ZWZ

# Bearing Integral Catalogue



WAFANGDIAN BEARING GROUP CORP., LTD.

# Catalogue Content

ZWZ


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Thrust Ball Bearing 849

Thrust Roller Bearing 887

Railway Bearing 933

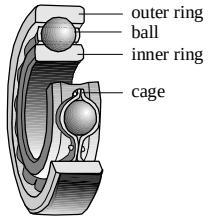
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Bearing Appendix 1067

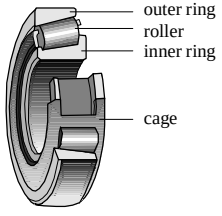
# The Structure and Characteristics of Rolling Bearings

## The Structures of Rolling Bearings

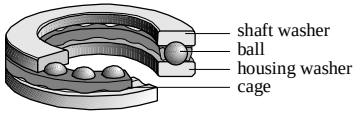
A rolling bearing normally consists of rings (inner ring and outer ring), rolling elements and cage. Between inner ring (or shaft washer) and outer ring ( or housing washer) have a number of rolling elements between them, which are held by the cage to keep the rolling element with certain distance to ensure smooth rolling.




(Deep groove ball bearing)




(Tapered roller bearing)




(Thrust ball bearing)

Figure 1. Structure example

### Rings (inner ring and outer ring)

The surface which carrying bearing load, is fit for the raceway of rolling element. The raceway appears groove shape, generally the cross section are the arch type, the diameter is slightly larger than ball diameter. Generally, the inner ring and outer ring work with shaft and housing respectively. The inner ring and outer ring of thrust bearing are also called the shaft washer and housing washer respectively.

### Rolling Elements

Rolling elements have two types, one of which is balls and the other one is rollers. The rollers can be cylindrical rollers, needle rollers, tapered rollers and spherical rollers and etc.

### Cage

The cage is applied to embrace the rolling elements partially to ensure a distance between the two neighbor rollers in the circumferential direction, and moving along with the rollers.The cage can be pressed cages, solid machined cages or engineering plastic cages.Comparing with the full complement (balls or rollers) bearings, the bearings with cages have less friction and are suitable for the high-speed rotation condition.

## The Classification of Rolling Bearings

Based on the different contact angles, rolling elements can be divided into radial bearings and thrust bearings. Or according to the structures of the rolling elements and rings, they can be classified into deep groove ball bearings, self-aligning ball bearings, angular contact ball bearings, thrust ball bearings, cylindrical roller bearings, needle roller bearings, self-aligning roller bearings, tapered roller bearings, thrust spherical roller bearings and so on. According to the number of rows of rolling elements, it can also be divided into single row, double row and multi-row (e.g. three-row, four-row) bearings. For general classification of bearings, refer to Figure 2.

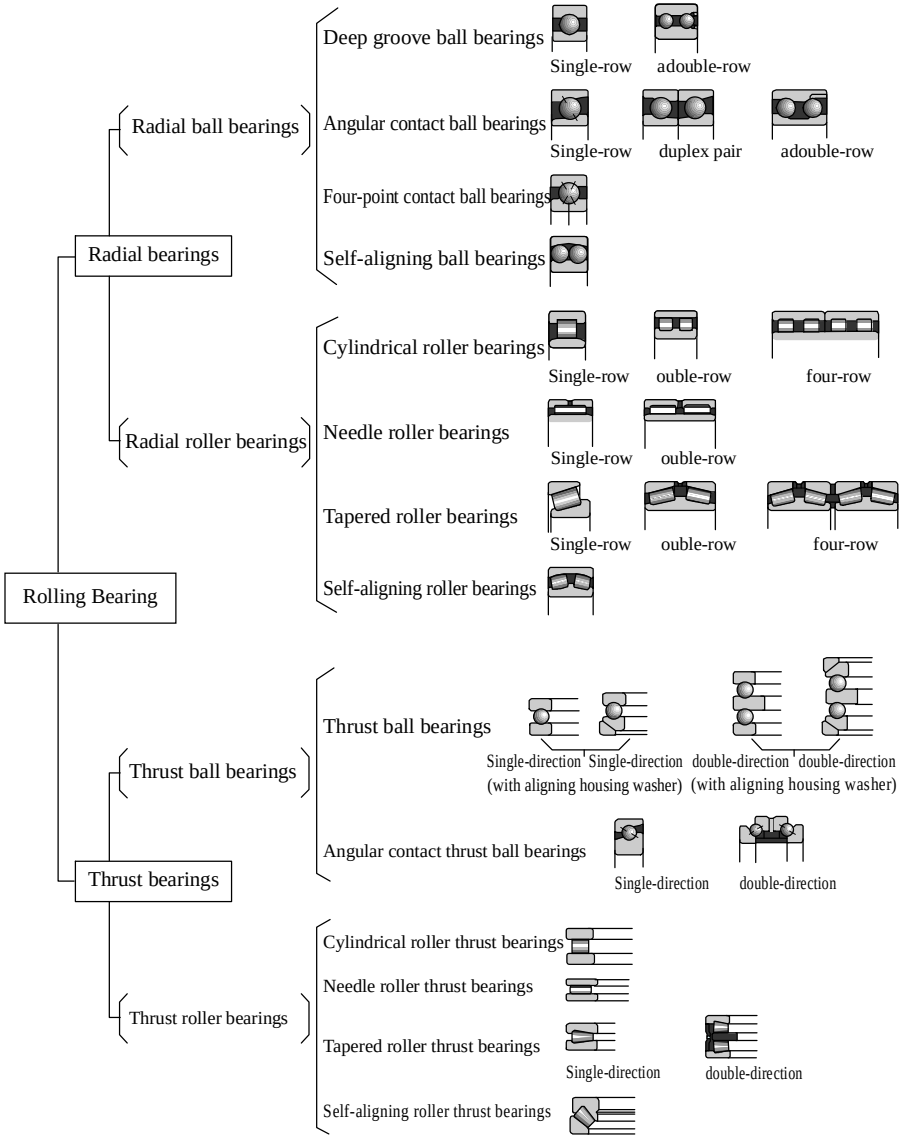



Figure 2. The bearing classification

## The characteristics of Rolling Bearings

1. Low starting friction coefficient, flexible while starting .
2. Good interchangeable property, easy for maintain and replacement.
3. Lubricated easily and less lubricant consumed, easy to seal and maintain .
4. Most of bearings can carry the axial and radial load simultaneously.
5. Applied easily under high or low temperature condition.
6. Bearing rigidity can be reinforced by applying preload.
7. Relative small radial clearance, high rotation precision.



# The System of Bearing Code

## The Basic Bearing Code

### The standard bearings

Each standard bearing, designed by ZWZ, has a basic code, which usually consists of three, four or five digitals, or combined with letters and digitals.

The meaning of digitals (or letters and digitals) is as below:

--The initial digital, letter or letter group indicates bearing type.

--The second and the third digital indicates the dimensional series. The second digital stands for the width (height) series, the third digital stands for the diameter series.

--The last two digitals of the basic bearing code multiplied by 5 will be the bore diameter in millimeter.

Under certain cases, the digital standing for the types of bearing or the first digital standing for the dimension series are default. The default digitals have been listed with the brackets in

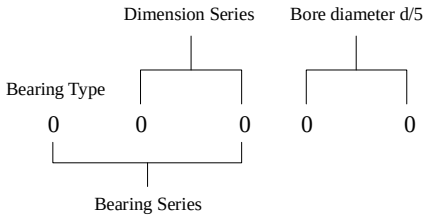



Table 1

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| (0)32 | 1(0)2 | 223 | 302 | 4(2)2 | 510 | (6)(0)2 | 719 | 811 |
| (0)33 | (1)22 | 213 | 303 | 4(2)3 | 511 | (6)(0)3 | 7(1)0 | 812 |
| (0)40 | 1(0)3 | 232 | 310 | | 512 | 6(0)2 | 7(0)2 | 822 |
| (0)49 | (1)23 | 222 | 313 | | 513 | 6(0)3 | 7(0)3 | 823 |
| | | 241 | 318 | | 514 | 6(0)4 | 7(0)4 | 871 |
| | | 231 | 319 | | | 6(1)0 | 2344 | 872 |
| | | 240 | 320 | | 522 | 16(0)0 | 2347 | 874 |
| | | 230 | 322 | | 523 | 617 | 2349 | 893 |
| | | 249 | 323 | | 524 | 618 | | 894 |
| | | 239 | 329 | | | 619 | 5600 | |
| | | 248 | 330 | | 532 | 637 | 7600 | |
| | | 238 | 331 | | 533 | | | |
| | | 202 | 332 | | 534 | | | |
| | | 203 | | | | | | |
| | | 204 | 3500 | | 542 | | | |
| | | | 3700 | | 543 | | | |
| | | 294 | 3800 | | 544 | | | |
| | | 293 | | | | | | |
| | | 292 | | | | | | |

Table 1 (Continued)

| | | | | |
|---|---|---|---|---|
| 911 | N10 | NUP (0) 2 | UC2 | QJ10 |
| 912 | N (0) 2 | NUP22 | UC3 | QJ18 |
| 913 | N22 | NUP (0) 3 | | QJ19 |
| 914 | N (0) 3 | NUP23 | UEL2 | QJ29 |
| | N23 | | UEL3 | QJ39 |
| 991 | N (0) 4 | NF (0) 2 | | QJ2 |
| 992 | | NF (0) 3 | UK2 | QJ3 |
| 993 | NU10 | NF23 | UK3 | |
| 994 | NU (0) 2 | | | QJF10 |
| 995 | NU22 | NN30 | | QJF18 |
| | NU (0) 3 | NNU49 | | QJF19 |
| 922 | NU23 | | | QJF29 |
| 923 | | | | QJF39 |
| 924 | NJ (0) 4 | | | QJF2 |
| | NJ (0) 2 | | | QJF3 |
| | NJ22 | | | |
| | NJ (0) 3 | | | |
| | NJ23 | | | |
| | NJ (0) 4 | | | |

## The code of bearing types

0- Double-row angular contact ball bearing
1- Self-aligning ball bearing
2- Self-aligning roller bearing and thrust self-aligning roller bearing
3- Tapered roller bearing
4- Double-row deep groove ball bearing
5- Thrust ball bearing
6- Deep groove ball bearing
7- Angular contact ball bearing
8- Cylindrical roller thrust bearing
9- Tapered roller thrust bearing

## The non-standard bearings

In recent year, due to the types of non-standard bearings increasing gradually, there are some unique, special and new products appears in the market, in order to let these product to compete in the global market, provide conveniencefor sell the products in domestic market, it is necessary to formulate the code system. The non-standard bearing code is consists of basic code and prefix & suffix code.

N- Cylindrical roller bearing

If there are one or more letters followed "N", the code will represents rib structure or types of the bearings. such as NJ, NU, NUP,

NN stands for double-row or multi-row cylindrical roller bearing.

## Needle roller bearing

NA or NK is normally used to express needle roller bearings.
U- Spherical outside surface ball bearing
QJ- Four-point contact ball bearing

The basic code of the non-standard bearing consists of two parts, one is the bearing type code and the other is Indication of dimensions for bearing basic dimension .

The indication of of dimensions according to the two methods as follows.
1.Non-standard bearing represents by dimension series number a) Standard bore diameter and non-standard outside diameter or width（height）
The non-standard outside diameter or width (height) should be indicated by a letter following basic bearing code of a bearing, which has a most similar diameter series or width (height series) with this non-standard bearing. This bearing can be determined through comparing the standard OD dimension or width (height) dimension, or following the extensive rule of the standard boundary dimension. Please refer to Table 1.

b) Non-standard bore diameter, outside diameter and width
The non-standard bore diameter, outside diameter and width (height) should be indicated by indefinite series code because the comparison with standard dimension or, extensive rule of the standard boundary dimension is not available. Please refer to Table 2 for the indefinite series code of ZWZ bearings.

Table 1

| Letter | Meaning |
|---|---|
| X1 | Non-standard outside diameter |
| X2 | Non-standard width (height) |
| X3 | Non-standard outside diameter and width (height) |
| | (Standard bore diameter) |

Table 2

| Type of Bearing | Basic Bearing Code |
|---|---|
| Double-row angular contact ball bearing | 4600 |
| Self-aligning ball bearing | 1600 |
| Spherical roller bearing | 20600 |
| Tapered roller bearing | 30600 |
| Double-row tapered roller bearing with double-raceway cup | 350600 |
| Double-row tapered roller bearing with double-raceway cone | 370600 |
| Four-row tapered roller bearing | 380600 |
| Double-row deep groove ball bearing | 40600 |
| Thrust ball bearing | 51700 |
| Double-direction thrust ball bearing | 52700 |
| Deep groove ball bearing | 6600 |
| Angular contact ball bearing | 7600 |
| Four-point contact ball bearing (split inner bearing race) | QJ600 |
| Four-point contact ball bearing (split outer bearing race) | QJF600 |
| Thrust angular-contact ball bearing | 561700 |
| Double-direction angular contact ball thrust bearing | 232700 |
| Cylindrical roller thrust bearing | 81700 |
| Double-direction cylindrical roller thrust bearing | 82700 |
| Tapered roller thrust bearing | 91700 |
| Double-direction tapered roller thrust bearing | 92700 |
| Cylindrical roller bearing | N600、NU600、NJ600、NF600 NUP600 、NN600、NNU600 |
| Self-aligning roller thrust bearing | 21700 |

Note: "00" stands for any proper bore diameter code of bearing.

2. Non-standard bearing indicated by bore diameter code, please refer to Table 3 for the bore diameter code of the non-standard bearing.

Table 3

| Inner diameter | Indication method |
|---|---|
| Standard dimension | Reference to the present standard. |
| Non-standard dimension | Bore diameter is indicated by the quotient divided by 5 if this bore diameter is smaller than 500mm and can be divided by 5.<br>Other bore diameter are indicated with the actual bore diameter value (mm) or additive letter. When the bore diameter value (mm) is integer or with one place decimal, it can be indicated with this dimension directly, but be separated from the dimension series code with "/";<br>When the actual bore diameter value (mm) is with two or more places decimals, the dimension is indicated with the integral part and expressed with X4.<br>For example, NCF6/27X4V, it indicates the cylindrical roller bearing, indefinite series, with the bore diameter of 27.762 and full filling with rollers. |

Example 1:
66/6.4 Deep groove ball bearing, indefinite series, bore diameter is 6.4mm.
Example 2:
61936X1M Deep groove ball bearing, non-standard outside diameter, close to diameter series 9.
Example 3:
62/14.5 Deep groove ball bearing, dimension series 02, bore diameter is 14.5mm.
Example 4:
52706 Double-direction thrust ball bearing, indefinite series, bore diameter is 30mm.
When the code of several non-standard bearings are the same, which belong to the same type but with the slightly different dimensions, they are distinguished by adding "-"mark and add sequence number 1, 2, 3····· after each code name.
For example, 61956X1M
61956X1M-1
61956X1M-2
The prefix and suffix code for non-standard bearing according to the rules of present standard and this system.

Illustration of Cage Structure and Material Code:

| SN | Bearing Type | Illustration of cage structure and material code |
|---|---|---|
| 1 | Deep Groove Ball Bearing | 1)While bearing outer diameter D≤400mm, select steel plates (strips) or brass sheet (strips) pressed cage, the suffix code of the cage not marked. |



Illustration of Cage Structure and Material Code:

| SN | Bearing Type | Illustration of cage structure and material code |
|---|---|---|
| 1 | Deep Groove Ball Bearing | 2) While bearing outer diameter D>400mm, select brass solid cage, the suffix code of the cage not marked; while select outer ring guided and brass cage, cage suffix code marked as MA.<br>3) While the cage suffix code not mark the guiding method, it means inner ring guided. |
| 2 | Self-aligning ball bearing | 1) While bearing outer diameter D≤200mm, select steel plates (strips) pressed cage, the suffix code of the cage not marked.<br>2) While bearing outer diameter D>200mm, select brass solid cage, the suffix code of the cage not marked. |
| 3 | Cylindrical roller bearing | 1) While select composite cage, the suffix code of the cage not marked.<br>2) While select pressed cage, the suffix code of the cage marked as J. If the different structure of pressed cage, successively expressed by J, J1, J2, J3.....<br>3) While select groove type cage, the suffix code of the cage marked as CJ.<br>4) While select brass solid cage, the suffix code of the cage marked as M.<br>5) While the bearing outer diameter D＞400mm, select steel solid cage, the suffix code of the cage not marked, but if the guiding method is inner or outer ring guided, shall mark the corresponding suffix code of the cage material and guiding method (outer ring guided expressed by A, inner ring guided expressed by B) |
| 4 | Double-row cylindrical roller bearing | Not marked while select brass solid cage. |
| 5 | Spherical roller bearing | 1) While select brass solid cage, the suffix code of the cage not marked.<br>2) While select pressed cage, the code expressed by "C", "CC".<br>3) While select other solid cage, shall mark the suffix code accordingly.<br>4) If guided by outer ring, shall mark the corresponding suffix code of the cage material and guiding method "A" |
| 6 | Angular contact ball bearing | 1) Angular contact ball bearing with split inner bearing or two-piece outer ring (three point or four point contact), while selecting solid brass cage, the suffix code of cage not marked.<br>2) Angular contact ball bearing and its variants<br>While bearing outer diameter D ≤ 250mm, contact angle $\alpha$=15°， |

Illustration of Cage Structure and Material Code:

| SN | Bearing Type | Illustration of cage structure and material code |
|---|---|---|
| 6 | Angular contact ball bearing | 25° select phenolic cloth laminated tube solid cage; α=40° select steel sheet pressed cage; the suffix code of the cage all not marked. While bearing outer diameter D>250mm, select brass or duralumin solid cage; the P5, P4, P2 level bearing product select phenolic cloth laminated tube solid cage;<br>The angular contact ball bearing with counter bore on inner ring and its variants select phenolic cloth laminated tube solid cage; suffix code of cage not marked.<br>3) Double row angular contact ball bearing, select steel plate (sheet) pressed cage, the suffix code of cage not marked. |
| 7 | Tapered roller bearing | 1) While bearing outer diameter D≤650mm, select steel plate pressed cage, the suffix code of cage not marked.<br>2) While bearing outer diameter D>650mm, select steel solid pin-type cage, the suffix code of cage not marked. |
| 8 | Thrust ball bearing | 1) While bearing outer diameter D≤250mm, select steel plate (sheet) pressed cage, the suffix code of cage not marked.<br>2) While bearing outer diameter D>250mm, select solid brass cage, the suffix code of cage not marked.<br>Other suffix code marked accordingly. |
| 9 | Thrust angular contact ball bearing | Single & double direction thrust angular contact ball bearing<br>While bearing outer diameter D ≤650mm, select brass solid cage, the suffix code of cage not marked.<br>While bearing outer diameter D>650mm, select steel solid cage, the suffix code of cage not marked. |
| 10 | Thrust cylindrical roller bearing | While bearing outer diameter D ≤500mm, select brass solid cage, the suffix code of cage not marked.<br>While bearing outer diameter D>500mm, select steel solid cage, the suffix code of cage not marked.<br>Other suffix code marked accordingly. |
| 11 | Thrust spherical roller bearing | Select brass solid cage, the suffix code of cage not marked, other suffix code marked accordingly. |
| 12 | Thrust tapered roller bearing | Select brass solid cage, the suffix code of cage not marked, other suffix code marked accordingly. |



## The illustration to the Change of Dimensions and Structures

The suffix YA plus number indicates various kinds of technical changes. Please refer to the suffix illustration for details.

If one type of bearing has two changes on its structure, the bearing is indicated with YA plus two digitals. For example, /YA12, it indicates the surface of outer ring and inner bore of inner ring vary from the standard design. The specific change can be referenced to the product catalogue or the supplemented technical requirements.

If one type of bearing has two or more changes on its structure at the same time, the bearing is indicated with YAD.

## The illustration to the Change of Technical Requirements

The suffix YB appended with digitals indicates all variations of the technical requirements. More details please refer to the specification of bearing suffix.

If one type of bearing has two changes on the technical requirements in the same time, the bearing is indicated by YB appended with two digitals. For example, /YB12, see specific change to the product catalogue or supplemented technical requirements.

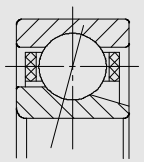
If one type of bearing has more than two changes on the technical requirements in the same time, indicated by /YBD.

If one type of bearing has changes both on the structure and the technical requirements in the same time, the bearing is indicated with /YAB.

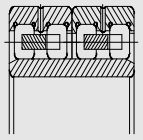
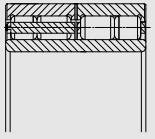
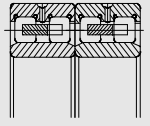
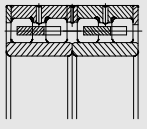
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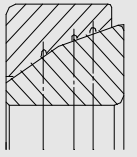
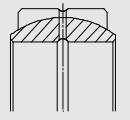
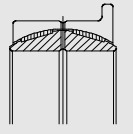
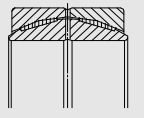
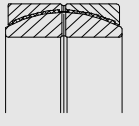
If the bearing suffix has Y and another letter or the appended number, it is suggested to reference the product catalogue or the supplemented technical requirements, in order to know the specific change.

## Prefix of Bearing and Bearing Components

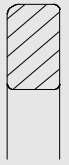
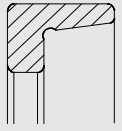
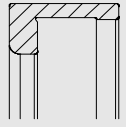
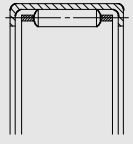
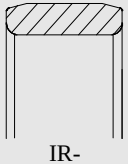
| Code | Meaning | Example |
|---|---|---|
| B | Angular contact ball bearing with counter bore on inner ring |  B |
| F | If "F" added before the bearing series code of the inch tapered roller bearing, it indicates the cage of bearing. | Example:<br>25580/25520 Bearing<br>Code of the Cage: F25500 |

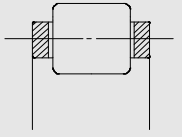
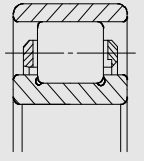
## Prefix of Bearing and Bearing Components

| Code | Meaning | Example |
|---|---|---|
| FC | Four-row cylindrical roller bearing with double outer ring and single inner ring without rib. |  FC |
| FC···ZW | Four-row cylindrical roller bearing with single inner ring, double outer rings with double ribs on each outer ring, double-row roller come together. |  FC···ZW |
| FCD | Four-row cylindrical roller bearing with double outer rings and double inner rings without rib. |  FCD |
| FCDP | Four-row cylindrical roller bearing, double outer rings, outer ring only have central rib but with loose rib, double inner rings, without rib. |  FCDP |
| G- | Represent bearing inner space or outer spacer in the inch series tapered roller bearing.<br>The express method of inner spacer: add "G-" before the code of inch series inner ring assembly.<br>The express method of outer spacer: add "G-" before the code of outer ring. | Example: M224749D/M224710-M224710D<br>Bearing inner spacer expressed as: G-M224749D<br>Bearing outer spacer expressed as: G-M224710 |

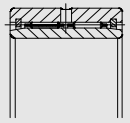
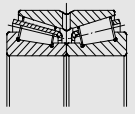
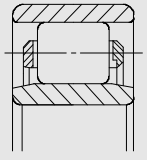
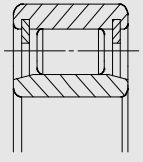
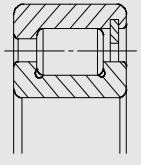
| Code | Meaning | Example |
|---|---|---|
| GAC | Thrust plain bearing |  GAC |
| GE...ES | Plain radial bearing |  GE···ES |
| GET...CXS | Self lubricated self-aligning plain radial bearing, special series, and inner ring merged with bronze alloy, double gapped axially. |  GET...CXS |
| GET...CHS | Self-aligning plain radial bearing, special series, and inner ring merged with bronze alloy, double half outer ring. |  GET...CHS |
| GET...FHS | Self-aligning plain radial bearing, special series, outer ring merged with special self-lubricated material, double half outer ring. |  GET...FHS |

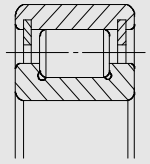
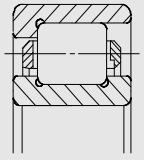
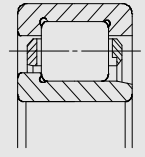
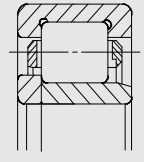
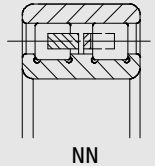
## Prefix of Bearing and Bearing Components

| Code | Meaning | Example |
|---|---|---|
| GS | Cylindrical roller thrust bearing housing washer. |  GS |
| HJ | Separate thrust collar |  HJ |
| HJR | Right angle retaining ring |  |
| HJR1 | Right angle retaining ring, dimension is different with HJR | |
| HJR2 | Right angle retaining ring, dimension is different with HJR & HJR1 | HJR、HJR1、HJR2 |
| HK | Open type pressed outer ring needle roller bearing |  HK |
| IR- | Inner ring of radial bearing |  IR- |

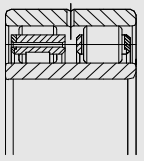
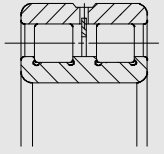
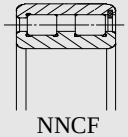
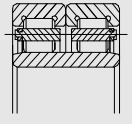
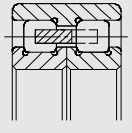
| Code | Meaning | Example |
|---|---|---|
| IW- | Shaft washer of thrust bearing |  IW- |
| K | 1. Assembly of rolling element and cage |  |
| | 2. The rings and rolling elements or only the rings of inch tapered roller bearing are made from the high carbon chromium bearing steel. | K K3979/K3920 |
| K1 | For the inch series tapered roller bearing, the rings and rolling elements or only the ring are made by 100CrMo7. | |
| K2 | For the inch series tapered roller bearing, the rings and rolling elements or only the ring are made by ZGCr15. | |
| KIW- | Thrust bearing without housing washer. | |
| KOW- | Thrust bearing without shaft washer. | |
| L | Separable inner ring or outer ring of the separable bearing | LFC4056188 |
| LR | The inner ring assembly or outer ring assembly of separable bearing | |
| N | Cylindrical roller bearing, inner ring with double ribs, outer ring without rib. |  N |

## Prefix of Bearing and Bearing Components

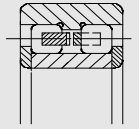
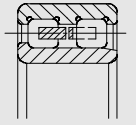
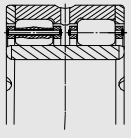
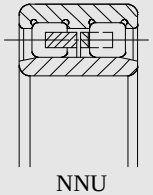
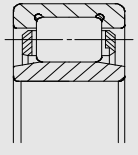
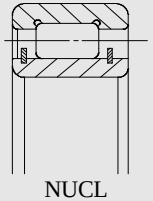
| Code | Meaning | Example |
|---|---|---|
| NA | 1. Needle roller bearing |  NA |
| | 2. Timken double-row cylindrical roller bearing with wide cone, no central spacer. |  NA551002/NA551701D |
| NB | Cylindrical roller bearing without rib. |  NB |
| NBCL | Cylindrical roller bearing, outer ring without rib but with double snap rings, inner ring without rib. |  NBCL |
| NCF | NF+ snap ring |  NCF...V |

| Code | Meaning | Example |
|---|---|---|
| NCL | Cylindrical roller bearing, outer ring without rib but with double snap rings, inner ring with double ribs. |  NCL...V |
| NF | Cylindrical roller bearing, inner ring with double ribs, outer ring with single rib. |  NF |
| NJ | Cylindrical roller bearing, outer ring with double ribs, inner ring with single rib. |  NJ |
| NJP | Cylindrical roller bearing, outer ring with double ribs, inner ring without rib but with loose rib. |  NJP |
| NN | Double-row cylindrical roller bearing, inner ring with three ribs, outer ring without rib. |  NN |

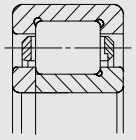
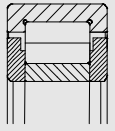
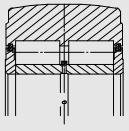
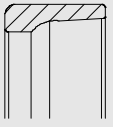
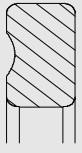
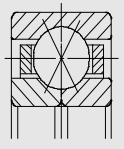
## Prefix of Bearing and Bearing Components

| Code | Meaning | Example |
|---|---|---|
| NNB | Double-row cylindrical roller bearing, double inner ring and outer ring without rib. |  NNB |
| NNCL | Double-row cylindrical roller bearing, inner ring with three ribs, outer ring without rib but with central spacer. |  NNCL |
| NNCF | Double-row cylindrical roller bearing, inner ring with three ribs, outer ring with single rib and with snap ring on the other side. |  NNCF |
| NND | Double-row cylindrical roller bearing, single inner ring, double outer rings with double ribs. |  NND |
| NNF | Double-row cylindrical roller bearing, double inner rings, single outer ring with central rib and no rib on both sides. |  NNF |

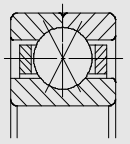
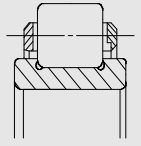
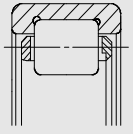
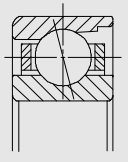


| Code | Meaning | Example |
|---|---|---|
| NNFP | Double-row cylindrical roller bearing, single inner ring, with loose ring on two sides, single outer ring with central rib and no rib on both sides. |  NNFP |
| NNJ | Double-row cylindrical roller bearing, outer ring with three ribs, inner ring with single rib. |  NNJ |
| NNP | Double-row cylindrical roller bearing, inner ring with no rib, outer ring with central rib and with loose rib on both faces. |  NNP |
| NNU | Double-row cylindrical roller bearing, outer ring with three ribs, inner ring with no rib. |  NNU |
| NU | Cylindrical roller bearing, outer ring with double ribs, inner ring without rib. |  NU |
| NUCL | Cylindrical roller bearing, inner ring with no rib but with double snap rings |  NUCL |

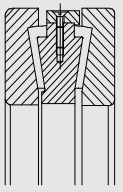
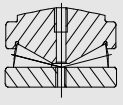
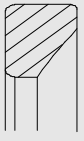
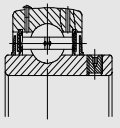
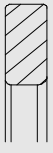
## Prefix of Bearing and Bearing Components

| Code | Meaning | Example |
|---|---|---|
| NUP | Cylindrical roller bearing, outer ring with double ribs, inner ring with single rib and loose rib. |  NUP |
| NUTR | Cylindrical roller bearing, full components, with loose rib. |  NUTR...XS |
| NNTR | Double-row cylindrical roller bearing, full components |  NNTR |
| OR | Outer ring of radial bearing |  OR |
| OW | Housing washer of thrust bearing |  OW |
| QJ | Four-point contact bearing, two piece inner rings. |  QJ |



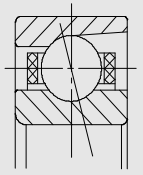
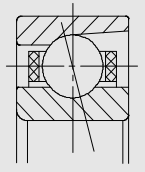
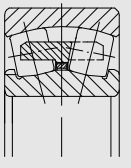
| Code | Meaning | Example |
|---|---|---|
| QJF | Four-point contact bearing, two piece outer rings. |  QJF |
| R | 1.Bearing with inseparable inner ring or outer ring.<br>2.If "R" is added before bearing series code in the inch tapered roller bearing, it indicates the tapered roller. | Example: The designation of 392/393 roller is R395 |
| RN | N type cylindrical roller bearing without outer ring. |  RN |
| RNU | NU type cylindrical roller bearing without inner ring. |  RNU |
| S | Separable angular contact ball bearing. |  |

## Prefix of Bearing and Bearing Components

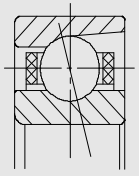
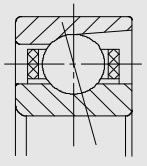
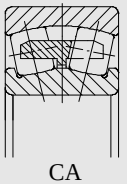
| Code | Meaning | Example |
|---|---|---|
| T | 1.Tapered roller bearing, the boundary dimension complying with GB273.1 appendix A.<br>For example, T 2ED 020<br>T- Tapered roller bearing<br>2- Angle series code (reference to GB273.1 appendix B)<br>ED- Series code (reference to GB273.1 appendix B)<br>020- Inner ring 20mm<br>2. Timken tapered roller thrust bearing |  <br>T |
| TTSX | Full component tapered roller bearings with convex spherical shaft washer used on screw down mechanism of rolling mill. |  <br>TTSX |
| U | Aligning seat washer |  <br>U |
| UC | Spherical out surface ball bearing with set screw. |  <br>UC |
| WS | Shaft washer of cylindrical roller thrust bearing. |  <br>WS |

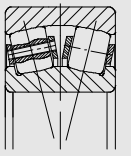


## Suffix of Bearing and Bearing Components

| Code | Meaning | Example |
|---|---|---|
| -1,-2... | It indicates the non-standard series X1,X2, YA2,... | |
| A | 1.Angular contact ball bearing, nominal contact angle α=30?<br>2. Tapered roller bearing, contact angle α and the outside diameter D1 not conform to the national standard, same as there are two or more α,D1 which is different from the national standard in one code, it will be indicated with A1, A2... by sequence. 3.Outer ring guided |  <br>A<br>Example: 32930X2A<br>Example: 61936MA |
| AC | Angular contact ball bearing, nominal contact angle α=25° |  <br>AC |
| ACA | Aligning roller bearing with movable central rib and asymmetrical rollers. |  <br>ACA |
| /AS | The needle roller bearing outer ring with lubrication hole, the additional number indicates to the number of oil holes. | |
| /ARS | The needle roller bearing outer ring with oil groove and oil hole, the additional number indicates to the number of oil holes | |

## Suffix of Bearing and Bearing Components

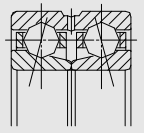
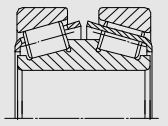
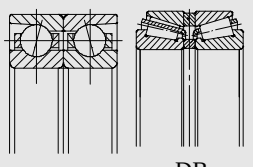
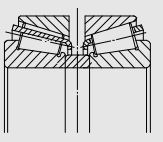
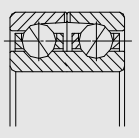
| Code | Meaning | Example |
|---|---|---|
| A6 | Inch tapered roller bearing, assembly of chamfer differed from TIMKEN, if the assembly of chamfer in one code have two or more bearings different from TIMKEN, it will be indicated with A61, A62... | Example: KLM48548A6/ KLM48510A6 |
| B | 1.Angular contact ball bearing, nominal contact angle α=40° .<br>2.Tapered roller bearing, contact angle enlarged (enlarge with one larger angle series)<br>3.Inner ring guided. |  <br>B<br>Example: 61836MB |
| C | 1.Angular contact ball bearing, nominal contact angle α=15° .<br>2.Spherical roller bearing, inner ring with no rib but movable central rib, with symmetrical rollers, pressed steel cage.<br>3.Matched pair tapered roller bearing, when the axial clearance not complying with ZWZ standard, the mean value of the axial clearance should be directly added after C. |  <br>C<br>Example: 32032T112/DBC345 mean axial clearance is 0.345 |
| CA | Spherical roller bearing, inner ring with no rib in the middle, small ribs on outside of inner ring, filling with symmetrical rollers, solid brass cage. |  <br>CA |

| Code | Meaning | Example |
|---|---|---|
| CAB | CA type spherical roller bearing, pierced rollers, with pin type cage. |  <br>CAB |
| CABC | CAB type spherical roller bearing, roller guiding methods improved (roller surface roughness, raceway surface roughness, change of heat treatment method), in order to reduce friction. | |
| CAC | CA type spherical roller bearing, roller guiding methods improved (roller surface roughness, raceway surface roughness,change of heat treatment method), in order to reduce friction. | |
| CAZ | CA type spherical roller bearing with symmetrical roller, with middle rib, solid cage. | |
| CB | Continuous casting machine bearing. | |
| CC | C type spherical roller bearing, roller guiding method improved (roller surface roughness, raceway surface roughness, change of heat treatment method), in order to reduce friction. | |
| CD | The dowel hole on the oil groove. | |
| /CM | Clearance of the deep groove ball bearing for electrical motor. | |
| /CN | 0 group clearances. /CN combined with the letter H, M or L, it indicates the clearance scope decreased in half; or combined with P, it indicates the clearance scope deviated. | |

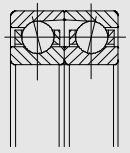
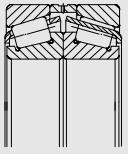
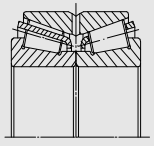
## Suffix of Bearing and Bearing Components

| Code | Meaning | Example |
|---|---|---|
| /CN | Example:<br>/CNH 0 group clearance decreased in half, belonging to the upper part.<br>/CNM 0 group clearance decreased in half, belonging to the middle part.<br>/CNL 0 group clearance decreased in half, belonging to the lower part.<br>/CNP clearance scope lies in the upper part of 0 group clearance and the lower part of C3 grade. | |
| /C1 | Clearance conforms to the standard group 1. | |
| /C2 | Clearance conforms to the standard group 2. | |
| /C3 | Clearance conforms to the standard group 3. | |
| /C4 | Clearance conforms to the standard group 4. | |
| /C5 | Clearance conforms to the standard group 5.<br>Letter H, M, L or P can follow directly after the clearance code, it indicates the clearance scope decreased in half or deviated, see explanation of /CN, but P must be added after the lower clearance grade. For example, /C3P clearance scope lies in the upper part of group C3 and the lower part of grade C4. | |
| /C9 | Bearing clearance not conforms to the present standard.<br>When two or more clearances in one code are different from the present standard, it will be indicated with the added digitals, such as C91, C92... | Example:<br>NN3020K/C9<br>NN3020K/C9<br>1indicates the two clearance it is different with current standard. |
| /C9T | The clearance of double-row cylindrical roller bearing's raceway are different. | |



| Code | Meaning | Example |
|---|---|---|
| /CR | When the matched pair tapered roller bearings have the radial clearance requirements, the mean value of clearance will be added after CR. | Example:<br>32048X2AT171/DBCR275<br>Tapered roller bearing back-to back arrangement, mean radial clearance is 0.275. |
| /CRA9 | The radial bearing clearance none standard, requirements to axial clearance. | |
| D | 1.Double row angular contact ball bearing, double inner ring, contact angle *=45?<br>2.Double row tapered roller bearing, no inner spacer or outer spacer, un-grinded end face.<br>3.Inch tapered roller bearing, inner ring with double raceway or outer ring with double raceway.<br>4.Split bearing. |  <br>D<br>  <br>D |
| /DB | Two single deep groove ball bearings or angular contact ball bearings or tapered roller bearings used for the back to back paired mounting. |  <br>DB DB |
| /DBY | Two single-row tapered roller bearing, for back to back mounting, with inner spacer, without outer spacer. |  <br>DBY |
| /DC | Double row angular contact ball bearing with double outer ring. |  <br>DC |

## Suffix of Bearing and Bearing Components

| Code | Meaning | Example |
|---|---|---|
| /DF | Two single deep groove ball bearings or angular contact ball bearings or tapered roller bearings used for the face to face paired mounting. |  DF  DF |
| /DH | Single direction thrust bearing with two housing washers. | |
| /DS | Single direction thrust bearing with two shaft washers. | |
| /DT | Two single deep groove ball bearings or angular contact ball bearings or tapered roller bearings used for the same direction tandem paired mounting. | |
| D1 | Double row tapered roller bearing, with no inner spacer, grinded end face. |  D1 |
| E | Inside design is changed, enhanced structure. | |
| F | The materials of steel, nodular cast iron or power metallurgical solid cage are indicated by the added digitals.<br>F1- Carbon steel<br>F2- Graphite steel<br>F3- Nodular cast iron | Example: 239/1180CAKF1/W33, Cage is made by 45 Steel |

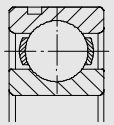
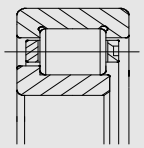
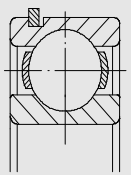
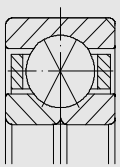


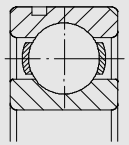
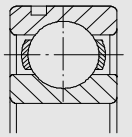
| Code | Meaning | Example |
|---|---|---|
| F | F4- Powder metallurgy<br>FA- Steel, nodular cast iron or power metallurgical solid cage, outer ring guided.<br>FB- steel, nodular cast iron or power metallurgical solid cage, inner ring guided.<br>FE- steel solid cage-phosphorized. | |
| -FS | Felt-ring sealed. | |
| /FT | Five set tandem arranged bearing. | |
| G1 | Gear quenched. | |
| /GP | Dimension tolerance equals to level 0, rotating precision equals to level 5. | |
| /HA | Ring rolling elements and cage or only the ring and rolling elements are made from vacuum smelted bearing steel. | Example: 7309BM/HADBYA3 |
| /HC | Ring and rolling elements or only ring or rolling elements are made from case hardened steel(/HC-20Cr2Ni4A; /HC1-20Cr2Mn2MoA; /HC2-15Mn). | Example: 3519/500/HC |
| /HCE | If the metric series bearing, indicates rings and rolling elements are choose high quality carburized steel. | |
| /HCER | For the metric series bearing, only the roller is are made by high quality carburized steel. | |
| /HCG2I | Indicates the outer ring & rolling elements are made by carburized steel, inner ring made by GCr18Mo. | |
| /HCI | Indicates the inner ring made by carburized steel. | |

## Suffix of Bearing and Bearing Components

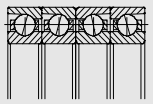
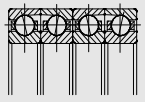
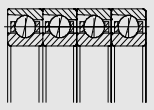
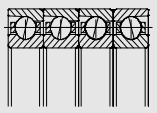
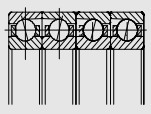
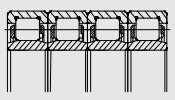
| Code | Meaning | Example |
|---|---|---|
| /HCO | Indicates the outer ring made by carburized steel. | |
| /HCOI | Indicates only the outer ring & inner ring made by carburized steel. | |
| /HCOR | Indicates only the outer ring & rolling element are made by carburized steel. | |
| /HCR | To distinguish the bearing with same designations, only the rolling elements are made by carburized steel. | |
| /HE | Ring, rolling elements and cage or only the ring and rolling elements are made by electroslag remelting bearing steel (military first grade steel) ZGCr15. | |
| /HG | Ring, rolling elements and cage or only the ring and rolling elements are made by electroslag remelting bearing steel (military first grade steel) ZGCr15. | |
| /HG2CR | Indicates the bearing ring is made by GCr18Mo, rolling elements is made by carburized steel. | |
| /HG2I | If belongs to radial bearing, indicates the inner ring is made by GCr18Mo, outer ring & rolling elements is made by GCr15.<br>If belongs to thrust ball bearing, indicates that the shaft washer is made by GCr18Mo, housing washer & rolling elements are made by GCr15. | |
| /HG2O | Indicates the bearing outer ring made by GCr18Mo. | |
| /HN | Ring and rolling elements are made by heat resistant steel (/HN-GCr4Mo4V; /HN1-Cr14Mo4;/HN2-Cr15Mo4V; /HN3-W18Cr4V). | |
| /HP | Ring and rolling elements are made from beryllium bronze or other anti-magnetic materials. When material is changed, it is indicated by the added digitals. | |
| /HQ | Ring and rolling elements are made from the unusual materials (/HQ- plastic; /HQ1-ceramic alloy) | |
| /HU | Ring, rolling elements and cage or only the ring and rolling elements are made from the unhardened stainless steel 1Cr18Ni9Ti. | |
| /HV | Ring, rolling elements and cage or only the ring and rolling elements are made from the unhardened stainless steel (/HV-9Cr18; /HV1-9Cr18Mo). | |
| J | Pressed steel cage. When material is changed, it is indicated with the added digitals. | |
| JA | Pressed steel cage, outer ring guided. | |
| JE | Pressed unhardened steel cage after phosphating. | |
| JR | Cage is riveted with two unhardened steel sheets( for large size thrust ball bearing). | |
| JW | Cage is welded with unhardened steel sheet. | |
| K | Tapered bore bearing. Conicity is 1: 12. | Example: 24040CAK30/W33 |
| K30 | Tapered bore bearing. Conicity is 1: 30. | |
| L | Light alloy solid cage. When the material of cage is changed, it is indicated with the appended digitals. | |
| L3 | Zinky aluminum alloy ZznA127Cu2 or material is ZA30-C-Q/WZ.J41362. | |
| LA | Light alloy solid cage, outer ring guided. | |
| LB | Light alloy solid cage, inner ring guided. | |

## Suffix of Bearing and Bearing Components

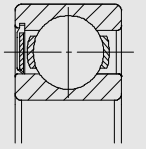
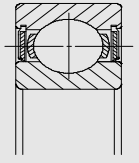
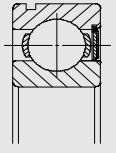
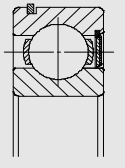
| Code | Meaning | Example |
|---|---|---|
| /LM | Cage is made by magnesium alloy. | |
| -LS | Dust proof ring. | |
| M | Brass solid cage. | Example: NU315M |
| MA | Brass solid cage, outer ring guided. | Example: 6034MA |
| MB | Brass solid cage, inner ring guided. | |
| N | Bearing with snap groove on outer ring. |  N |
| NB | Bearing with narrow inner ring. | |
| NB1 | Bearing with narrow inner ring, one side is narrow. |  NB1 |
| NR | Bearing with snap groove and snap ring on outer ring. |  NR |
| N1 | Bearing with a positional notch on outer ring. |  N1*2 |
| N2 | Bearing with two or more symmetrical positional notch on outer ring. | |

| Code | Meaning | Example |
|---|---|---|
| N4 | N+N2 Positional notch and snap groove are not on the same side. |  N4 |
| N6 | N+N2 Positional notch and snap groove are on the same side. |  N4 |
| /P0 | Tolerance grade conforms to the standard P0, code is omitted. | |
| /P6 | Tolerance grade conforms to the standard P6. | |
| /P6X | Tolerance grade conforms to the standard P6X. | |
| /P5 | Tolerance grade conforms to the standard P5. | |
| /P5C2H | Tolerance level comply with 5 level in standard, clearance is the upper limit in group 2. | |
| /P4 | Tolerance grade conforms to the standard P4. | |
| /P2 | Tolerance grade conforms to the standard P2. | |
| Q | Bronze solid cage, indicated with the appended digitals, which means different materials.<br>Q1- Aluminum iron manganese bronze.<br>Q2- Silicon iron zinc bronze.<br>Q3- Silicon nickel bronze.<br>Q4- Aluminum bronze.<br>Q5- Stannum bronze (ZQSn10-1). | |

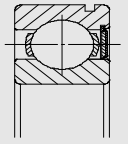
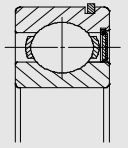
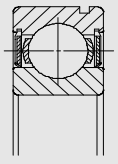
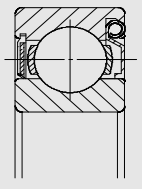
## Suffix of Bearing and Bearing Components

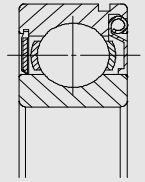
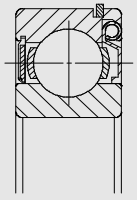
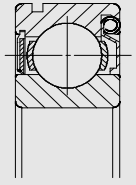
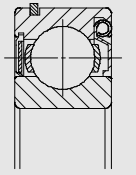
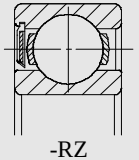
| Code | Meaning | Example |
|---|---|---|
| /QB | Four sets of bearings in pair tandem matched and back to back mounting. |  /QB |
| /QF | Four sets of bearings in pair tandem matched and face to face mounting. |  /QF |
| /QT | Four sets of bearings in tandem mounting. |  /QT |
| /QBT | Four sets of bearings, three in tandem and one in back to back mounting. |  /QBT |
| /QFT | Four sets of bearings, three in tandem and one in face to face mounting. |  /QFT |
| /QR | Four deep groove ball bearings or cylindrical roller bearings combined, radial lode distributed equally. |  /QR |
| R | Bearing with snap rib on outer ring (convex outer ring). | |
| R1 | Track roller snap ring groove dimension comply with DZN471 standard. | |



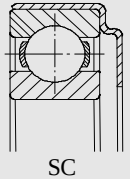
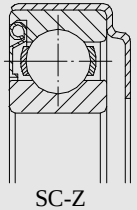
| Code | Meaning | Example |
|---|---|---|
| R2 | Track roller snap ring groove dimension comply with WRE standard. | |
| R3 | Track roller snap ring groove dimension comply with JIS standard. | |
| R4 | Track roller snap ring groove dimension comply is not standard. | |
| -RS | Bearing with frame system rubber seal ring (contact system) | |
| -RS1 | Bearing with frame system rubber seal ring (contact system), the material of seal ring is sulfureted rubber. |  |
| -RS2 | Bearing with frame system rubber seal ring (contact system), the material of seal ring is fluoride rubber. | RS、RS1、RS2 |
| -2RS | Bearing with RS sealed on both sides. |  |
| -2RS1 | Bearing with RS1 sealed on both sides. | |
| -2RS2 | Bearing with RS2 sealed on both sides. | 2RS、2RS1、2RS2 |
| -RSN | RS+N Sealed on the opposite side of snap groove. |  |
| -RS1N | RS1+N | |
| -RS2N | RS2+N | RSN、RS1N、RS2N |
| -RSNR | RS+NR Sealed on the opposite side of snap ring. |  |
| -RS1NR | RS1+NR | |
| -RS2NR | RS2+NR | RSNR、RS1NR、RS2NR |

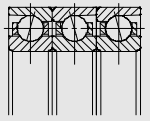
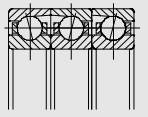
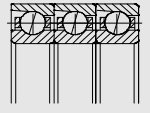
## Suffix of Bearing and Bearing Components

| Code | Meaning | Example |
|---|---|---|
| -RSNB | RS+NR Sealed on the opposite side of snap ring. |  RSNB、RS1NB、RS2NB |
| -RS1NB | RS1+N | |
| -RS2NB | RS2+N | |
| -RSNBR | RS+NR Sealed on the same side of snap ring. |  RSNBR、RS1NBR、RS2NBR |
| -RS1NBR | RS1+NR | |
| -RS2NBR | RS2+NR | |
| -2RSN | 2RS+N |  2RSN、2RS1N、2RS2N |
| -2RS1N | 2RS1+N | |
| -2RS2N | 2RS2+N | |
| -2RSNR | 2RS+NR | |
| -2RS1NR | 2RS1+NR | |
| -2RS2NR | 2RS2+NR | |
| -RSZ | RS+Z Bearing with frame type rubber sealing ring (contact system) on one side and with shield on the other side. |  RSZ、RS1Z、RS2Z |
| -RS1Z | RS+Z<br>RS1+Z | |
| -RS2Z | RS2+Z | |

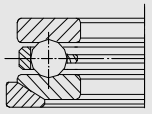
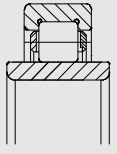
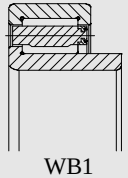
| Code | Meaning | Example |
|---|---|---|
| -RSZN | RS+Z+N Sealed on the other side of snap groove. |  RSZN、RS1ZN、RS2ZN |
| -RS1ZN | RS1+Z+N | |
| -RS2ZN | RS2+Z+N | |
| -RSZNR | RS+Z+NR Sealed on the other side of snap ring. |  RSZNR、RS1ZNR、RS2ZNR |
| -RS1ZNR | RS1+Z+NR | |
| -RS2ZNR | RS2+Z+NR | |
| -RSZNB | RS+Z+N Sealed on the same side of snap groove. |  RSZNB、RS1ZNB、RS2ZNB |
| -RS1ZNB | RS1+Z+N | |
| -RS2ZNB | RS2+Z+N | |
| -RSZNBR | RS+Z+NR Sealed on the same side of snap ring. |  RSZNBR、RS1ZNBR、RS2ZNBR |
| -RS1ZNBR | RS1+Z+NR | |
| -RS2ZNBR | RS2+Z+NR | |
| -RZ | Bearing with frame type rubber sealing ring (non-contact type). |  -RZ |

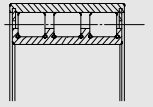
## Suffix of Bearing and Bearing Components

| Code | Meaning | Example |
|---|---|---|
| -2RZ | Bearing with RZ sealed on both sides. | |
| S | Martensite quenching. | |
| /SP | Ultra precision grade, dimension tolerance equals to P5, rotating precision equals to P4. | |
| /S0 | Bearing ring tempered in high temperature, which can reach to 150℃. | |
| /S1 | Bearing ring tempered in high temperature, which can reach to 200℃. | |
| /S2 | Bearing ring tempered in high temperature, which can reach to 250℃. | |
| /S3 | Bearing ring tempered in high temperature, which can reach to 300℃. | |
| /S4 | Bearing ring tempered in high temperature, which can reach to 350℃. | |
| SC | Radial bearing with outer cover. |  SC |
| SC-Z | Radial bearing with outer cover and shield. |  SC-Z |
| T | 1.When the assemble height dimension of the matched pair tapered roller bearing not conform to the standard specification, the assemble height dimension will be added directly after T.<br>2.Phenolic cloth laminated tube solid cage | Example:<br>32032T112/DBC345<br>Tapered roller bearing back-to-back arrangement, stand hight is 112 |

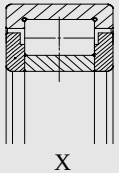
| Code | Meaning | Example |
|---|---|---|
| /T | If the starting torque of bearing has special requirements, digitals added after indicates the starting torque. | |
| /RT | If the rotating torque of bearing has special requirements, digitals added after indicates the rotating torque. | |
| TA | Phenolic cloth laminated tube, outer ring guided. |  /TBT |
| TB | Phenolic cloth laminated tube, inner ring guided. | |
| /TBT | Three sets of bearings in tandem and face to face arrangement. | |
| TH | Engineering plastic cage. | |
| /TFT | Glass fibre-reinforced phenolic resin cage (tube shape) |  /TFT |
| TN | TN1- Nylon<br>TN2-Polyamide (PA)<br>TN3-Polyimide<br>TN4- Polycarbonate<br>TN5- Paraformaldehyde | |
| /TT | Three sets of bearings in tandem arrangement. |  /TT |

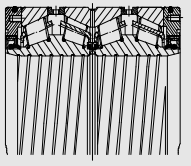
## Suffix of Bearing and Bearing Components

| Code | Meaning | Example |
|---|---|---|
| U | Thrust ball bearing with spherical seat washer. |  U |
| /UP | Super precision grade, dimension tolerance equals to P4, rotating precision is higher than P4. | |
| V | Full complement rolling elements (no cage). | |
| /V | Vibrating speed group of bearing. The appended digital indicates different groups.<br>V1- vibrating speed group conforms to the standard V1 group.<br>V2- vibrating speed group conforms to the standard V2 group.<br>V3- vibrating speed group conforms to the standard V3 group. | |
| VB | Vibration Screen Bearing. | |
| WB | Bearing with wide inner ring (Both sides wide). |  WB |
| WB1 | Bearing with wide inner ring (Single side wide). |  WB1 |

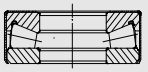
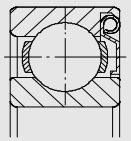
| Code | Meaning | Example |
|---|---|---|
| WC | Bearing with wide outer ring. |  WC |
| /W124 | Indicates precision electronic motor bearing (execute standard Q/WZ.14124). | |
| /W20 | Bearing with three lubricating oil holes on outer ring (no oil groove). | |
| /W20A | Bearing with four lubricating oil holes on outer ring (no oil groove) | |
| /W20C | Bearing with six lubricating oil holes on outer ring (no oil groove) | |
| /W20D | Bearing with eight lubricating oil holes on outer ring (no oil groove) | |
| /W20T | Bearing with three lubricating oil holes on inner ring (no oil groove) | |
| /W23 | Bearing with six lubricating oil holes on inner ring. | |
| /W26 | Indicates the metallurgical bearings (execute standard Q/WZ.J14281) | |
| /W281 | Bearing with oil groove and three lubricating oil holes on outer ring. | |
| /W33 | Bearing with oil groove and four lubricating oil holes on outer ring. | |
| /W33A | Bearing with twelve lubricating holes on outer ring. | |
| /W33D | Bearing with eight lubricating holes on inner ring. | |
| /W33T | Bearing with six lubricating holes on inner ring. | |
| /WN26 | Bearing with oil groove and six lubricating oil holes on outer ring. | |

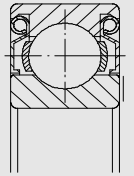
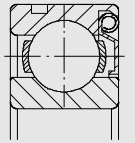
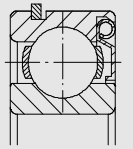
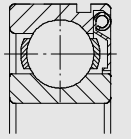
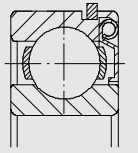
## Suffix of Bearing and Bearing Components

| Code | Meaning | Example |
|---|---|---|
| /W33X | Bearing with oil groove and six lubricating oil holes on outer ring. | |
| /W33XB | Bearing outer ring with six lubricating oil hole, and the diameter of the oil hole is ϕ15. | |
| /W512 | /W512 W23+W33 | |
| /W513 | /W513 W26+W33 | |
| /W518 | /W518 W20+W26 | |
| /W519 | /W519 W33X+WN26 | |
| /W520 | /W520 W33+WN26 | |
| /WN33 | /WN33 Bearing with oil groove and three lubricating oil holes on inner ring. | |
| X | Full complement cylindrical roller bearing with loose rib. |  X |

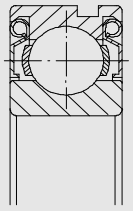
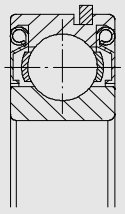
| Code | Meaning | Example |
|---|---|---|
| X1 | Non-standard outer diameter. | |
| X2 | Non-standard width(height). | |
| X3 | Non-standard outer diameter, width (height) (standard bore diameter). | Example:NCF6/27X4V Cylindrical roller bearing, Inner diameter is 27.762, Full complement rolling element. |
| X4 | Inner diameter select the integer of non-standard bearing, while inner diameter is not integer and have two and more decimal places, indicated by X4 as select integer of the figures. | |
| -XRS | Four row tapered roller bearing, with multi sealed parts. (more than two sealings) |  -XRS 380680-XRS/HC |
| /Y | Y Combines with another letter (such as YA, YB) or more digitals to identify the change of the non-series which can not be indicated with the present suffix code.<br>YA- Structure change.<br>YA1- Outside surface of outer ring has changed comparing to standard design.<br>YA2- Bore of inner ring has changed comparing to the standard design.<br>YA3- End face of bearing ring has changed comparing to the standard design.<br>YA4- Raceway of bearing ring has changed comparing to the standard design.<br>YA5- Bearing rolling elements has changed comparing to the standard design.<br>YA6- Bearing mounting chamfer has changed comparing to the standard design.<br>YA7- Bearing rib or flange has changed comparing to the standard design. | |

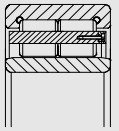
## Suffix of Bearing and Bearing Components

| Code | Meaning | Example |
|---|---|---|
| /Y | YA8- Bearing cage structure changed.<br>YA9- Bearing contact angle has changed comparing to the standard design.<br>YA10- Double-row tapered roller bearing, inner spacer with oil groove and oil hole.<br>YAB- Structure and technical specification has changed at the same time.<br>YAD- One type of bearing has two or more changes on structure.<br>YB- Technical specification has changed.<br>YB1-Surface of bearing ring has plated coating.<br>YB2- Bearing dimension and tolerance changed.<br>YB3- Surface roughness of bearing ring changed.<br>YB4- Heat treating specification (e.g. hardness) changed.<br>YB5- Structure and position tolerance have special requirements.<br>YBD- One type of bearing has two or more changes on technical specification. | |
| ZH | Thrust bearing with shielded housing washer. | |
| ZL | Seal spring compression ring. | |
| ZS | Thrust bearing with shielded shaft washer. |  <br>ZS |
| -Z | Bearing with shield on one side. |  <br>-Z |

| Code | Meaning | Example |
|---|---|---|
| -2Z | Bearing with shields on both sides. |  <br>-2Z |
| -ZN | Z+N: Shield is on the different side of snap groove. |  <br>ZN |
| -ZNR | Z+NR: Shield is on the other side of snap groove and snap ring. |  <br>-ZNR |
| -ZNB | Z+NB: Shield is on the same side of snap groove. |  <br>ZNB |
| -ZNBR | Z+NR: Shield is on the same side of snap groove and snap ring. |  <br>-ZNBR |

## Suffix of Bearing and Bearing Components

| Code | Meaning | Example |
|---|---|---|
| /Z | Z1- vibrating acceleration rating group conforms to the standard Z1 group.<br>Z2- vibrating acceleration rating group conforms to the standard Z2 group.<br>Z3- vibrating acceleration rating group conforms to the standard Z3 group. | |
| -2ZN | 2Z+N: Bearing with shields on both sides, outer ring with snap groove. |  <br>2ZN |
| -2ZNR | 2Z+NR: Bearing with shields on both sides, outer ring with snap groove and snap ring. |  <br>2ZNR |
| /ZP | Dimensional tolerance equals to grade 6, rotating precision equals to grade 5. | |
| -ZT | Thrust cylindrical roller bearing, three row roller lean against together. |  <br>ZT |

| Code | Meaning | Example |
|---|---|---|
| ZW | Double-row needle rollers and cage assembly. |  <br>ZW |
| /Z | Four-row cylindrical roller bearing, tow-row roller lean against together. The bearing vibration acceleration rated group.The appended digital indicates different groups. | |

1) The quantities of the bearing collocation group

/D- two sets of bearings
/T- three sets of bearings.
/Q- four sets of bearings.
/P- five sets of bearings.
/S- six sets of bearings.

2) Bearing arrangement of the bearing collocation

B- Back to back
F- Face to face
T- Tandem arrangement
G- Universal matching
BT- Back to back & Tandem.
FT- Face to face & Tandem
BC- Back to back tandem arrangement in pairs.
FC- Face to face tandem arrangement in pairs.
Notes: 1) & 2) can combines several kinds of collocation types. Details please see the meaning of bearing suffix code and examples.

3) The radial clearance in collocation, pre-load and allocation of axial- load.

The test appended after the collocation code indicates the property:
GA-Light pre-load. Pre-load value relative small (deep groove and angular contact ball bearing).
GB-Medium pre-load. Pre-load value larger than GA (deep groove and angular contact ball bearing).
GC- Heavy pre-load. Pre-load value larger than GB (Deep groove and angular contact ball bearing).
Gxxx- pre-load is xxx special preload value ( append pre-load value after the code directly, unit is N)
For angular contact ball bearing,"G" can be omitted.
G- Special pre-load, the number append directly express the magnitude of pre-load.
CA- Axial clearance is relative small (deep groove and angular contact ball bearing).
CB- Axial clearance is larger than CA (deep groove and angular contact ball bearing).

CB- Axial clearance is larger than CB (deep groove and angular contact ball bearing).
CG- Axial clearance is 0 (tapered roller bearing)
R- Radial clearance equally distributed.
Example 1: 7210C/DBGA- angular contact ball bearing 7210C, contact angle α=15° ,back to back arrangement with light pre-load.
Example 2: 6210/DFGA-deep groove ball bearing 6210, after grinded endface, face to face arrangement, with light pre-load.
Example 3: 7210C/TFT- angular contact ball bearing 7210C, contact angle α=15° three sets matched arrangement, two sets of tandem arrangement and one set of face to face arrangement.
Example 4: 7210AC/QBT- angular contact ball bearing 7210AC, contact angle α=25° , four sets matched arrangement, three sets of tandem arrangement and 1 set back to back arrangement.
Example 5:NU210/QTR cylindrical roller bearing NU210, four sets matched arrangement, pre-load uniformly distributed.
Example 6:7210C/PT angular contact ball bearing 7210C, contact angle α=15° , five sets tandem arrangement.
Example 7: 7210C/G325-angular contact ball bearing 7210C, contact angle α=15° ,special pre-load value is 325N.

## The illustration to the Sequence of Bearing Code

| | | | |
|---|---|---|---|
| Bearing Code | Prefix Code | | Components of Bearing |
| | Basic Code | | |
| | Suffix Code | 1 | Internal structure changed |
| | | 2 | Sealing, dust-proof, ring changed |
| | | 3 | Cage and its material |
| | | 4 | Bearing material |
| | | 5 | Tolerance grade |
| | | 6 | Clearance |
| | | 7 | Application |
| | | 8 | Vibration features |
| | | 9 | Heat treatment features |
| | | 10 | Lubrication features |
| | | 11 | The structure and technical requirement change not in serial (YA/YB) and etc. |

While composing the ZWZ bearing designations, the suffix code is located on the right side after the basic code with distance of half of Chinese characters (except the designation including "-" or "/") when there are more changed items, follows the sequence in the form above from left to right. While the change content after group 4 (including group 4), separate by "/" before the designation with previous code. The last 2 group changed items, which after the 4 groups changes, when the shown number or test meaning can make confusion, space half Chinese characters between 2 designation.
Example: 6215-2RS/HAP63 V2YA7



## Case of the Combination of Beairng Basic Code and Suffix

### 1.6212-2RS/HAP93YA5

Basic code 6212 deep groove ball bearing, with inner diameter equals to 60mm.
Suffix code 2RS, with double side sealing ring.
HA Rings and rolling elements material is vacuum-degassed steel.
P63 Tolerance level comply with level 6 required, internal clearance of bearing comply with group 3.
YA5 Rolling element design is different with 6212-2RS.

### 2. FC3854168Q1/HG2P69YA4

Basic code FC3854168, four-row cylindrical roller bearing, single inner ring, double outer ring, inner diameter 190mm, outer diameter 270mm, width 168mm.
Suffix code Q1 indicates the cage material is bronze (ZCuAl10Fe3Mn2).
HG2 Ring material select GCr18Mo.
P69 Tolerance level comply with grade 5 required in the standard. Bearing internal clearance not comply with current standard.
YA4 bearing raceway on the ring have different design with standard design.

### 3. 22316X2CAKF3/HAC9W33YA8

Spherical roller bearing with basic code 22316, inner diameter 80mm.
Suffix code X2 indicates the bearing ring width is different with standard design.
CA type solid cage, symmetrical roller, inner ring without center rib, 2 small ribs on each end.
Tapered bore, conicity 1:12.
F3 cage material choose nodular cast iron.
HA bearing ring choose vacuum-degassed steel.
C9 bearing internal clearance not comply with current standard
W33 bearing outer ring have lubricating oil groove and three lubricating hole.
YA8 cage structure have different design other than standard design

### 4. 3806/685.8-XRS/HCC9

Basic code 3806/685.8, four-row tapered roller bearing, inner diameter is 685.8mm, Indefinite boundary dimension series.
Suffix code XRS with double sealing ring on both side. Double inner ring with sealing ring, outer ring double side with 0 shape ring, multi position sealing.
HC bearing ring and rolling element use carburized steel (G20Cr2Ni4).
C9 bearing internal clearance not comply with current standard.

## The Description for the Drawn up of Current Bearing Code

### Deep Groove Ball Bearing

While /YA7 in the suffix code, it means inner ring flange diameter have different design with standard design.

### Cylindrical Roller Bearing

The different kinds of drawings coexists in ZWZ system.
The boundary dimensions comply with national standard have two types, enhanced type and none enhanced type.
Enhanced type with the letter "E", none enhanced type dosen't have letter "E".
While cage choose composite cage, cage suffix code not marked.

Example: N314E: composite cage, enhanced structure.
N314EM: brass cage, enhanced structure.
N314M: brass cage, none enhanced structure.

### Spherical Roller Bearing

1. Symmetrical roller, pressed cage, basic code appended with "C" or "CC".
2. Asymmetrical roller, half cage old structure type, directly shown by basic code.
3. Symmetrical roller, solid cage, appended "CA", basic code while involves other changes, see the illustration of the bearing suffix code.
4. Symmetrical roller, solid cage, with inner spacer, append"ACA"after basic code*is transition code.

### Four-point angular contact ball bearing

Because of the four-point contact angular contact ball bearing manufactured by ZWZ basically adopt brass cage, while select brass cage, cage suffix code not marked.

### Tapered Roller Bearing

The different kinds of drawings coexists in ZWZ system*the boundary dimension comply with the requirements old national and new national standard in two conditions. According to the conditions of ZWZ, for the single-row tapered roller bearing which boundary dimensions not comply with new national boundary dimensions, due to the contact angle and raceway diameter also different with new national standard, so that indicated by "X2A" after bearing code.
Example 32028X2A
X2: Indicates bearing width and bearing ring width different with new national standard.
A: Contact angle, outer ring raceway dimension is different with new national standard.

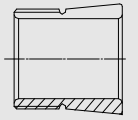
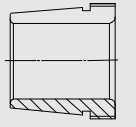
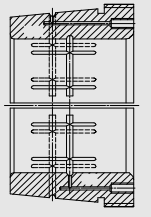
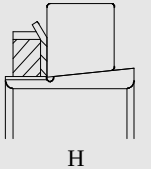
Double & four- row tapered roller bearing, the boundary dimension not comply with new national standard, indicated by X2 directly after basic code.
For the same type non-standard bearing with minor differences in its boundary dimensions and with same bearing code, use mark "-" appended with serial number 1,2,3..... to distinguish each other.
Example:
352948X2
352948X2-1

### Spherical Roller Thrust Bearing

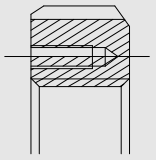
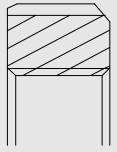
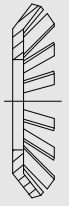
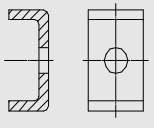
1. Asymmetrical roller, select brass solid cage, directly shown by basic code.
2. Asymmetrical roller, select pressed cage, appended with "J" after bearing code, if two kinds of pressed cage coexists, use letter "E" to distinguish one kind of cage.
Example:
29424: Brass solid cage
29424E: pressed cage
29424J: pressed cage, roller diameter, roller quantities is different with 29424E.
3. Old structure 9069000 type, change to new code 29000/YAD
Example:
Old code: 9069244
New code: 29244/YAD



## Accessories of Rolling Bearing

| Code | Meaning | Example |
|---|---|---|
| A | Adapter sleeve |  A |
| AH | Standard designed withdrawal sleeve<br>Appended letter or number after AH means the different structure of withdrawal sleeve:<br>AH- withdrawal sleeve with conicity1:12<br>AH2- withdrawal sleeve with conicity 1:30<br>AHX- withdrawal sleeve with conicity 1:12 and Thread size different with original. |  AH |
| AOH | Withdrawal sleeve, with oil passage and oil groove for mounting and dismounting by oil press methods, other design is same as AH type design. |  AOH |
| H | Adapter sleeve |  H |

## Accessories of Rolling Bearing

| Code | Meaning | Example |
|---|---|---|
| HM | Locknut, indicate metric series trapezoidal thread. |  HM |
| KM | Lock nut, indicates metric series normal thread |  KM |
| MB | Locking washer straight inner jaw. |  MB |
| MBA | Locking washer indicate inner jaw bending inside. | |
| MBB | Locking washer indicate inner jaw bending outside. | |
| MS | Locking clip<br>The above accessories when the design if different with standard design, expressed by "C" after the code, if there are several dimensions different with standard dimensions appended C1, C2 ..... after code in sequence<br>Example:<br>AH3164C<br>AH3164C1 |  MS |

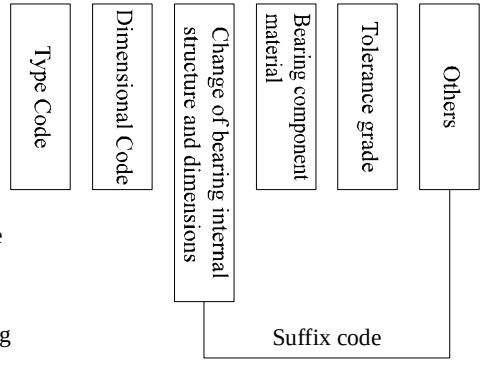


## Draw up Method of Special Type Bearing

### Slewing bearing coding method

1. Constitute of designation and coding method

Designation contains 3 parts:
Type code, dimensional code, suffix code
The express method shown as follows.




2. Type Code

HAW- parallel roller arrangement slewing bearing outer ring with gear.
HSB- four-point contact slewing bearing without gear.
HSW- four point contact slewing bearing, gear on outer ring.
HSN-four point contact slewing bearing, gear on inner ring.
HSQB- four-point contact slewing bearing without gear(ring structure different with HSB).
HSQW- four-point contact slewing bearing, gear on outer ring(ring structure different with HSB).
HSQN-four-point contact slewing bearing, gear on inner ring(ring structure different with HSB).
HTB- Thrust ball slewing bearing without gear.
HY1B- single shaft washer double housing washer three-row roller slewing bearing.
HYB- single housing washer, double shaft washer three-row roller slewing bearing.
HYS- slewing bearing upper level with cylindrical roller, lower level with steel ball.
HYW- single housing washer with gear double shaft washer, three-row roller slewing bearing.
HY1N- single shaft washer with gear, double housing washer three-row roller slewing bearing.
HJB- cross roller slewing bearing.
HJW- cross roller slewing bearing outer ring with gear.
HJN- cross roller slewing bearing inner ring with gear.

3. Illustration method of dimensional code

Directly indicated by rotary center diameter dimension. The rotary center diameter dimension means the rotary center of upper and lower roller.

4. Suffix code

Use this to express the variation of internal structure, dimension, component material, tolerance level, clearance and etc.
Because of this type of bearing belongs to special purpose bearing, technical requirement very complicate, most of the content directly marked on the product drawings, so only define item as follows:
a) four-point contact angular contact slewing bearing, cross roller slewing bearings, while it is double raceway, appended "D" after the rotary center diameter dimension.
Example: HSN 410D
b) While for the same type of bearing, its rotary center diameter dimension is same, but the

boundary dimension and structure is different. Use "X" after rotary center diameter dimension, to express the variation of of its dimension and structure, for the same type, same rotary center dimeter have different kinds of changes, than use "X1" "X2".....in sequence
Example:HSN1535X
c) For the same type of bearing, only the dimension of the location hole is different, than use "K" to express.
Example:HJB2800K
To express the location hole dimension is different with the standard HJB2800 bearing in the catalogue.
d) For same type of bearing, both with full complement rolling element and also have isolate block, the isolate block structure indicated by letter "A".
Example:HSB1094, HSB1094A
e) While bearing component is made by material other than 42CrMo, than use suffix code "C" to express.
f) Bearing tolerance level according to the regulation of normal purpose bearing code.



## The Selection of Bearing

There are diverse kinds, types and dimensions of rolling bearings. In order to perform the expected performance of the mechanical devices, it is critical to choose the most appropriate bearings.
In bearing selection, there are many elements needs to be considered, study, evaluate from different aspects, the relevant procedure of bearing selection are not special regulated, but the general sequence are listed as follows:
Working conditions of the mechanical device and the bearings.
Define the requirements to bearings.
Choose the type of the bearing.
Choose the configuration pattern of the bearing
Choose the dimensions of the bearing.
Choose the specifications of the bearing
Choose the mounting method for the bearing

### The Operating Conditions and Environment Conditions of Bearing

Correct identify the position of application in the mechanical device and the use conditions & surrounding conditions are the pre-conditions of choosing the proper bearing. For this purpose, the following figures and informations are required:
The functions and structure of the mechanical device.
The position of application.
Loads (magnitude and directions).
Rotate speed.
Vibration and shock.
Bearing temperature (surrounding temperature and rises).
Surrounding ambiance (corrosion, cleanness, lubrication).

### The Selection of Bearing Type

| Items of Analyses | | Methods of selection |
|---|---|---|
| Mounting space | Those the bearing type which can be installed into the mounting space | Since the rigidity and strength of the shaft have been considered in the designing, the shaft neck must be determined at first.<br>But there are too may dimensional series and types, the most appropriate type must be chosen. |
| Load | Strength, direction and nature of the load<br>[the load carrying capacity is indicated by basic load rating whose value is provided in the bearing dimension tables] | The load is rich in variations, such as the amount of the load, whether there is only radial load or not, whether the axial load is in single-direction or double direction, the amount of vibration or shock and others. These factors must be considered before choosing the most appropriate bearing type.<br>Normally, the radial load carrying capacity is increasing as following sequences listed as follows, when bearings with the same ID :<br>[Deep Groove Ball Bearing < Angular Contact Ball Bearings < Cylindrical Roller Bearings < Tapered Roller Bearings < Spherical Roller Bearings] |

## The Selection of Bearing Type

| Items of Analyses | | Methods of selection |
|---|---|---|
| Rotating speed | The bearing type which suitable for the mechanical rotations. [the limit valor of rotating speed is indicated by limiting speed (rpm) whose figures are provide in the bearing dimension tables.] | The limit speed of the bearing is not only determined by the bearings type but also limited by bearing dimensions, cage type, precision, load carrying conditions, and lubrication methods. These factors must be considered when selecting bearings. The following bearings are applied for high speed rotation: [Deep Groove Ball Bearings, Angular Contact Ball Bearings, Cylindrical Roller Bearings] |
| Running Accuracy | Those can satisfy the running accuracy requirements. [The dimensional accuracy and running accuracy have been standardized according to national standards (GB)in bearing types.] | Machine tool spindles, gas turbines and control machines entail high rotation precision, high speed and low friction. Bearings with precision degree 5 or over should be applied in the cases. Normally the following bearings are applied: [Deep Groove Ball Bearings, Angular Contact Ball Bearings, Cylindrical Roller Bearings] |
| Rigidity | Those can satisfy the rigidity of mechanical shaft system. [When bearing carrying load, the contact surface between the rolling elements an the raceways can have elastic deformation. "High rigidity" means such elastic deformation shall occurs in smaller amount.] | |



| Items of Analyses | | Methods of selection |
|---|---|---|
| The relative leaning of the inner ring and outer ring | Reason of leading to the relative leaning of the inner ring and outer ring must be analyzed (such as the load - induced bending of the shaft, poor precision of the shaft and housing or mounting error), and the bearings that fit these conditions should be chosen. [The permissible sloping angle is indicated in the notes to the tables of bearing dimensions] | If the relative leaning between the inner ring and outer ring is too big, the inside load thereof shall do harm to the bearings. So bearing types that can carry this leaning should be chosen. Normally, the allowable sloping angle increased with the following order: [Cylindrical Roller Bearings, Tapered Roller Bearing, Deep Groove Ball Bearings (Angular Contact Ball Bearings), Thrust Ball (Spherical Roller) Bearings] |
| Mounting and dismounting | Check the frequency and methods of mounting and dismounting of the bearings regularly. | If mounting and dismounting frequently, choosing Cylindrical roller bearings with separable inner ring and outer ring, needle roller bearings and tapered roller bearings is comparatively convenient. With adapter or withdrawal sleeve, self-aligning ball bearing with tapered bore and spherical roller bearings with tapered bore are convenient for mounting and dismounting. |

## The Selection of bearing Collocation

Normally, the shaft is supported by two bearings in radial and axial directions. At the moment , one side of the bearings is called the fix-end bearing which carries the loads both in radial ans. The other one is called the free-end bearing that only carries the radial load and the bearing can comparatively move in the axial direction in order to solve the problems of expansion of the shaft caused by changed in the temperature and the clearance error in mounting.

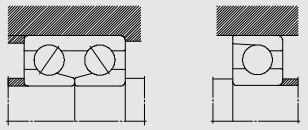
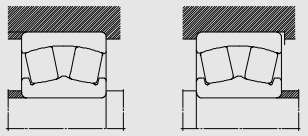
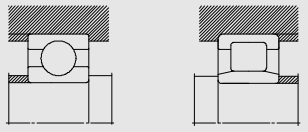
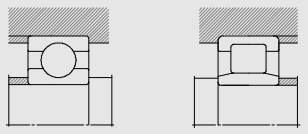
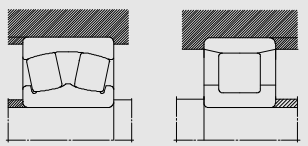
For the fix-end bearing, it must be chosen from which the axial movement can be prevented. For the free-end bearing, it must be chosen to use its sliding surface to make axial movement (such as cylindrical roller bearings) or use its mounting surface to move (such as radial ball bearings). On the comparatively short shaft, if there are no differences between the two bearings, the bearings that only move in the fixed single axial direction (such as radial thrust ball bearings) are preferable.

Bearings on the fixing end and the free end

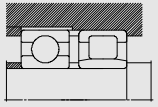
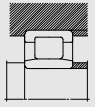
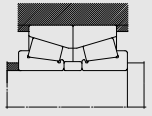
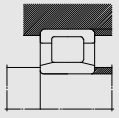
| Content | | Applicable bearing types |
|---|---|---|
| Bearings onthe fixed end | Fix the bearing in the axial direction.<br>Choose bearings that can carry both the radial load and the axial load.<br>In order to carry double-direction axial load, strength must be considered according to the amount of the axial load while mounting. | Deep groove ball bearings<br>Combined angular contact ball bearings<br>Self-aligning ball bearings<br>Cylindrical roller bearings with flanges (NUP and NH types.)<br>Double-row tapered roller bearings<br>Spherical roller bearings |
| Bearings on the free end | The bearing must adapt to the shaft expansion caused by the changes in temperature while working and adjust the bearing position in the axial direction.<br>Only the bearing with separable inner ring and outer ring that can carry radial load should be chosen.<br>With non-separable bearings, there should be a clearance between the outer ring and housing in order to adapt the bearing to the shaft expansion in the axial direction.<br>Sometimes, the adaptation is achieved with the contact surface between the shaft and the inner ring. | Separable cylindrical roller bearings (NU or N type)<br>Non-separable types<br>Deep groove ball bearings<br>Combined angular contact ball bearings (back-to-back arrangement)<br>Double-row angular contact ball bearings<br>Self-aligning ball bearings<br>Double-row tapered roller bearings (3700 type)<br>Spherical roller bearings |
| Regardless of fixed end or free end | When the distance between the tow bearings is small, and the effects of shaft expansion are not important, two angular contact ball bearings or tapered roller bearings that can carry axial load can be used together in face-to-face or back-to-back arrangement.<br>Use screw nut or filling piece to adjust the axial clearance after mounting. | Deep groove ball bearings<br>Angular contact ball bearings<br>Self-aligning ball bearings<br>Cylindrical roller bearings (NJ and NF types)<br>Tapered roller bearings<br>Spherical roller bearings |
| Vertical shaft | Bearings that can carry both radial load and axial load should be chosen for the fixing end. If the axial load is too big, use the combination of thrust bearings and radial bearing.<br>Similarly, only bearings that can carry radial load should be used to adapt to the shaft expansion. | For fixed end<br>Combined angular contact ball bearing<br>(back-to-back arrangement)<br>Double-row tapered roller bearings (3700 type)<br>Combined thrust bearing and radial bearing arrangements |

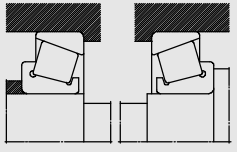
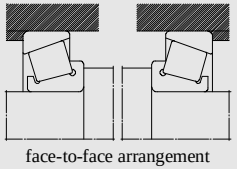


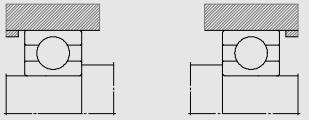
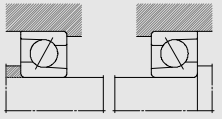
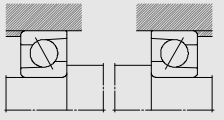
## The Specification of Bearing Collocation

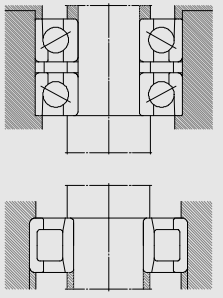
| Bearing collocation | | Application abstracts | Application position |
|---|---|---|---|
| Fixed-end | Free-end | | |
|  | | ·Suitable for carrying larger axial load in double directions<br>·Use the stacking mount angular contact ball bearing to replace double-row angular contact ball bearing in the fixing-end. | Worm and gear<br>Reducer |
|  | | ·Suitable for the situation of mounting error and shaft deflection.<br>·Not only can carry large radial load, but also can carry the axial load with certain limits | Rolling mill<br>Reducer of table rolls<br>Walking wheel of bridge crane |
|  | | ·Wide applied in high speed rotation.<br>·Not suitable for the situation that shaft deflection and bearing eccentricity might happen. | Medium-sized motor<br>Air-blower |
|  | | ·Suitable for the situation of high speed rotation, heavy axial load or shock load.<br>·Suitable for the interference fit required for inner ring and outer ring, because of separable bearings.<br>·Not suitable for the situation that shaft deflection and bearing eccentricity might happen. | Main electric motor of railway vehicle |
|  | | ·Suitable for the situation that the axial load is not very large.<br>·Suitable for the interference fit required for inner ring and outer ring | Calendar roll of papermaking<br>Vehicle shaft of Diesel locomotive |

## The Specification of Bearing Collocation

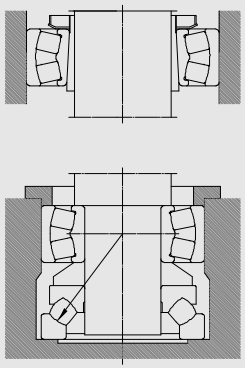
| Bearing collocation | | Application abstracts | Application position |
|---|---|---|---|
| Fixed-end | Free-end | | |
|  |  | ·Suitable for the high speed rotation and the situation that the radial load is large and the axial load exists at the same time<br>·In order to make deep groove ball bearings free from radial load, there is a gap between outer ring and housing. | Transmission of diesel locomotive |
|  |  | ·Suitable for carrying large load or shock load<br>·This application requires the high rigidity of the fixing-end and bearings are mounted in back-to-back arrangement and pre-loaded<br>·This application also requires to improve the precision of shaft and housing and reduce mounting error | Rolling mill<br>Lathe spindle |

| Bearing collocation | Application abstracts | Application position |
|---|---|---|
| Regardless of fix-end or free-end | | |
|  <br>back-to-back arrangement<br>  <br>face-to-face arrangement | ·Suitable for carrying large load or shock load<br>·Suitable for improving the rigidity of shaft through pre-loading<br>·Back to back arrangement is in order to carry torque.<br>·Face-to-face arrangement is convenient for mounting when inner ring requires interference fit. Suitable for the situation of mounting error<br>·Pay attention to the adjustment of pre-load when pre-load is applied. | Reducer<br>Axle shaft of automobile |

| Bearing collocation | Application abstracts | Application position |
|---|---|---|
| Regardless of fix-end or free-end | | |
|  | ·Normally used in small-size mechanisms or for carrying small load<br>·When applying pre-load, a spring or shim, the thickness of which has been adjusted, can be used on one side of outer ring end face | Small-sized motor<br>Small-sized reducer<br>Small-sized pump |
|  <br>back-to-back arrangement<br>  <br>face-to-face arrangement | ·In order to improve the rigidity of shaft through pre-load application. Widely used in the situation of high rotation speed and large axial load.<br>·Back-to-back arrangement is fit for carrying torque.<br>·When applying pre-load, a spring or shim, the thickness of which has been adjusted, can be used on one side of outer ring end face | Machine tool spindle |

| Bearing collocation | Application abstracts | Application position |
|---|---|---|
| Vertical shaft | | |
|  | ·Use stacking mount angular contact ball bearing in fixing end, using cylindrical bearing in free end. Suitable for high speed rotation. | Vertical motor<br>Vertical pump |

## The Specification of Bearing Collocation

| Bearing collocation<br>Vertical shaft | Application abstracts | Application position |
|---|---|---|
|  | ·Suitable for low speed, heavy load and the axial load is greater than radial load.<br>·Suitable for the situation that can generate the bending of shaft and eccentricity. | Central shaft of crane<br>Vertical pump |

## The Selection of Bearing Dimension

### Bearing Life

When bearing rotating while carrying load, material fatigue shall happen even under normal operating conditions due to the effects of alternating load on the raceways of rings and the rolling surface of the rolling elements, and it will cause scaling damage to the raceways and the sliding surface (called flaking of spalling).

The total number of rotations before such scaling happens is called the "(Fatigue) life" of the bearing.

The bearing (fatigue) life varies greatly, even if those with the same structure, dimensions, materials and manufacturing processes under the same rotation conditions.

Because the material fatigue is of diversity, it must be considered statistically. Suppose a group of bearings of the same specification are operated individually under the same working conditions. After a certain period of time, the total rotation which 90% bearing not occurs rolling fatigue is called "Bearing's basic rating life" (namely, the life with 90% reliability). When the bearings rotate at constant speed, the life can also be expressed with total rotation time.

In fact, however, other damage or impair may happen besides fatigue scaling.

The damage of impair may be avoided by choosing the correct bearing, mounting method and lubrication.

### Basic Dynamic Load Rating

Basic dynamic load rating indicates the fatigue resistant capacity (i.e. load carrying capacity). It indicates that with pure radial load (for radial bearings) applied, and under the condition of inner ring rotating and fixed outer ring (or vice versa), the basic rating life can reach 1 million rotations. The basic load rating for radial bearings and thrust bearing is called radial basic load rating respectively, indicated by Cr and Ca, whose values are provided in the bearing dimension tables.

### Basic life rating

Formula (1) shows the relations among basic dynamic load rating, equivalent dynamic load raign and basic life rating.When the bearing rotates in constant speed , it is more convenient to express the life rating in time, as shown in formula (2).

In addition, for railway vehicles or automobiles, it is more common to use distance of movement (km) to express the life of relative bearings, as shown in formula (3).

(Total rotation number)

$$L_{10}=\left(\frac{C}{P}\right)^{p} \quad \cdots\cdots\cdots\cdots (1)$$

(Time)

$$L_{10h}=\left(\frac{10^6}{60n}\right)^{p} \quad \cdots\cdots\cdots\cdots (2)$$

(Distance of movement)

$$L_{10s}=\pi D L_{10} \quad \cdots\cdots\cdots\cdots (3)$$

Where

$L_{10}$ basic life rating, 106 rotations

$L_{10h}$ basic life rating, h

$L_{10s}$ basic life rating, km

P: equivalent dynamic load rating, N{kgf}

C: basic dynamic load rating, N{kgf}

n: rotation speed, rpm

p: life index, rpm

ball bearing·····P=3 $10/3$

roller bearing·····P=

D: diameter of the wheel or tire, mm

Therefore, we assume the working conditions of the bearing are: equivalent dynamic load is P, rotation speed is n, then the basic dynamic load rating that satisfies the design requirement of the bearing can be calculated with formula (4). From the dimension tables, we can select the bearing that can meet the requirement of value C, then we can define the dimension of the bearing.

$$C=P\left(L_{10h}x\right)\frac{60n}{10^6}^{1/p} \quad \cdots\cdots\cdots\cdots (4)$$

Use life factor (fh) and speed factor (fn) and get the following formula:

$$L_{10h}=500fh^{p} \quad \cdots\cdots\cdots\cdots (5)$$

Life factor:

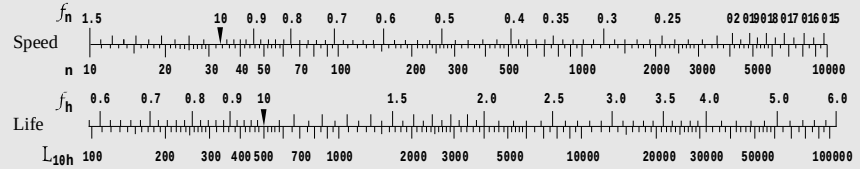
$$fh=fn\frac{C}{P} \quad \cdots\cdots\cdots\cdots (6)$$

Speed factor:

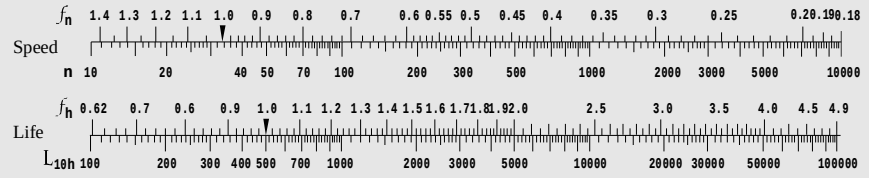
$$fn = \left(\frac{10^6}{500x60n}\right)^{1/p} = (0.03n)^{1/p} \quad \cdots\cdots\cdots\cdots\cdots (7)$$

We can easily get fh, fn and $L_{10h}$ with the calculated figure [Reference figure].

[Ball bearing]




[Roller bearing]




## The Modified Basic Dynamic Load Rating Based on Temperature and Stabilizing Treatment of Bearing

When applied in high temperature, the internal microstructure in the material shall change and the hardness shall be decreased, while the basic dynamic load rating shall be smaller than in normal temperature. And if the changed microstructure in the material shall not recover even when the bearing is put back in the normaltemperature again.

Therefore, under high temperature conditions, the basic dynamic load ratings must be multiplied by the temperature factors listed in table 1 for correction purpose.

Table 1 Temperature factors

| Working temperature℃ | 125 | 150 | 175 | 200 | 250 |
|---|---|---|---|---|---|
| Temperature factor (fT) | 1 | 1 | 0.95 | 0.90 | 0.75 |

If working in the temperature of over 120℃ for a very long time, the dimensions for bearings processed by normal heat treatment shall change greatly, measures must be taken to stabilized the dimensions.

The code names for these stabilization measures and the applicable temperature ranges are provided in Table 2. The hardness of the bearing, however, shall be reduced with the above treatment. Sometimes, the basic dynamic load rating will also decrease.

Table 2 Measures for dimensional stabilization

| Code name | Relative temperature range |
|---|---|
| $S_0$ | Over 100℃ to 150℃ |
| $S_1$ | Over 150℃ to 200℃ |
| $S_2$ | Over 200℃ to 250℃ |

## Correction of Life Rating

Formula (1) shows the basic life rating ($L_{10h}$) of 90% reliability. Based on different applications, high-reliability life with reliability being over 90% will be required under come conditions.

In addition, special materials sometimes shall elongate the bearing life, even lubrication or differences in working conditions can have effects on bearing life. The bearing life after taking these factors into consideration is called the corrected life rating, which is calculated with formula (8).

$$L_{na} = a_1 a_2 a_3 L_{10} \quad \cdots\cdots\cdots\cdots\cdots (8)$$

Where ,

$L_{na}$: corrected life rating, $10^6$ revolutions

(i.e. the life with 100-n% reliability (n% loss rate) after taking the bearing features and operating conditions into consideration.)

$L_{10}$: basic life rating ,$10^6$ rotations (reliability of 90%)

$a_1$: Reliability life correction factor ····· referring to (1)

$a_2$: Special raw-material performance life correction factor····· referring to (2)

$a_3$: Bearing performance correction factor in application condition····· referring to (3)

Note: When selecting bearing dimensions according reliability over 90% Lna,shall pay special attention to the strength of shaft and housing.

### (1) Reliability factor $a_1$

When calculating the corrected life rating for those with reliability of greater than 90% (i.e. the loss if not greater than 10%),factor a1 in Table 3 should be employed.

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Table 3 Reliability factor $a_1$

| Reliability, % | Lna | $a_1$ |
|---|---|---|
| 90 | $L_{10a}$ | 1 |
| 95 | $L_{5a}$ | 0.62 |
| 96 | $L_{4a}$ | 0.53 |
| 97 | $L_{3a}$ | 0.44 |
| 98 | $L_{2a}$ | 0.33 |
| 99 | $L_{1a}$ | 0.21 |

### (2) Special raw-material performance life correction factor $a_2$

The bearing characteristics relate to service life may vary with the bearing materials (type of steel, quality), processing technique and design. In these cases, the factor a1 should be used for correction purpose.

If the material is high quality vacuum degassed

bearing steel or with quite minimum amount of inclusion , $a_2$>1
For normal bearing material steel, $a_2$=1.

(3) Bearing performance correction factor in application condition $a_3$
This factor a3 is used for correction purpose when the bearings are applied in conditions (especially lubrication) that shall affect the service life of the bearings.
Can select $a_3$ =1 under normal lubricating conditions, and choose $a_3$ >1 if in excellent conditions.
Under the following circumstances ,choose a3 <1:

- If the kinematic viscosity of the lubricant decreases during the working time of the bearing:
  Ball bearings·····less than 13mm²/s {13ces}
  Roller bearings·····less than20mm²/s {20ces}
- When the rotational speed is extremely low, the product of the pitch diameter of the rolling elements and the rotational speed is less than 10000.
- When the lubricant mix with impurities.
- Large relative lean between inner ring and outer ring

[Note] When the hardness decreases under high temperature circumstance circumstances, the basic dynamic load rating must be corrected (see Table 1)

## The Bearing LIfe Required by the Machinery

The requirement for bearing life must be reasonably defined. If the requirement is too high, the dimensions must be too big and the machine shall be respectively too heavy that lead to the diseconomy of the machine. If the requirement is too low, however, the bearing must be replaced very often. Normally, the bearing life may be defined according to the period of overhaul. The recommended life values for various bearings are provided in Table 4.

Table 4 Required Bearing Life (for reference)

| Application conditions | Machines | Time (h) |
|---|---|---|
| Running in short time or discontinuously | Household electronic appliances, electrical tools, agricultural machines, winding engines | 4000-8000 |
| Not usually used but running with high reliability | Air conditioner motors, construction, machines, belt machines, elevators | 8000-12000 |
| Used discontinuously but running for long time periods | Mill roll necks, small motors, cranes | 8000-12000 |
| | General industrial motors, general gear devices | 12000-20000 |
| | Machine tools, vibration screens, crushers | 20000-30000 |
| | Compressors, pumps, important gear devices | 40000-60000 |
| Normally running over 8 hours daily or continuously for long time periods | Automatic elevators | 12000-20000 |
| | Centrifugal machines, air-conditioning equipment, air-blowers, wood processing machines, shafts for railway vehicles | 20000-30000 |
| | Large motors, mining elevators, main motors for railway vehicles, locomotives | 40000-60000 |
| | Paper-making machines | 100000-200000 |
| 24-hour continuous running without stoppage | Running water equipment, power station equipment, mining drainage works | 100000-200000 |

## Equivalent Dynamic Load

Bearings usually carry the combination of radial load and axial load, and the load conditions are varied, such as the changes in the amount and so on.
Therefore, the actual load can not be directly compared with its dynamic load rating.
In this case, it is necessary to convert the actual load into a perceived load with definite amount and direction that passes the bearing center. The bearing with this perceived load shall have the same life as with actual load and the same rotational speed.
This perceived load after conversion is called the equivalent dynamic load, indicated by P.

## The calculation of equivalent dynamic load

the equivalent dynamic load of the radial bearings an thrust bearings ($\alpha \neq 90^\circ$C ) can be calculated with formula below:

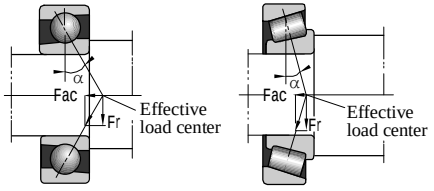
$$P=XF_r+YF_a \quad \cdots\cdots\cdots\cdots (9)$$

Where,
P: equivalent dynamic load, n {kgf}

For radial bearings, it is expressed as Pr: radial dynamic load
For thrust bearings, it is expressed as Pa: axial dynamic load

Fr: radial load, N {kgf}
Fa: axial load, N {kgf}
X: radial load factor
Y: axial load factor

(Load factors X and Y are given in the baring dimension tables.)
For single-row radial bearings,
when $Fa/Fr \leqslant e$, let X=1, Y=0
Hence, in this cage equivalent dynamic load Pr=Fr
[e indicates the critical value which is given in the bearing dimension tables.]
For single-row angular contact ball bearings and tapered roller bearings, as shown in Figure 1, since the axial component of force shall happen when the bearing carries radial load, normally two bearings are used in face-to-face or back-to-back arrangements.




[The location dimensions of effective load center are listed in the bearing dimension table]

Figure 1 Axial component of force

The axial component of force can be calculated with the following formula:

$$Fac = \frac{Fr}{2Y} \quad \cdots\cdots\cdots\cdots\cdots \quad (10)$$

The calculation method for the equivalent dynamic load of these bearings when they carry radial load and outside axial load are shown in Table 5.

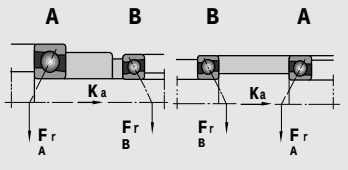
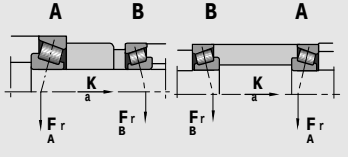
Thrust ball bearings with $\alpha$=90˚C can only carry axial load, therefore the equivalent dynamic load Pa=Fa.

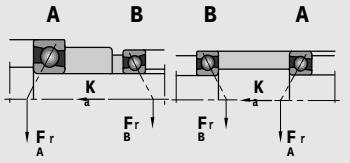
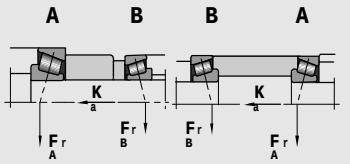
The equivalent dynamic load of thrust spherical roller bearing can be calculated with following formula:

$$Pa=Fa+1.2Fr \quad \cdots\cdots\cdots\cdots\cdots \quad (11)$$

Where, $\frac{Fr}{Fa} \leqslant 0.55$

Table 5 Calculation of equivalent dynamic load for two single-row angular contact ball bearings or tapered roller bearings matched in face-to-face or back-to back arrangement

| Bearings collocations | | Load conditions | Bearing | Axial load | Equivalent dynamic load |
|---|---|---|---|---|---|
| Back Collocation | Face Collocation | | | | |
|  | | $\frac{F_{rB}}{2Y_B}+K_a \geq \frac{F_{rA}}{2Y_A}$ | Bearing A | $\frac{F_{rB}}{2Y_B}+K_a$ | $P_A=XF_{rA}+Y_A\left(\frac{F_{rB}}{2Y_B}+K_a\right)$<br>$P_A<F_{rA}$ When, let $P_A=F_{rA}$ |
| | | | Bearing B | —— | $P_B=F_{rB}$ |
|  | | $\frac{F_{rB}}{2Y_B}+K_a < \frac{F_{rA}}{2Y_A}$ | Bearing A | —— | $P_A=F_{rA}$ |
| | | | Bearing B | $\frac{F_{rA}}{2Y_A}-K_a$ | $P_B=XF_{rB}+Y_B\left(\frac{F_{rA}}{2Y_A}-K_a\right)$<br>$P_B<F_{rB}$ When, let $P_B=F_{rB}$ |

| Bearings collocations | | Load conditions | Bearing | Axial load | Equivalent dynamic load |
|---|---|---|---|---|---|
| Back Collocation | Face Collocation | | | | |
|  | | $\frac{F_{rB}}{2Y_B} \leqslant K_a+\frac{F_{rA}}{2Y_A}$ | Bearing A | —— | $P_A=F_{rA}$ |
| | | | Bearing B | $\frac{F_{rA}}{2Y_A}+K_a$ | $P_B=XF_{rB}+Y_B\left(\frac{F_{rA}}{2Y_A}+K_a\right)$<br>$P_B<F_{rB}$ When, let $P_B=F_{rB}$ |
|  | | $\frac{F_{rB}}{2Y_B} > \frac{F_{rA}}{2Y_A}+K_a$ | Bearing A | $\frac{F_{rB}}{2Y_B}-K_a$ | $P_A=XF_{rA}+Y_A\left(\frac{F_{rB}}{2Y_B}-K_a\right)$<br>$P_A<F_{rA}$ When, let $P_A=F_{rA}$ |
| | | | Bearing B | —— | $P_B=F_{rB}$ |

Note:

1. Applicable to situations where the internal clearance and pre-load equal 0 when the bearing is running.
2. The radial load is positive although it is in the opposite direction of the arrow in the above figure.

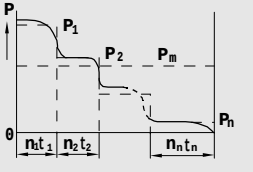
## The average equivalent dynamic load when the load changes

When the bearing carries a changing load in either amount or direction, it is necessary to calculate the average equivalent dynamic load which makes the bearing have the same life under actual changing circumstances.

The calculation methods for average equivalent dynamic load in changing situations are shown in (1) to (4).

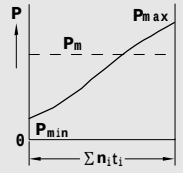
In addition, as shown in Figure 5, the average equivalent dynamic load can be calculated with formula (16) when the static load rotational load are carried simultaneously.

(1) Stepped changes



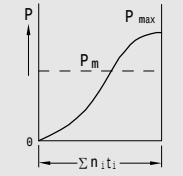

$$P_m=\sqrt[p]{\frac{P_1^p n_1t_1+P_2^p n_2t_2+\cdots\cdots+P_n^p n_ntn}{n_1t_1+n_2t_2+\cdots\cdots n_ntn}} \quad \cdots\cdots\cdots (12)$$

(2) Monotonous changes



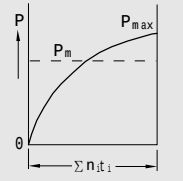

$$P_m = \frac{P_{min} + 2P_{max}}{3} \cdots\cdots (13)$$

(3) Sine changes




$$P_m = 0.68 P_{max} \cdots\cdots (14)$$

(4) Sine changes
(Upper part of sine curve)




$$P_m = 0.75 P_{max} \cdots\cdots (15)$$

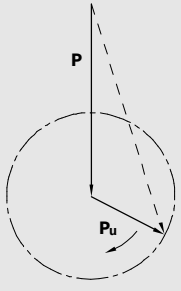
From (1) tp (4),

$P_m$: Average Equivalent Dynamic Load, N
$P_1$: {kgf}
AEDL when rotational speed = n1 and effective time = t1, N {kgf}
$P_2$: AEDL when rotational speed = n2 and effective time = t2, N {kgf}
$P_n$: AEDL when rotational speed = nn and effective time = tn, N {kgf}
$P_{min}$: the minimum AEDL, N {kgf}
$P_{max}$: the maximum AEDL, N {kgf}
$\Sigma n_i t_i$: tq~ti the total rotation number within the time
P: life index
For ball bearings, p=3
For roller bearings, p= 10/3

(Reference) Average rotation speed ($n_m$)can be calculated with the following formula:

$$n_m = \frac{n_1 t_1 + n_2 t_2 + \cdots\cdots + n_n t_n}{t_1 + t_2 + \cdots\cdots t_n}$$

(5) Static load and rotational load working together




$$P_m = f_m (P + P_u) \cdots\cdots (16)$$

Where,
$P_m$: average equivalent dynamic load, N {kgf}
$f_m$: factor ( Figure 2)
P: static load, N {kgf}
$P_u$: rotational load, N {kgf}

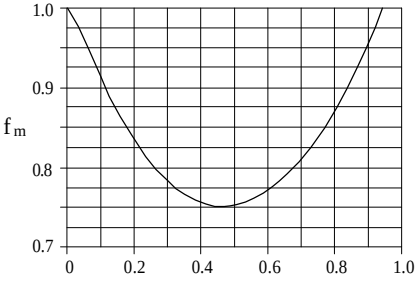



Figure 2 Factor $f_m$

## Basic Static Load Rating

Partial permanent deformation will happen to the contact surfaces of the rolling elements and raceways when the bearing carries too heavy the static load or work at extremely low rotational speed. The amount of deformation shall increase with the growing load and shall affect the normal rotation when it exceeds certain limit.
The basic static load rating means the static load which can produce stress in the center of contact surface between the rolling elements carrying the maximum load and the raceways, the contact stress can be calculated as the following:

- Self-aligning ball bearings
  4600Mpa {469kgf/sq.mm$^2$}
- Other ball bearings
  4200Mpa {429kgf/sq.mm$^2$}
- Roller bearings
  4000Mpa {408kgf/sq.mm$^2$}

The total amount of permanent deformation of the rolling elements and raceway under such stress equaling 0.0001 times of the diameter of the rolling elements.
For radial bearings and thrust bearings, the basic static load rating is called radial basic static load rating and the axial basic static load rating, indicated by Cor and Coa respectively. The values of them are given in the bearings dimension tables.

## Equivalent Static Load

Equivalent static load rating is a perceived load. When the bearing is motionless or rotates at extremely low speed, the contact stress in the center of the surface between the rolling elements carrying maximum load and the raceway under such perceived load shall be the same as that will happen in actual load conditions.
The radial load and axial load passing the bearing central line is used as the equivalent static load rating of radial bearing and axial bearing respectively.
Equivalent static load rating can be calculated with the following formula:
[Radial bearing]……can be calculated by two formula below, choose the larger value.

$$P_{or} = X_o F_r + Y_o F_a \cdots\cdots (17)$$
$$P_{or} = F_r \cdots\cdots (18)$$

[Thrust bearing]

($\alpha \neq **°$)

$$P_{oa} = X_o F_r + F_a \cdots\cdots (19)$$

(However, the accuracy decreased when $F_a < X_o F_a$)

($\alpha = **°$)

$$P_{oa} = F_a \cdots\cdots (20)$$

Where,

$P_{or}$: radial equivalent static load rating, N {kgf}
$P_{oa}$: axial equivalent static load rating, N {kgf}
$F_r$: radial load, N {kgf}
$F_a$: axial load, N {kef}
$X_o$: radial static load fator
$Y_o$: axial static load factor ( Static factor Xo and Yo are given in the bearing dimension tables.)

### Safety Factors

Although the permissible equivalent static load depends on the basic static load rating of the bearing, the use limit of the bearing restricted by the above-mentioned permanent deformation (the amount of partial surfacehollow) will vary with the requirements on the functionality and the application conditions of the bearing.

Therefore, an empirical safety factor is defined in order to analyze the safe level of the basic static load rating.

$$f_s = \frac{C_o}{P_o} \quad \text{..... (21)}$$

Where,

$f_s$: safety factor ( Table 6)
$C_o$: basic static load rating, N {kgf}
$P_o$: equivalent static load, N {kgf}

Table 6 Safety factor

| Application conditions | | fs (minimum) | |
|---|---|---|---|
| | | Ball bearing | Roller bearing |
| Rotating in normal way | High rotational precision | 2 | 3 |
| | Under normal conditions | 1 | 1.5 |
| | With shock load | 1.5 | 3 |
| Rotating rarely (sometimes oscillating) | Under normal conditions | 0.5 | 1 |
| | With shock load or unevenly-distributed load | 1 | 2 |

[Note]: For thrust spherical roller bearings, let fs≥ 4.



## The Preload of Bearing

During working and under the running condition, the bearings usually have proper internal clearance. In order to improve the rigidity or ruing accuracy of bearing under different working conditions, the bearing is preloaded to make it with certain negative internal clearance, i.e. taking some measures to generate certain predeformation among rolling elements, inner ring and outer ring to keep the condition of being pressed between inner ring and outer ring. This process measure is called pretension. It is normally applicable for angular contact ball bearing and tapered roller bearing.

### Purpose of Bearing Preload

To improve the axial and radial positioning accuracy of shaft and reduce the run-out of shaft.
To improve the rigidity of bearing
To avoid the bearing noise generated by vibration and resonance vibration
To keep correct relative position among rolling elements and rings.

### Types of Preload

Radial or axial pretension can be adopted according to different bearing type. The pretension is realized by applying preload between two pcs of bearings and make inner ring and outer ring have relative displacement.

### Positional Preload

In order to fix the relative axial position of bearing and improve the rigidity of bearing

### Constant Pressure Preload

The pretension is realized by a spring. Therefore, pre-pressure can be kept steadily even though the position between bearings may change due to temperature rise or load during operation.

Cylindrical bearing: radial preload.

Thrust bearing: axial preload.

Single-row angular contact ball bearing and tapered roller bearing:

Generally, they're applied axial preload and used with the other bearing of the same type in face-to-face arrangement or back-to-back arrangement.

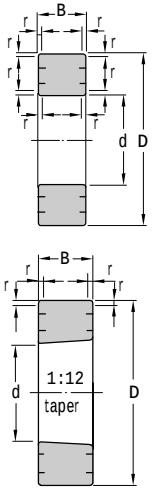
Deep groove ball is usually applied axial load. Normally, preload is adjusted under certain ambient temperature during mounting. (or preset according to this temperature ). During operating, if the temperature rise of shaft is greater than bearing block, the preload will be increased. And the preload amount of face-to-face arrangement increases greater than the preload amount of back-to-back arrangement.

# Bearing Data

## Main Bearing Dimensions

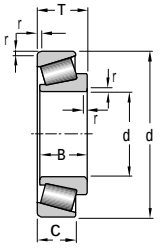
The main dimensions of bearings indicate the boundary dimensions of inner ring, outer ring, width or height and chamfer and others that are used to describe the outline of the bearing. They are the necessary dimensions required for the mounting on the shaft or in the housing. These main dimensions have been standardized by international standard (ISO15). GB307 (main dimensions for rolling bearings) are also based on ISO standards.

The national standards have defined the main dimensions according to types of radial bearings (except the regulations for tapered roller bearings) and thrust bearings. The details are provided in the bearing catalogue.



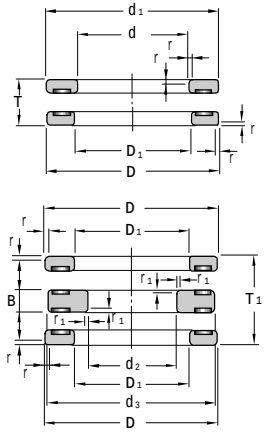

(1) Radial bearing
(Excluding tapered roller bearing)

d: bearing nominal bore diameter
D: bearing nominal outer diameter
B: bearing nominal width
r: inner and outer rings chamfer dimension




(2) Tapered roller bearing

d: bearing nominal bore diameter
D: bearing nominal outer diameter
T: bearing nominal width (assembly width)
B: inner ring nominal width
C: outer ring nominal width
r: inner and outer rings chamfer dimension




(3) Thrust bearing
(single direction, double direction)
Thrust bearing
(Plain housing washer type)

d: Shaft washer nominal bore diameter
$d_1$: Shaft washer nominal outer diameter 2) of inner ring
$d_2$: Central shaft washer nominal bore diameter
$d_3$: Central shaft washer nominal outer diameter 2)
D: Housing washer nominal out diameter
$D_1$: Housing washer nominal bore diameter 1)
T: Nominal height of single direction bearing
$T_1$: Nominal height of double direction bearing
B: Central shaft washer height
r: Shaft washer and housing washer chamfer dimension 1)
$r_1$: Central shaft washer chamfer dimension 1)

[Note]
1). The minimum value is listed in bearing dimension tables
2). The maximum value is listed in bearing dimension tables.

## Bearing Tolerance

Rolling bearing precision class has been standardized and has been classified into 6 levels of P0, P6X, P6, P5, P4 and P2.

The precision level increases beginning from P0. P0 class is applicable for normal purpose. When bearings are working in such conditions or circumstances as described in Table 1, P5 or even higher precision is needed.

Although the above mentioned precision class is made based on the ISO standard, it is named differently in some countries.

Applicable precision classes to all kinds of bearing types and comparisons among different countries' standards are listed in Table 2.

- Dimension precision (relative to axle and housing mounting)
  - Bore diameter, outer diameter, width and permissible deviation of assembly width
  - Permissible deviation of roller group inner and outer inscribed circle diameters
  - Permissible limit value of chamfer dimension
  - Permissible variation of width
  - Permissible deviation and variation of tapered bore
- Rotation precision (relative to rotation object's runout)
  - Permissible deviation and variation of tapered bore
  - Permissible radial and axial runout of inner and ring and outer ring
  - Permissible horizontal runout of inner ring
  - Permissible variation of outer diameter surface leaning slop
  - Permissible raceway thickness variation of thrust bearing

Table 1: Application examples of precision bearing

| Performance requirements | Application | Applicable precision class |
|---|---|---|
| High runout precision of rolling elements is required | Acoustics, video device spindles(video, recorder) | P5,P4 |
| | Radar, paraboloid antenna rotating axle | P4 |
| | Machine tools spindle | P5,P4,P2,ABEC9 |
| | Computer, disc driver spindle | P5,P4,P2,ABEC9 |
| | Roll neck for aluminum foil mill | P5 |
| | Bearings for multi-process rolling mills | P4 |
| High rotation speed | Superchargers | P5,P4 |
| | Jet propelled generator spindle, auxiliary machine | P5,P4 |
| | Centrifugal separator | P5,P4 |
| | Hydraulic natural gas pumps | P5 |
| | Turbine molecular pump spindle, protection bearing | P5,P4 |
| | Machine tool spindle | P5,P4,P2,ABEC9 |
| | Tensioners | P5,P4 |
| Low friction and small friction variation is required | Devices for control (synchronism motor, servo motor, gyro gimbal) | P4,ABMA 7P |
| | Meters and instruments | P5 |
| | Machine tool spindles | P5,P4,P2,ABEC9 |

Table 2: Bearing type and applicable precision class

| Bearing type | | Applicable standard | Applicable precision class | | | | | |
|---|---|---|---|---|---|---|---|---|
| Deep groove ball bearings | | GB307 | P0 | — | P6 | P5 | P4 | P2 |
| Angular contact ball bearings | | | P0 | — | P6 | P5 | P4 | P2 |
| Self-aligning ball bearing | | | P0 | — | — | — | — | — |
| Cylindrical roller bearings | | | P0 | — | P6 | P5 | P4 | P2 |
| Tapered roller bearings | Metric series (single row) | GB307 | P0 | P6X | P6 | P5 | P4 | — |
| | Metric series | SB/T53419-94 | P0 | — | — | — | — | — |
| | (double-row, four-row) inch series | SB/CO/T10-89 | Class4 | — | Class2 | Class3 | Class0 | Class0 |
| Spherical roller bearings | | GB307 | P0 | — | — | — | — | — |
| Thrust ball bearings | | | P0 | — | P6 | P5 | P4 | — |
| Spherical thrust roller bearings | | | P0 | — | — | — | — | — |



Tolerance symbols

Boundary dimension symbols (Figure 1)

d: Nominal bearing bore diameter

d1: Basic diameter of basic tapered hole on theoretical big end

△ds: Deviation of single bore diameter

△dmp: Deviation of mean inner diameter on the single plain (for tapered hole, △dmp only refers to theoretical small end of inner bore)

△d1mp: Mean inner diameter deviation of basic tapered hole on theoretical big end

△dp: Amount of change of inner diameter on the single radial plain

Vdmp: Mean inner diameter amount of change (only suitable for cylindrical bore)

α: Nominal half taper angle

D: Nominal bearing outer diameter

D1: Nominal outer diameter of outer ring's flange

△Ds: Single outer diameter deviation

△Dmp: Mean outer diameter deviation on the single plain

△D1s: Single outer diameter deviation of outer ring's flange

△Dp: Outer diameter variation on the single radial plain

△Dmp: Mean variation of outer diameter

B: Inner ring nominal width

△Bs: Single width deviation of inner ring

VBs: Width variation of inner ring

C: Nominal width of outer ring

C1: Nominal width of outer ring flange

△Cs: Single width deviation of outer ring

△C1s: Single width deviation of outer ring flange

VCs : Width variation of outer ring

VC1s: Width variation of outer ring flange

Kia: Radial runout of assembled bearing inner ring

Kea: Radial runout of assembled bearing outer ring

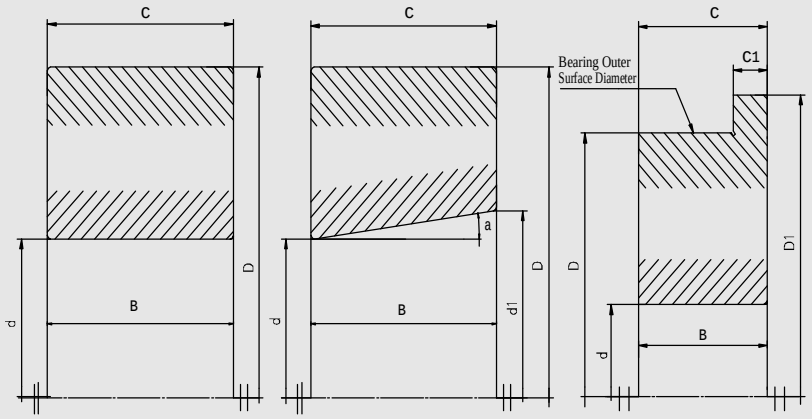
Sd: Inner ring reference face (back face) runout with bore

SD1: Inclination variation of outer diameter generatrix with reference face (back face)

Sia: Inclination variation of outer diameter generatrix to the flange back face

Sea: Runout of assembly bearing's inner ring end face (back face) to the race way

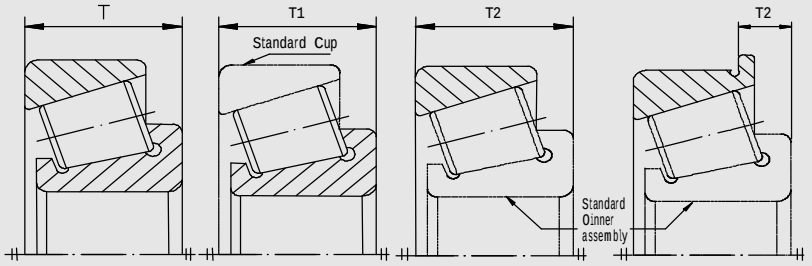
Sea1: Runout of flange back face to raceway of assembly bearings




Picture 1 the symbols of boundary dimension

Picture 2 Appended symbols for tapered roller bearings

T: Nominal width of the bearing
△Ts: Deviation of actual bearing assembly width
T1: Effective width of cone assembled with master cup
△T1s: Deviation of single width of cone assembled with master cup
T2: Effective width of cone assembled with master cup
△T2s: Deviation of single width of cup assembled with master cone




Picture 2 Appended symbols for tapered roller bearings

Tolerance value
Radial bearing (excluding tapered roller bearings)
Tolerance of P0 (Table 3, Table 4)

Table 3: Tolerance of Class P0 inner ring μm

| d mm | | △ dmp | | Vdp 2) | | | Vdmp | Kia | △ Bs | | | VBs |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Diameter series | | | | | All | Normal | Revision 3) | |
| | | | | 9 | 0、1 | 234 | | | | | | |
| Over | To | High | Low | max | | | max | max | High | Low | | |
| 0.6 1) | 2.5 | 0 | -8 | 10 | 8 | 6 | 6 | 10 | 0 | -40 | - | 12 |
| 2.5 | 10 | 0 | -8 | 10 | 8 | 6 | 6 | 10 | 0 | -120 | -250 | 15 |
| 10 | 18 | 0 | -8 | 10 | 8 | 6 | 6 | 10 | 0 | -120 | -250 | 20 |
| 18 | 30 | 0 | -10 | 13 | 10 | 8 | 8 | 13 | 0 | -120 | -250 | 20 |
| 30 | 50 | 0 | -12 | 15 | 12 | 9 | 9 | 15 | 0 | -120 | -250 | 20 |
| 50 | 80 | 0 | -15 | 19 | 19 | 11 | 11 | 20 | 0 | -150 | -380 | 25 |
| 80 | 120 | 0 | -20 | 25 | 25 | 15 | 15 | 25 | 0 | -200 | -380 | 25 |
| 120 | 180 | 0 | -25 | 31 | 31 | 19 | 19 | 30 | 0 | -250 | -500 | 30 |
| 180 | 250 | 0 | -30 | 38 | 38 | 23 | 23 | 40 | 0 | -300 | -500 | 30 |
| 250 | 315 | 0 | -35 | 44 | 44 | 26 | 26 | 50 | 0 | -350 | -500 | 35 |
| 315 | 400 | 0 | -40 | 50 | 50 | 30 | 30 | 60 | 0 | -400 | -630 | 40 |
| 400 | 500 | 0 | -45 | 56 | 56 | 34 | 34 | 65 | 0 | -450 | - | 50 |
| 500 | 630 | 0 | -50 | 63 | 63 | 38 | 38 | 70 | 0 | -500 | - | 60 |
| 630 | 800 | 0 | -75 | - | - | - | - | 80 | 0 | -750 | - | 70 |
| 800 | 1000 | 0 | -100 | - | - | - | - | 90 | 0 | -1000 | - | 80 |
| 1000 | 1250 | 0 | -125 | - | - | - | - | 100 | 0 | -1250 | - | 100 |
| 1250 | 1600 | 0 | -160 | - | - | - | - | 120 | 0 | -1600 | - | 120 |
| 1600 | 2000 | 0 | -200 | - | - | - | - | 140 | 0 | -2000 | - | 140 |

[Note]: 1) 0.6mm is included.
2) The values are not given for bearing diameter of series 7 and 8.
3) Suitable for inner ring or outer ring of a single bearing in matched pair or stacking mount, also suitable for inner ring of bearings with taper hole d*50mm.

Table 4: Tolerance of Class P0 outer ring μm

| D mm | | △Dmp | | VDp 2)4) | | | | VDmp 4) | Kea | △Cs △C1s 5) | VCs VC1s 5) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Open bearing | | | Capped bearing | | | | | |
| | | | | 9 | 0、1 | 2、3、4 | 2、3、4 | | | | | |
| Over | To | High | Low | max | | | | max | max | High | Low | max |
| 2.5 1) | 6 | 0 | -8 | 10 | 8 | 6 | 10 | 6 | 15 | | | |
| 6 | 18 | 0 | -8 | 10 | 8 | 6 | 10 | 6 | 15 | | | |
| 18 | 30 | 0 | -9 | 12 | 9 | 7 | 12 | 7 | 15 | | | |
| 30 | 50 | 0 | -11 | 14 | 11 | 8 | 16 | 8 | 20 | | | |
| 50 | 80 | 0 | -13 | 16 | 13 | 10 | 20 | 10 | 25 | | | |
| 80 | 120 | 0 | -15 | 19 | 19 | 11 | 26 | 11 | 35 | | | |
| 120 | 150 | 0 | -18 | 23 | 23 | 14 | 30 | 14 | 40 | | | |
| 150 | 180 | 0 | -25 | 31 | 31 | 19 | 38 | 19 | 45 | Same as the △Bs andVBS of the samebearing I.D. | | |
| 180 | 250 | 0 | -30 | 38 | 38 | 23 | - | 23 | 50 | | | |
| 250 | 315 | 0 | -35 | 44 | 44 | 26 | - | 26 | 60 | | | |
| 315 | 400 | 0 | -40 | 50 | 50 | 30 | - | 30 | 70 | | | |
| 400 | 500 | 0 | -45 | 56 | 56 | 34 | - | 34 | 80 | | | |
| 500 | 630 | 0 | -50 | 63 | 63 | 38 | - | 38 | 100 | | | |
| 630 | 800 | 0 | -75 | 94 | 94 | 55 | - | 55 | 120 | | | |
| 800 | 1000 | 0 | -100 | 125 | 125 | 75 | - | 75 | 140 | | | |
| 1000 | 1250 | 0 | -125 | - | - | - | - | - | 160 | | | |
| 1250 | 1600 | 0 | -160 | - | - | - | - | - | 190 | | | |
| 1600 | 2000 | 0 | -200 | - | - | - | - | - | 220 | | | |
| 2000 | 2500 | 0 | -250 | - | - | - | - | - | 250 | | | |

[Note]:

1) 2.5mm is included.
2) The values are not given for bearing diameter of series 7 and 8.
3) The values are not given for bearing diameter of series 9, 0 and 1.
4) Suitable for the situation that inner or outer snap ring is not mounted or dismounted.
5) Only applicable for deep groove bearings.

Tolerance of P6 (Table 5, Table 6)

Table 5: Tolerance of Class P6 inner ring μm

| d mm | | △dmp | | Vdp 2) | | | Vdmp | Kia | △Bs | | | VBs |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Diameter series | | | | | All | Normal | Revision 3) | |
| | | | | 9 | 0、1 | 2 3 4 | | | | | | |
| Over | To | High | Low | max | | | max | max | High | Low | | max |
| 0.6 1) | 2.5 | 0 | -7 | 7 | 9 | 5 | 5 | 5 | 0 | -40 | - | 12 |
| 2.5 | 10 | 0 | -7 | 7 | 9 | 5 | 5 | 6 | 0 | -120 | -250 | 15 |
| 10 | 18 | 0 | -7 | 7 | 9 | 5 | 5 | 7 | 0 | -120 | -250 | 20 |
| 18 | 30 | 0 | -8 | 8 | 10 | 6 | 6 | 8 | 0 | -120 | -250 | 20 |
| 30 | 50 | 0 | -10 | 10 | 13 | 8 | 8 | 10 | 0 | -120 | -250 | 20 |
| 50 | 80 | 0 | -12 | 15 | 15 | 9 | 9 | 10 | 0 | -150 | -380 | 25 |
| 80 | 120 | 0 | -15 | 19 | 19 | 11 | 11 | 13 | 0 | -200 | -380 | 25 |
| 120 | 180 | 0 | -18 | 23 | 23 | 14 | 14 | 18 | 0 | -250 | -500 | 30 |
| 180 | 250 | 0 | -22 | 28 | 28 | 17 | 17 | 20 | 0 | -300 | -500 | 30 |
| 250 | 315 | 0 | -25 | 31 | 31 | 19 | 19 | 25 | 0 | -350 | -500 | 35 |
| 315 | 400 | 0 | -30 | 38 | 38 | 23 | 23 | 30 | 0 | -400 | -630 | 40 |
| 400 | 500 | 0 | -35 | 44 | 44 | 26 | 26 | 35 | 0 | -450 | - | 45 |
| 500 | 630 | | -40 | 50 | 50 | 30 | 30 | 40 | 0 | -500 | - | 50 |

[Note]:

1) 0.6mm is included.
2) The values are not given for bearing diameter series of 7 and 8.
3) Suitable for inner ring or outer ring of a single bearing in matched pair or stacking mount, also suitable for inner ring of bearings with taper hole d≥50mm.

Table 6: Tolerance of Class P6 outer ring μm

| D mm | | △ $D_{mp}$ | | $V_{Dp}$ [2)4)] | | | | $V_{Dmp}$ [4)] | $K_{ea}$ | △$C_s$ △$C_{1s}$ [5)] | $V_{Cs}$ $V_{C1s}$ [5)] | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Open bearing | | | Capped bearing | | | | | |
| | | | | 9 | 0、1 | 2、3、4 | 0、1、2、3、4 | | | | | |
| Over | To | High | Low | max | | | | max | max | High | Low | max |
| 2.5 [1)] | 6 | 0 | -7 | 9 | 7 | 5 | 9 | 5 | 8 | Same as the △Bs and VBS of the same bearing I.D. | | |
| 6 | 18 | 0 | -7 | 9 | 7 | 5 | 9 | 5 | 8 | | | |
| 18 | 30 | 0 | -8 | 10 | 8 | 6 | 10 | 6 | 9 | | | |
| 30 | 50 | 0 | -9 | 11 | 9 | 7 | 13 | 7 | 10 | | | |
| 50 | 80 | 0 | -11 | 14 | 11 | 8 | 16 | 8 | 13 | | | |
| 80 | 120 | 0 | -13 | 16 | 16 | 10 | 20 | 10 | 18 | | | |
| 120 | 150 | 0 | -15 | 19 | 19 | 11 | 25 | 11 | 20 | | | |
| 150 | 180 | 0 | -18 | 23 | 23 | 14 | 30 | 14 | 23 | | | |
| 180 | 250 | 0 | -20 | 25 | 25 | 15 | - | 15 | 25 | | | |
| 250 | 315 | 0 | -25 | 31 | 31 | 19 | - | 19 | 30 | | | |
| 315 | 400 | 0 | -28 | 35 | 35 | 21 | - | 21 | 35 | | | |
| 400 | 500 | 0 | -33 | 41 | 41 | 25 | - | 25 | 40 | | | |
| 500 | 630 | 0 | -38 | 48 | 48 | 29 | - | 29 | 50 | | | |
| 630 | 800 | 0 | -45 | 56 | 56 | 34 | - | 34 | 60 | | | |
| 800 | 1000 | 0 | -60 | 75 | 75 | 45 | - | 45 | 75 | | | |

[Note]:

1) 2.5mm is included.
2) The values are not given for bearing diameter of series 7 and 8.
3) The values are not given for bearing diameter of series 9.
4) Suitable for the situation that inner or outer snap ring is not mounted or dismounted.
5) Only applicable for deep groove bearings.

Tolerance of P5 (Table 7, Table 8)

Table 7: Tolerance of Class P5 inner ring μm

| d mm | | △ $d_{mp}$ | | $V_{dp}$ [2)] | | $V_{dmp}$ | $K_{ia}$ | $S_d$ | $S_{ia}$ | △$B_s$ | | | $V_{Bs}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Diameter series | | | | | | All | Normal | Revision [4)] | |
| | | | | 9 | 0、1、2、3、4 | | | | | | | | |
| Over | To | High | Low | max | | max | max | max | max | High | Low | | |
| 0.6 [1)] | 2.5 | 0 | -5 | 5 | 4 | 3 | 4 | 7 | 7 | 0 | -40 | -250 | 5 |
| 2.5 | 10 | 0 | -5 | 5 | 4 | 3 | 4 | 7 | 7 | 0 | -40 | -250 | 5 |
| 10 | 18 | 0 | -5 | 5 | 4 | 3 | 4 | 7 | 7 | 0 | -80 | -250 | 5 |
| 18 | 30 | 0 | -6 | 6 | 5 | 3 | 4 | 8 | 8 | 0 | -120 | -250 | 5 |
| 30 | 50 | 0 | -8 | 8 | 6 | 4 | 5 | 8 | 8 | 0 | -120 | -250 | 5 |
| 50 | 80 | 0 | -9 | 9 | 7 | 5 | 5 | 8 | 8 | 0 | -150 | -250 | 6 |
| 80 | 120 | 0 | -10 | 10 | 8 | 5 | 6 | 9 | 9 | 0 | -200 | -380 | 7 |
| 120 | 180 | 0 | -13 | 13 | 10 | 7 | 8 | 10 | 10 | 0 | -250 | -380 | 8 |
| 180 | 250 | 0 | -15 | 15 | 12 | 8 | 10 | 11 | 13 | 0 | -300 | -500 | 10 |
| 250 | 315 | 0 | -18 | 18 | 14 | 9 | 13 | 13 | 15 | 0 | -350 | -500 | 13 |
| 315 | 400 | 0 | -23 | 23 | 18 | 12 | 15 | 15 | 20 | 0 | -400 | -630 | 15 |

[Note]:

1) 0.6mm is included.
2) The values are not given for bearing diameter series 7 and 8.
3) Only suitable for deep groove bearings.
4) Suitable for inner ring or outer ring of a single bearing in matched pair or stacking mount, also suitable for inner ring of bearings with taper hole d≥50mm.

Table 8: Tolerance of Class P5 outer ring μm

| D mm | | △ $D_{mp}$ | | $V_{Dp}$ [2)3)] Diameter series | | $V_{Dmp}$ | $K_{ea}$ | $S_D$ [4)] $S_{D1}$ [5)] | $S_{ea}$ [4)5)] | $S_{ea1}$ [4)5)] | △$C_s$ △$C_{1s}$ [5)] | | $V_{Cs}$ $V_{C1s}$ [5)] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 9 | 0、2、3、4 | | | | | | | | |
| Over | To | High | Low | max | | max | max | max | max | max | High | Low | max |
| 2.5 [1)] | 6 | 0 | -5 | 5 | 4 | 3 | 5 | 8 | 8 | 11 | | | 5 |
| 6 | 18 | 0 | -5 | 5 | 4 | 3 | 5 | 8 | 8 | 11 | | | 5 |
| 18 | 30 | 0 | -6 | 6 | 5 | 3 | 6 | 8 | 8 | 11 | Same as the △Bs of the same bearing I.D. | | 5 |
| 30 | 50 | 0 | -7 | 7 | 5 | 4 | 7 | 8 | 8 | 11 | | | 5 |
| 50 | 80 | 0 | -9 | 9 | 7 | 5 | 8 | 8 | 10 | 14 | | | 6 |
| 80 | 120 | 0 | -10 | 10 | 8 | 5 | 10 | 9 | 11 | 16 | | | 8 |
| 120 | 150 | 0 | -11 | 11 | 8 | 6 | 11 | 10 | 13 | 18 | | | 8 |
| 150 | 180 | 0 | -13 | 13 | 10 | 7 | 13 | 10 | 14 | 20 | | | 8 |
| 180 | 250 | 0 | -15 | 15 | 11 | 8 | 15 | 11 | 15 | 21 | | | 10 |
| 250 | 315 | 0 | -18 | 18 | 14 | 9 | 18 | 13 | 18 | 25 | | | 11 |
| 315 | 400 | 0 | -20 | 20 | 15 | 10 | 20 | 13 | 20 | 28 | | | 13 |
| 400 | 500 | 0 | -23 | 23 | 17 | 12 | 23 | 15 | 23 | 33 | | | 15 |
| 500 | 630 | 0 | -28 | 28 | 21 | 14 | 25 | 18 | 25 | 35 | | | 18 |
| 630 | 800 | 0 | -35 | 35 | 26 | 18 | 30 | 20 | 30 | 42 | | | 20 |

[Note]:

1) 2.5mm is included.
2) The values are not given for bearing diameter series 7 and 8.
3) The values are not given for closed bearings.
4) No suitable for bearings with flanged outer ring.
5) Only applicable for deep groove bearings.

Tolerance of P4 (Table 9, Table 10)

Table 9: Tolerance of Class P4 inner ring μm

| d mm | | △ $d_{mp}$ | | △ $d_s$ [2)] | | $V_{dp}$ [2)] Diameter series | | $V_{dmp}$ | $K_{ia}$ | $S_d$ | $S_{ia}$ | $V_{Bs}$ | | | $V_{Bs}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 9 | 0,1,2,3,4 | | | | | All | Normal | Revision [3)] | |
| Over | To | High | Low | High | Low | max | | max | max | max | max | High | Low | | |
| 0.6 [1)] | 2.5 | 0 | -4 | 0 | -4 | 4 | 3 | 2 | 2.5 | 3 | 3 | 0 | -40 | -250 | 2.5 |
| 2.5 | 10 | 0 | -4 | 0 | -4 | 4 | 3 | 2 | 2.5 | 3 | 3 | 0 | -40 | -250 | 2.5 |
| 10 | 18 | 0 | -4 | 0 | -4 | 4 | 3 | 2 | 2.5 | 3 | 3 | 0 | -80 | -250 | 2.5 |
| 18 | 30 | 0 | -5 | 0 | -5 | 5 | 4 | 2.5 | 3 | 4 | 4 | 0 | -120 | -250 | 2.5 |
| 30 | 50 | 0 | -6 | 0 | -6 | 6 | 5 | 3 | 4 | 4 | 4 | 0 | -120 | -250 | 3 |
| 50 | 80 | 0 | -7 | 0 | -7 | 7 | 5 | 3.5 | 4 | 5 | 5 | 0 | -150 | -250 | 4 |
| 80 | 120 | 0 | -8 | 0 | -8 | 8 | 6 | 4 | 5 | 5 | 5 | 0 | -200 | -380 | 4 |
| 120 | 180 | 0 | -10 | 0 | -10 | 10 | 8 | 5 | 6 | 6 | 7 | 0 | -250 | -380 | 5 |
| 180 | 250 | 0 | -12 | 0 | -12 | 12 | 9 | 6 | 8 | 7 | 8 | 0 | -300 | -500 | 6 |

[Note]:

1) 0.6mm is included.
2) Only suitable for diameter series of P0, P1, P2, P3 and P4.
3) The values are not given for bearing diameter series 7 and 8.
4) Only suitable for deep groove bearings.
5) Suitable for inner ring of a single bearing in matched pair or stacking mount.

Table 10: Tolerance of Class P4 outer ring μm

| d mm | | △ $d_{mp}$ | | △ $d_s$ [2] | | $V_{dp}$ [3][4] | | $V_{Dmp}$ | $K_{ea}$ | $S_D$ [5] $S_{D1}$ [6] | $S_{ea}$ [5][6] | $S_{eal}$ [6] | △ $C_s$ △ $C_{1s}$ [6] | | $V_{Bs}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Diameter series | | | | | | | | | |
| | | | | | | 9 | 0,1,2,3,4 | | | | | | | | |
| Over | To | High | Low | High | Low | max | | max | max | max | max | max | High | Low | max |
| 2.5 [1] | 6 | 0 | -4 | 0 | -4 | 4 | 3 | 2 | 3 | 4 | 5 | 7 | | | 2.5 |
| 6 | 18 | 0 | -4 | 0 | -4 | 4 | 3 | 2 | 3 | 4 | 5 | 7 | | | 2.5 |
| 18 | 30 | 0 | -5 | 0 | -5 | 5 | 4 | 2.5 | 4 | 4 | 5 | 7 | Same as the △Bs of the same bearing I.D. | | 2.5 |
| 30 | 50 | 0 | -6 | 0 | -6 | 6 | 5 | 3 | 5 | 4 | 5 | 7 | | | 2.5 |
| 50 | 80 | 0 | -7 | 0 | -7 | 7 | 5 | 3.5 | 5 | 4 | 5 | 7 | | | 3 |
| 80 | 120 | 0 | -8 | 0 | -8 | 8 | 6 | 4 | 6 | 5 | 6 | 8 | | | 4 |
| 120 | 150 | 0 | -9 | 0 | -9 | 9 | 7 | 5 | 7 | 5 | 7 | 10 | | | 5 |
| 150 | 180 | 0 | -10 | 0 | -10 | 10 | 8 | 5 | 8 | 5 | 8 | 11 | | | 5 |
| 180 | 250 | 0 | -11 | 0 | -11 | 11 | 8 | 6 | 10 | 7 | 10 | 14 | | | 7 |
| 250 | 315 | 0 | -13 | | -13 | 13 | 10 | 7 | 11 | 8 | 10 | 14 | | | 7 |
| 315 | 400 | 0 | -15 | | -15 | 15 | 11 | 8 | 13 | 10 | 13 | 18 | | | 8 |

[Note]:

1) 2.5mm is included
2) Only suitable for diameter series of P0, P1, P2, P3 and P4
3) The values are not given for bearing diameter series 7 and 8
4) The values are not given for closed bearings
5) No suitable for bearings with flanged outer ring
6) Only applicable for deep groove bearings



Tolerance of P2 (Table 11, Table 12)

Table 11: Tolerance of Class P2 inner ring μm

| d mm | | △ $d_{mp}$ | | △ $d_s$ | | $V_{dp}$ [2] | $V_{dmp}$ | $K_{ia}$ | $S_d$ | $S_{ia}$ [3] | △ $B_s$ | | | $V_{Bs}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Over | To | High | Low | High | Low | max | max | max | max | max | All | Normal | Revision | max |
| 0.6 [1] | 2.5 | 0 | -2.5 | 0 | -2.5 | 2.5 | 1.5 | 1.5 | 1.5 | 1.5 | 0 | -40 | -250 | 1.5 |
| 2.5 | 10 | 0 | -2.5 | 0 | -2.5 | 2.5 | 1.5 | 1.5 | 1.5 | 1.5 | 0 | -40 | -250 | 1.5 |
| 10 | 18 | 0 | -2.5 | 0 | -2.5 | 2.5 | 1.5 | 1.5 | 1.5 | 1.5 | 0 | -80 | -250 | 1.5 |
| 18 | 30 | 0 | -2.5 | 0 | -2.5 | 2.5 | 1.5 | 2.5 | 1.5 | 2.5 | 0 | -120 | -250 | 1.5 |
| 30 | 50 | 0 | -2.5 | 0 | -2.5 | 2.5 | 1.5 | 2.5 | 1.5 | 2.5 | 0 | -120 | -250 | 1.5 |
| 50 | 80 | 0 | -4 | 0 | -4 | 4 | 2 | 2.5 | 1.5 | 2.5 | 0 | -150 | -250 | 1.5 |
| 80 | 120 | 0 | -5 | 0 | -5 | 5 | 2.5 | 2.5 | 2.5 | 2.5 | 0 | -200 | -380 | 2.5 |
| 120 | 150 | 0 | -7 | 0 | -7 | 7 | 3.5 | 2.5 | 2.5 | 2.5 | 0 | -250 | -380 | 2.5 |
| 150 | 180 | 0 | -7 | 0 | -7 | 7 | 3.5 | 5 | 4 | 5 | 0 | -250 | -380 | 4 |
| 180 | 250 | 0 | -8 | 0 | -8 | 8 | 4 | 5 | 5 | 5 | 0 | -300 | -500 | 5 |

[Note]: 1) 0.6mm is included in this dimension range.

2) The values are not given for bearing diameter series 7, 8 and 9.
3) Only suitable for deep groove bearings.
4) Refers to inner ring width deviation of single bearings when matched or group installed.

Table 12: Tolerance of Class P2 outer ring μm

| D mm | | △ $D_{mp}$ | | △ $D_s$ [2] | | $V_{dp}$ [2] | $V_{Dmp}$ | $K_{ea}$ | $S_D$ [3] $S_{D1}$ [4] | $S_{ea}$ [3][4] | $S_{eal}$ [4] | △ $C_s$ △ $C_{1s}$ [4] | | $V_{Cs}$ $V_{C1s}$ [4] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Over | To | High | Low | High | Low | max | max | max | max | max | max | High | Low | max |
| 2.5 [1] | 6 | 0 | -2.5 | 0 | -2.5 | 2.5 | 1.5 | 1.5 | 1.5 | 1.5 | 3 | | | 1.5 |
| 6 | 18 | 0 | -2.5 | 0 | -2.5 | 2.5 | 1.5 | 1.5 | 1.5 | 1.5 | 3 | | | 1.5 |
| 18 | 30 | 0 | -4 | 0 | -4 | 4 | 2 | 2.5 | 1.5 | 2.5 | 4 | Same as the △Bs of the same bearing I.D. | | 1.5 |
| 30 | 50 | 0 | -4 | 0 | -4 | 4 | 2 | 2.5 | 1.5 | 2.5 | 4 | | | 1.5 |
| 50 | 80 | 0 | -4 | 0 | -4 | 4 | 2 | 4 | 1.5 | 4 | 6 | | | 1.5 |
| 80 | 120 | 0 | -5 | 0 | -5 | 5 | 2.5 | 5 | 2.5 | 5 | 7 | | | 2.5 |
| 120 | 150 | 0 | -5 | 0 | -5 | 5 | 2.5 | 5 | 2.5 | 5 | 7 | | | 2.5 |
| 150 | 180 | 0 | -7 | 0 | -7 | 7 | 3.5 | 5 | 2.5 | 5 | 7 | | | 2.5 |
| 180 | 250 | 0 | -8 | 0 | -8 | 8 | 4 | 7 | 4 | 7 | 10 | | | 4 |
| 250 | 315 | 0 | -8 | 0 | -8 | 8 | 4 | 7 | 5 | 7 | 10 | | | 5 |
| 315 | 400 | 0 | -10 | 0 | -10 | 10 | 5 | 8 | | 8 | 11 | | | 7 |

[Note]: 1) 2.5mm is included.

2) Only suitable for open and closed bearings with diameter series of P0, P1, P2, P3 and P4.
3) Not suitable for bearings with flanged outer ring.
4) Only applicable for deep groove bearings.

Precision of metric tapered roller bearings

Tolerance of P0 (Table 13, Table 14 and Table 15)

Table 13: Diameter tolerance and radial runout of inner ring μm

| d mm | | △ $d_{mp}$ | | $V_{dp}$ | $V_{dmp}$ | $K_{ia}$ |
|---|---|---|---|---|---|---|
| Over | To | High | Low | max | max | max |
| 10 | 18 | 0 | -12 | 12 | 9 | 15 |
| 18 | 30 | 0 | -12 | 12 | 9 | 18 |
| 30 | 50 | 0 | -12 | 12 | 9 | 20 |
| 50 | 80 | 0 | -15 | 15 | 11 | 25 |
| 80 | 120 | 0 | -20 | 20 | 15 | 30 |
| 120 | 180 | 0 | -25 | 25 | 19 | 35 |
| 180 | 250 | 0 | -30 | 30 | 23 | 50 |
| 250 | 315 | 0 | -35 | 35 | 26 | 60 |
| 315 | 400 | 0 | -40 | 40 | 30 | 70 |
| 400 | 500 | 0 | -45 | 45 | 34 | 80 |
| 500 | 630 | 0 | -60 | 60 | 40 | 90 |
| 630 | 800 | 0 | -75 | 75 | 45 | 100 |
| 800 | 1000 | 0 | -100 | 100 | 55 | 115 |
| 1000 | 1250 | 0 | -125 | 125 | 65 | 130 |
| 1250 | 1600 | 0 | -160 | 160 | 80 | 150 |
| 1600 | 2000 | 0 | -200 | 200 | 100 | 170 |

Table 14: Diameter tolerance and radial runout of outer ring μm

| D mm | | △ $D_{mp}$ | | $V_{Dp}$ | $V_{Dmp}$ | $K_{ea}$ |
|---|---|---|---|---|---|---|
| Over | To | High | Low | max | max | max |
| 18 | 30 | 0 | -12 | 12 | 9 | 18 |
| 30 | 50 | 0 | -14 | 14 | 11 | 20 |
| 50 | 80 | 0 | -16 | 16 | 12 | 25 |
| 80 | 120 | 0 | -18 | 18 | 14 | 35 |
| 120 | 150 | 0 | -20 | 20 | 15 | 40 |
| 150 | 180 | 0 | -25 | 25 | 19 | 45 |
| 180 | 250 | 0 | -30 | 30 | 23 | 50 |
| 250 | 315 | 0 | -35 | 35 | 26 | 60 |
| 315 | 400 | 0 | -40 | 40 | 30 | 70 |
| 400 | 500 | 0 | -45 | 45 | 34 | 80 |
| 500 | 630 | 0 | -50 | 50 | 38 | 100 |
| 630 | 800 | 0 | -75 | 80 | 55 | 120 |
| 800 | 1000 | 0 | -100 | 100 | 75 | 140 |
| 1000 | 1250 | 0 | -125 | 130 | 90 | 160 |
| 1250 | 1600 | 0 | -160 | 170 | 100 | 180 |
| 1600 | 2000 | 0 | -200 | 210 | 110 | 200 |
| 2000 | 2500 | 0 | -250 | 265 | 120 | 220 |



Table 15: Width-Inner ring, outer ring, single-row bearing and its assembly μm

| d mm | | △ $B_s$ | | △ $C_s$ | | △ $T_s$ | | △ $T_{1s}$ | | △ $T_{2s}$ | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Over | To | High | Low | High | Low | High | Low | High | Low | High | Low |
| 10 | 18 | 0 | -120 | 0 | -120 | +200 | 0 | +100 | 0 | +100 | 0 |
| 18 | 30 | 0 | -120 | 0 | -120 | +200 | 0 | +100 | 0 | +100 | 0 |
| 30 | 50 | 0 | -120 | 0 | -120 | +200 | 0 | +100 | 0 | +100 | 0 |
| 50 | 80 | 0 | -150 | 0 | -150 | +200 | 0 | +100 | 0 | +100 | 0 |
| 80 | 120 | 0 | -200 | 0 | -200 | +200 | -200 | +100 | -100 | +100 | -100 |
| 120 | 180 | 0 | -250 | 0 | -250 | +350 | -250 | +150 | -150 | +200 | -100 |
| 180 | 250 | 0 | -300 | 0 | -300 | +350 | -250 | +150 | -150 | +200 | -100 |
| 250 | 315 | 0 | -350 | 0 | -350 | +350 | -250 | +150 | -150 | +200 | -100 |
| 315 | 400 | 0 | -400 | 0 | -400 | +400 | -400 | +200 | -200 | +200 | -200 |
| 400 | 500 | 0 | -450 | 0 | -450 | +450 | -450 | +225 | -225 | +225 | -225 |
| 500 | 630 | 0 | -500 | 0 | -500 | +500 | -500 | - | - | - | - |
| 630 | 800 | 0 | -750 | 0 | -750 | +600 | -600 | - | - | - | - |
| 800 | 1000 | 0 | -1000 | 0 | -1000 | +750 | -750 | - | - | - | - |
| 1000 | 1250 | 0 | -1250 | 0 | -1250 | +900 | -900 | - | - | - | - |
| 1250 | 1600 | 0 | -1600 | 0 | -1600 | +1050 | -1050 | - | - | - | - |
| 1600 | 2000 | 0 | -2000 | 0 | -2000 | +1200 | -1200 | - | - | - | - |

Tolerance of P6X

The tolerance of diameter and radial runout of inner ring and outer ring diameter of this tolerance class are the same with those given for Class P0. Width tolerance values are listed in Table 16.

Table 16: Width-Inner ring, outer ring, single-row bearing and its assembly μm

| d mm | | △ $B_s$ | | △ $C_s$ | | △ $T_s$ | | △ $T_{1s}$ | | △ $T_{2s}$ | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Over | To | High | Low | High | Low | High | Low | High | Low | High | Low |
| 10 | 18 | 0 | -50 | 0 | -100 | +100 | 0 | +50 | 0 | +50 | 0 |
| 18 | 30 | 0 | -50 | 0 | -100 | +100 | 0 | +50 | 0 | +50 | 0 |
| 30 | 50 | 0 | -50 | 0 | -100 | +100 | 0 | +50 | 0 | +50 | 0 |
| 50 | 80 | 0 | -50 | 0 | -100 | +100 | 0 | +50 | 0 | +50 | 0 |
| 80 | 120 | 0 | -50 | 0 | -100 | +100 | 0 | +50 | 0 | +50 | 0 |
| 120 | 180 | 0 | -50 | 0 | -100 | +150 | 0 | +50 | 0 | +100 | 0 |
| 180 | 250 | 0 | -50 | 0 | -100 | +150 | 0 | +50 | 0 | +100 | 0 |
| 250 | 315 | 0 | -50 | 0 | -100 | +200 | 0 | +100 | 0 | +100 | 0 |
| 315 | 400 | 0 | -50 | 0 | -100 | +200 | 0 | +100 | 0 | +100 | 0 |
| 400 | 500 | 0 | -50 | 0 | -100 | +200 | 0 | +100 | 0 | +100 | 0 |

Tolerance of P5 (Table 17, Table 18)

Table 17: Inner ring and single row bearing width μm

| d mm | | △ dmp | | Vdp | Vdmp | Kia | Sd | △ Bs | | △ Ts | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Over | To | High | Low | max | max | max | max | High | Low | High | Low |
| 10 | 18 | 0 | -7 | 5 | 5 | 5 | 7 | 0 | -200 | +200 | -200 |
| 18 | 30 | 0 | -8 | 6 | 5 | 5 | 8 | 0 | -200 | +200 | -200 |
| 30 | 50 | 0 | -10 | 8 | 5 | 6 | 8 | 0 | -240 | +200 | -200 |
| 50 | 80 | 0 | -12 | 9 | 6 | 7 | 8 | 0 | -300 | +200 | -200 |
| 80 | 120 | 0 | -15 | 11 | 8 | 8 | 9 | 0 | -400 | +200 | -200 |
| 120 | 180 | 0 | -18 | 14 | 9 | 11 | 10 | 0 | -500 | +350 | -250 |
| 180 | 250 | 0 | -22 | 17 | 11 | 13 | 11 | 0 | -600 | +350 | -250 |
| 250 | 315 | 0 | -25 | 19 | 13 | 13 | 13 | 0 | -700 | +350 | -250 |
| 315 | 400 | 0 | -30 | 23 | 15 | 15 | 15 | 0 | -800 | +400 | -400 |
| 400 | 500 | 0 | -35 | 28 | 17 | 20 | 17 | 0 | -900 | +450 | -450 |
| 500 | 630 | 0 | -40 | 35 | 20 | 25 | 20 | 0 | -1100 | +500 | -500 |
| 630 | 800 | 0 | -50 | 45 | 25 | 30 | 25 | 0 | -1600 | +600 | -600 |
| 800 | 1000 | 0 | -60 | 60 | 30 | 37 | 30 | 0 | -2000 | +750 | -750 |
| 1000 | 1250 | 0 | -75 | 75 | 37 | 45 | 40 | 0 | -2000 | +750 | -750 |
| 1250 | 1600 | 0 | -90 | 90 | 45 | 55 | 50 | 0 | -2000 | +900 | -900 |

Table 18: Outer ring μm

| D mm | | △ Dmp | | VDp | Vdmp | Kea | $S_D$ [1] $S_{D1}$ | △ cs | |
|---|---|---|---|---|---|---|---|---|---|
| Over | To | High | Low | max | max | max | max | High | Low |
| 18 | 30 | 0 | -8 | 6 | 5 | 6 | 8 | Same as the △Bs of the same bearing I.D. | |
| 30 | 50 | 0 | -9 | 7 | 5 | 7 | 8 | | |
| 50 | 80 | 0 | -11 | 8 | 6 | 8 | 8 | | |
| 80 | 120 | 0 | --13 | 10 | 7 | 10 | 9 | | |
| 120 | 150 | 0 | -15 | 11 | 8 | 11 | 10 | | |
| 150 | 180 | 0 | -18 | 14 | 9 | 13 | 10 | | |
| 180 | 250 | 0 | -20 | 15 | 10 | 15 | 11 | | |
| 250 | 315 | 0 | -25 | 19 | 13 | 18 | 13 | | |
| 315 | 400 | 0 | -28 | 22 | 14 | 20 | 13 | | |
| 400 | 500 | 0 | -33 | 26 | 17 | 24 | 17 | | |
| 500 | 630 | 0 | -38 | 30 | 20 | 30 | 20 | | |
| 630 | 800 | 0 | -45 | 38 | 25 | 36 | 25 | | |
| 800 | 1000 | 0 | -60 | 50 | 30 | 43 | 30 | | |
| 1000 | 1250 | 0 | -80 | 65 | 38 | 52 | 38 | | |
| 1250 | 1600 | 0 | -100 | 90 | 50 | 62 | 50 | | |
| 1600 | 2000 | 0 | -125 | 120 | 65 | 73 | 65 | | |

1) Not suitable for bearings with flanged outer ring



Tolerance of P4 (Table 19, Table 20)

Table 19: Inner ring and single row bearing width μm

| d mm | | △ dmp | | △ ds | | Vdp | Vdmp | Kia | Sd | Sia | △ Bs | | △ Ts | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Over | To | High | Low | High | Low | max | max | max | max | max | High | Low | High | Low |
| 10 | 18 | 0 | -5 | 0 | -5 | 4 | 4 | 3 | 3 | 3 | 0 | -200 | +200 | -200 |
| 18 | 30 | 0 | -6 | 0 | -6 | 5 | 4 | 3 | 4 | 4 | 0 | -200 | +200 | -200 |
| 30 | 50 | 0 | -8 | 0 | -8 | 6 | 5 | 4 | 4 | 4 | 0 | -240 | +200 | -200 |
| 50 | 80 | 0 | -9 | 0 | -9 | 7 | 5 | 4 | 5 | 4 | 0 | -300 | +200 | -200 |
| 80 | 120 | 0 | -10 | 0 | -10 | 8 | 5 | 5 | 5 | 5 | 0 | -400 | +200 | -200 |
| 120 | 180 | 0 | -13 | 0 | -13 | 10 | 7 | 6 | 6 | 7 | 0 | -500 | +350 | -250 |
| 180 | 250 | 0 | -15 | 0 | -15 | 11 | 8 | 8 | 7 | 8 | 0 | -600 | +350 | -250 |
| 250 | 315 | 0 | -18 | 0 | -18 | 12 | 9 | 9 | 8 | 9 | 0 | -700 | +350 | -250 |

Table 20: Outer ring μm

| D mm | | △ Dmp | | △ Ds | | VDp | VDmp | Kea | $S_D$ [1] $S_{D1}$ | $S_{ea}$ [1] | Seal | △ Cs | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Over | To | High | Low | High | Low | max | max | max | max | max | max | High | Low |
| 18 | 30 | 0 | -6 | 0 | -6 | 5 | 4 | 4 | 4 | 5 | 7 | Same as the △Bs of the same bearing I.D. | |
| 30 | 50 | 0 | -7 | 0 | -7 | 5 | 5 | 5 | 4 | 5 | 7 | | |
| 50 | 80 | 0 | -9 | 0 | -9 | 7 | 5 | 5 | 4 | 5 | 7 | | |
| 80 | 120 | 0 | -10 | 0 | -10 | 8 | 5 | 6 | 5 | 6 | 8 | | |
| 120 | 150 | 0 | -11 | 0 | -11 | 8 | 6 | 7 | 5 | 7 | 10 | | |
| 150 | 180 | 0 | -13 | 0 | -13 | 10 | 7 | 8 | 5 | 8 | 11 | | |
| 180 | 250 | 0 | -15 | 0 | -15 | 11 | 8 | 10 | 7 | 10 | 14 | | |
| 250 | 315 | 0 | -18 | 0 | -18 | 14 | 9 | 11 | 8 | 10 | 14 | | |
| 315 | 400 | 0 | -20 | 0 | -20 | 15 | 10 | 13 | 10 | 13 | 18 | | |

1) Not suitable for bearings with flanged outer ring.

Tolerance of P2 (Table 21, Table 22)

Table 21 Inner ring and single row bearing width μm

| d mm | | △ $d_{mp}$ | | △ $d_s$ | | $V_{dp}$ | $V_{dmp}$ | $K_{ia}$ | $S_d$ | $S_{ia}$ | △ $B_s$ | | △ $T_s$ | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Over | To | High | Low | High | Low | max | max | max | max | max | High | Low | High | Low |
| 10 | 18 | 0 | -4 | 0 | -4 | 2.5 | 1.5 | 2 | 1.5 | 2 | 0 | -200 | +200 | -200 |
| 18 | 30 | 0 | -4 | 0 | -4 | 2.5 | 1.5 | 2.5 | 1.5 | 2.5 | 0 | -200 | +200 | -200 |
| 30 | 50 | 0 | -5 | 0 | -5 | 3 | 2 | 2.5 | 2 | 2.5 | 0 | -240 | +200 | -200 |
| 50 | 80 | 0 | -5 | 0 | -5 | 4 | 2 | 3 | 2 | 3 | 0 | -300 | +200 | -200 |
| 80 | 120 | 0 | -6 | 0 | -6 | 5 | 2.5 | 3 | 2.5 | 3 | 0 | -400 | +200 | -200 |
| 120 | 180 | 0 | -7 | 0 | -7 | 7 | 3.5 | 4 | 3.5 | 4 | 0 | -500 | +200 | -250 |
| 180 | 250 | 0 | -8 | 0 | -8 | 7 | 4 | 5 | 5 | 5 | 0 | -600 | +200 | -300 |
| 250 | 315 | 0 | -8 | 0 | -8 | 8 | 5 | 6 | 5.5 | 6 | 0 | -700 | +200 | -300 |

Table 22: Outer ring μm

| D mm | | △ $D_{mp}$ | | △ $D_s$ | | $V_{Dp}$ | $V_{Dmp}$ | $K_{ea}$ | $S_D$[1] $S_{D1}$ | $S_{ea}$ | $S_{eal}$[1] | △ $C_s$ | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Over | To | High | Low | High | Low | max | max | max | max | max | max | High | Low |
| 18 | 30 | 0 | -5 | 0 | -5 | 4 | 2.5 | 2.5 | 1.5 | 2.5 | 4 | | |
| 30 | 50 | 0 | -5 | 0 | -5 | 4 | 2.5 | 2.5 | 2 | 2.5 | 4 | | |
| 50 | 80 | 0 | -6 | 0 | -6 | 4 | 2.5 | 4 | 2.5 | 4 | 6 | Same as the △Bs of the same bearing I.D. | |
| 80 | 120 | 0 | -6 | 0 | -6 | 5 | 3 | 5 | 3 | 5 | 7 | | |
| 120 | 150 | 0 | -7 | 0 | -7 | 5 | 3.5 | 5 | 3.5 | 5 | 7 | | |
| 150 | 180 | 0 | -7 | 0 | -7 | 7 | 4 | 5 | 4 | 5 | 7 | | |
| 180 | 250 | 0 | -8 | 0 | -8 | 8 | 5 | 7 | 5 | 7 | 10 | | |
| 250 | 315 | 0 | -9 | 0 | -9 | 8 | 5 | 7 | 6 | 7 | 10 | | |
| 315 | 400 | 0 | -10 | 0 | -10 | 10 | 6 | 8 | 7 | 8 | 11 | | |

1) Not suitable for bearings with flanged outer ring



Outer ring flange of radial bearings

Radial ball bearing &Tapered roller bearing in different Tolerance grade

Table 23: Flanged outer ring tolerance μm

| $D_1$ mm | | $D_{1s}$ | | | |
|---|---|---|---|---|---|
| | | Mounting flange | | Non-mounting flange | |
| Over | To | High | Low | High | Low |
| - | 10 | 0 | -36 | +220 | -36 |
| 10 | 18 | 0 | -43 | +270 | -43 |
| 18 | 30 | 0 | -52 | +330 | -52 |
| 30 | 50 | 0 | -62 | +390 | -62 |
| 50 | 80 | 0 | -74 | +460 | -74 |
| 80 | 120 | 0 | -87 | +540 | -87 |
| 120 | 180 | 0 | -100 | +630 | -100 |
| 180 | 250 | 0 | -115 | +720 | -115 |
| 250 | 315 | 0 | -130 | +810 | -130 |
| 315 | 400 | 0 | -140 | +890 | -140 |
| 400 | 500 | 0 | -155 | +970 | -155 |
| 500 | 630 | 0 | -175 | +1100 | -175 |
| 630 | 800 | 0 | -200 | +1250 | -200 |
| 800 | 1000 | 0 | -230 | +1400 | -230 |
| 1000 | 1250 | 0 | -260 | +1650 | -260 |
| 1250 | 1600 | 0 | -310 | +1950 | -310 |
| 1600 | 2000 | 0 | -370 | +2300 | -370 |
| 2000 | 2500 | 0 | -440 | +2800 | -440 |

Tapered bore, taper of 1:12 and 1:30 (Figure 3 and Figure 4)

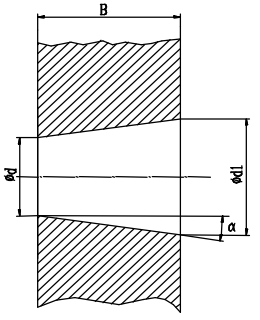



Figure 3: Theoretical tapered bore

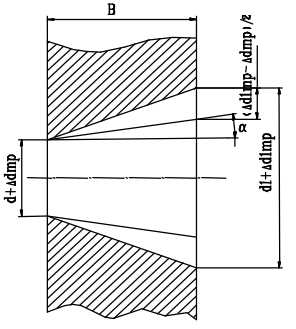



Figure 4: Tapered bore with actual mean diameter and its deviation

Taper 1:12:

Nominal half taper angle =2° 23' 9.4"=2.38594° =0.041643 radian

Basic diameter of theoretical large end of tapered bore $d1= d+\frac{1}{12}B$

Taper 1:30:

Nominal half taper angle =0° 57'17.4"=0.95484° =0.01667 radian $d1= d+\frac{1}{30}B$

Basic diameter of theoretical large end of tapered bore

The tolerance of tapered bore includes:

——Mean diameter tolerance indicated by limit value of actual mean diameter deviation △dmp of theoretical small end of tapered bore.

——Tapered tolerance indicated by limit value of the difference of actual mean diameter deviation of two ends of tapered bore.

——Diameter variation tolerance indicated by maximum value of inner diameter variation Vdp on any radial plain of tapered bore.

Tolerance of P0 (Table 24, Table 25)

Table 24: Tapered bore (1:12) μm

| $D_1$ mm | | $\triangle d_{mp}$ | | $\triangle d_{1mp}-\triangle d_{mp}$ | | $Vd_p$ 1)2) |
|---|---|---|---|---|---|---|
| Over | To | High | Low | High | Low | max |
| | 10 | +22 | 0 | +15 | 0 | 9 |
| 10 | 18 | +27 | 0 | +18 | 0 | 11 |
| 18 | 30 | +33 | 0 | +21 | 0 | 13 |
| 30 | 50 | +39 | 0 | +25 | 0 | 16 |
| 50 | 80 | +46 | 0 | +30 | 0 | 19 |
| 80 | 120 | +54 | 0 | +35 | 0 | 22 |
| 120 | 180 | +63 | 0 | +40 | 0 | 40 |
| 180 | 250 | +72 | 0 | +46 | 0 | 46 |
| 250 | 315 | +81 | 0 | +52 | 0 | 52 |
| 315 | 400 | +89 | 0 | +57 | 0 | 57 |
| 400 | 500 | +97 | 0 | +63 | 0 | 63 |
| 500 | 630 | +110 | 0 | +70 | 0 | 70 |
| 630 | 800 | +125 | 0 | +80 | 0 | - |
| 800 | 1000 | +140 | 0 | +90 | 0 | - |
| 1000 | 1250 | +165 | 0 | +105 | 0 | - |
| 1250 | 1600 | +195 | 0 | +125 | 0 | |

[Note]: 1) Suitable for any single radial plane of bore.
2) Not suitable for diameter series 7 and 8.



Table 25: Tapered bore (1:30) μm

| $D_1$ mm | | $\triangle d_{mp}$ | | $\triangle d_{1mp}-\triangle d_{mp}$ | | $Vd_p$ 1)2) |
|---|---|---|---|---|---|---|
| Over | To | High | Low | High | Low | max |
| 50 | 80 | +15 | 0 | +30 | 0 | 19 |
| 80 | 120 | +20 | 0 | +35 | 0 | 22 |
| 120 | 180 | +25 | 0 | +40 | 0 | 40 |
| 180 | 250 | +30 | 0 | +46 | 0 | 46 |
| 250 | 315 | +35 | 0 | +52 | 0 | 52 |
| 315 | 400 | +40 | 0 | +57 | 0 | 57 |
| 400 | 500 | +45 | 0 | +63 | 0 | 63 |
| 500 | 630 | +50 | 0 | +70 | 0 | 70 |

[Note]: 1) Suitable for any single radial plain of bore.
2) Not suitable for diameter series 7 and 8.

Tolerance values of inch tapered roller bearings are listed in from Table 26 to Table 28

Table 26: I.D. tolerance of bearing cone μm

| d mm | | $\triangle_{ds}$ | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | CL4、2 | | CL3 | | CL0 | | CL00 | |
| Over | To | High | Low | High | Low | High | Low | High | Low |
| - | 76.200 | +13 | 0 | +13 | 0 | +13 | 0 | +8 | 0 |
| 76.200 | 101.600 | +25 | 0 | +13 | 0 | +13 | 0 | +8 | 0 |
| 101.600 | 266.700 | +25 | 0 | +13 | 0 | +13 | 0 | +8 | 0 |
| 266.700 | 304.800 | +25 | 0 | +13 | 0 | +13 | 0 | - | - |
| 304.800 | 609.600 | +51 | 0 | +25 | 0 | +25 | 0 | - | - |

Table 27: Bearing O.D. tolerance and radial runout of cone and cup μm

| D mm | | $\triangle_{Ds}$ | | | | | | $K_{ia}$、$K_{ea}$、$S_{ia}$、$S_{ea}$ | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CL4、2 | | CL3、0 | | CL0 | | CL4 | CL2 | CL3 | CL0 | CL00 |
| Over | To | High | Low | High | Low | High | Low | max | max | max | max | max |
| - | 266.700 | +25 | 0 | +13 | 0 | +8 | 0 | 51 | 38 | 8 | 4 | 2 |
| 266.700 | 304.800 | +25 | 0 | +13 | 0 | - | - | 51 | 38 | 8 | 4 | - |
| 304.800 | 609.600 | +51 | 0 | +25 | 0 | - | - | 51 | 38 | 18 | - | - |

Table 28: Bearing's width tolerance μm

| d mm | | △ Ts | | | | | |
|---|---|---|---|---|---|---|---|
| | | CL4、CL2 | | CL3、CL0 | | CL00 | |
| Over | To | High | Low | High | Low | High | Low |
| - | 101.600 | +203 | 0 | +203 | -203 | +203 | -203 |
| 101.60 | 266.700 | +356 | -254 | +203 | -203 | +203 | -203 |
| 266.700 | 304.800 | +356 | -254 | +203 | -203 | +203 | -203 |
| 304.800 | 609.600 | +381 | -381 | +203 | -203 | +203 | -203 |

## Tolerance of thrust bearings

### Symbols

d: nominal bore diameter of single direction bearing shaft washer

$d_2$: nominal bore diameter of double direction bearing shaft washer

$\triangle_{dmp}$: Single radial plane mean bore diameter deviation of single direction bearing shaft washer

$\triangle_{d2mp}$: Single radial plane mean bore diameter deviation of double direction bearing shaft washer

$V_{dp}$: Single radial plane mean bore diameter variation of single direction bearing shaft washer

$V_{d2p}$: Single radial plane mean bore diameter variation of double direction bearing shaft washer

D: nominal outer diameter of housing washer

$\triangle_{Dmp}$: Single radial plane mean outer diameter deviation of housing washer

$\triangle_{Dp}$: Single radial plane mean outer diameter variation of housing washer

$S_i$: Variation of raceway thickness of shaft washer or central shaft washer

Remarks: only suitable for thrust ball bearing and thrust cylindrical roller bearing with contact angle of 900

$S_e$: Variation of raceway thickness of housing washer

Remarks: only suitable for thrust ball bearing and thrust cylindrical roller bearing with contact angle of 900

T: Nominal height of single direction bearing

$T_1$: Nominal height of double direction bearing

$\triangle_{Ts}$: Actual height deviation of single direction bearing

$\triangle_{T1S}$: Actual height deviation of double direction bearing



Tolerances of thrust bearings are listed in from Table 29 to Table 36

Table 29: Tolerance of P0 Shaft washer and bearing height μm

| d and d2/mm | | $\triangle d_{mp}, \triangle d_{mp}$ | | $V_{dP}$ $V_{d2p}$ | $S_i$ | $\triangle T_S$ | | $\triangle T_{1S}$ | |
|---|---|---|---|---|---|---|---|---|---|
| Over | To | High | Low | max | max | High | Low | High | Low |
| — | 18 | 0 | -8 | 6 | 10 | +20 | -250 | +150 | -400 |
| 18 | 30 | 0 | -10 | 8 | 10 | +20 | -250 | +150 | -400 |
| 30 | 50 | 0 | -12 | 9 | 10 | +20 | -250 | +150 | -400 |
| 50 | 80 | 0 | -15 | 11 | 10 | +20 | -300 | +150 | -500 |
| 80 | 120 | 0 | -20 | 15 | 15 | +25 | -300 | +200 | -500 |
| 120 | 180 | 0 | -25 | 19 | 15 | +25 | -400 | +200 | -600 |
| 180 | 250 | 0 | -30 | 23 | 20 | +30 | -400 | +250 | -600 |
| 250 | 315 | 0 | -35 | 26 | 25 | +40 | -400 | | |
| 315 | 400 | 0 | -40 | 30 | 30 | +40 | -500 | | |
| 400 | 500 | 0 | -45 | 34 | 30 | +50 | -500 | | |
| 500 | 630 | 0 | -50 | 38 | 35 | +60 | -600 | | |
| 630 | 800 | 0 | -75 | 55 | 40 | +70 | -750 | | |
| 800 | 1000 | 0 | -100 | 75 | 45 | +80 | -1000 | | |
| 1000 | 1250 | 0 | -125 | 95 | 50 | +100 | -1400 | | |
| 1250 | 1600 | 0 | -160 | 120 | 60 | +120 | -1600 | | |
| 1600 | 2000 | 0 | -200 | 150 | 75 | +140 | -1900 | | |
| 2000 | 2500 | 0 | -250 | 190 | 90 | +160 | -2300 | | |

[Note]: For double direction bearings, the tolerances are only suitable for bearings which d2≤190mm.

Table 30: Tolerance of P0 housing washer μm

| D/mm | | △$D_{mp}$ | | $V_{Dp}$ | $S_e$ |
|---|---|---|---|---|---|
| Over | To | High | Low | max | max |
| 10 | 18 | 0 | -11 | 8 | |
| 18 | 30 | 0 | -13 | 10 | |
| 30 | 50 | 0 | -16 | 12 | |
| 50 | 80 | 0 | -19 | 14 | |
| 80 | 120 | 0 | -22 | 17 | |
| 120 | 180 | 0 | -25 | 19 | |
| 180 | 250 | 0 | -30 | 23 | Same as shaft washer's Si value of the same bearing |
| 250 | 315 | 0 | -35 | 26 | |
| 315 | 400 | 0 | -40 | 30 | |
| 400 | 500 | 0 | -45 | 34 | |
| 500 | 630 | 0 | -50 | 38 | |
| 630 | 800 | 0 | -75 | 55 | |
| 800 | 1000 | 0 | -100 | 75 | |
| 1000 | 1250 | 0 | -125 | 95 | |
| 1250 | 1600 | 0 | -160 | 120 | |
| 1600 | 2000 | 0 | -200 | 150 | |
| 2000 | 2500 | 0 | -250 | 190 | |
| 2500 | 2850 | 0 | -300 | 225 | |

[Note]: For double direction bearings, the tolerances are only suitable for bearings which D≤360mm.

Table 31: Tolerance of P6 Shaft washer and bearing height μm

| d and d2/mm | | △$d_{mp}$,△$d_{mp}$ | | $V_{dP}$ $V_{d2p}$ | $S_i$ | △$T_S$ | | △$T_{1S}$ | |
|---|---|---|---|---|---|---|---|---|---|
| Over | To | High | Low | max | max | High | Low | High | Low |
| — | 18 | 0 | -8 | 6 | 10 | +20 | -250 | +150 | -400 |
| 18 | 30 | 0 | -10 | 8 | 10 | +20 | -250 | +150 | -400 |
| 30 | 50 | 0 | -12 | 9 | 10 | +20 | -250 | +150 | -400 |
| 50 | 80 | 0 | -15 | 11 | 10 | +20 | -300 | +150 | -500 |
| 80 | 120 | 0 | -20 | 15 | 15 | +25 | -300 | +200 | -500 |
| 120 | 180 | 0 | -25 | 19 | 15 | +25 | -400 | +200 | -600 |
| 180 | 250 | 0 | -30 | 23 | 20 | +30 | -400 | +250 | -600 |
| 250 | 315 | 0 | -35 | 26 | 25 | +40 | -400 | | |
| 315 | 400 | 0 | -40 | 30 | 30 | +40 | -500 | | |
| 400 | 500 | 0 | -45 | 34 | 30 | +50 | -500 | | |
| 500 | 630 | 0 | -50 | 38 | 35 | +60 | -600 | | |
| 630 | 800 | 0 | -75 | 55 | 40 | +70 | -750 | | |
| 800 | 1000 | 0 | -100 | 75 | 45 | +80 | -1000 | | |
| 1000 | 1250 | 0 | -125 | 95 | 50 | +100 | -1400 | | |
| 1250 | 1600 | 0 | -160 | 120 | 60 | +120 | -1600 | | |
| 1600 | 2000 | 0 | -200 | 150 | 75 | +140 | -1900 | | |
| 2000 | 2500 | 0 | -250 | 190 | 90 | +160 | -2300 | | |

[Note]: For double direction bearings, the tolerances are only suitable for bearings which d2≤190mm.

Table 32: Tolerance of P6 housing washer μm

| D/mm | | △$D_{mp}$ | | $V_{Dp}$ | $S_e$ |
|---|---|---|---|---|---|
| Over | To | High | Low | max | max |
| 10 | 18 | 0 | -11 | 8 | |
| 18 | 30 | 0 | -13 | 10 | |
| 30 | 50 | 0 | -16 | 12 | |
| 50 | 80 | 0 | -19 | 14 | |
| 80 | 120 | 0 | -22 | 17 | |
| 120 | 180 | 0 | -25 | 19 | |
| 180 | 250 | 0 | -30 | 23 | Same as shaft washer's Si value of the same bearing |
| 250 | 315 | 0 | -35 | 26 | |
| 315 | 400 | 0 | -40 | 30 | |
| 400 | 500 | 0 | -45 | 34 | |
| 500 | 630 | 0 | -50 | 38 | |
| 630 | 800 | 0 | -75 | 55 | |
| 800 | 1000 | 0 | -100 | 75 | |
| 1000 | 1250 | 0 | -125 | 95 | |
| 1250 | 1600 | 0 | -160 | 120 | |
| 1600 | 2000 | 0 | -200 | 150 | |
| 2000 | 2500 | 0 | -250 | 190 | |
| 2500 | 2850 | 0 | -300 | 225 | |

[Note]: For double direction bearings, the tolerances are only suitable for bearings which D≤360mm.

Table 33: Tolerance of P5 Shaft washer and bearing height μm

| d and d2/mm | | △$d_{mp}$,△$d_{mp}$ | | $V_{dP}$ $V_{d2p}$ | $S_i$ | △$T_S$ | | △$T_{1S}$ | |
|---|---|---|---|---|---|---|---|---|---|
| Over | To | High | Low | max | max | High | Low | High | Low |
| — | 18 | 0 | -8 | 6 | 10 | +20 | -250 | +150 | -400 |
| 18 | 30 | 0 | -10 | 8 | 10 | +20 | -250 | +150 | -400 |
| 30 | 50 | 0 | -12 | 9 | 10 | +20 | -250 | +150 | -400 |
| 50 | 80 | 0 | -15 | 11 | 10 | +20 | -300 | +150 | -500 |
| 80 | 120 | 0 | -20 | 15 | 15 | +25 | -300 | +200 | -500 |
| 120 | 180 | 0 | -25 | 19 | 15 | +25 | -400 | +200 | -600 |
| 180 | 250 | 0 | -30 | 23 | 20 | +30 | -400 | +250 | -600 |
| 250 | 315 | 0 | -35 | 26 | 25 | +40 | -400 | | |
| 315 | 400 | 0 | -40 | 30 | 30 | +40 | -500 | | |
| 400 | 500 | 0 | -45 | 34 | 30 | +50 | -500 | | |
| 500 | 630 | 0 | -50 | 38 | 35 | +60 | -600 | | |
| 630 | 800 | 0 | -75 | 55 | 40 | +70 | -750 | | |
| 800 | 1000 | 0 | -100 | 75 | 45 | +80 | -1000 | | |
| 1000 | 1250 | 0 | -125 | 95 | 50 | +100 | -1400 | | |
| 1250 | 1600 | 0 | -160 | 120 | 60 | +120 | -1600 | | |
| 1600 | 2000 | 0 | -200 | 150 | 75 | +140 | -1900 | | |
| 2000 | 2500 | 0 | -250 | 190 | 90 | +160 | -2300 | | |

[Note]: For double direction bearings, the tolerances are only suitable for bearings which d2≤190mm.

Table 34: Tolerance of P5 housing washer μm

| D/mm | | △$D_{mp}$ | | $V_{Dp}$ | $S_e$ |
|---|---|---|---|---|---|
| Over | To | High | Low | max | max |
| 10 | 18 | 0 | -11 | 8 | |
| 18 | 30 | 0 | -13 | 10 | |
| 30 | 50 | 0 | -16 | 12 | |
| 50 | 80 | 0 | -19 | 14 | |
| 80 | 120 | 0 | -22 | 17 | |
| 120 | 180 | 0 | -25 | 19 | |
| 180 | 250 | 0 | -30 | 23 | Same as shaft washer's Si value of the same bearing |
| 250 | 315 | 0 | -35 | 26 | |
| 315 | 400 | 0 | -40 | 30 | |
| 400 | 500 | 0 | -45 | 34 | |
| 500 | 630 | 0 | -50 | 38 | |
| 630 | 800 | 0 | -75 | 55 | |
| 800 | 1000 | 0 | -100 | 75 | |
| 1000 | 1250 | 0 | -125 | 95 | |
| 1250 | 1600 | 0 | -160 | 120 | |
| 1600 | 2000 | 0 | -200 | 150 | |
| 2000 | 2500 | 0 | -250 | 190 | |
| 2500 | 2850 | 0 | -300 | 225 | |

[Note]: For double direction bearings, the tolerances are only suitable for bearings which D≤360mm.

Table 35: Tolerance of P4 shaft washer and bearing height μm

| d and d2/mm | | △$d_{mp}$,△$d_{mp}$ | | $V_{dP}$ $V_{d2p}$ | $S_i$ | △$T_S$ | | △$T_{1S}$ | |
|---|---|---|---|---|---|---|---|---|---|
| Over | To | High | Low | max | max | High | Low | High | Low |
| — | 18 | 0 | -7 | 5 | 2 | +20 | -250 | +150 | -400 |
| 18 | 30 | 0 | -8 | 6 | 2 | +20 | -250 | +150 | -400 |
| 30 | 50 | 0 | -10 | 8 | 2 | +20 | -250 | +150 | -400 |
| 50 | 80 | 0 | -12 | 9 | 3 | +20 | -300 | +150 | -500 |
| 80 | 120 | 0 | -15 | 11 | 3 | +25 | -300 | +200 | -500 |
| 120 | 180 | 0 | -18 | 14 | 4 | +25 | -400 | +200 | -600 |
| 180 | 250 | 0 | -22 | 17 | 4 | +30 | -400 | +250 | -600 |
| 250 | 315 | 0 | -25 | 19 | 5 | +40 | -400 | | |
| 315 | 400 | 0 | -30 | 23 | 5 | +40 | -500 | | |
| 400 | 500 | 0 | -35 | 26 | 6 | +50 | -500 | | |
| 500 | 630 | 0 | -40 | 30 | 7 | +60 | -600 | | |
| 630 | 800 | 0 | -50 | 40 | 8 | +70 | -750 | | |

[Note]: For double direction bearings, the tolerances are only suitable for bearings which d2≤190mm.

Table 36: Tolerance P4 Housing washer μm

| D/mm | | △Dmp | | VDp | Se |
|---|---|---|---|---|---|
| Over | To | High | Low | max | max |
| 10 | 18 | 0 | -7 | 5 | |
| 18 | 30 | 0 | -8 | 6 | |
| 30 | 50 | 0 | -9 | 7 | |
| 50 | 80 | 0 | -11 | 8 | Same as shaft washer's Si value of the same bearing |
| 80 | 120 | 0 | -13 | 10 | |
| 120 | 180 | 0 | -15 | 11 | |
| 180 | 250 | 0 | -20 | 15 | |
| 250 | 315 | 0 | -25 | 19 | |
| 315 | 400 | 0 | -28 | 21 | |
| 400 | 500 | 0 | -33 | 25 | |
| 500 | 630 | 0 | -38 | 29 | |
| 630 | 800 | 0 | -45 | 34 | |
| 800 | 1000 | 0 | -60 | 45 | |

[Note]: For double direction bearings, the tolerances are only suitable for bearings which D≤360mm.

## Limit Dimension of Chamfer

(1) Radial bearings (except tapered roller bearings) Unit: mm

| r (min.) or r1(min.) | Nominal bore diameter of the bearing d mm | | Radial | Axial |
|---|---|---|---|---|
| | Over | To | r (min.) or r1(min.) | |
| 0.05 | - | - | 0.1 | 0.2 |
| 0.08 | - | - | 0.16 | 0.3 |
| 0.1 | - | - | 0.2 | 0.4 |
| 0.15 | - | - | 0.3 | 0.6 |
| 0.2 | - | - | 0.5 | 0.8 |
| 0.3 | - | 40 | 0.6 | 1 |
| | 40 | - | 0.8 | 1 |
| 0.6 | - | 40 | 1 | 2 |
| | 40 | - | 1.3 | 2 |
| 1 | - | 50 | 1.5 | 3 |
| | 50 | - | 1.9 | 3 |
| 1.1 | - | 120 | 2 | 3.5 |
| | 120 | - | 2.5 | 4 |
| 1.5 | - | 120 | 2.3 | 4 |
| | 120 | - | 3 | 5 |
| 2 | - | 80 | 3 | 4.5 |
| | 80 | 220 | 3.5 | 5 |
| | 220 | - | 3.8 | 6 |
| 0.3 | - | 280 | 4 | 6.5 |
| | 280 | - | 4.5 | 7 |
| 0.3 | - | 100 | 3.8 | 6 |
| | 100 | 280 | 4.5 | 6 |
| | 280 | - | 5 | 7 |
| 0.3 | - | 280 | 5 | 8 |
| | 280 | - | 5.5 | 8 |
| 4 | - | - | 6.5 | 9 |
| 5 | - | - | 8 | 10 |
| 6 | - | - | 10 | 13 |
| 7.5 | - | - | 12.5 | 17 |
| 9.5 | - | - | 15 | 19 |
| 12 | - | - | 18 | 24 |
| 15 | - | - | 21 | 30 |
| 19 | - | - | 25 | 38 |

(2) Metric tapered roller bearing Unit: mm

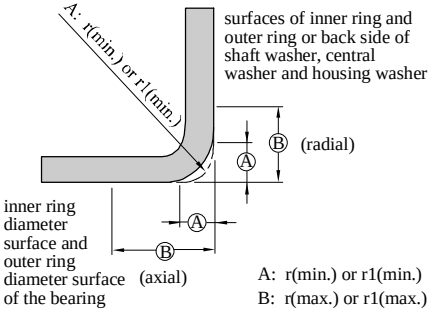
| r (min.) or r1(min.) | Bearing nominal bore diameter d or outer diameter D mm | | Radial | Axial |
|---|---|---|---|---|
| | Over | To | r (min.) or r1(min.) | |
| 0.3 | - | 40 | 0.7 | 1.4 |
| | 40 | - | 0.9 | 1.6 |
| 0.6 | - | 40 | 1.1 | 1.7 |
| | 40 | - | 1.3 | 2 |
| 1 | - | 50 | 1.6 | 2.5 |
| | 50 | - | 1.9 | 3 |
| 1.5 | - | 120 | 2.3 | 3 |
| | 120 | 250 | 2.8 | 3.5 |
| | 250 | - | 3.5 | 4 |
| 2 | - | 120 | 2.8 | 4 |
| | 120 | 250 | 3. | 4.5 |
| | 250 | - | 4 | 5 |
| 2.5 | - | 120 | 3.5 | 5 |
| | 120 | 250 | 4 | 5.5 |
| | 250 | - | 4.5 | 6 |
| 3 | - | 120 | 4 | 5.5 |
| | 120 | 250 | 4.5 | 6.5 |
| | 250 | 400 | 5 | 7 |
| | 400 | - | 5.5 | 7.5 |
| 4 | - | 120 | 5 | 7 |
| | 120 | 250 | 5.5 | 7.5 |
| | 250 | 400 | 6 | 8 |
| | 400 | - | 6.5 | 8.5 |
| 5 | - | 180 | 6.5 | 8 |
| | 180 | - | 7.5 | 9 |
| 6 | - | 180 | 7.5 | 10 |
| | 180 | - | 9 | 11 |

(3) Thrust bearing Unit: mm

| r (min.) or r1(min.) | Radial and Axial |
|---|---|
| | r (min.) or r1(min.) |
| 0.05 | 0.1 |
| 0.08 | 0.16 |
| 0.1 | 0.2 |
| 0.15 | 0.3 |
| 0.2 | 0.5 |
| 0.3 | 0.8 |
| 0.6 | 1.5 |
| 1 | 2.2 |
| 1.1 | 2.7 |
| 1.5 | 3.5 |
| 2 | 4 |
| 2.1 | 4.5 |
| 3 | 5.5 |
| 4 | 6.5 |
| 5 | 8 |
| 6 | 10 |
| 7.5 | 12.5 |
| 9.5 | 15 |
| 12 | 18 |
| 15 | 21 |
| 19 | 25 |

Basic tolerance Unit: mm

| Basic dimension mm | | Basic tolerance class IT | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Over | To | IT1 | IT2 | IT3 | IT4 | IT5 | IT6 | IT7 | IT8 | IT9 | IT10 |
| - | 3 | 0.8 | 1.2 | 2 | 3 | 4 | 6 | 10 | 14 | 25 | 40 |
| 3 | 6 | 1 | 1.5 | 2.5 | 4 | 5 | 8 | 12 | 18 | 30 | 48 |
| 6 | 10 | 1 | 1.5 | 2.5 | 4 | 6 | 9 | 15 | 22 | 36 | 58 |
| 10 | 18 | 1.2 | 2 | 3 | 5 | 8 | 11 | 18 | 27 | 43 | 70 |
| 18 | 30 | 1.5 | 2.5 | 4 | 6 | 9 | 13 | 21 | 33 | 52 | 84 |
| 30 | 50 | 1.5 | 2.5 | 4 | 7 | 11 | 16 | 25 | 39 | 62 | 100 |
| 50 | 80 | 2 | 3 | 5 | 8 | 13 | 19 | 30 | 46 | 74 | 120 |
| 80 | 120 | 2.5 | 4 | 6 | 10 | 15 | 22 | 35 | 54 | 87 | 140 |
| 120 | 180 | 3.5 | 5 | 8 | 12 | 18 | 25 | 40 | 63 | 100 | 160 |
| 180 | 250 | 4.5 | 7 | 10 | 14 | 20 | 29 | 46 | 72 | 115 | 185 |
| 250 | 315 | 6 | 8 | 12 | 16 | 23 | 32 | 52 | 81 | 130 | 210 |
| 315 | 400 | 7 | 9 | 13 | 18 | 25 | 36 | 57 | 89 | 140 | 230 |
| 40 | 500 | 8 | 10 | 15 | 20 | 27 | 40 | 63 | 97 | 155 | 250 |
| 500 | 630 | 9 | 11 | 16 | 22 | 30 | 44 | 70 | 110 | 175 | 280 |
| 630 | 800 | 10 | 13 | 18 | 25 | 35 | 50 | 80 | 125 | 200 | 320 |
| 800 | 1000 | 11 | 15 | 21 | 29 | 40 | 56 | 90 | 140 | 230 | 360 |
| 1000 | 1250 | 13 | 18 | 24 | 34 | 46 | 66 | 105 | 165 | 260 | 420 |
| 1250 | 1600 | 15 | 21 | 29 | 40 | 54 | 78 | 125 | 195 | 310 | 500 |
| 1600 | 2000 | 18 | 25 | 35 | 48 | 65 | 92 | 150 | 230 | 370 | 600 |
| 2000 | 2500 | 22 | 30 | 41 | 57 | 77 | 110 | 175 | 280 | 440 | 700 |
| 2500 | 3150 | 26 | 36 | 50 | 69 | 93 | 135 | 210 | 330 | 540 | 860 |




## Bearing Clearance

The bearing clearance, means before mounting the bearing to the shaft or housing, fix the inner ring or the outer ring and move the other unfixed ring in the radial or axial direction, the amount of movement is called the bearing clearance. According to the moving direction, it can be divided into radial clearance and axial clearance.

The amount of clearance while the bearing is rotating (the so-called working clearance) shall have effects on the rolling fatigue life, temperature rise, noise, vibration and other functions.

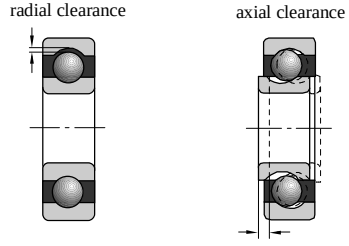



Figure 1: The clearance of the bearing

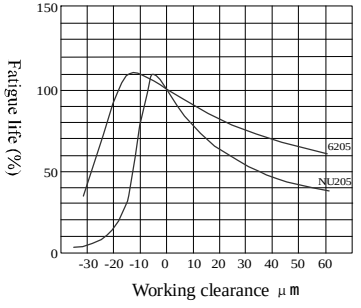
When measuring the clearance of bearing, in order to get the stable value of the clearance, normally a stated measuring load is put on the bearing. Therefore, the measured value is larger than the true clearance (called the theoretical clearance), which means the amount of the elastic deformation caused by the load increased. But for the rolling bearings, this elastic deformation can be ignored since it is comparatively small. Before the mounting, the internal clearance is normally expressed with the theoretical clearance.

### The selection of the clearance

It is very important to choose bearing clearance and also an important factor for normal operation. Choosing proper bearing clearance can make loads distributed reasonably among the bearing rolling elements, limit the axial and radial displacement of axle (or housing), make sure of bearing rotating precision, work normally in the specified temperature, reduce vibration and noise and improve bearing service life.

If the amount of expansion or contraction of the rings caused by the interference fit when mounting the bearing on the shaft or in the housing is deducted from the theoretical clearance, then we have the "Mounting Clearance". Furthermore, if the dimensional changed caused by the temperature difference inside the bearing is added to or reduced from the mounting clearance, we have the so-called "Effective Clearance". When the bearing rotates while carrying a certain magnitude of load in the machine, if the elastic deformation caused by the load is added to the effective clearance, then we have the " Working Clearance". As shown in Figure 2, when the working clearance is a slightly negative, the bearing has the longest service life. But with the negative clearance changing to be positive, the fatigue life shall decrease. Therefore, when choosing the clearance, it is preferred to choose the 0 or slightly positive working clearance.

Figure 2 Relation between the working clearance and the fatigue life.



When choosing bearing clearance, pay attention to these aspects as below:

1. Working condition of bearing, such as loads, temperature, rotation speed, etc.

2. Requirements for bearing operation performance ( rotating precision, friction torque, vibration, noise);

3. Reduction of bearing clearance caused by interference fit of bearing, axle and housing;

4. When bearing is running, temperature differences of inner and outer ring cause bearing clearance reducing.

5. Different expansion coefficients of the axle and housing cause increasing or decreasing of bearing clearance. According to operation experience, the most suitable working clearance of ball bearing is close to zero and for roller bearing, a bit of clearance should be kept. In the parts with good supporting rigidity as required, bearing is allowed to have pretension force of a certain value. Under normal working condition, it should firstly use basic group that can make bearing with proper working clearance. When the basic group can not meet usage requirement, auxiliary group clearance should be chosen. Auxiliary group of large clearance is suitable for when bearing, axle and housing adopting interference fit. Auxiliary group of small clearance is fit for occasions that high rotating precision is required, axial displacement of housing hole is strictly controlled and vibration and noise need to be reduced. In addition, when it need to improve bearing rigidity or reduce noise, the working clearance should adopt further negative value and when the bearing temperature rises rapidly, the working clearance need adopt further positive value, which should make a concrete analysis according to the usage condition.

The values of bearing clearances are shown in Tale 1 to Table 9.

Table 1 Radial clearance of deep groove ball bearings (cylindrical bore) μm

| Nominal bore diameter d mm | | Clearance | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Group 2 | | Group 0 | | Group 3 | | Group 4 | | Group 5 | |
| Over | To | min. | max. | min. | max. | min. | max. | min. | max. | min. | max. |
| 2.5 | 6 | 0 | 7 | 2 | 13 | 8 | 23 | - | - | - | - |
| 6 | 10 | 0 | 7 | 2 | 13 | 8 | 23 | 14 | 29 | 20 | 37 |
| 10 | 18 | 0 | 9 | 3 | 18 | 11 | 25 | 18 | 33 | 25 | 45 |
| 18 | 24 | 0 | 10 | 5 | 20 | 13 | 28 | 20 | 36 | 28 | 48 |
| 24 | 30 | 1 | 11 | 5 | 20 | 13 | 28 | 23 | 41 | 30 | 53 |
| 30 | 40 | 1 | 11 | 6 | 20 | 15 | 33 | 28 | 46 | 40 | 64 |
| 40 | 50 | 1 | 11 | 6 | 23 | 18 | 36 | 30 | 51 | 45 | 73 |
| 50 | 65 | 1 | 15 | 8 | 28 | 23 | 43 | 38 | 61 | 55 | 90 |
| 65 | 80 | 1 | 15 | 10 | 30 | 25 | 51 | 46 | 71 | 65 | 105 |
| 80 | 100 | 1 | 18 | 12 | 36 | 30 | 58 | 53 | 84 | 75 | 120 |
| 100 | 120 | 2 | 20 | 15 | 41 | 36 | 66 | 61 | 97 | 90 | 140 |
| 120 | 140 | 2 | 23 | 18 | 48 | 41 | 81 | 71 | 114 | 105 | 160 |
| 140 | 160 | 2 | 23 | 18 | 53 | 46 | 91 | 81 | 130 | 120 | 180 |
| 160 | 180 | 2 | 25 | 20 | 61 | 53 | 102 | 91 | 147 | 135 | 200 |
| 180 | 200 | 2 | 30 | 25 | 71 | 63 | 117 | 107 | 163 | 150 | 230 |
| 200 | 225 | 2 | 35 | 25 | 85 | 75 | 140 | 125 | 195 | 175 | 265 |
| 225 | 250 | 2 | 40 | 30 | 95 | 85 | 160 | 145 | 225 | 205 | 300 |
| 250 | 280 | 2 | 45 | 35 | 105 | 90 | 170 | 155 | 245 | 225 | 340 |
| 280 | 315 | 2 | 55 | 40 | 115 | 100 | 190 | 175 | 270 | 245 | 370 |
| 315 | 355 | 3 | 60 | 45 | 125 | 110 | 210 | 195 | 300 | 275 | 410 |
| 355 | 400 | 3 | 70 | 55 | 145 | 130 | 240 | 225 | 340 | 315 | 460 |
| 400 | 450 | 3 | 80 | 60 | 170 | 150 | 270 | 250 | 380 | 350 | 510 |
| 450 | 500 | 3 | 90 | 70 | 190 | 170 | 300 | 280 | 420 | 390 | 570 |
| 500 | 560 | 10 | 100 | 80 | 210 | 190 | 330 | 310 | 470 | 440 | 630 |
| 560 | 630 | 10 | 110 | 90 | 230 | 210 | 360 | 340 | 520 | 490 | 690 |
| 630 | 710 | 20 | 130 | 110 | 260 | 240 | 400 | 380 | 570 | 540 | 760 |
| 710 | 800 | 20 | 140 | 120 | 290 | 270 | 450 | 430 | 630 | 600 | 840 |
| 800 | 900 | 20 | 160 | 140 | 320 | 300 | 500 | 480 | 700 | 670 | 940 |
| 900 | 1000 | 20 | 170 | 150 | 350 | 330 | 550 | 530 | 770 | 740 | 1040 |
| 1000 | 1120 | 20 | 180 | 160 | 380 | 360 | 600 | 580 | 850 | 820 | 1150 |
| 1120 | 1250 | 20 | 190 | 170 | 410 | 390 | 650 | 630 | 920 | 890 | 1260 |

Table 2 Radial clearance of self-aligning ball bearings

(1) Radial clearance of self-aligning ball bearings with cylindrical bore μm

| Nominal bore diameter d mm | | Clearance | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Group 2 | | Group 0 | | Group 3 | | Group 4 | | Group 5 | |
| Over | To | min. | max. | min. | max. | min. | max. | min. | max. | min. | max. |
| 2.5 | 6 | 1 | 8 | 5 | 15 | 10 | 20 | 15 | 25 | 21 | 33 |
| 6 | 10 | 2 | 9 | 6 | 17 | 12 | 25 | 19 | 33 | 27 | 42 |
| 10 | 14 | 2 | 10 | 6 | 19 | 13 | 26 | 21 | 35 | 30 | 48 |
| 14 | 18 | 3 | 12 | 8 | 21 | 15 | 28 | 23 | 37 | 32 | 50 |
| 18 | 24 | 4 | 14 | 10 | 23 | 17 | 30 | 25 | 39 | 34 | 52 |
| 24 | 30 | 5 | 16 | 11 | 24 | 19 | 35 | 29 | 46 | 40 | 58 |
| 30 | 40 | 6 | 18 | 13 | 29 | 23 | 40 | 34 | 53 | 46 | 66 |
| 40 | 50 | 6 | 19 | 14 | 31 | 25 | 44 | 37 | 57 | 50 | 71 |
| 50 | 65 | 7 | 21 | 16 | 36 | 30 | 50 | 45 | 69 | 62 | 88 |
| 65 | 80 | 8 | 24 | 18 | 40 | 35 | 60 | 54 | 83 | 76 | 108 |
| 80 | 100 | 9 | 27 | 22 | 48 | 42 | 70 | 64 | 96 | 89 | 124 |
| 100 | 120 | 10 | 31 | 25 | 56 | 50 | 83 | 75 | 114 | 105 | 145 |
| 120 | 140 | 10 | 38 | 30 | 68 | 60 | 100 | 90 | 135 | 125 | 175 |
| 140 | 160 | 15 | 44 | 35 | 80 | 70 | 120 | 110 | 161 | 150 | 210 |

(2) Radial clearance of self-aligning ball bearing with tapered bore μm

| Nominal bore diameter d mm | | Clearance | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Group 2 | | Group 0 | | Group 3 | | Group 4 | | Group 5 | |
| Over | To | min. | max. | min. | max. | min. | max. | min. | max. | min. | max. |
| 18 | 24 | 7 | 17 | 13 | 26 | 20 | 33 | 28 | 42 | 37 | 55 |
| 24 | 30 | 9 | 20 | 15 | 28 | 23 | 39 | 33 | 50 | 44 | 62 |
| 30 | 40 | 12 | 24 | 19 | 35 | 29 | 46 | 40 | 59 | 52 | 72 |
| 40 | 50 | 14 | 27 | 22 | 39 | 33 | 52 | 45 | 65 | 58 | 79 |
| 50 | 65 | 18 | 32 | 27 | 47 | 41 | 61 | 56 | 80 | 73 | 99 |
| 65 | 80 | 23 | 39 | 35 | 57 | 50 | 75 | 69 | 98 | 91 | 123 |
| 80 | 100 | 29 | 47 | 42 | 68 | 62 | 90 | 84 | 116 | 109 | 144 |
| 100 | 120 | 35 | 56 | 50 | 81 | 75 | 108 | 100 | 139 | 130 | 170 |
| 120 | 140 | 40 | 68 | 60 | 98 | 90 | 130 | 120 | 165 | 155 | 205 |
| 140 | 160 | 45 | 74 | 65 | 110 | 100 | 150 | 140 | 191 | 180 | 240 |



Table 3 Radial clearance of cylindrical rolling bearing with cylindrical bore μm

| Nominal bore diameter d mm | | Clearance | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Group 2 | | Group 0 | | Group 3 | | Group 4 | | Group 5 | |
| Over | To | min. | max. | min. | max. | min. | max. | min. | max. | min. | max. |
| | 10 | 0 | 25 | 20 | 45 | 35 | 60 | 50 | 75 | - | - |
| 10 | 24 | 0 | 25 | 20 | 45 | 35 | 60 | 50 | 75 | 65 | 90 |
| 24 | 30 | 0 | 25 | 20 | 45 | 35 | 60 | 50 | 75 | 70 | 95 |
| 30 | 40 | 5 | 30 | 25 | 50 | 45 | 70 | 60 | 85 | 80 | 105 |
| 40 | 50 | 5 | 35 | 30 | 60 | 50 | 80 | 70 | 100 | 95 | 125 |
| 50 | 65 | 10 | 40 | 40 | 70 | 60 | 90 | 80 | 110 | 110 | 140 |
| 65 | 80 | 10 | 45 | 40 | 75 | 65 | 100 | 90 | 125 | 130 | 165 |
| 80 | 100 | 15 | 50 | 50 | 85 | 75 | 110 | 105 | 140 | 155 | 190 |
| 100 | 120 | 15 | 55 | 50 | 90 | 85 | 125 | 125 | 165 | 180 | 220 |
| 120 | 140 | 15 | 60 | 60 | 105 | 100 | 145 | 145 | 190 | 200 | 245 |
| 140 | 160 | 20 | 70 | 70 | 120 | 115 | 165 | 165 | 215 | 225 | 275 |
| 160 | 180 | 25 | 75 | 75 | 125 | 120 | 170 | 170 | 220 | 250 | 300 |
| 180 | 200 | 35 | 90 | 90 | 145 | 140 | 195 | 195 | 250 | 275 | 330 |
| 200 | 225 | 45 | 105 | 105 | 165 | 160 | 220 | 220 | 280 | 305 | 365 |
| 225 | 250 | 45 | 110 | 110 | 175 | 170 | 235 | 235 | 300 | 330 | 395 |
| 250 | 280 | 55 | 125 | 125 | 195 | 190 | 260 | 260 | 330 | 370 | 440 |
| 280 | 315 | 55 | 130 | 130 | 205 | 200 | 275 | 275 | 350 | 410 | 485 |
| 315 | 355 | 65 | 145 | 145 | 225 | 225 | 305 | 305 | 385 | 455 | 535 |
| 355 | 400 | 100 | 190 | 190 | 280 | 280 | 370 | 370 | 460 | 510 | 600 |
| 400 | 450 | 110 | 210 | 210 | 310 | 310 | 410 | 410 | 510 | 565 | 665 |
| 450 | 500 | 110 | 220 | 220 | 330 | 330 | 440 | 440 | 550 | 625 | 735 |

Table 4: Radial clearance of Self-aligning rolling bearings

(1) Self-aligning rolling bearings with cylindrical bore μm

| Nominal bore diameter d mm | | Clearance | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Group 2 | | Group 0 | | Group 3 | | Group 4 | | Group 5 | |
| Over | To | min. | max. | min. | max. | min. | max. | min. | max. | min. | max. |
| 14 | 18 | 10 | 20 | 20 | 35 | 35 | 45 | 45 | 60 | 60 | 75 |
| 18 | 24 | 10 | 20 | 20 | 35 | 35 | 45 | 45 | 60 | 60 | 75 |
| 24 | 30 | 15 | 25 | 25 | 40 | 40 | 55 | 55 | 75 | 75 | 95 |
| 30 | 40 | 15 | 30 | 30 | 45 | 45 | 60 | 60 | 80 | 80 | 100 |
| 40 | 50 | 20 | 35 | 35 | 55 | 55 | 75 | 75 | 100 | 100 | 125 |
| 50 | 65 | 20 | 40 | 40 | 65 | 65 | 90 | 90 | 120 | 120 | 150 |
| 65 | 80 | 30 | 50 | 50 | 80 | 80 | 110 | 110 | 145 | 145 | 180 |
| 80 | 100 | 35 | 60 | 60 | 100 | 100 | 135 | 135 | 180 | 180 | 225 |
| 100 | 120 | 40 | 75 | 75 | 120 | 120 | 160 | 160 | 210 | 210 | 260 |
| 120 | 140 | 50 | 95 | 95 | 145 | 145 | 190 | 190 | 240 | 240 | 300 |
| 140 | 160 | 60 | 110 | 110 | 170 | 170 | 220 | 220 | 280 | 280 | 350 |
| 160 | 180 | 65 | 120 | 120 | 180 | 180 | 240 | 240 | 310 | 310 | 390 |
| 180 | 200 | 70 | 130 | 130 | 200 | 200 | 260 | 260 | 340 | 340 | 430 |
| 200 | 225 | 80 | 140 | 140 | 220 | 220 | 290 | 290 | 380 | 380 | 470 |
| 225 | 250 | 90 | 150 | 150 | 240 | 240 | 320 | 320 | 420 | 420 | 520 |
| 250 | 280 | 100 | 170 | 170 | 260 | 260 | 350 | 350 | 460 | 460 | 570 |
| 280 | 315 | 110 | 190 | 190 | 280 | 280 | 370 | 370 | 500 | 500 | 630 |
| 315 | 355 | 120 | 200 | 200 | 310 | 310 | 410 | 410 | 550 | 550 | 690 |
| 355 | 400 | 130 | 220 | 220 | 340 | 340 | 450 | 450 | 600 | 600 | 750 |
| 400 | 450 | 140 | 240 | 240 | 370 | 370 | 500 | 500 | 660 | 660 | 820 |
| 450 | 500 | 140 | 260 | 260 | 410 | 410 | 550 | 550 | 720 | 720 | 900 |
| 500 | 560 | 150 | 280 | 280 | 440 | 440 | 600 | 600 | 780 | 780 | 1000 |
| 560 | 630 | 170 | 310 | 310 | 480 | 480 | 650 | 650 | 850 | 850 | 1100 |
| 630 | 710 | 190 | 350 | 350 | 530 | 530 | 700 | 700 | 920 | 920 | 1190 |
| 710 | 800 | 210 | 390 | 390 | 580 | 580 | 770 | 770 | 1010 | 1010 | 1300 |
| 800 | 900 | 230 | 430 | 430 | 650 | 650 | 860 | 860 | 1120 | 1120 | 1440 |
| 900 | 1000 | 260 | 480 | 480 | 710 | 710 | 930 | 930 | 1220 | 1220 | 1570 |

(2) Self-aligning rolling bearings with tapered bore μm

| Nominal bore diameter d mm | | Clearance | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Group 2 | | Group 0 | | Group 3 | | Group 4 | | Group 5 | |
| Over | To | min. | max. | min. | max. | min. | max. | min. | max. | min. | max. |
| 18 | 24 | 15 | 25 | 25 | 35 | 35 | 45 | 45 | 60 | 60 | 75 |
| 24 | 30 | 20 | 30 | 30 | 40 | 40 | 55 | 55 | 75 | 75 | 95 |
| 30 | 40 | 25 | 35 | 35 | 50 | 50 | 65 | 65 | 85 | 85 | 105 |
| 40 | 50 | 30 | 45 | 45 | 60 | 60 | 80 | 80 | 100 | 100 | 130 |
| 50 | 65 | 40 | 55 | 55 | 75 | 75 | 95 | 95 | 120 | 120 | 160 |
| 65 | 80 | 50 | 70 | 70 | 95 | 95 | 120 | 120 | 150 | 150 | 200 |
| 80 | 100 | 55 | 80 | 80 | 110 | 110 | 140 | 140 | 180 | 180 | 230 |
| 100 | 120 | 65 | 100 | 100 | 135 | 135 | 170 | 170 | 220 | 220 | 280 |
| 120 | 140 | 80 | 120 | 120 | 160 | 160 | 200 | 200 | 260 | 260 | 330 |
| 140 | 160 | 90 | 130 | 130 | 180 | 180 | 230 | 230 | 300 | 300 | 380 |
| 160 | 180 | 100 | 140 | 140 | 200 | 200 | 260 | 260 | 340 | 340 | 430 |
| 180 | 200 | 110 | 160 | 160 | 220 | 220 | 290 | 290 | 370 | 370 | 470 |
| 200 | 225 | 120 | 180 | 180 | 250 | 250 | 320 | 320 | 410 | 410 | 520 |
| 225 | 250 | 140 | 200 | 200 | 270 | 270 | 350 | 350 | 450 | 450 | 570 |
| 250 | 280 | 150 | 220 | 220 | 300 | 300 | 390 | 390 | 490 | 490 | 620 |
| 280 | 315 | 170 | 240 | 240 | 330 | 330 | 430 | 430 | 540 | 540 | 680 |
| 315 | 355 | 190 | 270 | 270 | 360 | 360 | 470 | 470 | 590 | 590 | 740 |
| 355 | 400 | 210 | 300 | 300 | 400 | 400 | 520 | 520 | 650 | 650 | 820 |
| 400 | 450 | 230 | 330 | 330 | 440 | 440 | 570 | 570 | 720 | 720 | 910 |
| 450 | 500 | 260 | 370 | 370 | 490 | 490 | 630 | 630 | 790 | 790 | 1000 |
| 500 | 560 | 290 | 410 | 410 | 540 | 540 | 680 | 680 | 870 | 870 | 1100 |
| 560 | 630 | 320 | 460 | 460 | 600 | 600 | 760 | 760 | 980 | 980 | 1230 |
| 630 | 710 | 350 | 510 | 510 | 670 | 670 | 850 | 850 | 1090 | 1090 | 1360 |
| 710 | 800 | 390 | 570 | 570 | 750 | 750 | 960 | 960 | 1220 | 1220 | 1500 |
| 800 | 900 | 440 | 640 | 640 | 840 | 840 | 1070 | 1070 | 1370 | 1370 | 1690 |
| 900 | 1000 | 490 | 710 | 710 | 930 | 930 | 1190 | 1190 | 1520 | 1520 | 1860 |

Table 5: Recommended radial clearance of double-row cylindrical rolling bearings with cylindrical bore μm

| Nominal bore diameter d mm | | Clearance | | | | | |
|---|---|---|---|---|---|---|---|
| | | Group 1 | | Group 2 | | Group 3 | |
| Over | To | min. | max. | min. | max. | min. | max. |
| | 24 | 5 | 15 | 10 | 20 | 20 | 30 |
| 24 | 30 | 5 | 15 | 10 | 25 | 25 | 35 |
| 30 | 40 | 5 | 15 | 12 | 25 | 25 | 40 |
| 40 | 50 | 5 | 18 | 15 | 30 | 30 | 45 |
| 50 | 65 | 5 | 20 | 15 | 35 | 35 | 50 |
| 65 | 80 | 10 | 25 | 20 | 40 | 40 | 60 |
| 80 | 100 | 10 | 30 | 25 | 45 | 45 | 70 |
| 100 | 120 | 10 | 30 | 25 | 50 | 50 | 80 |
| 120 | 140 | 10 | 35 | 30 | 60 | 60 | 90 |
| 140 | 160 | 10 | 35 | 35 | 65 | 65 | 100 |
| 160 | 180 | 10 | 40 | 35 | 75 | 75 | 110 |
| 180 | 200 | 15 | 45 | 40 | 80 | 80 | 120 |
| 200 | 225 | 15 | 50 | 45 | 90 | 90 | 135 |
| 225 | 250 | 15 | 50 | 50 | 100 | 100 | 150 |
| 250 | 280 | 20 | 55 | 55 | 110 | 110 | 165 |
| 280 | 315 | 20 | 60 | 60 | 120 | 120 | 180 |
| 315 | 355 | 20 | 65 | 65 | 135 | 135 | 200 |
| 355 | 400 | 25 | 75 | 75 | 150 | 150 | 225 |
| 400 | 450 | 25 | 85 | 85 | 170 | 170 | 255 |
| 450 | 500 | 25 | 95 | 95 | 190 | 190 | 285 |

Table 6: Recommended radial clearance of double-row cylindrical rolling bearings with tapered bore μm

| Nominal bore diameter d mm | | Clearance | | | |
|---|---|---|---|---|---|
| | | Group 1 | | Group 2 | |
| Over | To | min. | max. | min. | max. |
| | 24 | 10 | 20 | 20 | 30 |
| 24 | 30 | 15 | 25 | 25 | 35 |
| 30 | 40 | 15 | 25 | 25 | 40 |
| 40 | 50 | 17 | 30 | 30 | 45 |
| 50 | 65 | 20 | 35 | 35 | 50 |
| 65 | 80 | 25 | 40 | 40 | 60 |
| 80 | 100 | 35 | 55 | 45 | 70 |
| 100 | 120 | 40 | 60 | 50 | 80 |
| 120 | 140 | 45 | 70 | 60 | 90 |
| 140 | 160 | 50 | 75 | 65 | 100 |
| 160 | 180 | 55 | 85 | 75 | 110 |
| 180 | 200 | 60 | 90 | 80 | 120 |
| 200 | 225 | 60 | 95 | 90 | 135 |
| 225 | 250 | 65 | 100 | 100 | 150 |
| 250 | 280 | 75 | 110 | 110 | 165 |
| 280 | 315 | 80 | 120 | 120 | 180 |
| 315 | 355 | 90 | 135 | 135 | 200 |
| 355 | 400 | 100 | 150 | 150 | 225 |
| 400 | 450 | 110 | 170 | 170 | 255 |
| 450 | 500 | 120 | 190 | 190 | 285 |

Table 7: Radial clearance of four-row cylindrical rolling bearings (cylindrical bore) µm

| Nominal bore diameter d mm | | Clearance | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Group 2 | | Group 0 | | Group 3 | | Group 4 | | Group 5 | |
| Over | To | min. | max. | min. | max. | min. | max. | min. | max. | min. | max. |
| 80 | 100 | 15 | 50 | 50 | 85 | 75 | 110 | 105 | 140 | 155 | 190 |
| 100 | 120 | 15 | 55 | 50 | 90 | 85 | 125 | 125 | 165 | 180 | 220 |
| 120 | 140 | 15 | 60 | 60 | 105 | 100 | 145 | 145 | 190 | 200 | 245 |
| 140 | 160 | 20 | 70 | 70 | 120 | 115 | 165 | 165 | 215 | 225 | 275 |
| 160 | 180 | 25 | 75 | 75 | 125 | 120 | 170 | 170 | 220 | 250 | 300 |
| 180 | 200 | 35 | 90 | 90 | 145 | 140 | 195 | 195 | 250 | 275 | 330 |
| 200 | 225 | 45 | 105 | 105 | 165 | 160 | 220 | 220 | 280 | 305 | 365 |
| 225 | 250 | 45 | 110 | 110 | 175 | 170 | 235 | 235 | 300 | 330 | 395 |
| 250 | 280 | 55 | 125 | 125 | 195 | 190 | 260 | 260 | 330 | 370 | 440 |
| 280 | 315 | 55 | 130 | 130 | 205 | 200 | 275 | 275 | 350 | 410 | 485 |
| 315 | 355 | 65 | 145 | 145 | 225 | 225 | 305 | 305 | 385 | 455 | 535 |
| 355 | 400 | 100 | 190 | 190 | 280 | 280 | 370 | 370 | 460 | 510 | 600 |
| 400 | 450 | 110 | 210 | 210 | 310 | 310 | 410 | 410 | 510 | 565 | 665 |
| 450 | 500 | 110 | 220 | 220 | 330 | 330 | 440 | 440 | 550 | 625 | 735 |
| 500 | 560 | 120 | 240 | 240 | 360 | 360 | 480 | 480 | 600 | - | - |
| 560 | 630 | 140 | 260 | 260 | 380 | 380 | 500 | 500 | 620 | - | - |
| 630 | 710 | 145 | 285 | 285 | 425 | 425 | 565 | 565 | 705 | - | - |
| 710 | 800 | 150 | 310 | 310 | 470 | 470 | 630 | 630 | 790 | - | - |
| 800 | 900 | 180 | 350 | 350 | 520 | 520 | 690 | 690 | 860 | - | - |
| 900 | 1000 | 200 | 390 | 390 | 580 | 580 | 770 | 770 | 960 | - | - |
| 1000 | 1120 | 220 | 430 | 430 | 640 | 640 | 850 | 850 | 1060 | - | - |
| 1120 | 1250 | 230 | 470 | 470 | 710 | 710 | 950 | 950 | 1190 | - | - |
| 1250 | 1400 | 270 | 530 | 530 | 790 | 790 | 1050 | 1050 | 1310 | - | - |



Table 8: Radial clearance of double-row and four-row tapered rolling bearings µm

| Nominal bore diameter d mm | | Group 1 | | Group 2 | | Group 0 | | Group 3 | | Group 4 | | Group 5 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Over | To | min | max | min | max | min | max | min | max | min | max | min | max |
| _ | 30 | 0 | 10 | 10 | 20 | 20 | 30 | 40 | 50 | 50 | 60 | 70 | 80 |
| 30 | 40 | 0 | 12 | 12 | 25 | 25 | 40 | 45 | 60 | 60 | 75 | 80 | 95 |
| 40 | 50 | 0 | 15 | 15 | 30 | 30 | 45 | 50 | 65 | 65 | 80 | 90 | 110 |
| 50 | 65 | 0 | 15 | 15 | 30 | 30 | 50 | 50 | 70 | 70 | 90 | 90 | 120 |
| 65 | 80 | 0 | 20 | 20 | 40 | 40 | 60 | 60 | 80 | 80 | 110 | 110 | 150 |
| 80 | 100 | 0 | 20 | 20 | 45 | 45 | 70 | 70 | 100 | 100 | 130 | 130 | 170 |
| 100 | 120 | 0 | 25 | 25 | 50 | 50 | 80 | 80 | 110 | 110 | 150 | 150 | 200 |
| 120 | 140 | 0 | 30 | 30 | 60 | 60 | 90 | 90 | 120 | 120 | 170 | 170 | 230 |
| 140 | 160 | 0 | 30 | 30 | 65 | 65 | 100 | 100 | 140 | 140 | 190 | 190 | 260 |
| 160 | 180 | 0 | 35 | 35 | 70 | 70 | 110 | 110 | 150 | 150 | 210 | 210 | 280 |
| 180 | 200 | 0 | 40 | 40 | 80 | 80 | 120 | 120 | 170 | 170 | 230 | 230 | 310 |
| 200 | 225 | 0 | 40 | 40 | 90 | 90 | 140 | 140 | 190 | 190 | 260 | 260 | 340 |
| 225 | 250 | 0 | 50 | 50 | 100 | 100 | 150 | 150 | 210 | 210 | 290 | 290 | 380 |
| 250 | 280 | 0 | 50 | 50 | 110 | 110 | 170 | 170 | 230 | 230 | 320 | 320 | 420 |
| 280 | 315 | 0 | 60 | 60 | 120 | 120 | 180 | 180 | 250 | 250 | 350 | 350 | 460 |
| 315 | 355 | 0 | 70 | 70 | 140 | 140 | 210 | 210 | 280 | 280 | 390 | 390 | 510 |
| 355 | 400 | 0 | 70 | 70 | 150 | 150 | 230 | 230 | 310 | 310 | 440 | 440 | 580 |
| 400 | 450 | 0 | 80 | 80 | 170 | 170 | 260 | 260 | 350 | 350 | 490 | 490 | 650 |
| 450 | 500 | 0 | 90 | 90 | 190 | 190 | 290 | 290 | 390 | 390 | 540 | 540 | 720 |
| 500 | 560 | 0 | 100 | 100 | 210 | 210 | 320 | 320 | 430 | 430 | 590 | 590 | 790 |
| 560 | 630 | 0 | 110 | 110 | 230 | 230 | 350 | 350 | 480 | 480 | 660 | 660 | 880 |
| 630 | 710 | 0 | 130 | 130 | 260 | 260 | 400 | 400 | 540 | 540 | 740 | 740 | 910 |
| 710 | 800 | 0 | 140 | 140 | 290 | 290 | 450 | 450 | 610 | 610 | 830 | 830 | 1100 |
| 800 | 900 | 0 | 160 | 160 | 330 | 330 | 500 | 500 | 670 | 670 | 920 | 920 | 1240 |
| 900 | 1000 | 0 | 180 | 180 | 360 | 360 | 540 | 540 | 720 | 720 | 980 | 980 | 1300 |
| 1000 | 1120 | 0 | 200 | 200 | 400 | 400 | 600 | 600 | 820 | | | | |
| 1120 | 1250 | 0 | 220 | 220 | 450 | 450 | 670 | 670 | 900 | | | | |
| 1250 | 1400 | 0 | 250 | 250 | 500 | 500 | 750 | 750 | 980 | | | | |

Table 9: Radial clearance of four-point contact ball bearings μm

| Nominal bore diameter d mm | | Group 2 | | Group 0 | | Group 3 | | Group 4 | |
|---|---|---|---|---|---|---|---|---|---|
| Over | To | min | max | min | max | min | max | min | max |
| - | 18 | 15 | 55 | 45 | 85 | 75 | 115 | 105 | 145 |
| 18 | 40 | 26 | 66 | 56 | 106 | 96 | 146 | 136 | 186 |
| 40 | 60 | 36 | 86 | 76 | 126 | 116 | 166 | 156 | 206 |
| 60 | 80 | 46 | 96 | 86 | 136 | 126 | 176 | 166 | 216 |
| 80 | 100 | 56 | 116 | 96 | 156 | 136 | 196 | 176 | 236 |
| 100 | 140 | 66 | 136 | 116 | 176 | 156 | 216 | 196 | 256 |
| 140 | 180 | 76 | 156 | 136 | 196 | 176 | 236 | 216 | 276 |
| 180 | 220 | 96 | 176 | 156 | 216 | 196 | 256 | 236 | 296 |
| 220 | 260 | 115 | 195 | 175 | 235 | 215 | 295 | 275 | 335 |
| 260 | 300 | 135 | 215 | 195 | 275 | 255 | 335 | 295 | 355 |
| 300 | 350 | 155 | 235 | 215 | 295 | 275 | 355 | 335 | 415 |
| 350 | 400 | 175 | 265 | 245 | 325 | 305 | 385 | 365 | 465 |
| 400 | 500 | 205 | 305 | 285 | 385 | 355 | 455 | 435 | 525 |
| 500 | 600 | 255 | 355 | 335 | 445 | 425 | 545 | 525 | 615 |

## Bearing Material

The performance and reliability of rolling bearings mostly depend on bearing material property. The rolling bearings are required to suffer large force repeatedly on the interface between rings and rolling elements, meanwhile, keep the high precision rotation. So it is required that the materials of the rings and the rolling elements possess the characteristics of hardness coinciding with loading capacity, anti-fatigue and anti-wear, and dimensional steady under different conditions of rolling contact and lubrication. Too much non-metallic impurity can cause fatigue and chapping easily. The less the impurity is, the cleaner the bearing steel is being improved, the material property is improved greatly by vacuumed degassed treatment and the oxygen content and non-metal content are reduced. Electroslag refining bearing steel with higher clean degree is used for bearings with long service life and high liability.

### Rings and rolling elements

High carbon chrome bearing steel is generally used for the rolling bearing rings and the rolling elements. The carburizing steel is used for the bearings with high impact load and alternating bending stress.

High carbon chrome bearing steel is the most widely used for the rolling bearings, which are required to adopt overall quenching way,the surface and bore of the bearing both are able to be hardened. Recently, the quality of the



ZWZ heat treatment technology for rolling bearing rings and rolling elements ensures the dimensional steady under 120℃ temperature. For higher operating temperature, special bearing heat treatment technology are demanded to ensure its dimensional steady. But this special technology will reduce bearing material's hardness and shorten bearing's fatigue life. For bearing whose operating temperature is more than 300℃, high temperature steel of hyperpyrexia hardness is used.

### Cage

The cage is applied to embrace the rolling elements partially to ensure a distance between the two neighbor rollers, in order to reduce operating friction and generated heat, keep the same distance between rolling elements and distribute load equably and prevent rolling elements from falling off from separable bearings, as well as to guide rolling elements. The cages can take functions in lubrication grease storage to improve bearings' lubrication. For the cage material, it is required to bear operating vibration and impacting strength and to ensure small friction with rolling elements. The material should be light and suitable for bearing's operating temperature.

ZWZ rolling bearing cages can be divided into pressed cage, solid cage and pin cage.

### Pressed cage

ZWZ pressed cage is generally made of cold-rolled and hot-rolled sheet steel which have light weight and takes small space in bearings so that lubricant can go inside easily.

Pressed cage is usually used in deep groove ball bearing, spherical rolling bearing and most tapered rolling bearing.

### Solid cage

ZWZ solid cage is made of metal, phenolic bakelite and plastic.

Metal solid cage is usually made of brass, carbon steel and the etc. It is used in situations where cages of high strength are required and where the temperature is high.

Solid cage can be used where guide rib is needed. High speed bearing cage with guide rib is often made of light material, such as light alloy, phenolic bakelite and the etc. to endure its small inertia.

Plastic injection molding can be adopted when solid cage is made of glass fiber reinforced nylon 66 according to its outline suitable for the highest load requirement. Glass fiber reinforced nylon 66 has big flexibility, light weight and is suitable for vibration impact stress, acceleration or deceleration or mutual clopping of inner ring and outer ring. This bearing cage holds good property of lubrication and self-aligning. Cages made of glass fiber reinforced nylon 66 can be used in steady situations where the operating temperature is less than 120℃. Nylon will lose its flexibility under temperature lower than -40℃.

### Pin cage

Linked by hollow roller, pin and gasket, pin cage is mostly used in large size cylindrical rolling bearings and tapered rolling bearings. The cage's weight is light and can accommodate more rollers and heavier load.

## The Limit Speed of Bearing

The rotation speed of the bearing is mainly restricted by the increase in temperature due to the frictional heat generated inside the bearing. When the rotation speed exceeds certain limit, the bearing shall fail to continue rotating due to the burns.

Limit rotation speed of the bearing indicates the limit value of the rotation speed when there is no frictional heat that leads to the burns and the bearing can continuously rotate.

Therefore, the limit rotation speed of the bearing is subject to the bearing type, dimensions, precision, lubrication method, quality and amount of lubricant, material and design of retaining cage, loading conditions and other factors.

The limit rotation speed for different types of bearings using grease lubrication and oil lubrication are respectively given in the dimension tables of these bearings. These values indicate the limit values of rotation speed of the normal design bearings under normal loading conditions ($C/P \geqslant 13$, $Fa/Fr \leqslant 0.25$ or so). In addition, the lubricant may be better than others in property, according to types and brand, but it may not be suitable for high speed rotation.

## The Determination Method of Rolling Bearing's Limit Speed

Because of many factors influencing limit speed, there is no precise calculation method to define the limit speed of each kind of bearing. Only can put forward an approximate formula for calculating the limit speed according to the domestic and foreign usage experience and test results. And provide the guidance to use reasonably. When choosing bearings, generally should not exceed the limit speed listed in sample books.

The limit speed listed in roller bearing sample books us given under certain assumptions, namely assume the equivalent dynamic load $P<0.1C$ ( C means rating dynamic load of bearing); Lubrication and cooling condition is normal; The radial bearing can only carry radial loads and thrust bearing can only carry axial loads; Bearing precision is Po.

Under the condition of the above assumptions, the bearing limit speed can be calculated by formula as below:

For radial bearing: $$n_j = \frac{f_1 A}{D_m}$$

For thrust bearing: $$n_j = \frac{f_1 A}{\sqrt{DH}}$$

In the formular:

$n_j$—Limit speed of roller bearing (r/min)

$D_m$—Bearing average diameter

$D_m = 0.5\ (D+d)$

d—Bearing inner diameter

D—Bearing outer diameter

H—Thrust bearing height

$f_1$—Dimensional factor that can check out according to Dm of radial bearing or $\sqrt{DH}$ of thrust bearing in Figure 1;

The result is accurate to two digits and taken as in Table 2. When calculating the limit speed of needle bearing, Dm should be replaced by outer diameter of inner ring raceway. The value range of rlller bearing limit speed is listed in Table 2.

Table 1 Structural factor A ($X10^4$)

| Bearing type | Grease lubrication | Oil lubrication |
|---|---|---|
| Deep groove ball bearing | | |
| Single row | 48 | 60 |
| Single row with dust cover | 48 | 60 |
| Single row with seal ring | 34 | - |
| Single row with felt von seal ring | 24 | - |
| Single row with filling slot | 38 | 48 |
| Double-row with filling slot | 30 | 38 |
| Needle bearing | | |
| Without cage | 9 | 12 |
| With cage | 24 | 36 |
| With cage drawn cup | 20 | 28 |
| Spherical roller bearing | 28 | 34 |
| Angular contact ball bearing | 45 | 60 |
| Single row | 32 | 43 |
| Double row | 32 | 43 |
| Mounting in pairs | 36 | 48 |
| Four-point contact | | |
| Separated type | | |
| (Magneto bearing) | 48 | 60 |
| Self-aligning ball bearing | 38 | 48 |
| Short cylindrical roller bearing | 43 | 53 |
| Tapered roller bearing | 30 | 38 |
| Single row | 22 | 28 |
| Double row | 18 | 22 |
| Four-row | 9 | 13 |
| Thrust ball bearing | 6.7 | 9 |
| Cylindrical roller thrust bearing | 6.7 | 9 |
| Tapered roller thrust bearing | - | 18 |
| Self-aligning thrust roller bearing | | |

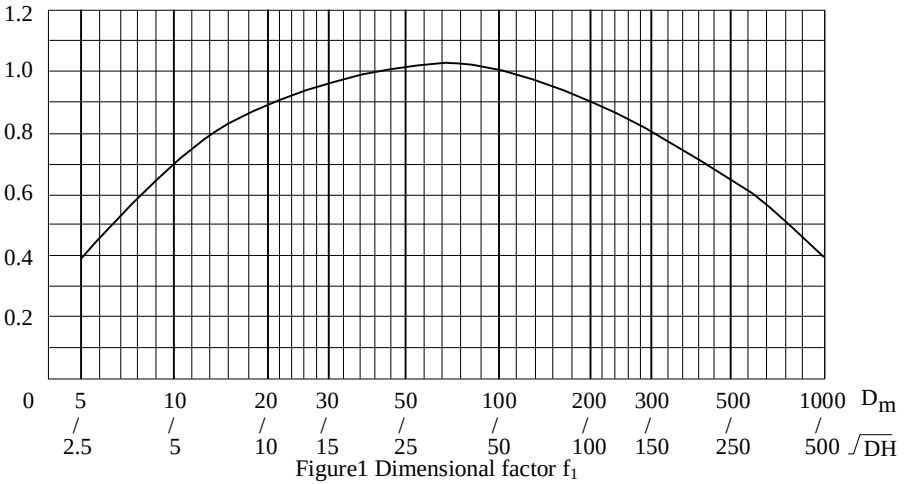



Figure1 Dimensional factor $f_1$

Table 2 Value range of limit speed

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 10 | 38 | 100 | 380 | 1000 | 3800 | 10000 | 38000 |
| 11 | 40 | 110 | 400 | 1100 | 4000 | 11000 | 40000 |
| 12 | 43 | 120 | 430 | 1200 | 4300 | 12000 | 43000 |
| 13 | 45 | 130 | 450 | 1300 | 4500 | 13000 | 45000 |
| 14 | 48 | 140 | 480 | 1400 | 4800 | 14000 | 48000 |
| 15 | 50 | 150 | 500 | 1500 | 5000 | 15000 | 50000 |
| 16 | 53 | 160 | 530 | 1600 | 5300 | 16000 | 53000 |
| 17 | 56 | 170 | 560 | 1700 | 5600 | 17000 | 56000 |
| 18 | 60 | 180 | 600 | 1800 | 6000 | 18000 | 60000 |
| 19 | 63 | 190 | 630 | 1900 | 6300 | 19000 | 63000 |
| 20 | 67 | 200 | 670 | 2000 | 6700 | 20000 | 67000 |
| 22 | 70 | 220 | 700 | 2200 | 7000 | 22000 | 70000 |
| 24 | 75 | 240 | 750 | 2400 | 7500 | 24000 | 75000 |
| 26 | 80 | 260 | 800 | 2600 | 8000 | 26000 | 80000 |
| 28 | 85 | 280 | 850 | 2800 | 8500 | 28000 | 85000 |
| 30 | 90 | 300 | 900 | 3000 | 9000 | 30000 | 90000 |
| 32 | 95 | 320 | 950 | 3200 | 9500 | 32000 | 95000 |
| 34 | 100 | 340 | 1000 | 3400 | 10000 | 34000 | 100000 |
| 36 | | 360 | | 3600 | | 36000 | |



## The Limit Speed of Rolling Bearing in Actual Application

There are many factors influencing limit speed, mainly these kinds as listed below:

(1) Load amount

When bearings running with load condition of P>0.1C, the contact stress of rolling elements and raceway increases, temperature rises, which influence the lubricant performance. As a result, the limit speed listed in sample books will be multiplied by load factor f2 as shown in Figure 2.

(2) Load type and direction

If radial bearings carry combined loads of radial load and axial load, because the number of rolling elements withstanding load increaseand large friction heat, then multiply the limit speed value listed in sample books with load distribution factor f3 as shown in Figure 3.

(3) Lubricant and lubrication method

The limit speed listed in sample books belong to normal lubricating status, which means oil bath lubrication or drop lubrication, such as circulating oil lubrication, fog lubrication, splash lubrication, air-oil lubrication and so on. Then the limit speed of bearing can be improved by 1.5~2 times.

Experience proves that the limit speed can also be improved by enhancing bearing manufacture precision, increasing bearing clearance properly and adopting cage with special material and structure.

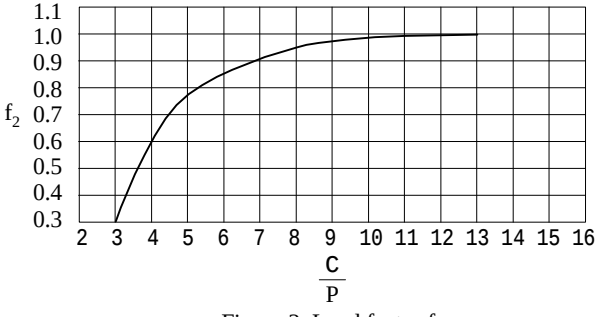



Figure 2 Load factor $f_2$

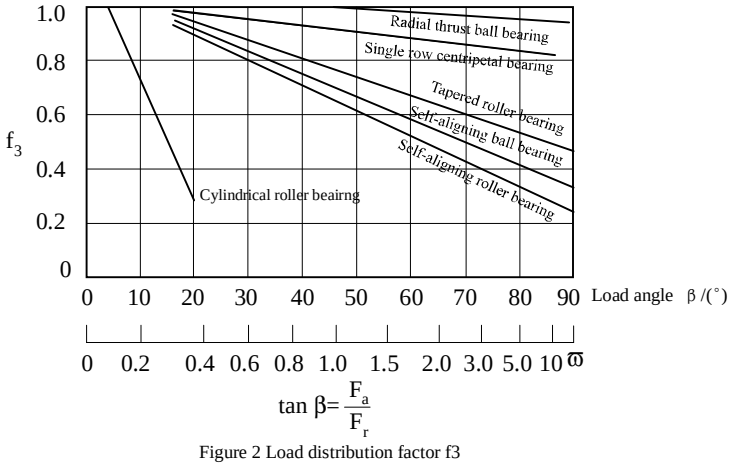



Figure 2 Load distribution factor f3

## Correction of Limit Speed

When the loading condition is P>0.1C, or when the axial load exceeds the radial load by over 25% in the combined load, the limit speed need to be corrected.

$$na = f1 \cdot f2 \cdot n \quad \cdots\cdots\cdots\cdots\cdots \quad (1)$$

Where:

- na: the corrected limit rotational speed, rpm
- f1: the correction factor related to the loading condition (Figure 1)
- f2: the correction factor related to the combined load (Figure 2)
- n: the limit rotation speed under normal load conditions, rpm (see bearing dimension tables)
- C: the basic dynamic load rating
- P: the equivalent dynamic load
- Fr: radial load N{kgf}
- Fa: axial load N{kgf}

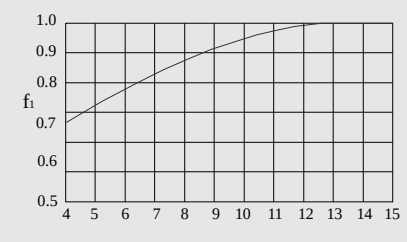



Figure 1: The correction factor fi relative to load condition $f_1$

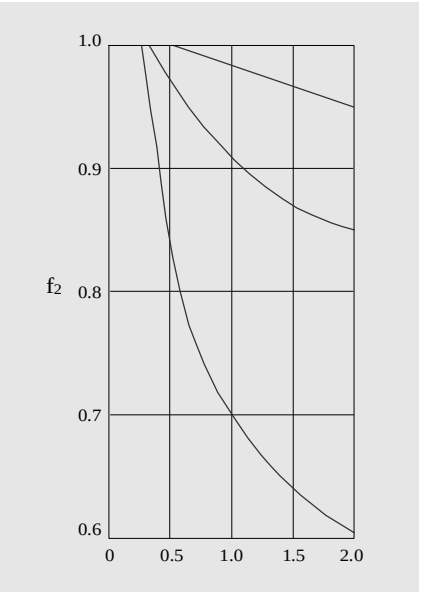



Figure 2: The correction factory f2 relative to the combined load $f_2$

## The Limit Speed of the Bearing with Sealing Ring

The limit rotation speed of the ball bearing with contact seals (RS type) is confined by the linear speed or the contact surface of the seals. The allowable linear speed depends on the rubber quality of the seals.

## Precautions of High Speed Rotation

When the bearing rotates at high speed, especially at rotation speed approaching or exceeding the limit rotation speed given in the dimension tables, attention must be paid to the following issues:

(1) Apply precision bearing
(2) Analyze the internal clearance of the bearing (considering the reduction in internal clearance caused by the temperature increase)
(3) Analyze the type of cage material (For high speed rotation, cages of copper alloy or PF resins are preferred. Cages of synthetic resigns are also workable.).
(4) Analyze the lubricating method (Circular lubrication, spurt lubrication, oil spray or gas lubrications are suitable for high-speed rotations.)
(5) Or the cage made of cutting phenolic resin. In addition, also suitable for cage made of resin at a high rotation speed.

# Friction and Temperature Rise of Bearing

## Friction

Every friction can cause energy loss and hinder movement. Friction is the main reason for causing roller bearing heating, so it is also the key element to define working temperature of bearing. Friction depends on the load and several other factors in which the bearing type, size, rotation speed, lubricant property and lubricant amount are the most important.

There are many reasons leading to friction, such as friction caused by sliding between rolling elements and raceway, sliding friction between rolling elements and cage, sliding friction between rolling elements and ring flange, friction caused by seal parts and so on.

## Approximate Calculation of Friction Torque

In order to be compared with the sliding bearing, the frictional torque of rolling bearings can be calculated according to the bore diameter of the bearings:

$$M = \mu P \frac{d}{2}$$

Where:

M: Frictional torque {kgf.mm}
μ: frictional factor (Table 1)
P: bearing load N{kgf}
d: nominal bore diameter of the bearing mm

The frictional factor μ is greatly influenced by the bearing type, load, rotational speed and lubrication and so on. The reference frictional factor under normal stable rotational conditions is given in Table 1.For sliding bearings, normally μ=0.01-0.02, sometimes 0.1-0.2.

Table 1 The frictional factor μ for different bearings

| Bearing type | Frictional factor μ |
|---|---|
| Deep-groove ball bearing | 0.0010-0.0015 |
| Angular contact ball bearing | 0.0012-0.0020 |
| Self-aligning ball bearing<br>Cylindrical rolling bearing | 0.0008-0.0012 |
| Needle rolling bearings with full complement | 0.0025-0.0035 |
| Caged needle rolling bearing | 0.0020-0.0030 |
| Tapered rolling bearing | 0.0017-0.0025 |
| Spherical rolling bearing | 0.0020-0.0025 |
| Thrust ball bearing | 0.0010-0.0015 |
| Spherical roller thrust bearing | 0.0020-0.0025 |

## Temperature Rise

Friction loss of bearing almost changes into heat, so the bearing temperature rises. The quantity of heat caused by friction moment can be expressed as the following formula:

$$Q=0.105\times10^{-6}M.n$$

Q: Heat Kw
M: Friction moment N.m
n: Bearing rotation speed rpm

The heat produced and outflow heat keep balanced, then the bearing temperature will stay stable. Generally, temperature rises rapidly at the start of operation, but it will become stable when reaches normal condition. The bearing temperature will be different because of different generating heat, heat capacity of bearing boxing, cooling area, lubricating oil amount, environment temperature by the time of arriving stable condition. If it can not be stable and reach the stable condition, then it will be defined as abnormal.

Reasons for abnormal temperature rise: too small bearing torque load and clearance, too big prepress, insufficient or sufficient lubricant, foreign matter coming into sealing device and so on.



# Fit of Bearing

## The Purpose of Fit

The purpose of fit is to make the inner ring or the outer ring fixed to the shaft or housing so that no bad circular slide shall happen on the fit surface.

The bad circular slide (called creep deformation) will bring about abnormal heat, scratches on the fit surface (hence making the ground iron power enter into the bearing), vibration and other problems, which cause the insufficient functioning of the bearing.

Therefore, since the bearing rotates with load, normally the rings must have interference fit so that they are fixed to the shaft or the housing.

### Dimensional tolerances and fits of shaft and housing

The dimensional tolerance of the metric shaft and housing bore have been standardized in the GB/T275-93 *The fits of Rolling Bearings with Shaft and Housing*. If the dimensional tolerances are available, we can define the fit of the bearing with the shaft or the housing.

The fit relations between the dimensional tolerances of the shaft and housing bore and the bearings with PO class precision degree are given in Figure 1.

## The Selection of Fit

The selection of fit is made according to the following principles.

According to the direction and nature of applied load and which of the two rings rotates, the load carried by each of the rings can be divided into rotational load, static load or indeterminate direction load. The ring carrying rotation load or indeterminate direction load should use static fit (interference fit), and the ring carrying static load should use transitional fit or dynamic fit (clearance fit).

If the bearing load is big or there is vibrating or shock load, the interference fit should be increased. When using hollow shaft, bearing box with thin wall or light alloy or plastic bearing box, the interference should also be increased.

If high rotation precision is required, the high precision bearing should be used, and the dimension precision of the shaft or bearing box should be increased to avoid too much interference fit. If the interference is too big, the geometric precision of the shaft or bearing box shall affect the geometric shape of the bearing rings, and accordingly damage the bearing rotation precision.

If both inner ring and outer ring of non-separable bearing (such as deep groove ball bearing) adopt static fits, the mounting and dismounting of bearing is very inconvenient. It's better to adopt dynamic fit for inner ring or outer ring.

### 1) Effects of the load nature

According to its nature, bearing load can be divided into inner ring rotation load, outer ring rotation load and indeterminate direction load..

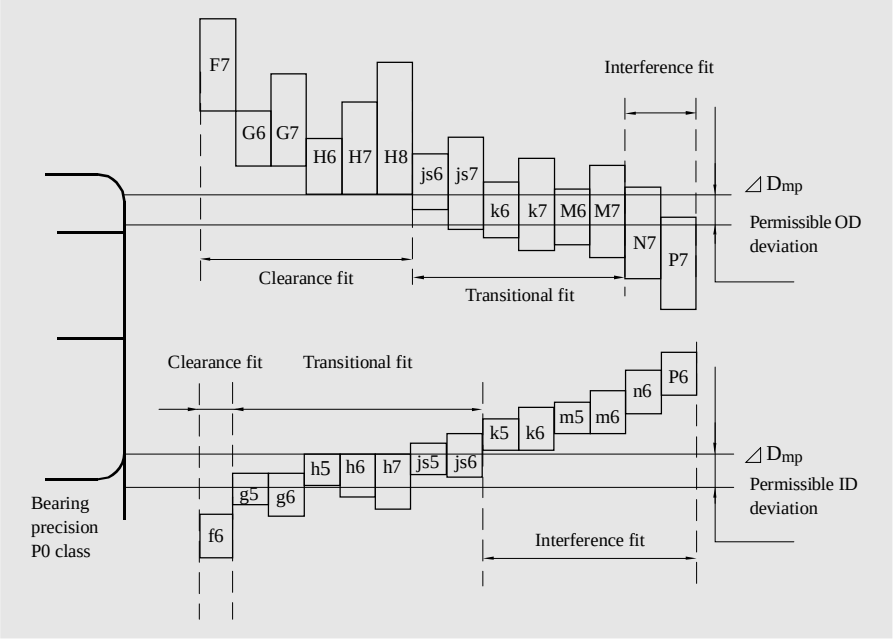
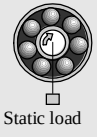
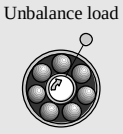



Figure1 Relations between dimension tolerances of shaft and housing bore and fit ( bearings of PO class precision).

Table1 Nature of load and relations with fit

| Bearing rotational conditions | Figure example | Nature of load | Fit choice |
|---|---|---|---|
| Inner ring:rotating<br>Outer ring:static<br>Direction of load:<br>fixed |  | I.R. rotating load | I.R:. use static fit (interference fit) |
| Inner ring:static<br>Outer ring:rotating<br>Direction of load:<br>Rotating<br>simultaneously<br>with outer ring |  | O.R. static load | O.R.: use dynamic (clearance fit ) |



| Bearing rotational conditions | Figure example | Nature of load | Fit choice |
|---|---|---|---|
| Inner ring: static<br>Outer ring: rotating<br>Direction of load:<br>fixed |  | I.R. static load | I.R. use dynamic fit (clearance fit) |
| Inner ring: rotating<br>Outer ring : static<br>Direction of load:<br>Rotating<br>simultaneously with<br>inner ring |  | O.R. rotating load | O.R. use static fit (interference fit) |

### 2) Effects of load magnitude

For inner ring with radial load, it is both compressed and expanded in the radial direction, and the circumference tends to increase slightly, therefore the initial interference will decrease.

The amount of decrease can be calculated with the following formula:

[ $F_r \leqslant 0.25\ C_0$ ]

$$\triangle d_F = 0.08 \sqrt{\frac{d}{B} \cdot F_r} \times 10^{-3} \quad \cdots\cdots (1)$$

[ $F_r > 0.25\ C_0$ ]

$$\triangle d_F = 0.02 \frac{F_r}{B} \times 10^{-3} \quad \cdots\cdots (2)$$

Where:

$\triangle$dF: a mount of decrease of the interference, mm

d: bearing nominal bore diameter, mm

B: nominal bore width, mm

Fr: radial load, N {kgf}

$C_0$: basic static load rating, N{kgf}

Therefore, when the radial load is a heavy one ( exceeding the value of C0 by 25%), the fit must be tighter than that with light load.

If there is the shock load, the fit must be even tighter.

### 3) Effects of the fit surface roughness

When taking the plastic deformation of the fit surface into consideration, the effective interference after fit is influenced by the processing quality of the fit surface. It can be approximately expressed with the following formula:

[ground shaft]

$$\triangle d_{eff} \fallingdotseq \frac{d}{d+2} \triangle d \quad \cdots\cdots (3)$$

[turned shaft]

$$\triangle d_{eff} \fallingdotseq \frac{d}{d+3} \triangle d \quad \cdots\cdots (4)$$

Where:
△deff: effective interference, mm
△d: apparent interference, mm
d: bearing nominal inner diameter, mm

### 4) Effects of temperature

Generally speaking, the bearing temperature in operation is higher than the surrounding temperature, and if the bearing rotates with load, the temperature of the inner ring is higher than that of the shaft, and the heat expansion shall reduce the effective interference.

Now assume the temperature difference between the inside of the bearing and the surrounding temperature of the housing is △t, we can presume that the temperature difference between the inner ring and the shaft on the fit surface is approximately (0.10~0.15)△t.

The reduced amount of interference caused by temperature change can be calculated with the following formula:

$$\Delta dt = (0.10 \text{ to } 0.15)\Delta t \cdot \alpha \cdot d \fallingdotseq 0.0015\Delta t \cdot d \times 10^{-3} \quad \cdots\cdots\cdots (5)$$

Where:
△dt: reduced amount of the interference caused by the temperature difference, mm
△t: temperature difference between the inside of the bearing and the surrounding housing, ℃
a: linear expansion factor of bearing steel, $(12.5\text{x}10^{-6})1/℃$
d: bearing nominal bore diameter, mm

Therefore, when the temperature of the bearing is higher than that of the shaft, the fit must be very tight. On the other hand, the interference between the outer ring and housing may increase due to the temperature difference or linear expansion factor difference. Hence it must be noted when considering using the slide in the fit surface between the outer ring and the housing to adapt to the expansion.

### 5) The maximum stress inside the bearing caused by the fit

When mounting the bearing with interference fit, sometimes the rings may expand or contact and then bring about stress.

If the stress is too big, the rings sometimes may break, to which attention must be paid.

The maximum stress inside the bearing caused by the fit can be calculated with the formula in Table2. As the reference value, it is safe to let the maximum interference not exceed 1/1000 of the shaft radius, or let the maximum stress should not exceed 120MPa {12kgf/mm2}.

### 6) Others

When a much higher accuracy is required, the precision level of the shaft and housing should be increased. Compared with shaft, it is more difficult to process the housing and the precision level is low. Therefore, the loosened fit between the shaft and the housing is recommended.

When using hollow shaft or thin wall-thickness, the fit must be tighter than normal.

When using two half housings, the fit with the outer ring must be loosened. For housing of cast aluminum or light alloy, the fit must be tighter than normal.

Table2 the maximum stress inside the bearing caused by fit

| Shaft and inner ring |
|---|
| (hollow shaft) $s = \frac{E}{2} \cdot \frac{\Delta d_{eff}}{d} \cdot \frac{\left(1-\frac{d_0^2}{d^2}\right)\left(1+\frac{d^2}{D_i^2}\right)}{\left(1-\frac{d_0^2}{D_i^2}\right)}$ |
| (solid shaft) $s = \frac{E}{2} \cdot \frac{\Delta d_{eff}}{d} \cdot \left(1+\frac{d^2}{D_i^2}\right)$ |
| **Housing bore and outer ring** |
| $(D_h \neq \infty)$ $s = E \cdot \frac{\Delta D_{eff}}{D} \cdot \frac{\left(1-\frac{D^2}{D_h^2}\right)}{\left(1-\frac{D_e^2}{D_h^2}\right)}$ |
| $(D_h = \infty)$ $s = E \cdot \frac{\Delta D_{eff}}{D}$ |

s: maximum stress, MPa{kgf/mm}
d: nominal bore diameter (shaft diameter), mm
Di: inner ring raceway diameter, mm
Ball bearing ····· Di=0.2(D+4d)
Rolling bearing ····· Di=0.25 (D+3d)
△deff: effective interference of inner ring, mm
do: hollow shaft radius, mm
De: outer ring raceway diameter, mm
Ball bearing ····· De=0.2(4D+d)
Rolling bearing ····· De=0.25 (3D+d)
D: bearing nominal outer diameter (housing bore diameter), mm
△Deff: effective interference of outer ring, mm
Dh: housing outer diameter, mm
E: modulus of elasticity 2.08x105 MPa{21200 kgf/mm}

# Lubrication

Lubrication has important effects on the functions of the bearing. Wether the lubricant and the method are suitable or not shall influence the bearing life. That is to say, the lubrication is a necessary condition to assure the normal operation of bearing and the lubrication plays an important role in improving load-carry capability and service life of bearing.

## The Purpose of Lubrication

The purpose of bearing lubrication is to form a thin grease film on rolling or sliding surfaces in order to prevent the direct contact with the metals.

## The Effect of Lubrication

Reduce the friction of metals and slow down the wear.

The grease film formed expands the touching area and reduces the contacting stress.

Assure the rolling bearing can work normally under a high-frequency contact stress for a long time and elongates the bearing fatigue life.

Take away the heat generated by friction and reduce the temperature of bearing working surface in order to prevent burns.

Prevent the bearing from rust, dust and corrosion.

## Methods of Lubrication

The lubricating methods of rolling bearing include oil lubrication and grease lubrication.

## Oil Lubrication

Oil lubrication is applied to high-speed and

heat-resistant bearings and is effective for reducing vibration and lowering noise.
Oil lubrication has the following methods:

### 1).Oil drip lubrication

Oil drip lubrication can lubricate the bearing by dripping oil through the orifice of oil cup. The orifice of oil cup can be adjusted according to the magnitude of oil.
The advantage of lubrication method is the simple configuration and easy to use. But the disadvantage is that viscidity degree of oil can not be too high. Or it can not go through smoothly and influence the lubrication effect. So it is usually applied to rolling bearings with low speed and light load.

### 2). Oil bath lubrication

Oil bath lubrication can also be called soak oil lubrication that a part of bearing is dipped into the lubricant and make sure that every roller can be dipped into the lubricant when the bearing is working. Then the lubricant with rollers can go around other working parts of bearing. Considering the churning waste and temperature rise, in order to slow down the aging speed of lubrication, oil bath lubrication should not be adopted for the bearings with high rotation speed.

### 3) Splash lubrication

Splash lubrication is often adopted when rolling bearing works in closed gearing. It splashes the lubricant by using rotating parts, such as gear, swing oil plate and so on. The lubricant scatters on the bearing or flow into inside of rolling bearing through a designed oil groove along the box wall to lubricate rolling bearing. The used lubricant can mass again in the box for recycling. Since splash lubrication doesn't need any other accessorial equipment, it is normally adopted by the gearing with simple and compact configuration. But the following three points should be paid more attention when using splash lubrication:

(1) The upside surface of the lubricant should not be too high, or the wastage caused by churning oil will be overmuch. And it can also cause granule abrasion because of the sediment such as grinding scraps taken from oil pool to bearing part when churning oil.

(2) The lubricant in the box should be often kept clean. Magnetism adsorber should be used in the oil pool to clear away grinding scraps and foreign matters for reducing granule abrasion.

(3) When designing the configuration, an oil trough for storing and a throttle orifice towards bearing could be set up against box wall to make bearing in the similar situation where they are oil bath lubricated and dripping oil lubricated for supplying lubricant and preventing from the lack of oil.

### 4) Oil cycling lubrication

Oil cycling lubrication is a way of actively lubricating for the parts of rolling bearing. It pumps the lubricant from oil box by a lift pump and transmits the lubricant into the rolling bearing supporting through an oil pipe and oil bore. Then the lubricant returns to the oil box through the orifice of bearing housing for reusing after being cooled and filtrated. Therefore, this method of lubrication can eliminate much more heat and simultaneously expel friction heat effectively. So it is applied to the bearing supporting with overload and high-speed rotation.

### 5) Oil jet lubrication

Oil jet lubrication is a kind of oil circulating



### 6). Oil mist lubrication

Oil mist lubrication is a kind of micro-lubricating. It meets the lubricating demand of rolling bearing with a spot of lubricant. Oil mist lubrication is to lubricate bearing with the oil mist that converted from lubricating oil in the oil mist generator. Actually, rolling bearing still keep the status of sparse lubricating condition since oil mist coagulate into oil drippings on the working surface of rolling bearing. To avoid the overmuch of oil supplying and increase of rolling bearing's working temperature caused by the augment of friction inside the oil, oil mist lubrication is normally adopted when the linear velocity of roller is quite high. Generally, the stress of oil mist is around 0.05~0.1bar. But the following two points should be paid much attention when adopt this lubrication method:
(1) The viscosity degree of lubricant should not exceed 340mm2/s (40℃) because exorbitant viscosity degree can not bring the effect of atomization.
(2) The oil mist after lubricating may spread with air partially and result in environment pollution. The oil mist should be collected by an oil-gas separator if necessary or eliminated by aerator.

### 7) Oil air lubrication

Use a piston quantitative distributor to transmit little oil to the constringent airflow inside the pipe at regular intervals and form a continuous flowing of oil against the wall of the pipe for supplying to bearing. The oil won't aging because of the new lubricant coming continuously.
Compressing the air can prevent the external impurities from breaking into the inside of bearing easily.
The little oil supplying can reduce the pollution to surrounding environment. Oil air lubrication use less oil than oil mist lubrication and has better stability, small friction moment, slowly temperature increasing. It is especially applied to high speed bearing.

## Grease Lubrication

Grease lubrication put inside the bearing can last a comparatively long time without replenishment and the sealing device is very simple. Therefore, it is extensively applied.
There are two methods for grease lubrication: one is to put the grease inside the sealed bearings in advance. The other is to fill the certain amount of grease inside the housing and refill it or change the grease inside at intervals.
Besides, for machines with several bearings requiring lubrication, the method of centralized greasing through pipes connecting with the places to be lubricated is adopted.
The effect of grease lubrication is to put the grease onto every motional surface of rolling bearing directly. But when lubricating the raceway of rolling bearing and sliding surface, the principles below must be followed:
(1) To lubricate bearings adequately, the grease should impenetrate to the working surface and the interspace of bearing.
(2) Some of grease should be remained on the working surface of rolling bearing and last for a period of time. But overmuch loss of grease by flowing away should be prevented.
(3)The flowing direction of inputting and venting of grease should be according to the seal for it is propitious to the venting of contamination.
(4) Reduce the amount of grease at full steam

when making sure well lubricated.

(5) Set up an exit hole at the end of flowing direction of grease in order to let the new grease can jostle the old one injected into the room and making sure the bearings are well lubricated.

## The Selection Rules of Oil Lubrication

From the invalidation instance of oil lubricated rolling bearing, we can see most of invalidations are caused by the low viscidity degree of lubricant. The lower viscidity degree of lubricant is, the smaller carrying capacity of oil film owns and the easier oil film breaks, when the metal material connect each other directly and doing relative motions inside the rolling bearing and leading the bearing life is shorted for the increase of friction and abrasion or the burn and rupture accident occurs. But if the viscidity degree is overmuch, it can cause the increase of friction. So the quantity of heat increases when churning the lubricant, that is to say, the consumed energy of the system will increase. On the other hand, for working under the condition of high-speed, high load and high temperature, the rolling bearing may have special demand of antirust, antioxidant, wearability and the increase of lubricant adsorbability. Therefore, for selecting lubricant, it is mainly to ensure the viscidity degree and additive kind or different lubricant with some additive.

The following are general principles for selecting lubricant:

### (1) Operating temperature

Operating temperature influences change of lubricant's viscosity and lubricating effect. So, when the operating temperature is lower, the lower viscosity degree of lubricant should be selected; when the operating temperature is higher, the higher viscidity degree of lubricant or the lubricant with proper additive should be selected. For the different working temperatures, the viscidity degree of selected lubricant should varies synchronously. For example, much lower lubricant viscosity should be selected when lubricating bearings in north area or winter than in south area or summer. When the operating temperature varies frequently, the lubricant with excellent viscidity temperature quality should be selected. Namely, the viscidity degree of lubricant doesn't change a lot when the operating temperature ascending or descending to ensure that the thickness of oil film is controlled in a certain range steadily.

### (2) Motion speed

The higher rotation speed, the lower viscosity of lubricating oil should be selected to avoid moving resistance and more heat generated. On the contrary, under the situation of the lower rotation speed, using the higher viscosity will be beneficial to improve the ability of load for bearings.

### (3) Nature of the motion

In motion, there are impact, vibration, frequent changes of load ,speed and starting. Stop motion, rolling back frequently and intercourse or intermittence moving, they are not beneficial to form the oil film. Therefore, the lubricating oil with high viscosity should be adopted. Sometimes, would rather adopt lubricating grease, even the solid lubricating to make sure the reliable lubrication.

### (4) Working load

The bigger load of rolling bearings carries, the higher viscosity of the lubricant's viscosity should be selected, the better oiliness and extreme-pressure property of lubricating oil should be selected as well, to avoid squeezing the lubricating oil from the friction pair, or producing the direct contact of metal.

### (5) Structure characteristics

The smaller rolling bearing's radial clearance is, the higher friction surface's processing precision is, the lower the viscosity of oil lubrication will be.

### (6) Environment condition

When the bearing works under the condition of humid , corrosive gas, lower temperature, dust, intense radiation, the lubricating oil is easily to be polluted. So the lubricating oil which has feature of water resistance, anti-corrosion, cold-resistant, anti-radiate. When the circumstance is water pollution, latex spray, humid air or heavy dust, choose lubricating grease, generally not suitable for lubricating oil .

### (7) Bearing precision

When the friction surface is crudity, generally, the high viscosity of oil lubrication should be selected so that it can carry partial relative high pressure caused by bad contact, but when the friction surface precision is high, the low viscosity of lubricant should be selected to reduce the unnecessary waste of energy loss and temperature rise.

### (8) Bearing hardness

When the hardness of bearing motion friction surface is low, the high viscidity degree of lubricant should be selected and the amount of oil should be rich. Contrarily, the viscidity degree of lubricant could be reduced.

## The Selection Rules of Grease Lubrication

Grease is made of thickener, additive and base oil. Base oil takes up about 70-95%, thickening agent takes about 30-50% and additive only in tiny percentage.

The method of choosing grease and oil are the same. It is mainly on the basis of bearing types and working conditions, for example the circumstance humidity, working temperature, speed parameter dmn, magnitude of load and the method of grease lubrication. Meanwhile, we should consider about some points below:

1) The dropping point of the grease should be 20-30℃ higher than the working temperature to assure the lubricating effect.

2) Lubricating grease is not appropriate for circulation lube, because the grease flowability is bad, frictional resistance is big, mechanical efficiency is lower, heat conductivity coefficient is small . When the grease is used as dry oil for the concentrating lubrication, the cone penetration should be above 300 (1/10mm).

3) For the grease is not sensitive with normal temperature, and suitable for the different loads and high rotation speed, so mostly the grease are used in machine which is with high different temperatures and speed or with reverse and intermission movement. And they can also be used in the agriculture, architecture, mine field machine and so on.

4) Grease put inside the bearings is not easy to lose or be extruded, and needn't to be changed regularly. For these advantages they are easy to seal and they can seal themselves. The grease is mostly suitable for some special places which are better not to put in oil regularly, install complicated seal and can't be contaminated by the grease as well as high dust environment.

The general characteristics of grease normally used

| Appellation | Brand No. | Titration temperature ℃ not lower than | Cone penetration | Operating temperature range ℃ | Characteristic and primary purpose |
|---|---|---|---|---|---|
| General lithium radicle grease | 1<br>2<br>3 | 170<br>175<br>180 | 310~340<br>265~295<br>220~250 | -20~120 | Having anti-water and mechanical security. Normally used in the rolling and sliding part of machinery equipment. Grease is often adopted when lubricating rolling bearings. |
| Electrode tension lithium grease | 0<br>1<br>2 | 170 | 355~385<br>316~340<br>265~295 | -20~120 | Having well mechanical security, anti-water, anti-permeating, electrode tension, extreme pressure antiwear property, the pumping capability. Normally used in the lubrication of heavy load machinery equipment, gear and bearings. |
| Calcium radicle grease | 1 | 80 | 310~340 | Temperatu<55 | Often used in the bearing lubrication with small load and self-supporting lubricating. Also pint-sized machine in the lower temperature area. |
| | 2 | 85 | 265~295 | | Be applied to medium-size and print-sized rolling bearing and the friction part of small load, high-speed machine in equipment with the temperature within 55℃. |
| | 3 | 90 | 220~250 | | Medium motor rolling bearings, motor and friction part of medium load and medium rotating speed machine with the temperature below 60℃. |

| Appellation | Brand No. | Titration temperature ℃ not lower than | Cone penetration | Operating temperature range ℃ | Characteristic and primary purpose |
|---|---|---|---|---|---|
| Calcium radicle grease | 4 | 95 | 175~205 | Temperatu<55 | Adopted by automotive water pump bearing, heavy load automatic machine bearing and other heavy load, low-speed machinery with the temperature below 60℃. |
| Calcium radicle grease | ZGN-1<br>ZGN-2 | 120<br>135 | 250~290<br>200~240 | 80~100 | Dissolving-resistant, water-resistant, with temperature 80 ~ 100℃ (can not be used under low temperature). Railway engine, train, small size motor and dynamo as well as other high-temperature bearings. |

# The Application of Bearing

## Precautions For Use

Compared with normal mechanical parts, rolling bearings have high precision levels and attention must be paid to their applications:

1) Keep the bearing and its surrounding environment clean.

2) Apply the bearings carefully.

Carelessness may cause strong shock to the bearing and may lead to scratches and breaks to the bearing.

3) Use appropriate tools.

4) Pay attention to preventing from rusting.

The bearings should not be used in moist places. Gloves should be worn to prevent the sweat drops adhere to the bearing.

5) The operators must know bearings well.

6) Application instructions must be formulated for correct usage of the bearings.

- The bearing preservation
  The washing of the bearing and
- surroundings
- Inspection on the mounting dimensions and the processing quality
- Mounting operation
- Inspection after mounting
- Dismounting operation
- Maintenance (regular inspection)
- Replenishment of lubricate

# The Storage of Bearing

The bearings are painted with rust-preventive oil and wrapped up with rust-preventive paper. The quality of the bearing can be ensured when the packaging is kept in good condition.

It is recommended that the bearings are kept under air moist of 65% and in temperature 20℃ and on shelves of 30cm above the ground for long time storage. Besides, the storage should avoid direct sunshine and touching cold walls.

For the bearings with seals or shields, the characteristics of grease will be degraded after a long time storage. The bearings should be protected free of pollution and corrosion after they are taken out of original package.

The large size bearings should be placed horizontally and the whole side face of bearings shall be supported. If the bearings have a small thickness and are placed vertically, the dead weight of rings and rolling elements shall result in permanent bearing deformation.

# The Mounting of Bearing

## 1. Preparation for the bearings

### 1.1 The ambient of bearing mounting

The mounting of bearing shall be done in dry and dust free room as possible and mounting work also shall be away from the equipments with metalworking or generating metal debris and dust. When the mounting must be done without any protections (large size bearings often experience this situation), proper measures must be taken to prevent the bearings from dust and humid air until the mounting is finished.

### 1.2 Preparation for the bearings

Do not open the packaging of the bearing until mounting operation since the bearing has received rust-prevention handling and been properly packaged. In addition, the lubricant applied on the bearing has good lubricating property. For bearings of general applications or bearings filled with lubricating grease, there is no need of washing before using the bearings. But for bearings applied to instruments or rotating at high speed, washing with cleaning oil should be used to rid the bearings of the rust-preventive oil. In this case, the bearings may easily become rusty, therefore they should not be kept for a long time.

### 1.3 The preparation for mounting tools

The mounting tools should be made from wood or light metal and the materials, which can generate chips, shall be avoided to use. The mounting tools shall be kept clean.

### 1.4 The inspections on the shaft and housing

Wash the shaft and the housing to ensure that there are no burs or scratches from machining. In no way should there be grinding agents (SiC, Al2O3 and so on), foundry sand and smear metal.

Then check if the dimensions, shapes and processing quality of the shaft and housing are in conformity with the drawings.

As shown in Figure 1 and 2 , measuring should be done at several places. Also it is necessary to inspect the dimensions of the fillet and the verticality of the abutment. Before mounting, lubricate the qualified shaft and housing on all the fit surfaces.

Figure1 The measuring position of the shaft diameter

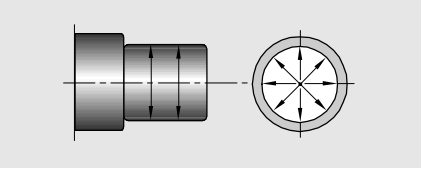
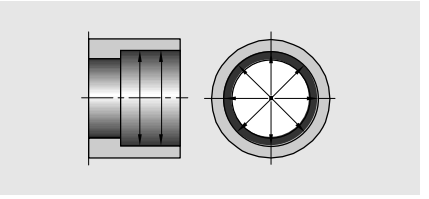
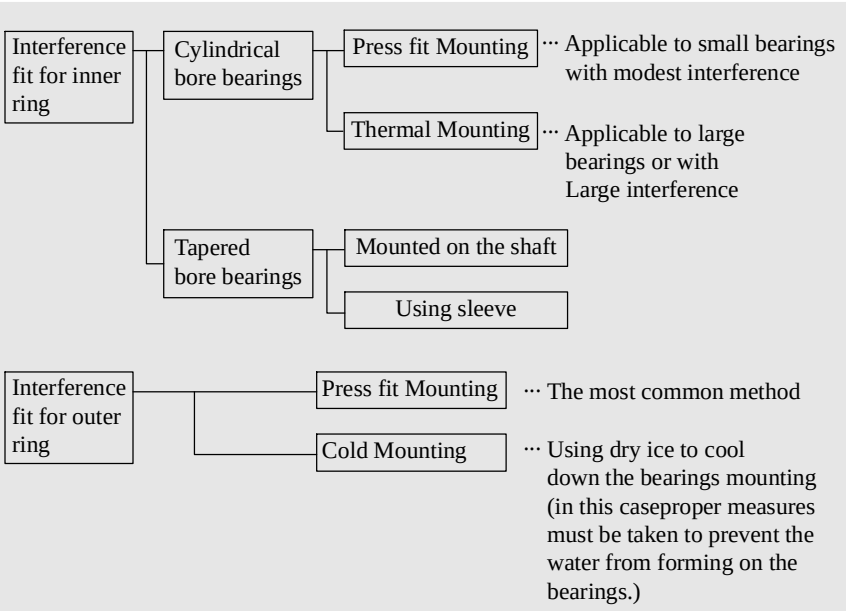


Figure 2 The measuring position of housing bore diameter



## 2. Classification of bearing mounting method

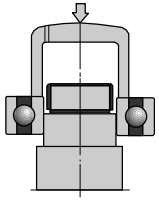
The mounting methods vary with the bearing types and fit conditions. Since in most cases it is the shaft that rotates, the inner ring and outer ring can use interference fit and clearance fit respectively. When the outer ring rotates, the interference fit should be used for it. The mounting methods can be divided into the following types when using interference fit, the details of which are shown in the following Table.




### 3. The mounting of cylindrical bore bearing

#### 3.1 Press fit mounting

Hydraulic press is normally used, sometimes adopt nuts and screws. Hammers can also be used if absolutely necessary.

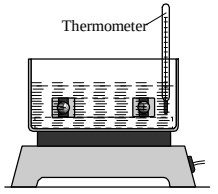


When inner ring of bearing is interference fit and need to be mounted on shaft, the pressure shall be applied on inner ring; When outer ring of bearing is interference fit and need to be mounted in housing, the pressure shall be applied on outer ring. When both inner ring and outer ring are interference fit, a shim plate must be used to make sure pressure can be applied on both inner ring and outer ring simultaneously.

#### 3.2 Thermal mounting

This method heats the bearings to make it expand and then mount the bearing on the shaft. It can prevent the bearing from being affected by unnecessary external forces and finish the mounting within very short time. The heating methods mainly are oil bath and induction.






Heating by oil bath

The advantages of electric induction heating:

1.Clear, no pollution
2.Timing, constant temperature
3.Easy operation

When bearing is heated to the expected temperature (below 120℃), take it out and then mount it on the shaft quickly. Bearing will shrink along with cooling. Sometimes, the gap will occur between shaft shoulder and bearing end face, therefore the bearing should be pushed by tools towards shaft shoulder.

Due to the pre-lubricating grease or seal material has limitation with temperature, the heating temperature of the shielded or sealed bearing can not surpass 80* and also such bearings can not be heated by oil bath. Make sure temperature is distributed uniformly when heating the bearings and no overheated positions.

### 4. The mounting of tapered bore bearing

Most of the tapered bore bearings are mounted with interference fit of inner ring. Tapered bore bearing can be directly mounted to tapered shaft or to cylindrical shaft through adapter sleeve and withdrawal sleeve.

Interference degree is defined by checking clearance decreased volume or the axial displacement of the inner ring on tapered shaft. On certain circumstances, it can also be defined by testing lock angle of the locknut or the expansion volume of inner ring.

As for the tapered bore bearing, when the inner ring is pressed on the tapered shaft, adapter sleeve or withdrawal sleeve, interference degree will be increased and the radial clearance will be decreased. The interference degree can be defined through checking the decreased volume.

#### 4.1 Measure the decreased clearance volume

The measure method of using feeler gauge to check the radial clearance before and after mounting is only suitable for medium size and the extra large size bearing. The measured clearance must be at the position between the unloaded rollers and the raceway of outer ring. Before measuring, running the outer ring for several revolutions, and make sure the central lines of the outer ring and roller group are overlapped. In the first measure, feeler gauge should have a measuring value lower than the minimum value of the clearance, and then choose a thicker feeler gauge to measure the clearance for several times till feeler gauge meets resistance in the following situation when being moved.

Before mounting——measuring place is between outer ring and the highest roller;

After mounting—measuring place is between inner ring (outer ring) and the lowest roller, according to different cages.

### 5. The mounting of outer ring

When mounting the outer ring to bearing box with interference fit, for the small size bearing, the outer ring can be pressed in normal temperature. When interference is big, the outer ring can be pressed through heating bearing box or cooling outer ring. When applying the dry ice or other refrigerant, the moisture in the air will agglomerate on the bearing, it must take the anti-rust measures.

## The Dismounting of Bearing

Dismounting of bearing is necessary for purposes of regular check and replacement of parts. Normally, the bearing shall be further used, as well as the shaft and bearing box. Therefore, dismounting must be considered during design in order not to damage bearing, shaft, bearing box or other parts. Tools for dismounting must be properly prepared. When dismounting the rings with static fit, the withdrawal force can only be applied to the said ring and should not work on the rings through rolling elements.

### The dismounting tools of bearing

The most proper dismounting tools for bearing are press machine. When it is applied, it is necessary to check if the axial lines of lift part of press machine and the dismounted bearing are perpendicular with each other. In addition, there are some other simple manual dismounting tools for bearings and they are also useful and convenient.

### The dismounting method of cylindrical bore bearing

As for the non-separable bearing, it should be dismounted firstly from the looser fit position (it is usual for the fit between outer ring and housing bore diameter), then pressed it out from the tight fit position by press machine.
Provided the dismounted bearings would be used once again, it is not allowed to pass the dismounting force through rolling elements. Otherwise the rolling elements and raceway of ring will be damaged.

### The dismounting of tapered bore bearing

The medium size and small size bearings mounted on the tapered shaft neck can be easily dismounted through pulling the inner ring with normal a puller. If applying the automatical aligning puller, damage on the shaft neck can be avoided when pulling out the bearing.
The bearings dismounted from the tapered shaft neck become loose in short time. Therefore, certain equipment should be added to prevent the bearings dropping from the shaft.
It is a simple and practical method to dismount the large size bearings on the adapter sleeve by the hydraulic nut, but the bearing should be leaned against a supporting ring. Filling oil is a simpler way to dismount, but the adapter sleeve must have oil raceway and oil slot. When dismounting the bearings on the withdrawal sleeve, it is a must to dismount some axial lock equipments firstly, such as locknut and end gap, etc. As for the medium size and small size bearings, they can be dismounted by locknut, hook type wrench or punch wrench.

## The Maintenance of Bearing

Regular maintenance (regular check) must be carried out to ensure the play of the functions within a long time period.
Regular check is very important to improve the productivity and economy by finding the trouble or problem before such occurrence.

### Washing

Make appearance records of the bearings by photo or other methods before dismounting and check the bearings.
In addition, ensure the amount of lubricant left inside the bearing and analyze the lubricant by sampling before washing the bearing.
The bearing can be washed roughly or carefully, and a metal net or rack can be used in the bottom of container.
For rough washing, use a brush in the oil to clean the lubricant or any adhesive away. Rotating the bearing at this moment may damage the bearing surface due to the foreign matter inside.
For careful washing, rotate the bearing in the oil slowly and carefully.
The normally used cleaning agent is of neural nature, without water, diesel oil or kerosene. Sometimes lukewarm alkali liquid is used upon necessity.
Filtering of the cleaning agent is required to keep clean no matter which agent is used. Paint immediately the rust-preventing oil or grease on the bearing after washing.

### Check and make judgment

In order to judge whether the dismounted bearing can be reused or not, the dimensional precision, rotational precision, internal clearance should be especially checked, as well as the interference fit surface, raceway surface, rolling surface, cage and seals and so on. Concerning the results of such checks, please consult the bearing specialist for judgement.
The criteria for judgement vary with the mechanical functions and importance and the regularities of the checks. Replacement of the bearing must be done in case of the following damages:
There are cracks or defects on the bearing parts.
There are peelings-off from the raceways or the rolling surface.

## Identification of Bearing Problems

It is important for improvement in productivity and economy to identify or predict if there are any problems or troubles inside the bearing without dismounting it for check purposes.
The main identification methods are as below:

### 1) Identification through sound

Rich experience is required to identify the bearing problems or troubles by listening to the sound of the bearing. Much training in this respect is entailed to tell the sound of the bearing or that of other parts. It is recommended that a special worker should be responsible for this job. The sound of the bearings can be heard clearly when putting a stethoscope or the rod on the housing.

### 2) Identification through working temperature

This method uses comparisons, and is applied only in cases without big changes when the bearing is rotating. Therefore, continuous records of the temperature must be kept. The temperature not only increases but also presents irregular changes in case of trouble.
It is preferred to use these two methods together.

### 3) Identification through the status of the lubricant

Identify the trouble by taking samples of the lubricant and analyzing the dirty level and wether there is any foreign matter or metal particles inside. This method is especially effective for bearings that can not be approached for inspection or the large bearings.

## The Damages and Solutions of Bearing

There is no method to view directly when the bearing is operating, but it can be known abnormity by the status of noise, vibration, temperature and lubricant. Typical bearing injury examples are listed in following table:

| Item | Appearance | Possible reason | Solution |
|---|---|---|---|
| Peeling off | Peeling off and deformation of the rotational surface | Load too heavy or improper applications<br>Mal-mounting<br>Poor precision of the shaft or bearing box<br>Clearance too small<br>Intrusion of foreign matters<br>Rusting<br>Hardness decrease caused by abnormal high temperature | Re-consider the application conditions<br>Consider other bearing specifications<br>Re-consider the clearance<br>Check the processing precision of the shaft and bearing box<br>Consider the surrounding design<br>Check the mounting method<br>Check the lubricant and lubricating method |
| Burns | Overheat color varying, then burning, leading to failure to rotate | Clearance too small (including clearance for the deforming part)<br>Insufficient lubrication or inappropriate lubricant<br>Load too heavy (pre-load too heavy)<br>Skewing rollers | Choose proper clearance (increasing clearance)<br>Check lubricant type and ensuring amount<br>Check application conditions<br>Avoid positioning error<br>Check surrounding design ( including heat to bearing<br>Improve the mounting method |
| Cracks | Partial breach and even cracks | Shock load too heavy<br>Interference too big<br>Big peeling off and frictional cracks<br>Poor precision of the mounting side (corner circle too big)<br>Frictional cracks<br>Mal-applications (using copper hammer, intrusion of big foreign matter) | Check the application conditions<br>Set proper interference and check material quality<br>Improve mounting and application method<br>Prevent frictional cracks (check lubricants<br>Check bearing surrounding design |

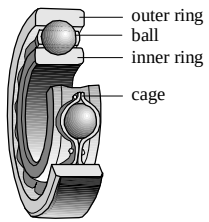


| Item | Appearance | Possible reason | Solution |
|---|---|---|---|
| Cage damage | Loosening or broken rivet<br>Broken cage | Torque load too big<br>High speed rotation or speed changing too frequently<br>Poor lubrication<br>Intrusion of foreign matter<br>Vibration too big<br>Bad mounting (mounting in learning conditions)<br>Abnormal increase in temperature (resin cage) | Check application conditions<br>Check lubrication conditions<br>Re-consider choice of cage<br>Pay attention to application<br>Consider rigidity of shaft and bearing box |
| Scratches | Rough surface with small deposit<br>Scratches between the flanges of rings and the side surfaces of the rollers | Poor lubrication<br>Intrusion of foreign matter<br>Skewing rollers caused by learning<br>Axial load too big leading to no lubricant on flange surface<br>Roughness of the surface too big<br>Big sliding of the rolling elements | Re-consider lubricant and lubricating method<br>Check application method<br>Set proper pre-load<br>Reinforce the sealing function<br>Use bearings correctly |
| Rusting corrosion | Rusting on all or part of the surface<br>Rust on rolling elements in pitch shape | Poor maintenance<br>Improper packaging<br>Insufficient rust-preventive<br>Intrusion of moist acid liquid<br>Taking the bearing by hands | Maintenance to prevent rusting<br>Reinforcing the sealing function<br>Check the lubricant regularly<br>Pay attention to bearing application |
| Corrosion | Red corroded particles in the fit surface | Insufficient amount of interference<br>Small bearing oscillating angle<br>Insufficient lubrication (or without lubrication)<br>Not stable load<br>Vibration in the transit | Check the interference and the condition of the lubricant<br>Separable packing of inner rings and outer rings when in transit, pre-load shall prevail if the bearings are un-separable<br>Re-consider choice of lubricant<br>Re-consider choice of bearings |

| Item | Appearance | Possible reason | Solution |
|---|---|---|---|
| Wear | Surface worn, leading to dimension changes with scratches and traces | Foreign matters in the lubricant<br>Poor lubrication<br>Rollers skewing | Check lubricant and lubrication method<br>Reinforce sealing function<br>Prevent positioning error |
| Electric corrosion | Crater-like pits on the rolling surface and possible development of corrugation shape | Electrical current in the rolling surface | Use current by-pass value<br>Adopt insulation to avoid current passing through inside of the bearing |
| Dent and bruise | Intrusion of solid foreign matter or pits in the surface caused by shock or scratches from mounting | Solid foreign matter intrusion<br>Peels inside the bearing<br>Shock from mal-mounting<br>Peeling off<br>Mounting in learning conditions | Improve mounting and application methods<br>Prevent foreign matters from intruding<br>Check other parts if caused by metal pieces |
| Creep deformation | Slippery ID surface and OD surface leading to mirror surface and sometimes blocking | Insufficient interference at the fit surface<br>Sleeve not fastened enough<br>Abnormal increase in temperature<br>Load too heavy | Re-consider the interference amount<br>Consider the application conditions<br>Check precision of shaft and bearing box |

## Product Characteristics

Deep groove ball bearing consists of four basic parts, which are inner raceway (inner ring), outer raceway (outer ring), steel balls and cage. With normal rotation, inner raceway, outer raceway and steel balls accommodate the load while the cage plays a role in separating the balls and keeping stable. Single-row deep groove ball bearing has a simple structure, non-split inner ring and outer ring and easy to be used so it is widely used bearing in machinery industry such as precision meter, low noise electric motor, automobile, motorcycle, woodworker, transmission shaft of textile machinery, mining machinery, electromechanical equipments, plastic machinery, office equipments, medical equipments, fitness equipments, national defense industry, aeronautic industry, aerospace industry, excise equipments and other general machinery. Single-row deep groove ball bearing is mainly used for accommodating radial load and certain axial load. When this bearing is given a larger radial clearance, this bearing will have a feature as radial thrust bearing to carry larger axial load and also can limit the axial movement in two directions. Different clearances allow a relative misalignment of inner ring and outer ring ranging from 8' to 16'.




(Deep groove ball bearing)

## Product Category

ZWZ manufactures following categories of Deep groove ball bearing currently:

- Single-row deep groove ball bearing
- Single-row deep groove ball bearing with shield(s)
- Single-row deep groove ball bearing with seal(s)
- Single-row deep groove ball bearing with snap groove or snap ring on outer ring

Single-row deep groove ball bearing is used for the applications without special requirements for mounting, sealing and interface.

Single-row deep groove ball bearing with shield(s) is used for the applications with difficulties in lubricating and checking lubrication or special situations. There is gap between shield(s) and inner ring. Single-row deep groove ball bearing with two shields has been filled with lubricant when manufacturing so it is unnecessary to wash and fill lubricant before mounting. It is also unnecessary to add lubricant within lubricating period during operating.

Single-row deep groove ball bearing with seal(s) has a seal or seals with steel frame. The seal is contact type and has a more superior waterproof property than Single-row deep groove ball bearing with shield(s). However, the rotational speed of this bearing is lower than Single-row deep groove ball bearing with shield(s) due to the larger friction force.

Single-row deep groove ball bearing with snap groove or snap ring on outer ring simplifies the mounting in housing as a result of positioning with snap ring in axial direction.

## Dimension Range

The basic dimensions of Deep groove ball bearing manufactured by ZWZ are listed in dimension table.

Dimension range of bore diameter:
10mm - 1320mm
Dimension range of outer diameter:
30mm - 1600mm
Dimension range of overall width:
9mm - 300mm

## Tolerance

The standard tolerance of Deep groove ball bearing manufactured by ZWZ is Class normal, which conforms to GB307.1. Please refer to tolerances listed in the table of preface pages.

## Radial Clearance

The standard internal clearances of Deep groove ball bearing manufactured by ZWZ are C2, normal (C0), C3, C4 and C5, which conforms to GB4604. Please refer to radial clearances listed in the table of preface pages. The values are available for the bearings before mounting or without load.

The bearings with internal clearance larger or lower than standard values also can be developed.

## Cage

Deep groove ball bearing has stamped steel cage or solid brass cage. When outer diameter is lower than 400mm, stamped steel cage is adopted without suffix after basic bearing number. When outer diameter is larger than 400mm, solid brass cage is adopted without suffix after basic bearing number.

## Allowable Angle Error

Deep groove ball bearing allows different relative misalignments of inner ring with outer ring by radial clearance as follows:

| Radial clearance | Allowable angle error |
|---|---|
| Normal | 8' |
| C3 | 12' |
| C4 | 16' |

Dynamic Equivalent Load:

P=XFr+YFa [kN]

In the formula:

Fr: Radial load [KN]
Fa: Axial load [KN]

X, Y factors please see following table:

| Fa/Co | Normal | | | | | C3 | | | | | C4 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fa/Fr≤e | | Fa/Fr>e | | e | Fa/Fr≤e | | Fa/Fr>e | | e | Fa/Fr≤e | | Fa/Fr>e | | e |
| | X | Y | X | Y | | X | Y | X | Y | | X | Y | X | Y | |
| 0.025 | 1 | 0 | 0.56 | 2.0 | 0.22 | 1 | 0 | 0.46 | 1.74 | 0.31 | 1 | 0 | 0.44 | 1.42 | 0.39 |
| 0.04 | 1 | 0 | 0.56 | 1.8 | 0.24 | 1 | 0 | 0.46 | 1.61 | 0.33 | 1 | 0 | 0.44 | 1.36 | 0.41 |
| 0.07 | 1 | 0 | 0.56 | 1.6 | 0.27 | 1 | 0 | 0.46 | 1.46 | 0.36 | 1 | 0 | 0.44 | 1.27 | 0.44 |
| 0.13 | 1 | 0 | 0.56 | 1.4 | 0.31 | 1 | 0 | 0.46 | 1.30 | 0.41 | 1 | 0 | 0.44 | 1.17 | 0.46 |
| 0.25 | 1 | 0 | 0.56 | 1.2 | 0.37 | 1 | 0 | 0.46 | 1.14 | 0.47 | 1 | 0 | 0.44 | 1.05 | 0.53 |
| 0.5 | 1 | 0 | 0.56 | 1.0 | 0.44 | 1 | 0 | 0.46 | 1.00 | 0.54 | 1 | 0 | 0.44 | 1.00 | 0.56 |

Dynamic Equivalent Load:

P0=Fr [kN] Fa/Fr≤0.8

P0=0.6Fr+0.5Fa [kN] Fa/Fr>0.8

## Supplement Code

The definition of suffix code for deep groove ball bearing as follows:

CN Normal group radial clearance, normally only for combine with following numbers to express relative narrow or the range of deviate.
H The range of narrow clearance, equals to the upper half range of original clearance.
L The range of narrow clearance, equals to the lower half range of original clearance.
P The range of deviated clearance, equals to the upper half range of original clearance and the lower half of next group clearance.

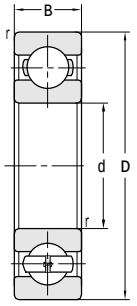
The letters above can also applicable to combine with following clearance group to respective meanings: C2,C3,C4 & C5, for example: C2H

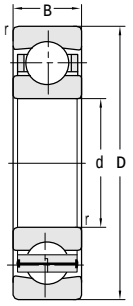
C2 Radial clearance smaller than normal group.
C3 Radial clearance larger than normal group
C4 Radial clearance larger than C3
C5 Radial clearance larger than C4
DB Two sets of single-row deep groove ball bearings with back to back arrangement
DF Two sets of single-row deep groove ball bearings with face to face arrangement
DT Two sets of single-row deep groove ball bearings with tandem arrangement
E Internal design changed, enhanced structure
J Pressed steel sheet cage
M Brass solid cage, steel ball guided. The different design and material is identified by adding numbers after the letter M, such as M2
MA Brass solid cage, outer ring guided.
MB Brass solid cage, inner ring guided
MT33 MT33 Lithium base grease. NLGI viscosity grade 3, temperature range -30℃to +120℃ (standard filling amount)
MT47 MT47 Lithium base grease. NLGI viscosity grade 2, temperature range -30℃to +110℃ (standard filling amount)
N Outer ring with snap groove
NR Outer ring with snap groove and snap ring
N1 Outer ring endface with groove
P5 Dimensional accuracy and rotating accuracy comply with ISO tolerance grade 5
P6 Dimensional accuracy and rotating accuracy comply with ISO tolerance grade 6
P52 P5+C2
P62 P6+C2
P63 P6+C3
RS Bearing with frame system rubber seal ring (contact type)

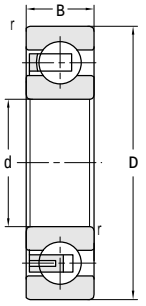


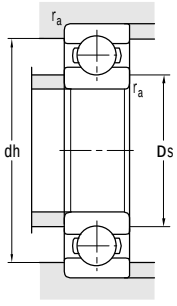
2RS Bearing with RS sealed on both sides.
RS1 Bearing with frame system rubber seal ring (contact type), the material of seal ring is sulfureted rubber
2RS1 Bearing with RS1 sealed on both sides
RS2 Bearing with frame system rubber seal ring (contact type), the material of seal ring is fluoride rubber
2RS2 Bearing with RS2 sealed on both sides.
RZ Bearing with frame type rubber sealing ring (non-contact type)
2RZ Bearing with RZ sealed on both sides.
Z Bearing with shield on one side.
2Z Bearing with shields on both sides.
ZN Z+N Shield with the different side of snap groove
ZNR Z+NR Shield is on the other side of snap groove and snap ring.
ZNB Z+NB Shield is on the same side of snap groove.
ZNBR Z+NR Shield is on the same side of snap groove and snap ring.
2ZN 2Z+N Bearing with shields on both sides, outer ring with snap groove.
2ZNR 2Z+NR Bearing with shields on both sides, outer ring with snap groove and snap ring.
TH Glass fibre-reinforced phenolic resin cage (tube shape)
V Full complement rolling element (without cage)

d 10~26 mm



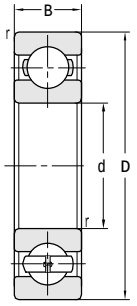



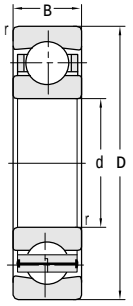



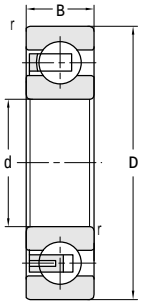



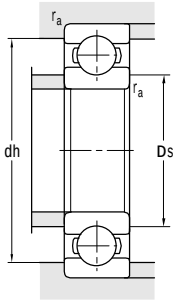

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | $D_{smin}$ | $d_{hmax}$ | $r_{amax}$ | |
| mm | | | | kN | | r/min | | | mm | | | kg |
| **10** | 30 | 9 | 0.6 | 6.50 | 3.00 | 24000 | 30000 | **6200** | 14 | 26 | 0.6 | 0.0277 |
| **12** | 32 | 10 | 0.6 | 6.50 | 3.00 | 22000 | 28000 | **6201** | 16 | 28 | 0.6 | 0.0365 |
| **15** | 35 | 11 | 0.6 | 8.00 | 4.00 | 19000 | 24000 | **6202** | 19 | 31 | 0.6 | 0.0431 |
| **17** | 40 | 12 | 0.6 | 9.10 | 5.00 | 17000 | 20000 | **6203** | 21 | 36 | 0.6 | 0.0661 |
| | 47 | 14 | 1 | 13.6 | 6.60 | 16000 | 19000 | **6303-WCH** | 22.6 | 41.4 | 1 | 0.110 |
| | 47 | 14 | 1 | 13.6 | 6.60 | 16000 | 19000 | **6303-WC** | 22.6 | 41.4 | 1 | 0.110 |
| | 47 | 14 | 1 | 13.6 | 6.60 | 16000 | 19000 | **6303-BYD** | 22.6 | 41.4 | 1 | 0.110 |
| **20** | 47 | 14 | 1 | 13.0 | 6.70 | 15000 | 18000 | **6204** | 25 | 42 | 1 | 0.110 |
| | 47 | 14 | 1 | 13.0 | 6.70 | 15000 | 18000 | **6204TN1** | 25 | 42 | 1 | 0.104 |
| | 62 | 16 | 1 | 18.2 | 10.0 | 13000 | 16000 | **6304X3/C3** | 28 | 54 | 1 | 0.252 |
| **22** | 56 | 16 | 1.1 | 17.8 | 9.25 | 13000 | 16000 | **63/22/C3** | 29 | 47 | 1 | 0.183 |
| **23** | 52 | 13 | 1 | 17.7 | 9.35 | 13000 | 16000 | **62/23-BYD** | 29 | 43 | 1 | 0.117 |
| | 56 | 15 | 1 | 18.5 | 9.30 | 12000 | 15000 | **66/23/P53YB2** | 29 | 47 | 1 | 0.169 |
| | 56 | 15 | 1 | 18.5 | 9.30 | 12000 | 15000 | **66/23/P53Z2** | 29 | 47 | 1 | 0.172 |
| **25** | 37 | 7 | 0.3 | 4.2 | 2.64 | 16000 | 19000 | **61805** | 27 | 35 | 0.3 | 0.0227 |
| | 42 | 9 | 0.3 | 7.30 | 4.55 | 16000 | 19000 | **61905** | 27 | 40 | 0.3 | 0.0415 |
| | 42 | 9 | 0.3 | 7.30 | 4.55 | 16000 | 19000 | **1000905** | 27 | 40 | 0.3 | 0.0415 |
| | 47 | 12 | 0.6 | 11.4 | 6.28 | 15000 | 18000 | **6005** | 29 | 43 | 0.6 | 0.078 |
| | 47 | 8 | 0.3 | 8.00 | 5.00 | 14000 | 17000 | **16005** | 27 | 45 | 0.3 | 0.0562 |
| | 47 | 12 | 0.6 | 10.0 | 5.85 | 14000 | 17000 | **FL-6005/C3** | 29 | 43 | 0.6 | 0.0787 |
| | 52 | 15 | 1 | 14.3 | 8.00 | 12000 | 15000 | **6205** | 30 | 47 | 1 | 0.134 |
| | 52 | 15 | 1 | 14.3 | 8.00 | 12000 | 15000 | **6205TN1** | 30 | 47 | 1 | 0.126 |
| | 52 | 18 | 1 | 14.0 | 7.90 | 12000 | 15000 | **62205** | 30 | 47 | 1 | 0.159 |
| | 62 | 17 | 1.1 | 22.4 | 11.5 | 11000 | 14000 | **6305** | 31.5 | 55.5 | 1 | 0.214 |
| | 62 | 17 | 1.1 | 22.4 | 11.5 | 15000 | 19000 | **FL-6305/P6** | 31.5 | 55.5 | 1 | 0.214 |
| | 68 | 18 | 1.1 | 26.3 | 12.9 | 11000 | 14000 | **6305X3/C3YA5** | 33 | 62 | 1 | 0.296 |
| | 80 | 21 | 1.5 | 37.5 | 19.0 | 9000 | 11000 | **6405** | 33 | 72 | 1.5 | 0.530 |
| **26** | 68 | 19.5 | 2 | 40.3 | 17.0 | 9500 | 12000 | **6605X2WBTN1/HA** | 33 | 61 | 2 | 0.272 |

d 28~40 mm

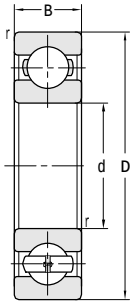


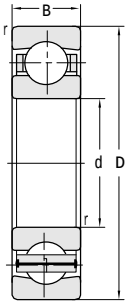



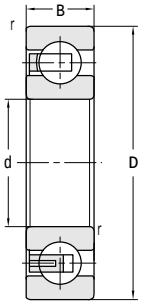



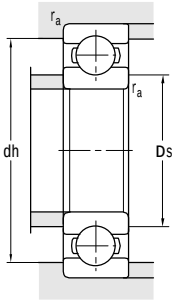




| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | $D_{smin}$ | $d_{hmax}$ | $r_{amax}$ | |
| mm | | | | kN | | r/min | | | mm | | | kg |
| **28** | 68 | 18 | 1.1 | 32.5 | 13.0 | 9500 | 12000 | **63/28/HA** | 34.5 | 61.5 | 1 | 0.299 |
| | 68 | 18 | 1.1 | 24.6 | 13.0 | 9500 | 12000 | **63/28** | 34.5 | 61.5 | 1 | 0.301 |
| **28.575** | 71.438 | 20.638 | 1.1 | 23.6 | 13.3 | 9400 | 11700 | **66/28X4** | 35 | 65 | 1 | 0.396 |
| **30** | 47 | 9 | 0.3 | 7.50 | 4.95 | 14000 | 17000 | **61906** | 32 | 45 | 0.3 | 0.0433 |
| | 55 | 9 | 0.3 | 10.6 | 6.75 | 12000 | 15000 | **16006** | 32 | 53 | 0.3 | 0.0827 |
| | 55 | 13 | 1 | 13.2 | 7.96 | 12000 | 15000 | **6006** | 34.6 | 50.4 | 1 | 0.121 |
| | 59 | 22 | 0.4 | 13.0 | 8.00 | 10000 | 13000 | **1-0005** | 33 | 55 | 0.4 | 0.191 |
| | 62 | 16 | 1 | 19.5 | 11.3 | 10000 | 13000 | **6206** | 35 | 57 | 1 | 0.218 |
| | 72 | 19 | 1.1 | 28.4 | 15.4 | 9000 | 11000 | **6306** | 36.5 | 65.5 | 1 | 0.354 |
| | 72 | 19 | 1.1 | 28.4 | 15.4 | 9000 | 11000 | **6306TN1** | 37 | 65 | 1 | 0.342 |
| | 90 | 23 | 1.5 | 44.5 | 23.0 | 8500 | 10000 | **6406** | 38 | 82 | 1.5 | 0.805 |
| **33** | 72 | 17 | 1.1 | 22.5 | 13.6 | 9100 | 11000 | **62/33** | 40.5 | 64.5 | 1 | 0.308 |
| **35** | 47 | 7 | 0.3 | 3.90 | 3.00 | 13000 | 16000 | **61807** | 37 | 45 | 0.3 | 0.0292 |
| | 55 | 10 | 0.6 | 9.35 | 6.70 | 11000 | 14000 | **61907** | 38.2 | 51.8 | 0.6 | 0.0779 |
| | 62 | 14 | 1 | 16.0 | 10.3 | 10000 | 13000 | **6007** | 40 | 57 | 1 | 0.152 |
| | 72 | 17 | 1.1 | 26.0 | 14.7 | 9000 | 11000 | **6207** | 41.5 | 65.5 | 1 | 0.294 |
| | 80 | 21 | 1.5 | 33.4 | 19.2 | 8500 | 10000 | **6307** | 43 | 72 | 1.5 | 0.456 |
| | 80 | 21 | 1.5 | 33.4 | 19.2 | 8500 | 10000 | **6307TN1** | 43 | 72 | 1.5 | 0.443 |
| | 100 | 25 | 1.5 | 55.5 | 29.5 | 7000 | 8500 | **6407** | 43 | 92 | 1.5 | 0.919 |
| **40** | 62 | 12 | 0.6 | 13.0 | 9.20 | 10000 | 13000 | **61908** | 43.2 | 58.8 | 0.6 | 0.108 |
| | 68 | 15 | 1 | 16.8 | 11.6 | 9500 | 12000 | **6008** | 44.6 | 63.4 | 1 | 0.191 |
| | 68 | 15 | 1 | 16.8 | 11.6 | 9500 | 12000 | **6008/C3** | 44.6 | 63.4 | 1 | 0.191 |
| | 80 | 18 | 1.1 | 31.2 | 18.2 | 8500 | 10000 | **6208** | 46.5 | 73.5 | 1 | 0.369 |
| | 80 | 18 | 1.1 | 31.2 | 18.2 | 8500 | 10000 | **6208/P6** | 46.5 | 73.5 | 1 | 0.361 |
| | 80 | 18 | 1.1 | 31.2 | 18.2 | 8500 | 10000 | **6208/HAP6** | 46.5 | 73.5 | 1 | 0.361 |
| | 80 | 18 | 1.1 | 31.2 | 18.2 | 8500 | 10000 | **6208/P5YB2** | 46.5 | 73.5 | 1 | 0.361 |
| | 80 | 18 | 1.1 | 31.2 | 18.2 | 8500 | 10000 | **370208** | 46.5 | 73.5 | 1 | 0.362 |
| | 90 | 23 | 1.5 | 41.0 | 24.0 | 7500 | 9000 | **6308/P5YB2** | 48 | 82 | 1.5 | 0.642 |
| | 90 | 23 | 1.5 | 41.0 | 24.0 | 7500 | 9000 | **6308** | 48 | 82 | 1.5 | 0.642 |
| | 90 | 23 | 1.5 | 41.0 | 24.0 | 7500 | 9000 | **6308TN1** | 48 | 82 | 1.5 | 0.611 |
| | 90 | 23 | 1.5 | 41.0 | 24.0 | 7500 | 9000 | **6308/HA** | 48 | 82 | 1.5 | 0.642 |

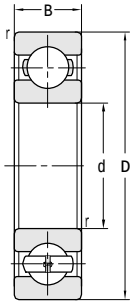


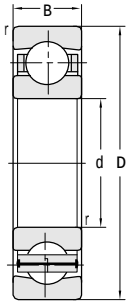



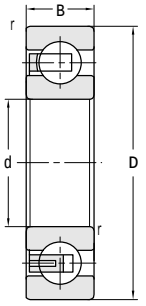



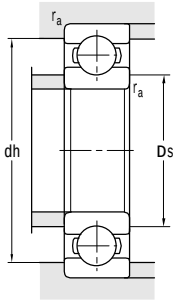




| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | $D_{smin}$ | $dh_{max}$ | $r_{amax}$ | |
| mm | | | | kN | | r/min | | | mm | | | kg |
| **40** | 90 | 23 | 1.5 | 41.0 | 24.0 | 7500 | 9000 | **6308/C9YA4** | 48 | 82 | 1.5 | 0.642 |
| | 110 | 27 | 2 | 67.5 | 36.0 | 6700 | 8000 | **6408** | 49 | 101 | 2 | 1.20 |
| **41** | 80 | 17 | 1.1 | 23.7 | 19.0 | 8500 | 10000 | **62/41/HAP53** | 47.5 | 73.5 | 1 | 0.342 |
| | 80 | 17 | 1.1 | 29.1 | 17.9 | 8500 | 10000 | **62/41/P53** | 47.5 | 73.5 | 1 | 0.353 |
| **45** | 58 | 7 | 0.3 | 6.50 | 5.00 | 9500 | 12000 | **61809** | 47 | 56 | 0.3 | 0.0391 |
| | 75 | 10 | 0.6 | 14.9 | 11.4 | 9000 | 11000 | **16009** | 49 | 71 | 0.6 | 0.165 |
| | 75 | 16 | 1 | 20.0 | 14.0 | 9000 | 11000 | **6009** | 50 | 70 | 1 | 0.246 |
| | 85 | 19 | 1.1 | 33.7 | 20.7 | 7500 | 9000 | **6209** | 51.5 | 78.5 | 1 | 0.429 |
| | 85 | 19 | 1.1 | 33.7 | 20.7 | 7500 | 9000 | **6209TN1** | 51.5 | 78.5 | 1 | 0.415 |
| | 85 | 19 | 1.1 | 33.7 | 20.7 | 7500 | 9000 | **6209K** | 51.5 | 78.5 | 1 | 0.419 |
| | 85 | 19 | 1.1 | 33.7 | 20.7 | 7500 | 9000 | **6209MA** | 51.5 | 78.5 | 1 | 0.492 |
| | 85 | 19 | 1.1 | 33.7 | 20.7 | 7500 | 9000 | **6209/YA1** | 51.5 | 78.5 | 1 | 0.429 |
| | 85 | 19 | 1.1 | 42.5 | 32.0 | 7500 | 9000 | **209** | 51.5 | 78.5 | 1 | 0.492 |
| | 90 | 20 | 1.1 | 41.0 | 24.4 | 7000 | 8500 | **6609TN1/YA1** | 51.5 | 83.5 | 1 | 0.481 |
| | 100 | 25 | 1.5 | 52.5 | 30.0 | 6700 | 8000 | **6309/YB5** | 53 | 92 | 1.5 | 0.850 |
| | 100 | 25 | 1.5 | 52.5 | 30.0 | 6700 | 8000 | **6309/HAC3V2YA7** | 53 | 92 | 1.5 | 0.807 |
| | 100 | 25 | 1.5 | 52.6 | 30.1 | 6700 | 8000 | **309U2** | 53 | 92 | 1.5 | 0.850 |
| | 100 | 25 | 1.5 | 52.7 | 30.2 | 6700 | 8000 | **309HU** | 53 | 92 | 1.5 | 1.05 |
| | 100 | 25 | 1.5 | 52.5 | 30.0 | 6700 | 8000 | **6309A** | 53 | 92 | 1.5 | 0.859 |
| | 100 | 25 | 1.5 | 52.5 | 30.0 | 6700 | 8000 | **6309** | 53 | 92 | 1.5 | 0.850 |
| | 100 | 25 | 1.5 | 52.5 | 30.0 | 6700 | 8000 | **6309TN1** | 53 | 92 | 1.5 | 0.809 |
| | 120 | 29 | 2 | 73.0 | 43.0 | 6000 | 7000 | **6409** | 54 | 111 | 2 | 1.59 |
| **50** | 72 | 12 | 0.6 | 13.9 | 11.0 | 8500 | 10000 | **61910** | 53.2 | 68.8 | 0.6 | 0.128 |
| | 80 | 10 | 0.6 | 15.4 | 12.3 | 8500 | 10000 | **16010** | 54 | 76 | 0.6 | 0.179 |
| | 80 | 16 | 1 | 22.0 | 16.3 | 6500 | 10000 | **6010** | 55 | 75 | 1 | 0.255 |
| | 80 | 16 | 1 | 22.0 | 16.3 | 6500 | 10000 | **FL-6010** | 55 | 75 | 1 | 0.255 |
| | 80 | 16 | 1 | 22.0 | 16.3 | 11000 | 13000 | **FL-6010/P6** | 55 | 75 | 1 | 0.255 |
| | 80 | 16 | 1 | 22.0 | 16.3 | 6500 | 10000 | **FL-6010-QD** | 55 | 75 | 1 | 0.255 |
| | 90 | 20 | 1.1 | 35.6 | 22.3 | 7100 | 8500 | **6210/HA** | 56.5 | 83.5 | 1 | 0.504 |
| | 90 | 20 | 1.1 | 35.6 | 22.3 | 7100 | 8500 | **6210/C9YA6** | 56.5 | 83.5 | 1 | 0.474 |
| | 90 | 20 | 1.1 | 35.6 | 22.3 | 7100 | 8500 | **6210** | 56.5 | 83.5 | 1 | 0.474 |
| | 90 | 20 | 1.1 | 35.6 | 22.3 | 7100 | 8500 | **FL-6210** | 56.5 | 83.5 | 1 | 0.474 |
| | 90 | 20 | 1.1 | 35.6 | 22.3 | 7100 | 8500 | **FL-6210-QD** | 56.5 | 83.5 | 1 | 0.474 |

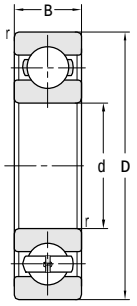


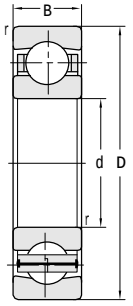



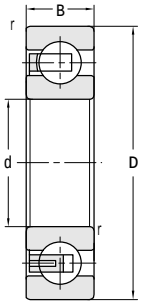



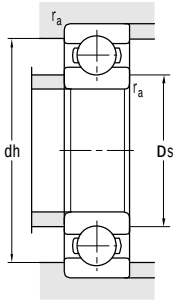




| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | $D_{smin}$ | $d_{hmax}$ | $r_{amax}$ | |
| mm | | | | kN | | r/min | | | mm | | | kg |
| **50** | 90 | 26 | 1.1 | 35.6 | 22.3 | 7100 | 8500 | **62210X2** | 56.5 | 83.5 | 1 | 0.601 |
| | 110 | 27 | 2 | 62.0 | 38.0 | 6300 | 7500 | **6310** | 59 | 101 | 2 | 1.12 |
| | 110 | 27 | 2 | 62.0 | 38.0 | 6300 | 7500 | **6310A** | 59 | 101 | 2 | 1.12 |
| | 110 | 27 | 2 | 62.0 | 38.0 | 6300 | 7500 | **6310TN1** | 59 | 101 | 2 | 1.06 |
| | 110 | 27 | 2 | 62.0 | 38.0 | 6300 | 7500 | **6310TN11** | 59 | 101 | 2 | 1.06 |
| | 111 | 27 | 2.3 | 62.0 | 38.0 | 6300 | 7500 | **6310X1** | 61 | 101 | 2 | 1.13 |
| | 111 | 27 | 2.3 | 62.0 | 38.0 | 6300 | 7500 | **810** | 61 | 101 | 2 | 1.10 |
| | 130 | 31 | 2.1 | 88.0 | 52.0 | 5300 | 6300 | **6410** | 61 | 119 | 2 | 1.91 |
| **55** | 72 | 9 | 0.3 | 8.80 | 8.10 | 8500 | 10000 | **61811** | 57 | 70 | 0.3 | 0.0845 |
| | 80 | 13 | 1 | 15.9 | 13.2 | 8000 | 9500 | **61911** | 59.6 | 75.4 | 1 | 0.177 |
| | 90 | 11 | 0.6 | 21.3 | 14.2 | 7500 | 9000 | **7000111** | 59 | 85 | 0.6 | 0.307 |
| | 90 | 18 | 1.1 | 29.0 | 20.7 | 7500 | 9000 | **6011** | 61 | 84 | 1 | 0.384 |
| | 90 | 18 | 1.1 | 29.0 | 20.7 | 7500 | 9000 | **6011/C9YA2** | 61 | 84 | 1 | 0.384 |
| | 90 | 11 | 0.6 | 18.6 | 15.2 | 7500 | 9000 | **16011** | 58.2 | 86.8 | 0.6 | 0.255 |
| | 100 | 21 | 1.5 | 44.3 | 27.8 | 6300 | 7500 | **6211K** | 63 | 92 | 1.5 | 0.620 |
| | 100 | 21 | 1.5 | 44.3 | 27.8 | 6300 | 7500 | **6211** | 63 | 92 | 1.5 | 0.628 |
| | 100 | 26 | 1.5 | 44.3 | 27.8 | 6300 | 7500 | **62211X2** | 63 | 92 | 1.5 | 0.759 |
| | 120 | 29 | 2 | 71.5 | 45.0 | 5600 | 6700 | **6311** | 64 | 111 | 2 | 1.38 |
| | 120 | 29 | 2 | 71.5 | 45.0 | 5600 | 6700 | **6311TN1** | 64 | 111 | 2 | 1.29 |
| | 120 | 29 | 2 | 71.5 | 45.0 | 5600 | 6700 | **6311/YA6** | 64 | 111 | 2 | 1.37 |
| | 140 | 33 | 2.1 | 95.0 | 60.0 | 5000 | 6000 | **6411** | 66 | 129 | 2 | 2.25 |
| **60** | 85 | 13 | 1 | 17.0 | 15.1 | 7500 | 9000 | **61912** | 64.5 | 80.5 | 1 | 0.201 |
| | 95 | 11 | 0.6 | 19.1 | 16.5 | 6700 | 8000 | **16012** | 64 | 91 | 0.6 | 0.270 |
| | 95 | 18 | 1.1 | 30.0 | 23.0 | 6700 | 8000 | **6012** | 66.5 | 88.5 | 1 | 0.416 |
| | 95 | 18 | 1.1 | 30.0 | 23.0 | 6700 | 8000 | **6012M** | 66.5 | 88.5 | 1 | 0.497 |
| | 110 | 22 | 1.5 | 53.0 | 36.0 | 5600 | 7100 | **6212** | 68 | 102 | 1.5 | 0.793 |
| | 110 | 22 | 1.5 | 53.0 | 36.0 | 5600 | 7100 | **6212-1** | 68 | 102 | 1.5 | 0.772 |
| | 110 | 22 | 1.5 | 53.0 | 36.0 | 5600 | 7100 | **6212/HAP63YA5** | 68 | 102 | 1.5 | 0.772 |
| | 110 | 22 | 1.5 | 53.0 | 36.0 | 6000 | 7000 | **6212/YA6** | 68 | 102 | 1.5 | 0.793 |
| | 110 | 22 | 1.5 | 53.0 | 36.0 | 5600 | 7100 | **212** | 68 | 102 | 1.5 | 0.793 |
| | 110 | 22 | 1.5 | 53.0 | 36.0 | 5600 | 7100 | **212U** | 68 | 102 | 1.5 | 0.793 |
| | 110 | 22 | 1.5 | 53.0 | 36.0 | 5600 | 7100 | **212U1** | 68 | 102 | 1.5 | 0.793 |
| | 110 | 22 | 1.5 | 53.0 | 36.0 | 5600 | 7100 | **6212/YA5** | 68 | 102 | 1.5 | 0.772 |
| | 110 | 22 | 1.5 | 53.0 | 36.0 | 5600 | 7100 | **6212K** | 68 | 102 | 1.5 | 0.781 |



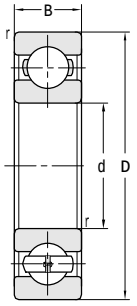



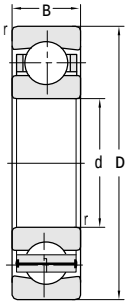



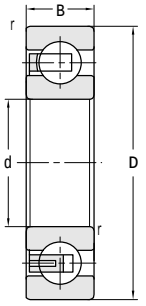



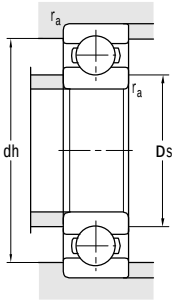

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil |
| mm | | | | kN | | r/min | |
| **60** | 130 | 31 | 2.1 | 82.0 | 50.0 | 5300 | 6300 |
| | 130 | 31 | 2.1 | 82.0 | 50.0 | 5300 | 6300 |
| | 130 | 31 | 2.1 | 82.0 | 50.0 | 5000 | 6000 |
| | 130 | 31 | 2.1 | 82.0 | 50.0 | 5000 | 6000 |
| | 130 | 31 | 2.1 | 82.0 | 50.0 | 5000 | 6000 |
| | 150 | 35 | 2.1 | 107 | 68.5 | 4800 | 5600 |
| **65** | 85 | 10 | 0.6 | 10.4 | 12.9 | 6700 | 8000 |
| | 90 | 13 | 1 | 19.9 | 17.5 | 6700 | 8000 |
| | 100 | 18 | 1.1 | 32.0 | 25.0 | 6300 | 7500 |
| | 100 | 18 | 1.1 | 32.0 | 25.0 | 6300 | 7500 |
| | 120 | 23 | 1.5 | 57.0 | 40.0 | 5300 | 6300 |
| | 120 | 23 | 1.5 | 57.0 | 40.0 | 5300 | 6300 |
| | 120 | 23 | 1.5 | 57.0 | 40.0 | 5300 | 6300 |
| | 120 | 23 | 1.5 | 57.0 | 40.0 | 5300 | 6300 |
| | 120 | 23 | 1.5 | 57.0 | 40.0 | 5300 | 6300 |
| | 120 | 23 | 1.5 | 57.0 | 40.0 | 5300 | 6300 |
| | 120 | 23 | 1.5 | 57.0 | 40.0 | 5300 | 6300 |
| | 140 | 33 | 2.1 | 95.0 | 59.5 | 4800 | 5600 |
| | 140 | 33 | 2.1 | 87.5 | 56.5 | 4800 | 5600 |
| | 140 | 33 | 2.1 | 92.5 | 59.5 | 4800 | 5600 |
| | 140 | 33 | 2.5 | 92.5 | 59.5 | 4800 | 5600 |
| | 140 | 33 | 2.1 | 92.5 | 59.5 | 4800 | 5600 |
| | 160 | 37 | 2.1 | 118 | 78.5 | 4500 | 6300 |
| **70** | 110 | 20 | 1.1 | 38.0 | 30.0 | 6000 | 7000 |
| | 110 | 20 | 1.1 | 38.0 | 30.0 | 6000 | 7000 |
| | 125 | 24 | 1.5 | 61.2 | 43.2 | 5000 | 6000 |
| | 125 | 24 | 1.5 | 61.2 | 43.2 | 5000 | 6000 |
| | 150 | 35 | 2.1 | 104 | 68.0 | 4500 | 5300 |
| | 150 | 35 | 2.1 | 104 | 68.0 | 4500 | 5300 |
| | 150 | 35 | 2.1 | 104 | 68.0 | 4500 | 5300 |
| | 150 | 35 | 2.1 | 107 | 68.0 | 4500 | 5300 |
| | 150 | 35 | 2.1 | 107 | 68.0 | 4500 | 5300 |
| | 150 | 35 | 2.1 | 107 | 68.0 | 4500 | 5300 |

| Designations | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|
| | $D_{smin}$ | $dh_{max}$ | $r_{amax}$ | |
| | mm | | | kg |
| 6312A | **71** | 119 | 2 | 1.750 |
| 6312 | **71** | 119 | 2 | 1.750 |
| 6312Q1 | **71** | 119 | 2 | 2.12 |
| 6312TN1 | **71** | 119 | 2 | 1.69 |
| 4E312QT | | | 2 | 2.07 |
| 6412 | **71** | 139 | 2 | 2.72 |
| 61813Q1 | **69** | 81 | 0.6 | 0.119 |
| 61913 | **70** | 85 | 1 | 0.195 |
| 6013 | **71.5** | 93.5 | 1 | 0.428 |
| 6013M | **71.5** | 93.5 | 1 | 0.553 |
| 6213 | **73** | 112 | 1.5 | 1.00 |
| FL-6213-QD | **73** | 112 | 1.5 | 1.00 |
| 6213MA | **73** | 112 | 1.5 | 1.23 |
| 6213A | **73** | 112 | 1.5 | 1.00 |
| 6213/YA5 | **73** | 112 | 1.5 | 1.05 |
| 213G | **73** | 112 | 1.5 | 1.01 |
| 180213 | **73** | 112 | 1.5 | 1.06 |
| 6313 | **76** | 129 | 2 | 2.10 |
| 6313/W124 | **77** | 128 | 2 | 2.15 |
| 6313A | **76** | 129 | 2 | 1.85 |
| 6313/YA6 | **76** | 129 | 2.5 | 2.09 |
| 6313M | **76** | 129 | 2 | 2.67 |
| 6413 | **76** | 149 | 2 | 3.21 |
| 6014 | **76.5** | 103.5 | 1 | 0.624 |
| 6014M | **76.5** | 103.5 | 1 | 0.743 |
| 6214 | **78** | 117 | 1.5 | 1.12 |
| 6214A | **78** | 117 | 1.5 | 1.12 |
| 6314A | **81** | 139 | 2 | 2.60 |
| 6314/P6CMV2 | **81** | 139 | 2 | 2.55 |
| 314U1 | **81** | 139 | 2 | 2.55 |
| 6314 | **81** | 139 | 2 | 2.57 |
| 6314/W124 | **82** | 138 | 2 | 2.57 |
| 6314/C9 | **81** | 139 | 2 | 2.57 |



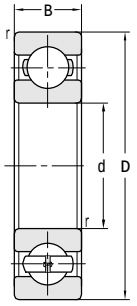



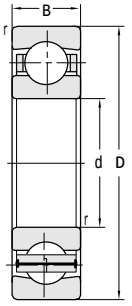



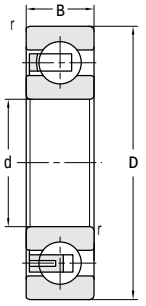



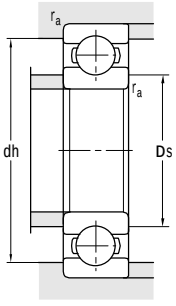

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil |
| mm | | | | kN | | r/min | |
| **70** | 150 | 35 | 2.1 | 107 | 68.0 | 4500 | 5300 |
| | 150 | 35 | 2.1 | 107 | 68.0 | 4500 | 5300 |
| | 180 | 42 | 3 | 136 | 100 | 3800 | 4500 |
| **72** | 110 | 20 | 1.1 | 38.0 | 31.0 | 5200 | 6500 |
| | 115 | 20 | 1.1 | 38.0 | 31.0 | 5600 | 6700 |
| | 115 | 20 | 1.1 | 38.0 | 31.0 | 5600 | 6700 |
| **75** | 105 | 16 | 1 | 26.5 | 23.5 | 5600 | 6700 |
| | 115 | 13 | 0.6 | 29.0 | 26.0 | 5600 | 6700 |
| | 115 | 13 | 0.6 | 29.0 | 26.0 | 5600 | 6700 |
| | 115 | 13 | 1.1 | 24.8 | 23.9 | 5600 | 6700 |
| | 130 | 25 | 1.5 | 66.0 | 50.0 | 4800 | 5600 |
| | 130 | 25 | 1.5 | 66.0 | 50.0 | 4800 | 5600 |
| | 130 | 25 | 1.5 | 66.0 | 50.0 | 4800 | 5600 |
| | 130 | 25 | 1.5 | 66.0 | 50.0 | 4800 | 5600 |
| | 130 | 31 | 1.5 | 66.0 | 50.0 | 4800 | 5600 |
| | 160 | 37 | 2.1 | 113 | 77 | 4300 | 5000 |
| | 160 | 37 | 2.1 | 113 | 77 | 4300 | 5000 |
| | 160 | 37 | 2.1 | 113 | 77 | 4300 | 5000 |
| | 160 | 37 | 2.1 | 113 | 77 | 4300 | 5000 |
| | 160 | 37 | 2.1 | 113 | 77 | 4300 | 5000 |
| | 160 | 37 | 2.1 | 113 | 77 | 4300 | 5000 |
| | 190 | 45 | 3 | 146 | 107 | 3600 | 4300 |
| **80** | 100 | 10 | 0.6 | 12.7 | 13.3 | 6000 | 7000 |
| | 110 | 16 | 1 | 27.5 | 25.0 | 5600 | 6700 |
| | 125 | 22 | 1.1 | 47.5 | 40.0 | 5300 | 6300 |
| | 125 | 22 | 1.1 | 47.5 | 40.0 | 6500 | 8000 |
| | 125 | 14 | 0.6 | 32.0 | 30.0 | 5300 | 6300 |
| | 125 | 22 | 1.1 | 47.5 | 40.0 | 5300 | 6300 |
| | 140 | 26 | 2 | 71.5 | 54.5 | 4500 | 5300 |
| | 140 | 26 | 2 | 71.5 | 54.5 | 4500 | 5300 |
| | 170 | 39 | 2.1 | 125 | 86.5 | 3800 | 4500 |
| | 170 | 39 | 2.1 | 125 | 86.5 | 3800 | 4500 |

| Designations | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|
| | $D_{smin}$ | $dh_{max}$ | $r_{amax}$ | |
| | mm | | | kg |
| **6314/YA6** | 81 | 139 | 2 | 2.58 |
| **6314TN1** | 81 | 139 | 2 | 2.50 |
| **6414** | 83 | 167 | 2.5 | 4.54 |
| **60/72** | 79.5 | 102.5 | 1 | 0.584 |
| **6015** | 81.5 | 108.5 | 1 | 0.630 |
| **6015M** | 81.5 | 108.5 | 1 | 0.804 |
| **61915** | 80 | 100 | 1 | 0.350 |
| **16015** | 81.5 | 108.5 | 0.6 | 0.546 |
| **16015M** | 81.5 | 108.5 | 0.6 | 0.546 |
| **16015/YA6** | 84.5 | 105.5 | 1 | 0.476 |
| **6215** | 83 | 122 | 1.5 | 1.21 |
| **6215A** | 83 | 122 | 1.5 | 1.21 |
| **6215M** | 83 | 122 | 1.5 | 1.46 |
| **6215K** | 83 | 122 | 1.5 | 1.18 |
| **62215** | 83 | 122 | 1.5 | 1.47 |
| **6315** | 86 | 149 | 2 | 3.03 |
| **6315A** | 86 | 149 | 2 | 3.03 |
| **6315/CM** | 86 | 149 | 2 | 3.02 |
| **315U1** | 86 | 149 | 2 | 3.02 |
| **6315/YA8** | 86 | 149 | 2 | 3.03 |
| **6315M** | 86 | 149 | 2 | 3.86 |
| **6415** | 88 | 177 | 2.5 | 5.88 |
| **61816** | 83.2 | 96.8 | 0.6 | 0.153 |
| **61916** | 85 | 105 | 1 | 0.350 |
| **6016** | 86.5 | 118.5 | 1 | 0.845 |
| **FL-6016/P6** | 86.5 | 118.5 | 1 | 0.845 |
| **16016** | 84 | 121 | 0.6 | 0.599 |
| **6016M** | 86.5 | 118.5 | 1 | 1.04 |
| **6216A** | 89 | 131 | 2 | 1.47 |
| **6216** | 89 | 131 | 2 | 1.47 |
| **6316** | 91 | 159 | 2 | 3.68 |
| **6316/CM** | 91 | 159 | 2 | 3.60 |



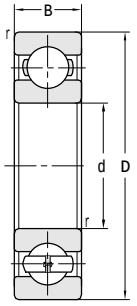



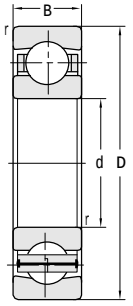



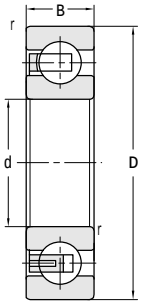

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil |
| mm | | | | kN | | r/min | |
| **80** | 170 | 39 | 2.1 | 125 | 86.5 | 3800 | 4500 |
| | 170 | 39 | 2.1 | 125 | 86.5 | 3800 | 4500 |
| | 200 | 48 | 3 | 160 | 122 | 3400 | 4000 |
| **85** | 120 | 18 | 1.1 | 30.3 | 27.0 | 5300 | 6300 |
| | 130 | 14 | 0.6 | 31.5 | 30.0 | 5000 | 6000 |
| | 130 | 22 | 1.1 | 47.5 | 40.0 | 5000 | 6000 |
| | 130 | 22 | 1.1 | 47.5 | 40.0 | 5000 | 6000 |
| | 150 | 28 | 2 | 84.0 | 62.0 | 4300 | 5000 |
| | 150 | 28 | 2 | 77.0 | 59.0 | 4300 | 5000 |
| | 150 | 28 | 2 | 84.0 | 62.0 | 4300 | 5000 |
| | 150 | 28 | 2 | 84.0 | 62.0 | 4300 | 5000 |
| | 150 | 28 | 2 | 84.0 | 62.0 | 4300 | 5000 |
| | 150 | 28 | 2 | 84.0 | 62.0 | 4300 | 5000 |
| | 150 | 28 | 2 | 77.0 | 59.0 | 4300 | 5000 |
| | 150 | 28 | 1 | 77.0 | 59.0 | 4300 | 5000 |
| | 180 | 41 | 3 | 102 | 96.5 | 3800 | 4500 |
| | 180 | 41 | 3 | 102 | 96.5 | 3800 | 4500 |
| | 180 | 41 | 3 | 102 | 96.5 | 3800 | 4500 |
| | 180 | 41 | 3 | 102 | 96.5 | 3600 | 4300 |
| | 180 | 41 | 3 | 102 | 96.5 | 3800 | 4500 |
| | 210 | 52 | 4 | 170 | 132 | 3200 | 3800 |
| **88.9** | 127 | 19.05 | 1.1 | 28.9 | 28.4 | 4400 | 5500 |
| **90** | 125 | 18 | 1.1 | 33.0 | 31.5 | 5000 | 6000 |
| | 125 | 18 | 1.1 | 33.0 | 31.5 | 5000 | 6000 |
| | 125 | 18 | 0.6 | 33.0 | 31.5 | 5000 | 6000 |
| | 140 | 24 | 1.5 | 58.5 | 50.0 | 4800 | 5600 |
| | 140 | 16 | 1 | 58.5 | 50.0 | 4800 | 5600 |
| | 140 | 24 | 1.5 | 58.5 | 50.0 | 4800 | 5600 |
| | 160 | 30 | 2 | 97.0 | 72.0 | 3800 | 4500 |
| | 160 | 30 | 2 | 73.5 | 72 | 3800 | 4500 |
| | 160 | 30 | 2 | 97.0 | 72.0 | 3800 | 4500 |
| | 190 | 43 | 3 | 144 | 108 | 3400 | 4000 |
| | 190 | 43 | 3 | 144 | 108 | 3400 | 4000 |

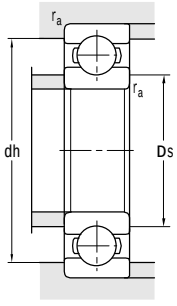
| Designations | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|
| | $D_{smin}$ | $dh_{max}$ | $r_{amax}$ | |
| | mm | | | kg |
| **6316M/HQ1** | 91 | 159 | 2 | 4.54 |
| **6316A** | 91 | 159 | 2 | 3.68 |
| **6416** | 93 | 187 | 2.5 | 6.84 |
| **61917** | 91 | 114 | 1 | 0.557 |
| **16017** | 89 | 126 | 0.6 | 0.636 |
| **6017** | 91.5 | 123.5 | 1 | 0.935 |
| **6017M** | 91.5 | 123.5 | 1 | 1.12 |
| **6217** | 94 | 141 | 2 | 1.85 |
| **6217/W124** | 94 | 141 | 2 | 1.85 |
| **6217K** | 94 | 141 | 2 | 1.81 |
| **6217A** | 94 | 141 | 2 | 1.85 |
| **6217/HA** | 94 | 141 | 2 | 1.80 |
| **6217M** | 94 | 141 | 2 | 1.91 |
| **6217/CRA9W124** | 94 | 141 | 2 | 1.85 |
| **6217R/C3Z1YA6** | 94 | 141 | 1 | 1.95 |
| **6317** | 98 | 167 | 2.5 | 4.33 |
| **6317/P6CMV2** | 98 | 167 | 2.5 | 4.33 |
| **6317M** | 98 | 167 | 2.5 | 4.97 |
| **6317/CRA9W124** | 99 | 166 | 2.5 | 4.29 |
| **317U1** | 98 | 167 | 2.5 | 4.33 |
| **6417** | 101 | 194 | 3 | 8.10 |
| **66/88.9/YA2** | 96.4 | 120.5 | 1 | 0.690 |
| **61918** | 96.5 | 118.5 | 1 | 0.572 |
| **61918M** | 96.5 | 118.5 | 1 | 0.680 |
| **61918/YA6** | 96.5 | 118.5 | 0.5 | 0.572 |
| **6018** | 98 | 132 | 1.5 | 1.15 |
| **16018M** | 95 | 135 | 1 | 0.990 |
| **6018M** | 98 | 132 | 1.5 | 1.36 |
| **6218** | 99 | 151 | 2 | 2.19 |
| **6218/CRA9W124** | 101 | 149 | 2 | 2.19 |
| **218U1** | 99 | 151 | 2 | 2.19 |
| **6318** | 103 | 177 | 2.5 | 4.97 |
| **6318/CM** | 103 | 177 | 2.5 | 4.97 |

d 90~100 mm



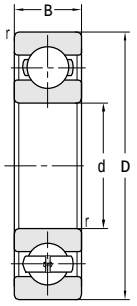



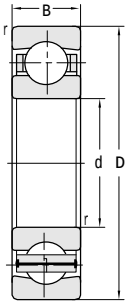



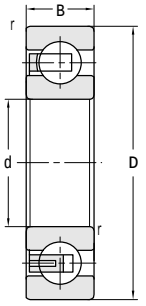

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | Cr | Cor | Grease | Oil |
| mm | | | | kN | | r/min | |
| **90** | 190 | 43 | 3 | 144 | 108 | 3400 | 4000 |
| | 190 | 43 | 5.5 | 144 | 108 | 3400 | 4000 |
| | 225 | 54 | 4 | 189 | 154 | 3000 | 3600 |
| **95** | 120 | 13 | 1 | 19.3 | 20.4 | 5000 | 6000 |
| | 130 | 18 | 1.1 | 33.8 | 33.0 | 4800 | 5600 |
| | 145 | 16 | 1 | 40.5 | 39.0 | 4500 | 5300 |
| | 145 | 24 | 1.5 | 78.5 | 54.0 | 4500 | 5300 |
| | 170 | 32 | 2.1 | 110 | 80.0 | 3600 | 4300 |
| | 170 | 32 | 2.1 | 102 | 77.0 | 3600 | 4300 |
| | 170 | 32 | 2.1 | 110 | 80.0 | 3600 | 4300 |
| | 170 | 32 | 2.1 | 102 | 77.0 | 3600 | 4300 |
| | 200 | 45 | 3 | 152 | 118 | 3200 | 3800 |
| | 200 | 45 | 3 | 152 | 118 | 3200 | 3800 |
| | 200 | 45 | 3 | 152 | 118 | 3200 | 3800 |
| | 200 | 45 | 3 | 152 | 118 | 3200 | 3800 |
| | 200 | 45 | 3 | 152 | 118 | 3200 | 3800 |
| | 200 | 45 | 3 | 152 | 118 | 3200 | 3800 |
| | 200 | 45 | 3 | 152 | 118 | 3200 | 3800 |
| | 200 | 45 | 3 | 152 | 118 | 3200 | 3800 |
| | 240 | 55 | 4 | 195 | 162 | 3400 | 3600 |
| **100** | 125 | 13 | 1 | 19.6 | 21.2 | 4800 | 5600 |
| | 140 | 20 | 1.1 | 34.5 | 35.0 | 4500 | 5300 |
| | 140 | 20 | 1.1 | 34.5 | 35.0 | 4500 | 5300 |
| | 150 | 16 | 1 | 43.6 | 44.0 | 4300 | 5000 |
| | 150 | 24 | 1.5 | 62.4 | 52.9 | 4300 | 5000 |
| | 150 | 24 | 1.5 | 62.4 | 52.9 | 4300 | 5000 |
| | 180 | 28 | 1.8 | 116 | 92.0 | 3400 | 4000 |
| | 180 | 34 | 2.1 | 122 | 93.0 | 3400 | 4000 |
| | 180 | 34 | 2.1 | 115 | 88.0 | 3400 | 4000 |
| | 180 | 34 | 2.1 | 115 | 88.0 | 3400 | 4000 |
| | 215 | 47 | 3 | 173 | 141 | 2800 | 3600 |
| | 215 | 47 | 3 | 173 | 141 | 2800 | 3600 |
| | 215 | 47 | 3 | 173 | 141 | 2800 | 3600 |
| | 215 | 47 | 3 | 173 | 141 | 3000 | 3600 |

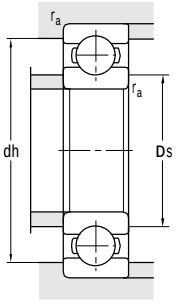
| Designations | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|
| | Dsmin | dhmax | ramax | |
| | mm | | | kg |
| **6318M/C4** | 103 | 177 | 2.5 | 6.37 |
| **6318/YA6** | 103 | 177 | 2.5 | 4.97 |
| **6418** | 106 | 209 | 3 | 9.58 |
| **61819** | 99.6 | 115 | 1 | 0.288 |
| **61919** | 101 | 124 | 1 | 0.610 |
| **16019** | 100 | 140 | 1 | 0.884 |
| **6019** | 103 | 137 | 1.5 | 1.14 |
| **6219** | 106 | 159 | 2 | 2.66 |
| **6219/W124** | 106 | 159 | 2 | 2.66 |
| **6219M** | 106 | 159 | 2 | 3.34 |
| **6219/CRA9W124** | 106 | 159 | 2 | 2.66 |
| **6319** | 108 | 187 | 2.5 | 5.84 |
| **IS-6319M** | 108 | 187 | 2.5 | 7.11 |
| **6319/CM** | 108 | 187 | 2.5 | 5.58 |
| **6319A** | 108 | 187 | 2.5 | 5.84 |
| **6319-DT** | 108 | 187 | 2.5 | 5.84 |
| **6319F1/HQ1** | 108 | 187 | 2.5 | 6.93 |
| **6319M/HQ1** | 108 | 187 | 2.5 | 7.11 |
| **IS-6319** | 109 | 186 | 2.5 | 5.48 |
| **6419M** | 108 | 215 | 2.5 | 13.6 |
| **61820** | 105 | 120 | 1 | 0.326 |
| **61920M** | 106.5 | 133.5 | 1 | 0.960 |
| **61920** | 106.5 | 133.5 | 1 | 0.850 |
| **16020** | 108 | 142 | 1 | 0.916 |
| **6020** | 108 | 142 | 1.5 | 1.15 |
| **6020M** | 108 | 142 | 1.5 | 1.37 |
| **720** | 111.5 | 171.5 | 1.8 | 2.70 |
| **6220** | 111 | 169 | 2 | 3.25 |
| **6220/CRA9W124** | 111 | 169 | 2 | 3.25 |
| **6220/W124** | 111 | 169 | 2 | 3.25 |
| **6320** | 113 | 202 | 2.5 | 7.10 |
| **IS-6320M** | 113 | 202 | 2.5 | 8.94 |
| **6320-DT** | 113 | 202 | 2.5 | 7.10 |
| **6320/W124** | 114 | 201 | 2.5 | 7.10 |

d 100~110 mm

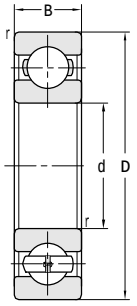


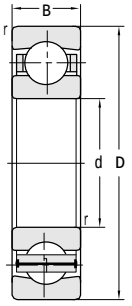



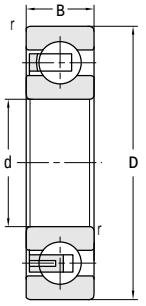



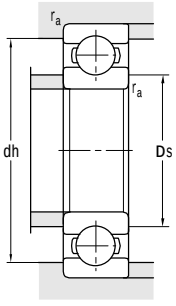




| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | $D_{smin}$ | $d_{hmax}$ | $r_{amax}$ | |
| mm | | | | kN | | r/min | | | mm | | | kg |
| **100** | 215 | 47 | 3 | 173 | 141 | 2800 | 3600 | **6320A** | 113 | 202 | 2.5 | 7.10 |
| | 215 | 47 | 3 | 173 | 141 | 2800 | 3600 | **6320M** | 113 | 202 | 2.5 | 8.94 |
| | 215 | 47 | 3 | 173 | 141 | 2800 | 3600 | **6320M-DT** | 113 | 202 | 2.5 | 8.34 |
| | 215 | 47 | 3 | 173 | 141 | 2800 | 3600 | **6320MA** | 113 | 202 | 2.5 | 9.28 |
| | 215 | 47 | 3 | 173 | 141 | 3000 | 3600 | **6320M/CRA9** | 114 | 201 | 2.5 | 8.94 |
| | 215 | 47 | 3 | 173 | 141 | 3000 | 3600 | **6320M/HQ1** | 114 | 201 | 2.5 | 8.00 |
| | 215 | 47 | 3 | 173 | 141 | 2800 | 3600 | **6320/YA8** | 113 | 202 | 2.5 | 7.20 |
| | 250 | 58 | 4 | 214 | 184 | 2600 | 3400 | **6420** | 116 | 234 | 3 | 13.1 |
| | 250 | 58 | 4 | 214 | 184 | 2600 | 3400 | **6420M** | 116 | 234 | 3 | 16.2 |
| **105** | 130 | 13 | 1 | 19.9 | 21.9 | 4500 | 5300 | **61821M** | 110 | 125 | 1 | 0.468 |
| | 160 | 26 | 2 | 73.0 | 62.8 | 4000 | 4800 | **6021** | 114 | 151 | 2 | 1.65 |
| | 160 | 26 | 2 | 73.0 | 62.8 | 4000 | 4800 | **6021A** | 114 | 151 | 2 | 1.65 |
| | 160 | 26 | 2 | 73.0 | 62.8 | 4000 | 4800 | **6021M** | 114 | 151 | 2 | 1.94 |
| | 180 | 22 | 1.1 | 68.0 | 65.0 | 4200 | 5000 | **721** | 113.5 | 173.5 | 1 | 2.61 |
| | 180 | 22 | 1.1 | 61.5 | 59.5 | 4200 | 5000 | **60121X1M** | 113.5 | 173.5 | 1 | 2.55 |
| | 190 | 36 | 2.1 | 135 | 102 | 3200 | 3800 | **6221** | 116 | 179 | 2 | 3.85 |
| | 190 | 36 | 2.1 | 133 | 105 | 3200 | 3800 | **6221/W124** | 117 | 178 | 2 | 3.66 |
| | 190 | 36 | 2.1 | 133 | 105 | 3200 | 3800 | **6221/CRA9W124** | 117 | 178 | 2 | 3.66 |
| | 190 | 36 | 2.1 | 135 | 102 | 3200 | 3800 | **6221M/CRA9** | 117 | 178 | 2 | 4.66 |
| | 225 | 49 | 3 | 240 | 154 | 2800 | 3400 | **6321** | 118 | 212 | 2.5 | 8.05 |
| **110** | 140 | 16 | 1 | 24.8 | 28.0 | 4300 | 5000 | **61822** | 115 | 135 | 1 | 0.505 |
| | 150 | 20 | 1.1 | 43.5 | 44.5 | 4000 | 4800 | **61922** | 116.5 | 143.5 | 1 | 0.888 |
| | 150 | 20 | 1.1 | 43.5 | 44.5 | 4000 | 4800 | **61922M** | 116.5 | 143.5 | 1 | 1.01 |
| | 170 | 19 | 1 | 57.2 | 57.0 | 3800 | 4500 | **16022** | 115 | 165 | 1 | 1.48 |
| | 170 | 28 | 2 | 82.0 | 70.6 | 3800 | 4500 | **6022** | 119 | 161 | 2 | 1.92 |
| | 170 | 28 | 2 | 82.0 | 70.6 | 3800 | 4500 | **6022M** | 119 | 161 | 2 | 2.35 |
| | 170 | 28 | 2 | 82.0 | 70.6 | 3800 | 4500 | **6022M/YB5** | 119 | 161 | 2 | 2.35 |
| | 200 | 38 | 2.1 | 145 | 114 | 2800 | 3400 | **6222** | 121 | 189 | 2 | 4.55 |
| | 200 | 38 | 2.1 | 145 | 114 | 2800 | 3400 | **6222M** | 121 | 189 | 2 | 5.46 |
| | 200 | 38 | 2.1 | 132 | 106 | 3000 | 3600 | **6222M/CRA9** | 122 | 188 | 2 | 5.46 |
| | 240 | 50 | 3 | 195 | 167 | 2400 | 3000 | **6322** | 123 | 227 | 2.5 | 9.72 |
| | 240 | 50 | 3 | 195 | 167 | 2400 | 3000 | **IS-6322M** | 123 | 227 | 2.5 | 11.7 |
| | 240 | 50 | 3 | 195 | 167 | 2600 | 3200 | **6322-DT** | 123 | 227 | 2.5 | 9.72 |
| | 240 | 50 | 3 | 151 | 169 | 2400 | 3000 | **6322/CM** | 123 | 227 | 2.5 | 9.23 |

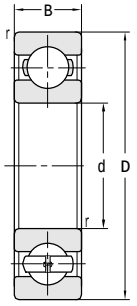


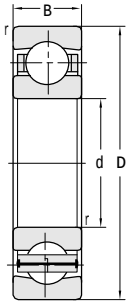



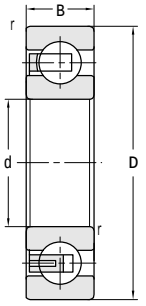



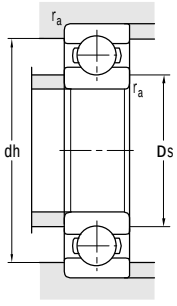




| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | $D_{smin}$ | $d_{hmax}$ | $r_{amax}$ | |
| mm | | | | kN | | r/min | | | mm | | | kg |
| **110** | 240 | 50 | 3 | 195 | 167 | 2600 | 3200 | **6322/W124** | 124 | 226 | 2.5 | 9.72 |
| | 240 | 50 | 3 | 195 | 167 | 2600 | 3200 | **IS-6322M** | 124 | 226 | 2.5 | 11.7 |
| | 240 | 50 | 3 | 205 | 176 | 2400 | 3000 | **6322A** | 123 | 227 | 2.5 | 9.72 |
| | 240 | 50 | 3 | 205 | 176 | 2400 | 3000 | **6322M** | 123 | 227 | 2.5 | 11.7 |
| | 240 | 50 | 3 | 195 | 167 | 2600 | 3200 | **6322M/HQ1** | 124 | 226 | 2.5 | 10.5 |
| | 280 | 65 | 4 | 247 | 226 | 2200 | 3000 | **6422** | 126 | 264 | 3 | 18.3 |
| | 280 | 65 | 4 | 247 | 226 | 2200 | 3000 | **6422M** | 126 | 264 | 3 | 19.0 |
| **120** | 150 | 16 | 1 | 24.5 | 28.0 | 3800 | 4500 | **61824** | 125 | 145 | 1 | 0.566 |
| | 165 | 22 | 1.1 | 53.0 | 54.0 | 3600 | 4300 | **61924** | 126.5 | 158.5 | 1 | 1.21 |
| | 165 | 22 | 1.1 | 53.0 | 54.0 | 3600 | 4300 | **61924M** | 126.5 | 158.5 | 1 | 1.54 |
| | 180 | 19 | 1 | 60.5 | 64.0 | 3400 | 4000 | **16024** | 125 | 175 | 1 | 1.64 |
| | 180 | 19 | 1 | 60.5 | 64.0 | 3400 | 4000 | **16024M** | 125 | 175 | 1 | 1.82 |
| | 180 | 28 | 2 | 85.5 | 80.0 | 3400 | 4000 | **6024** | 129 | 171 | 2 | 2.09 |
| | 180 | 28 | 2 | 85.5 | 80.0 | 3400 | 4000 | **6024A** | 129 | 171 | 2 | 2.09 |
| | 180 | 28 | 2 | 85.5 | 80.0 | 3400 | 4000 | **6024M** | 129 | 171 | 2 | 2.68 |
| | 215 | 40 | 2.1 | 154 | 130 | 2800 | 3400 | **6224** | 131 | 204 | 2 | 5.28 |
| | 215 | 40 | 2.1 | 155 | 132 | 2800 | 3400 | **6224/W124** | 132 | 203 | 2 | 5.30 |
| | 215 | 40 | 2.1 | 154 | 130 | 2800 | 3400 | **6224M** | 131 | 204 | 2 | 6.68 |
| | 215 | 40 | 2.1 | 155 | 132 | 2800 | 3400 | **6224M/CRA9** | 132 | 203 | 2 | 6.63 |
| | 260 | 55 | 3 | 217 | 196 | 2200 | 2800 | **6324** | 133 | 247 | 2.5 | 12.5 |
| | 260 | 55 | 3 | 217 | 196 | 2200 | 2800 | **6324-DT** | 133 | 247 | 2.5 | 12.5 |
| | 260 | 55 | 3 | 217 | 196 | 2200 | 2800 | **6324A** | 133 | 247 | 2.5 | 12.5 |
| | 260 | 55 | 3 | 217 | 196 | 2200 | 2800 | **6324M/C3** | 133 | 247 | 2.5 | 13.7 |
| | 260 | 55 | 3 | 217 | 196 | 2200 | 2800 | **6324M-DT** | 133 | 247 | 2.5 | 14.8 |
| | 260 | 55 | 3 | 217 | 196 | 2200 | 2800 | **6324F1/HQ1** | 133 | 247 | 2.5 | 13.4 |
| | 260 | 55 | 3 | 217 | 196 | 2400 | 3000 | **6324/W124** | 134 | 245 | 2.5 | 12.5 |
| **120.65** | 165.1 | 22.225 | 1.1 | 53.3 | 54.0 | 3600 | 4300 | **619/121X4M** | 126.5 | 158.5 | 1 | 1.48 |
| **121** | 165 | 22 | 1.1 | 53.3 | 54.0 | 3600 | 4300 | **619/121M** | 126.5 | 158.5 | 1 | 1.48 |
| **127** | 228.6 | 34.925 | 2 | 148 | 133 | 2200 | 2800 | **66/127M** | 136 | 219.6 | 2 | 7.00 |
| **130** | 165 | 18 | 1.1 | 37.0 | 38.0 | 3600 | 4300 | **61826MA** | 136 | 159 | 1 | 0.969 |
| | 180 | 24 | 1.5 | 65.0 | 67.0 | 3400 | 4000 | **61926M** | 138 | 172 | 1.5 | 1.92 |

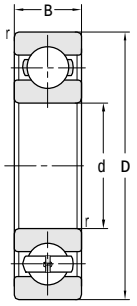


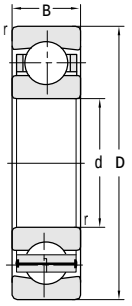



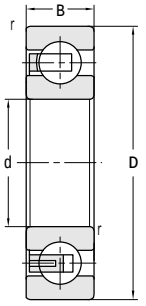



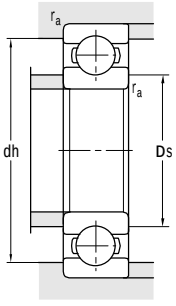




| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | $D_{smin}$ | $d_{hmax}$ | $r_{amax}$ | |
| mm | | | | kN | | r/min | | | mm | | | kg |
| **130** | 180 | 24 | 1.5 | 65.0 | 67.0 | 3400 | 4000 | **61926** | 138 | 172 | 1.5 | 1.56 |
| | 190 | 19 | 0.7 | 56.0 | 60.0 | 3200 | 3800 | **726** | 134 | 186 | 0.7 | 1.70 |
| | 190 | 19 | 0.7 | 56.0 | 60.0 | 3200 | 3800 | **726H** | 134 | 186 | 0.7 | 1.91 |
| | 200 | 22 | 1.1 | 79.5 | 81.5 | 3200 | 3800 | **16026M** | 136.5 | 193.5 | 1 | 2.32 |
| | 200 | 22 | 1.1 | 79.5 | 81.5 | 3200 | 3800 | **16026** | 136.5 | 193.5 | 1 | 2.19 |
| | 200 | 33 | 2 | 109 | 98 | 3200 | 3800 | **6026** | 139 | 191 | 2 | 3.29 |
| | 200 | 33 | 2 | 109 | 98 | 3200 | 3800 | **FL-6026** | 139 | 191 | 2 | 3.29 |
| | 200 | 33 | 2 | 109 | 98 | 3200 | 3800 | **6026M** | 139 | 191 | 2 | 3.96 |
| | 200 | 33 | 2 | 109 | 98 | 3200 | 3800 | **6026MA** | 139 | 191 | 2 | 3.98 |
| | 230 | 40 | 3 | 153 | 134 | 2600 | 3200 | **6226** | 143 | 217 | 2.5 | 6.33 |
| | 230 | 40 | 3 | 153 | 134 | 2600 | 3200 | **6226M/CRA9** | 144 | 216 | 2.5 | 7.83 |
| | 230 | 40 | 3 | 153 | 134 | 2600 | 3200 | **6226/W124** | 144 | 216 | 2.5 | 6.33 |
| | 230 | 40 | 3 | 165 | 148 | 2600 | 3200 | **226HU1** | 143 | 217 | 2.5 | 7.51 |
| | 230 | 40 | 3 | 165 | 148 | 2600 | 3200 | **226U1** | 143 | 217 | 2.5 | 6.16 |
| | 230 | 40 | 3 | 153 | 134 | 2600 | 3200 | **6226MA** | 143 | 217 | 2.5 | 7.91 |
| | 280 | 58 | 4 | 251 | 241 | 2200 | 2600 | **6326** | 146 | 264 | 3 | 15.3 |
| | 280 | 58 | 4 | 230 | 216 | 2200 | 2600 | **6326-DT** | 146 | 264 | 3 | 15.1 |
| | 280 | 58 | 4 | 240 | 226 | 2200 | 2800 | **6326/W124** | 147 | 263 | 3 | 15.3 |
| | 280 | 58 | 4 | 251 | 241 | 2200 | 2600 | **6326A** | 146 | 264 | 3 | 14.9 |
| | 280 | 58 | 4 | 251 | 241 | 2200 | 2600 | **6326F1/HQ1** | 146 | 264 | 3 | 16.7 |
| | 280 | 58 | 4 | 251 | 241 | 2200 | 2600 | **FL-6326/HQ1** | 146 | 264 | 3 | 13.5 |
| | 280 | 58 | 4 | 251 | 241 | 2200 | 2600 | **6326M** | 146 | 264 | 3 | 18.3 |
| | 280 | 58 | 4 | 230 | 216 | 2200 | 2600 | **6326M-DT** | 146 | 264 | 3 | 17.6 |
| **140** | 175 | 18 | 1.1 | 37.0 | 40.0 | 3400 | 4000 | **61828M** | 146.5 | 168.5 | 1 | 1.00 |
| | 175 | 18 | 1.1 | 37.0 | 40.0 | 3400 | 4000 | **61828MA** | 146.5 | 168.5 | 1 | 0.933 |
| | 190 | 24 | 1.5 | 64.0 | 67.5 | 3200 | 3800 | **61928M** | 148 | 182 | 1.5 | 2.11 |
| | 210 | 22 | 1.1 | 80.5 | 86.5 | 3000 | 3600 | **16028M** | 146.5 | 203.5 | 1 | 3.08 |
| | 210 | 33 | 2 | 106 | 102 | 3000 | 3600 | **6028** | 146.5 | 201 | 2 | 3.47 |
| | 210 | 33 | 2 | 106 | 102 | 3000 | 3600 | **6028/C9** | 149 | 201 | 2 | 3.47 |
| | 210 | 33 | 2 | 106 | 102 | 3000 | 3600 | **6028/C9YB2** | 149 | 201 | 2 | 3.47 |
| | 210 | 33 | 2 | 106 | 102 | 3000 | 3600 | **6028M** | 149 | 201 | 2 | 4.20 |
| | 250 | 42 | 3 | 166 | 150 | 2400 | 3000 | **6228** | 153 | 237 | 2.5 | 7.41 |
| | 250 | 42 | 3 | 166 | 150 | 2400 | 3000 | **6228/W124** | 154 | 236 | 2.5 | 7.41 |
| | 250 | 42 | 3 | 166 | 150 | 2400 | 3000 | **6228M** | 153 | 237 | 2.5 | 9.28 |
| | 250 | 42 | 3 | 128 | 150 | 2400 | 3000 | **6228MA** | 153 | 237 | 2.5 | 9.50 |

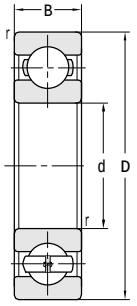


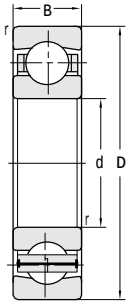



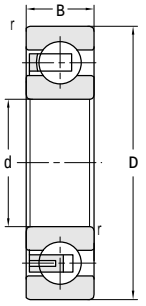



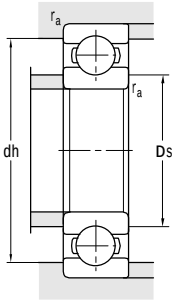




| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | $D_{smin}$ | $d_{hmax}$ | $r_{amax}$ | |
| mm | | | | kN | | r/min | | | mm | | | kg |
| **140** | 250 | 42 | 3 | 166 | 150 | 2400 | 3000 | **6228M/CRA9** | 154 | 236 | 2.5 | 9.28 |
| | 300 | 62 | 4 | 329 | 246 | 2000 | 2600 | **6328** | 156 | 284 | 3 | 18.8 |
| | 300 | 62 | 4 | 329 | 246 | 2000 | 2600 | **FL-6328/HQ1** | 156 | 284 | 3 | 16.7 |
| | 300 | 62 | 4 | 253 | 246 | 2000 | 2600 | **6328-DT** | 156 | 284 | 3 | 18.8 |
| | 300 | 62 | 4 | 253 | 246 | 2000 | 2600 | **6328L3-DT** | 156 | 284 | 3 | 20.7 |
| | 300 | 62 | 4 | 329 | 246 | 2000 | 2600 | **6328/W124** | 157 | 283 | 3 | 18.8 |
| | 300 | 62 | 4 | 253 | 246 | 2000 | 2600 | **6328M** | 156 | 284 | 3 | 21.5 |
| | 300 | 62 | 4 | 253 | 246 | 2000 | 2600 | **6328M-DT** | 156 | 284 | 3 | 22.7 |
| | 300 | 62 | 4 | 253 | 246 | 2000 | 2600 | **6328M/CRA9** | 157 | 283 | 3 | 21.5 |
| **144** | 185 | 22 | 0.7 | 62.5 | 70.0 | 3600 | 4000 | **928T3** | 148 | 181 | 0.7 | 1.07 |
| | 185 | 22 | 0.7 | 48.0 | 70.0 | 3600 | 4000 | **66/144/S2** | 148 | 181 | 0.7 | 1.07 |
| **149** | 201 | 33 | 0.7 | 105 | 102 | 3000 | 3600 | **930T3** | 153 | 197 | 0.7 | 1.79 |
| | 201 | 33 | 0.7 | 81.0 | 100 | 3000 | 3600 | **66/149/S2** | 153 | 197 | 0.7 | 1.79 |
| **150** | 190 | 20 | 1.1 | 46.4 | 53.0 | 3000 | 3600 | **61830M** | 156 | 184 | 1 | 1.50 |
| | 210 | 28 | 2 | 84.5 | 90 | 2800 | 3400 | **61930M** | 159 | 201 | 2 | 3.04 |
| | 225 | 24 | 1.1 | 89.0 | 96.0 | 2600 | 3200 | **16030** | 156.5 | 218.5 | 1 | 3.14 |
| | 225 | 24 | 1.1 | 89.0 | 96.0 | 2600 | 3200 | **16030M** | 156.5 | 218.5 | 1 | 3.67 |
| | 225 | 35 | 2.1 | 123 | 117 | 2600 | 3200 | **6030** | 161 | 214 | 2 | 4.07 |
| | 225 | 35 | 2.1 | 123 | 117 | 2600 | 3200 | **FL-6030** | 161 | 214 | 2 | 4.07 |
| | 225 | 35 | 2.1 | 123 | 117 | 2600 | 3200 | **6030/C9** | 161 | 214 | 2 | 4.07 |
| | 225 | 35 | 2.1 | 123 | 117 | 2600 | 3200 | **6030M** | 161 | 214 | 2 | 4.98 |
| | 225 | 35 | 2.1 | 123 | 117 | 2600 | 3200 | **6030M/P4** | 161 | 214 | 2 | 4.98 |
| | 230 | 35 | 2.1 | 123 | 117 | 2500 | 3000 | **6030X1M** | 159 | 220 | 2.1 | 5.37 |
| | 270 | 45 | 3 | 189 | 183 | 2000 | 2600 | **6230** | 163 | 257 | 2.5 | 9.96 |
| | 270 | 45 | 3 | 189 | 183 | 2000 | 2600 | **6230/W124** | 164 | 256 | 2.5 | 9.96 |
| | 270 | 45 | 3 | 176 | 169 | 2000 | 2600 | **6230M** | 163 | 257 | 2.5 | 11.4 |
| | 270 | 45 | 3 | 176 | 169 | 2000 | 2600 | **6230M/W124** | 164 | 256 | 2.5 | 11.8 |
| | 270 | 45 | 3 | 176 | 169 | 2000 | 2600 | **6230M/CRA9** | 164 | 256 | 2.5 | 11.4 |
| | 320 | 65 | 4 | 360 | 280 | 1800 | 2200 | **6330** | 166 | 304 | 3 | 22.2 |
| | 320 | 65 | 4 | 360 | 280 | 1800 | 2200 | **IS-6330** | 166 | 304 | 3 | 22.2 |
| | 320 | 65 | 4 | 360 | 280 | 1800 | 2200 | **FL-6330/HQ1** | 166 | 304 | 3 | 18.3 |
| | 320 | 65 | 4 | 277 | 280 | 1800 | 2200 | **6330-DT** | 166 | 304 | 3 | 22.2 |
| | 320 | 65 | 4 | 360 | 280 | 1800 | 2200 | **IS-6330** | 166 | 304 | 3 | 22.2 |

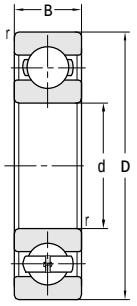


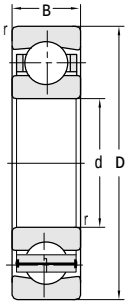



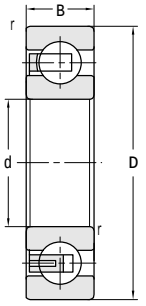



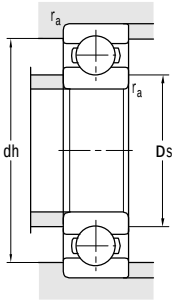




| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | Cr | Cor | Grease | Oil | | Dsmin | dhmax | ramax | |
| mm | | | | kN | | r/min | | | mm | | | kg |
| **150** | 320 | 65 | 4 | 277 | 280 | 1800 | 2200 | **6330M** | 166 | 304 | 3 | 23.9 |
| | 320 | 65 | 4 | 277 | 280 | 1900 | 2400 | **6330M/W124** | 167 | 303 | 3 | 26.0 |
| **160** | 200 | 20 | 1.1 | 49.5 | 59 | 2600 | 3200 | **61832M** | 168 | 192 | 1.1 | 1.32 |
| | 220 | 28 | 2 | 89 | 90.0 | 2600 | 3200 | **61932M** | 169 | 211 | 2 | 3.28 |
| | 229.5 | 33 | 3 | 108 | 111 | 2500 | 3100 | **62932X3M/YA6** | 168 | 211 | 3 | 4.67 |
| | 240 | 25 | 1.5 | 94.0 | 104 | 2400 | 3000 | **16032** | 168 | 232 | 1.5 | 3.95 |
| | 240 | 25 | 1.5 | 94.0 | 104 | 2400 | 3000 | **16032M** | 168 | 232 | 1.5 | 4.60 |
| | 240 | 38 | 2.1 | 143 | 138 | 2400 | 3000 | **6032** | 171 | 229 | 2 | 5.04 |
| | 240 | 38 | 2.1 | 143 | 138 | 2400 | 3000 | **6032/C9** | 171 | 229 | 2 | 5.04 |
| | 240 | 38 | 2.1 | 143 | 138 | 2400 | 3000 | **6032M** | 171 | 229 | 2 | 6.04 |
| | 240 | 38 | 2.1 | 127 | 127 | 2400 | 3000 | **6032M/W124** | 169 | 231 | 2 | 6.04 |
| | 290 | 48 | 3 | 210 | 210 | 1900 | 2400 | **6232** | 173 | 277 | 2.5 | 12.4 |
| | 290 | 48 | 3 | 200 | 201 | 1900 | 2400 | **6232-DT** | 173 | 277 | 2.5 | 12.3 |
| | 290 | 48 | 3 | 202 | 201 | 1900 | 2400 | **6232M** | 173 | 277 | 2.5 | 14.2 |
| | 290 | 48 | 3 | 200 | 201 | 1900 | 2400 | **6232M/P59Z2** | 174 | 276 | 2.5 | 14.4 |
| | 290 | 48 | 3 | 200 | 201 | 1900 | 2400 | **6232M/CRA9** | 174 | 276 | 2.5 | 14.2 |
| | 290 | 48 | 3 | 202 | 202 | 1900 | 2400 | **6232/W124** | 174 | 276 | 2.5 | 12.3 |
| | 340 | 68 | 4 | 310 | 325 | 1800 | 2200 | **6332** | 177 | 323 | 3 | 25.7 |
| | 340 | 68 | 4 | 310 | 325 | 1800 | 2200 | **6332-DT** | 177 | 323 | 3 | 26.5 |
| | 340 | 68 | 4 | 310 | 325 | 1800 | 2200 | **6332M** | 176 | 324 | 3 | 30.7 |
| | 340 | 68 | 4 | 310 | 325 | 1800 | 2200 | **6332M-DT** | 176 | 324 | 3 | 31.8 |
| | 340 | 68 | 4 | 238 | 325 | 1800 | 2200 | **6332M/W124** | 177 | 323 | 3 | 30.5 |
| | 340 | 68 | 4 | 310 | 325 | 1800 | 2200 | **6332/W124** | 176 | 324 | 3 | 25.7 |
| **165** | 250.5 | 35 | 2.5 | 147 | 143 | 2200 | 2600 | **733** | 177 | 238 | 2.5 | 6.44 |
| **170** | 215 | 22 | 1.1 | 65.0 | 61.0 | 2600 | 3200 | **61834M** | 176.5 | 208.5 | 1 | 2.03 |
| | 215 | 22 | 1.1 | 65.0 | 61.0 | 2600 | 3200 | **61834M-Z/YA8** | 176.5 | 208.5 | 1 | 1.89 |
| | 215 | 22 | 1.1 | 65.0 | 61.0 | 2600 | 3200 | **61834MA** | 176.5 | 208.5 | 1 | 1.98 |
| | 230 | 28 | 2 | 115 | 100 | 2400 | 3000 | **61934M** | 179 | 221 | 2 | 3.42 |
| | 230 | 28 | 2 | 115 | 100 | 2400 | 3000 | **61934MA** | 179 | 221 | 2 | 3.40 |
| | 260 | 28 | 1.5 | 119 | 128 | 2200 | 2800 | **16034** | 178 | 252 | 1.5 | 5.01 |
| | 260 | 28 | 1.5 | 119 | 129 | 2200 | 2800 | **16034M** | 178 | 252 | 1.5 | 5.83 |
| | 260 | 42 | 2.1 | 161 | 166 | 2200 | 2800 | **6034M** | 181 | 249 | 2 | 7.96 |
| | 260 | 42 | 2.1 | 161 | 166 | 2200 | 2800 | **6034MA** | 181 | 249 | 2 | 8.25 |

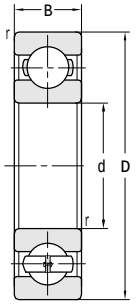


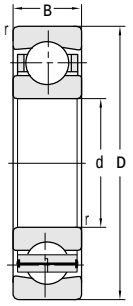



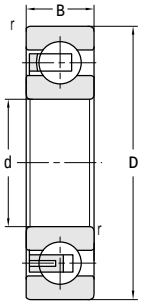



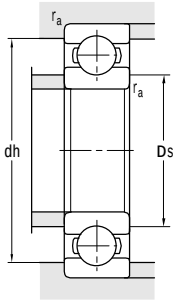




| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | $D_{smin}$ | $d_{hmax}$ | $r_{amax}$ | |
| mm | | | | kN | | r/min | | | mm | | | kg |
| **170** | 260 | 42 | 2.1 | 161 | 166 | 2200 | 2800 | **6034** | 181 | 249 | 2 | 6.86 |
| | 260 | 42 | 2.1 | 161 | 166 | 2200 | 2800 | **6034Q1** | 181 | 249 | 2 | 8.06 |
| | 260 | 42 | 2.1 | 170 | 171 | 5300 | 4300 | **4G134QT** | 181 | 249 | 2 | 7.94 |
| | 310 | 52 | 4 | 225 | 240 | 1900 | 2400 | **6234** | 186 | 294 | 3 | 15.1 |
| | 310 | 52 | 4 | 225 | 240 | 1900 | 2400 | **6234-DT** | 186 | 294 | 3 | 15.1 |
| | 310 | 52 | 4 | 225 | 240 | 1900 | 2400 | **6234M** | 186 | 294 | 3 | 17.9 |
| | 310 | 52 | 4 | 242 | 256 | 1900 | 2400 | **6234/YA5** | 186 | 294 | 3 | 15.2 |
| | 310 | 52 | 4 | 225 | 240 | 1900 | 2400 | **6234M/CRA9** | 187 | 293 | 3 | 17.9 |
| | 360 | 72 | 4 | 330 | 368 | 1700 | 2000 | **6334** | 186 | 344 | 3 | 31.5 |
| | 360 | 72 | 4 | 330 | 368 | 1700 | 2000 | **6334-DT** | 186 | 344 | 3 | 31.5 |
| | 360 | 72 | 4 | 330 | 368 | 1700 | 2000 | **6334M** | 186 | 344 | 3 | 38.4 |
| | 360 | 72 | 4 | 330 | 368 | 1700 | 2000 | **6334M/W124** | 187 | 343 | 3 | 38.4 |
| | 360 | 72 | 4 | 330 | 368 | 1700 | 2000 | **6334M/P59Z2** | 187 | 343 | 3 | 38.4 |
| **180** | 225 | 22 | 1.1 | 61.8 | 79.0 | 2400 | 3000 | **61836M** | 186 | 219 | 1 | 2.05 |
| | 225 | 22 | 1.1 | 61.8 | 79.0 | 2400 | 3000 | **61836MA** | 186 | 219 | 1 | 2.17 |
| | 250 | 33 | 2 | 118 | 128 | 2200 | 2800 | **61936M** | 189 | 241 | 2 | 5.07 |
| | 259.5 | 33 | 2 | 118 | 128 | 2200 | 2800 | **61936X1M** | 189 | 241 | 2 | 6.05 |
| | 259.5 | 52 | 2 | 118 | 128 | 2200 | 2800 | **63936X1M** | 189 | 250.5 | 2 | 8.64 |
| | 259.5 | 52 | 2 | 140 | 147 | 2200 | 2800 | **63936X1F3-1/C3H** | 189 | 250.5 | 2 | 8.82 |
| | 280 | 31 | 2 | 135 | 145 | 2100 | 2700 | **16036M** | 189 | 270 | 2 | 6.58 |
| | 280 | 46 | 2.1 | 186 | 196 | 2200 | 2600 | **6036** | 191 | 269 | 2 | 8.75 |
| | 280 | 46 | 2.1 | 186 | 196 | 2200 | 2600 | **6036M** | 191 | 269 | 2 | 10.4 |
| | 320 | 52 | 4 | 240 | 260 | 1800 | 2200 | **6236** | 196 | 304 | 3 | 14.9 |
| | 320 | 52 | 4 | 240 | 260 | 1800 | 2600 | **6236M** | 196 | 304 | 3 | 17.8 |
| | 320 | 52 | 4 | 240 | 260 | 1800 | 2600 | **6236MA** | 196 | 304 | 3 | 18.7 |
| | 380 | 75 | 4 | 340 | 400 | 1700 | 1900 | **6336M** | 198 | 363 | 3 | 49.5 |
| **190** | 240 | 24 | 1.5 | 73.0 | 94.0 | 2200 | 2800 | **61838M** | 198 | 232 | 1.5 | 2.63 |
| | 260 | 33 | 2 | 127 | 138 | 2200 | 2800 | **61938M** | 199 | 251 | 2 | 5.85 |
| | 269.5 | 33 | 2 | 127 | 138 | 2200 | 2800 | **61938X1M** | 199 | 260.5 | 2 | 5.78 |
| | 289.5 | 46 | 2.1 | 191 | 211 | 2000 | 2600 | **6038X1M** | 201 | 279 | 2 | 10.8 |
| | 290 | 31 | 2 | 145 | 162 | 2000 | 2600 | **16038** | 199 | 281 | 2 | 6.88 |
| | 290 | 31 | 2 | 145 | 162 | 2000 | 2600 | **16038M** | 199 | 281 | 2 | 8.11 |
| | 290 | 46 | 2.1 | 191 | 211 | 2000 | 2600 | **6038M** | 201 | 279 | 2 | 11.1 |
| | 290 | 46 | 2.1 | 191 | 211 | 2000 | 2600 | **6038** | 201 | 279 | 2 | 9.58 |



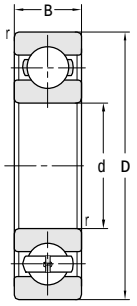



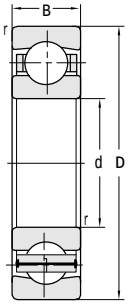



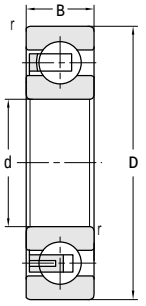

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil |
| mm | | | | kN | | r/min | |
| **190** | 340 | 55 | 4 | 265 | 305 | 1700 | 2000 |
| | 340 | 55 | 4 | 265 | 305 | 1700 | 2000 |
| | 340 | 55 | 4 | 265 | 305 | 1700 | 2000 |
| | 340 | 55 | 4 | 265 | 305 | 1700 | 2000 |
| | 400 | 78 | 5 | 370 | 440 | 1600 | 1900 |
| | 400 | 78 | 5 | 360 | 425 | 1600 | 1900 |
| **200** | 250 | 24 | 1.5 | 73.0 | 84.0 | 2200 | 2800 |
| | 250 | 24 | 1.5 | 73.0 | 84.0 | 2200 | 2800 |
| | 269.5 | 51 | 2.1 | 130 | 146 | 1900 | 2300 |
| | 269.5 | 51 | 2.1 | 91.0 | 109 | 1900 | 2300 |
| | 279.5 | 38 | 2.1 | 125 | 144 | 2000 | 2600 |
| | 280 | 38 | 2.1 | 125 | 144 | 2000 | 2600 |
| | 289.5 | 38 | 2.1 | 125 | 144 | 2000 | 2600 |
| | 310 | 34 | 2 | 162 | 182 | 1900 | 2400 |
| | 310 | 51 | 2.1 | 213 | 234 | 1900 | 2400 |
| | 310 | 51 | 2.1 | 213 | 234 | 1900 | 2400 |
| | 310 | 51 | 2.1 | 213 | 234 | 1900 | 2400 |
| | 360 | 58 | 4 | 285 | 335 | 1700 | 2000 |
| | 360 | 58 | 4 | 268 | 305 | 1700 | 2000 |
| | 420 | 80 | 5 | 380 | 460 | 1600 | 1800 |
| **220** | 270 | 24 | 1.5 | 75.0 | 89.0 | 1900 | 2400 |
| | 270 | 24 | 1.5 | 75.0 | 89.0 | 1900 | 2400 |
| | 300 | 38 | 2.1 | 148 | 176 | 1900 | 2400 |
| | 300 | 60 | 2.1 | 112 | 168 | 1900 | 2400 |
| | 309.5 | 38 | 2.1 | 148 | 176 | 1900 | 2400 |
| | 340 | 37 | 2.1 | 170 | 215 | 1800 | 2200 |
| | 340 | 56 | 3 | 242 | 284 | 1800 | 2200 |
| | 340 | 56 | 3 | 242 | 284 | 1800 | 2200 |
| | 400 | 65 | 4 | 297 | 365 | 1500 | 1800 |
| | 400 | 65 | 4 | 229 | 365 | 1500 | 1800 |
| | 460 | 88 | 5 | 403 | 520 | 1300 | 1600 |
| | 460 | 88 | 5 | 403 | 520 | 1300 | 1600 |
| **230** | 329.5 | 40 | 2.1 | 190 | 227 | 1600 | 2000 |

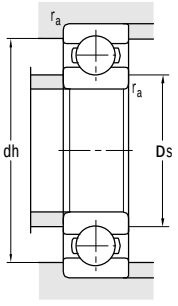
| Designations | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|
| | $D_{smin}$ | $dh_{max}$ | $r_{amax}$ | |
| | mm | | | kg |
| **6238** | 206 | 324 | 3 | 18.1 |
| **6238M** | 206 | 324 | 3 | 22.2 |
| **6238M-DT** | 206 | 324 | 3 | 21.1 |
| **6238M/CRA9** | 207 | 323 | 3 | 22.2 |
| **6338F3** | 210 | 382 | 4 | 48.4 |
| **6338M** | 210 | 382 | 4 | 50.0 |
| **61840MA** | 207 | 243 | 1.5 | 2.94 |
| **61840MA/P4** | 207 | 243 | 1.5 | 2.94 |
| **61040X1F3/C3H** | 208 | 260 | 2 | 7.91 |
| **61040X1M** | 208 | 260 | 2 | 8.10 |
| **61940X1MA-1** | 210 | 270 | 2 | 7.59 |
| **61940MA** | 210 | 270 | 2 | 7.63 |
| **61940X1MA** | 210 | 270 | 2 | 8.89 |
| **16040M** | 209 | 301 | 2 | 10.3 |
| **6040M** | 211 | 299 | 2 | 14.2 |
| **6040MA** | 210 | 300 | 2 | 14.3 |
| **6040** | 211 | 299 | 2 | 11.7 |
| **6240** | 216 | 344 | 3 | 22.3 |
| **6240M** | 216 | 344 | 3 | 26.4 |
| **6340** | 220 | 400 | 4 | 57.7 |
| **61844M** | 227 | 263 | 1.5 | 3.21 |
| **61844M/YA4** | 227 | 263 | 1.5 | 3.21 |
| **61944M** | 231 | 289 | 2 | 8.37 |
| **63944M** | 231 | 289 | 2 | 11.8 |
| **61944X1M** | 231 | 298.5 | 2 | 9.71 |
| **16044** | 233 | 327 | 2 | 11.7 |
| **6044** | 233 | 327 | 2.5 | 15.5 |
| **6044M** | 233 | 327 | 2.5 | 18.3 |
| **6244** | 236 | 384 | 3 | 31.2 |
| **6244M** | 236 | 384 | 3 | 36.3 |
| **6344** | 240 | 440 | 4 | 71.4 |
| **6344/C9** | 240 | 440 | 4 | 71.4 |
| **6646M** | 241 | 319 | 2.1 | 10.4 |

d 230~280 mm



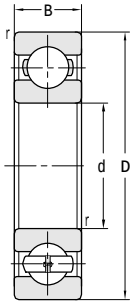



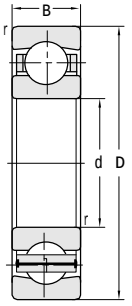



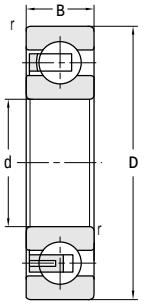



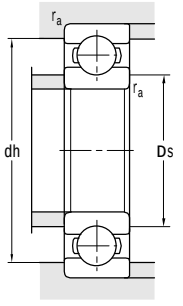

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | $D_{smin}$ | $d_{hmax}$ | $r_{amax}$ | |
| mm | | | | kN | | r/min | | | mm | | | kg |
| **230** | 309.5 | 40 | 2.1 | 145 | 173 | 1600 | 2000 | **6646M-1/C3** | 241 | 319 | 2.1 | 9.02 |
| | 329.5 | 40 | 2.1 | 190 | 227 | 1600 | 2000 | **6646M/W281** | 241 | 319 | 2.1 | 10.4 |
| **240** | 300 | 28 | 2 | 103 | 116 | 1800 | 2200 | **61848M** | 249 | 291 | 2 | 4.72 |
| | 320 | 38 | 2.1 | 155 | 192 | 1800 | 2200 | **61948M** | 251 | 309 | 2 | 8.50 |
| | 359.5 | 56 | 3 | 255 | 315 | 1700 | 2000 | **6048X1M** | 253 | 346.5 | 2.5 | 20.7 |
| | 360 | 37 | 2.1 | 185 | 228 | 1700 | 2000 | **16048M** | 253 | 347 | 2 | 14.6 |
| | 360 | 56 | 3 | 255 | 315 | 1700 | 2000 | **6048** | 253 | 347 | 2.5 | 17.6 |
| | 360 | 56 | 3 | 255 | 315 | 1700 | 2000 | **6048M** | 253 | 347 | 2.5 | 20.7 |
| | 440 | 72 | 4 | 350 | 460 | 1300 | 1600 | **6248** | 256 | 424 | 3 | 53.3 |
| | 500 | 95 | 5 | 440 | 595 | 1100 | 1400 | **6348F1** | 260 | 480 | 4 | 95.0 |
| | 500 | 95 | 5 | 440 | 595 | 1100 | 1400 | **6348F3** | 260 | 480 | 4 | 95.0 |
| | 500 | 95 | 5 | 440 | 595 | 1100 | 1400 | **6348M** | 260 | 480 | 4 | 96.2 |
| **260** | 320 | 28 | 2 | 122 | 128 | 1700 | 2000 | **61852M** | 269 | 311 | 2 | 4.80 |
| | 360 | 46 | 2.1 | 212 | 269 | 1600 | 1900 | **61952M** | 276 | 349 | 2 | 14.4 |
| | 360 | 46 | 2.1 | 212 | 269 | 1600 | 1900 | **61952MA** | 271 | 349 | 2 | 14.4 |
| | 369.5 | 46 | 2.1 | 212 | 269 | 1600 | 1900 | **61952X1M** | 276 | 349 | 2 | 16.3 |
| | 369.5 | 68 | 2.1 | 227 | 288 | 1600 | 1900 | **62952X3M** | 271 | 358.5 | 2 | 22.9 |
| | 369.5 | 60 | 2.1 | 227 | 288 | 1600 | 1900 | **62952X1M-1** | 271 | 358.5 | 2 | 20.3 |
| | 369.5 | 60 | 2.1 | 227 | 288 | 1600 | 1900 | **62952X1F3-2/C3H** | 271 | 358.5 | 2 | 20.9 |
| | 399.5 | 65 | 4 | 294 | 373 | 1500 | 1800 | **6052X1F3** | 276 | 384 | 3 | 28.5 |
| | 370 | 46 | 2.1 | 212 | 269 | 1600 | 1900 | **752** | 271 | 359 | 2 | 16.5 |
| | 400 | 44 | 3 | 230 | 300 | 1500 | 1800 | **16052M** | 272 | 388 | 2.5 | 22.3 |
| | 400 | 65 | 4 | 294 | 373 | 1500 | 1800 | **6052M** | 276 | 384 | 3 | 28.4 |
| | 400 | 65 | 4 | 294 | 373 | 1500 | 1800 | **6052M/YA3** | 276 | 384 | 3 | 26.6 |
| | 480 | 80 | 5 | 430 | 592 | 1100 | 1400 | **6252/C3** | 280 | 460 | 4 | 68.8 |
| | 480 | 80 | 5 | 430 | 592 | 1100 | 1400 | **6252F1** | 280 | 460 | 4 | 67.6 |
| | 480 | 80 | 5 | 430 | 592 | 1100 | 1400 | **6252F3** | 280 | 460 | 4 | 67.6 |
| | 540 | 102 | 6 | 500 | 710 | 1000 | 1300 | **6352F1** | 286 | 514 | 5 | 120 |
| | 540 | 102 | 6 | 500 | 710 | 1000 | 1300 | **6352F3** | 286 | 514 | 5 | 120 |
| **280** | 350 | 33 | 2 | 133 | 192 | 1600 | 1900 | **61856M** | 289 | 341 | 2 | 7.30 |
| | 380 | 46 | 2.1 | 215 | 282 | 1500 | 1800 | **61956M** | 291 | 369 | 2 | 16.4 |
| | 389.5 | 46 | 4 | 215 | 282 | 1500 | 1800 | **61956X1M** | 291 | 379 | 2 | 18.3 |
| | 389.5 | 46 | 4 | 217 | 282 | 1500 | 1800 | **61956X1M/W281** | 291 | 379 | 2 | 18.3 |

d 280~360 mm

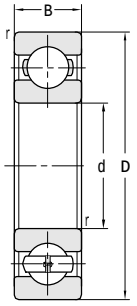


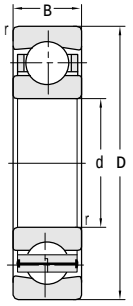



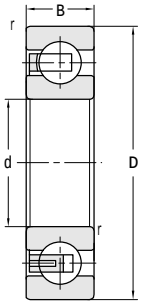



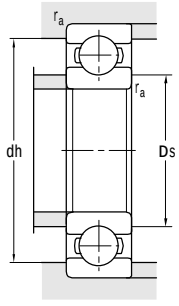




| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | $D_{smin}$ | $d_{hmax}$ | $r_{amax}$ | |
| mm | | | | kN | | r/min | | | mm | | | kg |
| **280** | 390 | 46 | 4 | 215 | 282 | 1500 | 1800 | **61956X1M-1** | 291 | 379 | 2 | 18.4 |
| | 420 | 44 | 3 | 235 | 330 | 1300 | 1600 | **16056** | 292 | 407 | 2.5 | 22.5 |
| | 420 | 65 | 4 | 305 | 405 | 1400 | 1700 | **6056** | 296 | 404 | 3 | 32.2 |
| | 500 | 80 | 5 | 410 | 600 | 1000 | 1300 | **6256** | 300 | 480 | 4 | 72 |
| | 580 | 108 | 6 | 560 | 840 | 1000 | 1200 | **6356** | 305 | 553 | 5 | 141 |
| **300** | 380 | 38 | 2.1 | 165 | 235 | 1400 | 1700 | **61860M** | 309 | 371 | 2 | 10.4 |
| | 419.5 | 56 | 3 | 265 | 370 | 1400 | 1700 | **61960X1** | 313 | 406.5 | 2.5 | 20.6 |
| | 420 | 56 | 3 | 265 | 370 | 1300 | 1600 | **61960** | 313 | 407 | 2.5 | 20.7 |
| | 460 | 50 | 4 | 289 | 400 | 1200 | 1500 | **16060/HA** | 316 | 444 | 3 | 33.1 |
| | 460 | 74 | 4 | 343 | 480 | 1200 | 1500 | **6060** | 316 | 444 | 3 | 48.4 |
| | 460 | 68 | 4 | 343 | 480 | 1200 | 1500 | **6060X2F3** | 316 | 444 | 3 | 41.5 |
| | 540 | 85 | 5 | 450 | 665 | 950 | 1200 | **6260** | 320 | 520 | 4 | 88.0 |
| **320** | 400 | 38 | 2.1 | 164 | 220 | 1300 | 1600 | **61864M** | 331 | 389 | 2 | 11.4 |
| | 400 | 38 | 2.1 | 164 | 220 | 1300 | 1600 | **61864F3** | 331 | 389 | 2 | 11.1 |
| | 412 | 38 | 2.5 | 180 | 292 | 1300 | 1600 | **864** | 332 | 400 | 2.5 | 12.7 |
| | 440 | 37 | 2.1 | 210 | 305 | 1200 | 1400 | **60964** | 331 | 428 | 2 | 15.5 |
| | 440 | 56 | 3 | 278 | 395 | 1300 | 1600 | **61964** | 333 | 427 | 2.5 | 24.9 |
| | 440 | 65 | 3 | 278 | 395 | 1300 | 1600 | **61964X2** | 333 | 427 | 2.5 | 28.4 |
| | 460 | 70 | 3 | 300 | 440 | 1300 | 1600 | **62964X3/YB2** | 333 | 447 | 2.5 | 39.9 |
| | 479.5 | 74 | 4 | 356 | 518 | 1100 | 1400 | **6064X1** | 336 | 464 | 3 | 50.1 |
| | 480 | 50 | 4 | 275 | 400 | 1100 | 1300 | **16064** | 336 | 466 | 3 | 34 |
| | 480 | 74 | 4 | 356 | 518 | 1100 | 1400 | **6064** | 336 | 464 | 3 | 50.3 |
| | 480 | 74 | 4 | 356 | 518 | 1100 | 1400 | **6064/C4YA8** | 336 | 464 | 3 | 49.6 |
| | 560 | 82 | 5 | 435 | 665 | 950 | 1200 | **6076N1F3** | 400 | 540 | 4 | 65.6 |
| | 580 | 92 | 5 | 515 | 780 | 1000 | 1200 | **6264** | 340 | 560 | 4 | 111 |
| **340** | 420 | 38 | 2.1 | 170 | 227 | 1200 | 1500 | **61868** | 352 | 408 | 2 | 11.6 |
| | 460 | 56 | 3 | 282 | 420 | 1100 | 1400 | **61968** | 353 | 447 | 2.5 | 27.0 |
| | 460 | 56 | 3 | 282 | 420 | 1100 | 1400 | **61968MA** | 353 | 447 | 2.5 | 27.6 |
| | 520 | 57 | 4 | 335 | 510 | 950 | 1200 | **16068** | 356 | 505 | 3 | 44.9 |
| | 520 | 82 | 5 | 403 | 620 | 1000 | 1300 | **6068** | 360 | 500 | 4 | 63.4 |
| | 620 | 92 | 6 | 545 | 890 | 900 | 1000 | **6268** | 366 | 599 | 4 | 112 |
| **360** | 440 | 25 | 1.5 | 118 | 210 | 1130 | 1450 | **60872** | 367 | 432 | 1.5 | 6.50 |



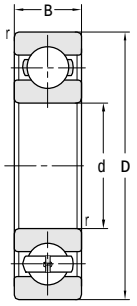



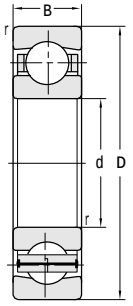



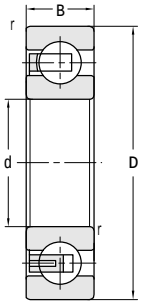



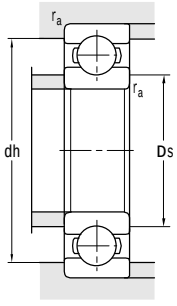

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil |
| mm | | | | kN | | r/min | |
| **360** | 440 | 38 | 2.1 | 173 | 242 | 1100 | 1400 |
| | 480 | 56 | 3 | 282 | 425 | 1100 | 1400 |
| | 480 | 56 | 3 | 282 | 425 | 1100 | 1400 |
| | 480 | 56 | 3 | 282 | 425 | 1100 | 1400 |
| | 480 | 56 | 3 | 282 | 425 | 1100 | 1400 |
| | 509.5 | 70 | 3 | 335 | 510 | 1000 | 1300 |
| | 530 | 82 | 5 | 355 | 620 | 1000 | 1300 |
| | 540 | 82 | 5 | 443 | 705 | 1000 | 1300 |
| | 540 | 57 | 4 | 345 | 545 | 1000 | 1200 |
| | 540 | 82 | 5 | 443 | 705 | 1000 | 1300 |
| | 540 | 82 | 5 | 443 | 705 | 1000 | 1300 |
| **380** | 480 | 46 | 2.1 | 232 | 375 | 1000 | 1300 |
| | 480 | 46 | 2.1 | 232 | 375 | 1000 | 1300 |
| | 520 | 44 | 3 | 241 | 365 | 1000 | 1300 |
| | 520 | 44 | 3 | 241 | 365 | 1000 | 1300 |
| | 520 | 65 | 4 | 335 | 550 | 1000 | 1300 |
| | 520 | 65 | 4 | 335 | 550 | 1000 | 1300 |
| | 560 | 57 | 4 | 368 | 615 | 940 | 1100 |
| | 560 | 82 | 5 | 443 | 720 | 950 | 1200 |
| | 560 | 82 | 5 | 443 | 720 | 950 | 1200 |
| | 560 | 82 | 5 | 443 | 720 | 950 | 1200 |
| | 560 | 82 | 5 | 443 | 720 | 950 | 1200 |
| | 560 | 82 | 5 | 443 | 720 | 950 | 1200 |
| **400** | 500 | 31 | 2 | 159 | 277 | 1000 | 1200 |
| | 500 | 46 | 2.1 | 242 | 397 | 1000 | 1200 |
| | 500 | 46 | 2.1 | 242 | 397 | 1000 | 1200 |
| | 540 | 44 | 3 | 258 | 435 | 980 | 1250 |
| | 540 | 65 | 4 | 350 | 580 | 950 | 1200 |
| | 540 | 65 | 4 | 350 | 580 | 950 | 1200 |
| | 600 | 90 | 5 | 500 | 830 | 900 | 1100 |
| | 600 | 90 | 5 | 500 | 830 | 900 | 1100 |
| | 600 | 90 | 5 | 500 | 830 | 900 | 1100 |
| | 720 | 130 | 6 | 630 | 1080 | 750 | 900 |

| Designations | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|
| | $D_{smin}$ | $dh_{max}$ | $r_{amax}$ | |
| | mm | | | kg |
| **61872** | 351 | 429 | 2 | 12.2 |
| **61972** | 373 | 467 | 2.5 | 30.9 |
| **FL-61972MA** | 373 | 467 | 2.5 | 28.9 |
| **61972/P64** | 373 | 467 | 2.5 | 30.9 |
| **61972F3** | 373 | 467 | 2.5 | 30.2 |
| **62972X3** | 374 | 495.5 | 2.5 | 48.0 |
| **6072X1/C9** | 382 | 508 | 4 | 59.8 |
| **6072F3** | 380 | 520 | 4 | 64.7 |
| **16072** | 376 | 524 | 3 | 48.4 |
| **6072F1** | 380 | 520 | 4 | 64.7 |
| **6072M** | 380 | 520 | 4 | 65.7 |
| **61876F1** | 391 | 469 | 2 | 19.0 |
| **61876F3** | 391 | 469 | 2 | 19.0 |
| **60976** | 396 | 504 | 3 | 29.2 |
| **60976/YA8** | 396 | 504 | 3 | 29.7 |
| **61976/W281** | 396 | 504 | 3 | 39.8 |
| **61976** | 396 | 504 | 3 | 39.8 |
| **16076** | 394 | 545 | 3 | 50.0 |
| **6076F3** | 398 | 542 | 4 | 65.6 |
| **6076N1** | 398 | 542 | 4 | 69.3 |
| **6076N1F3** | 398 | 542 | 4 | 65.6 |
| **6076** | 398 | 542 | 4 | 69.3 |
| **6076M** | 398 | 542 | 4 | 66.4 |
| **60880** | 410 | 490 | 2 | 15.0 |
| **61880** | 413 | 488 | 2 | 21.0 |
| **61880MA** | 413 | 488 | 2 | 20.2 |
| **60980** | 411 | 525 | 2.5 | 27.5 |
| **61980** | 416 | 524 | 3 | 43.6 |
| **61980F3** | 416 | 524 | 3 | 39.4 |
| **6080F1** | 420 | 580 | 4 | 86.5 |
| **6080F3** | 420 | 580 | 4 | 86.5 |
| **6080M** | 420 | 580 | 4 | 87.9 |
| **61280X2MA/YA3** | 477.45 | 642.55 | 2 | 250 |

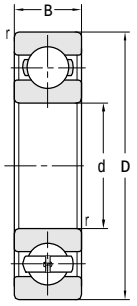


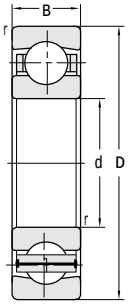



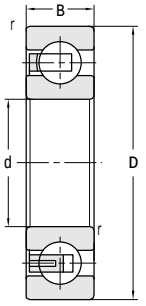



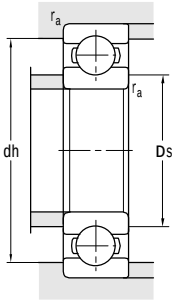




| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | $D_{smin}$ | $d_{hmax}$ | $r_{amax}$ | |
| mm | | | | kN | | r/min | | | mm | | | kg |
| **420** | 520 | 46 | 2.1 | 245 | 420 | 980 | 1250 | **61884** | 431 | 508 | 2 | 22.2 |
| | 520 | 46 | 2.1 | 245 | 420 | 980 | 1250 | **FL-61884MA** | 431 | 508 | 2 | 23.0 |
| | 560 | 65 | 4 | 320 | 520 | 900 | 1100 | **61984F3/C9** | 436 | 544 | 3 | 41.9 |
| | 560 | 65 | 4 | 320 | 520 | 900 | 1100 | **61984F3** | 436 | 544 | 3 | 41.9 |
| | 560 | 65 | 4 | 320 | 520 | 900 | 1100 | **61984MA** | 436 | 544 | 3 | 46.2 |
| | 560 | 65 | 4 | 320 | 520 | 900 | 1100 | **FL-61984MA/C3** | 436 | 544 | 3 | 46.2 |
| | 620 | 90 | 5 | 490 | 860 | 900 | 1110 | **6084** | 438 | 602 | 4 | 90.5 |
| | 620 | 90 | 5 | 490 | 860 | 900 | 1100 | **6084M** | 438 | 602 | 4 | 92.0 |
| **440** | 540 | 31 | 2 | 155 | 285 | 870 | 1000 | **60888** | 450 | 531 | 2 | 16.5 |
| | 540 | 46 | 2.1 | 245 | 445 | 870 | 1000 | **61888** | 453 | 528 | 2 | 22.3 |
| | 600 | 50 | 4 | 305 | 550 | 870 | 1000 | **60988** | 456 | 585 | 3 | 46.1 |
| | 600 | 74 | 4 | 390 | 650 | 900 | 1100 | **61988F3** | 456 | 584 | 3 | 60.5 |
| | 600 | 74 | 4 | 380 | 650 | 900 | 1100 | **61988** | 455 | 585 | 3 | 61.6 |
| | 650 | 94 | 6 | 525 | 880 | 850 | 1000 | **6088** | 466 | 624 | 5 | 108 |
| **460** | 580 | 56 | 3 | 303 | 435 | 900 | 1100 | **61892** | 473 | 567 | 2.5 | 34.3 |
| | 580 | 56 | 3 | 265 | 435 | 900 | 1100 | **61892MA** | 473 | 567 | 2.5 | 34.7 |
| | 620 | 72 | 4 | 410 | 710 | 870 | 1100 | **61992** | 475 | 604 | 3 | 63.0 |
| | 620 | 72 | 4 | 410 | 710 | 870 | 1100 | **FL-61992X2MA** | 475 | 604 | 3 | 62.8 |
| | 620 | 74 | 4 | 405 | 680 | 850 | 1000 | **61992F3** | 476 | 604 | 3 | 63.0 |
| | 620 | 72 | 4 | 410 | 710 | 850 | 1000 | **61992X2MA** | 476 | 604 | 3 | 62.8 |
| | 680 | 100 | 6 | 560 | 1020 | 800 | 950 | **6092F1** | 483 | 657 | 5 | 121 |
| | 680 | 100 | 6 | 560 | 1020 | 800 | 950 | **6092F3** | 483 | 657 | 5 | 121 |
| **480** | 600 | 56 | 3 | 315 | 610 | 870 | 1100 | **61896** | 492 | 587 | 2.5 | 36.0 |
| | 650 | 78 | 5 | 417 | 743 | 800 | 950 | **61996F3** | 498 | 632 | 4 | 74.1 |
| | 700 | 100 | 6 | 605 | 1115 | 740 | 900 | **6096** | 504 | 676 | 5 | 133 |
| **500** | 620 | 37 | 2.1 | 220 | 445 | 800 | 950 | **608/500** | 510 | 609 | 2 | 20 |
| | 620 | 56 | 3 | 325 | 607 | 800 | 950 | **618/500M** | 513 | 607 | 2.5 | 37.3 |
| | 660 | 75 | 5 | 395 | 716 | 750 | 900 | **619/500X3F1** | 520 | 650 | 4 | 68.8 |
| | 660 | 75 | 5 | 395 | 716 | 750 | 900 | **619/500X3F3** | 520 | 650 | 4 | 68.8 |
| | 670 | 78 | 5 | 450 | 860 | 760 | 900 | **619/500** | 519 | 651 | 4 | 79 |
| | 670 | 78 | 5 | 450 | 845 | 760 | 900 | **619/500F3** | 519 | 651 | 4 | 79.7 |
| | 720 | 100 | 6 | 575 | 1020 | 750 | 900 | **60/500** | 526 | 694 | 5 | 135 |



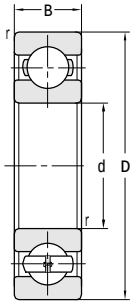



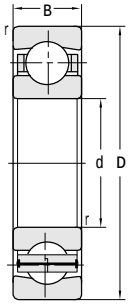



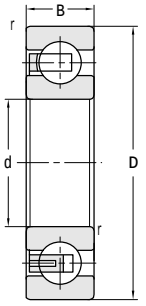



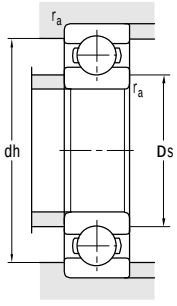

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | $D_{smin}$ | $d_{hmax}$ | $r_{amax}$ | |
| mm | | | | kN | | r/min | | | mm | | | kg |
| **500** | 720 | 100 | 6 | 580 | 1100 | 750 | 900 | **60/500N1MAS** | 523 | 697 | 5 | 136 |
| | 720 | 100 | 6 | 580 | 1100 | 750 | 900 | **60/500-BG** | 523 | 697 | 5 | 135 |
| **530** | 650 | 56 | 3 | 325 | 640 | 750 | 900 | **618/530F1** | 543 | 637 | 2.5 | 41.1 |
| | 650 | 56 | 3 | 325 | 640 | 750 | 900 | **618/530MA** | 543 | 637 | 2.5 | 42.1 |
| | 650 | 56 | 3 | 325 | 640 | 750 | 900 | **618/530F3** | 543 | 637 | 2.5 | 41.1 |
| | 710 | 57 | 4 | 410 | 810 | 700 | 850 | **609/530** | 545 | 696 | 3 | 60.0 |
| | 710 | 82 | 5 | 470 | 885 | 700 | 850 | **619/530F1** | 548 | 692 | 4 | 91.6 |
| | 710 | 82 | 5 | 470 | 885 | 700 | 850 | **619/530F3** | 548 | 692 | 4 | 91.6 |
| | 758 | 100 | 6 | 580 | 1130 | 680 | 830 | **60/530X3** | 543 | 745 | 5 | 149 |
| | 760 | 100 | 6 | 580 | 1130 | 680 | 830 | **60/530X3-1** | 556 | 754 | 5 | 153 |
| | 780 | 112 | 6 | 635 | 1260 | 670 | 810 | **60/530** | 552 | 757 | 5 | 188 |
| | 780 | 112 | 6 | 680 | 1300 | 670 | 800 | **60/530N1MA** | 556 | 754 | 5 | 185 |
| | 780 | 112 | 6 | 680 | 1300 | 670 | 800 | **60/530N1MA/YAB** | 553 | 757 | 5 | 185 |
| **560** | 680 | 37 | 2.1 | 220 | 460 | 710 | 860 | **608/560** | 572 | 670 | 2 | 30.0 |
| | 680 | 56 | 3 | 331 | 667 | 700 | 850 | **618/560F1** | 573 | 667 | 2.5 | 42.1 |
| | 680 | 56 | 3 | 331 | 667 | 700 | 850 | **618/560F3** | 573 | 667 | 2.5 | 42.1 |
| | 680 | 56 | 3 | 331 | 667 | 700 | 850 | **618/560MA** | 573 | 667 | 2.5 | 42.7 |
| | 680 | 56 | 3 | 331 | 667 | 700 | 850 | **618/560/P5** | 573 | 667 | 2.5 | 42.8 |
| | 750 | 85 | 5 | 475 | 925 | 670 | 800 | **619/560F1** | 578 | 732 | 4 | 110 |
| | 750 | 85 | 5 | 475 | 925 | 670 | 800 | **619/560F3** | 578 | 732 | 4 | 110 |
| | 820 | 115 | 6 | 670 | 1370 | 630 | 750 | **60/560F3** | 586 | 794 | 5 | 205 |
| | 820 | 115 | 6 | 630 | 1500 | 630 | 750 | **60/560N1MAS/C9** | 586 | 794 | 5 | 208 |
| | 820 | 115 | 6 | 670 | 1370 | 630 | 750 | **60/560F1** | 586 | 794 | 5 | 205 |
| **570** | 799 | 115 | 6 | 641 | 1280 | 480 | 600 | **66/570X1M** | 598 | 770 | 5 | 181 |
| **600** | 700 | 100 | 3 | 345 | 710 | 670 | 800 | **D66/600** | 610 | 690 | 2.5 | 60.6 |
| | 730 | 42 | 3 | 260 | 550 | 670 | 800 | **608/600** | 614 | 718 | 2.5 | 41.0 |
| | 730 | 42 | 3 | 261 | 485 | 670 | 800 | **608/600MA** | 614 | 718 | 2.5 | 41.0 |
| | 730 | 60 | 3 | 350 | 735 | 670 | 800 | **618/600** | 613 | 717 | 2.5 | 52.7 |
| | 730 | 60 | 3 | 350 | 735 | 670 | 800 | **618/600/W33X** | 613 | 717 | 2.5 | 52.2 |
| | 869 | 110 | 6 | 680 | 1450 | 650 | 750 | **60/600X3/C3H** | 623 | 846 | 5 | 219 |
| | 870 | 118 | 6 | 680 | 1450 | 600 | 700 | **60/600** | 623 | 847 | 5 | 233 |
| | 870 | 118 | 6 | 692 | 1450 | 600 | 700 | **60/600/HC** | 623 | 847 | 5 | 233 |

d 600~750 mm



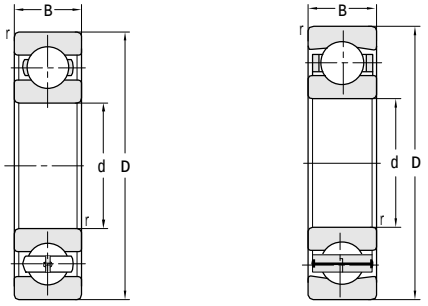




| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil |
| mm | | | | kN | | r/min | |
| **600** | 870 | 118 | 6 | 725 | 1510 | 600 | 700 |
| **600.3** | 819 | 90 | 5 | 560 | 1130 | 650 | 750 |
| **630** | 780 | 48 | 3 | 365 | 710 | 640 | 760 |
| | 780 | 69 | 4 | 424 | 926 | 630 | 750 |
| | 780 | 69 | 4 | 424 | 926 | 630 | 750 |
| | 780 | 69 | 4 | 420 | 760 | 630 | 750 |
| | 850 | 71 | 5 | 475 | 1050 | 600 | 710 |
| | 850 | 100 | 6 | 610 | 1330 | 600 | 710 |
| | 920 | 128 | 7.5 | 800 | 1750 | 550 | 660 |
| **650** | 920 | 118 | 6 | 750 | 1600 | 550 | 660 |
| **670** | 820 | 69 | 4 | 424 | 960 | 560 | 670 |
| | 820 | 69 | 4 | 424 | 960 | 560 | 670 |
| | 820 | 69 | 4 | 424 | 960 | 560 | 670 |
| | 920 | 118 | 6 | 750 | 1600 | 530 | 630 |
| | 820 | 69 | 4 | 424 | 960 | 560 | 670 |
| | 820 | 69 | 4 | 424 | 960 | 560 | 670 |
| | 900 | 73 | 5 | 540 | 1210 | 580 | 700 |
| | 900 | 103 | 6 | 670 | 1450 | 530 | 630 |
| | 980 | 136 | 7.5 | 885 | 1900 | 500 | 600 |
| | 980 | 136 | 7.5 | 885 | 1900 | 500 | 600 |
| | 980 | 136 | 7.5 | 885 | 1900 | 500 | 600 |
| **710** | 870 | 74 | 4 | 456 | 1056 | 530 | 630 |
| | 870 | 74 | 4 | 456 | 1056 | 530 | 630 |
| | 870 | 74 | 4 | 456 | 1056 | 530 | 630 |
| | 950 | 78 | 5 | 545 | 1280 | 500 | 610 |
| | 950 | 106 | 6 | 645 | 1510 | 500 | 610 |
| | 1030 | 140 | 7.5 | 935 | 2180 | 490 | 560 |
| **750** | 920 | 78 | 5 | 515 | 1225 | 480 | 610 |
| | 1000 | 112 | 6 | 745 | 1790 | 490 | 570 |
| | 1090 | 150 | 7.5 | 975 | 2370 | 450 | 530 |

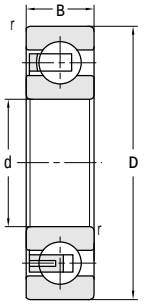
| Designations | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|
| | $D_{smin}$ | $dh_{max}$ | $r_{amax}$ | |
| | mm | | | kg |
| **60/600/HCE-1** | 623 | 847 | 5 | 236 |
| **66/600.3/HCYA13** | 623 | 796 | 5 | 147 |
| **608/630** | 643 | 767 | 2.5 | 41.0 |
| **618/630** | 645 | 765 | 3 | 76.5 |
| **618/630MA** | 645 | 765 | 3 | 77.8 |
| **618/630L/P5** | 645 | 765 | 3 | 65.7 |
| **609/630** | 649 | 832 | 4 | 112 |
| **619/630** | 654 | 829 | 5 | 163 |
| **60/630** | 657 | 891 | 6 | 280 |
| **66/650N1** | 678 | 891 | 5 | 254 |
| **618/670** | 685 | 805 | 3 | 82.2 |
| **618/670F1** | 685 | 805 | 3 | 80.8 |
| **618/670F3** | 685 | 805 | 3 | 80.8 |
| **66/650N1** | 673 | 897 | 5 | 254 |
| **618/670Q1** | 685 | 805 | 3 | 82.8 |
| **618/670/C4** | 685 | 805 | 3 | 82.2 |
| **609/670** | 689 | 882 | 4 | 143 |
| **619/670MA** | 693 | 877 | 5 | 194 |
| **60/670F3** | 698 | 952 | 6 | 361 |
| **60/670N1** | 698 | 952 | 6 | 366 |
| **60/670N1/YB2** | 698 | 952 | 6 | 366 |
| **618/710F3** | 725 | 855 | 3 | 96.1 |
| **618/710** | 725 | 855 | 3 | 98.1 |
| **618/710MA** | 725 | 855 | 3 | 98.8 |
| **609/710** | 729 | 932 | 4 | 148 |
| **619/710** | 732 | 928 | 5 | 218 |
| **60/710** | 738 | 1002 | 6 | 375 |
| **618/750** | 766 | 901 | 4 | 114 |
| **619/750** | 774 | 977 | 5 | 260 |
| **60/750** | 778 | 1061 | 6 | 490 |

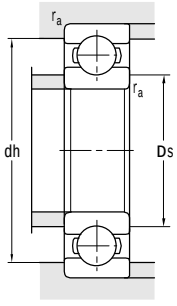
d 800~1000 mm







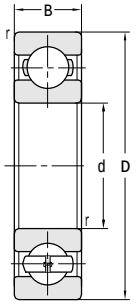


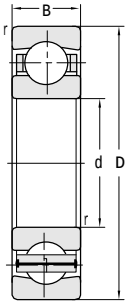



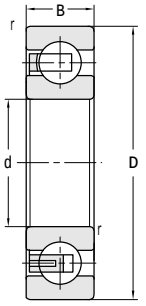

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil |
| mm | | | | kN | | r/min | |
| **800** | 980 | 57 | 4 | 390 | 990 | 430 | 510 |
| | 980 | 82 | 5 | 545 | 1340 | 430 | 510 |
| | 980 | 82 | 5 | 545 | 1360 | 430 | 510 |
| | 980 | 82 | 5 | 545 | 1360 | 430 | 510 |
| | 1060 | 115 | 6 | 815 | 2100 | 430 | 500 |
| | 1060 | 115 | 6 | 800 | 1960 | 430 | 500 |
| | 1150 | 115 | 7.5 | 950 | 2080 | 500 | 550 |
| | 1150 | 155 | 7.5 | 985 | 2530 | 400 | 480 |
| | 1150 | 115 | 7.5 | 845 | 2080 | 500 | 550 |
| **850** | 1030 | 57 | 4 | 385 | 1000 | 450 | 500 |
| | 1030 | 82 | 5 | 555 | 1300 | 450 | 530 |
| | 1030 | 82 | 5 | 545 | 1400 | 430 | 500 |
| | 1030 | 82 | 5 | 545 | 1400 | 430 | 500 |
| | 1030 | 82 | 5 | 555 | 1300 | 430 | 500 |
| | 1030 | 82 | 5 | 555 | 1300 | 450 | 530 |
| | 1120 | 118 | 6 | 815 | 2150 | 400 | 480 |
| | 1220 | 165 | 7.5 | 1090 | 2980 | 370 | 430 |
| **900** | 1090 | 85 | 5 | 600 | 1540 | 380 | 450 |
| | 1180 | 122 | 6 | 830 | 2270 | 360 | 440 |
| | 1280 | 170 | 7.5 | 1080 | 3120 | 330 | 410 |
| **950** | 1150 | 90 | 5 | 660 | 1620 | 360 | 430 |
| | 1150 | 90 | 5 | 660 | 1620 | 360 | 430 |
| | 1150 | 90 | 5 | 660 | 1620 | 360 | 430 |
| | 1200 | 90 | 5 | 660 | 1620 | 360 | 430 |
| | 1250 | 132 | 7.5 | 985 | 2850 | 330 | 410 |
| | 1250 | 132 | 7.5 | 930 | 2430 | 340 | 400 |
| | 1360 | 180 | 7.5 | 1145 | 3315 | 310 | 380 |
| **960** | 1160 | 90 | 5 | 630 | 1550 | 360 | 430 |
| **1000** | 1220 | 71 | 5 | 540 | 1550 | 350 | 400 |
| | 1220 | 100 | 6 | 680 | 1720 | 340 | 400 |
| | 1220 | 100 | 6 | 635 | 1720 | 340 | 400 |

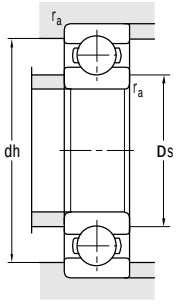
| Designations | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|
| | $D_{smin}$ | $dh_{max}$ | $r_{amax}$ | |
| | mm | | | kg |
| **608/800** | 815 | 966 | 3 | 100 |
| **618/800** | 820 | 960 | 4 | 132 |
| **618/800MA** | 820 | 960 | 4 | 133 |
| **618/800MA/P5** | 820 | 960 | 4 | 133 |
| **619/800** | 823 | 1037 | 5 | 280 |
| **619/800F3** | 823 | 1037 | 5 | 289 |
| **160/800X2F1** | 820 | 1130 | 6 | 427 |
| **60/800** | 828 | 1120 | 6 | 540 |
| **160/800X2F3** | 820 | 1130 | 6 | 427 |
| **608/850** | 865 | 1015 | 3 | 75 |
| **618/850** | 870 | 1010 | 4 | 151 |
| **618/850MA** | 868 | 1012 | 4 | 141 |
| **618/850MA/C9** | 868 | 1012 | 4 | 141 |
| **618/850F1** | 868 | 1012 | 4 | 147 |
| **618/850F3** | 870 | 1010 | 4 | 144 |
| **619/850** | 873 | 1098 | 5 | 315 |
| **60/850** | 879 | 1190 | 6 | 640 |
| **618/900F3** | 918 | 1072 | 4 | 155 |
| **619/900** | 923 | 1156 | 5 | 355 |
| **60/900** | 928 | 1252 | 6 | 725 |
| **618/950F1/C9** | 968 | 1132 | 4 | 188 |
| **618/950F3/C9** | 968 | 1132 | 4 | 188 |
| **618/950F1/C9** | 968 | 1132 | 4 | 188 |
| **618/950X1F3** | 968 | 1182 | 4 | 252 |
| **619/950** | 979 | 1222 | 6 | 395 |
| **619/950/C9** | 978 | 1222 | 6 | 460 |
| **60/950** | 979 | 1330 | 6 | 850 |
| **66/960MA** | 978 | 1142 | 4 | 199 |
| **608/1000** | 1018 | 1201 | 4 | 175 |
| **618/1000F3** | 1023 | 1197 | 5 | 230 |
| **618/1000F1** | 1026 | 1194 | 5 | 230 |

d 1000~1500 mm



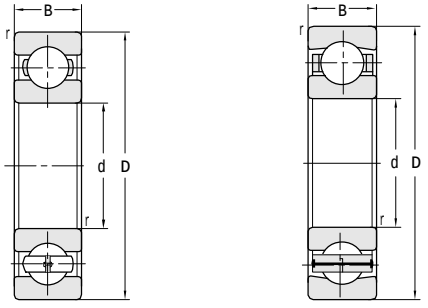



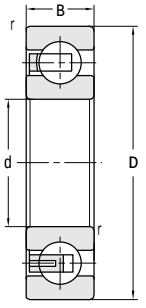

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | $D_{smin}$ | $d_{hmax}$ | $r_{amax}$ | |
| mm | | | | kN | | r/min | | | mm | | | kg |
| **1000** | 1220 | 100 | 6 | 680 | 1720 | 340 | 400 | **618/1000MA** | 1023 | 1197 | 5 | 234 |
| | 1320 | 103 | 6 | 800 | 2340 | 330 | 380 | **609/1000** | 1023 | 1297 | 5 | 405 |
| | 1320 | 140 | 7.5 | 950 | 2530 | 330 | 380 | **619/1000** | 1028 | 1292 | 6 | 548 |
| | 1420 | 185 | 7.5 | 1320 | 3900 | 280 | 340 | **60/1000** | 1028 | 1392 | 6 | 925 |
| **1060** | 1280 | 100 | 6 | 710 | 2140 | 310 | 350 | **618/1060** | 1084 | 1259 | 5 | 265 |
| | 1400 | 150 | 7.5 | 985 | 3030 | 290 | 330 | **619/1060** | 1089 | 1371 | 6 | 615 |
| | 1500 | 195 | 9.5 | 1310 | 3750 | 260 | 320 | **60/1060** | 1094 | 1466 | 8 | 1090 |
| | 1500 | 195 | 9.5 | 1310 | 3750 | 260 | 320 | **60/1060/HBYB2** | 1094 | 1466 | 8 | 1141 |
| **1120** | 1360 | 106 | 6 | 725 | 2180 | 290 | 350 | **618/1120** | 1143 | 1336 | 5 | 310 |
| | 1360 | 106 | 6 | 910 | 2500 | 290 | 350 | **618/1120M** | 1143 | 1336 | 5 | 313 |
| | 1460 | 150 | 7.5 | 1010 | 3070 | 270 | 330 | **619/1120** | 1148 | 1432 | 6 | 640 |
| | 1580 | 200 | 9.5 | 1430 | 4480 | 250 | 300 | **60/1120** | 1155 | 1546 | 8 | 1245 |
| **1180** | 1420 | 106 | 6 | 920 | 2580 | 320 | 360 | **618/1180M** | 1203 | 1397 | 5 | 317 |
| | 1420 | 106 | 6 | 920 | 2580 | 320 | 360 | **618/1180F1** | 1206 | 1394 | 5 | 310 |
| | 1420 | 106 | 6 | 920 | 2580 | 320 | 360 | **618/1180F3** | 1203 | 1397 | 5 | 310 |
| | 1540 | 160 | 7.5 | 1115 | 3630 | 210 | 270 | **619/1180** | 1209 | 1513 | 6 | 765 |
| **1240** | 1480 | 112 | 6 | 930 | 2660 | 300 | 340 | **618/1240X1** | 1266 | 1454 | 5 | 356 |
| **1250** | 1500 | 112 | 6 | 830 | 2740 | 210 | 270 | **618/1250** | 1274 | 1479 | 5 | 390 |
| | 1750 | 218 | 9.5 | 1590 | 5000 | 200 | 250 | **60/1250M/P5** | 1290 | 1710 | 8 | 1708 |
| **1280** | 1560 | 150 | 6 | 939 | 2750 | 220 | 280 | **66/1280F1/C9** | 1306 | 1534 | 5 | 606 |
| **1320** | 1600 | 150 | 6 | 956 | 2830 | 200 | 260 | **618/1320X2F1/C9** | 1343 | 1577 | 5 | 520 |
| | 1600 | 122 | 6 | 955 | 2830 | 200 | 260 | **618/1320F3** | 1343 | 1377 | 5 | 512 |
| | 1720 | 128 | 7.5 | 1180 | 4060 | 190 | 230 | **609/1320** | 1348 | 1691 | 6 | 835 |
| | 1720 | 175 | 7.5 | 1140 | 3500 | 360 | 450 | **619/1320F3/YB2** | 1348 | 1692 | 6 | 1112 |
| **1400** | 1700 | 132 | 7.5 | 1070 | 3980 | 190 | 230 | **618/1400** | 1427 | 1672 | 6 | 620 |
| | 1820 | 185 | 9.5 | 1550 | 5520 | 180 | 230 | **619/1400** | 1434 | 1777 | 8 | 1260 |
| **1500** | 1820 | 140 | 7.5 | 1190 | 4310 | 170 | 210 | **618/1500** | 1528 | 1791 | 6 | 695 |

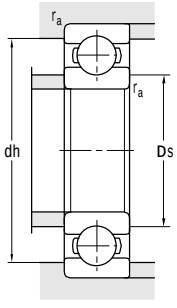
d 1500~1700 mm









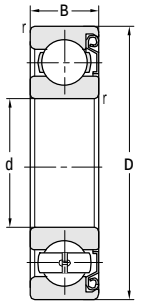



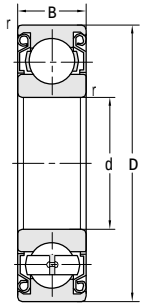

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil |
| mm | | | | kN | | r/min | |
| **1500** | 1950 | 195 | 9.5 | 1680 | 6220 | 160 | 190 |
| **1600** | 1950 | 155 | 7.5 | 1240 | 4750 | 150 | 180 |
| | 2060 | 200 | 9.5 | 1820 | 6300 | 260 | 300 |
| | 2060 | 200 | 9.5 | 1820 | 6300 | 260 | 300 |
| **1700** | 2060 | 160 | 7.5 | 1240 | 4950 | 130 | 160 |
| | 2180 | 212 | 9.5 | 1950 | 7680 | 120 | 150 |

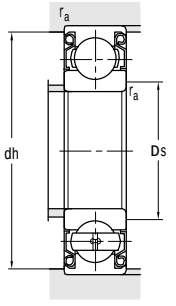
| Designations | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|
| | $D_{smin}$ | $dh_{max}$ | $r_{amax}$ | |
| | mm | | | kg |
| **619/1500** | 1535 | 1915 | 8 | 1515 |
| **618/1600** | 1627 | 1923 | 6 | 975 |
| **619/1600** | 1634 | 2026 | 8 | 1711 |
| **619/1600F3** | 1634 | 2026 | 8 | 1681 |
| **618/1700** | 1729 | 2032 | 6 | 1110 |
| **619/1700** | 1735 | 2145 | 8 | 1930 |

# Deep Groove Ball Bearing(With Shields)

d 10~30 mm



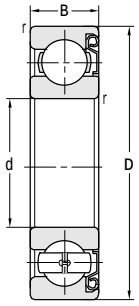



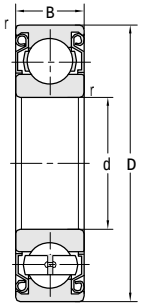



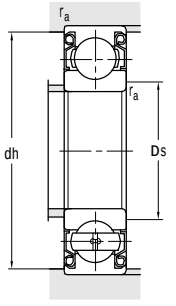

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil |
| mm | | | | kN | | r/min | |
| **10** | 30 | 9 | 0.6 | 6.50 | 3.00 | 24000 | 30000 |
| **12** | 32 | 10 | 0.6 | 6.50 | 3.00 | 22000 | 28000 |
| | 32 | 10 | 0.6 | 6.50 | 3.00 | 22000 | 28000 |
| **15** | 35 | 11 | 0.6 | 8.00 | 4.00 | 19000 | 24000 |
| | 35 | 11 | 0.6 | 8.00 | 4.00 | 19000 | 24000 |
| **17** | 40 | 12 | 0.6 | 9.75 | 4.8 | 17000 | 20000 |
| | 40 | 12 | 0.6 | 9.75 | 4.8 | 17000 | 20000 |
| **20** | 42 | 12 | 0.6 | 9.55 | 5.00 | 17000 | 19000 |
| | 42 | 12 | 0.6 | 9.40 | 5.00 | 17000 | 19000 |
| | 47 | 14 | 1 | 13.0 | 6.70 | 15000 | 18000 |
| | 47 | 14 | 1 | 13.0 | 6.70 | 15000 | 18000 |
| | 52 | 15 | 1 | 13.8 | 6.90 | 13000 | 16000 |
| | 62 | 16 | 1 | 18.2 | 10.0 | 10000 | 13000 |
| | 62 | 16 | 1 | 18.2 | 10.0 | 10000 | 13000 |
| **25** | 47 | 12 | 0.6 | 11.4 | 6.28 | 15000 | 18000 |
| | 47 | 12 | 0.6 | 10.1 | 5.85 | 15000 | 15000 |
| | 52 | 15 | 1 | 14.3 | 8.00 | 12000 | 18000 |
| | 52 | 15 | 1 | 14.3 | 8.00 | 12000 | 15000 |
| | 62 | 17 | 1.1 | 22.4 | 11.5 | 11000 | 14000 |
| **28** | 58 | 16 | 1.1 | 12.0 | 9.00 | 11000 | 13800 |
| | 68 | 18 | 1.1 | 19.0 | 13.0 | 9500 | 12000 |
| **30** | 55 | 13 | 1 | 13.2 | 7.96 | 12000 | 15000 |
| | 55 | 13 | 1 | 13.2 | 7.96 | 12000 | 15000 |
| | 62 | 16 | 1 | 19.5 | 11.3 | 10000 | 13000 |
| | 62 | 16 | 1 | 19.5 | 11.3 | 10000 | 13000 |
| | 62 | 16 | 1 | 19.5 | 11.3 | 10000 | 13000 |
| | 72 | 19 | 1.1 | 28.4 | 15.4 | 9000 | 11000 |
| | 72 | 19 | 1.1 | 28.4 | 15.4 | 9000 | 11000 |

| Designations | Abutment and fillet dimensions | | | | Weight |
|---|---|---|---|---|---|
| | $D_{smin}$ | $D_{smax}$ | $dh_{max}$ | $r_{amax}$ | |
| | mm | | | | kg |
| **6200-2Z** | 13.5 | 14.5 | 26 | 0.6 | 0.0270 |
| **6201-Z** | 16 | 16.5 | 28 | 0.6 | 0.0369 |
| **6201-2Z** | 16 | 16.5 | 28 | 0.6 | 0.0373 |
| **6202-Z** | 19 | | 31 | 0.6 | 0.0432 |
| **6202-2Z** | 19 | | 31 | 0.6 | 0.0450 |
| **6203-2Z** | 21 | | 36 | 0.6 | 0.0665 |
| **6203-Z** | 21 | | 36 | 0.6 | 0.0665 |
| **6004-Z-DW** | 24.5 | | 37.5 | 0.6 | 0.071 |
| **6004-2Z** | 23.2 | | 38.8 | 0.6 | 0.0704 |
| **6204-2Z** | 25 | | 42 | 1 | 0.111 |
| **6204-Z** | 25 | | 42 | 1 | 0.109 |
| **6304-2Z** | 27 | | 45 | 1 | 0.152 |
| **6304X3-2Z** | 35.6 | | 56.4 | 1 | 0.255 |
| **6304X3/C3** | 35.6 | | 56.4 | 1 | 0.252 |
| **6005-Z** | 28.2 | | 43.8 | 0.6 | 0.0769 |
| **6005-2Z** | 28.2 | | 43.8 | 0.6 | 0.0783 |
| **6205-2Z** | 30 | | 47 | 1 | 0.135 |
| **6205-Z** | 30 | | 47 | 1 | 0.136 |
| **6305-2Z** | 32 | | 55 | 1 | 0.218 |
| **62/28-ZN** | 35 | | 51 | 1 | 0.179 |
| **63/28-ZN** | 35 | | 61 | 1 | 0.292 |
| **6006-2Z** | 35 | | 50 | 1 | 0.118 |
| **6006-Z** | 34.6 | | 50.4 | 1 | 0.119 |
| **6206-2Z** | 35 | | 57 | 1 | 0.207 |
| **6206-Z** | 35 | | 57 | 1 | 0.208 |
| **6206-ZS** | 35 | | 57 | 1 | 0.205 |
| **6306-2Z** | 36.5 | | 65.5 | 1 | 0.357 |
| **6306-Z** | 36.5 | | 65.5 | 1 | 0.356 |

d 35~50 mm

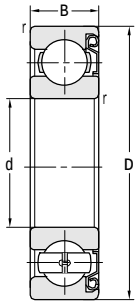


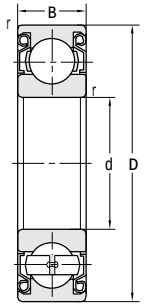



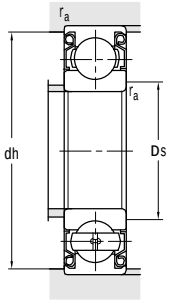




| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | Abutment and fillet dimensions | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | $D_{smin}$ | $D_{smax}$ | $dh_{max}$ | $r_{amax}$ | |
| mm | | | | kN | | r/min | | | mm | | | | kg |
| **35** | 62 | 14 | 1 | 16.0 | 10.3 | 10000 | 13000 | **6007-2Z** | 39.6 | | 57.4 | 1 | 0.154 |
| | 62 | 14 | 1 | 16.0 | 10.3 | 10000 | 13000 | **6007-Z/C3** | 40 | | 57 | 1 | 0.154 |
| | 72 | 17 | 1.1 | 26.0 | 14.7 | 9000 | 11000 | **6207-2Z** | 41.5 | | 65.5 | 1 | 0.397 |
| | 72 | 17 | 1.1 | 26.0 | 14.7 | 9000 | 11000 | **6207-Z** | 41.5 | | 65.5 | 1 | 0.390 |
| | 80 | 21 | 1.5 | 33.4 | 19.2 | 8500 | 10000 | **6307-2Z** | 43 | | 72 | 1.5 | 0.476 |
| | 80 | 21 | 1.5 | 33.4 | 19.2 | 8500 | 10000 | **6307-Z** | 43 | | 72 | 1.5 | 0.466 |
| | 100 | 25 | 1.5 | 51.5 | 29.0 | 7100 | 8500 | **6407-Z** | 46 | | 89 | 1.5 | 0.972 |
| | 100 | 25 | 1.5 | 51.5 | 29.0 | 7100 | 8500 | **6407-2Z** | 46 | | 89 | 1.5 | 0.976 |
| **40** | 68 | 15 | 1 | 16.8 | 11.6 | 9500 | 12000 | **6008-2Z** | 45 | | 63 | 1 | 0.191 |
| | 68 | 15 | 1 | 16.8 | 11.6 | 9500 | 12000 | **6008-RZ** | 45 | | 63 | 1 | 0.196 |
| | 80 | 18 | 1.1 | 31.2 | 18.2 | 8500 | 10000 | **6208-2Z** | 46.5 | 50.5 | 73.5 | 1 | 0.374 |
| | 80 | 18 | 1.1 | 31.2 | 18.2 | 8500 | 10000 | **6208-Z** | 46.5 | | 73.5 | 1 | 0.367 |
| | 80 | 18 | 1.1 | 31.2 | 18.2 | 5600 | 10000 | **6208-2RZ** | 46.5 | 50.5 | 73.5 | 1 | 0.408 |
| | 90 | 23 | 1.5 | 41.0 | 24.0 | 7500 | 9000 | **6308-2Z** | 48 | 50.5 | 82 | 1.5 | 0.651 |
| | 90 | 23 | 1.5 | 41.0 | 24.0 | 7500 | 9000 | **6308-2Z/YA7** | 48 | 52 | 82 | 1.5 | 0.641 |
| | 90 | 23 | 1.5 | 41.0 | 24.0 | 7500 | 9000 | **6308-Z** | 48 | | 82 | 1.5 | 0.644 |
| **45** | 75 | 16 | 1 | 21.2 | 14.0 | 9000 | 11000 | **6009-2Z** | 50.8 | | 69.2 | 1 | 0.245 |
| | 75 | 16 | 1 | 21.2 | 14.0 | 9000 | 11000 | **6009-2Z/C3** | 50.8 | | 69.2 | 1 | 0.245 |
| | 85 | 19 | 1.1 | 33.7 | 20.7 | 7500 | 9000 | **6209-2Z** | 51.5 | | 78.5 | 1 | 0.439 |
| | 85 | 19 | 1.1 | 33.7 | 20.7 | 7500 | 9000 | **6209-Z** | 51.5 | 54 | 78.5 | 1 | 0.434 |
| | 85 | 19 | 1.1 | 33.7 | 20.7 | 7500 | 9000 | **6209-2Z/YA7** | 51.5 | | 78.5 | 1 | 0.433 |
| | 100 | 25 | 1.5 | 48.5 | 29.5 | 6700 | 8000 | **6309-2Z-NY** | 54 | | 91 | 1.5 | 0.851 |
| | 100 | 25 | 1.5 | 52.5 | 30.0 | 6700 | 8000 | **6309-2Z** | 53 | | 92 | 1.5 | 0.850 |
| | 100 | 25 | 1.5 | 52.5 | 30.0 | 6700 | 8000 | **6309-Z** | 53 | 56.5 | 92 | 1.5 | 0.847 |
| | 100 | 25 | 1.5 | 52.5 | 30.0 | 6700 | 8000 | **6309-2Z/YA7** | 53 | | 92 | 1.5 | 0.831 |
| | 120 | 29 | 2 | 73.0 | 43.0 | 6000 | 7000 | **6409-Z** | 58 | | 107 | 2 | 1.57 |
| **50** | 80 | 16 | 1 | 22.0 | 16.3 | 8500 | 10000 | **6010-2Z** | 54.6 | | 75.4 | 1 | 0.257 |
| | 80 | 16 | 1 | 22.0 | 16.3 | 8500 | 10000 | **6010-Z** | 54.6 | | 75.4 | 1 | 0.257 |
| | 90 | 20 | 1.1 | 35.6 | 22.3 | 7000 | 8500 | **6210-2Z** | 56.5 | | 83.5 | 1 | 0.484 |
| | 90 | 20 | 1.1 | 35.6 | 22.3 | 7000 | 8500 | **6210-Z** | 56.5 | 58 | 83.5 | 1 | 0.479 |
| | 90 | 20 | 1.1 | 35.6 | 22.3 | 7000 | 8500 | **6210-2Z/YA7** | 56.5 | | 83.5 | 1 | 0.483 |
| | 110 | 27 | 2 | 62.0 | 38.0 | 6300 | 7500 | **6310-2Z** | 59 | | 101 | 2 | 1.134 |
| | 110 | 27 | 2 | 62.0 | 38.0 | 6300 | 7500 | **6310-Z** | 59 | 63 | 101 | 2 | 1.12 |

d 50~65 mm

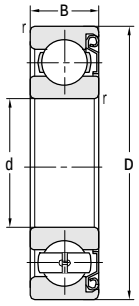


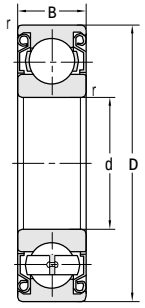



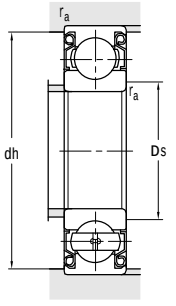




| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | Abutment and fillet dimensions | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | $D_{smin}$ | $D_{smax}$ | $dh_{max}$ | $r_{amax}$ | |
| mm | | | | kN | | r/min | | | mm | | | | kg |
| **50** | 110 | 27 | 2 | 62.0 | 38.0 | 6300 | 7500 | **6310-2Z/YA7** | 59 | | 101 | 2 | 1.11 |
| | 130 | 31 | 2.1 | 88.0 | 52.0 | 5300 | 6300 | **6410-2Z** | 64 | | 116 | 2 | 1.92 |
| **55** | 90 | 18 | 1.1 | 29.0 | 20.7 | 7500 | 9000 | **6011-Z** | 61 | | 84 | 1 | 0.388 |
| | 90 | 18 | 1.1 | 29.0 | 20.7 | 7500 | 9000 | **6011-2Z** | 61 | | 84 | 1 | 0.386 |
| | 100 | 21 | 1.5 | 44.3 | 27.8 | 7500 | 9000 | **6211-Z** | 63 | 65 | 92 | 1.5 | 0.621 |
| | 100 | 21 | 1.5 | 44.3 | 27.8 | 7500 | 9000 | **6211-2Z** | 63 | | 92 | 1.5 | 0.639 |
| | 100 | 21 | 1.5 | 44.3 | 27.8 | 7500 | 9000 | **6211-2Z/YA7** | 63 | | 92 | 1.5 | 0.631 |
| | 100 | 21 | 1.5 | 44.3 | 27.8 | 7500 | 9000 | **6211F2-2Z/C9S2** | 63 | | 92 | 1.5 | 0.631 |
| | 120 | 29 | 2 | 71.5 | 45.0 | 5600 | 6700 | **6311-2Z** | 64 | | 111 | 2 | 1.38 |
| | 120 | 29 | 2 | 71.5 | 45.0 | 5600 | 6700 | **6311-Z** | 64 | 69 | 111 | 2 | 1.38 |
| | 120 | 29 | 2 | 71.5 | 45.0 | 5600 | 6700 | **6311-2Z/YA7** | 64 | | 111 | 2 | 1.36 |
| | 120 | 29 | 2 | 71.5 | 45.0 | 5600 | 6700 | **6311-2RZ** | 64 | | 111 | 2 | 1.37 |
| | 140 | 33 | 2.1 | 95.0 | 60.0 | 5000 | 6000 | **6411-Z** | 69 | | 126 | 2 | 2.32 |
| | 140 | 33 | 2.1 | 95.0 | 60.0 | 5000 | 6000 | **6411-2Z** | 69 | | 126 | 2 | 2.28 |
| **60** | 85 | 13 | 1 | 17.0 | 15.1 | 7500 | 9000 | **61912-2Z** | 64.6 | | 80.4 | 1 | 0.198 |
| | 95 | 18 | 1.1 | 30.0 | 23.0 | 6700 | 8000 | **6012-2Z** | 66 | | 89 | 1 | 0.417 |
| | 110 | 22 | 1.5 | 53.0 | 36.0 | 6000 | 7000 | **6212-Z** | 68 | 71 | 102 | 1.5 | 0.794 |
| | 110 | 22 | 1.5 | 53.0 | 36.0 | 6000 | 7000 | **6212-2Z** | 68 | | 102 | 1.5 | 0.800 |
| | 110 | 22 | 1.5 | 53.0 | 36.0 | 6000 | 7000 | **6212-2Z/YA7** | 68 | | 102 | 1.5 | 0.792 |
| | 130 | 31 | 2.1 | 82.0 | 50.0 | 5000 | 6000 | **6312-2Z** | 71 | 76 | 119 | 2 | 1.71 |
| | 130 | 31 | 2.1 | 82.0 | 50.0 | 5000 | 6000 | **6312-2Z/YA7** | 71 | | 119 | 2 | 1.67 |
| | 130 | 31 | 2.1 | 82.0 | 50.0 | 5000 | 6000 | **6312-Z** | 71 | | 119 | 2 | 1.75 |
| | 150 | 35 | 2.1 | 107 | 68.5 | 4800 | 5600 | **6412-Z** | 74 | | 136 | 2 | 2.77 |
| | 150 | 35 | 2.1 | 107 | 68.5 | 4800 | 5600 | **6412-2Z** | 74 | | 136 | 2 | 2.75 |
| **65** | 100 | 18 | 1.1 | 32.0 | 25.0 | 6300 | 7500 | **6013-2Z** | 71.5 | | 93.5 | 1 | 0.459 |
| | 120 | 23 | 1.5 | 57.0 | 40.0 | 5300 | 6300 | **6213-2Z** | 73 | | 112 | 1.5 | 1.06 |
| | 120 | 23 | 1.5 | 57.0 | 40.0 | 5300 | 6300 | **FL-6213-2Z** | 73 | | 112 | 1.5 | 1.06 |
| | 120 | 23 | 1.5 | 57.0 | 40.0 | 5300 | 6300 | **6213-Z** | 73 | | 112 | 1.5 | 0.690 |
| | 120 | 23 | 1.5 | 57.0 | 40.0 | 5300 | 6300 | **6213-Z/HQ1** | 73 | | 112 | 1.5 | 1.05 |
| | 120 | 23 | 1.5 | 57.0 | 40.0 | 5300 | 6300 | **6213-2Z/YA7** | 73 | 79 | 112 | 1.5 | 0.679 |
| | 120 | 23 | 1.5 | 57.0 | 40.5 | 5300 | 6300 | **6213F2-2Z/C9S2** | 73 | | 112 | 1.5 | 1.06 |
| | 140 | 33 | 2.1 | 92.5 | 59.5 | 5000 | 6000 | **6313-2Z/YA7** | 76 | 81 | 129 | 2 | 2.19 |
| | 140 | 33 | 2.1 | 92.5 | 59.5 | 5000 | 6000 | **6313-2Z** | 76 | | 129 | 2 | 2.12 |

d 65~85 mm



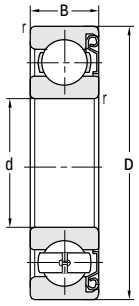



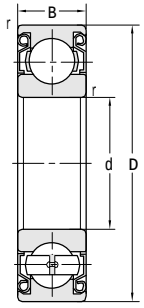



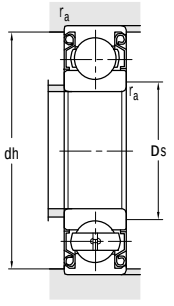

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil |
| mm | | | | kN | | r/min | |
| **65** | 140 | 33 | 2.1 | 92.5 | 59.5 | 5000 | 6000 |
| **70** | 110 | 20 | 1.1 | 38.0 | 30.0 | 6000 | 7000 |
| | 125 | 24 | 1.5 | 61.2 | 43.2 | 5000 | 6000 |
| | 125 | 24 | 1.5 | 61.2 | 43.2 | 5000 | 6000 |
| | 125 | 24 | 1.5 | 61.2 | 43.2 | 5000 | 6000 |
| | 127 | 28.4 | 1.5 | 56.0 | 46.5 | 5000 | 6000 |
| | 150 | 35 | 2.1 | 107 | 68.0 | 4500 | 5300 |
| | 150 | 35 | 2.1 | 107 | 68.0 | 4500 | 5300 |
| | 150 | 35 | 2.1 | 107 | 68.0 | 4500 | 5300 |
| | 150 | 35 | 2.1 | 107 | 68.0 | 4500 | 5300 |
| **75** | 105 | 16 | 1 | 26.5 | 23.5 | 6000 | 7000 |
| | 115 | 20 | 1.1 | 38.0 | 31.0 | 5600 | 6700 |
| | 115 | 20 | 1.1 | 38.0 | 31.0 | 5600 | 6700 |
| | 130 | 25 | 1.5 | 66.0 | 50.0 | 4800 | 5600 |
| | 130 | 25 | 1.5 | 66.0 | 50.0 | 4800 | 5600 |
| | 130 | 25 | 1.5 | 66.0 | 50.0 | 4800 | 5600 |
| | 130 | 25 | 1.5 | 66.0 | 50.0 | 4800 | 5600 |
| | 130 | 25 | 1.5 | 66.0 | 50.0 | 4800 | 5600 |
| | 160 | 37 | 2.1 | 113 | 77 | 4300 | 5000 |
| | 160 | 37 | 2.1 | 113 | 77 | 4300 | 5000 |
| | 160 | 37 | 2.1 | 113 | 77 | 4300 | 5000 |
| **80** | 110 | 16 | 1 | 27.6 | 25.3 | 5600 | 6700 |
| | 125 | 22 | 1.1 | 47.5 | 40.0 | 5300 | 6300 |
| | 125 | 22 | 1.1 | 47.5 | 40.0 | 5300 | 6300 |
| | 140 | 26 | 2 | 71.5 | 54.5 | 4500 | 5300 |
| | 140 | 26 | 2 | 71.5 | 54.5 | 4500 | 5300 |
| | 140 | 26 | 2 | 71.5 | 54.5 | 4500 | 5300 |
| | 140 | 26 | 2 | 71.5 | 54.5 | 4500 | 5300 |
| | 170 | 39 | 2.1 | 125 | 86.5 | 3800 | 4500 |
| | 170 | 39 | 2.1 | 125 | 86.5 | 3800 | 4500 |
| | 170 | 39 | 2.1 | 125 | 86.5 | 3800 | 4500 |
| **85** | 120 | 18 | 1.1 | 31.0 | 29.0 | 5000 | 6000 |

| Designations | Abutment and fillet dimensions | | | | Weight |
|---|---|---|---|---|---|
| | $D_{smin}$ | $D_{smax}$ | $dh_{max}$ | $r_{amax}$ | |
| | mm | | | | kg |
| **6313-Z** | 76 | | 129 | 2 | 2.12 |
| **6014-2Z** | 76 | | 104 | 1 | 0.625 |
| **6214-2Z/YA7** | 78 | 83 | 117 | 1.5 | 1.11 |
| **6214-2Z** | 78 | | 117 | 1.5 | 1.13 |
| **6214-Z** | 78 | | 117 | 1.5 | 1.13 |
| **6214-ZSC** | 78 | | 117 | 1.5 | 1.29 |
| **6314-2Z** | 81 | | 139 | 2 | 2.62 |
| **6314-2Z/P6CMV2** | 81 | | 139 | 2 | 2.51 |
| **6314-2Z/YA7** | 81 | 87 | 139 | 2 | 2.59 |
| **6314-Z** | 81 | | 139 | 2 | 2.59 |
| **61915-2Z** | 79.6 | | 100 | 1 | 0.357 |
| **6015-2Z** | 81.5 | | 108.5 | 1 | 0.624 |
| **6015-Z** | 81.5 | | 108.5 | 1 | 0.658 |
| **6215-2Z** | 83 | | 122 | 1.5 | 1.21 |
| **6215-Z** | 83 | | 122 | 1.5 | 1.21 |
| **6215-Z/HQ1** | 83 | | 122 | 1.5 | 1.22 |
| **6215-2Z/YA7** | 83 | 87 | 122 | 1.5 | 1.19 |
| **6215F2-2Z/C9S2** | 83 | | 122 | 1.5 | 1.16 |
| **6315-2Z** | 86 | | 149 | 2 | 3.11 |
| **6315-Z** | 86 | | 149 | 2 | 3.03 |
| **6315-2Z/YA7** | 86 | 94 | 149 | 2 | 3.12 |
| **61916-2Z** | 84.6 | | 105 | 1 | 0.357 |
| **6016-Z** | 86.5 | | 118.5 | 1 | 0.860 |
| **6016-2Z** | 86.5 | | 118.5 | 1 | 0.875 |
| **6216-2Z/YA7** | 89 | 94 | 131 | 2 | 1.45 |
| **6216-2Z** | 89 | | 131 | 2 | 1.50 |
| **FL-6216-2Z** | 89 | | 131 | 2 | 1.50 |
| **6216-Z** | 89 | | 131 | 2 | 1.47 |
| **6316-Z** | 91 | | 159 | 2 | 3.36 |
| **6316-2Z** | 91 | | 159 | 2 | 3.72 |
| **6316-2Z/YA7** | 91 | 100 | 159 | 2 | 3.69 |
| **61917** | 92 | | 113 | 1 | 0.557 |

d 85~100 mm



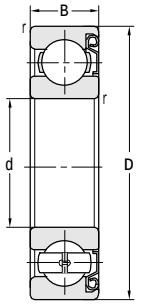



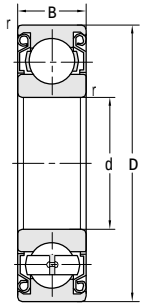



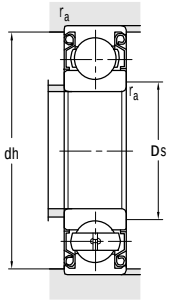

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil |
| mm | | | | kN | | r/min | |
| **85** | 130 | 22 | 1.1 | 47.5 | 40.0 | 5000 | 6000 |
| | 150 | 28 | 2 | 84.0 | 62.0 | 4300 | 5000 |
| | 150 | 28 | 2 | 84.0 | 62.0 | 4300 | 5000 |
| | 150 | 28 | 2 | 84.0 | 62.0 | 4300 | 5000 |
| | 180 | 41 | 3 | 102 | 96.5 | 4300 | 5000 |
| | 180 | 41 | 3 | 102 | 96.5 | 4300 | 5000 |
| | 180 | 41 | 3 | 102 | 96.5 | 4300 | 5000 |
| | 180 | 41 | 3 | 102 | 96.5 | 4300 | 5000 |
| | 180 | 41 | 3 | 102 | 96.5 | 4300 | 5000 |
| **90** | 140 | 24 | 1.5 | 58.5 | 50.1 | 4800 | 5600 |
| | 140 | 24 | 1.5 | 58.5 | 50.0 | 4800 | 5600 |
| | 160 | 30 | 2 | 97.0 | 72.0 | 3800 | 4500 |
| | 160 | 30 | 2 | 97.0 | 72.0 | 3800 | 4500 |
| | 160 | 30 | 2 | 97.0 | 72.0 | 3800 | 4500 |
| | 190 | 43 | 3 | 144 | 108 | 3400 | 4000 |
| | 190 | 43 | 3 | 144 | 108 | 3400 | 4000 |
| | 190 | 43 | 3 | 144 | 108 | 3400 | 4000 |
| | 190 | 43 | 3 | 144 | 108 | 3400 | 4000 |
| **95** | 130 | 18 | 1.1 | 33.8 | 33.0 | 4600 | 5400 |
| | 145 | 24 | 1.5 | 78.5 | 54.0 | 4500 | 5300 |
| | 145 | 24 | 1.5 | 78.5 | 54.0 | 4500 | 5300 |
| | 145 | 24 | 1.5 | 78.5 | 54.0 | 4500 | 5300 |
| | 170 | 32 | 2.1 | 110 | 80.0 | 3600 | 4300 |
| | 170 | 32 | 2.1 | 110 | 80.0 | 3600 | 4300 |
| | 170 | 32 | 2.1 | 110 | 80.0 | 3600 | 4300 |
| | 200 | 45 | 3 | 152 | 118 | 3200 | 3800 |
| | 200 | 50 | 3 | 152 | 118 | 3200 | 3800 |
| | 200 | 45 | 3 | 152 | 118 | 3200 | 3800 |
| | 200 | 45 | 3 | 152 | 118 | 3200 | 3800 |
| | 200 | 45 | 3 | 152 | 118 | 3200 | 3800 |
| **100** | 150 | 24 | 1.5 | 62.4 | 52.9 | 4300 | 5000 |
| | 150 | 24 | 1.5 | 62.4 | 52.9 | 4300 | 5000 |
| | 150 | 24 | 1.5 | 62.4 | 52.9 | 4300 | 5000 |

| Designations | Abutment and fillet dimensions | | | | Weight |
|---|---|---|---|---|---|
| | $D_{smin}$ | $D_{smax}$ | $dh_{max}$ | $r_{amax}$ | |
| | mm | | | | kg |
| **6017-2Z** | 92 | | 123 | 1 | 0.965 |
| **6217-Z** | 94 | | 141 | 2 | 1.85 |
| **6217-2Z** | 94 | 99 | 141 | 2 | 1.85 |
| **6217-2Z/YA7** | 94 | 99 | 141 | 2 | 1.81 |
| **6317-Z** | 98 | | 167 | 2.5 | 4.35 |
| **6317-2Z** | 98 | | 167 | 2.5 | 4.35 |
| **6317-2Z/YA7** | 98 | 107 | 167 | 2.5 | 4.35 |
| **IS-6317-2Z/P6CMV2** | 98 | | 167 | 2.5 | 4.30 |
| **6317-2Z/P6CMV2** | 98 | | 167 | 2.5 | 4.30 |
| **6018-Z** | 98 | | 132 | 1.5 | 1.16 |
| **6018-2Z** | 98 | | 132 | 1.5 | 1.17 |
| **6218-Z** | 99 | | 151 | 2 | 2.21 |
| **6218-2Z** | 99 | | 151 | 2 | 2.21 |
| **6218-2Z/YA7** | 99 | 105 | 151 | 2 | 2.20 |
| **6318-2Z/YA7** | 103 | 114 | 177 | 2.5 | 5.04 |
| **6318M-Z/YA8P54** | 103 | | 177 | 2.5 | 6.39 |
| **6318-2Z** | 103 | | 177 | 2.5 | 5.07 |
| **6318-Z** | 103 | | 177 | 2.5 | 5.04 |
| **61919-Z** | 101.5 | | 123.5 | 1 | 0.579 |
| **6019-Z** | 103 | | 137 | 1.5 | 1.16 |
| **6019-Z/HQ1** | 103 | | 137 | 1.5 | 1.31 |
| **6019-2Z** | 103 | | 137 | 1.5 | 1.17 |
| **6219-Z** | 106 | 111 | 159 | 2 | 2.63 |
| **6219-2Z** | 106 | 111 | 159 | 2 | 2.65 |
| **6219-2Z/YA7** | 106 | 111 | 159 | 2 | 2.62 |
| **6319-2Z** | 108 | 113 | 187 | 2.5 | 5.93 |
| **6319X2K-2Z** | 77 | | 187 | 2.5 | 6.40 |
| **6319-Z** | 109 | | 186 | 2.5 | 5.87 |
| **IS-6319** | 109 | | 186 | 2.5 | 5.48 |
| **6319-2Z/YA7** | 108 | 113 | 187 | 2.5 | 5.89 |
| **6020-2Z** | 108 | | 142 | 1.5 | 1.17 |
| **6020-2Z/C9** | 108 | 110 | 142 | 1.5 | 1.13 |
| **6020-Z** | 108 | | 142 | 1.5 | 1.15 |

d 100~130 mm

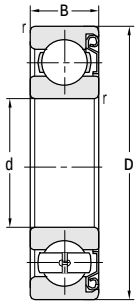


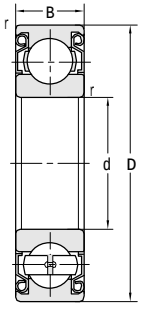



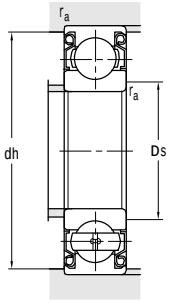




| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | Abutment and fillet dimensions | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | $D_{smin}$ | $D_{smax}$ | $d_{hmax}$ | $r_{amax}$ | |
| mm | | | | kN | | r/min | | | mm | | | | kg |
| **100** | 180 | 34 | 2.1 | 122 | 93.0 | 3400 | 4000 | **6220-Z** | 111 | | 169 | 2 | 3.26 |
| | 180 | 34 | 2.1 | 122 | 93.0 | 3400 | 4000 | **6220-2Z** | 111 | | 169 | 2 | 3.26 |
| | 180 | 34 | 2.1 | 122 | 93.0 | 3400 | 4000 | **6220-2Z/YA7** | 111 | 118 | 169 | 2 | 3.23 |
| | 215 | 47 | 3 | 173 | 141 | 2800 | 3600 | **6320-Z** | 113 | | 202 | 2.5 | 7.12 |
| | 215 | 47 | 3 | 173 | 141 | 2800 | 3600 | **6320-2Z** | 113 | 131 | 202 | 2.5 | 7.14 |
| | 215 | 47 | 3 | 173 | 141 | 2800 | 3600 | **6320-2Z/YA7** | 113 | 131 | 202 | 2.5 | 7.13 |
| **105** | 160 | 26 | 2 | 73.0 | 62.8 | 4000 | 4800 | **6021-2Z/C3Z1** | 116 | | 149 | 2 | 1.66 |
| | 190 | 36 | 2.1 | 135 | 102 | 3200 | 3800 | **6221-2Z** | 117 | | 178 | 2 | 3.94 |
| | 225 | 49 | 3 | 240 | 154 | 2800 | 3400 | **6321-2Z** | 119 | | 211 | 2.5 | 8.12 |
| **110** | 150 | 20 | 1.1 | 40.5 | 41.5 | 3900 | 4600 | **61922** | 116.5 | | 143.5 | 1 | 0.918 |
| | 150 | 20 | 1.1 | 40.5 | 41.5 | 3900 | 4600 | **61922M** | 116.5 | | 143.5 | 1 | 1.01 |
| | 170 | 28 | 2 | 82.0 | 73.5 | 3800 | 4500 | **6022-Z/HQ1** | 119 | | 161 | 2 | 2.40 |
| | 170 | 28 | 2 | 82.0 | 70.6 | 3800 | 4500 | **6022-Z** | 119 | | 161 | 2 | 1.94 |
| | 170 | 28 | 2 | 82.0 | 70.6 | 3800 | 4500 | **6022-2Z** | 119 | | 161 | 2 | 1.96 |
| | 175 | 31 | 2.3 | 158 | 176 | 3800 | 4500 | **6022X3M-Z** | 122 | | 163 | 2.3 | 2.67 |
| | 175 | 31 | 2.3 | 158 | 176 | 3800 | 4500 | **60722** | 122 | | 163 | 2.3 | 2.67 |
| | 200 | 38 | 2.1 | 145 | 114 | 2800 | 3400 | **6222-Z** | 121 | | 189 | 2 | 4.58 |
| | 200 | 38 | 2.1 | 145 | 114 | 2800 | 3400 | **6222-2Z** | 121 | | 189 | 2 | 4.61 |
| | 240 | 50 | 3 | 195 | 176 | 2400 | 3000 | **6322-2Z** | 123 | | 227 | 2.5 | 9.72 |
| | 240 | 50 | 3 | 195 | 176 | 2400 | 3000 | **6322-2Z/YA7** | 123 | 146 | 227 | 2.5 | 9.69 |
| **120** | 150 | 16 | 1 | 24.5 | 28.0 | 3800 | 4500 | **61824-2Z** | 125 | | 145 | 1 | 0.566 |
| | 150 | 16.1 | 1 | 24.5 | 28.0 | 3800 | 4500 | **61824-Z** | 125 | | 145 | 1 | 0.565 |
| | 165 | 22 | 1.1 | 53.0 | 54.0 | 3400 | 4000 | **61924** | 126.5 | | 158.5 | 1 | 1.21 |
| | 165 | 22 | 1.1 | 53.0 | 54.0 | 3400 | 4000 | **61924M** | 126.5 | | 158.5 | 1 | 1.54 |
| | 180 | 28 | 2 | 85.5 | 80.0 | 3400 | 4000 | **6024-2Z** | 129 | 132 | 171 | 2 | 2.15 |
| | 180 | 28 | 2 | 85.5 | 80.0 | 3400 | 4000 | **6024-Z** | 129 | 132 | 171 | 2 | 2.09 |
| | 180 | 28 | 2 | 85.5 | 80.0 | 3400 | 4000 | **6024-Z/C9** | 129 | 132 | 171 | 2 | 2.09 |
| | 215 | 40 | 2.1 | 154 | 130 | 2800 | 3400 | **6224-2Z** | 131 | | 204 | 2 | 5.24 |
| | 215 | 40 | 2.1 | 154 | 130 | 2800 | 3400 | **6224-Z** | 132 | | 203 | 2 | 5.25 |
| | 260 | 55 | 3 | 217 | 196 | 2400 | 3000 | **6324-2Z** | 134 | | 246 | 2.5 | 12.6 |
| **130** | 180 | 24 | 1.5 | 65.0 | 67.0 | 3400 | 4000 | **61926-2Z** | 137 | | 173 | 1.5 | 1.55 |
| | 180 | 24 | 1.5 | 65.0 | 67.0 | 3400 | 4000 | **61926-Z** | 137 | | 173 | 1.5 | 1.57 |

d 130~240 mm

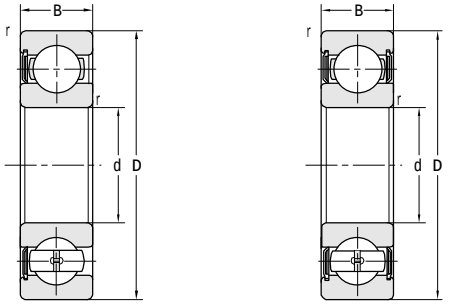


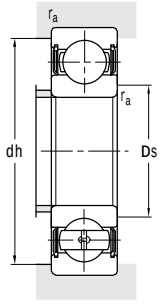




| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | Abutment and fillet dimensions | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | $D_{smin}$ | $D_{smax}$ | $dh_{max}$ | $r_{amax}$ | |
| mm | | | | kN | | r/min | | | mm | | | | kg |
| **130** | 200 | 33 | 2 | 109 | 98 | 3200 | 3800 | **6026-Z** | 139 | | 191 | 2 | 3.29 |
| | 200 | 33 | 2 | 109 | 98 | 3200 | 3800 | **6026-2Z** | 139 | | 191 | 2 | 3.29 |
| | 230 | 40 | 3 | 153 | 134 | 2600 | 3200 | **6226-Z** | 144 | | 216 | 2.5 | 6.35 |
| | 230 | 40 | 3 | 153 | 134 | 2600 | 3200 | **6226-2Z** | 144 | | 216 | 2.5 | 6.36 |
| | 280 | 58 | 4 | 240 | 226 | 2300 | 2800 | **6326-2Z** | 150 | | 265 | 3 | 15.4 |
| **140** | 175 | 18 | 1.1 | 34.0 | 40.0 | 3400 | 4000 | **61828-2Z** | 146 | | 169 | 1 | 0.845 |
| | 190 | 24 | 1.5 | 64.0 | 67.5 | 2800 | 3300 | **61928-2Z** | 147 | | 183 | 1.5 | 1.72 |
| | 210 | 33 | 2 | 106 | 102 | 2700 | 3200 | **6028-Z** | 149 | | 201 | 2 | 3.46 |
| | 250 | 42 | 3 | 166 | 150 | 2400 | 3000 | **6228-2Z** | 154 | | 236 | 2.5 | 7.50 |
| | 300 | 62 | 4 | 329 | 246 | 2000 | 2600 | **6328-2Z** | 157 | | 283 | 3 | 18.9 |
| **150** | 225 | 35 | 2.1 | 123 | 117 | 2600 | 3200 | **6030-2Z** | 161 | | 214 | 2 | 4.16 |
| | 270 | 45 | 3 | 189 | 183 | 2000 | 2600 | **6230-2Z** | 164 | | 256 | 2.5 | 10.0 |
| | 320 | 65 | 4 | 360 | 280 | 1900 | 2400 | **6330-2Z** | 167 | | 303 | 3 | 21.0 |
| **160** | 200 | 20 | 1.1 | 49.5 | 59 | 2400 | 3000 | **61832-2Z** | 165 | | 215 | 1 | 1.25 |
| | 220 | 28 | 2 | 83.5 | 90 | 2300 | 2900 | **61932-Z** | 169 | | 211 | 2 | 2.69 |
| | 220 | 28 | 2 | 83.5 | 90 | 2300 | 2900 | **61932-2Z** | 169 | | 211 | 2 | 2.72 |
| **170** | 260 | 42 | 2.1 | 161 | 166 | 2200 | 2800 | **6034-Z** | 181 | | 249 | 2 | 6.82 |
| **190** | 290 | 46 | 2.1 | 191 | 211 | 2000 | 2600 | **6038-2Z** | 201 | | 279 | 2 | 9.11 |
| **200** | 310 | 51 | 2.1 | 213 | 234 | 1900 | 2400 | **6040-2Z** | 211 | | 299 | 2 | 11.6 |
| | 310 | 34 | 2 | 157 | 179 | 1900 | 2400 | **16040M-Z** | 209 | | 301 | 2 | 10.3 |
| | 360 | 58 | 4 | 288 | 335 | 1700 | 2000 | **6240-Z** | 216 | | 344 | 3 | 22.5 |
| **240** | 300 | 28 | 2 | 103 | 116 | 1800 | 2200 | **61848M-Z/YA8** | 249 | | 291 | 2 | 4.64 |

d 12~28 mm

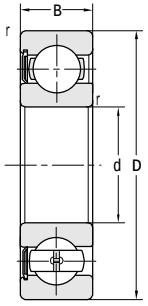


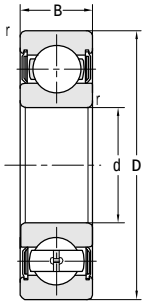



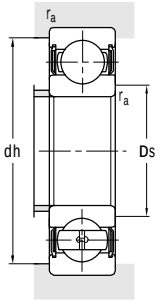

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings |
|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease |
| mm | | | | kN | | r/min |
| **12** | 28 | 8 | 0.3 | 5.18 | 2.26 | 26000 |
| **14** | 47 | 14 | 1 | 13.6 | 6.6 | 11000 |
| **17** | 40 | 12 | 0.6 | 9.55 | 4.8 | 12000 |
| | 40 | 14 | 1 | 9.6 | 4.6 | 12000 |
| **18** | 75 | 16 | 1 | 20 | 14 | 5500 |
| **20** | 47 | 14 | 1 | 13.0 | 6.70 | 10000 |
| | 47 | 14 | 1 | 13.0 | 6.70 | 15000 |
| **22** | 56 | 16 | 1.1 | 18.4 | 9.25 | 13000 |
| **25** | 37 | 7 | 0.3 | 3.60 | 2.64 | 17000 |
| | 47 | 12 | 0.6 | 10.6 | 5.00 | 9500 |
| | 47 | 12 | 0.6 | 11.4 | 6.28 | 13000 |
| | 52 | 15 | 1 | 14.3 | 8.00 | 8500 |
| | 52 | 15 | 1 | 14.3 | 8.00 | 8500 |
| | 52 | 15 | 1 | 14.3 | 8.00 | 8500 |
| | 52 | 15 | 1 | 14.3 | 8.00 | 8500 |
| | 52 | 15 | 1 | 14.3 | 8.00 | 8500 |
| | 52 | 15 | 1 | 14.3 | 8.00 | 8500 |
| | 62 | 17 | 1.1 | 22.4 | 11.5 | 7500 |
| | 62 | 17 | 1.1 | 22.4 | 11.5 | 7500 |
| | 62 | 17 | 0.4 | 22.4 | 11.5 | 7500 |
| | 62 | 17 | 1.1 | 22.4 | 11.5 | 7500 |
| | 68 | 18 | 1.1 | 20.2 | 12.9 | 7500 |
| **25.5** | 58 | 16 | 1 | 20.5 | 11.1 | 11000 |
| | 58 | 16 | 1 | 20.5 | 11.1 | 11000 |
| **28** | 68 | 18 | 1.1 | 32.5 | 13.0 | 6300 |
| | 68 | 18 | 1.1 | 25.0 | 13.9 | 6300 |

| Designations | Abutment and fillet dimensions | | | | Weight |
|---|---|---|---|---|---|
| | $D_{smin}$ | $D_{smax}$ | $dh_{max}$ | $r_{amax}$ | |
| | mm | | | | kg |
| **6001-2RS** | 14 | 14.5 | 26 | 0.3 | 0.023 |
| **6303-2RS** | 19 | | 42 | 1 | 0.114 |
| **6203-2RS** | 21 | 24 | 36 | 0.6 | 0.065 |
| **6203X2-FS/YA6** | 22 | 21 | 35 | 1 | 0.077 |
| **60/18-2RSN/YAD** | 24.5 | 51.3 | 68.5 | 1 | 0.365 |
| **6204-2RS** | 25.6 | | 41.4 | 1 | 0.121 |
| **6204-2RZ** | 25.6 | | 41.4 | 1 | 0.110 |
| **63/22-2RS/C3-SAGW** | 29 | 30.8 | 49 | 1 | 0.183 |
| **61805-2RZ** | 27 | | 35 | 0.3 | 0.022 |
| **6005-2RS** | 29 | 31 | 43 | 0.6 | 0.079 |
| **6005-Z** | 29 | | 43 | 0.6 | 0.077 |
| **6205-2RS** | 30 | | 47 | 1 | 0.130 |
| **6205-2RZ** | 30 | | 47 | 1 | 0.125 |
| **6205-RS2** | 30 | | 47 | 1 | 0.130 |
| **6205-RS** | 30 | | 47 | 1 | 0.130 |
| **6205-2RS2** | 30 | | 47 | 1 | 0.130 |
| **6205-2RS/FR** | 30 | | 47 | 1 | 0.130 |
| **6305-2RS** | 31.5 | | 55.5 | 1 | 0.232 |
| **6305-RS** | 31.5 | | 55.5 | 1 | 0.223 |
| **6305TN1-2RS/YA6** | 32 | | 55 | 1 | 0.211 |
| **6305-2RZ** | 32 | | 55 | 1 | 0.222 |
| **6305X3/C3YA5** | 32 | | 61 | 1 | 0.296 |
| **66/25.5-2RS-BYD** | 31 | | 52.5 | 1 | 0.177 |
| **66/25.5-2RS/P53Z2** | 31 | | 52.5 | 1 | 0.186 |
| **63/28-RS/HA** | 34.5 | | 61.5 | 1 | 0.305 |
| **63/28-2RS1/C3-DZ** | 34.5 | 39.5 | 61.5 | 1 | 0.301 |

d 28~35 mm

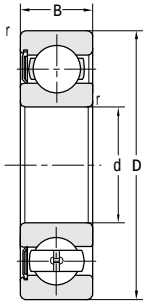


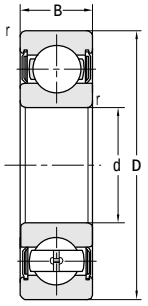



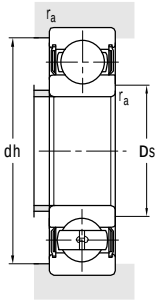




| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | Designations | Abutment and fillet dimensions | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | | $D_{smin}$ | $D_{smax}$ | $d_{hmax}$ | $r_{amax}$ | |
| mm | | | | kN | | r/min | | mm | | | | kg |
| **28** | 68 | 18 | 1.1 | 23.6 | 13.1 | 6300 | **63/28-2RS-DZ** | 34.5 | | 61.5 | 1 | 0.302 |
| | 68 | 18 | 1.1 | 23.5 | 13.0 | 6300 | **63/28-RS** | 34.5 | | 61.5 | 1 | 0.300 |
| **30** | 55 | 13 | 1 | 13.2 | 7.96 | 8000 | **6006-2RS** | 35 | | 50 | 1 | 0.118 |
| | 55 | 13 | 1 | 13.2 | 7.96 | 12000 | **6006-2RZ** | 34.6 | | 50.4 | 1 | 0.118 |
| | 62 | 16 | 1 | 19.5 | 11.3 | 10000 | **6206-RS** | 35 | | 56 | 1 | 0.212 |
| | 62 | 16 | 1 | 19.5 | 11.3 | 10000 | **6206-2RS** | 35 | | 56 | 1 | 0.214 |
| | 62 | 16 | 1 | 19.5 | 11.3 | 10000 | **6206-2RS-DZ** | 35 | | 56 | 1 | 0.214 |
| | 62 | 16 | 1 | 19.5 | 11.3 | 10000 | **6206-RS2** | 35 | | 56 | 1 | 0.212 |
| | 62 | 16 | 1 | 19.5 | 11.3 | 10000 | **6206-2RZ** | 35 | 38 | 56 | 1 | 0.224 |
| | 62 | 16 | 1 | 19.5 | 11.3 | 10000 | **6206-2RS1/C3-DZ** | 35 | 38 | 56 | 1 | 0.200 |
| | 62 | 20 | 1 | 19.0 | 11.0 | 10000 | **62206-2RS** | 35 | 38 | 56 | 1 | 0.255 |
| | 72 | 19 | 1.1 | 28.4 | 15.4 | 6300 | **6306-2RS** | 36.5 | 41.5 | 65.5 | 1 | 0.355 |
| | 72 | 19 | 1.1 | 28.4 | 15.4 | 6300 | **6306-RS** | 36.5 | 41.5 | 65.5 | 1 | 0.353 |
| | 72 | 19 | 1.1 | 28.4 | 15.4 | 6300 | **6306-2RZ** | 36.5 | 41.5 | 65.5 | 1 | 0.355 |
| | 72 | 19 | 1.7 | 28.4 | 15.4 | 6300 | **6306-2RZ/YA6** | 36.5 | 41.5 | 65.5 | 1 | 0.355 |
| | 72 | 19 | 1.7 | 28.4 | 15.4 | 6300 | **6306-2RS/YA6** | 36.5 | 41.5 | 65.5 | 1 | 0.338 |
| | 75 | 20 | 0.5 | 25.3 | 17.5 | 6300 | **6306X3-2RSN/Y** | 36.5 | | 68.5 | 0.5 | 0.475 |
| | 75 | 20 | 0.5 | 32.5 | 18.0 | 9000 | **450706K** | 36.5 | | 68.5 | 0.5 | 0.474 |
| **32** | 80 | 23 | 0.5 | 36.5 | 20.0 | 9000 | **4507/32KU** | 37.5 | | 72.5 | 0.5 | 0.534 |
| | 72 | 25 | 1 | 26.7 | 15.0 | 9400 | **66/32WB1-2RSZ/C9** | 39 | | 69.5 | 1 | 0.408 |
| | 75 | 20 | 1.5 | 22.0 | 16.0 | 8800 | **63/32-2RSN** | 41.5 | | 65.5 | 1.5 | 0.413 |
| | 80 | 23 | 0.5 | 27.9 | 19.6 | 8400 | **63/32X3-2RSN/C9Y** | 37.5 | | 72.5 | 0.5 | 0.534 |
| | 80 | 23 | 0.3 | 36.5 | 19.6 | 8400 | **63/32X3-2RSN/HAY** | 35 | | 77 | 0.3 | 0.534 |
| **35** | 62 | 14 | 1 | 16.0 | 10.3 | 7000 | **6007-2RZ** | 39.6 | | 57.4 | 1 | 0.169 |
| | 62 | 14 | 1 | 16.0 | 10.3 | 7000 | **6007-2RS** | 39.6 | | 57.4 | 1 | 0.175 |
| | 64 | 14 | 1 | 16.0 | 10.3 | 7000 | **6007X1-2RS/C3** | 39.6 | | 57.4 | 1 | 0.196 |
| | 72 | 17 | 1.1 | 26.0 | 14.7 | 6300 | **6207-RS** | 41.5 | | 65.5 | 1 | 0.296 |
| | 72 | 17 | 1.1 | 26.0 | 14.7 | 6300 | **6207-RS2** | 41.5 | | 65.5 | 1 | 0.296 |
| | 72 | 17 | 1.1 | 26.0 | 14.7 | 6300 | **6207-2RS2** | 41.5 | | 65.5 | 1 | 0.299 |
| | 72 | 17 | 1.1 | 26.0 | 14.7 | 6300 | **6207-2RS** | 41.5 | | 65.5 | 1 | 0.299 |
| | 72 | 17 | 1.1 | 26.0 | 14.7 | 6300 | **6207SC-2RS** | 41.5 | | 65.5 | 1 | 0.401 |
| | 80 | 21 | 1.5 | 33.4 | 19.2 | 6000 | **6307-RS** | 43 | | 72 | 1.5 | 0.480 |

d 35~50 mm

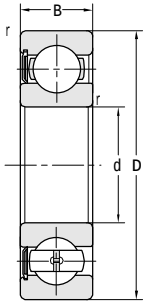


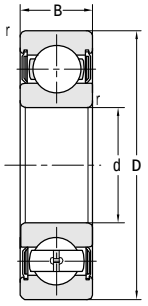



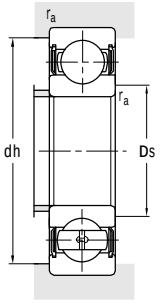




| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | Designations | Abutment and fillet dimensions | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | Cr | Cor | Grease | | Dsmin | Dsmax | dhmax | ramax | |
| mm | | | | kN | | r/min | | mm | | | | kg |
| **35** | 80 | 21 | 1.5 | 33.4 | 19.2 | 6000 | **6307-2RS** | 43 | | 72 | 1.5 | 0.491 |
| **40** | 68 | 15 | 1 | 16.8 | 11.6 | 6300 | **6008-2RS** | 44.6 | | 63.4 | 1 | 0.206 |
| | 80 | 18 | 1.1 | 31.2 | 18.2 | 5600 | **6208-RS** | 46.5 | 50.5 | 73.5 | 1 | 0.385 |
| | 80 | 18 | 1.1 | 31.2 | 18.2 | 5600 | **6208-RS2** | 46.5 | 50.5 | 73.5 | 1 | 0.385 |
| | 80 | 18 | 1.1 | 31.2 | 18.2 | 5600 | **6208-2RS** | 46.5 | 50.5 | 73.5 | 1 | 0.408 |
| | 80 | 21 | 1.1 | 31.2 | 18.2 | 5600 | **62208X2WB-2RS/P53** | 46.5 | 50.5 | 73.5 | 1 | 0.525 |
| | 85 | 22 | 1.5 | 32.5 | 20.4 | 5000 | **6308X3-2RS** | 48 | | 78 | 1.5 | 0.704 |
| | 90 | 23 | 1.5 | 41.0 | 24.0 | 5000 | **6308-RS** | 48 | | 82 | 1.5 | 0.643 |
| | 90 | 23 | 1.5 | 41.0 | 24.0 | 5000 | **6308-2RS** | 48 | | 82 | 1.5 | 0.641 |
| | 90 | 23 | 1.5 | 41.0 | 24.0 | 7500 | **6308-2RZ** | 48 | | 82 | 1.5 | 0.643 |
| | 109.5 | 31 | 1.5 | 41.0 | 24.0 | 5000 | **6308X3-2RS/YA6** | 48 | | 82 | 1.5 | 1.480 |
| | 110 | 27 | 2 | 67.5 | 36.0 | 6700 | **6408-2RS/YA5** | 49 | | 101 | 2 | 1.300 |
| **45** | 75 | 16 | 1 | 20.0 | 14.0 | 5600 | **6009-RS** | 50 | | 70 | 1 | 0.245 |
| | 75 | 16 | 1 | 20.0 | 14.0 | 5600 | **6009-RS2** | 50 | | 70 | 1 | 0.245 |
| | 75 | 16 | 1 | 20.0 | 14.0 | 5600 | **6009-2RS** | 50 | | 70 | 1 | 0.250 |
| | 75 | 16 | 1 | 20.0 | 14.0 | 5600 | **6009-2RS/FR** | 50 | | 70 | 1 | 0.250 |
| | 85 | 19 | 1.1 | 33.7 | 20.7 | 5300 | **6209-RS** | 51.5 | | 78.5 | 1 | 0.441 |
| | 85 | 19 | 1.1 | 33.7 | 20.7 | 7500 | **6209-2RZ** | 51.5 | | 78.5 | 1 | 0.442 |
| | 85 | 19 | 1.1 | 33.7 | 20.7 | 5300 | **6209-RS2** | 51.5 | | 78.5 | 1 | 0.435 |
| | 85 | 19 | 1.1 | 33.7 | 20.7 | 5300 | **6209-2RS** | 51.5 | | 78.5 | 1 | 0.442 |
| | 85 | 19 | 1.1 | 33.7 | 20.7 | 5300 | **6209-2RSK** | 51.5 | | 78.5 | 1 | 0.433 |
| | 85 | 21 | 1.1 | 33.7 | 20.7 | 5300 | **62209X2WB-2RS/P53** | 51.5 | | 78.5 | 1 | 0.544 |
| | 100 | 25 | 1.5 | 52.5 | 30.0 | 4500 | **6309-2RS** | 53 | | 92 | 1.5 | 0.861 |
| | 100 | 25 | 1.5 | 52.5 | 30.0 | 4500 | **6309-RS** | 53 | | 92 | 1.5 | 0.853 |
| | 100 | 25 | 1.5 | 48.5 | 29.5 | 7000 | **6309-2RZ** | 53 | | 92 | 1.5 | 0.861 |
| | 100 | 36 | 1.5 | 51.0 | 31.0 | 4500 | **62309-2RS** | 53 | | 92 | 1.5 | 1.150 |
| | 127 | 31.5 | 1.5 | 48.5 | 29.5 | 4500 | **6309X3-2RS/YA6** | 53 | | 112 | 1.5 | 2.040 |
| **50** | 65 | 7 | 0.3 | 5.85 | 5.69 | 8100 | **FL-61810-2RS/P6** | 53 | | 62 | 0.3 | 0.0552 |
| | 72 | 12 | 0.6 | 13.4 | 11.2 | 9900 | **FL-61910-2RS/P5** | 54 | | 68 | 0.6 | 0.135 |
| | 80 | 16 | 1 | 22.0 | 16.3 | 5000 | **6010-2RZ** | 54.6 | | 75.4 | 1 | 0.255 |
| | 80 | 16 | 1 | 22.0 | 16.3 | 5000 | **6010-2RS** | 54.6 | | 75.4 | 1 | 0.258 |
| | 90 | 20 | 1.1 | 35.6 | 22.3 | 4800 | **6210-2RS** | 56.5 | | 83.5 | 1 | 0.498 |
| | 90 | 33 | 1.1 | 35.6 | 22.3 | 4800 | **62210X2-XRS2** | 57 | | 83 | 1 | 0.727 |

d 50~65 mm

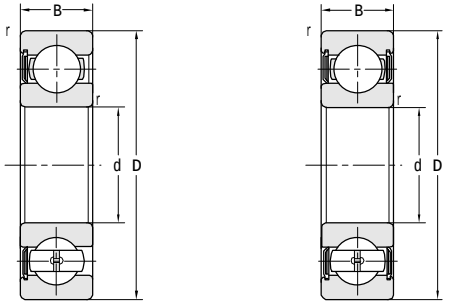


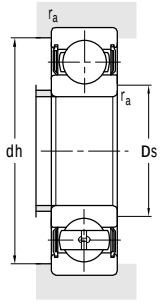




| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | Designations | Abutment and fillet dimensions | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | Cr | Cor | Grease | | Dsmin | Dsmax | dhmax | ramax | |
| mm | | | | kN | | r/min | | mm | | | | kg |
| **50** | 110 | 27 | 2 | 62.0 | 38.0 | 4800 | **6310-2RS** | 59 | 63 | 101 | 2 | 0.926 |
| | 110 | 27 | 2 | 62.0 | 38.0 | 4800 | **6310-2RS/HAC3V2YA7** | 59 | 63 | 101 | 2 | 1.07 |
| | 110 | 27 | 2 | 62.0 | 38.0 | 4800 | **6310TN1-2RZ/C4L** | 59 | 63 | 101 | 2 | 1.08 |
| | 163 | 46 | 2 | 57.5 | 35.0 | 4600 | **6310X3-2RS** | 67.5 | 96 | 2 | 4100 | 5.84 |
| **55** | 90 | 18 | 1.1 | 29.0 | 20.7 | 4500 | **6011-2RS** | 61 | | 84 | 1 | 0.389 |
| | 100 | 21 | 1.5 | 44.3 | 27.8 | 4300 | **6211-2RS** | 63 | | 92 | 1.5 | 0.653 |
| | 120 | 29 | 2 | 71.5 | 45.0 | 3800 | **6311-2RS** | 64 | | 111 | 2 | 1.370 |
| | 120 | 29 | 2 | 71.5 | 45.0 | 3800 | **6311-RS** | 64 | | 111 | 2 | 1.380 |
| | 120 | 49.2 | 2 | 71.5 | 45.0 | 3800 | **63311TN1-2RZ/C3H** | 64 | | 111 | 2 | 2.190 |
| | 120 | 49.2 | 2 | 67.0 | 42.0 | 3800 | **63311-2RZ/C3L** | 66 | | 109 | 2 | 2.270 |
| | 140 | 33 | 2.1 | 89 | 54 | 3600 | **6411-2RS/YA5** | 66 | | 129 | 2 | 2.450 |
| **60** | 95 | 18 | 1.1 | 30.0 | 23.0 | 4300 | **6012-2RS** | 66.5 | | 88.5 | 1 | 0.446 |
| | 95 | 18 | 1.1 | 30.0 | 23.0 | 4300 | **6012-RS** | 66.5 | | 88.5 | 1 | 0.430 |
| | 95 | 18 | 1.1 | 30.0 | 23.0 | 4300 | **FL-6012-2RS** | 66.5 | | 88.5 | 1 | 0.446 |
| | 95 | 18 | 1.1 | 30.0 | 23.0 | 4300 | **FL-6012/C3** | 66.5 | | 88.5 | 1 | 0.416 |
| | 95 | 18 | 1.1 | 30.0 | 23.0 | 4300 | **FL-6012/P6** | 66.5 | | 88.5 | 1 | 0.416 |
| | 110 | 22 | 1.5 | 53.0 | 36.0 | 4000 | **6212-2RS** | 68 | | 102 | 1.5 | 0.780 |
| | 110 | 22 | 1.5 | 53.0 | 36.0 | 4000 | **6212-2RS/HAC3V2YA7** | 68 | | 102 | 1.5 | 0.788 |
| | 110 | 22 | 1.5 | 53.0 | 36.0 | 4000 | **6212WB-2RS/P53** | 68 | | 102 | 1.5 | 0.974 |
| | 110 | 22 | 1.5 | 53.0 | 36.0 | 4000 | **6212/HAC3YAB-2RSZ** | 68 | | 102 | 1.5 | 0.928 |
| | 110 | 22 | 1.5 | 53.0 | 36.0 | 4000 | **6212-2RS2/HAYA57** | 68 | | 102 | 1.5 | 0.792 |
| | 110 | 22 | 1.5 | 53.0 | 36.0 | 4000 | **6212-2RS2** | 69 | | 101 | 1.5 | 0.780 |
| | 110 | 22 | 1.5 | 53.0 | 36.0 | 5500 | **FL-6212-2RS/P6** | 69 | | 101 | 1.5 | 0.800 |
| | 130 | 31 | 2.1 | 82.0 | 48.5 | 3400 | **6312-2RS** | 71 | | 119 | 2 | 1.750 |
| | 130 | 31 | 2.1 | 82.0 | 48.5 | 3400 | **6312-RS** | 71 | | 119 | 2 | 1.760 |
| | 130 | 31 | 2.1 | 77.0 | 49.0 | 5200 | **6312-2RZ** | 71 | | 119 | 2.1 | 1.750 |
| **65** | 85 | 10 | 0.6 | 11.9 | 11.5 | 6300 | **FL-61813-2RS/P6** | 69 | | 81 | 0.6 | 0.129 |
| | 90 | 13 | 1.1 | 16.0 | 15.0 | 7800 | **FL-61913-2RS/P5** | 71.5 | | 83.5 | 1 | 0.212 |
| | 100 | 18 | 1.1 | 32.0 | 25.0 | 4000 | **6013-2RS** | 71 | | 94 | 1 | 0.444 |
| | 120 | 23 | 1.5 | 57.0 | 40.0 | 3500 | **6213-2RS** | 73 | | 112 | 1.5 | 1.070 |
| | 120 | 23 | 1.5 | 57.0 | 40.0 | 3500 | **6213-2RSR/C3Z1YA6** | 73 | | 112 | 1.5 | 1.140 |
| | 140 | 33 | 2.1 | 95.0 | 59.5 | 3200 | **6313-2RS** | 76 | | 129 | 2 | 2.360 |
| | 140 | 33 | 2.1 | 95.0 | 59.5 | 3200 | **6313-RS** | 76 | | 129 | 2 | 2.250 |

d 65~95 mm

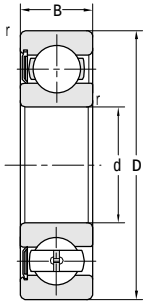


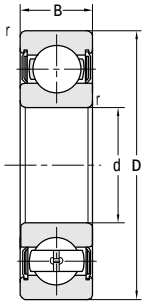



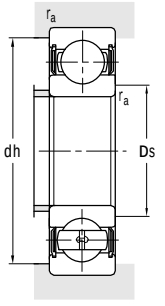

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings |
|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease |
| mm | | | | kN | | r/min |
| **65** | 140 | 33 | 2.1 | 95.0 | 59.5 | 3200 |
| **70** | 110 | 20 | 1.1 | 38.0 | 30.0 | 3600 |
| | 125 | 24 | 1.5 | 61.2 | 43.2 | 3400 |
| | 130 | 41 | 1.5 | 61.0 | 45.0 | 3200 |
| | 130 | 41 | 1.5 | 61.0 | 45.0 | 3200 |
| | 150 | 35 | 2.1 | 107 | 68.0 | 3000 |
| | 150 | 35 | 2.1 | 107 | 68.0 | 3000 |
| | 150 | 35 | 2.1 | 107 | 68.0 | 3000 |
| **75** | 115 | 20 | 1.1 | 40.0 | 32.2 | 3400 |
| | 115 | 20 | 1.1 | 40.0 | 32.2 | 3400 |
| | 130 | 25 | 1.5 | 66.0 | 50.0 | 3200 |
| | 130 | 25 | 1.5 | 66.0 | 50.0 | 4500 |
| | 130 | 25 | 1.5 | 61.0 | 46.0 | 3200 |
| | 130 | 25 | 1.5 | 61.0 | 46.0 | 3200 |
| | 160 | 37 | 2.1 | 113 | 71.0 | 2800 |
| **80** | 125 | 22 | 1.1 | 47.5 | 40.0 | 3200 |
| | 125 | 22 | 1.1 | 47.5 | 40.0 | 3200 |
| | 140 | 26 | 2 | 71.5 | 54.5 | 3000 |
| | 170 | 39 | 2.1 | 125 | 86.5 | 2600 |
| | 170 | 39 | 2.1 | 125 | 86.5 | 2600 |
| **85** | 130 | 22 | 1.1 | 47.5 | 40.0 | 3000 |
| | 150 | 28 | 2 | 84.0 | 62.0 | 2800 |
| | 180 | 41 | 3 | 102 | 96.5 | 2400 |
| | 180 | 41 | 3 | 102 | 96.5 | 2400 |
| | 180 | 41 | 3 | 133 | 96.5 | 2400 |
| **90** | 140 | 24 | 1.5 | 58.5 | 50.0 | 2800 |
| | 160 | 30 | 2 | 97.0 | 72.0 | 2600 |
| | 190 | 43 | 3 | 144 | 108 | 2400 |
| **95** | 145 | 24 | 1.5 | 60.5 | 54.0 | 2800 |
| | 170 | 32 | 2.1 | 110 | 80.0 | 2400 |

| Designations | Abutment and fillet dimensions | | | | Weight |
|---|---|---|---|---|---|
| | $D_{smin}$ | $D_{smax}$ | $dh_{max}$ | $r_{amax}$ | |
| | mm | | | | kg |
| **6313-2RZ** | 77 | | 128 | 2 | 2.360 |
| **6014-2RS** | 76.5 | | 103.5 | 1 | 0.623 |
| **6214-2RS** | 78 | | 117 | 1.5 | 1.140 |
| **180714** | 78.5 | | 121.5 | 1.5 | 2.050 |
| **63214X3-2RS** | 78.5 | | 121.5 | 1.5 | 2.050 |
| **6314-2RS** | 81 | | 139 | 2 | 2.600 |
| **6314-RS** | 81 | | 139 | 2 | 2.620 |
| **6314-2RZ** | 82 | | 138 | 2 | 2.600 |
| **6015-2RS** | 81 | | 108.5 | 1 | 0.604 |
| **6015-2RZ** | 81 | | 109 | 1 | 0.604 |
| **6215-2RS** | 83 | | 122 | 1.5 | 1.230 |
| **FL-6215-2RS/P6** | 83 | | 122 | 1.5 | 1.230 |
| **6215-2RZ** | 84 | | 121 | 1.5 | 1.230 |
| **6215-2RS/HAC3V2YA7** | 84 | 88 | 121 | 1.5 | 1.180 |
| **6315-2RS** | 87 | | 148 | 2 | 3.00 |
| **6016-2RS** | 86.5 | | 118.5 | 1 | 0.856 |
| **6016-2RZ** | 86 | | 119 | 1 | 0.856 |
| **6216-2RS** | 89 | | 131 | 2 | 1.51 |
| **6316-RS** | 91 | | 159 | 2 | 3.71 |
| **6316-2RS** | 91 | | 159 | 2 | 3.75 |
| **6017-2RS** | 91.5 | | 123.5 | 1 | 0.966 |
| **6217-2RS** | 94 | | 141 | 2 | 1.81 |
| **6317-RS** | 98 | | 167 | 2.5 | 4.32 |
| **6317-2RS** | 98 | | 167 | 2.5 | 4.35 |
| **6317-2RZ** | 99 | | 166 | 2.5 | 4.35 |
| **6018-2RS** | 98 | | 132 | 1.5 | 1.180 |
| **6218-2RS** | 101 | | 149 | 2 | 2.25 |
| **6318-2RS** | 104 | 114 | 176 | 2.5 | 5.10 |
| **6019-2RS/C3** | 102 | | 138 | 1.5 | 1.17 |
| **6219-2RS** | 106 | | 159 | 2 | 2.69 |

d 95~150 mm

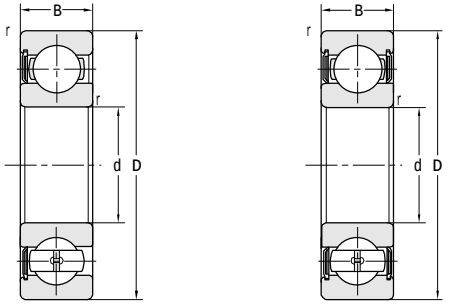


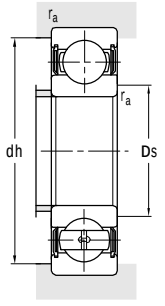




| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | Designations | Abutment and fillet dimensions | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | Cr | Cor | Grease | | Dsmin | Dsmax | dhmax | ramax | |
| mm | | | | kN | | r/min | | mm | | | | kg |
| **95** | 200 | 45 | 3 | 152 | 118 | 2400 | **6319-RS** | 108 | | 187 | 2.5 | 5.68 |
| | 200 | 45 | 3 | 152 | 118 | 2400 | **6319-2RS** | 108 | | 187 | 2.5 | 5.92 |
| **100** | 150 | 24 | 1.5 | 62.4 | 52.9 | 2600 | **6020-2RS** | 108 | | 142 | 1.5 | 1.210 |
| | 180 | 34 | 2.1 | 122 | 93.0 | 2400 | **6220-2RS** | 111 | | 169 | 2 | 3.270 |
| | 180 | 34 | 2.1 | 115 | 88.0 | 2400 | **6220-2RS/CRA9** | 111 | | 169 | 2 | 3.370 |
| | 215 | 47 | 3 | 173 | 141 | 2800 | **6320-2RS** | 113 | | 202 | 2.5 | 7.19 |
| **105** | 160 | 26 | 2 | 73.0 | 62.8 | 2400 | **6021-2RS** | 114 | | 151 | 2 | 1.670 |
| | 190 | 36 | 2.1 | 135 | 102 | 3200 | **6221-2RS** | 117 | | 178 | 2 | 3.870 |
| | 225 | 49 | 3 | 240 | 154 | 2800 | **6321-2RS** | 119 | | 211 | 2.5 | 8.150 |
| **110** | 140 | 16 | 1 | 26.7 | 28.2 | 2600 | **61822-2RS2/S3YA7** | 115 | | 135 | 1 | 0.517 |
| | 170 | 28 | 2 | 82.0 | 70.6 | 2400 | **6022-2RS** | 119 | | 161 | 2 | 1.98 |
| | 200 | 38 | 2.1 | 145 | 114 | 3000 | **6222-2RS** | 122 | | 188 | 2 | 4.620 |
| | 240 | 50 | 3 | 195 | 167 | 2600 | **6322-2RS** | 124 | | 226 | 2.5 | 9.770 |
| **120** | 165 | 22 | 1.1 | 48.6 | 50.5 | 3900 | **FL-61924-2RS/P5** | 126 | | 129 | 1 | 1.200 |
| | 180 | 28 | 2 | 85.5 | 80.0 | 2200 | **6024-2RS** | 129 | | 171 | 2 | 2.240 |
| | 215 | 40 | 2.1 | 154 | 130 | 2100 | **6224-2RZ** | 132 | | 203 | 2 | 5.330 |
| | 215 | 40 | 2.1 | 155 | 132 | 2800 | **6224-2RS/YB2** | 132 | | 203 | 2 | 5.430 |
| | 215 | 40 | 2.1 | 154 | 130 | 2800 | **6224-2RS** | 132 | | 203 | 2 | 5.330 |
| | 260 | 55 | 3 | 217 | 196 | 2000 | **6324-2RS** | 134 | | 246 | 2.5 | 12.700 |
| **130** | 165 | 18 | 1.1 | 33 | 37.7 | 3800 | **FL-61826-2RS/P5** | 136 | | 159 | 1 | 0.816 |
| | 200 | 33 | 2 | 109 | 98 | 3200 | **6026-2RS** | 139 | | 191 | 2 | 3.33 |
| | 230 | 40 | 3 | 153 | 134 | 2600 | **6226-2RZ/Z1** | 144 | | 216 | 2.5 | 6.40 |
| | 230 | 40 | 3 | 153 | 134 | 2600 | **6226-2RS** | 144 | | 216 | 2.5 | 6.40 |
| **140** | 250 | 42 | 3 | 166 | 150 | 2400 | **6228-2RZ/Z1** | 154 | | 236 | 2.5 | 7.52 |
| | 250 | 42 | 3 | 166 | 150 | 2400 | **6228-2RS** | 154 | | 236 | 2.5 | 7.52 |
| **150** | 225 | 35 | 2.1 | 123 | 117 | 1600 | **6030-2RS** | 161 | | 214 | 2 | 4.050 |
| | 270 | 45 | 3 | 189 | 183 | 2000 | **6230-2RS** | 164 | | 256 | 2.5 | 10.1 |

d 160~190 mm

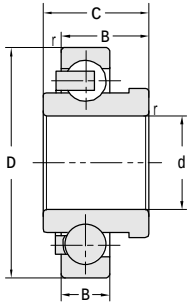


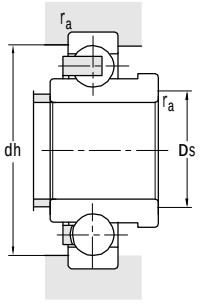




| Principal dimensions | | | | Basic load ratings | | Limit speed ratings |
|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | Cr | Cor | Grease |
| mm | | | | kN | | r/min |
| **160** | 240 | 38 | 2.1 | 143 | 138 | 1600 |
| **180** | 320 | 52 | 4 | 240 | 260 | 1800 |
| | 320 | 52 | 4 | 240 | 260 | 1800 |
| **190** | 290 | 46 | 2.1 | 194 | 204 | 2000 |

| Designations | Abutment and fillet dimensions | | | | Weight |
|---|---|---|---|---|---|
| | $D_{smin}$ | $D_{smax}$ | $dh_{max}$ | $r_{amax}$ | |
| | mm | | | | kg |
| **6032-2RS** | 169 | | 231 | 2 | 5.11 |
| **6236-2RS** | 197 | | 303 | 3 | 15.0 |
| **6236-2RZ/Z1** | 197 | | 303 | 3 | 15.0 |
| **6038-RS** | 200 | | 280 | 2 | 9.13 |

d 55~600 mm

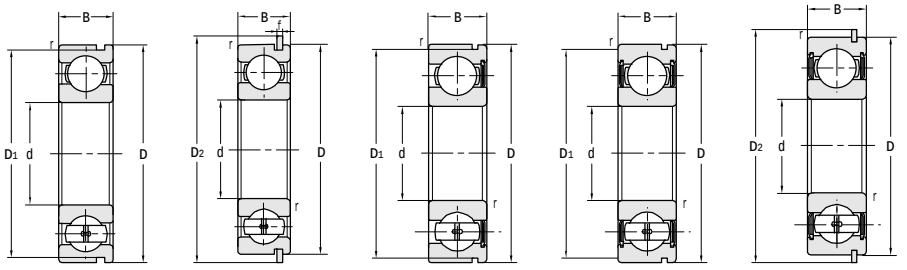


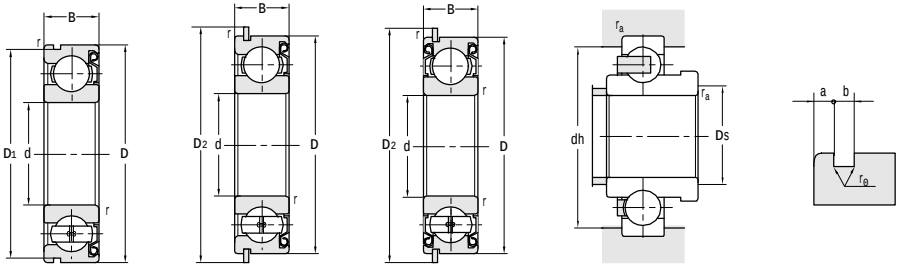




| Principal dimensions | | | | | Basic load ratings | | Limit speed ratings | Designations | Abutment and fillet dimensions | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | C | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | | $D_{smin}$ | $D_{smax}$ | $d_{hmax}$ | $r_{amax}$ | |
| mm | | | | | kN | | r/min | | mm | | | | kg |
| **25** | 65 | 18 | 17 | 1.1 | 25.0 | 13.9 | 7000 | **6605WB1-2RS/P63-SAGW** | 31 | | 59 | 1 | 0.27 |
| **26** | 68 | 21.5 | 14.5 | 1 | 31.0 | 17.0 | 6500 | **6605X2WBTN1/HA** | 32 | | 62 | 1 | 0.272 |
| **30** | 59 | 13 | 22 | 0.4 | 10 | 8 | 11000 | **1-0005** | 34 | | 55 | 0.4 | 0.191 |
| | 59 | 13 | 22 | 0.4 | 10 | 8 | 11000 | **1-0005ZC** | 34 | | 55 | 0.4 | 0.307 |
| **32** | 72 | 25 | 19 | 0.5 | 26.7 | 15.0 | 9000 | **66/32WB1-2RSZ/C9** | 36.5 | | 67.5 | 0.5 | 0.408 |
| **40** | 80 | 27 | 21 | 1.1 | 29.1 | 17.9 | 8500 | **62208X2WB-2RS/P53** | 46 | | 74 | 1 | 0.525 |
| | 94 | 26 | 31 | 1.5 | 41.0 | 24.0 | 7500 | **6308X3WB1TN1-2RS/YA6** | 48 | | 86 | 1.5 | 0.817 |
| | 100 | 23 | 36 | 2 | 41.0 | 24.0 | 7000 | **6308/YAD** | 46 | | 91 | 2 | 1.36 |
| **40.5** | 62 | 34 | 12 | 0.5 | 11.7 | 9 | 9300 | **1-0004** | 45 | | 57.5 | 0.5 | 0.16 |
| **45** | 85 | 27 | 21 | 1.1 | 29.3 | 19.5 | 7500 | **62209X2WB-2RS/P53** | 51 | | 79 | 1 | 0.544 |
| **50** | 129 | 27 | 34 | 2.5 | 62.0 | 38.0 | 4100 | **CZ5012934-2RS** | 61 | | 118 | 2.5 | 2.09 |
| **55** | 100 | 55.6 | 25 | 1.5 | 33.5 | 25.1 | 4300 | **62211WB-2RSZN** | 63 | | 92 | 1.5 | 1.08 |
| | 151 | 33 | 45 | 4 | 55.0 | 46.0 | 3600 | **CZ5515145-2RS** | 71 | | 135 | 3 | 3.94 |
| **60** | 110 | 65.1 | 27 | 1.5 | 40.5 | 36 | 5500 | **1-0001** | 68 | | 102 | 1.5 | 1.35 |
| | 179 | 31 | 45 | 2.5 | 63 | 53 | 3400 | **CZ6017945-2RS** | 71 | | 168 | 2.5 | 6.1 |
| **63.5** | 99.5 | 29 | 19.4 | 1.5 | 26.5 | 35.1 | 4100 | **76TM6429** | 73 | | 90 | 1.5 | 0.603 |
| **76.352** | 130 | 33.325 | 30.15 | 0.762 | 66.0 | 60.0 | 3000 | **66/76X4WB1-2RZ/YA3** | 85 | | 125 | 0.762 | 1.46 |
| **600** | 700 | 100 | 50 | 4 | 260 | 710 | 205 | **D66/600** | 616 | | 684 | 3 | 60.6 |

# Deep Groove Ball Bearing(With Snap Groove)

d 20~40 mm



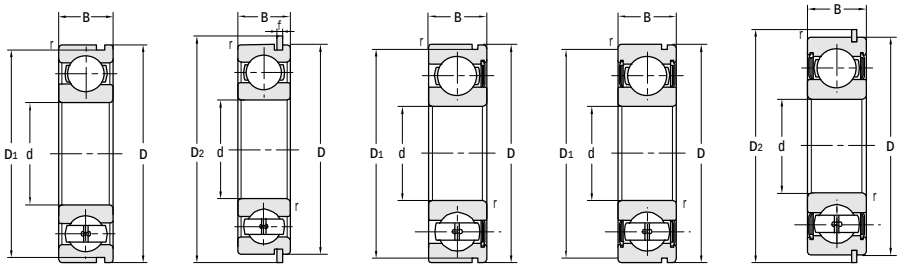


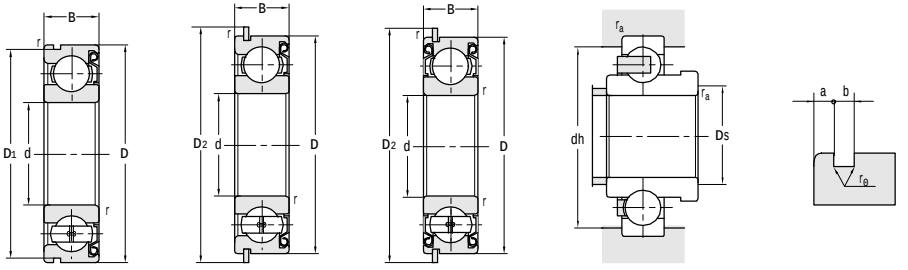
| Principal dimensions | | | | Basic load ratings | | Snap ring dimensions | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | D2 | f | Grease | Oil |
| mm | | | | kN | | | | r/min | |
| **20** | 47 | 14 | 1 | 13.0 | 6.70 | | | 15000 | 18000 |
| **25** | 52 | 15 | 1 | 14.3 | 8.00 | | | 12000 | 15000 |
| | 52 | 15 | 1 | 14.3 | 8.0 | | | 12000 | 15000 |
| | 52 | 15 | 1 | 14.3 | 8.00 | 57.9 | 1.12 | 12000 | 15000 |
| | 60 | 19 | 1.1 | 21.0 | 10.8 | | | 11000 | 14000 |
| | 80 | 21 | 1.5 | 37.5 | 19.0 | | | 9000 | 11000 |
| **35** | 72 | 17 | 1.1 | 26.0 | 14.7 | | | 9000 | 11000 |
| **28** | 58 | 16 | 1 | 15.6 | 9.00 | | | 11000 | 14000 |
| | 68 | 18 | 1.1 | 23.5 | 13.0 | | | 11000 | 14000 |
| **30** | 72 | 19 | 1.1 | 26.7 | 15.0 | | | 9000 | 11000 |
| | 72 | 19 | 1.1 | 28.4 | 15.4 | 78.6 | 1.7 | 9000 | 11000 |
| | 75 | 20 | 0.5 | 32.5 | 18.0 | | | 9000 | 11000 |
| | 75 | 21 | 1.5 | 33.0 | 17.5 | | | 9000 | 11000 |
| | 90 | 23 | 1.5 | 44.5 | 23.0 | | | 8500 | 10000 |
| **32** | 75 | 20 | 1.5 | 28.5 | 16.0 | | | 9000 | 11000 |
| | 75 | 20 | 1.5 | 28.5 | 16.0 | | | 9000 | 11000 |
| | 80 | 23 | 2 | 36.5 | 19.6 | | | 9000 | 11000 |
| | 80 | 23 | 0.5 | 36.5 | 20.0 | | | 9000 | 11000 |
| **35** | 62 | 14 | 1 | 16.3 | 10.5 | | | 9000 | 11000 |
| | 72 | 17 | 1.1 | 26.0 | 14.7 | | | 9000 | 11000 |
| | 72 | 17 | 1.1 | 26.0 | 14.7 | | | 9000 | 11000 |
| | 72 | 17 | 1.1 | 26.0 | 14.7 | | | 9000 | 11000 |
| | 72 | 17 | 2 | 26.0 | 15.3 | 78.1 | 1.7 | 9000 | 11000 |
| | 72 | 17 | 1.1 | 26.0 | 14.7 | | | 9000 | 11000 |
| | 80 | 21 | 1.5 | 33.4 | 19.2 | | | 8500 | 10000 |
| | 80 | 21 | 1.5 | 33.4 | 19.2 | | | 8500 | 1000 |
| | 90 | 21 | 1.5 | 37.1 | 20.7 | 96.5 | 2.46 | 8500 | 1000 |
| | 100 | 25 | 1.5 | 55.5 | 29.5 | | | 7000 | 8500 |
| **40** | 68 | 15 | 1 | 16.8 | 11.6 | | | 9500 | 12000 |

| Designations | Abutment and fillet dimensions | | | | Snap ring groove dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|
| | $D_{bmin}$ | $d_{hmax}$ | $r_{amax}$ | $D1_{max}$ | a | b | $r0_{max}$ | |
| | mm | | | | | | | kg |
| **6204N** | 25 | 42 | 1 | 44.6 | 2.46 | 1.35 | 0.4 | 0.110 |
| **6205N/C3** | 30 | 47 | 1 | 49.73 | 2.46 | 1.35 | 0.4 | 0.131 |
| **6205N** | 30 | 47 | 1 | 49.5 | 2.4 | 1.5 | 0.4 | 0.131 |
| **6205-ZNR** | 30 | 47 | 1 | 49.73 | 2.46 | 1.35 | 0.4 | 0.136 |
| **6305X3WBTN1-ZN** | 30 | 53 | 1 | 57.3 | 2.46 | 2.16 | 0.5 | 0.255 |
| **6405N** | 33 | 72 | 1.5 | 76.81 | 3.28 | 1.9 | 0.6 | 0.527 |
| **6207-2RSN** | 41.5 | 65.5 | 1 | 68.81 | 3.28 | 1.9 | 0.6 | 0.298 |
| **62/28-ZN** | 33 | 53 | 1 | 55.6 | 2.46 | 1.35 | 0.4 | 0.179 |
| **63/28-ZN** | 34 | 62 | 1 | 64.82 | 3.28 | 1.9 | 0.6 | 0.294 |
| **6306-2RZN/C4** | 36.5 | 65.5 | 1 | 68.81 | 3.205 | 1.98 | 0.6 | 0.340 |
| **6306-ZNR** | 36.5 | 65.5 | 1 | 68.81 | 3.28 | 1.9 | 0.6 | 0.365 |
| **450706K** | 36.5 | 68.5 | 0.5 | 71.7 | 3.2 | 1.9 | 0.6 | 0.474 |
| **6306X3-2RSN/HAY** | 36.5 | 68.5 | 1.5 | 71.83 | 3.25 | 1.9 | 0.6 | 0.477 |
| **6406N** | 38 | 82 | 1.5 | 86.79 | 3.28 | 2.7 | 0.6 | 0.715 |
| **63/32N** | 38.5 | 68.5 | 1.5 | 71.83 | 3.28 | 1.9 | 0.6 | 0.391 |
| **63/32-2RSN** | 38.5 | 68.5 | 1.5 | 71.83 | 3.28 | 1.9 | 0.6 | 0.413 |
| **63/32X3-2RSN/HAY** | 38.5 | 73.5 | 2 | 76.5 | 4.7 | 2 | 0.6 | 0.534 |
| **4507/32KU** | 38.5 | 73.5 | 0.5 | 76.5 | 4.7 | 2 | 0.6 | 0.534 |
| **6007-RSNB** | 40 | 57 | 1 | 59.61 | 2.08 | 1.9 | 0.6 | 0.161 |
| **6207-2RSN** | 41.5 | 65.5 | 1 | 68.81 | 3.28 | 1.9 | 0.6 | 0.298 |
| **6207-XRSN** | 41.5 | 65.5 | 1 | 68.81 | 3.28 | 1.9 | 0.6 | 0.294 |
| **6207N** | 41.5 | 65.5 | 1 | 68.81 | 3.28 | 1.9 | 0.6 | 0.291 |
| **6207-2RSNR/P53YAB** | 41.5 | 65.5 | 2 | 68 | 3.3 | 1.9 | 0.3 | 0.305 |
| **6207NKTN1-2RZ/C3H** | 41.5 | 65.5 | 2 | 68.81 | 3.28 | 1.9 | 0.6 | 0.278 |
| **6307N** | 43 | 72 | 1.5 | 76.81 | 3.28 | 1.9 | 0.6 | 0.443 |
| **6307-ZN** | 43 | 72 | 1.5 | 76.81 | 3.28 | 1.9 | 0.6 | 0.443 |
| **6307X1NR** | 43 | 75 | 1.5 | 76.81 | 3.28 | 1.9 | 0.6 | 0.638 |
| **6407N** | 43 | 92 | 1.5 | 96.8 | 3.25 | 2.7 | 0.6 | 0.901 |
| **6008NR** | 44.6 | 63.4 | 1 | 64.82 | 2.49 | 1.9 | 0.6 | 0.200 |

# Deep Groove Ball Bearing(With Snap Groove)

d 40~55 mm

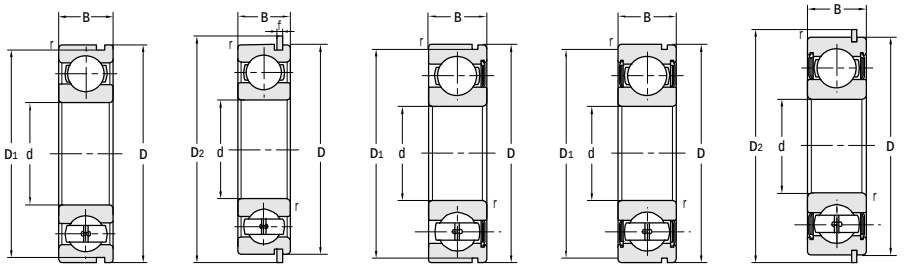


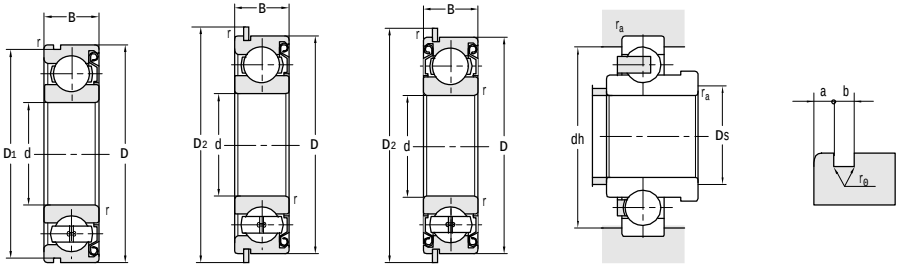




| Principal dimensions | | | | Basic load ratings | | Snap ring dimensions | | Limit speed ratings | | Designations | Abutment and fillet dimensions | | | | Snap ring groove dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | D2 | f | Grease | Oil | | $D_{bmin}$ | $dh_{max}$ | $r_{amax}$ | $D1_{max}$ | a | b | $r0_{max}$ | |
| mm | | | | kN | | | | r/min | | | mm | | | | | | | kg |
| **40** | 80 | 18 | 1.1 | 31.2 | 18.2 | | | 8500 | 10000 | **6208N** | 46.5 | 73.5 | 1 | 76.81 | 3.28 | 1.9 | 0.6 | 0.354 |
| | 80 | 18 | 1.1 | 31.2 | 18.2 | | | 8500 | 10000 | **6208-ZN** | 46.5 | 73.5 | 1 | 76.81 | 3.28 | 1.9 | 0.6 | 0.364 |
| | 80 | 18 | 1.1 | 31.2 | 18.2 | 86.6 | 1.7 | 8500 | 10000 | **6208-ZNR** | 46.5 | 73.5 | 1 | 76.81 | 3.28 | 1.9 | 0.6 | 0.382 |
| | 90 | 23 | 1.5 | 41.0 | 24.0 | | | 7500 | 9000 | **6308N** | 48 | 82 | 1.5 | 86.8 | 3.25 | 2.7 | 0.6 | 0.640 |
| | 90 | 23 | 1.5 | 41.0 | 24.0 | 96.5 | 2.46 | 7500 | 9000 | **6308NR** | 48 | 82 | 1.5 | 86.79 | 3.28 | 2.7 | 0.6 | 0.671 |
| | 90 | 23 | 1.5 | 41.0 | 24.0 | 96.5 | 2.46 | 7500 | 9000 | **6308-ZNR** | 48 | 82 | 1.5 | 86.79 | 3.28 | 2.7 | 0.6 | 0.673 |
| | 90 | 23 | 1.5 | 41.0 | 24.0 | | | 7500 | 9000 | **6308N/HAP63** | 48 | 82 | 1.5 | 86.79 | 3.28 | 2.7 | 0.6 | 0.640 |
| | 90 | 20 | 1.5 | 41.0 | 24.0 | 96.5 | 2.46 | 7500 | 9000 | **6308X2NR/C3** | 48 | 82 | 1.5 | 86.79 | 3.28 | 2.7 | 0.6 | 0.600 |
| | 90 | 23 | 1.5 | 41.0 | 24.0 | | | 7500 | 9000 | **6308-ZN** | 48 | 82 | 1.5 | 86.79 | 3.28 | 2.7 | 0.6 | 0.642 |
| | 90 | 23 | 1.5 | 41.0 | 24.0 | | | 6700 | 8000 | **6308-2RSN** | 48 | 82 | 1.5 | 86.79 | 3.28 | 2.7 | 0.6 | 0.622 |
| | 110 | 27 | 2 | 67.5 | 36.0 | | | 6700 | 8000 | **6408N** | 49 | 101 | 2 | 106.81 | 3.28 | 2.7 | 0.6 | 1.19 |
| **45** | 85 | 19 | 1.1 | 33.7 | 20.7 | | | 7500 | 9000 | **6209N** | 51.5 | 78.5 | 1 | 81.81 | 3.28 | 1.9 | 0.6 | 0.422 |
| | 85 | 19 | 1.1 | 33.7 | 20.7 | | | 7500 | 9000 | **6209-ZN** | 51.5 | 78.5 | 1 | 81.81 | 3.28 | 1.9 | 0.6 | 0.428 |
| | 85 | 19 | 1.1 | 33.7 | 20.7 | 91.6 | 1.7 | 7500 | 9000 | **6209-ZNR** | 51.5 | 78.5 | 1 | 81.81 | 3.28 | 1.9 | 0.6 | 0.434 |
| | 85 | 19 | 1.1 | 33.7 | 20.7 | 91.6 | 1.7 | 7500 | 9000 | **6209NR** | 51.5 | 78.5 | 1 | 81.81 | 3.28 | 1.9 | 0.6 | 0.428 |
| | 100 | 25 | 1.5 | 53.0 | 30.0 | | | 6700 | 8000 | **6309N** | 53 | 92 | 1.5 | 96.8 | 3.28 | 2.7 | 0.6 | 0.840 |
| | 100 | 25 | 1.5 | 53.0 | 30.0 | | | 6700 | 8000 | **6309-ZN** | 53 | 92 | 1.5 | 96.8 | 3.28 | 2.7 | 0.6 | 0.837 |
| | 100 | 25 | 1.5 | 53.0 | 30.0 | | | 6700 | 8000 | **309N/HAYAB** | 53 | 92 | 1.5 | 96.8 | 3.25 | 2.7 | 0.6 | 0.900 |
| | 100 | 25 | 1.5 | 48.5 | 29.5 | 106.5 | 2.46 | 6700 | 8000 | **6309NR** | 53 | 92 | 1.5 | 96.8 | 3.28 | 2.7 | 0.6 | 0.861 |
| | 100 | 25 | 1.5 | 50.0 | 45.0 | 106.5 | 2.46 | 6700 | 8000 | **309NR/HAYAB-DC** | 53 | 92 | 1.5 | 96.8 | 3.28 | 2.7 | 0.6 | 0.927 |
| | 100 | 25 | 1.5 | 50.0 | 45.0 | | | 6700 | 8000 | **309N/HAYAB-DC** | 53 | 92 | 1.5 | 96.8 | 3.28 | 2.7 | 0.6 | 0.900 |
| | 100 | 21 | 1.5 | 52.5 | 30.0 | 106.5 | 2.46 | 6700 | 8000 | **6309X2NR/C3** | 52 | 94 | 1.5 | 96.8 | 3.28 | 2.7 | 0.6 | 0.735 |
| | 120 | 29 | 2 | 73.0 | 43.0 | | | 6000 | 7000 | **6409N** | 54 | 111 | 2 | 115.21 | 4.06 | 3.1 | 0.6 | 1.57 |
| **50** | 90 | 20 | 1.1 | 35.6 | 22.3 | | | 7000 | 8500 | **6210N** | 56.5 | 83.5 | 1 | 86.79 | 3.28 | 2.7 | 0.6 | 0.464 |
| | 90 | 20 | 1.1 | 35.6 | 22.3 | | | 7000 | 8500 | **6210-ZN** | 56.5 | 83.5 | 1 | 86.79 | 3.28 | 2.7 | 0.6 | 0.469 |
| | 90 | 20 | 1.1 | 35.6 | 22.3 | 96.5 | 2.46 | 7000 | 8500 | **6210-ZNR** | 56.5 | 83.5 | 1 | 86.79 | 3.28 | 2.7 | 0.6 | 0.605 |
| | 90 | 20 | 1.1 | 35.6 | 22.3 | 96.5 | 2.46 | 7000 | 8500 | **6210NR** | 56.5 | 83.5 | 1 | 86.79 | 3.28 | 2.7 | 0.6 | 0.492 |
| | 90 | 20 | 1.1 | 35.6 | 22.3 | | | 7000 | 8500 | **6210-ZNB-FST** | 56.5 | 83.5 | 1 | 86.79 | 3.28 | 2.7 | 0.6 | 0.469 |
| | 110 | 27 | 2 | 62.0 | 38.0 | | | 6300 | 7500 | **6310N** | 59 | 101 | 2 | 106.8 | 3.25 | 2.7 | 0.6 | 1.1 |
| | 110 | 27 | 2 | 62.0 | 38.0 | 116.6 | 2.46 | 6300 | 7500 | **6310-ZNR** | 59 | 101 | 2 | 106.81 | 3.28 | 2.7 | 0.6 | 1.23 |
| | 130 | 31 | 2.6 | 92.2 | 55.1 | 139.7 | 2.82 | 5300 | 6300 | **6410NR/C9YA6** | 61 | 119 | 2 | 125.22 | 4.06 | 3.1 | 0.6 | 1.94 |
| | 130 | 31 | 2.1 | 88.0 | 52.0 | | | 5300 | 6300 | **6410N** | 61 | 119 | 2 | 125.22 | 4.06 | 3.1 | 0.6 | 1.89 |
| **55** | 100 | 21 | 1.5 | 44.3 | 27.8 | | | 6300 | 7500 | **6211N** | 63 | 92 | 1.5 | 96.8 | 3.28 | 2.7 | 0.6 | 0.623 |

# Deep Groove Ball Bearing(With Snap Groove)

d 55~70 mm



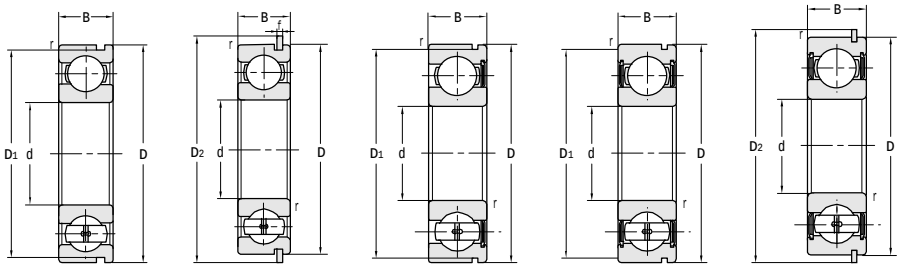



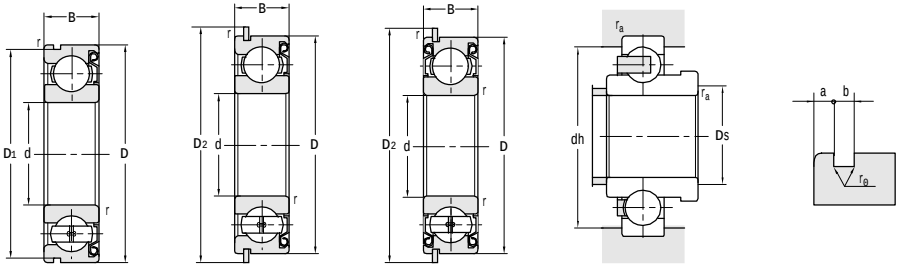

| Principal dimensions | | | | Basic load ratings | | Snap ring dimensions | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | D2 | f | Grease | Oil |
| mm | | | | kN | | | | r/min | |
| **55** | 100 | 21 | 1.5 | 44.3 | 27.8 | 106.5 | 2.46 | 6300 | 7500 |
| | 100 | 25 | 1 | 44.3 | 27.8 | | | 6300 | 7500 |
| | 120 | 29 | 2 | 71.5 | 45.0 | | | 5600 | 6700 |
| | 120 | 29 | 2 | 71.5 | 45.0 | | | 5600 | 6700 |
| | 120 | 29 | 2 | 71.5 | 45.0 | | | 5600 | 6700 |
| | 120 | 29 | 2 | 71.5 | 45.0 | 129.7 | 2.82 | 5600 | 6700 |
| | 130 | 31 | 1.1 | 77.0 | 49.0 | 139.7 | 2.77 | 5300 | 6400 |
| | 140 | 33 | 2.1 | 95.0 | 60.0 | | | 5000 | 6000 |
| **60** | 110 | 22 | 1.5 | 53.0 | 36.0 | | | 6000 | 7000 |
| | 110 | 22 | 1.5 | 53.0 | 36.0 | 117 | 2.46 | 6000 | 7000 |
| | 110 | 22 | 1.5 | 53.0 | 36.0 | 116.6 | 2.46 | 6000 | 7000 |
| | 110 | 22 | 1.5 | 53.0 | 36.0 | | | 6000 | 7000 |
| | 110 | 22 | 1.5 | 53.0 | 36.0 | | | 6000 | 7000 |
| | 110 | 22 | 1.5 | 53.0 | 36.0 | | | 6000 | 7000 |
| | 110 | 22 | 1.5 | 53.0 | 36.0 | 117 | 2.46 | 6000 | 7000 |
| | 110 | 22 | 3 | 53.0 | 36.0 | | | 6000 | 7000 |
| | 130 | 31 | 2.1 | 82.0 | 50.0 | | | 5000 | 6000 |
| | 130 | 31 | 2.1 | 82.0 | 50.0 | | | 5000 | 6000 |
| | 150 | 35 | 2.1 | 107 | 68.5 | | | 4800 | 5600 |
| **65** | 100 | 18 | 1.1 | 32.0 | 25.0 | 106.5 | 2.46 | 6300 | 7500 |
| | 100 | 18 | 1.1 | 32.0 | 25.0 | | | 6300 | 7500 |
| | 120 | 23 | 1.5 | 57.0 | 40.0 | | | 5300 | 6300 |
| | 120 | 23 | 1.5 | 57.0 | 40.0 | | | 5300 | 6300 |
| | 120 | 23 | 3 | 57.0 | 40.0 | | | 5300 | 6300 |
| | 140 | 33 | 2.1 | 95.0 | 59.5 | | | 4800 | 5600 |
| | 140 | 33 | 2.1 | 95.0 | 59.5 | | | 4800 | 5600 |
| | 140 | 33 | 2.1 | 95.0 | 59.5 | 149.7 | 2.77 | 4800 | 5600 |
| | 140 | 33 | 2.1 | 95.0 | 59.5 | 149.7 | 2.77 | 4800 | 5600 |
| | 160 | 37 | 2.1 | 118 | 78.5 | 169.7 | 2.82 | 4500 | 5300 |
| **70** | 110 | 20 | 1.1 | 38.0 | 30.0 | 116.6 | 2.46 | 6000 | 7000 |
| | 125 | 24 | 1.5 | 61.2 | 43.2 | | | 4800 | 5800 |
| | 150 | 35 | 2.1 | 107 | 68.0 | | | 4500 | 5300 |
| | 150 | 3 | 2.1 | 107 | 68.0 | | | 4500 | 5300 |

| Designations | Abutment and fillet dimensions | | | | Snap ring groove dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|
| | $D_{bmin}$ | $d_{hmax}$ | $r_{amax}$ | $D_{1max}$ | a | b | $r0_{max}$ | |
| | mm | | | | | | | kg |
| **6211-ZNR** | 63 | 92 | 1.5 | 96.8 | 3.28 | 2.7 | 0.6 | 0.645 |
| **62211WB-2RSZN** | 63 | 92 | 1 | 96.8 | 3.28 | 2.7 | 0.6 | 1.08 |
| **6311-2ZN** | 64 | 111 | 2 | 115.21 | 4.06 | 3.1 | 0.6 | 1.35 |
| **6311N** | 64 | 111 | 2 | 115.21 | 4.06 | 3.1 | 0.6 | 1.35 |
| **6311-2RSN** | 64 | 111 | 2 | 115.21 | 4.06 | 3.1 | 0.6 | 1.34 |
| **6311-2RSNR** | 64 | 111 | 2 | 115.21 | 4.06 | 3.1 | 0.6 | 1.41 |
| **6611NR** | 71 | 119 | 1.1 | 125.3 | 4.06 | 3.1 | 0.6 | 1.89 |
| **6411N** | 66 | 129 | 2 | 135.23 | 4.9 | 3.1 | 0.6 | 2.26 |
| **6212N** | 68 | 102 | 1.5 | 106.81 | 3.28 | 2.7 | 0.6 | 0.778 |
| **6212-ZNBR/YB2** | 68 | 102 | 1.5 | 107 | 3.28 | 2.69 | 0.6 | 0.794 |
| **6212-ZNBR/HAYAB-DC** | 68 | 102 | 1.5 | 106.81 | 3.28 | 2.69 | 0.6 | 0.794 |
| **6212-ZNB/HAYAB-DC** | 68 | 102 | 1.5 | 106.81 | 3.28 | 2.69 | 0.6 | 0.782 |
| **6212-ZN** | 68 | 102 | 1.5 | 106.81 | 3.28 | 2.7 | 0.6 | 0.766 |
| **6212-ZNB/HAYAB** | 68 | 102 | 1.5 | 106.81 | 3.28 | 2.69 | 0.6 | 0.782 |
| **6212-ZNR** | 68 | 102 | 1.5 | 107 | 3.28 | 2.69 | 0.6 | 0.778 |
| **6212N-FST** | 68 | 102 | 1.5 | 106.81 | 3.28 | 2.7 | 0.6 | 0.778 |
| **6312N** | 71 | 119 | 2 | 125.22 | 4.06 | 3.1 | 0.6 | 1.72 |
| **6312-ZN** | 71 | 119 | 2 | 125.22 | 4.06 | 3.1 | 0.6 | 1.73 |
| **6412N** | 71 | 139 | 2 | 145.24 | 4.9 | 3.1 | 0.6 | 2.7 |
| **6013NR** | 71.5 | 93.5 | 1 | 96.8 | 2.87 | 2.7 | 0.6 | 0.435 |
| **6013N** | 71.5 | 93.5 | 1 | 96.8 | 2.87 | 2.7 | 0.6 | 0.414 |
| **50213K** | 73 | 112 | 1.5 | 115.21 | 4.06 | 3.1 | 0.6 | 1.00 |
| **6213N** | 73 | 112 | 1.5 | 115.21 | 4.06 | 3.1 | 0.6 | 1.04 |
| **6213N-FST** | 73 | 112 | 1.5 | 115.21 | 4.06 | 3.1 | 0.6 | 1.04 |
| **6313N** | 76 | 129 | 2 | 135.23 | 4.9 | 3.1 | 0.6 | 2.13 |
| **6313N/YAB-FST** | 76 | 129 | 2 | 135.23 | 4.9 | 3.1 | 0.6 | 2.13 |
| **6313NR/C3YA6** | 76 | 129 | 2 | 135.23 | 4.9 | 3.1 | 0.6 | 2.17 |
| **6313NR/C3** | 76 | 129 | 2 | 135.23 | 4.9 | 3.1 | 0.6 | 2.20 |
| **6413NR/C3** | 76 | 149 | 2 | 155.22 | 4.9 | 3.1 | 0.6 | 3.26 |
| **6014NR** | 76.5 | 103.5 | 1 | 106.81 | 2.87 | 2.7 | 0.6 | 0.648 |
| **6214N** | 78 | 117 | 1.5 | 120.22 | 4.06 | 3.1 | 0.6 | 1.10 |
| **6314N** | 81 | 139 | 2 | 145.24 | 4.9 | 3.1 | 0.6 | 2.54 |
| **6314N/YA6** | 81 | 139 | 2 | 145.24 | 4.9 | 3.1 | 0.6 | 2.54 |

# Deep Groove Ball Bearing(With Snap Groove)

d 70~105 mm

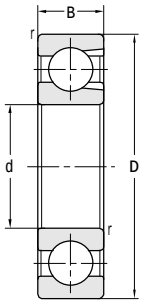


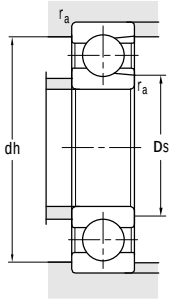




| Principal dimensions | | | | Basic load ratings | | Snap ring dimensions | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | D2 | f | Grease | Oil |
| mm | | | | kN | | | | r/min | |
| **70** | 150 | 35 | 2.1 | 107 | 68.0 | 159.7 | 2.82 | 4500 | 5300 |
| | 150 | 35 | 2.1 | 107 | 68.0 | | | 4500 | 5300 |
| | 150 | 35 | 2.1 | 136 | 102 | | | 4500 | 5300 |
| | 150 | 35 | 2.1 | 136 | 102 | | | 4500 | 5300 |
| **75** | 115 | 20 | 1.1 | 40.0 | 32.2 | | | 5600 | 6700 |
| | 130 | 25 | 1.5 | 66.0 | 50.0 | | | 4800 | 5600 |
| | 160 | 37 | 2.1 | 113 | 77 | | | 4300 | 5000 |
| | 160 | 37 | 2.1 | 149 | 115 | 169.7 | 2.82 | 4500 | 5200 |
| | 160 | 37 | 2.1 | 149 | 115 | 169.7 | 2.82 | 4500 | 5200 |
| **80** | 140 | 26 | 2 | 71.5 | 54.5 | | | 4500 | 5300 |
| | 170 | 39 | 2.1 | 125 | 86.5 | | | 4000 | 4800 |
| | 200 | 48 | 3 | 160 | 122 | | | 3400 | 4000 |
| **85** | 130 | 22 | 1.1 | 47.5 | 40.0 | 139.7 | 2.82 | 5000 | 6000 |
| | 130 | 22 | 1.1 | 47.5 | 40.0 | | | 5000 | 6000 |
| | 150 | 28 | 2 | 84.0 | 62.0 | | | 4300 | 5000 |
| | 150 | 28 | 2 | 84.0 | 62.0 | | | 4300 | 5000 |
| | 180 | 41 | 3 | 102 | 96.5 | | | 3800 | 4500 |
| | 160 | 30 | 2 | 83.0 | 64.5 | | | 4300 | 5000 |
| **90** | 140 | 24 | 1.5 | 58.5 | 50.0 | | | 4800 | 5600 |
| | 140 | 24 | 1.5 | 61.0 | 51.0 | | | 4800 | 5600 |
| | 140 | 24 | 1.5 | 55.5 | 45.0 | | | 4800 | 5600 |
| | 140 | 24 | 1.5 | 63.5 | 51.0 | | | 4800 | 5600 |
| | 140 | 24 | 1.5 | 63.5 | 51.0 | 149.7 | 2.82 | 4800 | 5600 |
| | 140 | 24 | 1.5 | 58.5 | 50.0 | 149.7 | 2.82 | 4800 | 5600 |
| | 140 | 24 | 1.5 | 58.5 | 50.0 | 149.7 | 2.82 | 4800 | 5600 |
| | 160 | 30 | 2 | 97.0 | 72.0 | | | 3800 | 4500 |
| | 160 | 30 | 2 | 96.0 | 71.5 | 169.7 | 2.82 | 3800 | 4500 |
| | 190 | 43 | 3 | 144 | 108 | | | 3000 | 3800 |
| **95** | 200 | 45 | 3 | 152 | 118 | | | 2800 | 3600 |
| **100** | 250 | 58 | 4 | 214 | 184 | | | 2600 | 3400 |
| | 150 | 24 | 1.5 | 62.4 | 52.9 | | | 4300 | 5000 |
| **105** | 190 | 36 | 2.1 | 135 | 102 | | | 3200 | 3800 |

| Designations | Abutment and fillet dimensions | | | | Snap ring groove dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|
| | $D_{bmin}$ | $d_{hmax}$ | $r_{amax}$ | $D1_{max}$ | a | b | $r0_{max}$ | |
| | mm | | | | | | | kg |
| **6314NR/C3** | 81 | 139 | 2 | 145.24 | 4.9 | 3.1 | 0.6 | 2.62 |
| **6314N/C9** | 81 | 139 | 2 | 145.24 | 4.9 | 3.1 | 0.6 | 2.54 |
| **314MN** | 81 | 139 | 2 | 145.24 | 4.9 | 3.1 | 0.6 | 3.18 |
| **314N/YAD** | 81 | 139 | 2 | 145.24 | 4.9 | 3.1 | 0.6 | 2.92 |
| **6015N-FST** | 81.5 | 108.5 | 1 | 111.81 | 2.87 | 2.7 | 0.6 | 0.622 |
| **6215N** | 83 | 122 | 1.5 | 125.2 | 4.05 | 3.1 | 0.6 | 1.18 |
| **6315N** | 86 | 149 | 2 | 155.22 | 4.9 | 3.1 | 0.6 | 2.92 |
| **315NR/YA8-1** | 86 | 149 | 2.1 | 155.22 | 4.9 | 3.1 | 0.6 | 4.27 |
| **315NR/YA68-1** | 86 | 149 | 2.1 | 155.22 | 4.9 | 3.1 | 0.6 | 4.27 |
| **6216N** | 89 | 131 | 2 | 135.23 | 4.9 | 3.1 | 0.6 | 1.46 |
| **6316N** | 91 | 159 | 2 | 163.65 | 5.69 | 3.5 | 0.6 | 3.63 |
| **6416N** | 93 | 187 | 2.5 | 193.6 | 5.7 | 3.5 | 0.6 | 6.78 |
| **6017NR/YB2** | 91.5 | 123.5 | 1 | 125.22 | 4.06 | 3.1 | 0.6 | 0.981 |
| **6017N/YB2-FST** | 91.5 | 123.5 | 1 | 125.22 | 4.06 | 3.1 | 0.6 | 0.903 |
| **6217N** | 94 | 141 | 2 | 145.2 | 4.9 | 3.1 | 0.6 | 1.82 |
| **6217-ZN** | 94 | 141 | 2 | 145.24 | 4.9 | 3.1 | 0.6 | 1.82 |
| **6317N** | 98 | 167 | 2.5 | 173.66 | 5.69 | 3.5 | 0.6 | 4.23 |
| **6317X3N** | 96 | 145 | 2 | 155.22 | 4.9 | 3.1 | 0.6 | 2.44 |
| **6018N** | 98 | 132 | 1.5 | 135.23 | 3.71 | 3.1 | 0.6 | 1.15 |
| **6018N/HAYAB** | 98 | 132 | 1.5 | 135.23 | 3.71 | 3.1 | 0.6 | 1.12 |
| **6018N/YAB-1** | 98 | 132 | 1.5 | 135.23 | 3.71 | 3.1 | 0.6 | 1.15 |
| **6018N/YAD** | 98 | 132 | 1.5 | 135.23 | 3.71 | 3.1 | 0.6 | 1.11 |
| **6018NR/YAD** | 98 | 132 | 1.5 | 135.23 | 3.71 | 3.1 | 0.6 | 1.18 |
| **6018NR/YAB-2** | 98 | 132 | 1.5 | 135.23 | 3.71 | 3.1 | 0.6 | 1.22 |
| **6018NR/YAB-2-DC** | 98 | 132 | 1.5 | 135.23 | 3.71 | 3.1 | 0.6 | 1.22 |
| **6218N** | 99 | 151 | 2 | 155.22 | 4.9 | 3.1 | 0.6 | 2.18 |
| **6218NR/YA7** | 99 | 151 | 2 | 155.22 | 4.9 | 3.1 | 0.6 | 2.3 |
| **6318N** | 100 | 180 | 2.5 | 183.64 | 5.69 | 3.5 | 0.6 | 4.73 |
| **6319N** | 110 | 185 | 2.5 | 193.65 | 5.69 | 3.5 | 0.6 | 5.79 |
| **6420N** | 116 | 234 | 3 | 242 | 6.5 | 4.5 | 0.6 | 13.1 |
| **6020N** | 108 | 142 | 1.5 | 145.24 | 3.71 | 3.1 | 0.6 | 1.13 |
| **6221N** | 116 | 179 | 2 | 183.6 | 5.7 | 3.5 | 0.6 | 3.79 |

d 50~440 mm



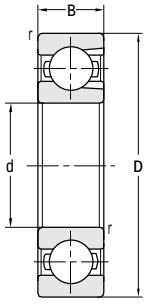



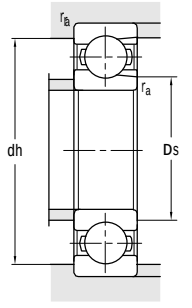

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil |
| mm | | | | kN | | r/min | |
| **50** | 110 | 27 | 2 | 85.5 | 62.0 | 4500 | 6300 |
| **60** | 130 | 31 | 2.1 | 113 | 83.5 | 3800 | 5300 |
| **65** | 140 | 33 | 2.1 | 130 | 90.0 | 3400 | 4800 |
| **70** | 125 | 24 | 1.5 | 84.5 | 73 | 4800 | 5800 |
| | 150 | 35 | 2.1 | 163 | 110 | 3200 | 4500 |
| **75** | 160 | 37 | 2.1 | 204 | 125 | 3000 | 4300 |
| **107** | 145 | 16 | 1.3 | 52.0 | 66.0 | 1500 | 1900 |
| **170** | 260 | 42 | 3.5 | 206 | 294 | 1200 | 1500 |
| **220** | 270 | 24 | 1.5 | 99.0 | 161 | 1100 | 1300 |
| | 300 | 38 | 2.1 | 201 | 292 | 1000 | 1300 |
| **240** | 300 | 28 | 2 | 142 | 212 | 1000 | 1300 |
| **320** | 412 | 38 | 2.5 | 319 | 530 | 900 | 1100 |
| **340** | 460 | 56 | 3 | 420 | 740 | 850 | 1000 |
| **440** | 600 | 74 | 4 | 730 | 1170 | 800 | 950 |

| Designations | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|
| | $D_{smin}$ | $dh_{max}$ | $r_{amax}$ | |
| | mm | | | kg |
| **310V** | 59 | 101 | 2 | 1.01 |
| **312V** | 71 | 119 | 2 | 1.82 |
| **313V** | 76 | 129 | 2 | 2.15 |
| **214V** | 78 | 117 | 1.5 | 1.19 |
| **314V** | 81 | 139 | 2 | 2.65 |
| **315V/C9** | 86 | 149 | 2 | 3.23 |
| **970921** | 114.6 | 137.4 | 1.3 | 0.821 |
| **6034V/YA7** | 182 | 248 | 3.5 | 7.11 |
| **61844V** | 228 | 262 | 1.5 | 2.62 |
| **61944V** | 231 | 289 | 2 | 7.24 |
| **61848V** | 249 | 291 | 2 | 4.93 |
| **970864** | 332 | 400 | 2.5 | 11.8 |
| **61968V** | 353 | 447 | 2.5 | 25.6 |
| **61988V** | 456 | 584 | 3 | 55.6 |

# Deep Groove Ball Bearing(With Filling Slot)

d 30~165 mm




| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{0r}$ | Grease | Oil |
| mm | | | | kN | | r/min | |
| **30** | 62 | 16 | 1 | 23.6 | 16.0 | 10000 | 13000 |
| **43** | 100 | 25 | 1.5 | 65.0 | 43.5 | 5200 | 6600 |
| | 100 | 25 | 1.5 | 65.0 | 43.5 | 5200 | 6600 |
| **45** | 85 | 19 | 1.1 | 43.0 | 32.0 | 5300 | 7500 |
| | 100 | 25 | 1.5 | 65.0 | 43.5 | 5200 | 6600 |
| **50** | 90 | 20 | 1 | 40.0 | 31.0 | 5300 | 6700 |
| | 110 | 27 | 1.5 | 80.0 | 57.0 | 4500 | 6300 |
| **55** | 140 | 33 | 2.1 | 97.5 | 89.0 | 3800 | 4800 |
| **65** | 120 | 23 | 1.5 | 78.0 | 64.0 | 4300 | 6000 |
| | 120 | 23 | 1.5 | 59.2 | 57.3 | 4300 | 6000 |
| | 140 | 33 | 2.1 | 110 | 90.0 | 3400 | 4800 |
| **70** | 125 | 24 | 1.5 | 84.5 | 73.0 | 4000 | 5000 |
| | 130 | 25 | 1.5 | 84.5 | 74.5 | 3400 | 4800 |
| | 180 | 42 | 3 | 133 | 136 | 2700 | 3500 |
| | 180 | 42 | 3 | 140 | 148 | 2700 | 3500 |
| **85** | 160 | 37 | 2.1 | 157 | 125 | 3000 | 3700 |
| | 180 | 41 | 3 | 183 | 157 | 3800 | 4500 |
| **90** | 190 | 43 | 3 | 144 | 108 | 3400 | 4000 |
| **107** | 147 | 16 | 1.3 | 40.0 | 70.0 | 2700 | 3400 |
| **165** | 250.5 | 35 | 2.5 | 187 | 204 | 1200 | 1500 |

| Designations | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|
| | $D_{smin}$ | $dh_{max}$ | $r_{amax}$ | |
| | mm | | | kg |
| **206** | 35 | 57 | 1 | 0.217 |
| **30/43NR** | 52.5 | 90.5 | 1.5 | 0.949 |
| **30/43NR-2Z/YAD** | 52.5 | 90.5 | 1.5 | 0.994 |
| **209** | 51.5 | 78.5 | 1 | 0.492 |
| **309/YA8** | 52.5 | 90.5 | 1.5 | 0.920 |
| **210-Z/YA6** | 56 | 84 | 1 | 0.503 |
| **310** | 59 | 101 | 2 | 1.10 |
| **411N1/YB8** | 66 | 129 | 2 | 2.45 |
| **370213** | 73 | 112 | 1.5 | 1.01 |
| **213** | 73 | 112 | 1.5 | 1.01 |
| **313** | 76 | 129 | 2 | 2.4 |
| **214V** | 78 | 117 | 1.5 | 1.19 |
| **215** | 83 | 122 | 1.5 | 1.32 |
| **414N1-RS** | 83 | 167 | 3 | 4.04 |
| **414N1-Z/YB8** | 83 | 167 | 3 | 5.64 |
| **315V/C9** | 86 | 149 | 2 | 3.23 |
| **6317V** | 98 | 167 | 2.5 | 4.16 |
| **6318V** | 103 | 177 | 2.5 | 4.84 |
| **66/107V** | 115 | 140 | 1.3 | 0.821 |
| **370833** | 177 | 239 | 2.5 | 6.56 |

Raceway of inner ring and outer ring of angular contact ball bearing can displace relatively on on the same horizontal axis, so this design can withstand the combined loads that is made up of axial and radial load at the same time.
Axial load carrying capacity of angular contact ball bearing increases when increasing the contact angle. The definition of contact angle is the angle between wired connecting balls with raceway and vertical axis of bearing on radial plane. When carry loads, it passed one raceway to another along the wired between balls and raceway.
ZWZ can provide various kinds of contact ball bearing in different size
Single-row angular contact ball bearing
(See Figure 1)
Four-point contact ball bearing
(See Figure 2)
Double-row angular contact ball bearing
(See Figure 3 and Figure 4)

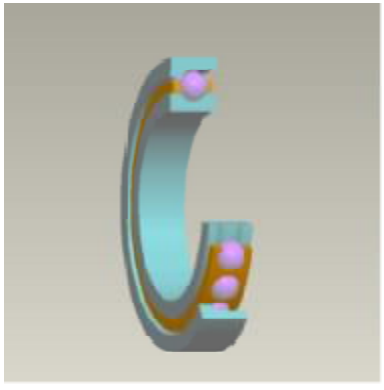


Figure 1

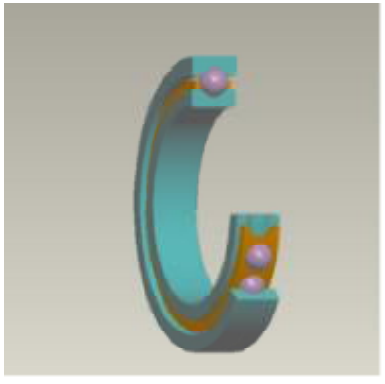


Figure 2



Figure 3

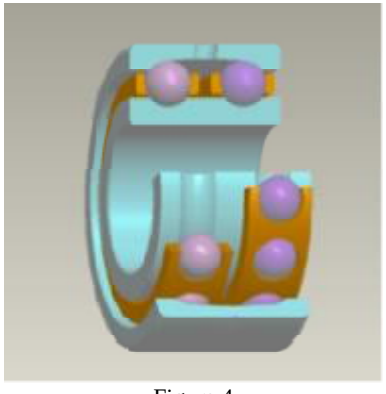


Figure 4

## Design:

### Single-row Angular Contact Ball Bearing

Single-row angular contact ball bearing consists of one outer ring, one inner ring, one-row steel balls and a cage. The bearings can carry radial load and axial load simultaneously. They can also bear even pure axial load and work at higher rotational speed. However, this bearing can only carry axial load in one direction. When it carry radial load, an additional axial force will occur and can only limit the axial displacement of shaft and housing in one direction. Although this bearing can only carry axial load in one direction, it can be mounted with the other bearing carrying a load in contrary direction. If paired mounting, make the end faces of outer rings of two bearings face to face, i.e. wide end face to wide end face (DB type) and narrow end face to narrow end face (DF type). This arrangement can avoid the occurrence of additional axial force and limit the movement of shaft and housing within axial clearance range of bearing in two directions.
Single-row angular contact ball bearing has more balls than those of deep groove ball bearing with the same boundary dimensions and therefore this kind of bearing has the highest load rating among ball bearings, strong rigidity and steady operation. The radial clearance can be adjusted by the relative displacement of inner ring and outer ring. The rigidity of system can be improved by the pre-interference amount generated by placing several bearings in tandem arrangement.
Angular contact ball bearing can not be separated and has poor self-aligning property. The contact angle of this bearing is not zero. The contact angle of single-row angular contact ball bearing is 15*, 25*, 30* and 40*. Contact angle determines how big radial load and axial load the bearing can carry when operating. The bigger the contact angle is, the bigger axial load capacity will be. But the smaller contact angle is positive to high speed rotation.
Single-row angular contact ball bearing doesn't have clearance. Internal clearance can only be achieved through stack mounting. According to applications, the stack mounting bearings have two types, which are preloaded or have pre-clearance. The internal clearance of preloaded stack mounting bearings is zero or negative. This bearing is often used on main shaft of machine tool to improve the rigidity and rotational precision of main shaft. The clearance or preload of matched pair bearing has been set in ZWZ and it is unnecessary for customer to adjust. The width tolerance and end surface convexity of an individual single-row angular contact ball bearing is produced as per normal class so these bearings can not be stack-mounted in random.
ZWZ can also produce universal stack mounting angular-contact ball bearings with DB, DF or in tandem arrangement. The universal stack mounting bearings have two types, which are preloaded or have pre-clearance. Except universal stack mounting bearings, all individual bearings of other kinds of stack mounting bearings are not interchangeable.
This bearing is most used in the applications with high rotation speed, high precision and small axial load such as main shaft of motor of airplane, main shaft of machine tool and other main shafts of high speed and precision machinery. It is also used on high frequency

motor, gas turbine, oil pump, air compressor, printing machines etc. It's a most widely used bearing in machinery industry.

### Double-row Angular Contact Ball Bearing

Design of ZWZ double-row angular contact ball bearing is basically the same with single-row ball bearing, but it only takes less axial space. Double-row angular contact ball bearing can carry radial loads and radial loads from two directions. bearing device with high rigidity can be provided and withstand capsizing moment.

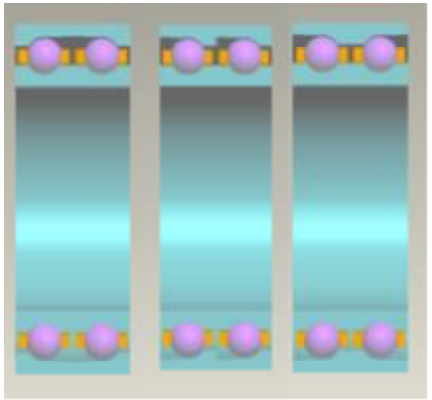
### Single-row angular contact ball bearing and stack mounting angular contact ball bearing

In order to improve the rigidity and load-carry property, the same angular contact ball bearings are often stack mounted in twosome (DB, DF, DT), triplet (TBT, TFT, TT), quaternion (QBC, QFC, QT) and even quintuplet (PBC, PFC, PT, PBT, PFT). For twosome bearings, the type of matched pair can be back to back (DB), face to face (DF) and tandem (DT).

Stack mounting bearings in DB type is suitable for carrying individual or combined radial load and axial load. These bearings can also carry axial loads in two directions, larger tilting moment and have strong rigidity. These bearings can be preloaded properly according to working conditions.

While Stack mounting bearings in DF type can only carry smaller tilting moment and provide inferior system rigidity. But the advantage of these bearings is less sensible to concentricity error of bearing housing.

Stack mounting bearings in tandem arrangement can only carry a larger axial load in one direction. In most occasions, these bearings need to be preloaded by spring and the preload value is associated with the value of radial load carried and bearing rigidity.



### Double-row angular contact ball bearings produced by ZWZ have three kinds of combination way as below:

1. 0000/DC Type, which is made up of two-raceway inner ring and two single-raceway outer ring



Angle of this kind of bearing is 40° to carry big radial load, axial load and combined load from radial and axial direction, mainly used in the components limiting axial displacement of the shaft or housing, with a high limiting rotation speed.

2. 0000D Type, which is made up of two-raceway outer ring and two single-raceway inner ring



Original code is 86000 type. Angle of this kind of bearing is 45° , as well as 26° , 32° and 40° in special situation. It is used to withstand big radial load, axial load and combined load from radial and axial direction, mainly used in the components limiting axial displacement of the shaft or housing, with a high limiting rotation speed.

3. 0000(α=30° )0000A Type, which is made up of two-raceway outer ring and two double-raceway inner ring



Original code is 56000 Type. Angle of this kind of bearing is 30° , as well as 26° , 32° and 40*in special situation. The structure is basically the same as two paired back to back angular contact ball bearings, with smaller width than that of paired bearing. It can carry big combined load from axial and radial direction, as well as a certain axial load from one direction. It can endure big capsizing moment. It is mainly applied in the components limiting axial displacement of the shaft or housing, with a high limiting rotation speed. Generally, there is a filling slot on one end. The cage uses copper cage. When the suffix code contains TN, the cage is made up of nylon, the ring without filling slot and can carry equal axial load from two directions.

## Common Information and Data

### Dimension

Basic dimension of ZWZ angular contact ball bearing has been listed in the dimension data table

### Single-row angular contact ball bearing
ID dimension range: 25mm~1180mm
OD dimension range: 62mm~1420mm
Width dimension range: 16mm~106mm

### Stack mounting angular contact ball bearing
ID dimension range: 30mm~1320mm
OD dimension range: 62mm~1600mm
Width dimension range: 32mm~244mm

### Double-row angular contact ball bearing
ID dimension range: 35mm~320mm
OD dimension range: 72mm~460mm
Width dimension range: 27mm~160mm

## Tolerance
The standard tolerance of Single-row angular-contact ball bearing manufactured by Class P0 but ZWZ can also supply the bearings meeting precision Class P6 or higher. For a single bearing with contact angle (a) of 15* and 25* used for paired mounting, the precision class meets P5. For a single bearing with contact angle (a) of 40* used for paired mounting, the precision class meets P6. ZWZ also can supply the bearings with precision 4A , 2A or other precision requirement.
Please refer to standard tolerances listed in the table of preface pages.

## Internal Clearance and Preload
Single-row angular contact ball bearing can reach a certain internal clearance only after mounting, and it depends on another bearing adjustment used for axial location of supplying contrary direction.
ZWZ stack mounting bearings are divided into preload and preclearance.

### Preload
GA——Light preload
GB——Medium preload
GC——Heavy preload

### Preclearance
CA——Small axial clearance
CB——Medium axial clearance
CC——Big axial clearance

Preload
The preload values (Unit:μm) of DB or DF matched pair bearings are listed in below table:

Contact angle 15°

| ID code | (B)71900C | | | (B)7000C | | | (B)7200C | | |
|---|---|---|---|---|---|---|---|---|---|
| | A | B | C | A | B | C | A | B | C |
| 00 | 10 | 20 | 40 | 15 | 30 | 60 | 20 | 40 | 80 |
| 01 | 10 | 20 | 40 | 15 | 30 | 60 | 20 | 40 | 80 |
| 02 | 15 | 30 | 60 | 20 | 40 | 80 | 30 | 60 | 120 |
| 03 | 15 | 30 | 60 | 25 | 50 | 100 | 35 | 70 | 140 |
| 04 | 25 | 50 | 100 | 35 | 70 | 140 | 45 | 90 | 180 |
| 05 | 25 | 50 | 100 | 35 | 70 | 140 | 50 | 100 | 200 |
| 06 | 25 | 50 | 100 | 50 | 100 | 200 | 90 | 180 | 360 |
| 07 | 35 | 70 | 140 | 60 | 120 | 240 | 120 | 240 | 480 |
| 08 | 45 | 90 | 180 | 60 | 120 | 240 | 150 | 300 | 600 |
| 09 | 50 | 100 | 200 | 110 | 220 | 440 | 160 | 320 | 640 |
| 10 | 50 | 100 | 200 | 110 | 220 | 440 | 170 | 340 | 680 |
| 11 | 70 | 140 | 280 | 150 | 300 | 600 | 210 | 420 | 840 |
| 12 | 70 | 140 | 280 | 150 | 300 | 600 | 250 | 500 | 1000 |
| 13 | 80 | 160 | 320 | 160 | 320 | 640 | 290 | 580 | 1160 |
| 14 | 130 | 260 | 520 | 200 | 400 | 800 | 300 | 600 | 1200 |
| 15 | 130 | 260 | 520 | 200 | 400 | 800 | 310 | 620 | 1240 |
| 16 | 140 | 280 | 560 | 240 | 480 | 960 | 370 | 740 | 1480 |
| 17 | 170 | 340 | 680 | 250 | 500 | 1000 | 370 | 740 | 1480 |
| 18 | 180 | 360 | 720 | 300 | 600 | 1200 | 480 | 960 | 1920 |
| 19 | 190 | 380 | 760 | 310 | 620 | 1240 | 520 | 1040 | 2080 |
| 20 | 230 | 460 | 920 | 310 | 620 | 1240 | 590 | 1180 | 2360 |
| 21 | 230 | 460 | 920 | 360 | 720 | 1440 | 650 | 1300 | 2600 |
| 22 | 230 | 460 | 920 | 420 | 840 | 1680 | 670 | 1340 | 2680 |
| 24 | 290 | 580 | 1160 | 430 | 860 | 1720 | 750 | 1500 | 3000 |
| 26 | 350 | 700 | 1400 | 560 | 1120 | 2240 | 800 | 1600 | 3200 |
| 28 | 360 | 720 | 1440 | 570 | 1140 | 2280 | | | |
| 30 | 470 | 940 | 1880 | 650 | 1300 | 2600 | | | |
| 32 | 490 | 980 | 1960 | 730 | 1460 | 2920 | | | |
| 34 | 500 | 1000 | 2000 | 800 | 1600 | 3200 | | | |
| 36 | 630 | 1260 | 2520 | 900 | 1800 | 3600 | | | |
| 38 | 640 | 1280 | 2560 | 950 | 1900 | 3800 | | | |
| 40 | 800 | 1600 | 3200 | 1100 | 2200 | 4400 | | | |
| 44 | 850 | 1700 | 3400 | 1250 | 2500 | 5000 | | | |
| 48 | - | - | - | 1300 | 2600 | 5200 | | | |

Contact angle 25°，Contact angle 40°

| ID code | (B)71900C | | | (B)7000AC | | | (B)7200AC | | | 7200B、7300B | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | B | C | A | B | C | A | B | C | A | B | C |
| 00 | 15 | 30 | 60 | 25 | 50 | 100 | 35 | 70 | 140 | 80 | 330 | 660 |
| 01 | 15 | 30 | 60 | 25 | 50 | 100 | 35 | 70 | 140 | 80 | 330 | 660 |
| 02 | 25 | 50 | 100 | 30 | 60 | 120 | 45 | 90 | 180 | 80 | 330 | 660 |
| 03 | 25 | 50 | 100 | 40 | 80 | 160 | 60 | 120 | 240 | 80 | 330 | 660 |
| 04 | 35 | 70 | 140 | 50 | 100 | 200 | 70 | 140 | 280 | 120 | 480 | 970 |
| 05 | 40 | 80 | 160 | 60 | 120 | 240 | 80 | 160 | 320 | 120 | 480 | 970 |
| 06 | 40 | 80 | 160 | 90 | 180 | 360 | 150 | 300 | 600 | 120 | 480 | 970 |
| 07 | 60 | 120 | 240 | 90 | 180 | 360 | 190 | 380 | 760 | 160 | 630 | 1280 |
| 08 | 70 | 140 | 280 | 100 | 200 | 400 | 240 | 480 | 960 | 160 | 630 | 1280 |
| 09 | 80 | 160 | 320 | 170 | 340 | 680 | 260 | 520 | 1040 | 160 | 630 | 1280 |
| 10 | 80 | 160 | 320 | 180 | 360 | 720 | 260 | 520 | 1040 | 160 | 630 | 1280 |
| 11 | 120 | 240 | 480 | 230 | 460 | 920 | 330 | 660 | 1320 | 380 | 1500 | 3050 |
| 12 | 120 | 240 | 480 | 240 | 480 | 960 | 400 | 800 | 1600 | 380 | 1500 | 3050 |
| 13 | 120 | 240 | 480 | 240 | 480 | 960 | 450 | 900 | 1800 | 380 | 1500 | 3050 |
| 14 | 200 | 400 | 800 | 300 | 600 | 1200 | 480 | 960 | 1920 | 380 | 1500 | 3050 |
| 15 | 210 | 420 | 840 | 310 | 620 | 1240 | 500 | 1000 | 2000 | 380 | 1500 | 3050 |
| 16 | 220 | 440 | 880 | 390 | 780 | 1560 | 580 | 1160 | 2320 | 380 | 1500 | 3050 |
| 17 | 270 | 540 | 1080 | 400 | 800 | 1600 | 600 | 1200 | 2400 | 410 | 1600 | 3250 |
| 18 | 280 | 560 | 1120 | 460 | 920 | 1840 | 750 | 1500 | 3000 | 410 | 1600 | 3250 |
| 19 | 290 | 580 | 1160 | 480 | 960 | 1920 | 850 | 1700 | 3400 | 410 | 1600 | 3250 |
| 20 | 360 | 720 | 1440 | 500 | 1000 | 2000 | 950 | 1900 | 3800 | 410 | 1600 | 3250 |
| 21 | 360 | 720 | 1440 | 560 | 1120 | 2240 | 1000 | 2000 | 4000 | 410 | 1600 | 3250 |
| 22 | 370 | 740 | 1480 | 650 | 1300 | 2600 | 1050 | 2100 | 4200 | 410 | 1600 | 3250 |
| 24 | 450 | 900 | 1800 | 690 | 1380 | 2760 | 1200 | 2400 | 4800 | 410 | 1600 | 3250 |
| 26 | 540 | 1080 | 2160 | 900 | 1800 | 3600 | 1250 | 2500 | 5000 | 540 | 2150 | 4300 |
| 28 | 560 | 1120 | 2240 | 900 | 1800 | 3600 | | | | 540 | 2150 | 4300 |
| 30 | 740 | 1480 | 2960 | 1000 | 2000 | 4000 | | | | 540 | 2150 | 4300 |
| 32 | 800 | 1600 | 3200 | 1150 | 2300 | 4600 | | | | 540 | 2150 | 4300 |
| 34 | 800 | 1600 | 3200 | 1250 | 2500 | 5000 | | | | 540 | 2150 | 4300 |
| 36 | 1000 | 2000 | 4000 | 1450 | 2900 | 5800 | | | | 540 | 2150 | 4300 |
| 38 | 1000 | 2000 | 4000 | 1450 | 2900 | 5800 | | | | 940 | 3700 | 7500 |
| 40 | 1250 | 2500 | 5000 | 1750 | 3500 | 7000 | | | | 940 | 3700 | 7500 |
| 44 | 1300 | 2600 | 5200 | 2000 | 4000 | 8000 | | | | 940 | 3700 | 7500 |
| 48 | | | | 2050 | 4100 | 8200 | | | | 940 | 3700 | 7500 |

For multi-stacking mounting bearings that consist of three or more than three sets of bearing, the preload values are the number of following coefficient mutiplied by the preload value of DB or DF matched pair bearings.

| Stack mounting type | | Coefficient |
|---|---|---|
| TBT | TFT | 1.35 |
| QBT | QFT | 1.60 |
| QBC | QFC | 2 |
| DBT | DFT | 1.75 |
| PBC | PFC | 2.45 |

## Pre-clearance

Axial pre-clearance values (Unit:μm) of 7200B series and 7300B series matched pair bearings (DB or DF type) are listed as below:

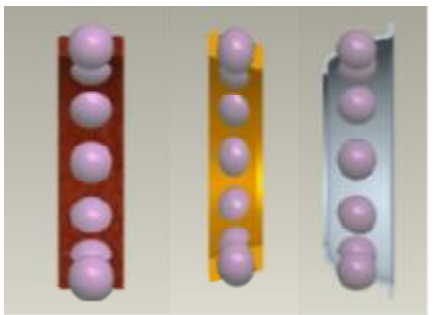
| d mm | | CA | | CB | | CC | |
|---|---|---|---|---|---|---|---|
| Over | To | min | max | min | max | min | max |
| - | 10 | 4 | 12 | 14 | 22 | 22 | 30 |
| 10 | 18 | 5 | 13 | 15 | 23 | 24 | 32 |
| 18 | 30 | 7 | 15 | 18 | 26 | 32 | 40 |
| 30 | 50 | 9 | 17 | 22 | 30 | 40 | 48 |
| 50 | 80 | 11 | 23 | 26 | 38 | 48 | 60 |
| 80 | 120 | 14 | 26 | 32 | 44 | 55 | 67 |
| 120 | 180 | 17 | 29 | 35 | 47 | 62 | 74 |
| 180 | 250 | 21 | 37 | 45 | 61 | 74 | 90 |

## Error of Centralization

For single-row angular contact ball bearing, ability of allowing angle error is limited. When it can not cause over additional stress to bearing, the angle error allowed by inner and outer ring depends on the radial clearance, bearing dimension, internal design, force and moment acted on bearing during bearing running. Due to the complicated relations among these factors, a specific common value can not be supplied. The paired bearing, especially for bearing pack that is mounted back to back with small axial clearance, when angle error existing in inner and outer ring, it will cause the balls carry bigger load. As a result, increase the stress on the cage and shorten bearing service life. Any angle error can lead to increase of noise. When angle error existing in inner and outer ring of double-row angular contact ball bearing, it will cause bigger load acted on balls and raceway. Any angle error can induce noise increasing and shortening bearing service life.

## Cage

Self-aligning ball bearing has stamped steel cage, solid brass cage and nylon cage. The material of cage is sheet steel, brass and synthetic resin.



a b c

Four-point angular contact bearing has solid brass cage without suffix after basic bearing number.

For a single bearing, the bearings in matched pair: when outside diameter is less than 250mm and contact angle is 15° and 25° , the material of cage is cotton fabric phenolic laminate. When outside diameter is more than 250mm, the material of cage is solid brass or hard aluminum.

Cotton fabric phenolic laminate cage is adopted for the bearings meeting precision P5, P4 and P2. And there is no suffix following basic bearing number.

Cotton fabric phenolic laminate cage is also adopted for Angular contact ball bearings with locking slot on inner ring or any changed bearings based on them. And there is no suffix following basic bearing number.

Stamped sheet (strip) steel cage is adopted for Double-row angular contact ball bearings and there is no suffix following basic bearing number.

The bearing with nylon cage can operate under ambient temperature of 120 or higher. The solid brass cage is considered when the bearing is used under high temperature or critical conditions.

Please contact ZWZ in advance if requesting for the bearing with non-standard cage.

## Dynamic Equivalent Load

### Single-row angular contact ball bearing with contact angle of 15°

Single bearing or two bearings in tandem arrangement

P=Fr [kN] When Fa/Fr≤e

P=0.44Fr+YFa [kN] When Fa/Fr>e

Two bearings in back-to-back arrangement or face-to-face arrangement

P=Fr +Y1Fa [kN] When Fa/Fr≤e

P=0.72Fr+Y2Fa [kN] When Fa/Fr>e

The values of e, Y, Y1 and Y2 are as follows:

| $Fa/C_0$ | e | Y | $Y_1$ | $Y_2$ |
|---|---|---|---|---|
| 0.015 | 0.38 | 1.47 | 1.65 | 2.39 |
| 0.029 | 0.40 | 1.40 | 1.57 | 2.28 |
| 0.058 | 0.43 | 1.30 | 1.46 | 2.11 |
| 0.087 | 0.46 | 1.23 | 1.38 | 2.00 |
| 0.12 | 0.47 | 1.19 | 1.34 | 1.93 |
| 0.17 | 0.50 | 1.12 | 1.26 | 1.82 |
| 0.29 | 0.55 | 1.02 | 1.14 | 1.66 |
| 0.44 | 0.56 | 1.00 | 1.12 | 1.63 |
| 0.58 | 0.56 | 1.00 | 1.12 | 1.63 |

Note: C0 is basic static load rating of a single bearing.

### Single-row angular contact ball bearing with contact angle of 25°

Single bearing or two bearings in tandem arrangement

P=Fr [kN] When Fa/Fr≤0.68

P=0.41Fr+0.87Fa [kN] When Fa/Fr>0.68

Two bearings in back-to-back arrangement or face-to-face arrangement

P=Fr+0.92Fa [kN] When Fa/Fr≤0.68

P=0.67Fr+1.41Fa [kN] When Fa/Fr>0.68

### Single-row angular contact ball bearing with contact angle of 40°

Single bearing or two bearings in tandem arrangement

P=Fr [kN] When Fa/Fr≤1.14

P=0.35Fr+0.57Fa [kN] When Fa/Fr>1.14

Two bearings in back-to-back arrangement or face-to-face arrangement

P=Fr +0.55Fa [kN] When Fa/Fr≤1.14

P=0.57Fr+0.93Fa [kN] When Fa/Fr>1.14

### Double-row angular contact ball bearing

When contact angle is 30°

P=Fr +0.78 Fa [kN] When Fa/Fr≤0.8

P=0.63Fr+1.24Fa [kN] When Fa/Fr>0.8

When contact angle is 45°

P=Fr +0.47Fa [kN] When Fa/Fr≤1.34

P=0.54Fr+0.81Fa [kN] When Fa/Fr>1.34

## Static Equivalent Load

### Single-row angular contact ball bearing with contact angle of 15°

P0=0.5Fr +0.46Fa [kN]

When F0<Fr Choose P0= Fr

Two bearings in back-to-back arrangement or face-to-face arrangement

P0=Fr +0.92Fa [kN]

### Single-row angular contact ball bearing with contact angle of 25°

Single bearing or two bearings in tandem arrangement

P0=0.5Fr +0.38Fa [kN]

When F0<Fr Choose Po= Fr

Two bearings in back-to-back arrangement or face-to-face arrangement

P0=Fr+0.76Fa [kN]

### Single-row angular contact ball bearing with contact angle of 40°

Single bearing or two bearings in tandem arrangement

P0=0.5Fr +0.26Fa [kN]

When F0<Fr Choose P0= Fr

Two bearings in back-to-back arrangement or face-to-face arrangement

P0=Fr+0.52Fa [kN]

### Double-row angular contact ball bearing

When contact angle is 30°

P0=Fr+0.66Fa [kN]

When contact angle is 45°

P0=Fr+0.44Fa [kN]

## Supplement Code

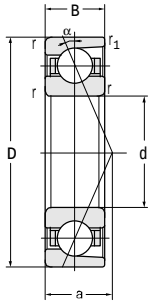
A Contact angle is 30°
AC Contact angle is 25°
B Contact angle is 40°
C Contact angle is 15°
C1 Clearance conforms to Group 1 specified in standard clearance
C2 Clearance conforms to Group 2 specified in standard clearance
C3 Clearance conforms to Group3 specified in standard clearance
C4 Clearance conforms to Group3 specified in standard clearance
C9 Clearance is different from current standard

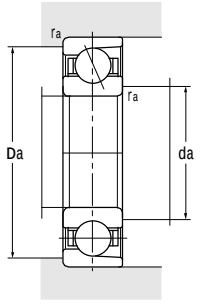
When there are two or more than two clearance is different from current standard clearance in uniform code, use attached digits

CA Axial clearance is small
CB Axial clearance is bigger than CA
CC Axial clearance is bigger than CB
CX Axial clearance is nonstandard
D Double-row angular contact ball bearing, double inner rings, contact angle is 45°
DC Double-row angular contact ball bearing, double inner rings
DB Two angular contact ball bearings used in back to back paired mounting
DF Two angular contact ball bearings used in face to face paired mounting
DT Two angular contact ball bearings used in tandem arrangement
DBA Two angular contact ball bearings used in back to back paired mounting, light preload
DBAX Two angular contact ball bearings used in back to back paired mounting, nonstandard light preload
DBB Two angular contact ball bearings used in back to back paired mounting, medium preload
DBBX Two angular contact ball bearings used in back to back paired mounting nonstandard medium preload
DFA Two angular contact ball bearings used in face to face paired mounting, light preload
DTA Two angular contact ball bearings used in tandem arrangement in the same direction, light preload
F1 Carbon steel solid cage



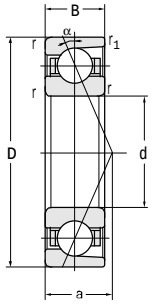
F3 Nodular cast iron solid cage
GA Light preload, preload value is small
HA Ring, rolling element and cage or only the ring and cage is made up of vacuum smelting bearing steel
J Pressed-sheet steel cage, attach digits to tell when material changes
K Bearing with taper hole, taper of 1:12
L3 Aluminium and zinc alloy solid cage
M Bronze solid cage
N1 Bearing outer ring with a positioning notch
P4 Dimensional precision and rotational precision conform to ISO tolerance level 4
P4A Tolerance level is higher than P4
P5 Dimensional precision and rotational precision conform to ISO tolerance level 5
Q1 Aluminium, fe and mn bronze solid cage
Q5 Tin-bronze solid cage
RS Bearing with skeleton-type rubber sealing ring on one side ( contact type)
2RS Bearing with RS shield on two sides
S0 Bearing ring after high-temperature tempering, the working temperature reaches 150℃
T Phenolic cloth laminated tube solid cage
TA Phenolic cloth laminated tube solid cage, guided with outer ring
TN1 Nylon cage
TYN Plyamide resin cage
V1 Speed conforms to V1 group as specified in standard
W33 Oil groove and three lubrication holes on the outer ring
W33A Oil groove and four lubrication holes on the outer ring
X1 Outer diameter is nonstandard
X2 Width (height) is nonstandard
X3 Outer diameter and width (height) are nonstandard (standard inner diameter)
YA1 Outside surface of bearing outer ring is different from standard design
YA3 End face of bearing ring is different from standard design
YA6 Mounting chamfer of bearing is different from standard design
YA8 Cage structure changes
YB2 Dimension and tolerance of bearing change

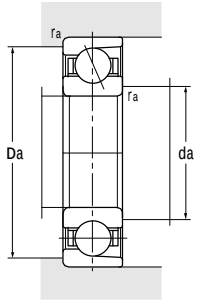


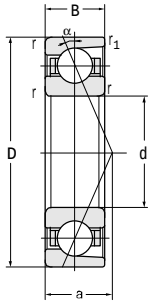

| Principal dimensions | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|
| d | D | B | r | $r_1$ | Cr | Cor | Grease | Oil |
| mm | | | | | kN | | r/min | |
| **25** | 47 | 12 | 0.6 | 0.3 | 11.1 | 8.1 | 10000 | 15000 |
| | 52 | 15 | 1 | 1 | 15.9 | 9.6 | 10000 | 15000 |
| | 62 | 17 | 1.1 | 0.6 | 28.6 | 16.0 | 10000 | 15000 |
| | 62 | 17 | 1.1 | 0.6 | 24.7 | 14.0 | 9000 | 13000 |
| **30** | 55 | 13 | 1 | 1 | 14.3 | 10.0 | 1000 | 13000 |
| | 62 | 16 | 1.1 | 0.3 | 21.0 | 14.0 | 8500 | 12000 |
| | 72 | 19 | 1.1 | 0.6 | 31.8 | 21.0 | 8500 | 13000 |
| | 72 | 19 | 1.1 | 0.6 | 31.0 | 19.5 | 8000 | 11000 |
| | 72 | 19 | 1.1 | 0.6 | 33.6 | 18.0 | 8000 | 11000 |
| **35** | 72 | 17 | 1.1 | 1.1 | 30.5 | 20.7 | 8000 | 11000 |
| | 72 | 17 | 1.1 | 0.6 | 32.5 | 22.0 | 9000 | 12000 |
| | 72 | 17 | 1.1 | 0.6 | 27.0 | 19.0 | 8000 | 11000 |
| | 72 | 17 | 1.1 | 0.6 | 29.0 | 18.0 | 8000 | 11000 |
| | 80 | 21 | 1.5 | 0.6 | 40.3 | 26.0 | 8000 | 11000 |
| **35** | 80 | 21 | 1.5 | 0.6 | 39.0 | 25.0 | 7800 | 10500 |
| | 80 | 21 | 1.5 | 0.6 | 39.0 | 25.0 | 7500 | 10000 |
| | 80 | 21 | 1.5 | 0.6 | 39.0 | 25.0 | 6000 | 8000 |
| | 100 | 25 | 1.5 | 0.6 | 70.2 | 42.0 | 6300 | 8000 |
| | 100 | 25 | 1.5 | 0.6 | 70 | 42.0 | 6000 | 8000 |
| **40** | 68 | 15 | 1 | 1 | 20.5 | 15.9 | 8300 | 11000 |
| | 80 | 18 | 1.1 | 0.6 | 36.4 | 25.0 | 8000 | 11000 |
| | 80 | 18 | 1.1 | 0.6 | 36.4 | 25.0 | 6400 | 8800 |
| | 80 | 18 | 1.1 | 0.6 | 47.2 | 21.5 | 10000 | 15000 |
| | 80 | 18 | 1.1 | 0.6 | 34.5 | 24.1 | 7000 | 9500 |
| | 80 | 18 | 1.1 | 0.6 | 34.5 | 24.1 | 7000 | 9500 |
| | 90 | 23 | 1.5 | 0.6 | 46.8 | 32.5 | 7600 | 10000 |
| | 90 | 23 | 1.5 | 0.6 | 46.8 | 31.0 | 6000 | 8000 |
| | 90 | 23 | 1.5 | 0.6 | 46.8 | 30.0 | 6000 | 8000 |
| | 90 | 23 | 1.5 | 0.6 | 46.8 | 30.0 | 6000 | 8000 |

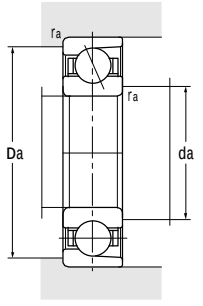
| Designations | Contact points | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|
| | a | $da_{max}$ | $Da_{max}$ | $ra_{max}$ | |
| | | mm | | | kg |
| **7005AC** | 22.8 | 25 | 43 | 0 | 0.0758 |
| **7205C** | 24 | 30.6 | 46 | 1 | 0.14 |
| **7305C** | 14.3 | 32 | 55 | 1 | 0.224 |
| **7305BM** | 27.2 | 32 | 55 | 1 | 0.277 |
| **7006C** | 12.2 | 35.5 | 49.5 | 1 | 0.118 |
| **7206AC** | 27 | 35.6 | 56 | 1 | 0.215 |
| **7306C** | 16.3 | 37 | 65 | 1 | 0.346 |
| **7306ACM** | 21.6 | 37 | 65 | 1 | 0.413 |
| **7306BM** | 30.9 | 37 | 65 | 1 | 0.371 |
| **7207AC** | 31 | 42 | 65 | 1 | 0.304 |
| **7207C** | 15.7 | 42 | 65 | 1 | 0.304 |
| **7207BTN1** | 31 | 42 | 65 | 1 | 0.285 |
| **7207BM** | 30.9 | 42 | 65 | 1 | 0.328 |
| **7307C** | 18.2 | 44 | 71 | 1.5 | 0.335 |
| **7307ACM** | 24.1 | 44 | 71 | 1.5 | 58.5 |
| **7307BM** | 35 | 44 | 71 | 1.5 | 0.551 |
| **7307B** | 35 | 44 | 71 | 1.5 | 0.481 |
| **7407ACM** | 28.3 | 44 | 91 | 1.5 | 1.14 |
| **7407AC** | 41 | 46 | 89 | 1.5 | 0.977 |
| **7008C** | 14.8 | 45.5 | 62.5 | 1 | 0.188 |
| **7208C** | 17 | 47 | 73 | 1 | 0.364 |
| **B7208C** | 17 | 47 | 73 | 1 | 0.383 |
| **7208CTN1/HQ1** | 17 | 47 | 73 | 1 | 0.312 |
| **7208AC** | 34 | 47 | 73 | 1 | 0.367 |
| **7208ACM** | 34 | 47 | 73 | 1 | 0.429 |
| **7308C** | 20.2 | 49 | 81 | 1.5 | 0.624 |
| **7308ACM** | 26.7 | 49 | 81 | 1.5 | 0.711 |
| **7308B** | 38.8 | 49 | 81 | 1.5 | 0.653 |
| **7308BM** | 38.8 | 49 | 81 | 1.5 | 0.711 |



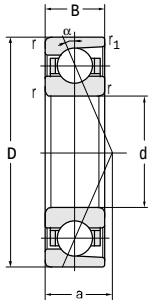



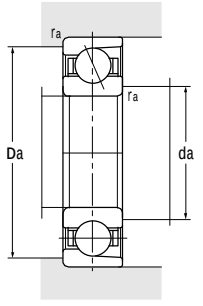

| Principal dimensions | | | | | Basic load ratings | | Limit speed ratings | | Designations | Contact points | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | r | $r_1$ | Cr | Cor | Grease | Oil | | a | $da_{max}$ | $Da_{max}$ | $ra_{max}$ | |
| mm | | | | | kN | | r/min | | | | mm | | | kg |
| **40** | 110 | 27 | 2 | 1 | 90.5 | 39.0 | 5600 | 7500 | **7408BM** | 45 | 60 | 100 | 2 | 1.47 |
| **45** | 75 | 16 | 1 | 0.3 | 24.5 | 19 | 9500 | 13000 | **7009AC** | 25.3 | 51 | 69 | 1 | 0.239 |
| | 75 | 16 | 1 | 1 | 24.7 | 19.3 | 14000 | 18000 | **7009C** | 16 | 50.5 | 69.5 | 1 | 0.24 |
| | 85 | 19 | 1.1 | 0.6 | 40.3 | 29.0 | 9600 | 13600 | **B7209C** | 18.2 | 52 | 78 | 1 | 0.418 |
| | 85 | 19 | 1.1 | 0.6 | 40.3 | 29.0 | 6900 | 9200 | **7209C** | 18.2 | 52 | 78 | 1 | 0.403 |
| | 85 | 19 | 1.1 | 0.6 | 39.0 | 27.5 | 6700 | 9000 | **7209AC** | 37 | 52 | 78 | 1 | 0.404 |
| | 85 | 19 | 1.1 | 0.6 | 39.0 | 27.5 | 6700 | 9000 | **7209ACM** | 37 | 52 | 78 | 1 | 0.49 |
| | 100 | 25 | 1.5 | 0.6 | 63.7 | 42.5 | 7000 | 9500 | **7309C** | 22.2 | 64 | 91 | 1.5 | 0.834 |
| | 100 | 25 | 1.5 | 0.6 | 64.1 | 42.5 | 7000 | 9500 | **7309C/P4** | 22.2 | 64 | 91 | 1.5 | 0.834 |
| | 100 | 25 | 1.5 | 0.6 | 65.0 | 45.0 | 6000 | 8000 | **7309ACM** | 29.4 | 64 | 91 | 1.5 | 1.02 |
| | 100 | 25 | 1.5 | 0.6 | 68.3 | 39.5 | 5600 | 7500 | **7309BM** | 42.9 | 64 | 91 | 1.5 | 1.02 |
| | 100 | 25 | 1.5 | 0.6 | 58 | 39.5 | 5600 | 7500 | **7309BM** | 42.9 | 64 | 91 | 1.5 | 1.01 |
| | 100 | 25 | 1.5 | 0.6 | 55 | 45.0 | 6000 | 8000 | **7309ACM** | 43 | 54 | 91 | 1.5 | 1.01 |
| | 120 | 29 | 2 | 1 | 79.5 | 52.0 | 4800 | 6300 | **7409BM** | 48 | 55 | 110 | 2 | 1.82 |
| | 120 | 29 | 2 | 1 | 79.5 | 52.0 | 4800 | 6300 | **7409BT** | 48 | 55 | 110 | 2 | 1.65 |
| **50** | 80 | 16 | 1 | 0.3 | 26.5 | 17.3 | 8000 | 10000 | **7010CM** | 16.7 | 57 | 73 | 1 | 0.309 |
| | 80 | 16 | 1 | 0.3 | 26 | 22.0 | 8000 | 17000 | **7010C** | 16.8 | 55.5 | 74.5 | 1 | 0.249 |
| | 80 | 16 | 1 | 0.3 | 25 | 20.5 | 8500 | 10000 | **7010AC** | 26.8 | 56 | 74 | 1 | 0.254 |
| | 80 | 16 | 1 | 0.3 | 25.0 | 20.5 | 7000 | 9000 | **7010ACM** | 23.2 | 57 | 73 | 1 | 0.314 |
| | 90 | 20 | 1.1 | 0.6 | 42.9 | 32.0 | 6400 | 8500 | **7210C** | 19.4 | 57 | 83 | 1 | 0.458 |
| | 90 | 20 | 1.1 | 0.6 | 42.9 | 32.0 | 6080 | 8000 | **B7210C** | 19.4 | 57 | 83 | 1 | 0.506 |
| | 90 | 20 | 1.1 | 0.6 | 40.3 | 30.0 | 5800 | 7800 | **7210AC** | 26.3 | 57 | 83 | 1 | 0.460 |
| | 90 | 20 | 1.1 | 0.6 | 41 | 30.0 | 5800 | 7800 | **7210ACM** | 26.3 | 57 | 83 | 1 | 0.561 |
| | 90 | 20 | 1.1 | 0.6 | 37.7 | 29.0 | 4480 | 6400 | **7210B** | 39.4 | 57 | 83 | 1 | 0.487 |
| | 110 | 27 | 2 | 1 | 71.5 | 49.0 | 5600 | 7500 | **7310ACM** | 32.2 | 60 | 100 | 2 | 1.21 |
| | 110 | 27 | 2 | 1 | 70.0 | 44.0 | 5000 | 6700 | **7310BM** | 47.1 | 60 | 100 | 2 | 1.17 |
| | 110 | 27 | 2 | 1 | 75.4 | 51.0 | 7000 | 8700 | **7310C** | 24.2 | 60 | 100 | 2 | 1.04 |
| | 110 | 27 | 2 | 1 | 75.4 | 51.0 | 7000 | 8700 | **7310CM** | 24.2 | 60 | 100 | 2 | 1.21 |
| | 110 | 27 | 2 | 1 | 70.0 | 44.0 | 4000 | 5400 | **7310B** | 47.1 | 60 | 100 | 2 | 1.05 |
| | 110 | 27 | 2 | 1 | 70.0 | 44.0 | 5300 | 7000 | **7310BM** | 47 | 61 | 99 | 2 | 1.19 |
| | 130 | 31 | 2.1 | 1.1 | 105 | 70.0 | 5000 | 7000 | **7410ACM** | 36.5 | 62 | 118 | 2.1 | 2.30 |
| | 130 | 31 | 2.1 | 1.1 | 96.4 | 64.0 | 4000 | 6000 | **7410BM** | 53.3 | 62 | 118 | 2.1 | 2.36 |
| | 130 | 31 | 2.1 | 1.1 | 105 | 70.0 | 4500 | 6000 | **7410AC** | 53 | 64 | 116 | 2 | 1.95 |



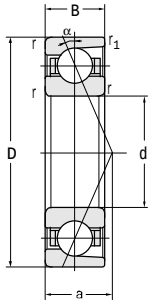



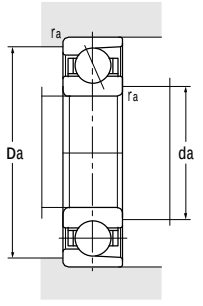

| Principal dimensions | | | | | Basic load ratings | | Limit speed ratings | | Designations | Contact points | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | r | $r_1$ | Cr | Cor | Grease | Oil | | a | $da_{max}$ | $Da_{max}$ | $ra_{max}$ | |
| mm | | | | | kN | | r/min | | | | mm | | | kg |
| **55** | 90 | 18 | 1.1 | 0.6 | 31.2 | 26.0 | 10000 | 12000 | **7011AC** | 25.9 | 62 | 83 | 1 | 0.385 |
| | 90 | 18 | 1.1 | 1.1 | 32.5 | 27.0 | 11000 | 15000 | **7011C** | 18.7 | 62 | 83 | 1 | 0.386 |
| | 100 | 21 | 1.5 | 0.6 | 53.3 | 40.0 | 8000 | 10000 | **7211C** | 20.9 | 64 | 91 | 1.5 | 0.599 |
| | 100 | 21 | 1.5 | 0.6 | 53.3 | 40.0 | 8000 | 10000 | **B7211C** | 20.9 | 64 | 91 | 1.5 | 0.600 |
| | 100 | 21 | 1.5 | 0.6 | 50.7 | 38.0 | 7100 | 10000 | **7211AC** | 28.6 | 64 | 91 | 1.5 | 0.599 |
| | 100 | 21 | 1.5 | 0.6 | 53.3 | 40.0 | 8000 | 10000 | **7211CM** | 20.9 | 65 | 91 | 1.5 | 0.698 |
| | 100 | 21 | 1.5 | 0.6 | 50.7 | 32.0 | 8000 | 10000 | **7211C/HQ1** | 20.9 | 65 | 91 | 1.5 | 0.578 |
| | 100 | 21 | 1.5 | 0.6 | 34.0 | 34.0 | 5600 | 8000 | **7211BM** | 43 | 65 | 91 | 1.5 | 1.698 |
| | 120 | 29 | 2 | 1 | 92.3 | 65.0 | 7000 | 8700 | **7311CM** | 26.2 | 65 | 110 | 2 | 1.65 |
| | 120 | 29 | 2 | 1 | 92.3 | 65.0 | 7000 | 8700 | **7311C** | 26.2 | 65 | 110 | 2 | 1.44 |
| | 120 | 29 | 2 | 1 | 91.0 | 65.0 | 5000 | 6700 | **7311AC** | 34.9 | 65 | 110 | 2 | 1.44 |
| | 120 | 29 | 2 | 1 | 88.4 | 63.0 | 5000 | 6700 | **7311ACM** | 34.9 | 65 | 110 | 2 | 1.65 |
| | 120 | 29 | 2 | 1 | 88.4 | 63.0 | 5000 | 6700 | **7311ACQ1** | 34.9 | 65 | 110 | 2 | 1.64 |
| | 120 | 29 | 2 | 1 | 81.0 | 56.0 | 4500 | 6300 | **7311BM** | 51.2 | 65 | 110 | 2 | 1.61 |
| | 140 | 33 | 2.1 | 1.1 | 121 | 84.0 | 4500 | 6300 | **7411ACM** | 39.3 | 67 | 128 | 2.1 | 2.79 |
| | 140 | 33 | 2.1 | 1.1 | 120 | 90.0 | 4300 | 5600 | **7411AC** | 58 | 69 | 126 | 2 | 2.38 |
| **60** | 95 | 18 | 1.1 | 0.6 | 35.1 | 30.0 | 7100 | 10000 | **7012AC** | 27.1 | 67 | 88 | 1 | 0.392 |
| | 110 | 22 | 1.5 | 0.6 | 55.9 | 43.0 | 6700 | 9000 | **7212AC** | 30.8 | 69 | 101 | 1.5 | 0.786 |
| | 110 | 22 | 1.5 | 0.6 | 55.9 | 43.0 | 6700 | 9000 | **7212ACM** | 30.8 | 69 | 101 | 1.5 | 0.951 |
| | 110 | 22 | 1.5 | 0.6 | 58.5 | 45.0 | 9500 | 13000 | **7212C** | 22.4 | 69 | 101 | 1.5 | 0.786 |
| | 110 | 22 | 1.5 | 0.6 | 49.4 | 36.0 | 5600 | 7800 | **7212BM** | 46.7 | 69 | 101 | 1.5 | 0.947 |
| | 110 | 22 | 1.5 | 1.5 | 55.5 | 43.0 | 5000 | 6700 | **7212ACM** | 47 | 69 | 101 | 1.5 | 0.945 |
| | 130 | 31 | 2.1 | 1.1 | 94.9 | 67.0 | 4800 | 6300 | **7312AC** | 37.7 | 72 | 118 | 2 | 1.80 |
| | 130 | 31 | 2.1 | 1.1 | 95 | 67.0 | 4800 | 6300 | **7312AC/P4** | 37.7 | 72 | 118 | 2 | 1.82 |
| | 130 | 31 | 2.1 | 1.1 | 94.9 | 67.0 | 4800 | 6300 | **7312ACM** | 37.7 | 72 | 118 | 2 | 2.12 |
| | 130 | 31 | 2.1 | 1.1 | 91.0 | 60.0 | 4300 | 5600 | **7312BM** | 55.4 | 72 | 118 | 2 | 2.14 |
| | 130 | 31 | 2.1 | 1.1 | 91.0 | 60.0 | 3500 | 4500 | **7312B** | 55.4 | 72 | 118 | 2 | 1.86 |
| | 130 | 31 | 2.1 | 1.1 | 83.6 | 70.0 | 4500 | 6000 | **7312CM** | 55 | 72 | 118 | 2 | 2.03 |
| | 150 | 35 | 2.1 | 1.1 | 131 | 95.0 | 3800 | 5000 | **7412ACM** | 42 | 72 | 138 | 2 | 3.65 |
| | 150 | 35 | 2.1 | 1.1 | 120 | 86.0 | 3000 | 4000 | **7412BM** | 61.6 | 72 | 138 | 2 | 3.42 |
| | 150 | 35 | 2.1 | 1.1 | 92.0 | 86.0 | 3800 | 5000 | **7412BT** | 62 | 74 | 136 | 2 | 3.15 |
| | 150 | 35 | 2.1 | 1.1 | 130 | 96.0 | 3800 | 5000 | **7412AC** | 62 | 74 | 136 | 2 | 3.11 |
| **65** | 100 | 18 | 1.1 | 0.6 | 33.8 | 31.0 | 6700 | 9500 | **7013AC** | 28.2 | 72 | 93 | 1 | 0.414 |
| | 100 | 18 | 1.1 | 0.6 | 37.7 | 34.0 | 5400 | 7600 | **7013ACJ** | 28.2 | 72 | 93 | 1 | 0.410 |



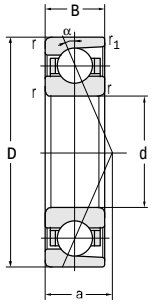



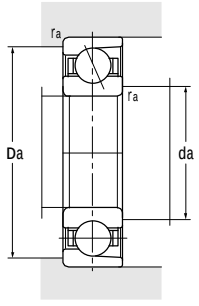

| Principal dimensions | | | | | Basic load ratings | | Limit speed ratings | | Designations | Contact points | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | r | $r_1$ | Cr | Cor | Grease | Oil | | a | $da_{max}$ | $Da_{max}$ | $ra_{max}$ | |
| mm | | | | | kN | | r/min | | | | mm | | | kg |
| **65** | 100 | 18 | 1.1 | 0.6 | 33.8 | 31.0 | 6700 | 9500 | **7013ACM** | 28.2 | 72 | 93 | 1 | 0.504 |
| | 100 | 18 | 1.1 | 0.6 | 33 | 30.5 | 6700 | 9500 | **7013ACM** | 32.8 | 72 | 93 | 1 | 0.504 |
| | 120 | 23 | 1.5 | 0.6 | 72.8 | 59.0 | 9000 | 12000 | **7213C** | 23.9 | 74 | 111 | 1.5 | 1.02 |
| | 120 | 23 | 1.5 | 0.6 | 72.8 | 56.0 | 6000 | 8500 | **7213AC/P5** | 33.1 | 74 | 111 | 1.5 | 1.02 |
| | 120 | 23 | 1.5 | 0.6 | 70.2 | 56.0 | 6000 | 8500 | **7213ACM** | 33.1 | 74 | 111 | 1.5 | 1.16 |
| | 120 | 23 | 1.5 | 0.6 | 70.2 | 56.0 | 6000 | 8500 | **7213AC/YB5** | 33.1 | 74 | 111 | 1.5 | 1.02 |
| | 120 | 23 | 1.5 | 0.6 | 74 | 59.0 | 9000 | 12000 | **7213CM** | 50 | 74 | 111 | 1.5 | 1.16 |
| | 140 | 33 | 2.1 | 1.1 | 120 | 88.0 | 8000 | 10000 | **7313CM** | 30.2 | 77 | 128 | 2 | 2.50 |
| | 140 | 33 | 2.1 | 1.1 | 120 | 88.0 | 6400 | 8000 | **7313CJ** | 30.2 | 77 | 128 | 2 | 2.23 |
| | 140 | 33 | 2.1 | 1.1 | 120 | 88.0 | 6300 | 8000 | **7313C** | 30.2 | 77 | 128 | 2 | 2.23 |
| | 140 | 33 | 2.1 | 1.1 | 114 | 84.0 | 4300 | 6000 | **7313ACM** | 40.4 | 77 | 128 | 2 | 2.61 |
| | 140 | 33 | 2.1 | 1.1 | 114 | 84.0 | 3400 | 4800 | **7313ACJ** | 40.4 | 77 | 128 | 2 | 2.24 |
| | 140 | 33 | 2.1 | 1.1 | 114 | 84.0 | 4300 | 6000 | **7313AC** | 40.4 | 77 | 128 | 2 | 2.24 |
| | 140 | 33 | 2.1 | 1.1 | 101 | 75.0 | 3800 | 5300 | **7313BM** | 59.5 | 77 | 128 | 2 | 2.48 |
| | 140 | 33 | 2.1 | 1.1 | 114 | 84.0 | 3500 | 4800 | **B7313ACM** | 40.4 | 77 | 128 | 2 | 2.61 |
| | 140 | 33 | 2.1 | 1.1 | 101 | 75.0 | 3000 | 4200 | **7313B** | 59.5 | 77 | 128 | 2 | 1.95 |
| | 160 | 37 | 2.1 | 1.1 | 129 | 97.0 | 2800 | 4300 | **7413BM** | 65.7 | 77 | 148 | 2 | 3.82 |
| **70** | 110 | 20 | 1.1 | 0.6 | 44.2 | 41.0 | 6300 | 8500 | **7014AC** | 31 | 77 | 103 | 1 | 0.626 |
| | 110 | 20 | 1.1 | 0.6 | 44.2 | 41.0 | 6300 | 8500 | **7014ACM** | 31 | 77 | 103 | 1 | 0.725 |
| | 125 | 24 | 1.5 | 0.6 | 79.3 | 65.0 | 8500 | 11000 | **7214CM** | 25.1 | 79 | 116 | 1.5 | 1.24 |
| | 125 | 24 | 1.5 | 0.6 | 79.3 | 65.0 | 8500 | 11000 | **7214C** | 25.1 | 79 | 116 | 1.5 | 1.10 |
| | 125 | 24 | 1.5 | 0.6 | 75.4 | 62.0 | 5600 | 8000 | **7214ACM** | 34.7 | 79 | 116 | 1.5 | 1.24 |
| | 125 | 24 | 1.5 | 0.6 | 75.4 | 62.0 | 5600 | 8000 | **7214AC** | 34.7 | 79 | 116 | 1.5 | 1.10 |
| | 125 | 24 | 1.5 | 0.6 | 79.3 | 65.0 | 6800 | 8800 | **B7214C** | 25.1 | 79 | 116 | 1.5 | 1.16 |
| | 125 | 24 | 1.5 | 0.6 | 79.3 | 65.0 | 8500 | 11000 | **7214CTN1** | 25.1 | 79 | 116 | 1.5 | 1.09 |
| | 125 | 24 | 1.5 | 0.6 | 68.0 | 54.0 | 4000 | 5600 | **7214BM** | 52.9 | 79 | 116 | 1.5 | 1.27 |
| | 150 | 35 | 2.1 | 1.1 | 134 | 100 | 6500 | 8000 | **7314C** | 32.2 | 82 | 138 | 2 | 2.69 |



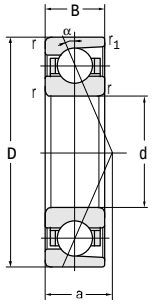



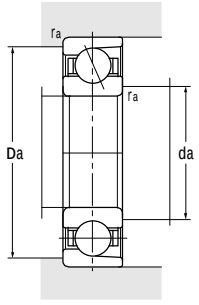

| Principal dimensions | | | | | Basic load ratings | | Limit speed ratings | | Designations | Contact points | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | r | $r_1$ | Cr | Cor | Grease | Oil | | a | $da_{max}$ | $Da_{max}$ | $ra_{max}$ | |
| mm | | | | | kN | | r/min | | | | mm | | | kg |
| **70** | 150 | 35 | 2.1 | 1.1 | 134 | 100 | 6500 | 8000 | **7314CM** | 32.2 | 82 | 138 | 2 | 3.04 |
| | 150 | 35 | 2.1 | 1.1 | 129 | 96.0 | 4000 | 5300 | **7314AC** | 43.2 | 82 | 138 | 2 | 2.69 |
| | 150 | 35 | 2.1 | 1.1 | 129 | 96.0 | 4000 | 5300 | **7314ACM** | 43.2 | 82 | 138 | 2 | 3.04 |
| | 150 | 35 | 2.1 | 1.1 | 114 | 86.0 | 3200 | 4200 | **7314B** | 63.7 | 82 | 138 | 2 | 2.85 |
| | 150 | 35 | 2.1 | 1.1 | 114 | 86.0 | 3600 | 5000 | **7314BM** | 63.7 | 82 | 138 | 2 | 3.16 |
| | 180 | 42 | 3 | 1.1 | 164 | 131 | 3600 | 5000 | **7414ACM** | 50.1 | 84 | 166 | 2.5 | 5.22 |
| | 180 | 42 | 3 | 1.1 | 164 | 131 | 2900 | 4000 | **7414ACJ** | 50.1 | 84 | 166 | 2.5 | 4.86 |
| | 180 | 42 | 3 | 1.1 | 148 | 118 | 2500 | 3500 | **7414BM** | 73.4 | 84 | 166 | 2.5 | 5.64 |
| | 180 | 42 | 3 | 1.1 | 114 | 118 | 3200 | 4300 | **7414BT** | 74 | 84 | 166 | 2.5 | 5.23 |
| | 180 | 42 | 3 | 1.1 | 163 | 131 | 3200 | 4300 | **7414AC** | 74 | 84 | 166 | 2.5 | 4.76 |
| **75** | 115 | 20 | 1.1 | 1.1 | 46.5 | 43.5 | 6800 | 8500 | **7015C** | 22.7 | 82 | 108 | 1 | 0.641 |
| | 130 | 25 | 1.5 | 0.6 | 78.7 | 66.5 | 6800 | 8500 | **7215C/P5** | 26.2 | 84 | 121 | 1.5 | 1.24 |
| | 130 | 25 | 1.5 | 0.6 | 79.3 | 67.0 | 5600 | 7500 | **7215ACM** | 36.4 | 84 | 121 | 1.5 | 1.34 |
| | 130 | 25 | 1.5 | 0.6 | 79.3 | 67.0 | 5600 | 7500 | **7215AC** | 36.4 | 84 | 121 | 1.5 | 1.18 |
| | 130 | 25 | 1.5 | 0.6 | 79.3 | 67.0 | 4480 | 6000 | **7215ACJ** | 36.4 | 84 | 121 | 1.5 | 1.18 |
| | 130 | 25 | 1.5 | 0.6 | 79.3 | 67.0 | 4480 | 6000 | **7215ACTN1** | 36.4 | 84 | 121 | 1.5 | 1.21 |
| | 160 | 37 | 2.1 | 1.1 | 146 | 113 | 5800 | 7000 | **7315CM** | 34.2 | 87 | 148 | 2 | 3.57 |
| | 160 | 37 | 2.1 | 1.1 | 146 | 113 | 4800 | 5600 | **7315CJ** | 34.2 | 87 | 148 | 2 | 3.11 |
| | 160 | 37 | 2.1 | 1.1 | 140 | 109 | 3800 | 5000 | **7315AC** | 45.9 | 87 | 148 | 2 | 3.11 |
| | 160 | 37 | 2.1 | 1.1 | 140 | 109 | 3800 | 5000 | **7315ACM** | 45.9 | 87 | 148 | 2 | 3.54 |
| | 160 | 37 | 2.1 | 1.1 | 140 | 109 | 3800 | 5000 | **7315ACQ1** | 45.9 | 87 | 148 | 2 | 3.52 |
| | 160 | 37 | 2.1 | 1.1 | 125 | 97.0 | 3400 | 4800 | **7315BM** | 67.8 | 87 | 148 | 2 | 3.4 |
| | 160 | 37 | 2.1 | 1.1 | 125 | 97.0 | 2700 | 3800 | **7315B** | 67.8 | 87 | 148 | 2 | 3.26 |
| | 160 | 37 | 2.1 | 1.1 | 140 | 109 | 3400 | 4800 | **7315ACJ** | 45.9 | 87 | 148 | 2 | 3.10 |
| | 160 | 37 | 2.1 | 1.1 | 140 | 109 | 3800 | 5000 | **7315ACTN1** | 45.9 | 87 | 148 | 2 | 3.08 |
| | 190 | 45 | 3 | 1.1 | 159 | 130 | 2400 | 3800 | **7415BM** | 78.2 | 89 | 176 | 2.5 | 6.80 |
| | 190 | 45 | 3 | 1.1 | 122 | 130 | 2400 | 3800 | **7415BT** | 78.2 | 89 | 176 | 2.5 | 6.30 |




| Principal dimensions | | | | | Basic load ratings | | Limit speed ratings | | Designations | Contact points | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | r | $r_1$ | Cr | Cor | Grease | Oil | | a | $da_{max}$ | $Da_{max}$ | $ra_{max}$ | |
| mm | | | | | kN | | r/min | | | | mm | | | kg |
| **80** | 125 | 22 | 1.1 | 0.6 | 55.9 | 53.0 | 6500 | 8000 | **7016AC/P4** | 24.7 | 87 | 118 | 1 | 0.845 |
| | 125 | 22 | 1.1 | 0.6 | 56.5 | 52.5 | 5600 | 7500 | **7016AC** | 40.6 | 87 | 118 | 1 | 0.849 |
| | 125 | 22 | 1.1 | 0.6 | 55.9 | 53.0 | 6500 | 8000 | **7016CA/HQ1P4** | 24.7 | 87 | 118 | 1 | 0.845 |
| | 125 | 22 | 1.1 | 0.6 | 55.9 | 53.0 | 4500 | 6000 | **7016ACJ** | 34.9 | 87 | 118 | 1 | 0.849 |
| | 125 | 22 | 1.1 | 0.6 | 55.9 | 53.0 | 5600 | 7500 | **7016ACM** | 34.9 | 87 | 118 | 1 | 0.983 |
| | 140 | 26 | 2 | 1.1 | 126 | 82.5 | 3800 | 5000 | **7216C** | 59 | 91 | 129 | 2 | 1.52 |
| | 140 | 26 | 2 | 1 | 97.5 | 83.0 | 7500 | 10000 | **7216CM** | 27.7 | 90 | 130 | 2 | 1.74 |
| | 140 | 26 | 2 | 1 | 92.3 | 79.0 | 5000 | 7100 | **7216ACM** | 38.7 | 90 | 130 | 2 | 1.73 |
| | 140 | 26 | 2 | 1 | 97.5 | 83.0 | 6000 | 8000 | **B7216C** | 27.7 | 90 | 130 | 2 | 1.47 |
| | 140 | 26 | 2 | 1 | 92.3 | 79.0 | 5000 | 7100 | **7216AC** | 38.7 | 90 | 130 | 2 | 1.48 |
| | 140 | 26 | 2 | 1 | 92.3 | 79.0 | 5000 | 7100 | **7216AC/P4** | 38.7 | 90 | 130 | 2 | 1.48 |
| | 170 | 39 | 2.1 | 1.1 | 152 | 122 | 3600 | 4800 | **7316ACM** | 48.7 | 92 | 158 | 2 | 4.1 |
| | 170 | 39 | 2.1 | 1.1 | 152 | 122 | 2800 | 3800 | **7316ACJ** | 48.7 | 92 | 158 | 2 | 3.88 |
| | 170 | 39 | 2.1 | 1.1 | 152 | 122 | 3600 | 4800 | **7316AC** | 48.7 | 92 | 158 | 2 | 3.59 |
| | 170 | 39 | 2.1 | 1.1 | 152 | 122 | 3600 | 4800 | **7316ACF3** | 48.7 | 92 | 158 | 2 | 4.15 |
| | 170 | 39 | 2.1 | 1.1 | 135 | 109 | 3400 | 4500 | **7316BM** | 71.9 | 92 | 158 | 2 | 4.15 |
| | 200 | 48 | 3 | 1.1 | 195 | 168 | 2600 | 3800 | **7416ACM** | 56.7 | 94 | 186 | 2.5 | 8.60 |
| | 200 | 48 | 3 | 1.1 | 195 | 168 | 2600 | 3800 | **7416AC** | 56.7 | 94 | 186 | 2.5 | 7.18 |
| | 200 | 48 | 3 | 1.1 | 195 | 168 | 2100 | 3000 | **7416ACJ** | 56.7 | 94 | 186 | 2.5 | 7.22 |
| | 200 | 48 | 3 | 1.1 | 178 | 153 | 2200 | 3200 | **7416BM** | 82.7 | 96 | 184 | 2.5 | 8.05 |
| | 200 | 48 | 3 | 1.1 | 178 | 153 | 2200 | 3200 | **7416BT** | 77 | 96 | 184 | 2.5 | 7.3 |
| **85** | 130 | 22 | 1.1 | 0.6 | 57.2 | 56.0 | 5300 | 7100 | **7017ACM** | 36.1 | 92 | 123 | 1 | 1.11 |
| | 130 | 22 | 1.1 | 0.6 | 57.2 | 56.0 | 5300 | 7100 | **7017AC** | 36.1 | 92 | 123 | 1 | 0.95 |
| | 130 | 22 | 1.1 | 1.1 | 59.5 | 58.5 | 7600 | 10000 | **7017C** | 25.5 | 92 | 123 | 1 | 0.901 |
| | 150 | 28 | 2 | 1 | 104 | 90.0 | 6700 | 9500 | **7217CM** | 29.7 | 95 | 140 | 2 | 2.11 |
| | 150 | 28 | 2 | 1 | 104 | 90.0 | 5400 | 7600 | **7217CJ** | 29.7 | 95 | 140 | 2 | 1.96 |
| | 150 | 28 | 2 | 1 | 98.8 | 86.0 | 4800 | 6700 | **7217AC** | 41.4 | 95 | 140 | 2 | 1.91 |
| | 150 | 28 | 2 | 1 | 98.8 | 86.0 | 4800 | 6700 | **7217ACTN1** | 41.4 | 95 | 140 | 2 | 1.96 |
| | 150 | 28 | 2 | 1 | 98.8 | 86.0 | 4800 | 6700 | **7217ACM** | 41.4 | 95 | 140 | 2 | 1.72 |
| | 150 | 28 | 2 | 1 | 98.8 | 86.0 | 3800 | 5400 | **7217ACJ** | 41.4 | 95 | 140 | 2 | 1.97 |
| | 150 | 28 | 2 | 1 | 97 | 72.0 | 3600 | 4800 | **7217BM** | 63 | 96 | 139 | 2 | 2.26 |

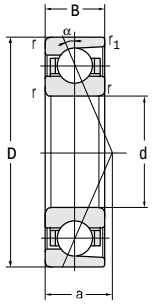


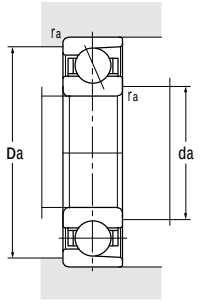




| Principal dimensions | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|
| d | D | B | r | $r_1$ | Cr | Cor | Grease | Oil |
| mm | | | | | kN | | r/min | |
| **85** | 180 | 41 | 3 | 1.1 | 146 | 122 | 3000 | 4000 |
| | 180 | 41 | 3 | 1.1 | 146 | 122 | 3000 | 4000 |
| | 180 | 41 | 3 | 1.1 | 146 | 122 | 3000 | 4000 |
| | 180 | 41 | 3 | 1.1 | 125 | 137 | 3200 | 4300 |
| | 180 | 41 | 3 | 1.1 | 165 | 137 | 3200 | 4300 |
| | 180 | 41 | 3 | 1.1 | 123 | 122 | 3200 | 4300 |
| | 180 | 41 | 3 | 1.1 | 165 | 137 | 3200 | 4300 |
| | 140 | 24 | 1.5 | 0.6 | 67.6 | 66.0 | 4800 | 6700 |
| | 140 | 24 | 1.5 | 0.6 | 45.0 | 57.0 | 4300 | 6200 |
| **90** | 140 | 24 | 1.5 | 0.6 | 69.0 | 66.0 | 4800 | 6700 |
| | 140 | 24 | 1.5 | 0.6 | 58.5 | 57.0 | 4300 | 6200 |
| | 160 | 30 | 2 | 1 | 122 | 105 | 6300 | 9000 |
| | 160 | 30 | 2 | 1 | 122 | 105 | 6300 | 9000 |
| | 160 | 30 | 2 | 1 | 117 | 100 | 4500 | 6000 |
| | 160 | 30 | 2 | 1 | 117 | 100 | 3600 | 4800 |
| | 160 | 30 | 2 | 1 | 117 | 100 | 4500 | 6000 |
| | 160 | 30 | 2 | 1 | 103 | 88.0 | 3200 | 4300 |
| | 160 | 30 | 2 | 1 | 117 | 100.0 | 3400 | 4500 |
| | 190 | 43 | 3 | 1.1 | 120 | 135.0 | 3000 | 4000 |
| | 190 | 43 | 3 | 1.1 | 135 | 152.0 | 3000 | 4000 |
| | 190 | 43 | 3 | 1.1 | 141 | 158.0 | 3000 | 4000 |
| | 190 | 43 | 3 | 1.1 | 183 | 158 | 5200 | 6300 |
| | 190 | 43 | 3 | 1.1 | 176 | 152 | 3200 | 4300 |
| | 190 | 43 | 3 | 1.1 | 156 | 135 | 2800 | 3800 |
| | 190 | 43 | 3 | 1.1 | 172 | 145 | 4200 | 8800 |
| | 190 | 43 | 3 | 1.1 | 156 | 135 | 2200 | 3000 |
| | 225 | 54 | 4 | 1.5 | 233 | 214 | 2900 | 4000 |
| | 225 | 54 | 4 | 1.5 | 210 | 193 | 1900 | 2900 |
| | 225 | 54 | 4 | 1.5 | 230 | 213 | 1900 | 2800 |
| | 225 | 54 | 4 | 1.5 | 210 | 193 | 1900 | 2800 |
| **95** | 145 | 24 | 1.5 | 0.6 | 53.5 | 69.0 | 5200 | 6300 |

| Designations | Contact points a | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|
| | | $da_{max}$ | $Da_{max}$ | $ra_{max}$ | |
| | | mm | | | kg |
| **7317BM** | 76.1 | 99 | 166 | 2.5 | 4.89 |
| **7317BT** | 76.1 | 99 | 166 | 2.5 | 4.34 |
| **7317BTN1** | 76.2 | 99 | 166 | 2.5 | 4.26 |
| **7317AC** | 76 | 99 | 166 | 2.5 | 4.35 |
| **7317ACM** | 76 | 99 | 166 | 2.5 | 5.02 |
| **7317BM** | 76 | 99 | 166 | 2.5 | 5.02 |
| **IS-7317ACM** | 76 | 99 | 166 | 2.5 | 5.02 |
| **7018ACM** | 38.8 | 99 | 131 | 1.5 | 1.39 |
| **7018BT** | 60.2 | 99 | 131 | 1.5 | 1.2 |
| **7018ACMA/P5** | 38.8 | 99 | 131 | 1.5 | 1.37 |
| **7018BM** | 60.2 | 99 | 131 | 1.5 | 1.43 |
| **7218CM** | 31.7 | 100 | 150 | 2 | 2.37 |
| **7218C** | 31.7 | 100 | 150 | 2 | 2.09 |
| **7218ACM** | 44.1 | 100 | 150 | 2 | 2.39 |
| **7218ACJ** | 44.1 | 100 | 150 | 2 | 2.16 |
| **7218AC** | 44.1 | 100 | 150 | 2 | 2.11 |
| **7218BM** | 67.4 | 100 | 150 | 2 | 3.38 |
| **7218ACM-NTW** | 67 | 101 | 149 | 2 | 2.39 |
| **7318BT** | 80 | 104 | 176 | 2.5 | 4.75 |
| **7318AC** | 80 | 104 | 176 | 2.5 | 5.35 |
| **7318C** | 80 | 104 | 176 | 2.5 | 4.96 |
| **7318CM** | 40.3 | 104 | 176 | 2.5 | 5.7 |
| **7318ACM** | 54.1 | 104 | 176 | 2.5 | 6.17 |
| **7318BM** | 80.2 | 104 | 176 | 2.5 | 5.13 |
| **B7318C** | 40.3 | 104 | 176 | 2.5 | 4.90 |
| **7318B** | 80.2 | 104 | 176 | 2.5 | 4.94 |
| **7418ACM** | 63.8 | 108 | 207 | 3 | 11.5 |
| **7418BM** | 93.1 | 110 | 205 | 3 | 11.4 |
| **7418AC** | 86 | 110 | 205 | 3 | 10 |
| **7418BT** | 86 | 110 | 205 | 3 | 10.3 |
| **7019ACM** | 40 | 93 | 135 | 1.5 | 1.44 |

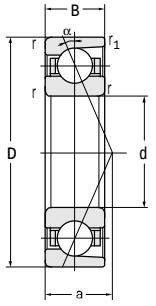
d 95~110 mm

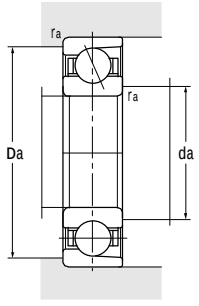



| Principal dimensions | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|
| d | D | B | r | $r_1$ | Cr | Cor | Grease | Oil |
| mm | | | | | kN | | r/min | |
| **95** | 145 | 24 | 1.5 | 0.6 | 53.5 | 69 | 5200 | 6300 |
| | 145 | 24 | 1.5 | 1.5 | 74 | 73 | 6700 | 8900 |
| | 170 | 32 | 2.1 | 1.1 | 139 | 120 | 6000 | 8500 |
| | 170 | 32 | 2.1 | 1.1 | 139 | 120 | 4800 | 6800 |
| | 170 | 32 | 2.1 | 1.1 | 133 | 114 | 4300 | 5600 |
| | 170 | 32 | 2.1 | 1.1 | 133 | 114 | 3400 | 4500 |
| | 170 | 32 | 2.1 | 1.1 | 116 | 101 | 3000 | 4000 |
| | 200 | 45 | 3 | 1.1 | 168 | 150 | 2900 | 3900 |
| | 200 | 45 | 3 | 1.5 | 196 | 174 | 2800 | 3800 |
| | 200 | 45 | 3 | 1.1 | 188 | 167 | 2800 | 3800 |
| **100** | 150 | 24 | 1.5 | 0.6 | 76.7 | 77.0 | 4500 | 6000 |
| | 180 | 34 | 2.1 | 1.1 | 156 | 136 | 5600 | 8000 |
| | 180 | 34 | 2.1 | 1.1 | 130 | 114 | 2800 | 3800 |
| | 180 | 34 | 2.1 | 1.1 | 148 | 130 | 4000 | 5300 |
| | 180 | 34 | 2.1 | 1.1 | 148 | 130 | 4000 | 5300 |
| | 215 | 47 | 3 | 1.1 | 210 | 198 | 2600 | 3600 |
| | 215 | 47 | 3 | 1.1 | 213 | 199 | 2800 | 3800 |
| | 215 | 47 | 3 | 1.1 | 190 | 177 | 2400 | 3400 |
| | 215 | 47 | 3 | 1.1 | 190 | 177 | 1900 | 2700 |
| | 215 | 47 | 3 | 1.1 | 190 | 177 | 1900 | 2700 |
| | 215 | 47 | 3 | 1.1 | 210 | 198 | 2600 | 3600 |
| **105** | 190 | 36 | 2.1 | 1.1 | 131 | 114 | 2800 | 3800 |
| | 225 | 49 | 3 | 1.1 | 202 | 193 | 2400 | 3200 |
| **110** | 170 | 21 | 1.5 | 1.5 | 76.7 | 82.0 | 4800 | 6800 |
| | 170 | 28 | 2 | 1 | 98.8 | 101 | 3200 | 4200 |
| | 170 | 28 | 2 | 1 | 98.8 | 101 | 3200 | 4200 |
| | 170 | 28 | 2 | 1 | 98.8 | 101 | 4000 | 5300 |
| | 170 | 28 | 2 | 1 | 98.8 | 101 | 4000 | 5300 |
| | 175 | 30 | 1.1 | 0.7 | 103 | 104 | 3200 | 4200 |

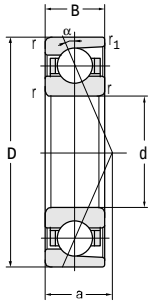
| Designations | Contact points a | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|
| | | $da_{max}$ | $Da_{max}$ | $ra_{max}$ | |
| | | mm | | | kg |
| **7019AC** | 40 | 93 | 135 | 1.5 | 1.21 |
| **7019C** | 28.3 | 103.5 | 136.5 | 1.5 | 1.21 |
| **7219CM** | 33.8 | 107 | 158 | 2 | 2.95 |
| **7219CJ** | 33.8 | 107 | 158 | 2 | 2.76 |
| **7219ACM** | 46.9 | 107 | 158 | 2 | 2.95 |
| **7219ACJ** | 46.9 | 107 | 158 | 2 | 2.76 |
| **7219B** | 71.7 | 107 | 158 | 2 | 3.00 |
| **7319BM** | 84.4 | 109 | 186 | 2.5 | 6.67 |
| **7319CM** | 84 | 109 | 186 | 2.5 | 6.32 |
| **7319ACM** | 84 | 109 | 186 | 2.5 | 6.32 |
| **7020AC** | 41.2 | 109 | 141 | 1.5 | 1.25 |
| **7220CM** | 35.8 | 112 | 168 | 2 | 3.57 |
| **7220BM** | 75.7 | 112 | 168 | 2 | 4.00 |
| **7220AC** | 49.6 | 112 | 168 | 2 | 3.25 |
| **7220AC/P4** | 49.6 | 112 | 168 | 2 | 3.25 |
| **7320AC** | 90 | 114 | 201 | 2.5 | 8.33 |
| **7320ACM** | 60.2 | 114 | 201 | 2.5 | 9.61 |
| **7320BM** | 89.6 | 114 | 201 | 2.5 | 8.41 |
| **7320B** | 89.6 | 114 | 201 | 2.5 | 7.29 |
| **7320BT** | 89.6 | 114 | 201 | 2.5 | 7.58 |
| **7320ACM** | 90 | 114 | 201 | 2.5 | 9.68 |
| **7221ACM** | 80 | 117 | 178 | 2 | 4.36 |
| **7321BM** | 93.7 | 119 | 211 | 2.5 | 9.51 |
| **7022AX2M** | 50.9 | 115 | 165 | 1.5 | 1.86 |
| **7022ACJ** | 46.6 | 120 | 160 | 2 | 1.90 |
| **B7022AC** | 47 | 120 | 160 | 2 | 2.03 |
| **7022ACM** | 46.7 | 120 | 160 | 2 | 2.41 |
| **7022AC** | 46.7 | 120 | 160 | 2 | 2.16 |
| **46722K** | 49.7 | 117 | 168 | 1 | 2.38 |

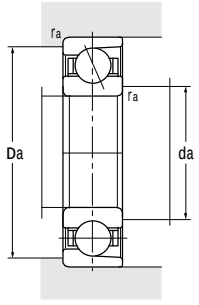


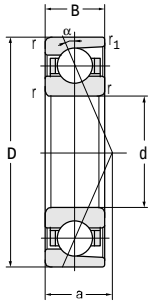

| Principal dimensions | | | | | Basic load ratings | | Limit speed ratings | | Designations | Contact points | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | r | $r_1$ | Cr | Cor | Grease | Oil | | a | $da_{max}$ | $Da_{max}$ | $ra_{max}$ | |
| mm | | | | | kN | | r/min | | | | mm | | | kg |
| **110** | 200 | 38 | 2.1 | 1.1 | 185 | 171 | 5000 | 7100 | **7222CM** | 39.8 | 122 | 188 | 2 | 5.03 |
| | 200 | 38 | 2.1 | 1.1 | 185 | 171 | 4000 | 5700 | **7222CJ** | 39.8 | 122 | 188 | 2 | 4.14 |
| | 200 | 38 | 2.1 | 1.1 | 185 | 171 | 5000 | 7100 | **7222C** | 39.8 | 122 | 188 | 2 | 4.07 |
| | 200 | 38 | 2.1 | 1.1 | 176 | 164 | 3600 | 4800 | **7222ACM** | 55.1 | 122 | 188 | 2 | 4.65 |
| | 200 | 38 | 2.1 | 1.1 | 176 | 164 | 3600 | 4800 | **7222AC** | 55.1 | 122 | 188 | 2 | 4.07 |
| | 200 | 38 | 2.1 | 1.1 | 176 | 164 | 2900 | 3800 | **7222ACJ** | 55.1 | 122 | 188 | 2 | 4.14 |
| | 200 | 38 | 2.1 | 1.1 | 153 | 144 | 2600 | 3400 | **7222BM** | 84 | 122 | 188 | 2 | 3.95 |
| | 240 | 50 | 3 | 1.1 | 191 | 240 | 3600 | 4800 | **7322CM** | 48.4 | 124 | 210 | 2.5 | 9.67 |
| | 240 | 50 | 3 | 1.1 | 239 | 231 | 2600 | 3400 | **7322ACM** | 65.8 | 124 | 226 | 2.5 | 9.97 |
| | 240 | 50 | 3 | 1.1 | 213 | 212 | 2200 | 3000 | **7322BM** | 99.3 | 124 | 226 | 2.5 | 11.5 |
| | 240 | 50 | 3 | 1.1 | 213 | 212 | 2200 | 3000 | **7322BM/YA8** | 98.4 | 124 | 226 | 2.5 | 11.7 |
| | 240 | 50 | 3 | 1.1 | 213 | 212 | 1800 | 2400 | **7322B** | 99.3 | 124 | 226 | 2.5 | 9.84 |
| | 240 | 50 | 3 | 1.1 | 213 | 212 | 1800 | 2400 | **B7322BQ1** | 99.2 | 124 | 226 | 2.5 | 11.4 |
| **120** | 180 | 28 | 2 | 1 | 100 | 107 | 3600 | 5000 | **7024ACM** | 49 | 130 | 170 | 2 | 2.62 |
| | 180 | 28 | 2 | 1 | 100 | 107 | 3600 | 5000 | **7024AC** | 49 | 130 | 170 | 2 | 2.31 |
| | 215 | 40 | 2.1 | 1.1 | 190 | 184 | 3200 | 4500 | **7224ACM** | 59.1 | 132 | 203 | 2 | 6.17 |
| | 215 | 40 | 2.1 | 1.3 | 247 | 184 | 2600 | 3600 | **B7224ACQ1/HAS0** | 59 | 132 | 203 | 2 | 6.45 |
| | 215 | 40 | 2.1 | 1.1 | 198 | 192 | 2200 | 3200 | **7224CM** | 90 | 132 | 203 | 2 | 6.07 |
| | 215 | 40 | 1.3 | 2.1 | 204 | 239 | 2200 | 3200 | **B7224ACQ1/HASO** | 90 | 132 | 203 | 2 | 6.45 |
| | 215 | 40 | 2.1 | 1.1 | 190 | 184 | 2200 | 3200 | **7224AC/P4** | 98.1 | 137 | 199 | 2 | 5.56 |
| | 260 | 55 | 3 | 1.1 | 251 | 262 | 1600 | 2200 | **7324B** | 107.2 | 134 | 246 | 2.5 | 14.6 |
| | 260 | 55 | 3 | 1.1 | 278 | 288 | 3400 | 4000 | **B7324CM** | 52.9 | 134 | 246 | 2.5 | 14.2 |
| | 260 | 55 | 3 | 1.1 | 268 | 277 | 1800 | 2400 | **B7324ACM** | 71.8 | 134 | 246 | 2.5 | 14.2 |
| | 260 | 55 | 3 | 1.1 | 268 | 277 | 1800 | 2400 | **B7324ACQ1** | 71.8 | 134 | 246 | 2.5 | 14.0 |
| | 260 | 55 | 3 | 1.1 | 265 | 269 | 2200 | 3000 | **7324AC** | 71.8 | 134 | 246 | 2.5 | 13.7 |
| **130** | 200 | 33 | 2 | 1 | 129 | 137 | 5400 | 6500 | **7026C** | 38.6 | 140 | 190 | 2 | 3.33 |
| | 200 | 33 | 2 | 1.1 | 108 | 118 | 4500 | 5000 | **7026BM** | 155 | 144 | 186 | 2 | 3.85 |
| | 230 | 40 | 3 | 1.1 | 207 | 209 | 2400 | 3200 | **7226CM** | 44.1 | 144 | 216 | 2.5 | 7 |

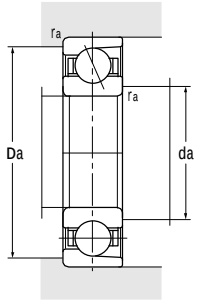
d 130~160 mm



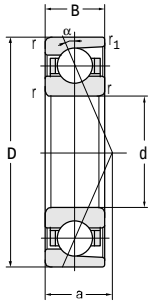

| Principal dimensions | | | | | Basic load ratings | | Limit speed ratings | | Designations | Contact points | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | r | $r_1$ | Cr | Cor | Grease | Oil | | a | $da_{max}$ | $Da_{max}$ | $ra_{max}$ | |
| mm | | | | | kN | | r/min | | | | mm | | | kg |
| **130** | 230 | 40 | 3 | 1.1 | 196 | 200 | 2400 | 3200 | **7226ACM** | 62 | 144 | 216 | 2.5 | 6.98 |
| | 230 | 40 | 3 | 1.1 | 196 | 200 | 1900 | 2600 | **7226ACJ** | 62 | 144 | 216 | 2.5 | 6.23 |
| | 230 | 40 | 3 | 1 | 170 | 175 | 2200 | 3000 | **7226BM** | 95.5 | 144 | 216 | 2.5 | 7.56 |
| | 280 | 58 | 4 | 1.5 | 250 | 268 | 1800 | 2400 | **7326B** | 115.1 | 148 | 262 | 3 | 17.9 |
| **140** | 210 | 33 | 2 | 1 | 125 | 137 | 3200 | 4300 | **7028AC** | 57.3 | 150 | 200 | 2 | 3.46 |
| | 210 | 33 | 2 | 1 | 125 | 137 | 3200 | 4300 | **7028ACM** | 57.3 | 150 | 200 | 2 | 4.14 |
| | 250 | 42 | 3 | 1.1 | 231 | 243 | 4200 | 5000 | **7228CM** | 47.1 | 154 | 236 | 2.5 | 8.31 |
| | 250 | 42 | 3 | 1.1 | 220 | 237 | 2200 | 3000 | **7228ACM** | 66.5 | 154 | 236 | 2.5 | 8.43 |
| | 250 | 42 | 3 | 1.1 | 217 | 235 | 2200 | 3000 | **B7228ACYQ1** | 68.5 | 154 | 236 | 2.5 | 8.70 |
| | 250 | 42 | 3 | 1.1 | 191 | 207 | 2000 | 2800 | **7228BM** | 102.9 | 154 | 236 | 2.5 | 8.59 |
| | 300 | 62 | 4 | 1.5 | 275 | 300 | 1600 | 2200 | **7328B** | 123.3 | 158 | 282 | 3 | 21.2 |
| | 300 | 62 | 4 | 1.5 | 275 | 300 | 1600 | 2200 | **7328B/YA8** | 123.3 | 158 | 282 | 3 | 23.1 |
| | 300 | 62 | 4 | 1.5 | 276 | 301 | 2100 | 2800 | **7328BA** | 123.3 | 158 | 282 | 3 | 21.6 |
| **150** | 225 | 35 | 2.1 | 1.1 | 153 | 170 | 2400 | 3000 | **7030ACM** | 61.2 | 162 | 213 | 2 | 4.80 |
| | 225 | 35 | 2.1 | 2.1 | 155 | 170 | 1900 | 2800 | **7030AC** | 96 | 160 | 219 | 2 | 4.23 |
| | 225 | 35 | 2.1 | 2.1 | 155 | 170 | 5400 | 7300 | **7030AC/P4** | 96 | 160 | 219 | 2 | 4.23 |
| | 270 | 45 | 3 | 1.1 | 195 | 222 | 1700 | 2400 | **7230BM** | 111 | 164 | 256 | 2.5 | 11.7 |
| | 270 | 45 | 3 | 1.1 | 242 | 268 | 2000 | 2800 | **7230AC** | 71.5 | 164 | 256 | 2.5 | 12.1 |
| | 270 | 45 | 3 | 1.1 | 226 | 254 | 1600 | 2200 | **B7230AC** | 71.4 | 164 | 256 | 2.5 | 10.6 |
| | 320 | 65 | 4 | 1.5 | 359 | 429 | 1800 | 2400 | **7330AC** | 87.6 | 168 | 302 | 3 | 25.8 |
| | 320 | 65 | 4 | 1.5 | 317 | 380 | 2300 | 2000 | **7330B** | 131 | 168 | 302 | 3 | 26.2 |
| **160** | 229.5 | 33 | 2 | 2 | 93.5 | 128 | 2000 | 2400 | **72932X3BM** | 65.6 | 172 | 228 | 2 | 4.53 |
| | 240 | 38 | 2.1 | 1.1 | 161 | 183 | 1800 | 2200 | **B7032ACQ1** | 65.6 | 172 | 228 | 2 | 5.74 |
| | 240 | 38 | 2.1 | 1.1 | 161 | 183 | 1800 | 2200 | **B7032ACM** | 65.6 | 172 | 228 | 2 | 5.81 |
| | 240 | 38 | 2.1 | 1.1 | 161 | 183 | 1800 | 2200 | **7032ACM** | 65.6 | 172 | 228 | 2 | 5.95 |
| | 240 | 38 | 1.1 | 2.1 | 160 | 237 | 4800 | 2600 | **146132QT** | 103 | 171 | 229 | 2 | 5.74 |
| | 290 | 48 | 3 | 1.1 | 263 | 304 | 2900 | 3600 | **7232C** | 54.1 | 174 | 276 | 2.5 | 14.5 |
| | 290 | 48 | 3 | 1.1 | 250 | 289 | 1900 | 2600 | **7232AC** | 76.5 | 174 | 276 | 2.5 | 14.5 |
| | 340 | 68 | 4 | 1.5 | 337 | 409 | 1200 | 1600 | **7332B** | 138.9 | 178 | 322 | 3 | 30.8 |
| | 340 | 68 | 4 | 4 | 355 | 420 | 1600 | 2200 | **7332AC** | 106.2 | 178 | 322 | 3 | 37.7 |

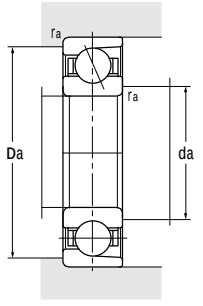



| Principal dimensions | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|
| d | D | B | r | $r_1$ | Cr | Cor | Grease | Oil |
| mm | | | | | kN | | r/min | |
| **160** | 400 | 88 | 5 | 2 | 449 | 580 | 1100 | 1600 |
| **170** | 260 | 42 | 2.1 | 1.1 | 199 | 227 | 2000 | 2600 |
| | 260 | 42 | 2.1 | 1.1 | 199 | 227 | 2000 | 2600 |
| | 260 | 42 | 2.1 | 1.1 | 200 | 232 | 2000 | 2600 |
| | 260 | 42 | 2.1 | 1.1 | 209 | 181 | 1700 | 2400 |
| | 310 | 52 | 4 | 1.5 | 321 | 389 | 2800 | 3400 |
| | 310 | 52 | 4 | 1.5 | 306 | 371 | 1800 | 2400 |
| | 310 | 52 | 4 | 1.5 | 266 | 325 | 1600 | 2200 |
| | 310 | 52 | 4 | 1.5 | 282 | 343 | 1500 | 1900 |
| | 360 | 72 | 4 | 1.5 | 380 | 495 | 1350 | 1800 |
| | 360 | 72 | 4 | 1.5 | 430 | 491 | 1400 | 1900 |
| **180** | 250 | 33 | 2 | 1 | 160 | 196 | 3200 | 4300 |
| | 280 | 46 | 2.1 | 1.1 | 190 | 235 | 1650 | 2200 |
| | 320 | 52 | 4 | 1.5 | 333 | 418 | 2700 | 3200 |
| | 320 | 52 | 4 | 1.5 | 317 | 399 | 1700 | 2200 |
| | 380 | 75 | 4 | 1.5 | 404 | 536 | 1300 | 1800 |
| | 380 | 75 | 4 | 1.5 | 455 | 605 | 1300 | 1800 |
| **190** | 290 | 46 | 2.1 | 1.1 | 215 | 263 | 1800 | 2400 |
| | 340 | 55 | 4 | 1.5 | 257 | 430 | 1500 | 2000 |
| | 340 | 55 | 4 | 1.5 | 330 | 430 | 1700 | 2300 |
| | 400 | 78 | 5 | 2 | 430 | 600 | 1150 | 1600 |
| **200** | 310 | 51 | 2.1 | 1.1 | 264 | 331 | 1700 | 2200 |
| | 310 | 51 | 2.1 | 1.1 | 264 | 331 | 1700 | 2200 |
| | 360 | 58 | 4 | 1.5 | 363 | 487 | 2500 | 3000 |
| | 360 | 58 | 4 | 1.5 | 345 | 462 | 1500 | 2000 |
| | 360 | 58 | 4 | 1.5 | 345 | 462 | 1500 | 2000 |
| | 360 | 58 | 4 | 1.5 | 309 | 417 | 1300 | 1800 |
| | 420 | 80 | 5 | 2 | 450 | 660 | 1000 | 1500 |
| | 420 | 80 | 5 | 2 | 475 | 670 | 1100 | 1600 |

| Designations | Contact points a | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|
| | | $da_{max}$ | $Da_{max}$ | $ra_{max}$ | |
| | | mm | | | kg |
| **7432BM** | 161 | 180 | 382 | 4 | 61.4 |
| **7034ACQ1** | 71.1 | 182 | 248 | 2 | 8.27 |
| **7034AC** | 71.1 | 182 | 248 | 2 | 7.98 |
| **7034AC/P4** | 71.1 | 182 | 248 | 2 | 7.02 |
| **46134QT** | 111 | 181 | 249 | 2 | 8.27 |
| **7234C** | 58.2 | 188 | 292 | 3 | 17.1 |
| **7234AC** | 82 | 188 | 292 | 3 | 17.1 |
| **7234B** | 126.7 | 187 | 293 | 3 | 17.8 |
| **B7234AC** | 82 | 188 | 292 | 3 | 17.4 |
| **7334B** | 147 | 188 | 342 | 3 | 34.5 |
| **7334AC** | 147 | 187 | 343 | 3 | 36.6 |
| **71936CM** | 45.3 | 192 | 235 | 2 | 4.88 |
| **7036B** | 119 | 192 | 268 | 2 | 10 |
| **7236C** | 59.5 | 198 | 302 | 3 | 17.9 |
| **7236AC** | 84.3 | 198 | 302 | 3 | 17.9 |
| **7336B** | 155 | 198 | 362 | 3 | 37.0 |
| **7336AC** | 156 | 197 | 363 | 3 | 42.5 |
| **7038AC** | 79 | 202 | 278 | 2 | 10.6 |
| **7238AC** | 89.3 | 222 | 324 | 3 | 22.4 |
| **7238AC/P4** | 89.3 | 222 | 324 | 3 | 22.4 |
| **7338B** | 164 | 212 | 380 | 4 | 48 |
| **7040AC** | 85 | 212 | 298 | 2 | 14.9 |
| **7040ACN1** | 85 | 212 | 298 | 2 | 14.8 |
| **7240C** | 66.5 | 218 | 342 | 3 | 25.2 |
| **7240AC** | 94.3 | 218 | 342 | 3 | 25.2 |
| **7240ACL3** | 94.3 | 218 | 342 | 3 | 24 |
| **7240B** | 146.5 | 218 | 342 | 3 | 25.8 |
| **7340B** | 170 | 222 | 400 | 4 | 53 |
| **7340AC** | 170 | 220 | 400 | 4 | 56.3 |

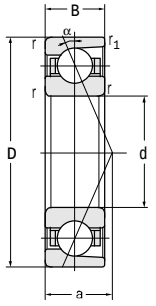


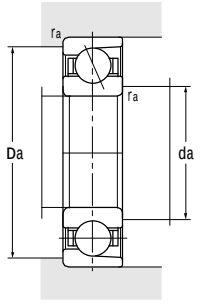




| Principal dimensions | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|
| d | D | B | r | $r_1$ | Cr | Cor | Grease | Oil |
| mm | | | | | kN | | r/min | |
| **220** | 300 | 38 | 2.1 | 1.1 | 170 | 238 | 1500 | 2000 |
| | 300 | 38 | 2.1 | 1.1 | 171 | 238 | 1500 | 2000 |
| | 400 | 65 | 4 | 1.5 | 423 | 605 | 1100 | 1600 |
| | 460 | 88 | 5 | 2 | 480 | 730 | 1000 | 1400 |
| **240** | 320 | 48 | 2.1 | 1.1 | 185 | 250 | 1000 | 1500 |
| | 320 | 38 | 2.1 | 1.1 | 188 | 258 | 1100 | 1600 |
| | 360 | 56 | 3 | 1.1 | 250 | 380 | 1150 | 1600 |
| | 440 | 72 | 4 | 1.5 | 419 | 626 | 1000 | 1500 |
| | 440 | 72 | 4 | 1.5 | 435 | 650 | 1000 | 1500 |
| | 500 | 95 | 5 | 2 | 540 | 850 | 850 | 1200 |
| **260** | 360 | 46 | 2.1 | 1.1 | 260 | 380 | 900 | 1400 |
| | 360 | 46 | 2.1 | 1.1 | 275 | 405 | 1300 | 1800 |
| | 480 | 80 | 5 | 2 | 495 | 790 | 850 | 1200 |
| **280** | 380 | 46 | 2.1 | 1.1 | 268 | 405 | 800 | 1300 |
| | 420 | 65 | 4 | 1.5 | 310 | 500 | 900 | 1300 |
| | 420 | 65 | 4 | 1.5 | 315 | 500 | 900 | 1300 |
| | 500 | 80 | 5 | 2 | 500 | 840 | 800 | 1200 |
| **285** | 380 | 46 | 2.1 | 1.1 | 244 | 366 | 800 | 1200 |
| **300** | 460 | 74 | 4 | 1.5 | 410 | 690 | 950 | 1300 |
| | 460 | 74 | 4 | 1.5 | 360 | 620 | 900 | 1200 |
| | 460 | 74 | 4 | 1.5 | 400 | 665 | 950 | 1400 |
| **320** | 440 | 56 | 3 | 1.1 | 340 | 580 | 940 | 1400 |
| | 480 | 74 | 4 | 1.5 | 416 | 700 | 800 | 1100 |
| **340** | 420 | 38 | 2.1 | 1.1 | 196 | 325 | 950 | 1400 |
| | 460 | 56 | 3 | 1.1 | 330 | 575 | 900 | 1350 |
| | 520 | 82 | 5 | 2 | 510 | 1050 | 800 | 1100 |

| Designations | Contact points a | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|
| | | $da_{max}$ | $Da_{max}$ | $ra_{max}$ | |
| | | mm | | | kg |
| **71944C** | 129 | 229 | 291 | 2 | 8.34 |
| **71944CTA** | 129 | 229 | 291 | 2 | 7.02 |
| **7244AC** | 104.7 | 238 | 382 | 3 | 35.8 |
| **7344B** | 187 | 242 | 440 | 4 | 71 |
| **72948AC** | 89.3 | 252 | 308 | 2 | 10.0 |
| **71948AC** | 89.3 | 252 | 308 | 2 | 8.70 |
| **7048B** | 154 | 256 | 345 | 2.5 | 19.5 |
| **7248B** | 178.5 | 258 | 411 | 3 | 50.9 |
| **7248AC** | 180 | 257 | 423 | 3 | 51.1 |
| **7348B** | 203 | 262 | 481 | 4 | 89 |
| **71952AC** | 95.3 | 291 | 348 | 2 | 13.8 |
| **71952C** | 113 | 271 | 349 | 2 | 13.7 |
| **7252B** | 195 | 280 | 460 | 4 | 67 |
| **71956AC** | 99.9 | 292 | 368 | 2 | 15.7 |
| **7056B** | 179 | 296 | 406 | 3 | 31 |
| **7056BM** | 179 | 296 | 406 | 3 | 31 |
| **7256B** | 204 | 300 | 480 | 4 | 70.5 |
| **B71957Y** | 119 | 297 | 368 | 2 | 14.7 |
| **7060A** | 147 | 318 | 442 | 3 | 43 |
| **7060B** | 196 | 318 | 442 | 3 | 43 |
| **7060AC** | 147 | 317 | 443 | 3 | 46.5 |
| **71964AC** | 116 | 334 | 426 | 2.5 | 26.5 |
| **7064AC/P6** | 130 | 385 | 445 | 3 | 47.5 |
| **71868AC** | 129 | 351 | 409 | 2 | 11.4 |
| **71968AC** | 126 | 354 | 446 | 2.5 | 24.5 |
| **7068AC** | 141.3 | 360 | 500 | 4 | 61.0 |

d 340~460 mm

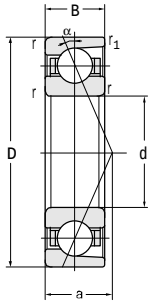


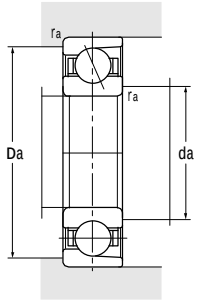




| Principal dimensions | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|
| d | D | B | r | $r_1$ | Cr | Cor | Grease | Oil |
| mm | | | | | kN | | r/min | |
| **340** | 620 | 92 | 6 | 3 | 685 | 1320 | 700 | 1000 |
| **360** | 440 | 38 | 2.1 | 1.1 | 228 | 430 | 1800 | 2650 |
| | 480 | 56 | 3 | 1.1 | 340 | 630 | 900 | 1300 |
| | 480 | 56 | 3 | 1.1 | 330 | 620 | 850 | 1000 |
| | 480 | 56 | 3 | 3 | 360 | 630 | 800 | 1100 |
| | 480 | 56 | 3 | 1.1 | 290 | 540 | 850 | 1000 |
| | 540 | 82 | 5 | 1.3 | 532 | 965 | 600 | 1000 |
| | 650 | 95 | 6 | 3 | 635 | 1240 | 700 | 950 |
| **380** | 480 | 31 | 2 | 1 | 185 | 340 | 860 | 1200 |
| | 480 | 46 | 2.1 | 1.1 | 285 | 495 | 860 | 1200 |
| | 520 | 65 | 4 | 1.5 | 355 | 630 | 500 | 800 |
| | 520 | 65 | 4 | 4 | 415 | 760 | 800 | 1100 |
| | 560 | 82 | 5 | 2 | 495 | 940 | 810 | 1100 |
| | 560 | 82 | 5 | 2 | 455 | 880 | 760 | 1000 |
| **400** | 540 | 65 | 4 | 1.5 | 410 | 760 | 810 | 1100 |
| | 540 | 65 | 4 | 4 | 420 | 780 | 800 | 1100 |
| | 600 | 90 | 5 | 2 | 590 | 1170 | 740 | 1000 |
| | 600 | 90 | 5 | 2 | 515 | 1010 | 710 | 960 |
| **420** | 560 | 65 | 4 | 1.5 | 410 | 820 | 810 | 1100 |
| | 560 | 65 | 4 | 1.5 | 355 | 670 | 810 | 1100 |
| | 620 | 90 | 5 | 2 | 590 | 1160 | 710 | 960 |
| | 620 | 90 | 5 | 2 | 525 | 1040 | 680 | 910 |
| **440** | 600 | 74 | 4 | 1.5 | 495 | 1050 | 740 | 1000 |
| | 650 | 94 | 6 | 3 | 635 | 1300 | 710 | 960 |
| | 650 | 94 | 6 | 3 | 560 | 1170 | 630 | 840 |
| **460** | 580 | 37 | 2.1 | 1 | 259 | 550 | 760 | 1000 |
| | 580 | 56 | 3 | 3 | 362 | 760 | 760 | 1000 |
| | 580 | 56 | 3 | 1.1 | 335 | 635 | 750 | 1000 |
| | 620 | 74 | 4 | 1.5 | 495 | 1050 | 680 | 740 |
| | 680 | 100 | 6 | 3 | 675 | 1450 | 670 | 910 |

| Designations | Contact points a | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|
| | | $da_{max}$ | $Da_{max}$ | $ra_{max}$ | |
| | | mm | | | kg |
| **7268B** | 248 | 366 | 593 | 5 | 128 |
| **71872AC** | 112 | 371 | 430 | 2 | 12.5 |
| **71972AC** | 126 | 374 | 468 | 2.5 | 29.5 |
| **71972A** | 149 | 374 | 468 | 2.5 | 29.5 |
| **71972ACM/P5** | 204 | 373 | 467 | 2.5 | 28.3 |
| **71972B** | 204 | 374 | 468 | 2.5 | 29.5 |
| **7072CF3** | 101.3 | 382 | 518 | 4 | 65.3 |
| **7272B** | 261 | 387 | 624 | 5 | 152 |
| **70876A** | 142 | 390 | 470 | 2 | 13.5 |
| **71876AC** | 123 | 392 | 470 | 2 | 18.5 |
| **71976B** | 221.4 | 398 | 502 | 3 | 42.1 |
| **71976AC** | 222 | 395 | 505 | 3 | 41.5 |
| **7076A** | 177 | 399 | 541 | 4 | 66 |
| **7076B** | 238 | 399 | 541 | 4 | 66 |
| **71980A** | 168 | 416 | 525 | 3 | 42.5 |
| **71980AC** | 168 | 415 | 525 | 3 | 44.3 |
| **7080A** | 189 | 418 | 580 | 4 | 91.5 |
| **7080B** | 255 | 418 | 580 | 4 | 91.5 |
| **71984A** | 174 | 436 | 545 | 3 | 46.5 |
| **71984B** | 238 | 436 | 545 | 3 | 46.5 |
| **7084A** | 195 | 439 | 601 | 4 | 97 |
| **7084B** | 263 | 440 | 602 | 4 | 93 |
| **71988AC** | 158 | 456 | 585 | 3 | 60 |
| **7088A** | 204 | 464 | 626 | 5 | 100 |
| **7088B** | 276 | 464 | 626 | 5 | 100 |
| **70892A** | 169 | 472 | 568 | 2 | 25.5 |
| **71892A** | 178 | 474 | 566 | 2.5 | 34.5 |
| **71892AC** | 169 | 471 | 569 | 2 | 34.8 |
| **71992AC** | 163 | 476 | 606 | 3 | 58.5 |
| **7092A** | 215 | 484 | 656 | 5 | 121 |

d 460~710 mm

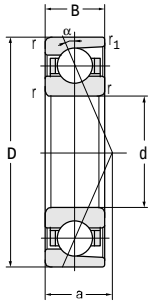


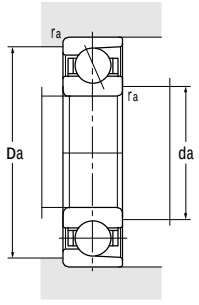




| Principal dimensions | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|
| d | D | B | r | $r_1$ | Cr | Cor | Grease | Oil |
| mm | | | | | kN | | r/min | |
| **460** | 680 | 100 | 6 | 3 | 605 | 1280 | 610 | 800 |
| **480** | 700 | 100 | 6 | 3 | 685 | 1540 | 630 | 840 |
| | 700 | 100 | 6 | 3 | 610 | 1330 | 550 | 740 |
| **500** | 620 | 37 | 2.1 | 1.1 | 270 | 610 | 660 | 890 |
| | 620 | 56 | 3 | 1.1 | 390 | 810 | 600 | 850 |
| | 670 | 78 | 5 | 2 | 540 | 1210 | 620 | 850 |
| | 720 | 100 | 6 | 3 | 700 | 1610 | 610 | 810 |
| | 720 | 100 | 6 | 3 | 620 | 1410 | 550 | 760 |
| **530** | 650 | 56 | 3 | 1.1 | 380 | 890 | 620 | 840 |
| | 650 | 56 | 3 | 3 | 350 | 715 | 630 | 850 |
| | 710 | 82 | 5 | 2 | 600 | 1350 | 610 | 810 |
| | 780 | 112 | 6 | 3 | 815 | 1880 | 550 | 740 |
| | 780 | 112 | 6 | 3 | 725 | 1690 | 510 | 680 |
| **560** | 680 | 56 | 3 | 1.1 | 385 | 920 | 600 | 810 |
| | 750 | 85 | 5 | 2 | 580 | 1270 | 550 | 740 |
| | 820 | 115 | 6 | 3 | 880 | 2140 | 520 | 710 |
| **600** | 730 | 42 | 3 | 1.1 | 330 | 730 | 560 | 740 |
| | 730 | 60 | 3 | 1.1 | 405 | 880 | 720 | 760 |
| | 730 | 60 | 3 | 1.1 | 405 | 880 | 560 | 750 |
| | 800 | 90 | 5 | 2 | 700 | 1720 | 540 | 710 |
| | 870 | 118 | 6 | 3 | 865 | 2150 | 470 | 620 |
| **630** | 920 | 128 | 7.5 | 4 | 935 | 2460 | 420 | 550 |
| **670** | 820 | 69 | 4 | 1.5 | 540 | 1280 | 490 | 640 |
| | 980 | 136 | 7.5 | 4 | 1140 | 3180 | 470 | 630 |
| **710** | 870 | 74 | 4 | 1.5 | 530 | 1290 | 450 | 600 |
| | 870 | 74 | 4 | 1.5 | 530 | 1290 | 450 | 600 |
| | 870 | 74 | 4 | 4 | 555 | 1350 | 450 | 600 |

| Designations | Contact points a | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|
| | | $da_{max}$ | $Da_{max}$ | $ra_{max}$ | |
| | | mm | | | kg |
| **7092B** | 289 | 484 | 656 | 5 | 121 |
| **7096A** | 220 | 503 | 677 | 5 | 126 |
| **7096B** | 298 | 503 | 677 | 5 | 126 |
| **708/500A** | 180 | 512 | 610 | 2 | 27.5 |
| **718/500AMB** | 189.7 | 513 | 607 | 2.5 | 37.4 |
| **719/500A** | 208 | 520 | 651 | 4 | 77.5 |
| **70/500A** | 226 | 526 | 696 | 5 | 132 |
| **70/500B** | 306 | 526 | 696 | 5 | 132 |
| **718/530A** | 198 | 544 | 637 | 2.5 | 38.5 |
| **718/530AC** | 198 | 543 | 637 | 2.5 | 40.1 |
| **719/530AC** | 186 | 559 | 691 | 4 | 93 |
| **70/530A** | 245 | 554 | 756 | 5 | 178 |
| **70/530B** | 332 | 554 | 756 | 5 | 182 |
| **718/560A** | 207 | 574 | 668 | 2.5 | 42 |
| **719/560A** | 232 | 578 | 733 | 4 | 107 |
| **70/560A** | 257 | 584 | 798 | 5 | 193 |
| **708/600A** | 212 | 613 | 717 | 2.5 | 39 |
| **718/600ACM** | 185.1 | 613 | 717 | 2.5 | 54.6 |
| **718/600ACM-CB** | 222 | 613 | 717 | 2.5 | 54.6 |
| **719/600AC** | 208 | 620 | 781 | 4 | 123 |
| **70/600A** | 273 | 624 | 845 | 5 | 230 |
| **70/630A** | 240 | 659 | 891 | 6 | 275 |
| **718/670AC** | 208 | 686 | 804 | 3 | 77.5 |
| **70/670A** | 306 | 699 | 951 | 6 | 345 |
| **718/710A/YB2** | 265 | 725 | 855 | 3 | 99.9 |
| **718/710A/YB2-CB** | 265 | 725 | 855 | 3 | 99.9 |
| **718/710AC** | 265 | 725 | 855 | 3 | 96.4 |

d 710~1250 mm

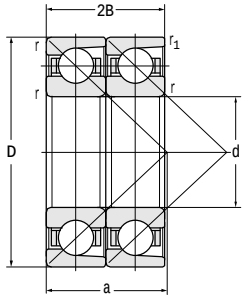


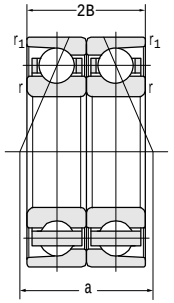

| Principal dimensions | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|
| d | D | B | r | $r_1$ | Cr | Cor | Grease | Oil |
| mm | | | | | kN | | r/min | |
| **710** | 950 | 106 | 6 | 3 | 830 | 2220 | 450 | 600 |
| | 1030 | 140 | 7.5 | 4 | 1160 | 3200 | 400 | 530 |
| **750** | 920 | 78 | 5 | 2 | 630 | 1850 | 400 | 530 |
| | 920 | 78 | 5 | 2 | 610 | 1510 | 400 | 530 |
| | 1090 | 150 | 7.5 | 4 | 1270 | 3630 | 350 | 470 |
| **800** | 1150 | 155 | 7.5 | 4 | 1320 | 3780 | 330 | 440 |
| **850** | 1030 | 82 | 5 | 2 | 675 | 1850 | 330 | 440 |
| | 1030 | 82 | 5 | 5 | 670 | 1800 | 340 | 450 |
| | 1220 | 165 | 7.5 | 4 | 1490 | 4600 | 290 | 400 |
| **900** | 1090 | 85 | 5 | 2 | 670 | 1830 | 300 | 400 |
| | 1280 | 170 | 7.5 | 4 | 1520 | 4980 | 270 | 370 |
| **950** | 1360 | 180 | 7.5 | 4 | 1590 | 5150 | 250 | 350 |
| **1000** | 1220 | 100 | 6 | 3 | 830 | 2460 | 260 | 360 |
| | 1420 | 185 | 7.5 | 4 | 1590 | 5450 | 210 | 310 |
| **1060** | 1500 | 195 | 9.5 | 5 | 1640 | 5650 | 200 | 310 |
| **1120** | 1360 | 106 | 6 | 3 | 1030 | 3700 | 190 | 290 |
| | 1580 | 200 | 9.5 | 5 | 1680 | 5800 | 180 | 280 |
| **1180** | 1420 | 106 | 6 | 4 | 865 | 3650 | 100 | 200 |
| | 1660 | 212 | 9.5 | 5 | 1700 | 6000 | 170 | 230 |
| **1250** | 1500 | 80 | 6 | 3 | 780 | 2650 | 180 | 250 |
| | 1500 | 112 | 6 | 3 | 1110 | 3900 | 180 | 250 |
| | 1750 | 218 | 9.5 | 5 | 1740 | 6500 | 160 | 220 |
| | 1750 | 218 | 9.5 | 9.5 | 1670 | 5900 | 160 | 220 |

| Designations | Contact points a | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|
| | | $da_{max}$ | $Da_{max}$ | $ra_{max}$ | |
| | | mm | | | kg |
| **719/710AC** | 247 | 734 | 926 | 5 | 200 |
| **70/710A** | 321 | 739 | 1000 | 6 | 375 |
| **718/750AC** | 234 | 768 | 901 | 4 | 112 |
| **718/750A** | 234 | 768 | 902 | 4 | 115 |
| **70/750A** | 341 | 779 | 1062 | 6 | 450 |
| **70/800A** | 359 | 830 | 1120 | 6 | 510 |
| **718/850A** | 312 | 869 | 1011 | 4 | 141 |
| **718/850AC** | 312 | 868 | 1012 | 4 | 140 |
| **70/850A** | 381 | 880 | 1191 | 6 | 605 |
| **718/900ACF1** | 274.5 | 944 | 1046 | 4 | 163 |
| **70/900A** | 400 | 930 | 1251 | 6 | 675 |
| **70/950A** | 424 | 979 | 1331 | 6 | 800 |
| **718/1000A** | 370 | 1023 | 1197 | 5 | 239 |
| **70/1000A** | 442 | 1029 | 1390 | 6 | 905 |
| **70/1060A** | 467 | 1095 | 1465 | 8 | 1060 |
| **718/1120A** | 411 | 1145 | 1336 | 5 | 325 |
| **70/1120A** | 497 | 1155 | 1545 | 8 | 1160 |
| **718/1180CAF1** | 356 | 1225 | 1377 | 5 | 329 |
| **70/1180A** | 516 | 1215 | 1625 | 8 | 1340 |
| **708/1250A** | 437 | 1275 | 1476 | 5 | 300 |
| **718/1250A** | 453 | 1275 | 1476 | 5 | 395 |
| **70/1250A** | 542 | 1286 | 1715 | 8 | 1580 |
| **70/1250BM/P5** | 542 | 1284 | 1716 | 8 | 1738 |

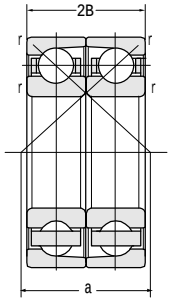
d 20~45 mm



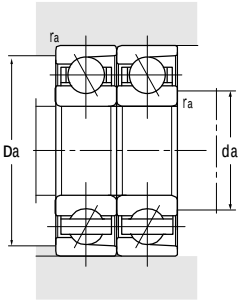

DT type



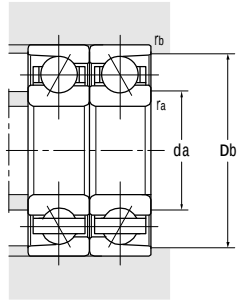

DB type



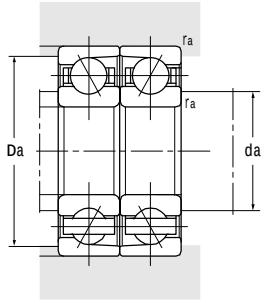

DF type




DT type



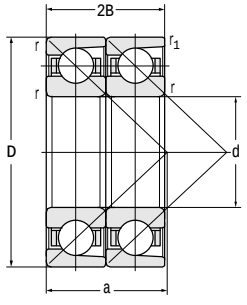

DB type



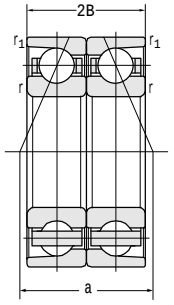

DF type

| Principal dimensions | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|
| d | D | 2B | r | $r_1$ | Cr | Cor | Grease | Oil | |
| mm | | | | | kN | | r/min | | |
| **20** | 47 | 28 | 1 | 0.6 | 17.2 | 28.3 | 9500 | 14000 | **760204TN1/P4DBB** |
| **25** | 52 | 30 | 1 | 0.6 | 17.5 | 30.5 | 8500 | 12000 | **760205TN1/P4DBB** |
| | 62 | 34 | 1.1 | 0.6 | 44.0 | 32.0 | 7500 | 10000 | **7305ACM/DB** |
| | 62 | 34 | 1.1 | 1 | 28.5 | 41.5 | 7500 | 10000 | **760305TN1/P4DBB** |
| **30** | 62 | 32 | 1 | 0.3 | 30 | 24.5 | 7300 | 10000 | **7206BM/DT** |
| | 62 | 32 | 1.1 | 1 | 22.9 | 44 | 7300 | 10000 | **760206TN1/P4DBB** |
| | 62 | 30 | 1 | 0.6 | 37.5 | 88 | 7300 | 10000 | **760206X2TN1/P4DT** |
| | 62 | 30 | 1 | 0.6 | 22.9 | 44 | 7300 | 10000 | **760206X2TN1/P4DFA** |
| | 72 | 38 | 1.1 | 0.6 | 50.0 | 39 | 6700 | 9000 | **7306ACM/DB** |
| **35** | 62 | 28 | 1 | 0.3 | 31 | 27.4 | 6800 | 9000 | **7007C/DB** |
| | 72 | 34 | 1.1 | 0.6 | 48.1 | 38 | 6300 | 8400 | **7207BTNT/DB** |
| | 72 | 34 | 1.1 | 0.6 | 41.5 | 34 | 6300 | 8400 | **7207BM/DT** |
| | 72 | 34 | 1.1 | 0.6 | 48 | 41 | 6300 | 8500 | **7207CHATN1/P4DTCX** |
| | 80 | 42 | 1.5 | 0.6 | 63.1 | 50 | 5500 | 7500 | **7307AC/DBA** |
| | 80 | 42 | 1.5 | 0.6 | 63.1 | 50 | 5500 | 7500 | **7307AC/DB** |
| | 80 | 42 | 1.5 | - | 62.4 | 49 | 5500 | 7000 | **7307BM/DFYA3** |
| | 80 | 42 | 1.5 | 0.6 | 62 | 49 | 6000 | 8000 | **7307BM/DT** |
| **40** | 90 | 40 | 1 | 0.6 | 77 | 187 | 6000 | 7500 | **760308X2TN1/P4ADTA** |
| | 90 | 46 | 1.5 | 0.6 | 75 | 60 | 5300 | 7000 | **7308BM/DB** |
| | 90 | 46 | 1.5 | 0.6 | 77.0 | 62.3 | 6700 | 9000 | **7308AC/DB** |
| | 90 | 46 | 1.5 | 0.6 | 76 | 62 | 6700 | 9000 | **7308ACM/DB** |
| **45** | 85 | 38 | 1.1 | 0.6 | 56 | 49 | 6000 | 7400 | **7209BM/DT** |
| | 85 | 38 | 1.1 | 0.6 | 56 | 49 | 6000 | 7400 | **7209BM/DFCC** |
| | 85 | 38 | 1.1 | 0.6 | 66.5 | 57.5 | 6300 | 7500 | **7209C/DBA** |
| | 85 | 38 | 1.5 | 1.1 | 34.5 | 74 | 5300 | 7000 | **760209TN1/P4DBB** |
| | 100 | 50 | 1.5 | 0.6 | 108 | 88 | 6000 | 7000 | **7309ACM/DB** |
| | 100 | 50 | 1.5 | 0.6 | 97.5 | 79 | 5600 | 6500 | **7309BM/HADB** |
| | 100 | 50 | 1.5 | 0.6 | 75 | 80 | 5600 | 6500 | **7309BT/DB** |
| | 100 | 50 | 1.5 | 0.6 | 97.5 | 79 | 4800 | 6300 | **7309BM/DT** |
| | 100 | 50 | 1.5 | 0.6 | 82.5 | 79 | 4800 | 6300 | **7309BM/DB** |
| | 100 | 50 | 1.5 | 0.6 | 91.3 | 88 | 4800 | 6300 | **7309ACM/DB** |

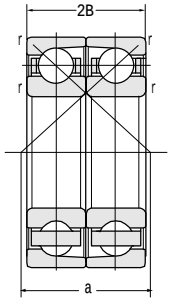
| Contact points | | | Abutment and fillet dimensions | | | | | Weight |
|---|---|---|---|---|---|---|---|---|
| DB | DF | DT | damin | Damax | Dbmax | ramax | rbmax | |
| | | | mm | | | | | kg |
| 21 | - | - | 25.6 | 41.4 | | 1 | 0.6 | 0.263 |
| 24 | - | - | 30.6 | 46 | | 1 | 0.6 | 0.3 |
| 27 | - | - | 32 | 55 | | 1 | 0.6 | 0.511 |
| 27 | - | - | 32 | 55 | | 1 | 0.6 | 0.542 |
| - | - | 27.3 | 35.6 | 56.5 | - | 1 | - | 0.497 |
| 27 | - | - | 35.6 | 56.4 | | 1 | 0.6 | 0.443 |
| - | - | 47.3 | | | | | | 0.419 |
| - | 24.8 | - | | | | | | 0.419 |
| 31 | | | 37 | 65 | | 1 | 0.6 | 0.661 |
| 27 | | | | 57 | | | 0.6 | 0.296 |
| 61.9 | - | - | 42 | - | 67.5 | 1 | 0.6 | 0.571 |
| - | - | 31 | 42 | 65 | - | 1 | - | 0.656 |
| | | 31 | 42 | 65 | | 1 | 1 | 0.584 |
| 47.8 | - | - | 43.5 | - | 74.5 | 1.5 | 0.6 | 0.907 |
| 47.8 | - | - | 43.5 | - | 74.5 | 1.5 | 0.6 | 0.907 |
| - | 28.1 | - | 43.5 | - | 74.5 | 1.5 | - | 1.10 |
| - | - | 35 | 43.5 | 71.5 | - | 1.5 | - | 1.1 |
| | | | | | | | | 1.27 |
| 39 | - | - | 49 | 81 | | 1.5 | 1 | 1.42 |
| 56.5 | | | 49 | 81 | | 1.5 | 1 | 1.25 |
| 53.5 | | | 49 | 81 | | 1.5 | 1 | 1.49 |
| - | - | 36.8 | 52 | 78 | - | 1 | - | 1.97 |
| - | 35.5 | | 52 | 78 | - | 1 | - | 1.97 |
| 37 | - | - | 52 | 78 | | 1 | 0.6 | 0.805 |
| 37 | - | - | 52 | 78 | | 1 | 0.6 | 0.978 |
| 58.8 | - | - | 54 | - | 94 | 1.5 | 1 | 2.03 |
| 85.8 | - | - | 54 | - | 94 | 1.5 | 1 | 2.03 |
| 85.8 | - | - | 54 | - | 94 | 1.5 | 1 | 1.83 |
| - | - | 43 | 54 | 91 | | 1.5 | | n |
| 43 | - | - | 54 | 91 | - | 1.5 | 1 | 2.02 |
| 43 | - | - | 54 | 91 | - | 1.5 | 1 | 2.02 |



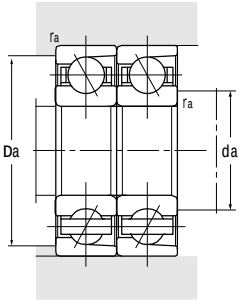

DT type



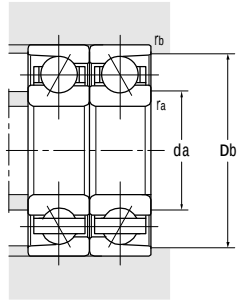

DB type



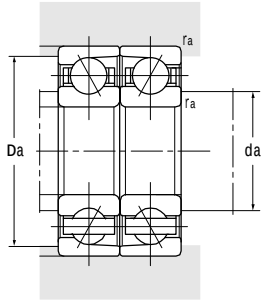

DF type




DT type




DB type

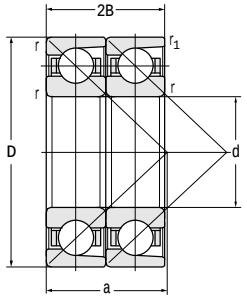



DF type

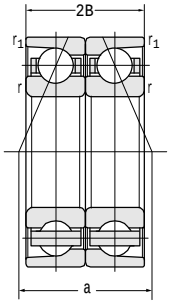
| Principal dimensions | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|
| d | D | 2B | r | $r_1$ | Cr | Cor | Grease | Oil | |
| mm | | | | | kN | | r/min | | |
| **45** | 100 | 50 | 1.5 | 0.6 | 91.3 | 88 | 4800 | 6300 | **7309AC/DB** |
| | 100 | 50 | 1.5 | 0.6 | 97.5 | 79 | 4800 | 6300 | **7309BM/DT** |
| **50** | 80 | 32 | 1 | 1 | 41.5 | 46 | 10000 | 14000 | **7010C/DF** |
| | 90 | 40 | 1.1 | 0.6 | 580 | 53.5 | 6400 | 8500 | **7210BM/DT** |
| | 110 | 54 | 2 | 1 | 117 | 98 | 8200 | 11000 | **7310ACM/DB** |
| | 110 | 54 | 2 | 1 | 117 | 98 | 8200 | 11000 | **7310ACM/DF** |
| | 110 | 54 | 2 | 1 | 117 | 98 | 8200 | 11000 | **7310AC/DB** |
| | 110 | 54 | 2 | 1 | 113 | 88 | 5600 | 7500 | **7310BM/DB** |
| | 110 | 54 | 2 | - | 113 | 88 | 5600 | 7500 | **7310BM/DFYA3** |
| | 110 | 54 | 2 | - | 122 | 102 | 8200 | 11000 | **7310CM/DF** |
| **55** | 90 | 36 | 1.1 | 0.6 | 50.7 | 51 | 9200 | 12000 | **7011ACQ5/DB** |
| | 90 | 36 | 1.1 | 0.6 | 53 | 54 | 9200 | 12000 | **7011C/DT** |
| | 100 | 42 | 1.5 | 0.6 | 82 | 76 | 4300 | 5600 | **7211ACM/DB** |
| | 100 | 42 | 1.5 | 0.6 | 80.5 | 78 | 9000 | 12000 | **7211CHA/P4ADBA** |
| | 120 | 58 | 2 | 1 | 143 | 126 | 4000 | 5000 | **7311ACM/DB** |
| | 120 | 58 | 2 | 1 | 143 | 126 | 4000 | 5000 | **7311AC/DB** |
| | 120 | 58 | 2 | 1 | 127 | 113 | 3800 | 5000 | **7311BM/DB** |
| | 120 | 58 | 2 | 1 | 127 | 112 | 3800 | 5000 | **7311BM/DT** |
| | 120 | 58 | 2 | 2 | 143 | 126 | 3800 | 5000 | **7311ACM/DF** |
| **60** | 95 | 36 | 1.1 | 0.6 | 58 | 60 | 6000 | 8000 | **7012AC/DBB** |
| | 95 | 36 | 1.1 | 1.1 | 57 | 61 | 6000 | 8000 | **7012CHA/P4ADBA** |
| | 95 | 36 | 1.1 | 0.6 | 54 | 58 | 6000 | 8000 | **7012ACHA/P4DTA** |
| | 95 | 36 | 1.1 | 0.6 | 54 | 58 | 6000 | 8000 | **7012ACHATN1/P4DTCX** |
| | 110 | 44 | 1.5 | 0.6 | 72.5 | 98.8 | 7700 | 10000 | **7212C/DT** |
| | 110 | 44 | 1.5 | 0.6 | 89.5 | 86 | 4000 | 5300 | **7212ACM/DB** |
| | 110 | 44 | 1.5 | 0.6 | 74 | 77 | 4000 | 5300 | **7212ACHA/P4DBB** |
| | 110 | 44 | 1.5 | 0.6 | 74 | 77 | 4000 | 5300 | **7212ACHA/P5DBB** |
| | 110 | 44 | 1.5 | 0.6 | 74 | 77 | 4000 | 5300 | **7212ACHA/P5DBB-SJ** |
| | 130 | 62 | 2.1 | - | 154 | 134 | 4000 | 5000 | **7312ACM/DF** |
| | 130 | 62 | 2.1 | 1.1 | 106 | 138 | 5600 | 7800 | **7312BT/DB** |

| Contact points | | | Abutment and fillet dimensions | | | | | Weight |
|---|---|---|---|---|---|---|---|---|
| DB | DF | DT | damin | Damax | Dbmax | ramax | rbmax | |
| | | | mm | | | | | kg |
| 58.8 | | | 54 | 91 | | 1.5 | 1 | 1.83 |
| | | 73.3 | 54 | 91 | - | 1.5 | 1 | 2.02 |
| | 1.4 | | | | 75 | | 0.6 | 0.489 |
| - | - | 39.4 | 57 | 83 | - | 1 | - | 2.35 |
| 64.3 | - | - | 60 | - | 104 | 2 | 1 | 2.32 |
| | 10.3 | | 60 | - | 104 | 2 | - | 2.41 |
| 64.3 | | | 60 | - | 104 | 2 | 1 | 2.09 |
| 94.1 | - | - | 60 | - | 104 | 2 | 1 | 2.35 |
| - | 40.1 | - | 60 | 100 | - | 2 | - | 2.35 |
| - | -5.6 | - | 60 | 100 | - | 2 | - | 2.41 |
| 51.8 | - | - | 62 | - | 85 | 1 | 0.6 | 0.947 |
| | | 28.4 | 62 | 85 | | | | 0.772 |
| 57.1 | - | - | 64 | - | 91 | 1.5 | 1 | 1.4 |
| 41.8 | - | - | 64 | - | 91 | 1.5 | 1 | 1.26 |
| 69.8 | - | - | 66 | - | 109 | 2 | 1 | 3.3 |
| 69.8 | | | 66 | - | 109 | 2 | 1 | 2.88 |
| 102.4 | - | - | 65 | - | 114 | 2 | 1 | 13.55 |
| - | - | 51 | 66 | 109 | | 2 | 1 | 3.22 |
| | 51 | | 66 | 109 | | 2 | 1 | 3.3 |
| 62.7 | | | 60 | | 90 | | 0.6 | 0.785 |
| 62.7 | | | 60 | | 90 | | 0.6 | 0.816 |
| | | | 60 | | 90 | | 0.6 | 0.816 |
| | | | 60 | | 90 | | 0.6 | 0.815 |
| - | - | 22 | 69 | 101 | - | 1.5 | - | 1.57 |
| 47 | - | - | 69 | 101 | - | 1.5 | 1 | 1.89 |
| 47 | | | 69 | 101 | - | 1.5 | 1 | 1.86 |
| 47 | | | 69 | 101 | - | 1.5 | 1 | 1.86 |
| 47 | | | 69 | 101 | - | 1.5 | 1 | 1.86 |
| - | 13.3 | - | 72 | 118 | - | 2 | - | 4.05 |
| 111 | - | - | 69 | - | 127 | 2 | 1 | 1.83 |

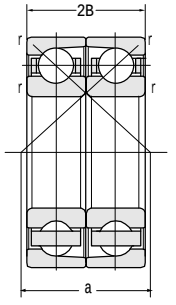
d 60~75 mm



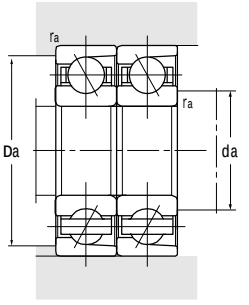

DT type



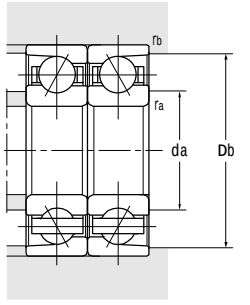

DB type



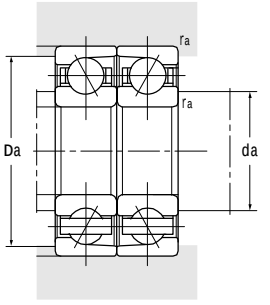

DF type




DT type




DB type

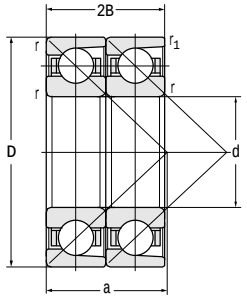



DF type

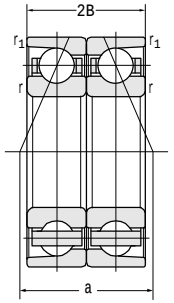
| Principal dimensions | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|
| d | D | 2B | r | $r_1$ | Cr | Cor | Grease | Oil | |
| mm | | | | | kN | | r/min | | |
| **60** | 130 | 62 | 2.1 | 1.1 | 155 | 135 | 3600 | 4800 | **7312AC/DB** |
| | 130 | 62 | 2.1 | 1.1 | 179 | 120 | 3600 | 4800 | **7312BM/DB** |
| | 130 | 62 | 2.1 | 1.1 | 154 | 134 | 3600 | 4800 | **7312ACM/DB** |
| | 130 | 62 | 2.1 | 1.1 | 154 | 134 | 3600 | 4800 | **7312ACM/DT** |
| **65** | 100 | 36 | 1.1 | 0.6 | 54.6 | 62 | 7800 | 10000 | **7013AC/DT** |
| | 100 | 36 | 1.1 | 0.6 | 48 | 52 | 7800 | 10000 | **7013AC/DBB** |
| | 100 | 36 | 1.1 | 0.6 | 48 | 52 | 7800 | 10000 | **7013ACHA/P4DBA** |
| | 120 | 46 | 1.5 | 0.6 | 118 | 117 | 7100 | 9500 | **7213ACQ5/DBYA3** |
| | 140 | 66 | 2.1 | 1.1 | 186 | 169 | 6400 | 8500 | **7313AC/DB** |
| | 140 | 66 | 2.1 | 1.1 | 157 | 169 | 3200 | 4300 | **7313ACM/DB** |
| | 140 | 66 | 2.1 | 1.1 | 165 | 150 | 3200 | 4300 | **7313BM/DF** |
| | 140 | 66 | 2.1 | 1.1 | 165 | 150 | 3200 | 4300 | **7313BM/DT** |
| **70** | 110 | 40 | 1.1 | 1.1 | 58.5 | 86 | 6900 | 9200 | **7014CM/P5DB** |
| | 110 | 40 | 1.1 | 0.6 | 71.5 | 82 | 6900 | 9200 | **7014AC/DBB** |
| | 110 | 40 | 1.1 | 1.1 | 58.5 | 86 | 7300 | 9700 | **7014C/DB** |
| | 110 | 40 | 1.1 | 1.1 | 62 | 73 | 7300 | 9700 | **7014AHA/P4DBA** |
| | 110 | 40 | 1.1 | 0.6 | 65 | 75 | 7300 | 9700 | **7014ACHA/P4DBA** |
| | 110 | 40 | 1.1 | 1.1 | 65.0 | 75.0 | 7000 | 9500 | **7014ACTN1/P4DBA** |
| | 125 | 48 | 1.5 | 0.6 | 124 | 123 | 3300 | 4600 | **7214ACM/DB** |
| | 125 | 48 | 1.5 | 0.6 | 108 | 108 | 3300 | 4600 | **7214BM/DT** |
| | 150 | 70 | 2.1 | 1.1 | 186 | 173 | 3800 | 5000 | **7314BM/DB** |
| | 150 | 70 | 2.1 | - | 185 | 171 | 3000 | 4000 | **7314BM/DT** |
| | 150 | 70 | 2.1 | 1.1 | 209 | 192 | 3000 | 4000 | **7314ACM/DB** |
| | 150 | 70 | 2.1 | 1.1 | 209 | 192 | 3000 | 4000 | **7314ACM/DBYA8** |
| | 150 | 70 | 2.1 | 2.1 | 75 | 82 | 3000 | 4000 | **7314ACM/DF** |
| | 180 | 84 | 3 | 3 | 240 | 236 | 2400 | 3400 | **7414BM/DFA** |
| **75** | 115 | 40 | 1.1 | 1.1 | 69 | 83.5 | 6000 | 8000 | **7015ACHATN1/P4DTCX** |
| | 130 | 50 | 1.5 | 0.6 | 112 | 116 | 6200 | 8200 | **7215BM/DB** |
| | 130 | 50 | 1.5 | 0.6 | 103 | 113 | 3200 | 4300 | **7215CHATN1/P4DTCX** |
| | 160 | 74 | 2.1 | 1.1 | 228 | 218 | 5500 | 7400 | **7315ACM/DB** |

| Contact points | | | Abutment and fillet dimensions | | | | | Weight |
|---|---|---|---|---|---|---|---|---|
| DB | DF | DT | damin | Damax | Dbmax | ramax | rbmax | |
| | | | mm | | | | | kg |
| 75.3 | - | - | 72 | - | 123 | 2 | 1 | 3.61 |
| 55 | - | - | 72 | 118 | | 2 | 1 | 4.28 |
| 55 | - | - | 72 | 118 | | 2 | 1 | 4.24 |
| - | - | 55 | 72 | 118 | | 2 | - | 4.24 |
| - | - | 28.2 | 72 | 93 | - | 1 | - | 0.828 |
| | | | | | | | | 0.824 |
| | | | | | | | | 0.811 |
| 66.1 | - | - | 74 | - | 114 | 1.5 | 1 | 2.43 |
| 60 | - | - | 77 | - | 133 | 2 | 1 | 4.47 |
| 60 | | | 77 | 128 | | 2 | 1 | 5.12 |
| | 60 | | 77 | 128 | | 2 | 1 | 4.96 |
| | | 76.5 | 77 | 128 | | 2 | 1 | 4.96 |
| 62 | - | - | 77 | - | 102 | 1 | 1 | 1.45 |
| | | | | | | | | 1.25 |
| 44.1 | | | 77 | 103 | 105.5 | 1 | 0.6 | 1.25 |
| 44.1 | | | 77 | 103 | 105.5 | 1 | 0.6 | 1.27 |
| 44.1 | | | 77 | 103 | 105.5 | 1 | 0.6 | 1.25 |
| 69.5 | | | 71 | 103 | | | | 1.24 |
| - | - | - | 79 | - | 116 | 1.5 | 1 | 2.47 |
| 86.3 | - | 52.9 | 79 | 116 | - | 1.5 | - | 2.54 |
| - | - | - | 82 | - | 143 | 2 | 1 | 6.32 |
| 64 | - | 64 | 82 | 138 | - | 2 | - | 6.32 |
| 64 | | | 82 | 138 | | 2 | 1 | 6.27 |
| | | | 82 | 138 | | 2 | 1 | 6.25 |
| - | 64 | | 82 | 138 | | 2 | 1 | 6.12 |
| 62 | 74 | - | 86 | 164 | - | 2.5 | 1 | 11.3 |
| | | | 80 | | 110 | | 0.6 | 1.29 |
| 111 | - | - | 84 | - | 124 | 1.5 | 1 | 2.63 |
| | | 56 | 84 | 121 | | 1.5 | 1.5 | 2.51 |
| 91.8 | - | - | 87 | - | 153 | 2 | 1 | 7.09 |

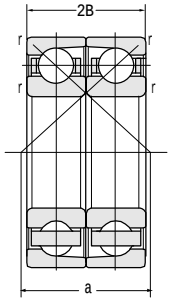
d 75~85 mm



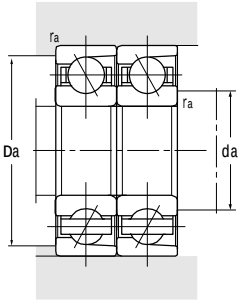

DT type



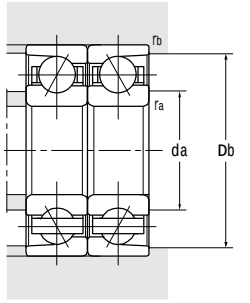

DB type



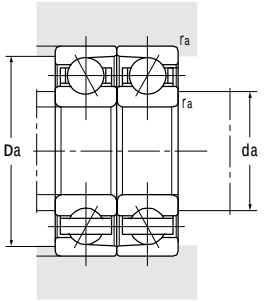

DF type




DT type



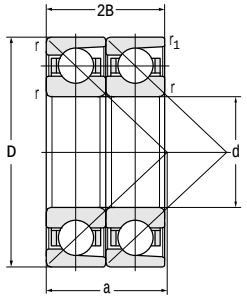

DB type



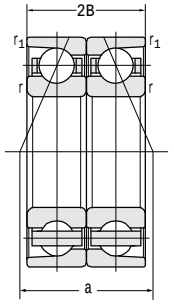

DF type

| Principal dimensions | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|
| d | D | 2B | r | $r_1$ | Cr | Cor | Grease | Oil | |
| mm | | | | | kN | | r/min | | |
| **75** | 160 | 74 | 2.1 | 1.1 | 228 | 218 | 5500 | 7400 | **7315ACM/DT** |
| | 160 | 74 | 2.1 | 1.1 | 228 | 218 | 5500 | 7400 | **7315ACQ1/DT** |
| | 160 | 74 | 2.1 | 1.1 | 203 | 194 | 3600 | 4800 | **7315B/DT** |
| | 160 | 74 | 2.1 | 1.1 | 203 | 194 | 3600 | 4800 | **7315BQ1/P6DTGAS0** |
| | 160 | 74 | 2.1 | 1.1 | 190 | 218 | 2800 | 3800 | **7315ACM/DB** |
| | 160 | 74 | 2.1 | 1.1 | 202 | 195 | 2800 | 3800 | **7315BM/DB** |
| | 160 | 74 | 2.1 | 2.1 | 202 | 194 | 2800 | 3800 | **7315BM/DF** |
| | 160 | 74 | 2.1 | 2.1 | 202 | 194 | 2800 | 3800 | **7315BM/DT** |
| **80** | 125 | 44 | 1.1 | 0.6 | 89.7 | 105 | 6400 | 8500 | **7016ACM/DB** |
| | 125 | 44 | 1.1 | 0.6 | 89.7 | 105 | 6400 | 8500 | **7016AC/DBB** |
| | 125 | 44 | 1.1 | 0.6 | 83 | 99 | 6400 | 8500 | **7016ACHA/P5DBA** |
| | 125 | 44 | 1.1 | 0.6 | 79 | 95 | 6400 | 8500 | **7016AHA/P4DBB** |
| | 125 | 44 | 1.1 | 0.6 | 83 | 99 | 6400 | 8500 | **7016ACHA/P4DBA-ZH** |
| | 140 | 52 | 2 | 1 | 150 | 158 | 6400 | 8500 | **7216AC/P4DBB** |
| | 140 | 52 | 2 | 1 | 150 | 158 | 6400 | 8500 | **7216ACQ5/DBYA3** |
| | 140 | 52 | 2 | 1 | 150 | 158 | 3000 | 4000 | **7216ACM/DB** |
| | 140 | 52 | 2 | 1 | 107 | 123 | 3000 | 4000 | **7216ACHA/P5DBB** |
| | 170 | 78 | 2.1 | 1.1 | 246 | 245 | 2500 | 3600 | **7316ACM/DB** |
| | 170 | 78 | 2.1 | 1.1 | 246 | 245 | 2500 | 3600 | **7316AC/DB** |
| | 170 | 78 | 2.1 | 1.1 | 220 | 218 | 2600 | 3600 | **7316BM/DB** |
| | 170 | 78 | 2.1 | 2.1 | 220 | 218 | 2600 | 3600 | **7316BM/DF** |
| | 170 | 78 | 2.1 | 2.1 | 220 | 218 | 2600 | 3600 | **7316BM/DT** |
| | 200 | 96 | 3 | 1.1 | 320 | 339 | 2300 | 3000 | **7416AC/DT** |
| **85** | 130 | 44 | 1.1 | 0.6 | 84.5 | 104 | 4300 | 5600 | **7017ACHA/P4DBA** |
| | 150 | 56 | 2 | 1 | 162 | 174 | 2800 | 3800 | **7217ACM/DB** |
| | 150 | 56 | 2 | 1 | 157 | 144 | 2800 | 3800 | **7217BM/DB** |
| | 180 | 82 | 3 | 1.1 | 265 | 273 | 2400 | 3400 | **7317ACM/DB** |
| | 180 | 82 | 3 | 1.1 | 265 | 275 | 2400 | 3400 | **7317AC/DB** |
| | 180 | 82 | 3 | - | 265 | 273 | 2400 | 3400 | **7317ACM/DF** |
| | 180 | 82 | 3 | 1.1 | 230 | 240 | 2400 | 3400 | **7317BM/DT** |

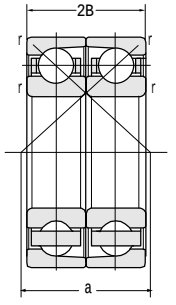
| Contact points | | | Abutment and fillet dimensions | | | | | Weight |
|---|---|---|---|---|---|---|---|---|
| DB | DF | DT | $d_{amin}$ | $D_{amax}$ | $D_{bmax}$ | $r_{amax}$ | $r_{bmax}$ | |
| | | | mm | | | | | kg |
| - | - | 45.9 | 87 | 148 | - | 2 | - | 7.09 |
| - | - | 45.9 | 87 | 148 | - | 2 | - | 7.04 |
| - | - | 67.8 | 87 | 148 | - | 2 | - | 6.51 |
| - | - | 67.8 | 87 | 148 | - | 2 | - | 7.41 |
| 68 | | | 87 | 148 | | 2 | 1 | 7.3 |
| 135.6 | | | 87 | 148 | | 2 | 1 | 6.81 |
| | 61.6 | | 87 | 148 | | 2 | 1 | 6.81 |
| | | 117 | 87 | 148 | | 2 | 1 | 6.81 |
| 69.8 | - | - | 87 | - | 120 | 1 | 0.6 | 1.97 |
| 69.8 | - | - | 87 | - | 120 | 1 | 0.6 | 1.7 |
| 69.8 | - | - | 87 | - | 120 | 1 | 0.6 | 1.85 |
| 69.8 | - | - | 87 | - | 120 | 1 | 0.6 | 1.85 |
| 69.8 | - | - | 87 | - | 120 | 1 | 0.6 | 1.85 |
| 59 | - | - | 91 | 129 | | 2 | 1 | 2.97 |
| 77.5 | - | - | 90 | - | 134 | 2 | 1 | 3.26 |
| 77.5 | - | - | 91 | - | 129 | 2 | 1 | 3.46 |
| 59 | | | 91 | 129 | | 2 | 1 | 3.1 |
| 97.3 | - | - | 92 | - | 158 | 2 | 1 | 8.18 |
| 97.3 | - | - | 92 | - | 158 | 2 | 1 | 7.17 |
| 143 | | | 92 | 158 | | 2 | 1 | 8.30 |
| | 65.8 | | 92 | 158 | | 2 | 1 | 8.30 |
| | | 124 | 92 | 158 | | 2 | 1 | 8.30 |
| - | - | 56.7 | 94 | 186 | - | 2.5 | | 14.4 |
| 84.1 | | | 90 | | 125 | | 0.6 | 1.85 |
| 63 | - | - | 96 | 139 | - | 2 | 1 | 4.22 |
| 64 | - | - | 96 | 139 | - | 2 | 1 | 4.53 |
| 102.8 | - | - | 99 | - | 173 | 2.5 | 1 | 9.78 |
| 102.8 | - | - | 99 | - | 173 | 2.5 | 1 | 8.7 |
| - | 20.8 | - | 99 | 166 | - | 2.5 | - | 9.78 |
| - | - | 76 | 99 | 166 | | 2.5 | 2.5 | 9.78 |



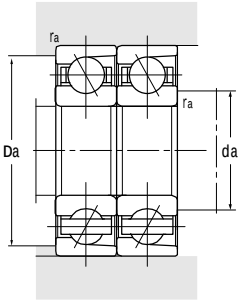

DT type



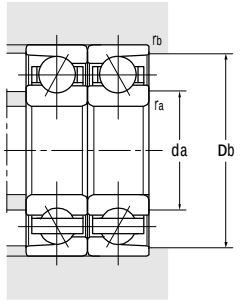

DB type



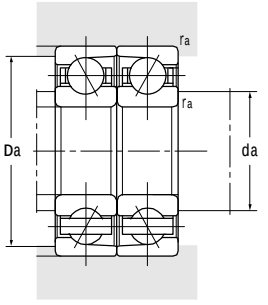

DF type




DT type




DB type

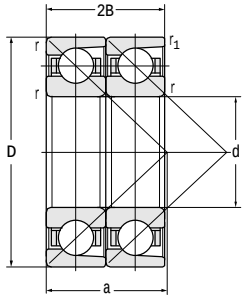



DF type

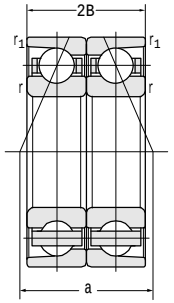
| Principal dimensions | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|
| d | D | 2B | r | $r_1$ | Cr | Cor | Grease | Oil | |
| mm | | | | | kN | | r/min | | |
| **85** | 180 | 82 | 3 | 1.1 | 236 | 244 | 2400 | 3400 | **7317BM/DB** |
| | 180 | 82 | 3 | 1 | 265 | 275 | 2400 | 3400 | **7317ACM/DBYA8** |
| | 180 | 82 | 3 | 1.1 | 230 | 240 | 2400 | 3400 | **7317BM/DT** |
| **90** | 140 | 48 | 1.5 | 0.6 | 110 | 131 | 3800 | 5300 | **7018AC/DBB** |
| | 140 | 48 | 1.5 | 0.6 | 102 | 125 | 3800 | 5300 | **7018ACHA/P4DBA** |
| | 140 | 45 | 1.5 | 1 | 65 | 90 | 3800 | 5300 | **SV7018X2ATYN/P4ADBA** |
| | 140 | 48 | 1.5 | 0.6 | 102 | 125 | 3800 | 5300 | **7018ACHA/P5DBB** |
| | 140 | 48 | 1.5 | 0.6 | 120 | 145 | 3800 | 5300 | **7018CHA/P4DBA-ZH** |
| | 140 | 48 | 1.5 | 0.6 | 102 | 125 | 4500 | 6300 | **7018ACTN1/P4DBA** |
| | 140 | 48 | 1.5 | 0.6 | 102 | 125 | 4500 | 6300 | **7018ACTN1/P5DBA** |
| | 160 | 60 | 2 | 1 | 166 | 176 | 3400 | 4500 | **7218B/P4DFA** |
| | 190 | 86 | 3 | 1.1 | 250 | 270 | 4500 | 6300 | **7318BM/DT** |
| | 190 | 86 | 3 | 1.1 | 286 | 305 | 4500 | 6300 | **7318ACM/DB** |
| **95** | 170 | 64 | 2.1 | - | 215 | 229 | 4800 | 6400 | **7219ACQ5/DF** |
| | 170 | 64 | 2.1 | 1.1 | 215 | 228 | 2400 | 3400 | **7219AC/DBB** |
| | 200 | 90 | 3 | 1.1 | 306 | 335 | 2000 | 3000 | **7319ACM/DB** |
| | 200 | 90 | 3 | 1.1 | 273 | 300 | 2000 | 3000 | **7319BM/DB** |
| | 200 | 90 | 3 | 3 | 273 | 300 | 2000 | 3000 | **7319BM/DF** |
| | 200 | 90 | 3 | 3 | 273 | 300 | 2000 | 3000 | **7319BM/DT** |
| **100** | 150 | 48 | 1.5 | 0.6 | 111 | 141 | 3600 | 5000 | **7020AHA/P4DBA** |
| | 150 | 48 | 1.5 | 0.6 | 124 | 154 | 3600 | 5000 | **7020AC/DBB** |
| | 150 | 48 | 1.5 | 0.6 | 116 | 146 | 3600 | 5000 | **7020ACHA/DBA** |
| | 150 | 45 | 1.5 | 1 | 69 | 94 | 3600 | 5000 | **SV7020X2ATYN/P4ADBA** |
| | 150 | 48 | 1.5 | 0.6 | 124 | 154 | 3600 | 5000 | **7020AC/DB** |
| | 150 | 48 | 1.5 | 0.6 | 116 | 146 | 3600 | 5000 | **7020ACHA/P4DBB** |
| | 150 | 48 | 1.5 | 0.6 | 118 | 154 | 3600 | 5000 | **7020ACHA/P4DBB-ZH** |
| | 180 | 68 | 2.1 | 1.1 | 242 | 260 | 4600 | 6100 | **7220ACM/DB** |

| Contact points | | | Abutment and fillet dimensions | | | | | Weight |
|---|---|---|---|---|---|---|---|---|
| DB | DF | DT | damin | Damax | Dbmax | ramax | rbmax | |
| | | | mm | | | | | kg |
| 76 | - | - | 99 | 166 | | 2.5 | 1 | 9.78 |
| 76 | | | 99 | 166 | | 2.5 | 1 | 10 |
| | | 76 | 99 | 166 | | 2.5 | | 10 |
| 90.4 | | | 96 | | 134 | | 1 | 2.36 |
| 90.4 | | | 96 | | 134 | | 1 | 2.35 |
| 90.4 | | | 96 | | 134 | | 1 | 2.48 |
| 90.4 | | | 96 | | 134 | | 1 | 2.35 |
| 90.4 | | | 96 | | 134 | | 1 | 2.34 |
| 77.6 | | | 99 | | 133 | 1.5 | 0.6 | 2.34 |
| 77.6 | | | 99 | | 133 | 1.5 | 0.6 | 2.34 |
| | 74.9 | | 105 | 145 | | 1.5 | 0.6 | 4.78 |
| | | 138.9 | 104 | 176 | | 2.5 | | 10.3 |
| 108.2 | - | - | 104 | - | 173 | 2.5 | 1 | 12.2 |
| - | 29.8 | - | 107 | 158 | - | 2 | - | 5.95 |
| 72 | | | 107 | 158 | | 2 | 1 | 5.36 |
| 84 | | | 109 | 186 | | 2.5 | 1 | 13 |
| 84 | 84 | | 109 | 186 | | 2.5 | 1 | 12.6 |
| | | 61.5 | 109 | 186 | | 2.5 | 1 | 12.6 |
| | 84 | | 109 | 186 | | 2.5 | | 12.6 |
| 96.2 | | | | | 144 | | 1 | 2.49 |
| 96.2 | | | | | 144 | | 1 | 1.3 |
| 96.2 | | | | | 144 | | 1 | 2.49 |
| | | | | | | | | 2.68 |
| 96.2 | | | | | 144 | | 1 | 2.49 |
| 96.2 | | | | | 144 | | 1 | 2.49 |
| 96.2 | | | | | 144 | | 1 | 2.55 |
| 99.3 | - | - | 112 | - | 173 | 2 | 1 | 7.14 |

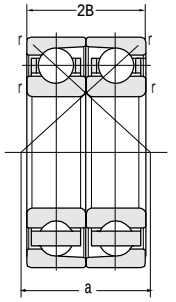
d 100~120 mm



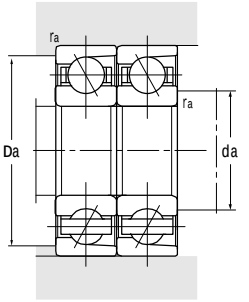

DT type



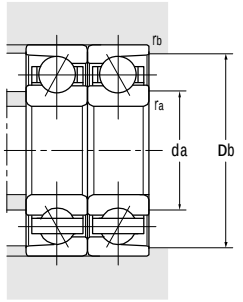

DB type



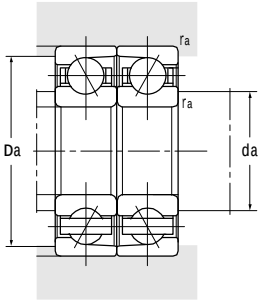

DF type




DT type



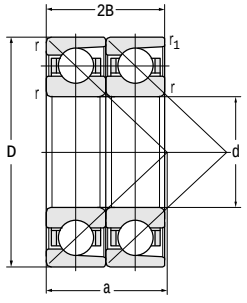

DB type



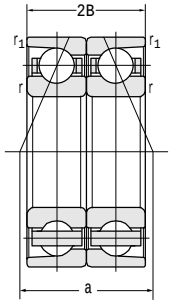

DF type

| Principal dimensions | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|
| d | D | 2B | r | $r_1$ | Cr | Cor | Grease | Oil | |
| mm | | | | | kN | | r/min | | |
| **100** | 215 | 94 | 3 | - | 345 | 395 | 1900 | 2800 | **7320ACM/DF** |
| | 215 | 94 | 3 | - | 305 | 355 | 1900 | 2800 | **7320BM/DF** |
| | 215 | 94 | 3 | 1.1 | 309 | 354 | 1900 | 2800 | **7320BT/DT** |
| | 215 | 94 | 3 | 1.1 | 345 | 395 | 1900 | 2800 | **7320ACM/DB** |
| | 215 | 94 | 3 | 1.1 | 310 | 355 | 1900 | 2800 | **7320BM/DB** |
| **105** | 225 | 98 | 3 | 1.1 | 330 | 390 | 1800 | 2600 | **7321BM/DB** |
| | 225 | 98 | 3 | 3 | 330 | 390 | 1800 | 2600 | **7321BM/DF** |
| **110** | 170 | 56 | 2 | 1 | 165 | 213 | 4500 | 6300 | **7022CM/DBYA3** |
| | 200 | 76 | 2.1 | 1.1 | 299 | 342 | 4100 | 5500 | **7222CM/DB** |
| | 200 | 76 | 2.1 | 1.1 | 286 | 325 | 2000 | 3000 | **7222ACM/DB** |
| | 200 | 76 | 2.1 | 1.1 | 250 | 289 | 4000 | 6000 | **7222BM/P5DBCB** |
| | 200 | 76 | 2.1 | 1.1 | 299 | 340 | 1900 | 2800 | **7222CM/DB** |
| | 200 | 76 | 3 | 1.1 | 250 | 289 | 1900 | 2800 | **7222BM/DB** |
| | 240 | 100 | 3 | - | 347 | 425 | 1700 | 2400 | **7322BM/DF** |
| | 240 | 100 | 3 | 1.1 | 385 | 465 | 1700 | 2400 | **7322ACM/DB** |
| | 240 | 100 | 3 | 3 | 385 | 465 | 1700 | 2400 | **7322ACM/DF** |
| | 240 | 100 | 3 | 1.1 | 385 | 465 | 1700 | 2400 | **7322ACM/DT** |
| **120** | 180 | 56 | 2 | - | 164 | 214 | 4200 | 5600 | **7024AC/DF** |
| | 180 | 56 | 2 | 1 | 140 | 185 | 2000 | 2900 | **7024BM/DT** |
| | 180 | 56 | 2 | 1 | 148 | 199 | 1900 | 2800 | **7024AHA/P4DBA** |
| | 180 | 56 | 2 | 1 | 153 | 206 | 1900 | 2800 | **7024ACHA/P4DBB** |
| | 180 | 56 | 2 | 1 | 153 | 206 | 1900 | 2800 | **7024ACHA/P4DTA** |
| | 180 | 54 | | 1 | 153 | 205 | 1900 | 2800 | **SV7024X2ATN1/P4ADBA** |
| | 180 | 54 | | 1 | 153 | 205 | 1900 | 2800 | **SV7024X2ATYN/P4ADBA** |
| | 215 | 80 | 2.1 | 1.1 | 307 | 367 | 3800 | 5000 | **7224ACQ5/DB** |
| | 215 | 80 | 2.1 | 1.1 | 300 | 367 | 1700 | 2400 | **7224ACM/DB-SH** |
| | 215 | 80 | 2.1 | 2.1 | 300 | 367 | 1700 | 2400 | **7224ACM/DF** |
| | 260 | 110 | 3 | - | 400 | 540 | 1600 | 2200 | **7324AC/DF** |

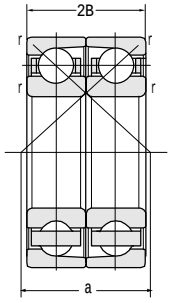
| Contact points | | | Abutment and fillet dimensions | | | | | Weight |
|---|---|---|---|---|---|---|---|---|
| DB | DF | DT | damin | Damax | Dbmax | ramax | rbmax | |
| | | | mm | | | | | kg |
| - | 26.5 | - | 114 | 201 | - | 2 | - | 19.2 |
| - | 85.2 | - | 114 | 201 | - | 2 | - | 16.8 |
| - | - | 89.6 | 114 | 201 | - | 2.5 | - | 15.2 |
| 90 | | | 114 | 201 | | 2.5 | 1 | 19.4 |
| 76 | | | 112 | 168 | | 2 | 1 | 16.8 |
| 94 | - | - | 119 | 211 | | 2.5 | 1 | 19 |
| | 94 | | 119 | 211 | | 2.5 | 1 | 19 |
| 65.5 | | | | | 164 | | 1 | 4.82 |
| 79.5 | - | - | 122 | - | 188 | 2 | 1 | 10.0 |
| 103.3 | - | - | 122 | - | 188 | 2 | 1 | 9.47 |
| 167.9 | - | - | 122 | - | 188 | 2 | 1 | 7.92 |
| 84 | - | - | 122 | 188 | - | 2 | 1 | 9.67 |
| 85 | - | - | 122 | 188 | - | 2 | 1 | 7.92 |
| - | 98.5 | - | 124 | 226 | - | 2.5 | - | 23.5 |
| 99 | | | 124 | 226 | | 2.5 | 1 | 19.9 |
| | 99 | | 124 | 226 | | 2.5 | 1 | 20.4 |
| | | 99 | 124 | 226 | | 2.5 | | 20.4 |
| - | 42 | - | 130 | 170 | - | 2 | - | 4.62 |
| - | - | 77 | 130 | 170 | - | 2 | - | |
| 77 | - | - | 129 | 171 | | 2 | 1 | 4.27 |
| 77 | - | - | 129 | 171 | | 2 | 1 | 4.27 |
| - | - | 77 | 129 | 171 | | 2 | 1 | 4.27 |
| 77 | | | 129 | 171 | | 2 | 1 | 4.16 |
| 77 | | | 129 | 171 | | 2 | 1 | 4.16 |
| 118.1 | - | - | 132 | - | 208 | 2 | 1 | 13.1 |
| 90 | - | - | 132 | 203 | | 2 | 1 | 12.3 |
| | 90 | | 132 | 203 | | 2 | 1 | 12.3 |
| - | 33.6 | - | 134 | 246 | - | 2.5 | - | 27.4 |



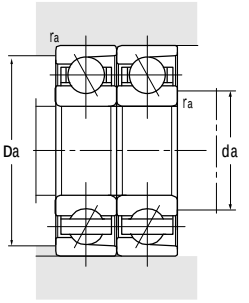

DT type



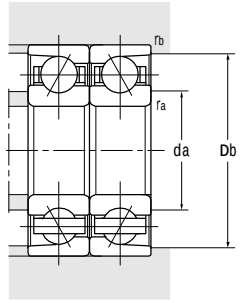

DB type



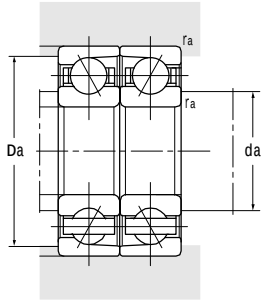

DF type




DT type




DB type

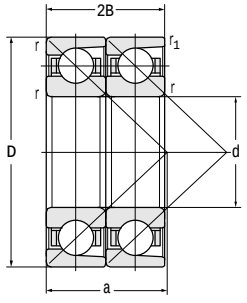



DF type

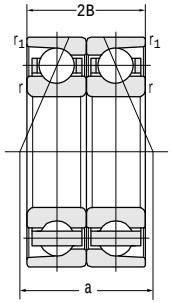
| Principal dimensions | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|
| d | D | 2B | r | $r_1$ | Cr | Cor | Grease | Oil | |
| mm | | | | | kN | | r/min | | |
| **120** | 260 | 110 | 3 | 1.1 | 410 | 525 | 3300 | 4500 | **7324B/DT** |
| | 260 | 110 | 3 | 1.1 | 430 | 540 | 1600 | 2200 | **7324AC/DB** |
| | 260 | 110 | 3 | 3 | 405 | 525 | 1600 | 2200 | **7324B/DF** |
| **130** | 180 | 48 | 1.5 | 0.6 | 130 | 190 | 3400 | 4800 | **71926ACM/DT** |
| | 200 | 66 | 2 | 1 | 198 | 260 | 2600 | 3600 | **7026AC/DT** |
| | 200 | 63 | 2 | 1 | 126 | 179 | 2600 | 3600 | **SV7026X2ATYN/P4ADBA** |
| | 230 | 80 | 3 | 1.1 | 278 | 350 | 1800 | 2600 | **7226BM/P5DBCB** |
| | 230 | 80 | 3 | 1.1 | 320 | 400 | 1700 | 2400 | **7226ACM/DB** |
| | 230 | 80 | 3 | 3 | 320 | 400 | 1700 | 2400 | **7226ACM/DF** |
| | 280 | 116 | 4 | - | 403 | 537 | 1600 | 2200 | **7326B/DF** |
| | 280 | 116 | 4 | 1.5 | 403 | 537 | 1600 | 2200 | **7326B/DT** |
| | 280 | 116 | 4 | 1.5 | 455 | 605 | 1500 | 2000 | **7326ACM/DB** |
| | 230 | 80 | 3 | 1.1 | 278 | 350 | 1800 | 2600 | **7226BM/DT** |
| | 230 | 80 | 3 | 1.1 | 278 | 350 | 1800 | 2600 | **7226BM/DF** |
| | 230 | 80 | 3 | 1.1 | 335 | 420 | 1900 | 2800 | **7226C/P4DFA** |
| **140** | 210 | 66 | 2 | - | 203 | 275 | 3600 | 4800 | **7028AC/DF** |
| | 250 | 84 | 3 | 1.1 | 355 | 470 | 1600 | 2200 | **7228ACM/DB-SH** |
| | 250 | 84 | 3 | 1.1 | 309 | 414 | 1700 | 2300 | **7228BM/DB** |
| | 250 | 84 | 3 | 1.1 | 309 | 414 | 1700 | 2300 | **7228BM/DT** |
| | 250 | 84 | 3 | 1.1 | 310 | 415 | 1700 | 2300 | **7228BM/P5DBCB** |
| | 300 | 124 | 4 | 1.5 | 447 | 616 | 1600 | 2000 | **7328B/DT** |
| | 300 | 124 | 4 | 1.5 | 445 | 600 | 1600 | 2000 | **7328BA/DT** |
| | 300 | 124 | 4 | 1.5 | 445 | 600 | 1400 | 1900 | **7328B/DB** |
| | 300 | 124 | 4 | 4 | 445 | 600 | 1400 | 1900 | **7328B/DF** |
| **150** | 225 | 70 | 2.1 | 1.1 | 213 | 294 | 1700 | 2300 | **7030BM/DB** |
| | 225 | 67.5 | 2.1 | 1.1 | 213 | 194 | 1600 | 2200 | **7030X2BM/P4ADBA** |
| | 270 | 90 | 3 | - | 310 | 430 | 1600 | 2000 | **7230B/DF** |
| | 270 | 90 | 3 | 1.1 | 582 | 857 | 1500 | 2000 | **7230BM/DB** |
| | 320 | 130 | 4 | - | 582 | 856 | 2600 | 3600 | **7330AC/DF** |
| | 320 | 130 | 4 | - | 582 | 856 | 2600 | 3600 | **7330B/DF** |
| **160** | 229.5 | 66 | 3 | 1.5 | 151 | 256 | 3000 | 4000 | **72932X3BM/DBYA6** |
| | 240 | 76 | 2.1 | 1.1 | 225 | 315 | 3100 | 4100 | **7032BM/DB** |

| Contact points | | | Abutment and fillet dimensions | | | | | Weight |
|---|---|---|---|---|---|---|---|---|
| DB | DF | DT | damin | Damax | Dbmax | ramax | rbmax | |
| | | | mm | | | | | kg |
| - | - | 107.2 | 134 | 246 | - | 2.5 | - | 29.2 |
| 107 | | | 134 | 246 | | 2.5 | 1 | 27.4 |
| | 107 | | 134 | 246 | | 2.5 | 1 | 29.2 |
| 96.3 | | | | | 174 | | 1 | 3.78 |
| | | | | | 194 | | 1 | 6.75 |
| | | | | | 194 | | 1 | 6.76 |
| 191 | - | - | 144 | - | 216 | 2.5 | 1 | 15.1 |
| 96 | - | - | 144 | 216 | - | 2.5 | 1 | 14 |
| | 96 | | 144 | 216 | | 2.5 | 1 | 14 |
| - | 114 | - | 148 | 262 | - | 3 | - | 35.9 |
| - | - | 115.1 | 148 | 262 | - | 3 | - | 35.9 |
| 115 | | | 147 | 263 | | 3 | 1.5 | 36.1 |
| | | 171 | 152 | 209 | | 2.5 | 1 | 15.1 |
| 111 | | | 152 | 209 | | 2.5 | 1 | 15.1 |
| | 8 | | 148 | 213 | | 2.5 | 1 | 12.5 |
| - | 48.6 | - | 150 | 200 | - | 2 | - | 6.92 |
| 103 | - | - | 154 | 236 | | 2.5 | 1 | 16.9 |
| 205.8 | - | - | 154 | - | 243 | 2.5 | 1 | 17.2 |
| | | 184.8 | 154 | 228 | | 2.5 | 1 | 17.2 |
| 205.6 | - | - | 154 | - | 243 | 2.5 | 1 | 17.2 |
| - | - | 123.2 | 158 | 282 | - | 3 | - | 42.3 |
| - | - | 123 | 158 | 282 | - | 3 | - | 42.3 |
| 123 | - | - | 157 | 283 | - | 3 | 1.5 | 42.3 |
| - | 123 | - | 157 | 283 | - | 3 | 1.5 | 42.3 |
| 192.3 | - | - | 160 | - | 215 | 2 | 1 | 9.61 |
| 96 | - | - | 160 | 215 | | 2 | 1 | 9.57 |
| - | 132 | - | 165 | 256 | - | 2.5 | - | 22 |
| 111 | | | 164 | 256 | 2.5 | 23.7 | | 23.4 |
| - | 45.3 | - | 168 | 302 | - | 3 | - | 51.6 |
| - | 132 | - | 168 | 302 | - | 3 | - | 52.3 |
| 78.9 | | | | | 214 | | 1 | 9.06 |
| 205.8 | - | - | 172 | - | 233 | 2 | 1 | 12 |

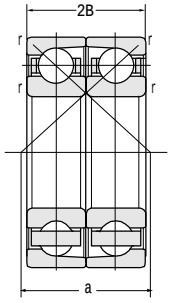
d 160~200 mm



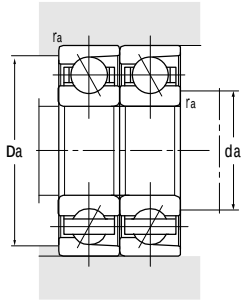

DT type



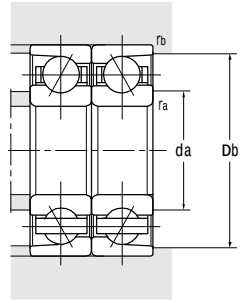

DB type



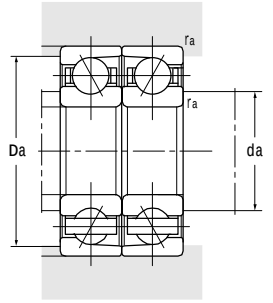

DF type




DT type



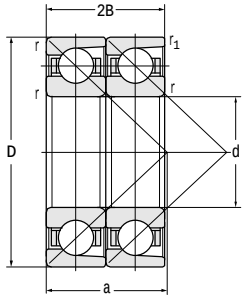

DB type



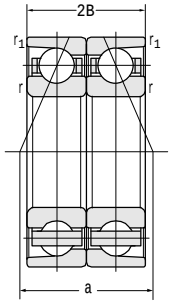

DF type

| Principal dimensions | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|
| d | D | 2B | r | $r_1$ | Cr | Cor | Grease | Oil | |
| mm | | | | | kN | | r/min | | |
| **160** | 290 | 96 | 3 | 1.1 | 400 | 580 | 1300 | 1800 | **7232AC/DB** |
| | 290 | 96 | 3 | 1.1 | 340 | 500 | 1400 | 1900 | **7232B/DB** |
| | 290 | 96 | 3 | 1.1 | 340 | 500 | 1400 | 1900 | **7232B/DT** |
| | 290 | 96 | 3 | 3 | 400 | 580 | 1300 | 1800 | **7232AC/DF** |
| | 290 | 96 | 3 | 3 | 340 | 500 | 1300 | 1800 | **7232B/DF** |
| **170** | 229.5 | 56 | 2 | - | 147 | 225 | 3600 | 4800 | **71934X1B/DFYA3** |
| | 260 | 84 | 2.1 | 1.1 | 310 | 435 | 1500 | 2000 | **7034A/C2DB** |
| | 260 | 84 | 2.1 | 1.1 | 272 | 380 | 1500 | 2000 | **7034B/DB** |
| | 310 | 104 | 4 | 1.5 | 462 | 685 | 2900 | 3900 | **B7234AC/DT** |
| | 310 | 104 | 4 | 1.5 | 495 | 740 | 1800 | 2500 | **7234AC/DT** |
| | 310 | 104 | 1 | 1.5 | 495 | 740 | 1200 | 1700 | **7234AC/DB** |
| | 360 | 144 | 4 | 1.5 | 570 | 905 | 1000 | 1500 | **7334B/DB** |
| **180** | 280 | 92 | 2.1 | 1.1 | 310 | 485 | 1200 | 1700 | **7036B/DT** |
| | 280 | 92 | 2.1 | 1.1 | 355 | 525 | 1300 | 1800 | **7036CHA/P4DBA** |
| | 320 | 104 | 4 | - | 400 | 645 | 1000 | 1500 | **7236B/DF** |
| | 380 | 150 | 4 | 2 | 590 | 970 | 1000 | 1400 | **7336B/DT** |
| **190** | 260 | 66 | 2 | 1 | 162 | 274 | 2400 | 3400 | **71938CTYN/P5DBAX** |
| | 260 | 66 | 2 | 1 | 162 | 274 | 2400 | 3400 | **71938C/P5DBAX** |
| | 290 | 92 | 2.1 | 1.1 | 347 | 526 | 2600 | 3400 | **7038AC/DT** |
| | 290 | 92 | 2.1 | 1.1 | 218 | 262 | 1200 | 1700 | **7038AC/DT** |
| | 400 | 156 | 5 | 2 | 640 | 1100 | 900 | 1400 | **7338B/DT** |
| **200** | 280 | 76 | 2 | 1 | 310 | 480 | 2200 | 3200 | **71940A/DB** |
| | 280 | 76 | 2.1 | 1.1 | 200 | 330 | 2200 | 3200 | **71940CTYN/P4ADBAX** |
| | 280 | 76 | 2.1 | 1.1 | 200 | 330 | 2200 | 3200 | **71940C/P4ADBAX** |
| | 280 | 76 | 2.1 | 1.1 | 200 | 330 | 2200 | 3200 | **71940ACHA/P4DBB** |
| | 289.5 | 76 | 3.5 | 2 | 232 | 420 | 2200 | 3200 | **71940X1B/DBYA6** |
| | 310 | 102 | 2.1 | 1.1 | 370 | 575 | 1600 | 2100 | **7040B/DB** |
| | 360 | 116 | 4 | 1.5 | 503 | 834 | 2200 | 3000 | **7240B/DB** |
| | 360 | 116 | 4 | - | 589 | 974 | 2200 | 3000 | **7240C/DF** |
| | 360 | 11 | 4 | - | 728 | 920 | 2200 | 3000 | **7240AC/DF** |

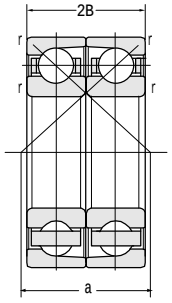
| Contact points | | | Abutment and fillet dimensions | | | | | Weight |
|---|---|---|---|---|---|---|---|---|
| DB | DF | DT | damin | Damax | Dbmax | ramax | rbmax | |
| | | | mm | | | | | kg |
| 118 | - | - | 174 | 276 | - | 2.5 | 1 | 29 |
| 236.8 | - | - | 174 | - | 276 | 2.5 | 1 | 27.8 |
| | | 212.8 | 174 | 264 | | 2.5 | - | 27.8 |
| | 118 | | 174 | 276 | | 2.5 | 1 | 29 |
| | 118 | | 174 | 276 | | 2.5 | 1 | 27.8 |
| - | 139 | - | 168 | 225 | - | 1.5 | - | 7.04 |
| 166.2 | - | - | 181 | - | 249 | 2 | 1 | 15.6 |
| 222.6 | - | - | 181 | - | 249 | 2 | 1 | 16.6 |
| - | - | 82 | 181 | 249 | - | 3 | - | 34.8 |
| - | - | 82 | 181 | 249 | - | 3 | - | 34.1 |
| 127 | - | - | 187 | 293 | - | 3 | 1.5 | 34.1 |
| 294 | - | - | 188 | - | 351.5 | 3 | 1.5 | 69.8 |
| - | - | 119 | 192 | 269 | - | 2 | - | 21 |
| 119 | | | 191 | 269 | | 2 | 1 | 19 |
| - | 158 | - | 198 | 304 | - | 3 | - | 35 |
| - | - | 156 | 198 | 362 | - | 3 | - | 81 |
| 93.3 | | | | | 254 | | 1 | 9.58 |
| 93.3 | | | | | 254 | | 1 | 9.58 |
| - | - | 79 | 202 | 278 | - | 2 | - | 21.4 |
| | | 124 | 201 | 279 | | 2 | | 21.5 |
| - | - | 164 | 210 | 380 | - | 4 | - | 97 |
| 102 | | | | | 273 | | 1 | 14.7 |
| 102 | | | | | 273 | | 1 | 6.76 |
| 102 | | | | | 273 | | 1 | 13.4 |
| 102 | | | | | 273 | | 1 | 13.5 |
| 102 | | | | | 273 | | 1 | 16.9 |
| 265 | - | - | 211 | - | 299 | 2 | 1 | 28.3 |
| 292.9 | - | - | 218 | - | 351 | 3 | 1.5 | 51.6 |
| - | 17 | - | 218 | 342 | - | 3 | - | 50.3 |
| - | 72.6 | - | 218 | 342 | - | 3 | - | 50.3 |



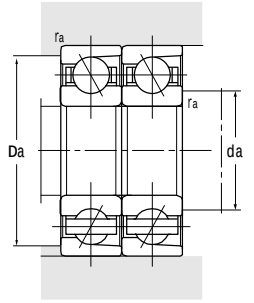

DT type



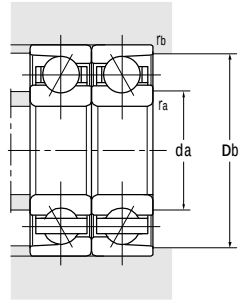

DB type



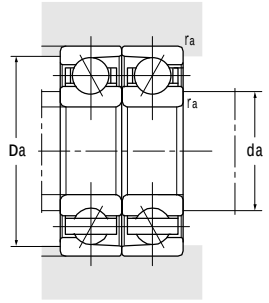

DF type




DT type




DB type

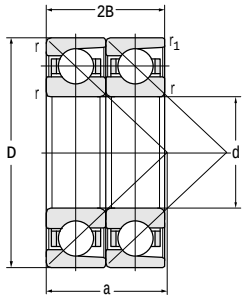



DF type

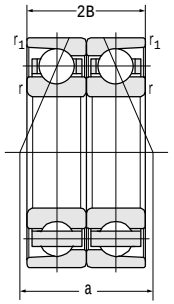
| Principal dimensions | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|
| d | D | 2B | r | $r_1$ | Cr | Cor | Grease | Oil | |
| mm | | | | | kN | | r/min | | |
| **200** | 360 | 116 | 4 | 1.5 | 560 | 920 | 1300 | 1800 | **7240AC/DB** |
| | 420 | 160 | 5 | 2 | 720 | 1270 | 900 | 1200 | **7340B/DT** |
| **220** | 300 | 76 | 2.1 | 1.1 | 275 | 475 | 1100 | 1600 | **71944C/P5DBBX** |
| | 340 | 112 | 3 | 1.1 | 400 | 700 | 900 | 1300 | **7044B/DB** |
| | 400 | 130 | 4 | 1.5 | 505 | 910 | 900 | 1200 | **7244B/DB** |
| | 460 | 176 | 5 | - | 800 | 1450 | 800 | 1200 | **7344B/DF** |
| **230** | 329.5 | 80 | 2.1 | 1.1 | 358 | 605 | 900 | 1200 | **7646AMB/DB** |
| | 329.5 | 80 | 2.1 | 1.1 | 360 | 605 | 900 | 1200 | **7646AMB/DB/W281** |
| **240** | 320 | 76 | 2.1 | 1.1 | 305 | 510 | | | **71948C/P4DBBX** |
| | 360 | 112 | 3 | - | 410 | 760 | 900 | 1200 | **7048B/DF** |
| | 370 | 112 | 3 | - | | | | | **366748K** |
| **260** | 360 | 92 | 2.1 | - | 277 | 630 | 1300 | 1800 | **71952B/DF** |
| | 400 | 130 | 4 | 4 | 520 | 970 | 1000 | 1500 | **7052B/DF/W281** |
| | 400 | 130 | 4 | 4 | 520 | 970 | 1000 | 1500 | **7052B/DF** |
| **280** | 380 | 92 | 2.1 | 1.1 | 436 | 810 | 950 | 1400 | **71956AC/DB** |
| | 380 | 92 | 2.1 | 1.1 | 410 | 745 | 950 | 1400 | **71956A/DBA** |
| | 420 | 130 | 4 | 1.5 | 490 | 1000 | 800 | 1000 | **7056B/DB** |
| **310** | 429.5 | 120 | 3 | 1.1 | 460 | 890 | 800 | 1100 | **71962X3B/DB** |
| | 429.5 | 120 | 3 | 1.1 | 460 | 890 | 800 | 1100 | **71962X3B/DB/W281** |
| **340** | 520 | 164 | 5 | - | 725 | 1620 | 660 | 900 | **7068B/DF** |
| **360** | 440 | 76 | 2.1 | 1.1 | 365 | 840 | 1500 | 1900 | **71872AC/DB** |
| | 480 | 112 | 3 | 3 | 560 | 1250 | 740 | 1000 | **71972AC/DB** |
| **380** | 480 | 92 | 2.1 | 1.1 | 359 | 730 | 700 | 910 | **71876B/DB** |
| | 520 | 130 | 4 | 4 | 640 | 1470 | 700 | 910 | **71976AC/DT** |
| **420** | 620 | 180 | 5 | 2 | 850 | 2130 | 520 | 700 | **7084B/DT** |

| Contact points | | | Abutment and fillet dimensions | | | | | Weight |
|---|---|---|---|---|---|---|---|---|
| DB | DF | DT | damin | Damax | Dbmax | ramax | rbmax | |
| | | | mm | | | | | kg |
| 146 | | | 217 | 343 | | 3 | 1.5 | 50.3 |
| - | - | 170 | 220 | 400 | - | 4 | - | 108 |
| 129 | - | - | 229 | - | 295 | 2 | 1 | 14.1 |
| 290 | - | - | 234 | - | 325 | 2.5 | 1 | 36.5 |
| 328 | - | - | 238 | - | 384 | 3 | 1.5 | 70.6 |
| - | 198 | - | 240 | 440 | - | 4 | - | 142 |
| 201.6 | - | - | 245 | - | 321 | 2 | 1 | 22.7 |
| 202.6 | - | - | 246 | - | 321 | 2 | 1 | 22.7 |
| | | | | | | | | 14.6 |
| - | 196 | - | 255 | 345 | - | 2.5 | - | 39 |
| - | 199.9 | - | 254 | 356 | - | 2.5 | - | 48.7 |
| - | 214 | - | 272 | 348 | - | 2 | - | 28.8 |
| | 171 | | 277 | 383 | | 1.5 | 3 | 60 |
| | 171 | | 277 | 383 | | 1.5 | 3 | 60 |
| 200 | - | - | 292 | - | 372 | 2 | 1 | 31.4 |
| 236.6 | - | - | 290 | - | 370 | 2 | 1 | 33.2 |
| 358 | - | - | 298 | - | 404 | 3 | 1.5 | 60 |
| | | | | | | | | 52.2 |
| | | | | | | | | 52.2 |
| - | 282 | - | 360 | 500 | - | 4 | - | 124 |
| 224 | - | - | 372 | - | 430 | 2 | 1 | 24 |
| 252 | - | - | 374 | - | 465 | 2.5 | 2.5 | 57.5 |
| 601 | - | - | 392 | - | 473 | 2 | 1 | 37.2 |
| - | - | 137 | 396 | 505 | - | 3 | - | 83.5 |
| - | - | 263 | 439 | 602 | - | 4 | - | 176 |

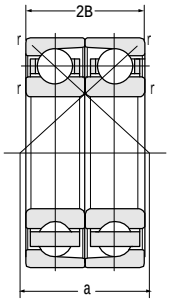
d 440~1320 mm



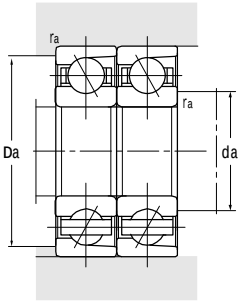

DT type



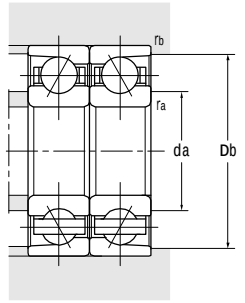

DB type



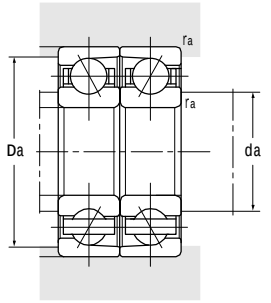

DF type




DT type




DB type

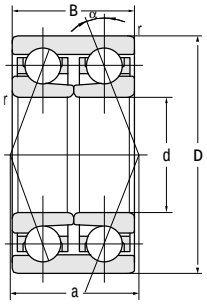



DF type

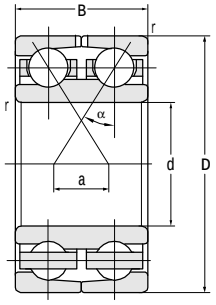
| Principal dimensions | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|
| d | D | 2B | r | $r_1$ | Cr | Cor | Grease | Oil | |
| mm | | | | | kN | | r/min | | |
| **440** | 650 | 188 | 6 | | 885 | 2190 | 500 | 650 | **7088BM/DF** |
| **460** | 580 | 112 | 3 | 3 | 580 | 1530 | 610 | 810 | **71892A/DT** |
| **500** | 620 | 74 | 2.1 | - | 430 | 1230 | 520 | 700 | **708/500A/DF** |
| | 670 | 156 | 5 | 2 | 86 | 860 | 500 | 660 | **719/500A/DT** |
| **530** | 615 | 70 | 3 | 1.1 | 210 | 520 | 630 | 824 | **718/530X3AC/P5DB** |
| | 650 | 112 | 3 | - | 620 | 1810 | 510 | 680 | **718/530A/DF** |
| | 650 | 112 | 3 | 1.1 | 645 | 1850 | 510 | 680 | **718/530AC/DB** |
| | 710 | 164 | 5 | 2 | 1030 | 2530 | 500 | 700 | **719/530A/DB** |
| | 710 | 164 | 5 | 2 | 845 | 2210 | 600 | 800 | **719/530B/DT** |
| **560** | 680 | 112 | 3 | 1.1 | 635 | 1850 | 470 | 620 | **718/560A/DT** |
| | 750 | 170 | 5 | 2 | 970 | 2680 | 470 | 620 | **719/560A/DB** |
| **600** | 730 | 120 | 3 | 3 | 740 | 2330 | 790 | 1100 | **718/600AC/DB** |
| **670** | 820 | 138 | 4 | 1.5 | 830 | 2510 | 380 | 500 | **718/670A/DT** |
| **710** | 870 | 148 | 4 | - | 955 | 3240 | 370 | 480 | **718/710AC/DF** |
| | 950 | 212 | 5 | 2 | 1370 | 4500 | 640 | 850 | **719/710AC/DB** |
| **750** | 920 | 156 | 5 | - | 985 | 3450 | 310 | 420 | **718/750A/DF** |
| **1000** | 1420 | 260 | 7.5 | 2 | 2340 | 9250 | 190 | 250 | **70/1000X2AF3/P69DF** |
| **1180** | 1420 | 212 | 6 | 4 | 1410 | 7300 | 180 | 270 | **718/1180ACM/DB** |
| | 1420 | 212 | 6 | 4 | 1410 | 7300 | 180 | 270 | **718/1180ACF3/DF** |
| **1320** | 1600 | 244 | 6 | - | 1930 | 8230 | 200 | 300 | **718/1320ACF3/DF** |

| Contact points | | | Abutment and fillet dimensions | | | | | Weight |
|---|---|---|---|---|---|---|---|---|
| DB | DF | DT | damin | Damax | Dbmax | ramax | rbmax | |
| | | | mm | | | | | kg |
| | 263 | | 461 | 548 | | 4 | | 221 |
| - | - | 178 | 474 | 567 | - | 2.5 | - | 68 |
| - | 286 | - | 512 | 610 | - | 2 | - | 54.5 |
| - | - | 208 | 519 | 653 | - | 4 | - | 154 |
| 296.7 | - | - | 544 | - | 608 | 2.5 | 1 | 37.1 |
| - | 285 | - | 544 | 638 | - | 2.5 | - | 77 |
| 331 | - | - | 544 | - | 638 | 2.5 | 1 | 77 |
| 440 | - | - | 552 | - | 700 | 4 | 2 | 189 |
| - | - | 186 | 558 | 692 | 701 | 4 | 2 | 191 |
| - | - | 207 | 575 | 667 | - | 2.5 | - | 95 |
| 463 | | | 612 | | 697 | | | 218 |
| 370 | - | - | 614 | - | 718 | 2.5 | 2.5 | 94.5 |
| - | - | 250 | 686 | 806 | - | 3 | - | 156 |
| - | 294 | - | 726 | 856 | - | 3 | - | 192 |
| 494 | - | - | 734 | - | 926 | 5 | 2.5 | 389 |
| - | 404 | - | 768 | 902 | - | 4 | - | 220 |
| - | 220 | - | 1020 | 1400 | | 7 | | 1400 |
| 495 | | | 1250 | | 1400 | 5 | | 669 |
| | 500 | | 1235 | 1365 | | | | 657 |
| - | 558.9 | - | 1348 | 1572 | - | 5 | - | 987 |

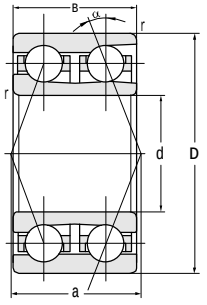
d 25~80 mm



Picture1

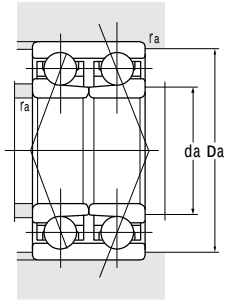


Picture2

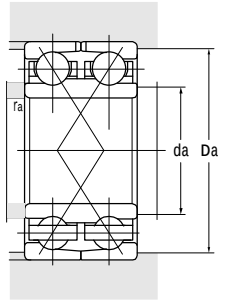


Picture3

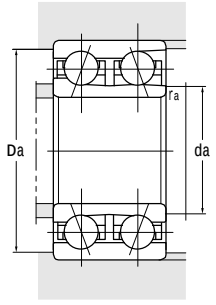
| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|
| d | D | B | r | $C_r$ | $C_{or}$ | Grease | Oil |
| mm | | | | kN | | r/min | |
| **25** | 52 | 20.6 | 1 | 16.1 | 11.8 | 6500 | 8000 |
| | 62 | 25.4 | 1.1 | 26.0 | 17.9 | 6500 | 8000 |
| **30** | 62 | 23.8 | 1 | 28.6 | 20.8 | 7000 | 9500 |
| **35** | 72 | 27 | 1.1 | 32.5 | 35.0 | 6500 | 8000 |
| | 72 | 27 | 1.1 | 37.7 | 27.5 | 6000 | 8000 |
| | 80 | 34.9 | 1.5 | 52 | 48.0 | 5600 | 7500 |
| **40** | 80 | 30.2 | 1.1 | 48 | 41 | 5600 | 7500 |
| | 90 | 36.5 | 1.5 | 57.5 | 55.0 | 5300 | 6700 |
| **45** | 85 | 30.2 | 1.1 | 50.7 | 46.0 | 5000 | 6700 |
| | 85 | 30.2 | 1.1 | 50.7 | 46.0 | 5000 | 6700 |
| | 100 | 39.7 | 1.5 | 63 | 68.0 | 4800 | 6300 |
| **50** | 110 | 44.4 | 2 | 75 | 83.0 | 4300 | 5600 |
| **55** | 100 | 33.3 | 1.5 | 54.0 | 47.0 | 4500 | 5800 |
| **60** | 110 | 36.5 | 1.5 | 82.6 | 81.0 | 3800 | 5000 |
| **65** | 120 | 38.1 | 1.5 | 91.0 | 96.0 | 3600 | 4500 |
| | 120 | 38.1 | 1.5 | 51.0 | 60.0 | 3600 | 4500 |
| | 140 | 58.74 | 2.1 | 164 | 150 | 3200 | 4300 |
| | 140 | 58.7 | 2.1 | 135 | 146 | 3200 | 4300 |
| **70** | 150 | 63.5 | 2.1 | 180 | 168 | 3200 | 4300 |
| **75** | 130 | 41.3 | 1.5 | 111 | 119 | 3200 | 4300 |
| | 130 | 41.3 | 1.5 | 107 | 115 | 3200 | 4300 |
| | 160 | 68.3 | 2.1 | 208 | 197 | 3000 | 4100 |
| | 160 | 68.3 | 2.1 | 203 | 191 | 3000 | 4100 |
| **80** | 170 | 68.3 | 2.1 | 221 | 216 | 2800 | 3600 |



Picture1



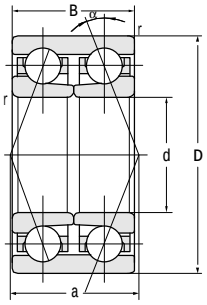
Picture2



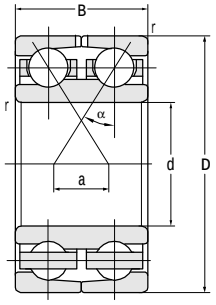
Picture3

| Designations | Contact points | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|
| | a | $d_{amin}$ | $D_{amax}$ | $r_{amax}$ | |
| | | mm | | | kg |
| **3205ATN1** | 31.7 | 31.3 | 46 | 1 | 0.185 |
| **3305ATN1** | 36.2 | 33 | 54 | 1 | 0.359 |
| **3206ATN1-2RS** | 36.5 | 36.5 | 57 | 1 | 0.293 |
| **3207M** | 46.3 | 39 | 68 | 1 | 0.51 |
| **3207ATN1** | 42.5 | 43 | 64 | 1 | 0.457 |
| **3307M** | 49 | 44 | 71 | 1.5 | 0.87 |
| **3208M** | 47 | 47 | 73 | 1 | 0.68 |
| **3308M** | 52 | 49 | 81 | 1.5 | 1.1 |
| **3209M** | 53.5 | 52 | 78 | 1 | 0.719 |
| **3209F1/C3** | 53.5 | 52 | 78 | 1 | 0.710 |
| **3309M** | 58 | 54 | 91 | 1.5 | 1.540 |
| **3310M** | 64 | 61 | 99 | 2 | 2.040 |
| **3211ATN1/V1** | 60.2 | 63 | 96 | 1.5 | 0.990 |
| **3212M** | 69.7 | 69 | 101 | 1.5 | 1.47 |
| **3213YM** | 64.7 | 74 | 111 | 1.5 | 1.84 |
| **3213ATN1/V1** | 71.8 | 74 | 111 | 1.5 | 1.70 |
| **3313DYM** | 79.4 | 77 | 128 | 2 | 4.89 |
| **3313M** | 86 | 77 | 128 | 2 | 4.34 |
| **3314** | 97.4 | 87 | 137 | 2 | 5.26 |
| **3215DYM** | 70.6 | 84 | 121 | 1.5 | 2.81 |
| **3215** | 73 | 84 | 121 | 1.5 | 2.09 |
| **3315DYM** | 91.5 | 87 | 148 | 2 | 6.82 |
| **3315** | 103.8 | 87 | 148 | 2 | 6.27 |
| **3316M** | 105.6 | 92 | 158 | 2 | 7.21 |

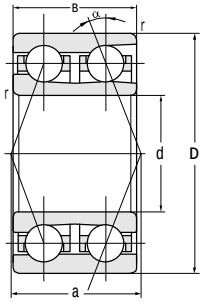
d 85~180 mm




Picture1



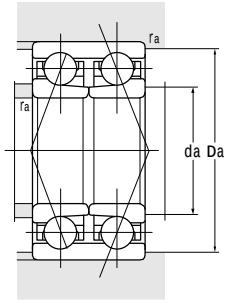

Picture2



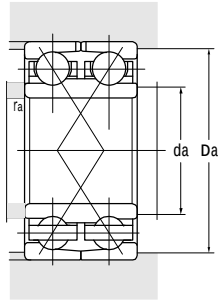

Picture3

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|
| d | D | B | r | $C_r$ | $C_{or}$ | Grease | Oil |
| mm | | | | kN | | r/min | |
| **85** | 140 | 48 | 2 | 114 | 101 | 2200 | 3200 |
| **100** | 180 | 60.3 | 2.1 | 198 | 215 | 2000 | 2700 |
| **110** | 240 | 92.1 | 3 | 358 | 429 | 1800 | 2400 |
| **120** | 190 | 66 | 2 | 179 | 237 | 2500 | 3600 |
| **130** | 200 | 75 | 2 | 150 | 200 | 2200 | 3200 |
| **150** | 215 | 50 | 2 | 126 | 188 | 1600 | 2200 |
| | 225 | 73 | 2 | 199 | 275 | 2200 | 3200 |
| | 230 | 70 | 2.1 | 185 | 250 | 2200 | 3200 |
| | 230 | 70 | 2.1 | 185 | 250 | 2200 | 3200 |
| **160** | 240 | 76 | 2.1 | 225 | 315 | 1900 | 2500 |
| | 240 | 80 | 2.1 | 210 | 289 | 1900 | 2500 |
| | 240 | 80 | 2.1 | 210 | 289 | 1900 | 2500 |
| | 240 | 80 | 2.1 | 209 | 289 | 1500 | 2000 |
| | 240 | 80 | 2.1 | 209 | 289 | 1500 | 2000 |
| | 240 | 80 | 2.1 | 209 | 289 | 1500 | 2000 |
| **170** | 259.5 | 84 | 2.1 | 250 | 355 | 1600 | 2100 |
| | 259.5 | 84 | 2.1 | 250 | 355 | 1600 | 2100 |
| | 260 | 84 | 2.1 | 207 | 385 | 1600 | 2100 |
| | 260 | 90 | 2.1 | 250 | 355 | 1600 | 2100 |
| | 260 | 90 | 2.1 | 250 | 355 | 1400 | 1900 |
| **180** | 259.5 | 66 | 2.1 | 281 | 313 | 1400 | 1800 |
| | 259.5 | 66 | 2.1 | 216 | 312 | 1400 | 1800 |
| | 259.5 | 66 | 2.1 | 281 | 313 | 1400 | 1800 |
| | 280 | 92 | 2.1 | 275 | 400 | 1300 | 1800 |
| | 280 | 92 | 2.1 | 275 | 400 | 1300 | 1800 |
| | 280 | 100 | 2.1 | 275 | 400 | 1300 | 1700 |
| | 280 | 100 | 2.1 | 275 | 400 | 1300 | 1700 |

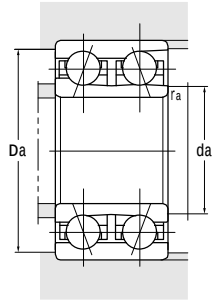





Picture1



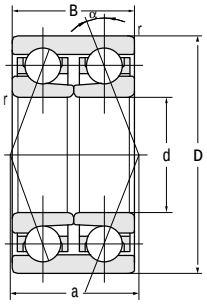

Picture2



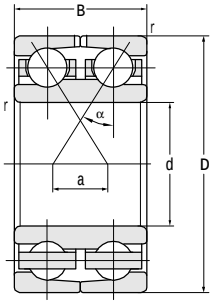

Picture3

| Designations | Contact points | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|
| | a | $d_{amin}$ | $D_{amax}$ | $r_{amax}$ | |
| | | mm | | | kg |
| **3217X3DATN1/C3** | 25.9 | 43 | 64 | 2 | 2.39 |
| **3220YM** | 129.5 | 112 | 168 | 2 | 6.46 |
| **3322M** | 151 | 124 | 226 | 2.5 | 19.9 |
| **4024X3DM/W34** | 130.1 | 133 | 175.8 | 2 | 6.78 |
| **4026X2DM** | 202.5 | 140 | 190 | 2 | 8.29 |
| **4932X3DM** | 185 | 171 | 207 | 2 | 5.15 |
| **4030X2DYM/YA6W34** | 193.8 | 164 | 212 | 2 | 6.78 |
| **4030X3DM** | 200.1 | 162 | 218 | 2 | 10.7 |
| **4030X3DM/W33** | 194 | 161 | 219 | 2 | 10.6 |
| **4032X2M/DCYA1** | 129.9 | 172 | 228 | 2 | 12.5 |
| **4032DM** | 240 | 172 | 228 | 2 | 11.6 |
| **4032DM/C91W33A** | 239.8 | 172 | 228 | 2 | 11.5 |
| **4032DM** | 130 | 172 | 228 | 2 | 12 |
| **4032DM/W33** | 130 | 172 | 228 | 2 | 11.6 |
| **4032DM/C9W33A** | 130 | 172 | 228 | 2 | 11.5 |
| **4034X3DM** | 258 | 188 | 241 | 2 | 15.3 |
| **4034X3DM/W33** | 258 | 188 | 241 | 2 | 15.3 |
| **4034X2BM/YA1** | 138.5 | 182 | 248 | 2 | 16.1 |
| **4034DM** | 260 | 182 | 248 | 2 | 16.1 |
| **4034D/W33** | 111 | 181 | 249 | 2 | 16.1 |
| **4936X3DM** | 253 | 192 | 248 | 2 | 11.1 |
| **4936X3DM/W33** | 253 | 192 | 248 | 2 | 10 |
| **4936X3DM/W34** | 253 | 192 | 248 | 2 | 11 |
| **4036DMX2/W33** | 147 | 192 | 268 | 2 | 20.9 |
| **4036X2DN1/W33** | 147 | 192 | 268 | 2 | 20.9 |
| **4036DM/C9W33** | 280 | 192 | 268 | 2 | 22.4 |
| **4036DM/W33** | 280 | 192 | 268 | 2 | 22.4 |

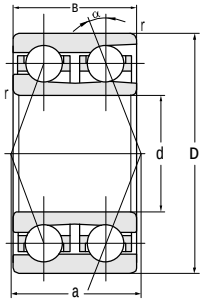
d 190~530 mm




Picture1

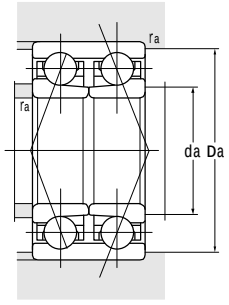



Picture2

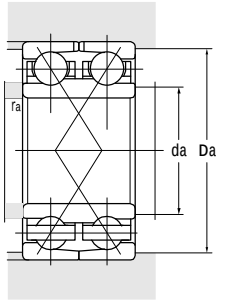



Picture3

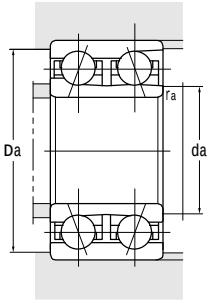
| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|
| d | D | B | r | $C_r$ | $C_{or}$ | Grease | Oil |
| mm | | | | kN | | r/min | |
| **190** | 269.5 | 66 | 2.1 | 220 | 324 | 1350 | 1700 |
| | 269.5 | 66 | 2.1 | 220 | 324 | 1350 | 1700 |
| | 290 | 100 | 2.1 | 308 | 470 | 1200 | 1700 |
| **200** | 310 | 109 | 2.1 | 343 | 538 | 1200 | 1600 |
| | 310 | 96 | 3 | 370 | 575 | 1100 | 1600 |
| **220** | 309.5 | 76 | 2.1 | 250 | 381 | 1100 | 1500 |
| | 309.5 | 76 | 2.1 | 250 | 380 | 1000 | 1500 |
| | 340 | 118 | 3 | 359 | 596 | 1000 | 1400 |
| | 340 | 118 | 3 | 385 | 645 | 1000 | 1400 |
| **230** | 329.5 | 80 | 1.1 | 340 | 570 | 950 | 1400 |
| | 329.5 | 80 | 1.1 | 340 | 570 | 950 | 1400 |
| **240** | 360 | 118 | 3 | 470 | 650 | 900 | 1250 |
| | 359.5 | 118 | 3 | 376 | 648 | 900 | 1250 |
| | 359.5 | 118 | 3 | 470 | 650 | 900 | 1250 |
| **260** | 369.5 | 92 | 4 | 373 | 662 | 800 | 1200 |
| | 369.5 | 92 | 4 | 373 | 662 | 800 | 1200 |
| | 400 | 130 | 4 | 470 | 855 | 800 | 1100 |
| | 400 | 140 | 4 | 450 | 830 | 800 | 1100 |
| | 400 | 140 | 4 | 450 | 830 | 800 | 1100 |
| | 400 | 140 | 4 | 450 | 830 | 850 | 1200 |
| **280** | 389 | 92 | 4 | 380 | 670 | 750 | 1100 |
| | 389.5 | 92 | 4 | 377 | 683 | 750 | 1100 |
| | 420 | 140 | 4 | 500 | 950 | 750 | 1100 |
| **300** | 419.5 | 112 | 2.1 | 423 | 791 | 700 | 1000 |
| | 460 | 160 | 4 | 569 | 1149 | 640 | 960 |
| | 460 | 160 | 4 | 470 | 1260 | 640 | 960 |
| **320** | 440 | 112 | 2.1 | 460 | 920 | 630 | 850 |
| **530** | 778 | 224 | 3 | 1150 | 3400 | 400 | 520 |




Picture1



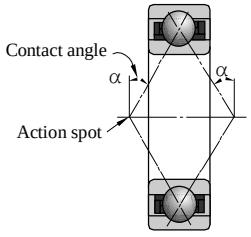

Picture2




Picture3

| Designations | Contact points | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|
| | a | $d_{amin}$ | $D_{amax}$ | $r_{amax}$ | |
| | | mm | | | kg |
| **4938X3DM** | 262.7 | 202 | 258 | 2 | 11.5 |
| **4938X3DM/W34** | 262.7 | 202 | 258 | 2 | 11.5 |
| **4038DM/W34** | 155 | 202 | 278 | 2 | 23 |
| **4040DM/W34** | 309.5 | 212 | 298 | 2 | 28.0 |
| **4040X2DCM/YA3** | 166 | 214 | 296 | 2.5 | 26.3 |
| **4944X3DM** | 303 | 232 | 298 | 2 | 18.0 |
| **4944X3DM/W33** | 204 | 232 | 297 | 2 | 17.9 |
| **4044DM/W34** | 339 | 234 | 326 | 2.5 | 36.7 |
| **4044/DCYA1** | 118 | 234 | 326 | 2.5 | 37.5 |
| **4646DCM/YA3** | 214 | 242 | 317 | 2 | 22.8 |
| **4646DCM/YA3-1** | 214 | 242 | 317 | 2 | 22.5 |
| **4048DM/W33** | 359 | 254 | 346 | 2.5 | 42.8 |
| **4048X1DM/W34** | 359 | 254 | 346 | 2.5 | 44.9 |
| **4048X1DM/C9W33** | 359 | 254 | 346 | 2.5 | 42.5 |
| **4952X3DM/W34** | 361 | 278 | 352 | 3 | 31.3 |
| **4952X3DM** | 361 | 278 | 352 | 3 | 31.3 |
| **4052X2/DCYA1** | 212 | 278 | 382 | 3 | 60.2 |
| **4052DM** | 400 | 278 | 382 | 3 | 60.7 |
| **4052DM/C9W33** | 400 | 278 | 382 | 3 | 60.7 |
| **4052DM/C9** | 212 | 383 | 3 | 3 | 60.7 |
| **4056X3D** | 381 | 298 | 372 | 3 | 32.9 |
| **4956X3DM/W34-1** | 381 | 298 | 372 | 3 | 34.0 |
| **4056D/W33** | 258 | 292 | 377 | 2 | 66.3 |
| **4960X3DM** | 416 | 342 | 408 | 2 | 43.0 |
| **4060DYM** | 398.6 | 348 | 442 | 3 | 97.9 |
| **4060D/W34** | 398.6 | 348 | 442 | 3 | 96.4 |
| **4964X2DM/W33** | 374.9 | 332 | 428 | 2 | 53.2 |
| **40/530X3/DCYA1** | 437 | 548 | 760 | 2 | 365 |

## Basic Design




Four-point contact ball bearing, as a kind of single-row contact ball bearing, is a separable type bearing and the steel balls four-point contact with ring with the contact angle of 35*that can carry radial load and axial load from any direction or the combined load from axial and radial direction. This kind of bearing can limit both side axial displacement of shaft or housing within axial clearance range. Compared with other ball bearings, when the radial clearance is the same, the axial clearance is small, load capacity is big and limit rotation speed is high.

This kind of bearing is mainly applied to carry axial load and installed into the bearing box that is used as thrust bearings with a certain radial clearance. Besides common four-point ball bearing, there is another kind of four-point ball bearing with N2 suffix. There are two locating slot on outer ring end face, in order to locate easily and prevent outer ring rotating.

## Common Information and Data Dimension

Inner diameter range: 30mm~560mm
Outer diameter range: 72mm~780mm
Width range: 19mm~90mm

## Tolerance

ZWZ produce standard series of single-row contact ball bearing according to tolerance Po, but ZWZ can also supply the bearings meeting precision Class P6 or higher. For a single bearing with contact angle (α) of 15° and 25° used for paired mounting, the precision class meets P5. For a single bearing with contact angle (α) of 40° used for paired mounting, the precision class meets P6. ZWZ also can supply the bearings with precision 4A , 2A or other precision requirement.

Please refer to standard tolerances listed in the table of preface pages.

## Internal clearance

Axial clearance of four-point contact ball bearing provided by ZWZ belongs to common group radial clearance. Some types can provide bigger or smaller clearance or narrow clearance range.

## Error of Centralization

For four-point contact ball bearings, ability of allowing angle error is limited, so they are not suitable for working condition of too much misalignment or shaft deflection. When it can not cause over additional stress to bearing, the angle error allowed by inner and outer ring depends on the radial clearance, bearing dimension, internal design, force and moment acted on bearing during bearing running. Due to the complicated relations among these factors, a specific common value can not be supplied.

Any angle error can lead to increase of noise, stress acting on cages and shorten bearing service life.

## Cage

Four-point contact ball bearings use solid brass cage without suffix code after basic bearing number.

## Minimum Load

To make bearing running well, four-point contact ball bearings are the same as all other ball bearings and roller bearings that must carry a certain minimum load, especially working at high speed and high accelerated speed or in a situation where load direction changes rapidly. In these working conditions, the inertia force of steel balls and cage and the friction inside lubricating agent will have bad influence on bearing rotating, besides, there will be harmful sliding motion to bearing formed between balls and raceways.

Minimum load needed for four-point contact ball bearing can be calculated as following formula:

$$F_m = k_m \frac{Cor}{1000} \left( \frac{nDpw}{100000} \right)^2$$

$F_m$= Minimum axial load, kN
$k_m$= Minimum axial load factor
$C_{or}$= Basic rating static load, kN
N= Rotation speed, r/min
Dpw= Average bearing diameter
= 0.5(d+D),mm

## Dynamic Equivalent Load

If starting in low temperature or viscosity of lubricating agent is high, the more minimum load will be needed. It is common to exceed necessary minimum load when weight of supporting bearing added external force. If it can not reach minimum load, the bearing must apply bigger external axial load, such as using spring.

If four-point contact ball bearings are used as fixed-end bearing, and carry radials&axial load in the meantime, the dynamic equivalent load can be calculated as formula below:

P=Fr+0.66Fa , When Fa/Fr≤0.95 [kN]
P=0.6Fr+1.07Fa ,When Fa/Fr＞0.95 [kN]

Four-point contact ball bearing will only work when steel balls contact with inner ring raceway on one point or with outer ring raceway on one point. It means axial load must meet Fa* 1.27Fr.

## Static Eqauivalent Load

For four-point contact ball bearing carrying static load Po=Fr+0.58Fa [kN]

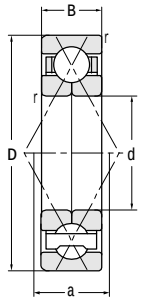
## Supplement Code

QJ Four-point contact ball bearing with split inner bearing race
QJF Four-point contact ball bearing with split outer bearing race
C1 Clearance conforms to Group 1 specified in standard clearance
C2 Clearance conforms to Group 2 specified in standard clearance
C3 Clearance conforms to Group3 specified in standard clearance
C4 Clearance conforms to Group3 specified in standard clearance
C9 Clearance is different from current standard
When there are two or more than two clearance is different from current standard clearance in uniform code, use attached digits
HA Ring, rolling element and cage or only the ring and cage is made up of vacuum smelting bearing steel
J Pressed-sheet steel cage, attach digits to tell when material changes
M Solid brass cage
MA Solid brass cage, guided with outer ring
MB Solid brass cage, guided with inner ring
N1 Bearing outer ring with a positioning notch
N2 Bearing outer ring with two or more than two symmetric positioning notches
Q Solid bronze cage, indicate different materials by attached digits
Q1- Aluminium, fe and mn bronze
Q2- Zinc silicon bronze
Q3- Silicon nickel bronze
Q4- Aluminum bronze
Q5- Stannum bronze
P6 Tolerance grade conforms to the standard P6
RS2 Bearing with frame system rubber seal ring (contact system), the material of seal ring is fluoride rubber
2RS2 Bearing with RS2 sealed on both sides
S2 Bearing ring tempered in high temperature, which can reach 250*
U Thrust ball bearing with spherical seat washer
X1 Non-standard outer diameter
X2 Non-standard width (height)
X3 Non-standard outer diameter, width (height) (standard bore diameter)

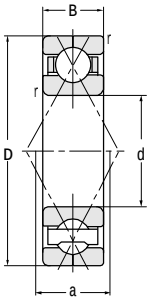
Axial clearance of four-point contact ball bearing Table 1 (μm)

| d mm | | Grovp 2 | | Grovp 0 | | Grovp 3 | | Grovp 4 | |
|---|---|---|---|---|---|---|---|---|---|
| Over | To | min | max | min | max | min | max | min | max |
| - | 18 | 15 | 55 | 45 | 85 | 75 | 115 | 105 | 145 |
| 18 | 40 | 26 | 66 | 56 | 106 | 96 | 146 | 136 | 186 |
| 40 | 60 | 36 | 86 | 76 | 126 | 116 | 166 | 156 | 206 |
| 60 | 80 | 46 | 96 | 86 | 136 | 126 | 176 | 166 | 216 |
| 80 | 100 | 56 | 116 | 96 | 156 | 136 | 196 | 176 | 236 |
| 100 | 140 | 66 | 136 | 116 | 176 | 156 | 216 | 196 | 256 |
| 140 | 180 | 76 | 156 | 136 | 196 | 176 | 236 | 216 | 276 |
| 180 | 220 | 96 | 176 | 156 | 216 | 196 | 256 | 236 | 296 |
| 220 | 260 | 115 | 195 | 175 | 235 | 215 | 295 | 275 | 335 |
| 260 | 300 | 135 | 215 | 195 | 275 | 255 | 335 | 295 | 355 |
| 300 | 350 | 155 | 235 | 215 | 295 | 275 | 355 | 335 | 415 |
| 350 | 400 | 175 | 265 | 245 | 325 | 305 | 385 | 365 | 465 |
| 400 | 500 | 205 | 305 | 285 | 385 | 355 | 455 | 435 | 525 |
| 500 | 600 | 255 | 355 | 335 | 445 | 425 | 545 | 525 | 615 |

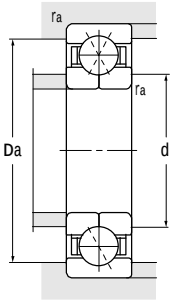
d 30~90 mm

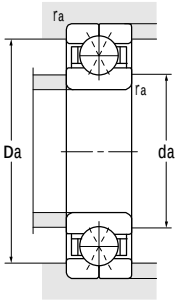



QJtype




QJFtype

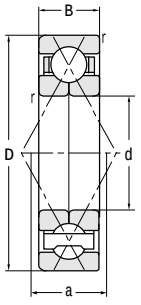


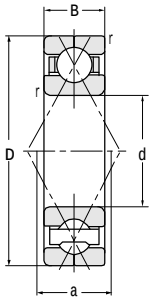

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | Cr | Cor | Grease | Oil |
| mm | | | | kN | | r/min | |
| **30** | 72 | 19 | 1.1 | 50.1 | 38 | 8000 | 11000 |
| **35** | 80 | 21 | 1.5 | 57.2 | 45 | 7100 | 9500 |
| **40** | 80 | 18 | 1.1 | 56 | 46 | 6700 | 9000 |
| | 90 | 23 | 1.5 | 72 | 58 | 5300 | 8500 |
| **45** | 100 | 25 | 1.5 | 88.9 | 72 | 5600 | 7500 |
| **55** | 100 | 21 | 1.5 | 98 | 71 | 530 | 7000 |
| **60** | 110 | 22 | 1.5 | 92.3 | 87 | 4800 | 6300 |
| **65** | 140 | 33 | 2.1 | 158 | 140 | 3800 | 5300 |
| | 140 | 33 | 2.1 | 158 | 140 | 3800 | 5300 |
| | 140 | 33 | 2.1 | 158 | 140 | 3500 | 5000 |
| **70** | 125 | 24 | 1.5 | 109 | 109 | 4000 | 5600 |
| | 150 | 35 | 2.1 | 185 | 166 | 3600 | 5000 |
| | 150 | 35 | 2.1 | 185 | 165 | 3600 | 4800 |
| | 150 | 35 | 2.1 | 185 | 165 | 3600 | 4800 |
| **75** | 130 | 25 | 1.5 | 117 | 123 | 3800 | 5300 |
| | 149 | 31 | 1 | 148 | 146 | 4000 | 5300 |
| | 160 | 37 | 2.1 | 212 | 204 | 3400 | 4800 |
| | 160 | 37 | 2.1 | 212 | 204 | 3400 | 4800 |
| **80** | 125 | 22 | 1.1 | 80 | 91.5 | 3900 | 5200 |
| | 140 | 26 | 2 | 138 | 146 | 3600 | 5000 |
| | 140 | 26 | 2 | 138 | 146 | 3600 | 5000 |
| **85** | 180 | 41 | 3 | 248 | 255 | 3000 | 4000 |
| **90** | 160 | 30 | 2 | 167 | 178 | 3200 | 4300 |
| | 160 | 30 | 2 | 167 | 178 | 3200 | 4300 |
| | 160 | 30 | 2 | 138 | 147 | 3200 | 4300 |

| Designations | Contact points | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|
| | a | damin | Damax | ramax | |
| | mm | | | | kg |
| **QJ306MA** | 35.7 | 37 | 65 | 1 | 0.463 |
| **QJ307N2Q1** | 40.3 | 44 | 71 | 1.5 | 0.69 |
| **QJ208** | 42 | 47 | 73 | 1 | 0.445 |
| **QJ308** | 45.5 | 50 | 80 | 1.5 | 0.793 |
| **QJ309M** | 50.8 | 54 | 91 | 1.5 | 1.08 |
| **QJ211** | 54.3 | 64 | 91 | 1.5 | 0.798 |
| **QJ212M** | 59.5 | 69 | 101 | 1.5 | 0.928 |
| **QJ313Q1** | 71.8 | 77 | 128 | 2 | 2.32 |
| **QJ313N2Q1** | 71.8 | 77 | 128 | 2 | 2.32 |
| **QJ313M** | 71.8 | 77 | 128 | 2 | 2.34 |
| **QJ214N2Q1** | 68.3 | 79 | 116 | 1.5 | 1.29 |
| **QJ314M** | 78.4 | 82 | 138 | 2 | 3.28 |
| **QJ314N/YAB** | 77 | 84 | 134 | 2 | 3.32 |
| **QJ314N2/C9YAB** | 77 | 84 | 134 | 2 | 3.22 |
| **QJ215M** | 71.8 | 84 | 121 | 1.5 | 1.38 |
| **QJ215X3R/YA6** | 75.3 | 84 | 120 | 2 | 2.33 |
| **QJ315N2** | 82.3 | 87 | 148 | 2 | 3.83 |
| **QJ315N2/C9** | 82.3 | 87 | 148 | 2 | 3.83 |
| **QJ1016N2** | 71.8 | 87 | 118 | 1 | 1.07 |
| **QJ216** | 77 | 90 | 130 | 2 | 2.02 |
| **QJ216N2** | 77 | 90 | 130 | 2 | 2.02 |
| **QJ317N2** | 92.8 | 99 | 166 | 2.5 | 5.45 |
| **QJ218N2** | 87.5 | 100 | 150 | 2 | 2.87 |
| **QJ218** | 87.5 | 100 | 150 | 2 | 2.87 |
| **QJ218/HAC4** | 87.5 | 100 | 150 | 2 | 2.87 |

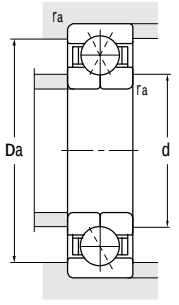
d 90~140 mm

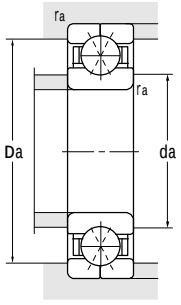



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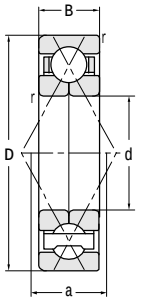


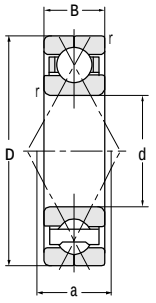

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | Cr | Cor | Grease | Oil |
| mm | | | | kN | | r/min | |
| **90** | 190 | 43 | 3 | 254 | 274 | 2800 | 3800 |
| | 190 | 43 | 3 | 254 | 274 | 2800 | 3800 |
| | 190 | 43 | 3 | 254 | 274 | 2800 | 3800 |
| **95** | 170 | 32 | 2.1 | 191 | 204 | 3000 | 4000 |
| | 200 | 45 | 3 | 285 | 310 | 2600 | 3600 |
| **100** | 150 | 24 | 1.5 | 103 | 128 | 3200 | 4300 |
| | 180 | 34 | 2.1 | 216 | 230 | 2800 | 3800 |
| | 180 | 34 | 2.1 | 216 | 230 | 2800 | 3800 |
| | 215 | 47 | 3 | 300 | 370 | 2400 | 3400 |
| **105** | 160 | 26 | 2 | 120 | 150 | 2800 | 3800 |
| **110** | 170 | 28 | 2 | 147 | 186 | 2800 | 3800 |
| | 200 | 38 | 2.1 | 255 | 292 | 2600 | 3400 |
| | 200 | 38 | 2.1 | 255 | 292 | 2600 | 3400 |
| | 200 | 38 | 2.1 | 255 | 292 | 2600 | 3400 |
| | 240 | 50 | 3 | 365 | 440 | 2200 | 3000 |
| | 240 | 50 | 3 | 345 | 405 | 2200 | 3000 |
| **120** | 150 | 16 | 1 | 26.5 | 48 | 3200 | 4300 |
| | 215 | 40 | 2.1 | 275 | 326 | 2400 | 3200 |
| | 260 | 55 | 3 | 375 | 515 | 2000 | 2800 |
| | 260 | 55 | 3 | 405 | 515 | 2000 | 2800 |
| | 260 | 55 | 3 | 405 | 515 | 2000 | 2800 |
| **130** | 200 | 33 | 2 | 182 | 240 | 2200 | 3200 |
| | 230 | 40 | 3 | 294 | 370 | 2200 | 3000 |
| | 280 | 58 | 4 | 425 | 560 | 1900 | 2600 |
| | 280 | 58 | 4 | 425 | 560 | 1900 | 2600 |
| | 280 | 58 | 4 | 425 | 560 | 1900 | 2600 |
| **140** | 210 | 33 | 2 | 268 | 273 | 2200 | 3000 |
| | 250 | 42 | 3 | 315 | 425 | 2000 | 2800 |
| | 250 | 42 | 3 | 330 | 440 | 2000 | 2800 |

| Designations | Contact points | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|
| | a | damin | Damax | ramax | |
| | | mm | | | kg |
| **QJ318N2** | 98 | 104 | 176 | 2.5 | 6.19 |
| **NJ318N2Q1** | 98 | 104 | 176 | 2.5 | 6.22 |
| **QJ318/P6** | 98 | 104 | 176 | 2.5 | 6.26 |
| **QJ219N2** | 92.8 | 107 | 158 | 2 | 3.30 |
| **QJ319N2** | 103.3 | 109 | 186 | 2.5 | 7.52 |
| **QJF1020** | 87.5 | 109 | 141 | 1.5 | 1.63 |
| **QJ220** | 98 | 112 | 168 | 2 | 3.81 |
| **QJ220N2Q1** | 98 | 112 | 168 | 2 | 3.74 |
| **QJ320N2** | 110.3 | 114 | 201 | 2.5 | 8.78 |
| **QJ1021M** | 93 | 116 | 150 | 2 | 2 |
| **QJ1022M** | 98.1 | 120 | 160 | 2 | 2.68 |
| **QJF222** | 108.5 | 122 | 188 | 2 | 5.67 |
| **QJ222** | 108.5 | 122 | 188 | 2 | 5.49 |
| **QJ222N2Q1** | 108.5 | 122 | 188 | 2 | 5.37 |
| **QJ322** | 122.5 | 124 | 226 | 2.5 | 12.0 |
| **QJ322N2Q1** | 122.5 | 124 | 226 | 2.5 | 11.7 |
| **QJ1824-2RS2/C9S2YA7** | 94.5 | 130 | 140 | 0.6 | 0.559 |
| **QJ224N2Q1** | 117.3 | 132 | 203 | 2 | 6.29 |
| **QJ324** | 133 | 134 | 246 | 2.5 | 15.3 |
| **QJ324/C3** | 133 | 134 | 246 | 2.5 | 15.3 |
| **QJ324Q1** | 133 | 134 | 246 | 2.5 | 14.8 |
| **QJ1026** | 115.5 | 140 | 190 | 2 | 4.22 |
| **QJ226N2Q1** | 126 | 144 | 216 | 2.5 | 7.43 |
| **QJF326** | 143.5 | 148 | 262 | 3 | 20.7 |
| **QJ326** | 143.5 | 148 | 262 | 3 | 20.1 |
| **QJ326N2** | 143.5 | 148 | 262 | 3 | 20.1 |
| **QJF1028** | 122.5 | 150 | 200 | 2 | 3.35 |
| **QJ228** | 136.5 | 154 | 236 | 2.5 | 9.38 |
| **QJF228** | 136.5 | 154 | 236 | 2.5 | 10.4 |

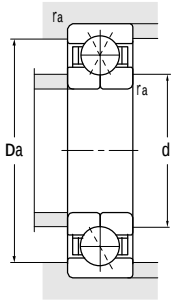
d 140~190 mm

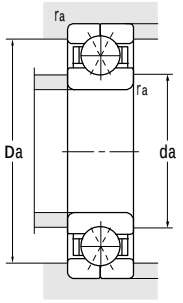



QJtype




QJFtype

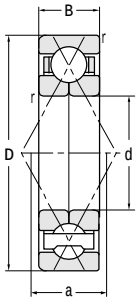


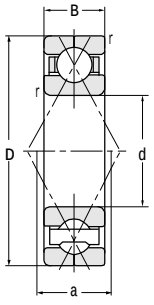

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | Cr | Cor | Grease | Oil |
| mm | | | | kN | | r/min | |
| **140** | 250 | 42 | 3 | 315 | 410 | 2000 | 2800 |
| | 300 | 62 | 4 | 470 | 645 | 1700 | 2400 |
| | 300 | 62 | 4 | 470 | 645 | 1700 | 2400 |
| **150** | 225 | 35 | 2.1 | 220 | 298 | 2000 | 2800 |
| | 225 | 35 | 2.1 | 220 | 298 | 2000 | 2800 |
| | 225 | 35 | 2.1 | 176 | 213 | 2000 | 2800 |
| | 270 | 45 | 3 | 340 | 470 | 1800 | 2600 |
| | 270 | 45 | 3 | 340 | 470 | 1800 | 2600 |
| | 320 | 65 | 4 | 540 | 795 | 1600 | 2200 |
| | 320 | 65 | 4 | 540 | 795 | 1600 | 2200 |
| | 320 | 65 | 4 | 540 | 795 | 1600 | 2200 |
| **160** | 240 | 38 | 2.1 | 239 | 335 | 1900 | 2600 |
| | 290 | 48 | 3 | 375 | 545 | 1700 | 2400 |
| | 290 | 48 | 3 | 375 | 545 | 1700 | 2400 |
| | 340 | 68 | 4 | 540 | 785 | 1500 | 2000 |
| **170** | 259.5 | 42 | 2.1 | 292 | 410 | 1800 | 2400 |
| | 260 | 42 | 2.1 | 292 | 410 | 1800 | 2400 |
| | 260 | 42 | 2.1 | 292 | 410 | 1800 | 2400 |
| | 260 | 42 | 2.1 | 292 | 410 | 1800 | 2400 |
| | 310 | 52 | 4 | 460 | 690 | 1600 | 2200 |
| | 310 | 52 | 4 | 590 | 740 | 1600 | 2200 |
| | 360 | 72 | 4 | 600 | 970 | 1500 | 1800 |
| **180** | 259.5 | 52 | 2 | 248 | 370 | 1700 | 2300 |
| | 280 | 46 | 2.1 | 320 | 490 | 1700 | 2200 |
| | 280 | 46 | 2.1 | 320 | 490 | 1700 | 2200 |
| | 320 | 52 | 4 | 475 | 735 | 1500 | 2000 |
| | 320 | 52 | 4 | 475 | 735 | 1500 | 2000 |
| | 380 | 75 | 4 | 690 | 1130 | 1500 | 2000 |
| | 380 | 75 | 4 | 585 | 1120 | 1300 | 1800 |
| **190** | 280 | 55 | 2.5 | 299 | 450 | 1600 | 2200 |
| | 289.5 | 46 | 2.1 | 325 | 490 | 1600 | 2200 |

| Designations | Contact points | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|
| | a | damin | Damax | ramax | |
| | | mm | | | kg |
| **QJ228N2Q1** | 136.5 | 154 | 236 | 2.5 | 9.36 |
| **QJ328** | 154 | 158 | 282 | 3 | 23.3 |
| **QJ328N2Q1** | 154 | 158 | 282 | 3 | 23.0 |
| **QJF1030** | 131.3 | 162 | 213 | 2 | 5.29 |
| **QJ1030** | 131.3 | 162 | 213 | 2 | 5.26 |
| **QJF1030J/C9** | 131.3 | 162 | 213 | 2 | 4.37 |
| **QJ230** | 147 | 164 | 256 | 2.5 | 12.0 |
| **QJ230N2Q1** | 147 | 164 | 256 | 2.5 | 12.0 |
| **QJF330** | 164.5 | 168 | 302 | 3 | 29.4 |
| **QJ330N2Q1** | 164.5 | 168 | 302 | 3 | 26.9 |
| **QJ330M** | 164.5 | 168 | 302 | 3 | 27.4 |
| **QJF1032** | 140 | 172 | 228 | 2 | 6.54 |
| **QJ232** | 157.5 | 174 | 276 | 2.5 | 15.4 |
| **QJ232N2Q1** | 157.5 | 174 | 276 | 2.5 | 14.8 |
| **QJ332N2Q1** | 175.1 | 178 | 322 | 3 | 34.4 |
| **QJ1034X1** | 150.5 | 182 | 248 | 2 | 8.13 |
| **QJ1034N2Q1** | 150.5 | 182 | 248 | 2 | 8.06 |
| **QJF1034** | 150.5 | 182 | 248 | 2 | 8.82 |
| **QJ1034** | 150.5 | 182 | 248 | 2 | 8.23 |
| **QJ234** | 168 | 188 | 292 | 3 | 18.7 |
| **QJ234N2Q1** | 168 | 188 | 292 | 3 | 18.2 |
| **QJ334** | 186 | 188 | 344 | 3 | 40.7 |
| **QJF3936X1** | 154 | 190 | 249 | 2 | 9.18 |
| **QJF1036** | 161 | 192 | 268 | 2 | 10.9 |
| **QJ1036** | 161 | 192 | 268 | 2 | 10.7 |
| **QJ236** | 175.1 | 198 | 302 | 3 | 17.7 |
| **QJF236** | 175.1 | 198 | 302 | 3 | 18.0 |
| **QJ336** | 196.1 | 198 | 362 | 3 | 46.2 |
| **QJ336N2Q1** | 196.1 | 198 | 362 | 3 | 46.2 |
| **176738U** | 164.5 | 203 | 267 | 2 | 11.6 |
| **QJF1038X1** | 168.1 | 202 | 278 | 2 | 11.1 |

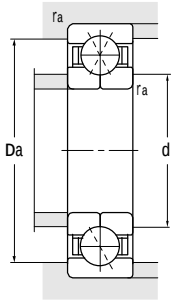
d 190~280 mm

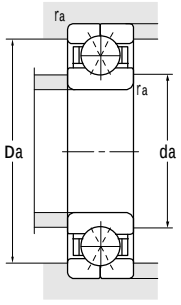



QJtype




QJFtype

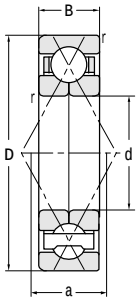


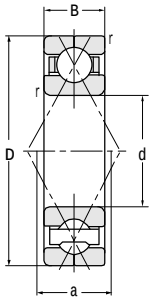

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | Cr | Cor | Grease | Oil |
| mm | | | | kN | | r/min | |
| **190** | 290 | 46 | 2.1 | 325 | 490 | 1600 | 2200 |
| | 290 | 46 | 2.1 | 325 | 490 | 1600 | 2200 |
| | 340 | 55 | 4 | 500 | 800 | 1400 | 2000 |
| | 340 | 55 | 4 | 500 | 800 | 1400 | 2000 |
| | 400 | 78 | 5 | 680 | 1100 | 1250 | 1600 |
| **200** | 300 | 58 | 2.5 | 325 | 505 | 1500 | 2000 |
| | 310 | 51 | 2.1 | 390 | 620 | 1500 | 2000 |
| | 310 | 51 | 2.1 | 390 | 620 | 1500 | 2000 |
| | 360 | 58 | 4 | 510 | 850 | 1300 | 1800 |
| | 360 | 58 | 4 | 515 | 855 | 1300 | 1800 |
| | 420 | 80 | 5 | 740 | 1270 | 1200 | 1600 |
| **220** | 299.5 | 60 | 2.1 | 265 | 420 | 1200 | 1600 |
| | 300 | 60 | 2.1 | 265 | 420 | 1200 | 1600 |
| | 340 | 56 | 3 | 400 | 655 | 1200 | 1700 |
| | 400 | 65 | 4 | 465 | 1050 | 1100 | 1500 |
| | 400 | 78 | 4 | 465 | 1050 | 1100 | 1500 |
| | 460 | 88 | 5 | 765 | 1350 | 1000 | 1500 |
| | 460 | 88 | 5 | 760 | 1400 | 950 | 1400 |
| **240** | 339.5 | 60 | 3 | 370 | 640 | 1100 | 1500 |
| | 340 | 60 | 3 | 370 | 640 | 1100 | 1500 |
| | 360 | 56 | 3 | 265 | 380 | 1100 | 1500 |
| | 360 | 56 | 3 | 430 | 756 | 1100 | 1500 |
| | 440 | 72 | 4 | 635 | 1100 | 1000 | 1400 |
| **260** | 360 | 46 | 2.1 | 387 | 676 | 1000 | 1400 |
| | 360 | 46 | 2.1 | 385 | 675 | 1000 | 1400 |
| | 399.5 | 65 | 4 | 507 | 910 | 980 | 1200 |
| | 400 | 65 | 4 | 507 | 910 | 980 | 1200 |
| | 480 | 80 | 5 | 670 | 1372 | 900 | 1300 |
| | 480 | 90 | 5 | 835 | 1620 | 900 | 1300 |
| **280** | 375 | 65 | 2.1 | 370 | 670 | 960 | 1300 |
| | 389.5 | 46 | 2.1 | 430 | 800 | 960 | 1000 |

| Designations | Contact points | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|
| | a | damin | Damax | ramax | |
| | | mm | | | kg |
| **QJF1038** | 168.1 | 202 | 278 | 2 | 11.1 |
| **QJ1038N2Q1** | 168 | 202 | 278 | 2 | 11.5 |
| **QJ238** | 185.6 | 208 | 322 | 3 | 24.0 |
| **QJF238** | 185.6 | 208 | 322 | 3 | 22.6 |
| **QJ338** | 207 | 214 | 379 | 4 | 50 |
| **176740U** | 175.1 | 213 | 287 | 2 | 14.7 |
| **QJ1040** | 178.6 | 212 | 298 | 2 | 14.7 |
| **QJF1040** | 178.6 | 212 | 298 | 2 | 14.7 |
| **QJ240** | 196.1 | 218 | 342 | 3 | 27.1 |
| **QJF240** | 196.1 | 218 | 342 | 3 | 27.3 |
| **QJ340N2** | 217.1 | 222 | 398 | 4 | 55.3 |
| **QJF3944** | 182.1 | 232 | 287 | 2 | 12.7 |
| **QJF3944X1** | 182.1 | 232 | 287 | 2 | 12.6 |
| **QJ1044N2Q1** | 196.1 | 234 | 326 | 2.5 | 17.8 |
| **QJ244N2** | 217.1 | 238 | 382 | 3 | 39.2 |
| **QJ1244N2** | 217.1 | 238 | 382 | 3 | 44.8 |
| **QJ344N2Q1** | 238 | 242 | 438 | 4 | 79.2 |
| **QJ344** | 238 | 424 | 439 | 4 | 79 |
| **QJF3948X1-1** | 203.1 | 254 | 326 | 2.5 | 17.7 |
| **QJF3948X1-2** | 203.1 | 254 | 326 | 2.5 | 16.1 |
| **QJ1048** | 210.1 | 254 | 346 | 2.5 | 20.9 |
| **QJ1048N2Q1** | 210.1 | 254 | 346 | 2.5 | 20.9 |
| **QJ248** | 238 | 256 | 421 | 3 | 54 |
| **QJ1952E** | 217.1 | 272 | 348 | 2 | 15.5 |
| **QJF1952** | 217 | 279 | 343 | 2 | 15 |
| **QJF1052X1** | 231 | 278 | 382 | 3 | 31.3 |
| **QJ1052M** | 231 | 278 | 382 | 3 | 31.5 |
| **QJ252** | 259.1 | 282 | 458 | 4 | 72.8 |
| **QJ1252** | 370 | 282 | 458 | 4 | 78.5 |
| **QJF2956X3-1** | 229.3 | 298 | 359 | 2 | 20.5 |
| **QJF1956X1** | 234.6 | 292 | 377 | | 18.8 |

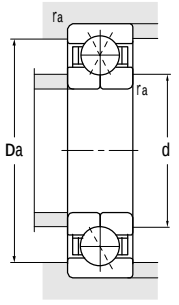
d 280~560 mm

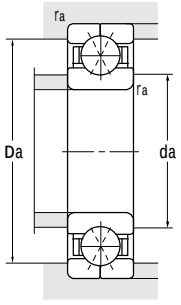



QJtype




QJFtype



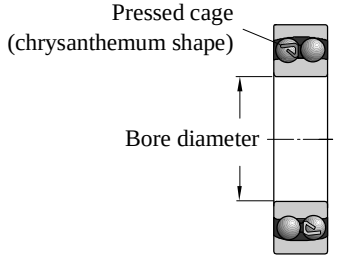




| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | Cr | Cor | Grease | Oil |
| mm | | | | kN | | r/min | |
| **280** | 389.5 | 65 | 2.1 | 430 | 800 | 960 | 1000 |
| | 420 | 65 | 4 | 533 | 1010 | 960 | 1000 |
| | 420 | 65 | 4 | 533 | 1010 | 960 | 1000 |
| | 500 | 90 | 5 | 710 | 1400 | 950 | 1300 |
| **300** | 460 | 74 | 4 | 605 | 1224 | 900 | 1100 |
| | 540 | 98 | 5 | 700 | 1480 | 800 | 1150 |
| **320** | 459.5 | 60 | 2.1 | 460 | 1100 | 850 | 1200 |
| | 479.5 | 74 | 4 | 630 | 1330 | 850 | 1200 |
| | 580 | 105 | 5 | 900 | 2000 | 850 | 1100 |
| **340** | 520 | 82 | 5 | 750 | 1635 | 700 | 950 |
| | 520 | 82 | 5 | 750 | 1635 | 700 | 950 |
| **360** | 540 | 82 | 5 | 775 | 1750 | 850 | 1000 |
| | 650 | 122 | 6 | 1080 | 2500 | 750 | 1000 |
| **380** | 560 | 82 | 5 | 865 | 1900 | 700 | 950 |
| | 680 | 132 | 6 | 1140 | 2900 | 650 | 950 |
| **400** | 600 | 90 | 5 | 880 | 5150 | 750 | 950 |
| | 720 | 140 | 6 | 1245 | 3125 | 650 | 850 |
| **420** | 560 | 65 | 4 | 620 | 1550 | 750 | 950 |
| | 620 | 90 | 5 | 900 | 2320 | 650 | 900 |
| | 620 | 90 | 5 | 920 | 2250 | 630 | 900 |
| | 760 | 150 | 7.5 | 1400 | 3700 | 550 | 750 |
| **440** | 600 | 74 | 4 | 740 | 1820 | 650 | 850 |
| | 650 | 94 | 6 | 975 | 2550 | 600 | 800 |
| | 790 | 155 | 7.5 | 1360 | 3700 | 600 | 700 |
| **460** | 680 | 100 | 6 | 1010 | 2550 | 650 | 850 |
| | 830 | 165 | 7.5 | 1490 | 4200 | 500 | 700 |
| **560** | 780 | 60 | 5 | 689 | 1840 | 600 | 800 |

| Designations | Contact points | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|
| | a | damin | Damax | ramax | |
| | | mm | | | kg |
| **QJF2956X3** | 234.6 | 292 | 377 | | 24.1 |
| **QJ1056M** | 245.1 | 262 | 402 | 3 | 34.4 |
| **QJF1056** | 245.1 | 262 | 402 | 3 | 33.5 |
| **QJ1256** | 390 | 302 | 478 | 4 | 83 |
| **QJF1060** | 266.1 | 318 | 442 | 3 | 48.2 |
| **QJ1260** | 420 | 321 | 518 | 4 | 106 |
| **QJF1964X3** | 273 | 344 | 435 | 2 | 35.7 |
| **QJF1064X1** | 280.1 | 338 | 462 | 3 | 52.2 |
| **QJ1264** | 450 | 341 | 558 | 4 | 132 |
| **QJ1068** | 301.1 | 360 | 500 | 4 | 68.4 |
| **QJF1068** | 301.1 | 360 | 500 | 4 | 68.8 |
| **QJ1072** | 315 | 381 | 518 | 4 | 71.5 |
| **QJ1272** | 505 | 388 | 621 | 5 | 188 |
| **QJ1076** | 329 | 402 | 538 | 4 | 74 |
| **QJ1276** | 530 | 409 | 651 | 5 | 225 |
| **QJ1080** | 350 | 422 | 579 | 4 | 95 |
| **QJ1280** | 560 | 429 | 691 | 5 | 259 |
| **QJ1984** | 343 | 438 | 541 | 3 | 50 |
| **QJ1084** | 364 | 442 | 598 | 4 | 100 |
| **QJF1084** | 364 | 442 | 598 | 4 | 101 |
| **QJ1284** | 590 | 456 | 725 | 6.5 | 320 |
| **QJ1988** | 364 | 460 | 580 | 3 | 66 |
| **QJ1088** | 382 | 468 | 621 | 5 | 110 |
| **QJ1288** | 615 | 477 | 755 | 6.5 | 352 |
| **QJ1092** | 399 | 488 | 652 | 5 | 130 |
| **QJ1292** | 645 | 498 | 795 | 6.5 | 420 |
| **QJF9/560X1** | 469.1 | 582 | 758 | 4 | 100 |

## Product Characteristics:

Self-aligning ball bearing has two-row balls and one concave spherical raceway on outer raceway. The center of outer raceway curvature is in accordance with the bearing center, therefore this bearing is self-aligning and can also rotate even if the inner ring, balls and cage are tilting against the outer ring. This bearing can resist the misalignment of shaft with bearing box. It is mainly used for carrying radial load and small axial load, but can not carry pure axial load. This bearing is used especially for the applications with serious shaft deflection or misalignment. So this bearing is a the most widely used in machinery industries such as precision meter, low noise electric motor, automobile, motorcycle, woodworker, transmission shaft of textile machinery, mining machinery, electromechanical equipments, plastic machinery, office equipments, medical equipments, fitness equipments, excise equipments and other general machineries.




## Product Type:

ZWZ manufactures two types of self-aligning ball bearings:

·Self-aligning ball bearing with cylindrical bore

·Self-aligning ball bearing with tapered bore

### Self-aligning ball bearing with cylindrical bore

Realizes self-aligning automatically because of two-row steel balls and arc outer raceway. This bearing can also resist the angle error between the shaft and bearing housing, so it is suitable for the applications with shaft deflection and error shaft center due to eccentricity. Self-aligning ball bearing has the smallest internal friction among all rolling bearings, so it has small temperature raise even at high rotation speed.

### Self-aligning ball bearing with tapered bore

Has the same features with self-aligning ball bearing with cylindrical bore. This bearing has a tapered bore (normal conicity 1:12) and the clearance of bearing can be adjusted slightly when mounting onto tapered shaft. This bearing is usually applied to the double-supporting shafts that bend greatly under load, as well as to the parts whose two supporting holes can not ensure strictly concentric. This bearing mainly bear radial load and slight axial load. Normally, it can not carry pure axial load. The generality of this bearing type is just the second to the deep groove ball bearing.The limited rotation speed is smaller than that of deep groove ball bearing. But the loads it can bear are higher than those of deep groove ball bearing.

## Dimension Range

The basic dimensions of ZWZ self-aligning ball bearing are listed in dimension table.
Bore diameter range : 25mm - 1100mm
Outer diameter range: 52mm - 1300mm
Width range: 15mm - 300mm

## Tolerance

The standard tolerance of ZWZ self-aligning ball bearing is Class Normal, which conforms to GB307.1. Please refer to tolerances listed in the table of preface pages.

## Radial Clearance

The standard internal clearances of ZWZ self-aligning ball bearing are C2, Normal (CN), C3, C4 and C5, which all conform to GB4604. The standard clearance of self-aligning ball bearing with tapered bore is C3. Please refer to radial clearances listed in the table of preface pages. The values are available for the bearings before mounting or without load. The bearings with internal clearance larger or lower than standard values can also be manufactured according to customers' requirements.

## Cage

Self-aligning ball bearing generally use pressed cage, solid brass cage and nylon cage. The materials of cage are sheet steel, brass and synthetic resin. When bearing outer diameter is lower than 200mm, pressed steel sheet (strap) cage is adopted without suffix after basic bearing number. When outer diameter is larger than 200mm, brass solid cage is adopted without suffix after basic bearing number. The bearing with nylon cage can operate under ambient temperature of +120* or higher. The brass solid cage is considered when the bearing is used under high temperature or in critical conditions.
Please contact with ZWZ if requesting for the bearing with non-standard cage.

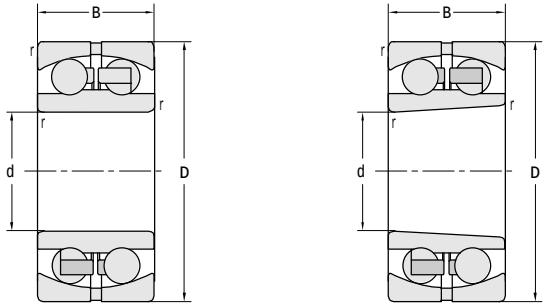
## Dynamic Equivalent Load:

When $Fa/Fr \leqslant e$,
$P=Fr+Y1Fa$
When $Fa/Fr>e$,
$P=0.65F+Y2Fa$
The values of e, Y1 and Y2 can be found in dimension table of bearing.

## Static Eqauivalent Load

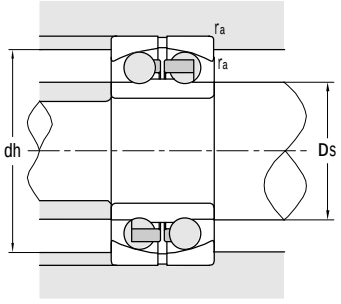
$P0=Fr+Y0Fa$
The value of Y0 can be found in dimension table of bearing.

d 25~45 mm





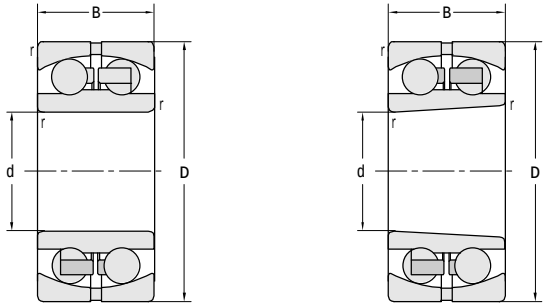


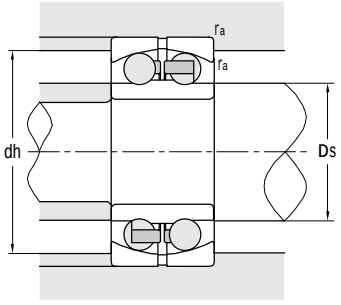



| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | Cr | Cor | Grease | Oil | Cylindrical bore | Tapered bore |
| mm | | | | kN | | r/min | | | |
| **25** | 52 | 15 | 1 | 13.9 | 3.88 | 13000 | 16000 | **1205TN1** | |
| | 62 | 17 | 1.1 | 18.4 | 5.24 | 9500 | 12000 | **1305TN1** | |
| **30** | 62 | 16 | 1 | 15.6 | 4.70 | 10000 | 13000 | **1206** | **1206K** |
| | 62 | 20 | 1 | 23.0 | 6.50 | 9500 | 12000 | **2206** | **2206K** |
| | 62 | 20 | 1 | 23.0 | | 9500 | 12000 | **2206TN1** | |
| | 72 | 27 | 1.1 | 31.0 | 8.70 | 8500 | 10000 | **2306** | **2306K** |
| | 72 | 27 | 1.1 | 31.0 | | 8500 | 10000 | **2306TN1** | |
| **35** | 72 | 17 | 1.1 | 18.4 | 5.82 | 9000 | 11000 | **1207** | **1207K** |
| | 72 | 17 | 1.1 | 18.4 | 5.82 | 9000 | 11000 | **1207TN1** | **1207KTN1** |
| | 72 | 23 | 1.1 | 29.8 | 8.54 | 8500 | 10000 | **2207** | **2207K** |
| | 72 | 23 | 1.1 | 29.8 | 8.54 | 8500 | 10000 | **2207TN1** | |
| | 80 | 21 | 1.5 | 25.7 | 8.25 | 7500 | 9000 | **1307** | **1307K** |
| | 80 | 21 | 1.5 | 25.7 | 8.25 | 7500 | 9000 | **1307TN1** | **1307KTN** |
| | 80 | 31 | 1.5 | 39.0 | 11.1 | 7000 | 8500 | **2307** | **2307K** |
| | 80 | 31 | 1.5 | 39.0 | 11.1 | 7000 | 8500 | **2307TN1** | |
| **40** | 80 | 18 | 1.1 | 19.3 | 6.74 | 8500 | 10000 | **1208** | **1208K** |
| | 80 | 18 | 1.1 | 19.3 | 6.74 | 8500 | 10000 | **1208TN1** | **1208KTN1** |
| | 80 | 23 | 1.1 | 30.9 | 9.70 | 7500 | 9000 | **2208** | **2208K** |
| | 80 | 23 | 1.1 | 30.9 | 9.70 | 7500 | 9000 | **2208TN1** | **2208KTN1** |
| | 90 | 23 | 1.5 | 32.8 | 10.9 | 6700 | 8000 | **1308** | **1308K** |
| | 90 | 23 | 1.5 | 32.8 | 10.9 | 6700 | 8000 | **1308TN1** | **1308KTN1** |
| | 90 | 33 | 1.5 | 52.4 | 15.5 | 6300 | 7500 | **2308** | **2308K** |
| | 90 | 33 | 1.5 | 52.4 | 15.5 | 6300 | 7500 | **2308TN1** | **2308KTN1** |
| **45** | 85 | 19 | 1.1 | 22.2 | 7.57 | 7500 | 9000 | **1209** | **1209K** |
| | 85 | 19 | 1.1 | 22.2 | 7.57 | 7500 | 9000 | **1209TN1** | **1209KTN1** |
| | 85 | 23 | 1.1 | 31.5 | 10.3 | 7000 | 8500 | **2209** | **2209K** |
| | 85 | 23 | 1.1 | 31.5 | 10.3 | 7000 | 8500 | **2209TN1** | **2209KTN1** |
| | 100 | 25 | 1.5 | 38.5 | 13.0 | 6300 | 7500 | **1309** | **1309K** |
| | 100 | 25 | 1.5 | 38.5 | 13.0 | 6300 | 7500 | **1309TN1** | **1309KTN1** |
| | 100 | 36 | 1.5 | 61.8 | 18.7 | 5600 | 6700 | **2309** | **2309K** |
| | 100 | 36 | 1.5 | 61.8 | 18.7 | 5600 | 6700 | **2309M** | |

| Abutment and fillet dimensions | | | Axle load coefficient | | | | Weight | |
|---|---|---|---|---|---|---|---|---|
| Dsmin | dhmax | ramax | e | Y1 | Y2 | Y0 | Cylindrical bore | Tapered bore |
| mm | | | mm | | | | kg | |
| 30 | 47 | 1 | 0.28 | 2.2 | 3.5 | 2.5 | 0.137 | |
| 31.5 | 55.5 | 1 | 0.28 | 2.2 | 3.5 | 2.5 | 0.249 | |
| 35 | 57 | 1 | 0.25 | 2.5 | 3.87 | 2.62 | 0.228 | 0.221 |
| 35 | 57 | 1 | 0.39 | 1.63 | 2.53 | 1.71 | 0.260 | 0.248 |
| 35 | 57 | 1 | 0.39 | 1.63 | 2.53 | 1.71 | 0.242 | |
| 36.5 | 65.5 | 1 | 0.44 | 1.43 | 2.22 | 1.5 | 0.515 | 0.495 |
| 36.5 | 65.5 | 1 | 0.44 | 1.43 | 2.22 | 1.5 | 0.494 | |
| 41.5 | 65.5 | 1 | 0.23 | 2.74 | 4.24 | 2.87 | 0.318 | 0.308 |
| 41.5 | 65.5 | 1 | 0.23 | 2.74 | 4.24 | 2.87 | 0.309 | 0.300 |
| 41.5 | 65.5 | 1 | 0.37 | 1.69 | 2.61 | 1.77 | 0.604 | 0.585 |
| 41.5 | 65.5 | 1 | 0.37 | 1.69 | 2.61 | 1.77 | 0.587 | |
| 43 | 72 | 1.5 | 0.25 | 2.56 | 3.97 | 2.69 | 0.507 | 0.492 |
| 43 | 72 | 1.5 | 0.25 | 2.56 | 3.97 | 2.69 | 0.486 | 0.471 |
| 43 | 72 | 1.5 | 0.46 | 1.36 | 2.11 | 1.43 | 0.675 | 0.645 |
| 43 | 72 | 1.5 | 0.46 | 1.36 | 2.11 | 1.43 | 0.659 | |
| 46.5 | 73.5 | 1 | 0.22 | 2.87 | 4.45 | 3.01 | 0.410 | 0.400 |
| 46.5 | 73.5 | 1 | 0.22 | 2.87 | 4.45 | 3.01 | 0.402 | 0.392 |
| 46.5 | 73.5 | 1 | 0.33 | 1.9 | 2.94 | 1.99 | 0.520 | 0.500 |
| 46.5 | 73.5 | 1 | 0.33 | 1.9 | 2.94 | 1.99 | 0.476 | 0.456 |
| 48 | 82 | 1.5 | 0.24 | 2.62 | 4.05 | 2.74 | 0.714 | 0.694 |
| 48 | 82 | 1.5 | 0.24 | 2.62 | 4.05 | 2.74 | 0.688 | 0.668 |
| 48 | 82 | 1.5 | 0.43 | 1.45 | 2.25 | 1.52 | 0.959 | 0.919 |
| 48 | 82 | 1.5 | 0.43 | 1.45 | 2.25 | 1.52 | 0.901 | 0.861 |
| 51.5 | 78.5 | 1 | 0.21 | 2.94 | 4.55 | 3.08 | 0.469 | 0.455 |
| 51.5 | 78.5 | 1 | 0.21 | 2.94 | 4.55 | 3.08 | 0.458 | 0.444 |
| 51.5 | 78.5 | 1 | 0.31 | 2.04 | 3.15 | 2.13 | 0.553 | 0.533 |
| 51.5 | 78.5 | 1 | 0.31 | 2.04 | 3.15 | 2.13 | 0.503 | 0.483 |
| 53 | 92 | 1.5 | 0.25 | 2.53 | 3.92 | 2.66 | 0.951 | 0.926 |
| 53 | 92 | 1.5 | 0.25 | 2.53 | 3.92 | 2.66 | 0.920 | 0.895 |
| 53 | 92 | 1.5 | 0.42 | 1.51 | 2.33 | 1.58 | 1.24 | 1.19 |
| 53 | 92 | 1.5 | 0.42 | 1.51 | 2.33 | 1.58 | 1.36 | |

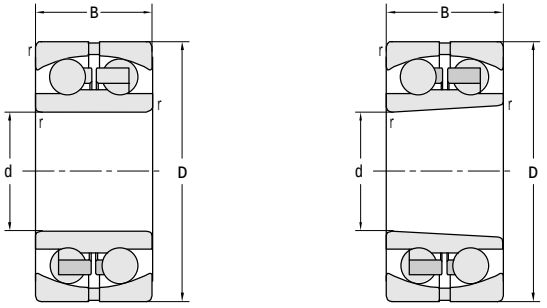
d 50~70 mm



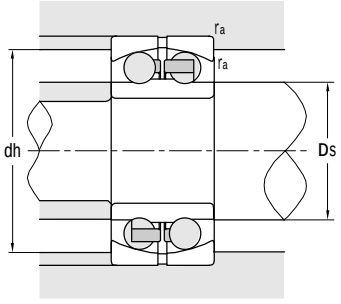

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | Cr | Cor | Grease | Oil | Cylindrical bore | Tapered bore |
| mm | | | | kN | | r/min | | | |
| **50** | 90 | 20 | 1.1 | 25.7 | 8.88 | 7000 | 8500 | **1210** | **1210K** |
| | 90 | 20 | 1.1 | 25.7 | 8.88 | 7000 | 8500 | **1210TN1** | **1210KTN1** |
| | 90 | 23 | 1.1 | 32.8 | 10.9 | 6300 | 7500 | **2210** | **2210K** |
| | 90 | 23 | 1.1 | 32.8 | 10.9 | 6300 | 7500 | **2210TN1** | **2210TKN1** |
| | 110 | 27 | 2 | 43.5 | 14.0 | 5600 | 6700 | **1310** | **1310K** |
| | 110 | 40 | 2 | 63.5 | 20.0 | 5300 | 6300 | **2310** | **2310K** |
| **55** | 100 | 21 | 1.5 | 27.0 | 10.6 | 6300 | 7500 | **1211** | **1211K** |
| | 100 | 21 | 1.5 | 27.0 | 10.6 | 6300 | 7500 | **1211TN1** | **1211KTNI** |
| | 100 | 25 | 1.5 | 37.8 | 13.0 | 6000 | 7000 | **2211** | **2211K** |
| | 120 | 29 | 2 | 51.5 | 18.0 | 5000 | 6000 | **1311** | **1311K** |
| | 120 | 29 | 2 | 51.5 | 18.0 | 5000 | 6000 | **1311TN1** | **1311KTN1** |
| | 120 | 43 | 2 | 75.0 | 23.5 | 4300 | 5000 | **2311** | **2311K** |
| **60** | 110 | 22 | 1.5 | 31.0 | 11.8 | 5600 | 6700 | **1212** | **1212K** |
| | 110 | 22 | 1.5 | 31.0 | 11.8 | 5600 | 6700 | **1212TN1** | **1212KTN1** |
| | 110 | 28 | 1.5 | 47.5 | 16.5 | 5300 | 6300 | **2212** | **2212K** |
| | 110 | 28 | 1.5 | 47.5 | 16.5 | 5300 | 6300 | **2212TN1** | **2212KTN1** |
| | 130 | 31 | 2.1 | 58.5 | 21.3 | 4500 | 5300 | **1312** | **1312K** |
| | 130 | 31 | 2.1 | 58.5 | 21.3 | 4500 | 5300 | **1312TN1** | **1312KTN1** |
| | 130 | 46 | 2.1 | 86.5 | 27.7 | 4500 | 5300 | **2312** | **2312K** |
| | 130 | 46 | 2.1 | 86.5 | 27.7 | 4500 | 5300 | **2312M** | |
| | 150 | 35 | 2.1 | 76.5 | 28.4 | 3800 | 4500 | **1412** | |
| | 150 | 35 | 2.1 | 73.5 | 26.7 | 3800 | 4500 | **1412M** | |
| **65** | 120 | 23 | 1.5 | 34.0 | 13.6 | 5300 | 6300 | **1213** | **1213K** |
| | 120 | 23 | 1.5 | 34.0 | 13.6 | 5300 | 6300 | **1213TN1** | **1213KTN1** |
| | 120 | 31 | 1.5 | 55.5 | 19.4 | 5000 | 6000 | **2213** | **2213K** |
| | 140 | 33 | 2.1 | 63.0 | 24.7 | 4300 | 5000 | **1313** | **1313K** |
| | 140 | 48 | 2.1 | 95.5 | 32.5 | 4000 | 4800 | **2313** | **2313K** |
| **70** | 125 | 24 | 1.5 | 34.5 | 14.2 | 5000 | 6000 | **1214** | **1214K** |
| | 125 | 31 | 1.5 | 44.0 | 17.0 | 4800 | 5600 | **2214** | **2214K** |
| | 150 | 35 | 2.1 | 74.5 | 27.8 | 4000 | 4800 | **1314** | **1314K** |
| | 150 | 51 | 2.1 | 109 | 37.5 | 3800 | 4500 | **2314** | |

| Abutment and fillet dimensions | | | Axle load coefficient | | | | Weight | |
|---|---|---|---|---|---|---|---|---|
| $D_{smin}$ | $dh_{max}$ | $r_{amax}$ | e | Y1 | Y2 | Y0 | Cylindrical bore | Tapered bore |
| mm | | | mm | | | | kg | |
| 56.5 | 83.5 | 1 | 0.2 | 3.13 | 4.85 | 3.28 | 0.547 | 0.527 |
| 56.5 | 83.5 | 1 | 0.2 | 3.13 | 4.85 | 3.28 | 0.535 | 0.515 |
| 56.5 | 83.5 | 1 | 0.29 | 2.2 | 3.41 | 2.31 | 0.618 | 0.598 |
| 56.5 | 83.5 | 1 | 0.29 | 2.2 | 3.41 | 2.31 | 0.567 | 0.547 |
| 59 | 101 | 2 | 0.24 | 2.68 | 4.14 | 2.8 | 1.21 | 1.18 |
| 59 | 101 | 2 | 0.42 | 1.49 | 2.3 | 1.56 | 1.66 | 1.58 |
| 63 | 95 | 1.5 | 0.2 | 3.23 | 4.99 | 3.38 | 0.708 | 0.683 |
| 63 | 95 | 1.5 | 0.2 | 3.23 | 4.99 | 3.38 | 0.681 | 0.656 |
| 63 | 95 | 1.5 | 0.28 | 2.26 | 3.5 | 2.37 | 0.824 | 0.794 |
| 64 | 111 | 2 | 0.23 | 2.7 | 4.18 | 2.83 | 1.57 | 1.53 |
| 64 | 111 | 2 | 0.23 | 2.7 | 118 | 2.83 | 1.51 | 1.47 |
| 64 | 111 | 2 | 0.41 | 1.53 | 2.36 | 1.6 | 2.10 | 2.00 |
| 68 | 102 | 1.5 | 0.19 | 3.39 | 5.25 | 3.56 | 0.892 | 0.872 |
| 68 | 102 | 1.5 | 0.19 | 3.39 | 5.25 | 3.56 | 0.870 | 0.850 |
| 68 | 102 | 1.5 | 0.28 | 2.27 | 3.51 | 2.38 | 1.16 | 1.12 |
| 68 | 102 | 1.5 | 0.28 | 2.27 | 3.51 | 2.38 | 1.09 | 1.05 |
| 71 | 119 | 2 | 0.23 | 2.8 | 4.33 | 2.93 | 1.98 | 1.93 |
| 71 | 119 | 2 | 0.23 | 2.8 | 4.33 | 2.93 | 1.92 | 1.87 |
| 71 | 119 | 2 | 0.4 | 1.56 | 2.41 | 1.63 | 2.61 | 2.41 |
| 71 | 119 | 2 | 0.4 | 1.56 | 2.41 | 1.63 | 2.68 | |
| 71 | 139 | 2 | 0.22 | 2.81 | 4.35 | 2.95 | 3.26 | |
| 71 | 139 | 2 | 0.22 | 2.81 | 4.35 | 2.95 | 3.31 | |
| 73 | 112 | 1.5 | 0.17 | 3.71 | 5.73 | 3.88 | 0.915 | 0.885 |
| 73 | 112 | 1.5 | 0.17 | 3.71 | 5.73 | 3.88 | 0.865 | 0.835 |
| 73 | 112 | 1.5 | 0.28 | 2.25 | 3.48 | 2.35 | 1.50 | 1.44 |
| 76 | 129 | 2 | 0.23 | 2.78 | 4.31 | 2.92 | 2.38 | 2.31 |
| 76 | 129 | 2 | 0.38 | 1.65 | 2.55 | 1.72 | 3.22 | 3.07 |
| 78 | 117 | 1.5 | 0.18 | 3.51 | 5.44 | 3.68 | 1.29 | 1.25 |
| 78 | 117 | 1.5 | 0.27 | 2.36 | 3.66 | 2.48 | 1.63 | 1.57 |
| 81 | 139 | 2 | 0.22 | 2.81 | 4.35 | 2.95 | 2.98 | 2.90 |
| 81 | 139 | 2 | 0.39 | 1.62 | 2.5 | 1.69 | 3.92 | |





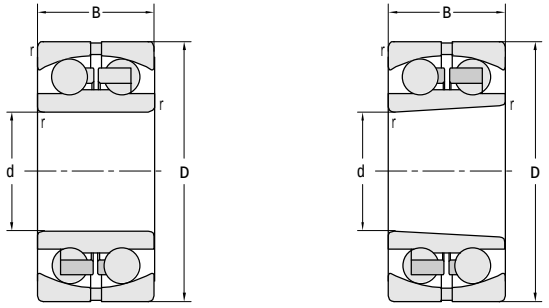





| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | Cr | Cor | Grease | Oil | Cylindrical bore | Tapered bore |
| mm | | | | kN | | r/min | | | |
| **75** | 130 | 25 | 1.5 | 39.0 | 15.5 | 4800 | 5600 | **1215** | **1215K** |
| | 130 | 31 | 1.5 | 55.5 | 21.3 | 4500 | 5300 | **2215** | **2215K** |
| | 160 | 37 | 2.1 | 79.5 | 29.9 | 3800 | 4500 | **1315** | **1315K** |
| | 160 | 55 | 2.1 | 123 | 43.0 | 3400 | 4000 | **2315** | **2315K** |
| | 160 | 55 | 2.1 | 123 | 43.0 | 3400 | 4000 | **2315TN1** | |
| **80** | 140 | 26 | 2 | 40.0 | 16.9 | 4500 | 5300 | **1216** | **1216K** |
| | 140 | 26 | 2 | 40.0 | 16.9 | 4500 | 5300 | **1216TN1** | **1216KTN1** |
| | 140 | 33 | 2 | 63.0 | 24.7 | 4000 | 4800 | **2216** | **2216K** |
| | 170 | 39 | 2.1 | 89.0 | 33.5 | 3600 | 4300 | **1316** | **1316K** |
| | 170 | 58 | 2.1 | 131 | 47.5 | 3200 | 3800 | **2316** | **2316K** |
| | 170 | 58 | 2.1 | 131 | 47.5 | 3200 | 3800 | **2316TN1** | |
| | 170 | 58 | 2.1 | 131 | 47.5 | 3200 | 3800 | **2316M** | |
| **85** | 150 | 28 | 2 | 49.0 | 20.5 | 4000 | 4800 | **1217** | **1217K** |
| | 150 | 36 | 2 | 58.5 | 23.6 | 3800 | 4500 | **2217** | **2217K** |
| | 180 | 41 | 3 | 98.5 | 38.0 | 3400 | 4000 | **1317** | **1317K** |
| | 180 | 60 | 3 | 139 | 51.5 | 3000 | 3600 | **2317** | **2317K** |
| **90** | 160 | 30 | 2 | 57.0 | 23.4 | 3800 | 4500 | **1218** | **1218K** |
| | 160 | 40 | 2 | 70.0 | 28.5 | 3400 | 4300 | **2218** | **2218k** |
| | 190 | 43 | 3 | 117 | 45.0 | 3200 | 3800 | **1318** | **1318K** |
| | 190 | 43 | 3 | 118 | 45.1 | 3200 | 3800 | **1318M** | |
| | 190 | 64 | 3 | 151 | 57.0 | 2800 | 3400 | **2318** | **2318k** |
| | 190 | 64 | 3 | 152 | 57.1 | 2800 | 3400 | **2318M** | **2318KM** |
| **95** | 170 | 32 | 2.1 | 64.0 | 27.0 | 3600 | 4300 | **1219** | **1219K** |
| | 170 | 43 | 2.1 | 83.5 | 34.0 | 3400 | 4000 | **2219** | **2219K** |
| | 200 | 45 | 3 | 132 | 51.0 | 3000 | 3600 | **1319** | **1319k** |
| | 200 | 67 | 3 | 164 | 64.5 | 2600 | 3200 | **2319** | **2319K** |
| **100** | 180 | 34 | 2.1 | 69.0 | 29.5 | 3400 | 4000 | **1220** | **1220K** |
| | 180 | 34 | 2.1 | 69.1 | 29.5 | 3400 | 4000 | **1220M** | **1220KM** |
| | 180 | 46 | 2.1 | 97.5 | 40.5 | 3200 | 3800 | **2220** | **2220K** |
| | 180 | 46 | 2.1 | 97.6 | 40.6 | 3200 | 3800 | **2220M** | **2220KM** |
| | 215 | 47 | 3 | 143 | 58.0 | 2800 | 3400 | **1320J** | **1320KJ** |

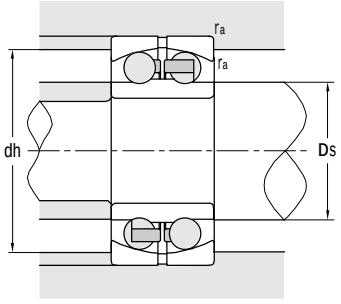
| Abutment and fillet dimensions | | | Axle load coefficient | | | | Weight | |
|---|---|---|---|---|---|---|---|---|
| $D_{smin}$ | $dh_{max}$ | $r_{amax}$ | e | Y1 | Y2 | Y0 | Cylindrical bore | Tapered bore |
| mm | | | mm | | | | kg | |
| 83 | 122 | 1.5 | 0.17 | 3.6 | 5.58 | 3.77 | 1.35 | 1.31 |
| 83 | 122 | 1.5 | 0.25 | 2.49 | 3.86 | 2.61 | 1.71 | 1.64 |
| 86 | 149 | 2 | 0.22 | 2.84 | 4.39 | 2.97 | 3.55 | 3.45 |
| 86 | 149 | 2 | 0.38 | 1.66 | 2.56 | 1.73 | 4.71 | 4.51 |
| 86 | 149 | 2 | 0.38 | 1.66 | 2.56 | 1.73 | 4.71 | |
| 89 | 131 | 2 | 0.16 | 3.94 | 6.1 | 4.13 | 1.65 | 1.60 |
| 89 | 131 | 2 | 0.16 | 3.94 | 6.1 | 4.13 | 1.59 | 1.54 |
| 89 | 131 | 2 | 0.25 | 2.49 | 3.86 | 2.61 | 2.19 | 2.11 |
| 91 | 159 | 2 | 0.22 | 2.92 | 4.52 | 3.06 | 4.19 | 4.09 |
| 91 | 159 | 2 | 0.39 | 1.63 | 2.53 | 1.71 | 5.70 | 5.50 |
| 91 | 159 | 2 | 0.39 | 1.63 | 2.53 | 1.71 | 5.62 | |
| 91 | 159 | 2 | 0.39 | 1.63 | 2.53 | 1.71 | 5.93 | |
| 94 | 141 | 2 | 0.17 | 3.69 | 5.7 | 3.86 | 2.10 | 2.04 |
| 94 | 141 | 2 | 0.25 | 2.48 | 3.84 | 2.6 | 2.53 | 2.43 |
| 98 | 167 | 2.5 | 0.22 | 2.9 | 4.49 | 3.04 | 4.95 | 4.81 |
| 98 | 167 | 2.5 | 0.38 | 1.67 | 2.59 | 1.75 | 6.73 | 6.43 |
| 99 | 151 | 2 | 0.17 | 3.76 | 5.81 | 3.94 | 2.44 | 2.36 |
| 99 | 151 | 2 | 0.27 | 2.36 | 3.65 | 2.47 | 3.22 | 3.08 |
| 103 | 177 | 2.5 | 0.22 | 2.81 | 4.35 | 2.94 | 5.99 | 5.82 |
| 103 | 177 | 2.5 | 0.22 | 2.81 | 4.35 | 2.94 | 6.70 | |
| 103 | 177 | 2.5 | 0.38 | 1.67 | 2.58 | 1.74 | 8.27 | 7.97 |
| 103 | 177 | 2.5 | 0.38 | 1.67 | 2.58 | 1.74 | 8.45 | 8.15 |
| 106 | 159 | 2 | 0.17 | 3.68 | 5.69 | 3.85 | 3.06 | 2.96 |
| 106 | 159 | 2 | 0.26 | 2.38 | 3.69 | 2.5 | 5.38 | 5.20 |
| 108 | 187 | 2.5 | 0.23 | 2.77 | 4.29 | 2.9 | 6.98 | 6.80 |
| 108 | 187 | 2.5 | 0.38 | 1.68 | 2.59 | 1.76 | 9.20 | 8.80 |
| 111 | 169 | 2 | 0.17 | 3.64 | 5.63 | 3.81 | 3.68 | 3.58 |
| 111 | 169 | 2 | 0.17 | 3.64 | 5.63 | 3.81 | 3.78 | 3.68 |
| 111 | 169 | 2 | 0.27 | 2.34 | 3.62 | 2.45 | 4.95 | 4.74 |
| 111 | 169 | 2 | 0.27 | 2.34 | 3.62 | 2.45 | 5.15 | 4.95 |
| 113 | 202 | 2.5 | 0.24 | 2.67 | 4.13 | 2.8 | 9.14 | 8.94 |

d 100~1100 mm










| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | Cr | Cor | Grease | Oil | Cylindrical bore | Tapered bore |
| mm | | | | kN | | r/min | | | |
| **100** | 215 | 73 | 3 | 191 | 78.5 | 2400 | 3000 | **2320J** | **2320KJ** |
| | 215 | 73 | 3 | 191 | 78.5 | 2400 | 3000 | **2320TN1** | |
| **105** | 190 | 36 | 2.1 | 75.0 | 32.0 | 3200 | 3800 | **1221** | |
| | 225 | 77 | 3 | 194 | 79.5 | 3200 | 2800 | **2321** | |
| **110** | 200 | 38 | 2.1 | 115 | 51.5 | 3000 | 3600 | **1222** | **1222K** |
| | 200 | 38 | 2.1 | 116 | 51.6 | 3000 | 3600 | **1222M** | **1222KM** |
| | 200 | 53 | 2.1 | 124 | 52.0 | 2800 | 3400 | **2222** | **2222K** |
| | 200 | 53 | 2.1 | 125 | 52.1 | 2800 | 3400 | **2222M** | **2222KM** |
| | 240 | 50 | 3 | 163.5 | 72.0 | 2400 | 3000 | **1322J** | **1322KJ** |
| | 240 | 80 | 3 | 215.5 | 94.0 | 2200 | 2800 | **2322J** | **2322KJ** |
| | 240 | 80 | 3 | 215.5 | 94.0 | 2200 | 2800 | **2322TN1** | |
| **120** | 215 | 42 | 2.1 | 119.5 | 52.5 | 2000 | 2600 | **1224** | **1224K** |
| | 215 | 42 | 2.1 | 115 | 50.0 | 2000 | 2600 | **1224J** | **1224KJ** |
| **130** | 230 | 46 | 3 | 125 | 56.5 | 3600 | 5600 | **1226** | |
| **140** | 250 | 50 | 3 | 155 | 72.0 | 1900 | 2500 | **1228** | **1228K** |
| | 250 | 50 | 3 | 155 | 72.0 | 1900 | 2500 | **1228-NTW** | |
| **150** | 235 | 36 | 3 | 104 | 53.0 | 2000 | 2600 | **1730** | |
| **500** | 720 | 300 | 6 | 338 | 301 | 350 | 400 | **150/500D1L** | |
| **680** | 900 | 300 | 6 | 360 | 370 | 300 | 350 | **150/680D1L** | |
| **1100** | 1300 | 300 | 6 | 328 | 440 | 130 | 160 | **150/1100D1L** | |

| Abutment and fillet dimensions | | | Axle load coefficient | | | | Weight | |
|---|---|---|---|---|---|---|---|---|
| Dsmin | $dh_{max}$ | $r_{amax}$ | e | Y1 | Y2 | Y0 | Cylindrical bore | Tapered bore |
| mm | | | mm | | | | kg | |
| 113 | 202 | 2.5 | 0.37 | 1.69 | 2.62 | 1.77 | 12.4 | 11.8 |
| 113 | 202 | 2.5 | 0.37 | 1.69 | 2.62 | 1.77 | 12.1 | |
| 116 | 179 | 2 | 0.18 | 3.55 | 5.5 | 3.72 | 4.71 | |
| 118 | 212 | 2.5 | 0.39 | 1.64 | 2.53 | 1.71 | 14.4 | |
| 121 | 189 | 2 | 0.17 | 3.64 | 5.64 | 3.82 | 5.20 | 5.04 |
| 121 | 189 | 2 | 0.17 | 3.64 | 5.64 | 3.82 | 5.56 | 5.40 |
| 121 | 189 | 2 | 0.28 | 2.25 | 3.49 | 2.36 | 7.16 | 6.86 |
| 121 | 189 | 2 | 0.28 | 2.25 | 3.49 | 2.36 | 7.36 | 7.06 |
| 123 | 227 | 2.5 | 0.22 | 2.83 | 4.39 | 2.97 | 11.9 | 11.7 |
| 123 | 227 | 2.5 | 0.38 | 1.67 | 2.59 | 1.75 | 17.6 | 16.9 |
| 123 | 227 | 2.5 | 0.38 | 1.67 | 2.59 | 1.75 | 15.9 | |
| 131 | 204 | 2 | 0.2 | 3.21 | 4.97 | 3.36 | 7.04 | 6.84 |
| 131 | 204 | 2 | 0.2 | 3.21 | 4.97 | 3.36 | 7.04 | 6.84 |
| 144 | 216 | 2.5 | 0.2 | 3.3 | 5.1 | 3.6 | 8.64 | |
| 153 | 237 | 2 | 0.2 | 3.12 | 4.83 | 3.27 | 11.3 | 11.0 |
| 153 | 237 | 2 | 0.2 | 3.12 | 4.83 | 3.27 | 10.7 | |
| 163 | 222 | 2 | 0.15 | 4.18 | 6.46 | 4.38 | 6.25 | |
| 523 | 697 | 5.5 | 0.32 | 1.98 | 3.06 | 2.07 | 342 | |
| 703 | 877 | 5.5 | 0.26 | 2.38 | 3.69 | 2.5 | 447 | |
| 1123 | 1277 | 5.5 | 0.21 | 2.99 | 4.62 | 3.13 | 614 | |

## Product Characteristics:

The cylindrical rollers have linear contact with raceways and the bearings can carry heavy radial load. They can be applied to the situation not only with heavy load and shock load but also with high rotation speed.

Cylindrical roller bearings have bigger carrying load capacity after ameliorating the geometry of the raceways and rolling elements.The new design of ribs and roller end surfaces improve lubricating conditions of contact area between roller end surface and ribs, meanwhile improve bearings service performance.

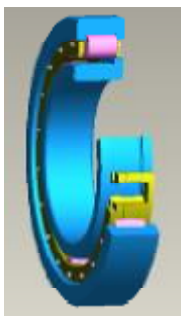
These bearings are mainly used in medium and large sized motors, electricity generators, internal combustion engines, gas turbines, machine tool spindles, deceleration devices, unloading and lifting machines and other industrial machineries.

## Types of bearing:

ZWZ cylindrical roller bearings can be divided into the following types:

- ·Sing -row cylindrical roller bearings
- ·Double -row cylindrical roller bearings
- ·Four -row cylindrical roller bearings
- ·Sendzimir bearing
- ·Cylindrical roller bearing for pulley
- ·Split cylindrical bearing

### Single-row Cylindrical Roller Bearing N Type



N type cylindrical roller bearings have double ribs on inner ring, without rib on outer ring and inner ring, rollers and cage can be separated from outer ring. This type of bearings permits the shaft to move relatively to housing in axial direction. They can adapt to the position changes between the shaft and housing caused by the thermal expansion or the mounting error and are most suitable for free end shafts. They can only carry radial load and can not limit the axial displacement of shaft and housing.

### NU Type

NU type cylindrical roller bearing have double ribs on outer ring, without rib on inner ring and outer ring, rollers and cage can be separated from inner ring. This type of bearings permit shaft to move relatively to housing in axial direction. They can adapt to the position changes between the shaft an housing caused by the thermal expansion or the mounting error and most suitable for free end shafts. They can only carry radial load and can not limit the axial displacement of shaft and housing.

### NJ Type

NJ type cylindrical roller bearings have double ribs on outer ring, and single rib on inner ring. They can make axial location in one direction and carry a certain axial loads in single direction.

### NF Type

NF type cylindrical roller bearings have double ribs on inner ring, and single rib on outer ring. They can make axial location in one direction and carry a certain axial loads in single direction.

### NUP Type

NUP type cylindrical roller bearings have double ribs on outer ring, single rib and flat end ring on inner ring.

Besides radial load, this type of bearings can carry small axial load in two directions if the displacement of shaft and housing are limited within the bearing axial clearance. Thus they can be used on the fixed end of the shaft.

### NH Type

NH type cylindrical roller bearings have double ribs on outer ring, single rib and slope end ring on inner ring. Their inner rings and outer rings can be mounted separately (constituting of rollers and cage). Besides radial load, this type of bearings can carry small axial load in two directions if the displacement of shaft and housing are limited within the bearing axial clearance. Thus they can be used on the fixed end of the shaft.

### NB Type

NB type bearings do not have ribs on inner or outer rings. There are lubricating holes on the outer ring. Their inner ring, outer ring and cage with rollers can be mounted separately. They can not limit the axial displacement of the shaft or housing and can not carry radial load.

### NCL...V Type

NCL...V type cylindrical roller bearings do not have ribs and cage, but they have double locking rings on the outer rings.

This kind of the bearings without cage have many rollers. This type bearing can carry heavier radial load with lower limit rotation speed in comparing with other cylindrical roller bearings with the same dimensions. Their outer ring and inner ring are not separable, can not be mounted separately, but they can limit the axial displacement of the shaft and housing in two directions within bearing's axial clearance.

### NJ...V Type

NJ...V type cylindrical roller bearings have single ribs on inner ring and without cage.

Beacuse of owning large number of rollers and without cage, this type bearing can carry heavier radial load with lower limit rotation speed in comparing with others cylindrical roller bearings with the same dimensions. They cannot limit the axial displacement of the shaft or housing within bearing's axial clearance and unable to carry axial load.

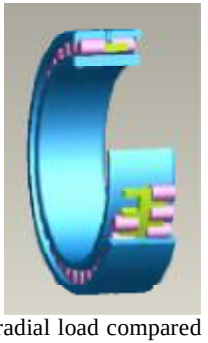
### NCF...V Type

NCF...V type cylindrical roller bearings belong to spherical short cylindrical roller bearings without cage and have single rib on the outer ring.

This type bearing do not have cage and full of rollers, so they can carry heavier radial load with lower limit rotating speed in comparing with others cylindrical roller bearings with the same dimensions. They can limit the axial displacement of the shaft or housing in two directions within bearing's axial clearance.

## Double-row Cylindrical Roller Bearings

### NN Type



NN type cylindrical roller bearings have ribs only on inner ring. The outer ring and inner ring can be mounted separately. They can not limit the axial displacements of the shaft or outer housing and can carry heavier radial load compared with other cylindrical roller bearings with the same dimensions.

These bearings are specially suitable for supporting machine tool shafts due to compact structure and smaller deformation caused by load.

### NN...K Type

The structure of NN..K type cylindrical roller bearings is the same as the NN type. The difference is that their inner bore is tapered, which makes it easy to adjust the radial clearance and convenient to mount.

The machine tool shafts mainly adopt this type of bearings and install them on the tapered shaft. Adjust radial clearance by inner ring pressing.

### NNU、NNU...K Type

NNU, NNU*K type cylindrical roller bearings have ribs only on the outer rings. According to the shape of bores, they can be divided into cylindrical and tapered bores. They do not limit the axial displacement of the shaft and outer cover, and can not carry axial load but they can carry heavier radial load compared with other cylindrical roller bearings with the same dimensions.

### NNCF Type

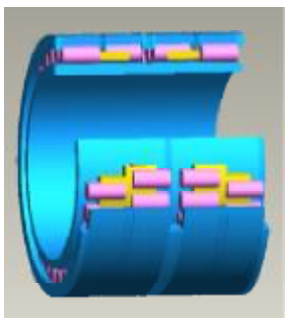
NNCF type cylindrical roller bearings have three ribs on the inner ring and one rib on the outer ring. They can be axial located in one direction. One fixed ring equipped on the opposite of outer ring makes the bearings become one piece.

### NNCL Type

NNCL type cylindrical roller bearings have three ribs only on inner rings and have stop slots on the two sides of outer rings which make the bearing become inseparable.

### NNCS Type

NNCS types cylindrical roller bearings are inseparable with three ribs only on inner ring and one central locked ring on the Middle of outer ring, They do not limit the axial displacement of the shaft and bearing base and can be mounted on the free end of shafts.



### Four-row Cylindrical Roller Bearings

Four-row cylindrical roller bearings can carry heavy radial load and shock load with high manufacturing precision and are suitable for application where the rotation speed is high.

It can improve rolling accuracy by simultaneous rubbing the inner raceway surface and mill rollers after pressing inner ring into roller neck. The assembly clearances can be adjusted freely. These bearings are mostly used on working roller or support rollers of cold ,hot rolling mills and banked rolling mills, also can be used on other applications,.

FC: two ribs on outer ring, single inner ring without ribs on inner ring.

FCD: double outer rings, double inner rings, no ribs on inner ring.

FCDP: double outer rings only with central ribs and flat ring, double inner rings without ribs.



## Sendzimir Bearing

### Structure Characteristics

Outer ring: The bearing outer ring contacts with intermediate roll directly, endure rolling component force when rotating. According to the feature that regard bearing outer ring directly as rolling contact surface, increase thickness of outer ring and adopt special structure as the shape of generating line of bearing outer ring, eliminate the edge stress and prolong interval time for grinding outer surface, with good anti-wear and operability of regrinding, and still have high rotation speed precision after regrinding.

Inner ring: Make a special lubrication hole and oil path on the inner ring and space ring, to make lubricating oil enter into the bearing smoothly and make sure of enough rolling fatigue life.

Rolling element: According to characteristics of bearing working condition, applying finite element software to make virtual force analysis for bearing to make sure of the structure size and generating line shape of rolling element, so that rolling element can carry big radial load.

Cage: Cage is made up of material with good toughness. The design adopts special structure, reduce mutual interference when rolling elements are rotating to meet requirement of high speed.

Core of Sendzimir bearing is soft enough with good impact resistance; Surface hardening layer is deep enough, increase repair times of outer diameter when rigidity is guarantied; Superior material organization guarantees high fatigue resistance. The grading tolerance of all the mounting wall thickness used on one shaft is ⩽0.005mm, grading tolerance of adjacent mounting wall thickness of bearing is ⩽0.002mm.

## Track Roller Bearing

### Structure Characteristics

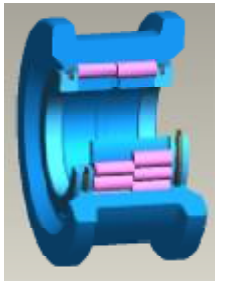
Track roller bearing is the bearing that wall of outer ring is thick, with oil groove and oil hole, retainer ring and sealing structure on both sides and full complement cylindrical bearing without cage. Cylindrical surface of outer diameter have two types including cylindrical type and circular arc type. They can add single side or doubling flange to coordinate with raceway according to customers' requirement, and can also roll directly on raceway as well as carry big load and impact load. This type of bearing mainly uses sealing structure, filling lubricating grease inside to make efficient lubrication.

### NUTR

Inner ring does not have ribs, with retainer ring on both sides, tightened by spring ring;

### NNTR

Inner ring does not have ribs, full complement double-row roller bearing;



### NUPTR

Inner ring has single rib, with retainer ring on the other side, tightened by spring ring;

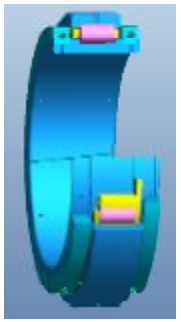
## Split Cylindrical Roller Bearing

### Structure Characteristics

It is a cylindrical roller bearing whose inner ring, outer ring and cage of bearing are split along a certain angle in radial direction and

it is fixed tightened with a grip ring on outside of inner ring. It is designed and manufactured through special technical process on basis of the whole bearing. It has low working resistance, stable operation and working temperature can reach 180*, so it is very suitable to use in the situation with low ration speed, big load, large impact and poor sealing property. Split bearings can be mounted and dismounted easily, which can save time and reduce production cost.

Split bearings are applied in the industry field, mainly used in converter supporting, all kinds of large transport equipments, continuous casting roller supporting, elevator, conveyor and paper machinery that are hard to dismount.



### N6...D

Split cylindrical roller bearing (single row)

### ND6...D

Split cylindrical roller bearing ( double rows)

## Dimension Range of Cylindrical Roller Bearing

ZWZ cylindrical roller bearings boundary dimensions are listed in the dimension table.

Bore diameter range: 25m - 1900mm
Outer diameter range: 52mm -2300mm
Width range: 13mm - 400mm

## Tolerance:

ZWZ manufacture single-row, double-row and four-row cylindrical roller bearings with P0, P1, P2, P3 and P4 precision grade. Also ZWZ can manufacture double-row cylindrical roller bearing with SP, UP precision grade .The standard tolerances are listed in the in the preface tables.

## Radial Clearance:

ZWZ manufacture single -row cylindrical roller bearings with basic group radial clearances, as well as with C3, C4 clearances, please refer to Table 14.

ZWZ manufactures double-row cylindrical roller bearings with C1 group clearances. ZWZ manufactures double-row cylindrical bore cylindrical roller bearings with C2, C3 group clearance. and also manufactures tapered bore cylindrical roller bearings with C2 group clearance .

ZWZ manufactures four-row cylindrical roller bearings with C3 group clearance and others clearance group.

The standard clearance values are listed in the preface tables.

ZWZ also manufacture the bearings with smaller or bigger radial clearance than normal one according to customer demands.

## Cage:

Normally, single-row cylindrical roller bearings use turned solid cages, pressed steel cages and Nylon cages,etc.

Double-row cylindrical roller bearings mostly use turned brass cages ,sometimes use nylon cages .

Four-row cylindrical roller bearings mostly use turned brass solid cages. For big sized bearings, it is suitable to use turned solid cages.

## The code name of cages are denoted as followed:

1.The pressed steel cages are denoted with the suffix J, different structures are denoted with the suffix J,J1 J2. . . .

2.Slot type cages are denoted with the suffix CJ;

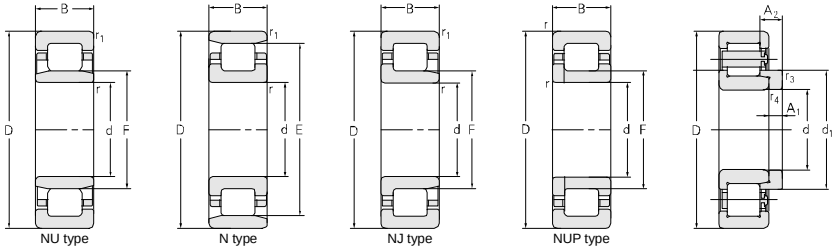
3.Brass solid cages are denoted with the suffix M;

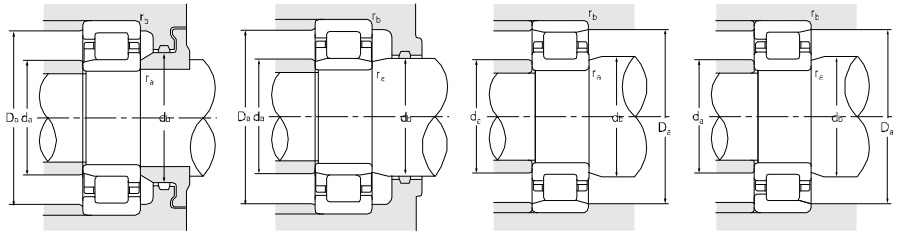
4.When the bearings OD>400mm, it use steel solid cage whose code name is not denoted. If guided by inner or outer rings, the material of cage and guide method should be denoted( A means outer ring guide, B means inner ring guide).

5.The solid brass cage for-double row cylindrical roller bearings is not denoted in code name.

## Supplement Code

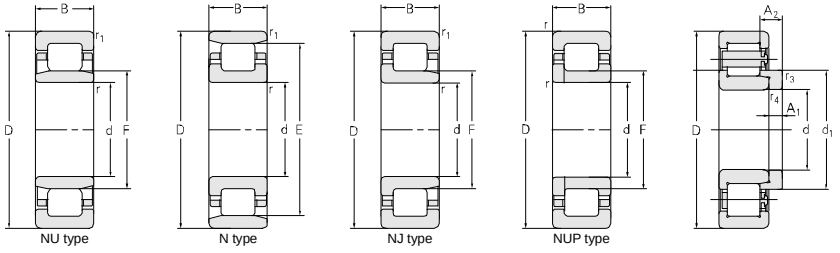
| | |
|---|---|
| /C9T | Clearances of double-row raceway of double-row cylindrical roller bearing are different |
| D | Split bearing |
| DR | Double-row split bearing used in pairs |
| E | Internal design changes, reinforced structure. ( raceway dimension conforms to current national standard (reinforced type), diameter of roller and the length increase compared with non-reinforced type) |
| FC...ZW | Four-row cylindrical roller bearing, single ring, double ribs on both outer rings, two rows of rollers lean on each other |
| J | Pressed sheet-steel cage, attach digits when material changes |
| JA | Pressed sheet-steel cage, guided with outer ring |
| JE | Hard pressed sheet-steel with quenching after parkerizing |
| K | Bearing with tapered hole, taper 1:12 |
| K30 | Bearing with tapered hole, taper 1:30 |
| L | Light alloy solid cage, expressed with attached digits when material of cage changes |
| LA | Light alloy solid cage, guided with outer ring |
| LB | Light alloy solid cage, guided with inner ring |
| M | Brass solid cage |
| MA | Brass solid cage, guided with outer ring |
| MB | Brass solid cage, guided with inner ring |
| N | Bearing with snap ring groove on outer ring |
| NB | Bearing with narrow inner ring |
| NB1 | Bearing with narrow inner ring, one side is narrow |
| NC | Bearing with narrow outer ring |
| NR | Bearing with snap ring groove and locating snap ring on outer ring of bearing |
| N1 | Bearing with a locating slot on outer ring of bearing |
| N2 | Bearing with a symmetrical locating slot on outer ring of bearing |
| Q | Bronze solid cage, attached digits show different material |
| /QR | Four cylindrical roller bearing combination, radial load is equally distributed |
| R | Bearing with flanged outer ring (flanged outer ring) |
| -RS | Bearing with rubber seal with spring rim on one side |
| -2RS | Bearing with RS seal on both sides |
| -RSZ | Bearing with rubber seal with spring rim on one side(contacting type), seal cover on another side |
| -RZ | One side of the bearing with frame-rubber sealing ring (none contact structure) |
| -2RZ | Bearing with RZ seal on both sides |
| S | Marquenching |
| VB | Bearing with vibration screen |
| WB | Bearing with wide inner ring ( both sides are wide) |
| WB1 | Bearing with wide inner ring ( one side is wide) |
| WC | Bearing with side outer ring |
| X | Complement cylindrical roller bearing with flat retainer ring roller |
| X1 | Outer diameter is nonstandard |
| X2 | Width (height) is nonstandard |
| X3 | Outer diameter and width (height) are nonstandard ( standard inner diameter ) |
| -Z | Bearing with dust cover on one side |
| -2Z | Bearing with dust cover on both sides |

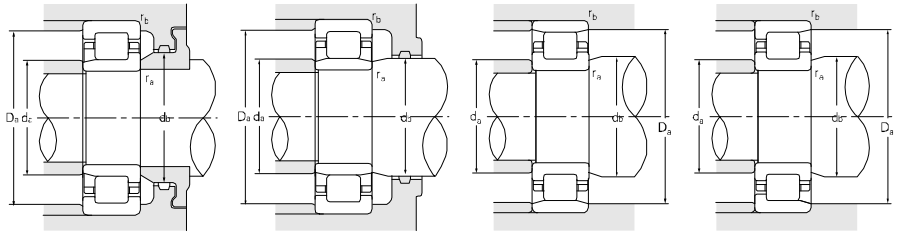


| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1smin}$ | $r_{smin}$ | F | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | | kN | | r/min | | |
| **25** | 52 | 15 | 1 | 0.6 | 31.5 | | 28 | 26.5 | 11000 | 13500 | **NU205EM** |
| | 52 | 15 | 1 | 0.6 | 31.5 | | 28 | 26.5 | 11000 | 13500 | **NJ205M** |
| | 52 | 15 | 1 | 0.6 | 31.5 | | 28 | 26.5 | 11000 | 13500 | **NJ205ETN1** |
| | 52 | 15 | 1 | 0.6 | 31.5 | | 28 | 26.5 | 11000 | 13500 | **NU205ETN1/C9** |
| | 52 | 18 | | 1 | 31.5 | | 33.5 | 33 | 11000 | 13500 | **NUP2205ETN1** |
| | 52 | 18 | 1 | 0.6 | 31.5 | | 33.5 | 33 | 11000 | 13500 | **NJ2205EM/P49YB2** |
| | 62 | 17 | 1.1 | 1.1 | 34 | | 45.5 | 36 | 9500 | 12000 | **NJ305M** |
| | 62 | 17 | 1.1 | 1.1 | 34 | | 45.5 | 36 | 9500 | 12000 | **NJ305ETN1** |
| | 62 | 17 | | 1.1 | 34 | | 45.5 | 36 | 9500 | 12000 | **NUP305EM** |
| | 62 | 24 | 1.1 | 1.1 | 35 | | 62 | 53 | 9500 | 12000 | **NJ2305M/HAP6** |
| **26** | 55 | 18 | 1 | 0.3 | 32 | | 39 | 56 | 10500 | 13000 | **NU6/26NRTN1-DZ** |
| **30** | 55 | 13 | 1 | 0.6 | 36.5 | | 20 | 23 | 12000 | 15000 | **NU1006M** |
| | 55 | 13 | 1 | 0.6 | 36.5 | | 20 | 23 | 12000 | 15000 | **NU1006TN1** |
| | 62 | 16 | 1 | 0.6 | 37.5 | | 42 | 35 | 9500 | 12000 | **NJ206EM** |
| | 62 | 16 | 1 | 0.6 | 37.5 | | 42 | 35 | 9500 | 12000 | **NJ206ETN1** |
| | 62 | 16 | 1 | 0.6 | 37.5 | | 42 | 35 | 9500 | 12000 | **NU206EM** |
| | 62 | 16 | 1 | 0.6 | 37.5 | | 42 | 35 | 9500 | 12000 | **NU206ETN1/C9** |
| | 62 | 20 | 1 | 0.6 | 37.5 | | 53 | 54 | 9500 | 12000 | **NJ2206EM** |
| | 62 | 20 | 1 | 0.6 | 37.5 | | 53 | 54 | 9500 | 12000 | **NU2206ETN1** |
| | 62 | 20 | 1 | 0.6 | 37.5 | | 53 | 54 | 9500 | 12000 | **NJ2206ETN1** |
| | 62 | 20 | 1 | 0.6 | 37.5 | | 53 | 54 | 9500 | 12000 | **NU2206ETN1/C9** |
| | 70 | 18 | 1.1 | 0.6 | 40 | | 57.2 | 55.0 | 9000 | 11000 | **NJ306X3WB/C9** |
| | 72 | 19 | 1.1 | 1.1 | 40.5 | | 56 | 48 | 9000 | 11000 | **NJ306EM** |
| | 72 | 19 | 1.1 | 1.1 | 40.5 | | 45 | 42.5 | 9000 | 11000 | **N306M** |
| | 72 | 19 | 1.1 | 1.1 | 40.5 | | 56 | 48 | 9000 | 11000 | **NJ306ETN1** |
| | 72 | 19 | 1.1 | 1.1 | 40.5 | | 56 | 48 | 9000 | 11000 | **NJ306ENTN1/C3-FST** |
| | 72 | 23 | 1.1 | 1.1 | 40.5 | | 53 | 50 | 9000 | 11000 | **NJ306X2EM-2RSL** |
| | 72 | 27 | | 1.1 | 42 | | 80 | 72 | 9000 | 11000 | **NUP2306M** |
| | 72 | 27 | 1.1 | 1.1 | 40.5 | | 80 | 72 | 8000 | 95000 | **NU2306EM** |
| | 72.046 | 23 | 1.1 | 1.1 | 40.5 | | 63.5 | 63 | 9000 | 11000 | **NF306X3EM/YA6** |
| | 90 | 23 | 1.5 | 1.5 | 45 | | 60 | 52 | 7500 | 9000 | **NJ406M** |
| **35** | 62 | 14 | 1 | 0.6 | 42 | | 34 | 36 | 9000 | 11000 | **NU1007M** |
| | 62 | 14 | 1 | 0.6 | 42 | | 34 | 36 | 9000 | 11000 | **NU1007TN1** |

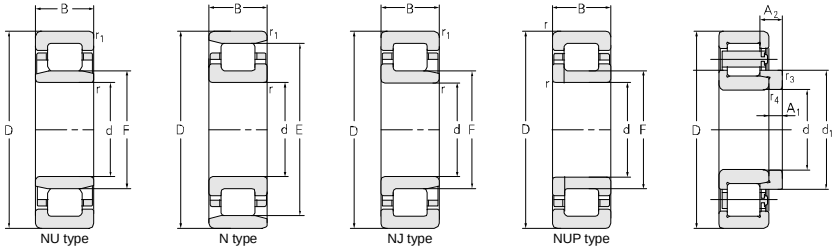
| Abutment and fillet dimensions | | | | | | | Weight | Model | Weight | Separate thrust collar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $da_{min}$ | $da_{max}$ | $db_{min}$ | $Da_{max}$ | $Da_{min}$ | $ra_{max}$ | $rb_{max}$ | | | | A1 | A2 | $r_3.r_4$ |
| mm | | | | | | | kg | | kg | mm | | |
| 29 | 30 | 36 | 47 | | 1 | 0.7 | 0.159 | | | | | |
| 29 | 30 | 36 | 47 | | 1 | 0.6 | 0.164 | | | | | |
| 29 | 30 | 36 | 47 | | 1 | 0.6 | 0.134 | | | | | |
| 29 | 30 | 36 | 47 | | 1 | 0.6 | 0.134 | | | | | |
| 30.6 | | 36 | 46.4 | | 1 | 1 | 0.171 | | | | | |
| 30.6 | | 36 | 46.4 | | 1 | 1 | 0.188 | | | | | |
| 31.5 | 32 | 40 | 55.5 | | 1 | 1 | 0.267 | | | | | |
| 31.5 | 32 | 40 | 55.5 | | 1 | 1 | 0.239 | | | | | |
| 31.5 | | 40 | 55.5 | | 1 | 1 | 0.28 | | | | | |
| 31.5 | 32 | 40 | 55.5 | | 1 | 1 | 0.453 | | | | | |
| 29.5 | 30.5 | | | | 1 | 0.3 | 0.212 | | | | | |
| 34 | 35 | 38 | 50 | | 1 | 0.6 | 0.138 | | | | | |
| 34 | 35 | 38 | 50 | | 1 | 0.6 | 0.119 | | | | | |
| 34 | 36 | 43 | 57 | | 1 | 0.6 | 0.264 | | | | | |
| 34 | 36 | 43 | 57 | | 1 | 0.6 | 0.203 | | | | | |
| 34 | 36 | 39 | 57 | | 1 | 0.6 | 0.259 | | | | | |
| | | | | | 1 | 0.6 | 0.198 | | | | | |
| 34 | 36 | 43 | 57 | | 1 | 0.6 | 0.297 | | | | | |
| 34 | 36 | 43 | 57 | | 1 | 0.6 | 0.259 | | | | | |
| 34 | 36 | 43 | 57 | | 1 | 0.6 | 0.265 | | | | | |
| 34 | 36 | 43 | 57 | | 1 | 0.6 | 0.259 | | | | | |
| 35 | 38 | 45 | 63.5 | | 1 | 1 | 0.342 | | | | | |
| 36.5 | 39 | 47 | 65.5 | | 1 | 1 | 0.411 | | | | | |
| 36.5 | 39 | 47 | 65.5 | | 1 | 1 | 0.403 | | | | | |
| 36.5 | 39 | 47 | 65.5 | | 1 | 1 | 0.374 | | | | | |
| 36.5 | 39 | 47 | 65.5 | | 1 | 1 | 0.369 | | | | | |
| 36.5 | 39 | 47 | 65.5 | | 1 | 1 | 0.472 | | | | | |
| 36.5 | | 47 | 65.5 | | 1 | 1 | 0.585 | | | | | |
| 36.5 | | 47 | 65.5 | | 1 | 1 | 0.593 | | | | | |
| 36.5 | 39 | 47 | 65.5 | | 1 | 1 | 0.502 | | | | | |
| 38 | 43 | 52 | 82 | | 1.5 | 1.5 | 0.882 | | | | | |
| 38.2 | 41 | 44 | 56 | | 1 | 0.6 | 0.173 | | | | | |
| 38.2 | 41 | 44 | 56 | | 1 | 0.6 | 0.156 | | | | | |

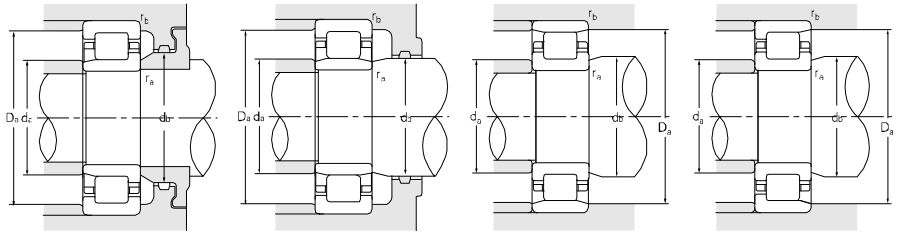


| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1smin}$ | $r_{smin}$ | F | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | | kN | | r/min | | |
| **35** | 72 | 17 | 0.6 | 1.1 | | 64 | 54 | 46 | 8500 | 10000 | **N207EM** |
| | 72 | 17 | 1.1 | 0.6 | 44 | | 54 | 46 | 8500 | 10000 | **NJ207EM** |
| | 72 | 17 | 1.1 | 0.6 | 44 | | 54 | 46 | 8500 | 10000 | **NJ207ETN1** |
| | 72 | 17 | 1.1 | 0.6 | 44 | | 54 | 46 | 8500 | 10000 | **NU207EM** |
| | 72 | 23 | 1.1 | 1.1 | 44 | | 66.0 | 70 | 8500 | 10000 | **NJ2207EM** |
| | 72 | 23 | 1.1 | 1.1 | 44 | | 66.0 | 70 | 8500 | 10000 | **NU2207EM** |
| | 72 | 23 | 1 | 0.6 | 44 | | 66.0 | 70 | 8500 | 10000 | **NJ2207ETN1** |
| | 72 | 23 | 1 | 0.6 | 44 | | 66 | 70 | 8500 | 10000 | **NJ2207EM/C9YA8** |
| | 72 | 23 | 1 | 0.6 | 44 | | 66.0 | 70 | 8500 | 10000 | **NU2207ETN1/C9** |
| | 80 | 21 | 1.5 | 1.5 | | 67.8 | 72 | 60 | 8000 | 9500 | **NCL307E/YA** |
| | 80 | 21 | 1.5 | 1.1 | 46.2 | | 72 | 60 | 8000 | 9500 | **NJ307M** |
| | 80 | 21 | 1.5 | 1.5 | | 70.2 | 72 | 60 | 8000 | 9500 | **N307M** |
| | 80 | 21 | 1.5 | 1.1 | 46.2 | | 72 | 60 | 8000 | 9500 | **NJ307E** |
| | 80 | 21 | 1.5 | 1.1 | | 70.2 | 72 | 60 | 8000 | 9500 | **NF307M** |
| | 80 | 21 | 1.5 | 1.1 | | 70.2 | 72 | 60 | 8000 | 9500 | **NF307ETN1** |
| | 80 | 21 | 1.5 | 1.1 | 46.2 | | 72 | 60 | 8000 | 9500 | **NU307M** |
| | 80 | 21 | 1.5 | 1.1 | 46.2 | | 72 | 60 | 8000 | 9500 | **NU307ENRM** |
| | 80 | 21 | 1.5 | 1.1 | 46.2 | | 72 | 60 | 8000 | 9500 | **NJ307ENRM** |
| | 80 | 21 | 1.5 | 1.1 | 46.2 | | 72 | 60 | 8000 | 9500 | **NU307ETN1/C9** |
| | 80 | 21 | 1.5 | 1.5 | | 70.2 | 72 | 60 | 8000 | 9500 | **NF307ETN1-FST** |
| | 80 | 21 | 1.5 | 1.1 | 46.2 | | 72 | 60 | 8000 | 9500 | **NU307EMA** |
| | 80 | 21 | 1.5 | 1.1 | 46.2 | | 72 | 60 | 8000 | 9500 | **NU307E** |
| | 80 | 21 | 1.5 | 1.1 | 46.2 | | 72 | 60 | 8000 | 9500 | **NU307EQ1** |
| | 80 | 31 | 1.5 | 1.5 | 46.2 | | 87 | 75 | 7000 | 8500 | **NJ2307M** |
| | 80 | 31 | 1.5 | 1.5 | 46.2 | | 102 | 94 | 7000 | 8500 | **NJ2307EM** |
| | 80 | 31 | 1.1 | 1.1 | 46.2 | | 102 | 94 | 7000 | 8500 | **NU2307EM** |
| | 100 | 25 | 1.5 | 1.5 | 53 | | 74 | 67 | 6700 | 8000 | **NJ407M** |
| **38** | 83 | 25.4 | | 1.1 | 48.5 | | 73.5 | 74.5 | 7500 | 9000 | **NUP6/38X2NM** |
| **40** | 68 | 15 | 1 | 0.6 | 47 | | 27 | 32 | 9500 | 12000 | **NU1008M** |
| | 68 | 15 | 1 | 0.6 | 47 | | 27 | 32 | 9500 | 12000 | **NU1008TN1** |
| | 80 | 18 | 1.1 | 1.1 | 49.5 | | 60 | 55.5 | 7500 | 9000 | **NJ208EM** |
| | 80 | 18 | 1.1 | 1.1 | 49.5 | | 60 | 55.5 | 7500 | 9000 | **NJ208E** |
| | 80 | 18 | 1.1 | 1.1 | 49.5 | | 60 | 55.5 | 7500 | 9000 | **NU208EM** |
| | 80 | 18 | | 1.1 | 49.5 | | 60 | 55.5 | 7500 | 9000 | **NUP208EM** |

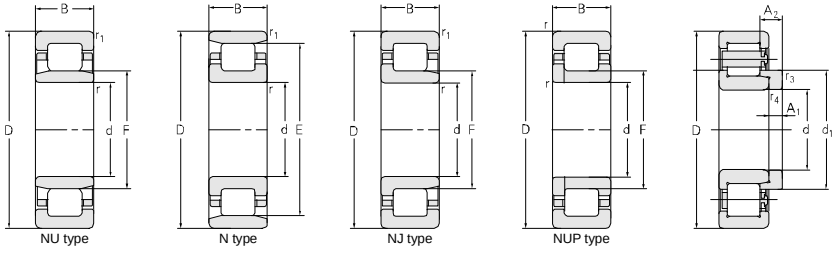
| Abutment and fillet dimensions | | | | | | | Weight | Model | Weight | Separate thrust collar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_{amin}$ | $d_{amax}$ | $d_{bmin}$ | $D_{amax}$ | $D_{amin}$ | $r_{amax}$ | $r_{bmax}$ | | | | A1 | A2 | $r_3.r_4$ |
| mm | | | | | | | kg | | kg | mm | | |
| 41.5 | 62 | | 68 | 66 | 1 | 0.6 | 0.331 | | | | | |
| 39 | 42 | 50 | 65.5 | | 1 | 0.6 | 0.338 | | | | | |
| 39 | 42 | 50 | 65.5 | | 1 | 0.6 | 0.303 | | | | | |
| 39 | 42 | 46 | 65.5 | | 1 | 0.6 | 0.331 | | | | | |
| 39 | 42 | 50 | 65.5 | | 1 | 0.6 | 0.363 | | | | | |
| 39 | 42 | 46 | 65.5 | | 1 | 0.6 | 0.445 | | | | | |
| 39 | 42 | 50 | 65.5 | | 1 | 0.6 | 0.404 | | | | | |
| 39 | 42 | 50 | 65.5 | | 1 | 0.6 | 0.455 | | | | | |
| 39 | 42 | 50 | 65.5 | | 1 | 0.6 | 0.393 | | | | | |
| 41.5 | 44 | 48 | 72 | | 1.5 | 1 | 0.503 | | | | | |
| 41.5 | 44 | 53 | 72 | | 1.5 | 1 | 0.604 | | | | | |
| 41.5 | 44 | | 73.5 | 72 | 1.5 | 1 | 0.595 | | | | | |
| 41.5 | 44 | 53 | 72 | | 1.5 | 1 | 0.62 | | | | | |
| 41.5 | 67 | | 73.5 | 72 | 1.5 | 1 | 0.610 | | | | | |
| 41.5 | 67 | | 73.5 | 72 | 1.5 | 1 | 0.519 | | | | | |
| 41.5 | 44 | 48 | 72 | | 1.5 | 1 | 0.591 | | | | | |
| 41.5 | 44 | 48 | 72 | | 1.5 | 1 | 0.607 | | | | | |
| 41.5 | 44 | 53 | 72 | | 1.5 | 1 | 0.620 | | | | | |
| 41.5 | 44 | 48 | 72 | | 1.5 | 1 | 0.500 | | | | | |
| 41.5 | 67 | | 73.5 | 72 | 1.5 | 1.5 | 0.519 | | | | | |
| 41.5 | 44 | 48 | 72 | | 1.5 | 1 | 0.547 | | | | | |
| 41.5 | 44 | 48 | 72 | | 1.5 | 1 | 0.526 | | | | | |
| 41.5 | 44 | 48 | 72 | | 1.5 | 1 | 0.591 | | | | | |
| 41.5 | 44 | 53 | 72 | | 1.5 | 1 | 0.833 | | | | | |
| 41.5 | 44 | 53 | 72 | | 1.5 | 1 | 0.823 | | | | | |
| 41.5 | 44 | 48 | 72 | | 1.5 | 1 | 0.81 | | | | | |
| 44 | 49 | 59 | 85 | | 1.5 | 1.5 | 1.10 | | | | | |
| 44.5 | 47 | 55 | 75 | | 1 | 1 | 0.705 | | | | | |
| 42 | 45 | 50 | 65 | | 1 | 0.6 | 0.231 | | | | | |
| 42 | 45 | 50 | 65 | | 1 | 0.6 | 0.183 | | | | | |
| 46.5 | 48 | 56 | 73.5 | | 1 | 1 | 0.460 | | | | | |
| 46.5 | | 56 | 73.5 | | 1 | 1 | 0.442 | | | | | |
| 46.5 | 48 | 51 | 73.5 | | 1 | 1 | 0.439 | | | | | |
| 46.5 | | 56 | 73.5 | | 1 | 1 | 0.460 | | | | | |

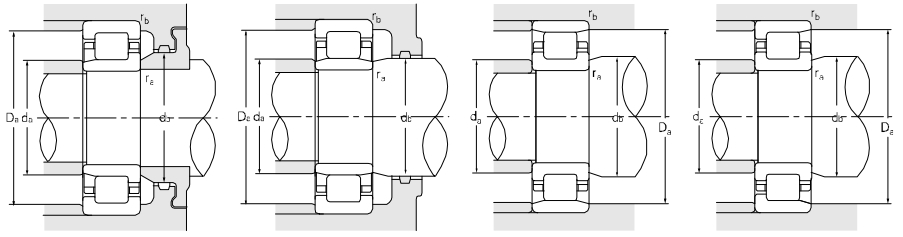


| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1smin}$ | $r_{smin}$ | F | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | | kN | | r/min | | |
| **40** | 80 | 18 | | 1.1 | 49.5 | | 60 | 55.5 | 7500 | 9000 | **NUP208ETN1** |
| | 80 | 18 | 1.1 | 1.1 | | 71.5 | 60 | 55.5 | 7500 | 9000 | **N208EM** |
| | 80 | 18 | 1.1 | 1.1 | | 71.5 | 60 | 55.5 | 7500 | 9000 | **NJ208ETN1** |
| | 80 | 18 | 1.1 | 1.1 | 49.5 | | 60 | 55.5 | 7500 | 9000 | **NU208ETN1/C9** |
| | 80 | 18 | 1.1 | 1.1 | 49.5 | | 60 | 55.5 | 7500 | 9000 | **NU208ETN1** |
| | 80 | 23 | 1.1 | 1.1 | 49.5 | | 78 | 72 | 7500 | 9000 | **NJ2208EM** |
| | 80 | 23 | 1.1 | 1.1 | 49.5 | | 78 | 72 | 7500 | 9000 | **NU2208EM** |
| | 80 | 23 | 1.1 | 1.1 | 49.5 | | 78 | 72 | 7500 | 9000 | **NU2208ETN1** |
| | 80 | 23 | 1.1 | 1.1 | 49.5 | | 78 | 72 | 7500 | 9000 | **NU2208ETN1/C9** |
| | 90 | 23 | 1.1 | 0.2 | 52.5 | | 90 | 75 | 6700 | 8000 | **NCL308E/C9YA-1** |
| | 90 | 23 | 1.1 | 0.2 | | 80 | 90 | 75 | 6700 | 8000 | **N308ETN1** |
| | 90 | 23 | 1.5 | 1.5 | | 80 | 90 | 75 | 6700 | 8000 | **NF308ETN1/C9-FST** |
| | 90 | 23 | 1.5 | 1.5 | | 77.5 | 90 | 75 | 6700 | 8000 | **NCL308E/YA** |
| | 90 | 23 | 1.5 | 1.5 | | 80 | 90 | 75 | 6700 | 8000 | **N308EM** |
| | 90 | 23 | 1.5 | 1.5 | | 80 | 90 | 75 | 6700 | 8000 | **NF308E** |
| | 90 | 23 | 1.5 | 1.5 | 52 | | 90 | 75 | 6700 | 8000 | **NF308EM/C9-FST** |
| | 90 | 23 | 1.5 | 1.5 | 52 | | 90 | 75 | 6700 | 8000 | **NJ308EM** |
| | 90 | 23 | 1.5 | 1.5 | 52 | | 90 | 75 | 6700 | 8000 | **NJ308EM/YA8** |
| | 90 | 23 | 1.5 | 1.5 | 52 | | 90 | 75 | 6700 | 8000 | **NJ308ETN1** |
| | 90 | 23 | | 1.5 | 52 | | 90 | 75 | 6700 | 8000 | **NUP308EM/C2** |
| | 90 | 23 | | 1.5 | 52 | | 90 | 75 | 6700 | 8000 | **NUP308EM/YA6** |
| | 90 | 23 | | 1.5 | 52 | | 90 | 75 | 6700 | 8000 | **NUP308ETN1/YA6** |
| | 90 | 33 | 1.5 | 1.5 | 52 | | 124 | 115 | 6300 | 7500 | **NU2308EM** |
| | 90 | 33 | 1.5 | 1.5 | 52 | | 124 | 115 | 6300 | 7500 | **NJ2308E** |
| **45** | 80.036 | 16 | 1 | 1 | 57.5 | | 35.5 | 46.5 | 6700 | 8000 | **NJ609M/YA1** |
| | 85 | 19 | 1.1 | 1.1 | 55 | | 57.5 | 56 | 6700 | 8000 | **NJ209M** |
| | 85 | 19 | 1.1 | 1.1 | 55 | | 57.5 | 56 | 6700 | 8000 | **NJ209TN1** |
| | 85 | 19 | 1.1 | 1.1 | 54.5 | | 67.5 | 61.5 | 6700 | 8000 | **NJ209EM** |
| | 85 | 19 | 1.1 | 1.1 | 55 | | 67.5 | 61.5 | 6700 | 8000 | **NU209EM** |
| | 85 | 19 | 1.1 | 1.1 | | 76.5 | 67.5 | 61.5 | 6700 | 8000 | **NF209EM** |
| | 85 | 19 | 1.1 | 1.1 | | 76.5 | 67.5 | 61.5 | 6700 | 8000 | **NF209ETN1** |
| | 85 | 19 | | 1.1 | 54.5 | | 67.5 | 61.5 | 6700 | 8000 | **NUP209EM** |
| | 85 | 23 | 1.1 | 1.1 | 54.5 | | 82 | 78 | 5600 | 6700 | **NU2209EM** |
| | 85 | 23 | 1.1 | 1.1 | 54.5 | | 82 | 78 | 5600 | 6700 | **NU2209ETN1** |
| | 85 | 23 | 1.1 | 1.1 | 54.5 | | 82 | 78 | 5600 | 6700 | **NU2209ETN1/C9** |

| Abutment and fillet dimensions | | | | | | | Weight | Model | Weight | Separate thrust collar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_{amin}$ | $d_{amax}$ | $d_{bmin}$ | $D_{amax}$ | $D_{amin}$ | $r_{amax}$ | $r_{bmax}$ | | | | A1 | A2 | $r_3.r_4$ |
| mm | | | | | | | kg | | kg | mm | | |
| 46.5 | 48 | 56 | 73.5 | | 1 | 1 | 0.40 | | | | | |
| 46.5 | 69 | | 73.5 | 73 | 1 | 1 | 0.425 | | | | | |
| 46.5 | 69 | | 73.5 | 73 | 1 | 1 | 0.398 | | | | | |
| 46.5 | 48 | 51 | 73.5 | | 1 | 1 | 0.377 | | | | | |
| 46.5 | 48 | 51 | 73.5 | | 1 | 1 | 0.377 | | | | | |
| 46.5 | 48 | 56 | 73.5 | | 1 | 1 | 0.539 | | | | | |
| 46.5 | 48 | 51 | 73.5 | | 1 | 1 | 0.530 | | | | | |
| 46.5 | 48 | 51 | 73.5 | | 1 | 1 | 0.487 | | | | | |
| 46.5 | 48 | 51 | 73.5 | | 1 | 1 | 0.487 | | | | | |
| 48 | 50 | 60 | 82 | | 1 | | 0.678 | | | | | |
| 48 | 78 | | 82 | 82 | 1 | | 0.648 | | | | | |
| 48 | | 60 | 82 | | 1.5 | 1.5 | 0.667 | | | | | |
| 48 | 50 | 60 | 82 | | 1.5 | 1.5 | 0.683 | | | | | |
| 48 | 78 | | 82 | 82 | 1.5 | 1.5 | 0.794 | | | | | |
| 48 | | | 82 | 82 | 1.5 | 1.5 | 0.750 | | | | | |
| 48 | | 60 | 82 | | 1.5 | 1.5 | 0.813 | | | | | |
| 48 | 50 | 60 | 82 | | 1.5 | 1.5 | 0.815 | | | | | |
| 48 | 50 | 60 | 82 | | 1.5 | 1.5 | 0.805 | | | | | |
| 48 | 50 | 60 | 82 | | 1.5 | 1.5 | 0.669 | | | | | |
| 48 | | 60 | 82 | | 1.5 | 1.5 | 0.819 | | | | | |
| 48 | | 60 | 82 | | 1.5 | 1.5 | 0.819 | | | | | |
| 48 | | 60 | 82 | | 1.5 | 1.5 | 0.673 | | | | | |
| 48 | 49 | 55 | 82 | | 1.5 | 1.5 | 1.01 | | | | | |
| 48 | 49 | 60 | 82 | | 1.5 | 1.5 | 1.10 | | | | | |
| 51.5 | 53 | 61 | 73.5 | 73 | 1 | 1 | 0.363 | | | | | |
| 51.5 | 53 | 61 | 78.5 | | 1 | 1 | 0.487 | | | | | |
| 51.5 | 53 | 61 | 78.5 | | 1 | 1 | 0.439 | | | | | |
| 51.5 | 53 | 61 | 78.5 | | 1 | 1 | 0.51 | | | | | |
| 51.5 | 53 | 61 | 78.5 | | 1 | 1 | 0.498 | | | | | |
| 51.5 | 73 | | 78.5 | 78 | 1 | 1 | 0.510 | | | | | |
| 51.5 | 73 | | 78.5 | 78 | 1 | 1 | 0.444 | | | | | |
| 52 | | 61 | 78 | | 1 | | 0.507 | | | | | |
| 51 | 53 | 58 | 79 | | 1 | 1 | 0.635 | | | | | |
| 51 | 53 | 58 | 79 | | 1 | 1 | 0.571 | | | | | |
| 51 | 53 | 58 | 79 | | 1 | 1 | 0.571 | | | | | |

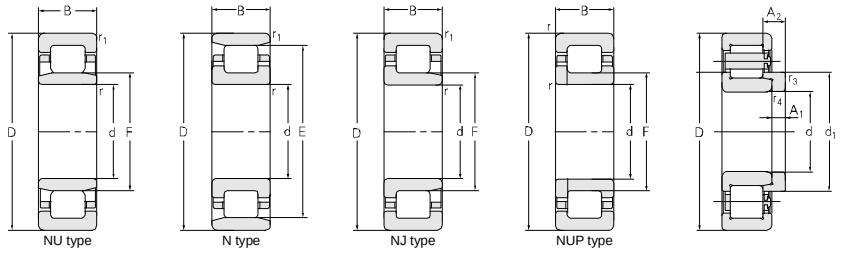


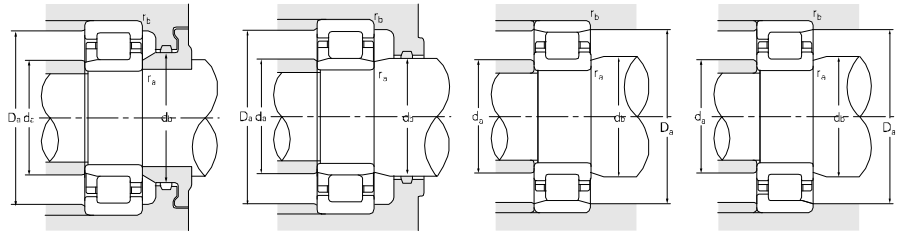



| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1smin}$ | $r_{smin}$ | F | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | | kN | | r/min | | |
| **45** | 85 | 23 | 1.1 | 1.1 | 54.5 | | 82 | 78 | 5600 | 6700 | **NJ2209E/C3** |
| | 85 | 23 | 1.1 | 1.1 | 54.5 | | 82 | 78 | 5600 | 6700 | **NJ2209EM** |
| | 85 | 30.16 | 1.1 | 1.1 | 55.52 | | 94.6 | 119 | 6300 | 7500 | **NU3209X2M/C9YA6** |
| | 85 | 30.16 | 1.1 | 1.1 | 55.52 | | 94.6 | 119 | 6300 | 7500 | **NU5209XPC3** |
| | 100 | 25 | 1.5 | 1.5 | | 86.5 | 108 | 96 | 6300 | 7500 | **N309M** |
| | 100 | 25 | 1.5 | 1.5 | | 86.5 | 108 | 96 | 6300 | 7500 | **N309J** |
| | 100 | 25 | 1.5 | 1.5 | | 88.5 | 108 | 96 | 6300 | 7500 | **NCL309EN/YA** |
| | 100 | 25 | 1.5 | 1.5 | 58.5 | | 108 | 96 | 6300 | 7500 | **NJ309ETN1** |
| | 100 | 25 | 1.5 | 1.5 | | 88.5 | 108 | 96 | 6300 | 7500 | **NCL309E/YA** |
| | 100 | 25 | 1.5 | 1.5 | 58.5 | | 108 | 96 | 6300 | 7500 | **NU309M/C3** |
| | 100 | 25 | 1.5 | 1.5 | 58.5 | | 108 | 96 | 6300 | 7500 | **NJ309EM** |
| | 100 | 25 | 1.5 | 1.5 | | 88.5 | 108 | 96 | 6300 | 7500 | **N309EM** |
| | 100 | 25 | 1.5 | 1.5 | 58.5 | | 108 | 96 | 6300 | 7500 | **NUP309E** |
| | 100 | 25 | | 1.5 | | 88.5 | 108 | 96 | 6300 | 7500 | **N309E** |
| | 100 | 25 | 1.5 | 1.5 | | 88.5 | 108 | 96 | 6300 | 7500 | **N309ETN1** |
| | 100 | 25 | 1.5 | 1.5 | | 88.5 | 108 | 96 | 6300 | 7500 | **NF309E** |
| | 100 | 25 | 1.5 | 1.5 | 58.5 | | 108 | 96 | 6300 | 7500 | **NJ309E** |
| | 100 | 25 | 1.5 | 1.5 | 58.5 | | 108 | 96 | 6300 | 7500 | **NJ309EM/C4W124YA8** |
| | 100 | 25 | 1.5 | 1.5 | 58.5 | | 108 | 96 | 6300 | 7500 | **NU309E** |
| | 100 | 25 | 1.5 | 1.5 | 56.4 | | 108 | 96 | 6300 | 7500 | **NU309NRB1/YA6** |
| | 100 | 25 | 1.5 | 1.5 | 58.5 | | 108 | 96 | 6300 | 7500 | **NUP309ETN1/HAC3YA6** |
| | 100 | 27.5 | 1.5 | 0.8 | 58.5 | | 101 | 102 | 6300 | 7500 | **NUP309EWB1NRTN1** |
| | 100 | 31 | | 1.5 | | 88 | 119 | 120 | 6300 | 7500 | **NF2309X2J/YA6** |
| | 100 | 36 | 1.5 | 4.5 | 58.5 | | 154 | 150 | 5600 | 6700 | **NU2309EM/C3** |
| | 100 | 36 | 1.5 | 1.5 | 58.5 | | 154 | 150 | 5600 | 6700 | **NJ2309E** |
| | 100 | 31 | 1.5 | 1.5 | 58.5 | | 141 | 153 | 5600 | 6700 | **NJ2309X2NV/C9YA26** |
| | 100 | 36 | 1.5 | 1.5 | 58.5 | | 154 | 150 | 5600 | 6700 | **NJ2309EM** |
| | 100 | 36 | 1.5 | 1.5 | 58.5 | | 154 | 150 | 5600 | 6700 | **NJ2309EM/C4W124** |
| | 100 | 36 | 1.5 | 1.5 | 58.5 | | 154 | 150 | 5600 | 6700 | **NU2309E** |
| | 100.038 | 25 | 1.5 | 1.5 | | 86.5 | 108 | 96 | 6300 | 7500 | **NF309X1MR/YA1** |
| | 120 | 29 | 2 | 2 | | 100.5 | 124 | 123 | 5600 | 6700 | **N409M** |
| | 120 | 29 | 2 | 2 | 64.5 | | 124 | 123 | 5600 | 6700 | **NU409M** |
| | 120 | 29 | 2 | 2 | 64.5 | | 124 | 123 | 5600 | 6700 | **NJ409M** |
| **50** | 80 | 16 | 1 | 0.6 | 57.5 | | 45 | 54 | 8500 | 10000 | **NJ1010M** |
| | 80 | 16 | 1 | 0.6 | 57.5 | | 45 | 54 | 8500 | 10000 | **NJ1010TN1** |

| Abutment and fillet dimensions | | | | | | | Weight | Model | Weight | Separate thrust collar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_{amin}$ | $d_{amax}$ | $d_{bmin}$ | $D_{amax}$ | $D_{amin}$ | $r_{amax}$ | $r_{bmax}$ | | | | A1 | A2 | $r_3.r_4$ |
| mm | | | | | | | kg | | kg | mm | | |
| 51.5 | 53 | 61 | 78.5 | | 1 | 1 | 0.639 | | | | | |
| 51.5 | 53 | 61 | 78.5 | | 1 | 1 | 0.645 | | | | | |
| 51 | 53 | 58 | 79 | | 1 | 1 | 0.831 | | | | | |
| 51 | 53 | 58 | 79 | | 1 | 1 | 0.843 | | | | | |
| 53 | 84 | | 92 | 90.5 | 1.5 | 1.5 | 0.920 | | | | | |
| 53 | 84 | | 92 | 90.5 | 1.5 | 1.5 | 0.820 | | | | | |
| 53 | 84 | | 92 | 90.5 | 1.5 | 1.5 | 0.872 | | | | | |
| 53 | 56 | 67 | 92 | | 1.5 | 1.5 | 0.891 | | | | | |
| 53 | 84 | | 92 | 90.5 | 1.5 | 1.5 | 0.872 | | | | | |
| 53 | 56 | 61 | 92 | | 1.5 | 1.5 | 0.992 | | | | | |
| 53 | 56 | 67 | 92 | | 1.5 | 1.5 | 1.00 | | | | | |
| 53 | 86 | | 92 | 91 | 1.5 | 1.5 | 0.959 | | | | | |
| 53 | | 67 | 92 | | 1.5 | 1.5 | 1.01 | | | | | |
| 53 | 86 | | 92 | 91 | 1.5 | 1.5 | 0.964 | | | | | |
| 53 | 86 | | 92 | 91 | 1.5 | 1.5 | 0.846 | | | | | |
| 53 | | | 92 | 91 | 1.5 | 1.5 | 0.995 | | | | | |
| 53 | 56 | 67 | 92 | | 1.5 | 1.5 | 1.01 | | | | | |
| 53 | 56 | 67 | 92 | | 1.5 | 1.5 | 1.09 | | | | | |
| 53 | 56 | 61 | 92 | | 1.5 | 1.5 | 0.986 | | | | | |
| 51 | 54 | 60 | 92 | | 1.5 | 1.5 | 0.912 | | | | | |
| 53 | | 67 | 92 | | 1.5 | 1.5 | 0.892 | | | | | |
| 53 | | 67 | 92 | | 1.5 | 1.5 | 0.942 | | | | | |
| 53 | | | 92 | 91 | 1.5 | 1.5 | 1.12 | | | | | |
| 53 | 56 | 61 | 93 | | 1 | 1 | 1.49 | | | | | |
| 53 | 56 | 67 | 92 | | 1.5 | 1.5 | 1.45 | | | | | |
| 53 | 56 | 67 | 92 | | 1.5 | 1.5 | 1.17 | | | | | |
| 53 | 56 | 67 | 92 | | 1.5 | 1.5 | 1.52 | | | | | |
| 53 | 56 | 67 | 92 | | 1.5 | 1.5 | 1.47 | | | | | |
| 53 | 56 | 61 | 93 | | 1.5 | 1.5 | 1.42 | | | | | |
| 53 | 84 | | 92 | 90.5 | 1.5 | 1.5 | 1.03 | | | | | |
| 54 | 97 | | 111 | 103 | 2 | 2 | 1.67 | | | | | |
| 54 | 62 | 67 | 111 | | 2 | 2 | 1.87 | | | | | |
| 54 | 62 | 74 | 111 | | 2 | 2 | 1.88 | | | | | |
| 54 | 56 | 60 | 75 | | 1 | 0.6 | 0.316 | | | | | |
| 54 | 56 | 60 | 75 | | 1 | 0.6 | 0.279 | | | | | |

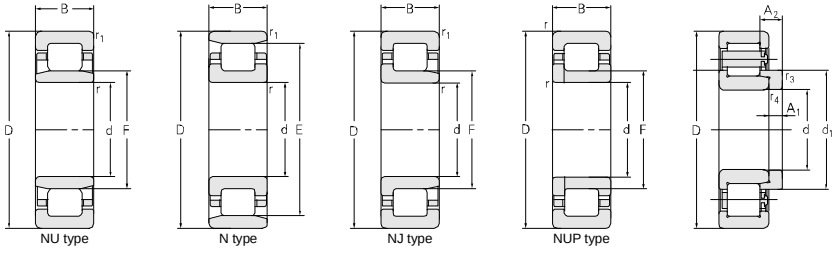
d 50 mm

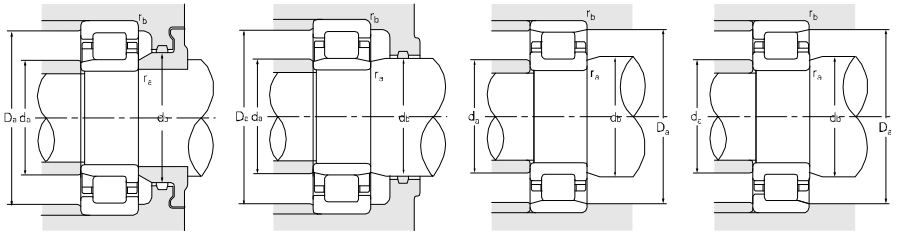


| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1smin}$ | $r_{smin}$ | F | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | | kN | | r/min | | |
| **50** | 80 | 16 | 1 | 1 | | 60.5 | 45 | 54 | 8500 | 10000 | **N1010KM/P49** |
| | 90 | 20 | 1.1 | 1.1 | | 80.4 | 57.2 | 64.0 | 6300 | 7500 | **N210M** |
| | 90 | 20 | 1.1 | 1.1 | | 81.5 | 70.5 | 67.5 | 6300 | 7500 | **N210EM** |
| | 90 | 20 | 1.1 | 1.1 | | 80.4 | 57.2 | 64.0 | 6300 | 7500 | **NF210M** |
| | 90 | 20 | 1.1 | 1.1 | 60.4 | | 57.2 | 64.0 | 6300 | 7500 | **NU210M** |
| | 90 | 20 | 1.1 | 1.1 | 60.4 | | 57.2 | 64.0 | 6300 | 7500 | **NU210Q1** |
| | 90 | 20 | 1.1 | 1.1 | 59.5 | | 70.5 | 67.5 | 6300 | 7500 | **NU210EM** |
| | 90 | 20 | 1.1 | 1.1 | 59.5 | | 70.5 | 67.5 | 6300 | 7500 | **NJ210EM** |
| | 90 | 20 | 1.1 | 1.1 | 59.5 | | 70.5 | 67.5 | 6300 | 7500 | **NJ210ETN1** |
| | 90 | 20 | 1.1 | 1.1 | | 81.5 | 70.5 | 67.5 | 6300 | 7500 | **NF210E** |
| | 90 | 20 | 1.1 | 1.1 | | 81.5 | 70.5 | 67.5 | 6300 | 7500 | **NF210EM** |
| | 90 | 20 | | 1.1 | 59.5 | | 70.5 | 67.5 | 6300 | 7500 | **NUP210E** |
| | 90 | 23 | 1.1 | 1.1 | 59.5 | | 86.5 | 84.5 | 6300 | 7500 | **NU2210EM** |
| | 90 | 23 | 1.1 | 1.1 | 59.5 | | 86.5 | 84.5 | 6300 | 7500 | **NU2210ETN1/C9** |
| | 90 | 23 | 1.1 | 1.1 | 59.5 | | 86.5 | 84.5 | 6300 | 7500 | **NJ2210EM** |
| | 90 | 23 | 1.1 | 1.1 | 59.5 | | 86.5 | 84.5 | 6300 | 7500 | **NJ2210ETN1** |
| | 90 | 30.16 | 1.1 | 1.1 | 60.45 | | 99.0 | 128 | 6300 | 7500 | **NU5210XPC3** |
| | 90 | 30.16 | 1.1 | 1.1 | 60.45 | | 99.0 | 128 | 6300 | 7500 | **NU3210X2M/C9YA6** |
| | 100 | 33.34 | 1.5 | 1.1 | 66.9 | | 118 | 155 | 6000 | 7000 | **NU5211XPC3** |
| | 100 | 32 | 2 | 2 | 65 | | 112 | 116 | 5000 | 6000 | **NU310EWBTN1** |
| | 110 | 27 | 2 | 2 | | 95 | 122 | 108 | 5000 | 6000 | **N310M** |
| | 110 | 27 | 2 | 2 | | 95 | 122 | 108 | 5000 | 6000 | **NF310M** |
| | 110 | 27 | 2 | 2 | 65 | | 122 | 108 | 5000 | 6000 | **NJ310M** |
| | 110 | 27 | 2 | 2 | 65 | | 122 | 108 | 5000 | 6000 | **NJ310M+HJ310** |
| | 110 | 27 | 2 | 2 | 65 | | 122 | 108 | 5000 | 6000 | **NU310M/C3** |
| | 110 | 27 | 2 | 2 | | 97 | 122 | 108 | 5000 | 6000 | **N310EM** |
| | 110 | 27 | 2 | 2 | | 97 | 122 | 108 | 5000 | 6000 | **N310E** |
| | 110 | 27 | 2 | 2 | 65 | | 122 | 108 | 5000 | 6000 | **NJ310E** |
| | 110 | 27 | 2 | 2 | 65 | | 122 | 108 | 5000 | 6000 | **NU310E** |
| | 110 | 27 | 2 | 2 | 65 | | 122 | 108 | 5000 | 6000 | **NU310EM** |
| | 110 | 27 | | 2 | 65 | | 122 | 108 | 5000 | 6000 | **NUP310EM** |
| | 110 | 27 | | 2 | 65 | | 122 | 108 | 5000 | 6000 | **NUP310M** |
| | 110 | 27 | 2 | 2 | 65 | | 122 | 108 | 5000 | 6000 | **NJ310TN1** |
| | 110 | 27 | 2 | 2 | 65 | | 122 | 108 | 5000 | 6000 | **NU310TN1** |
| | 110 | 40 | 2 | 2 | 65 | | 180 | 180 | 5000 | 6000 | **NU2310M** |
| | 110 | 40 | 2 | 2 | 65 | | 180 | 180 | 5000 | 6000 | **NJ2310E** |

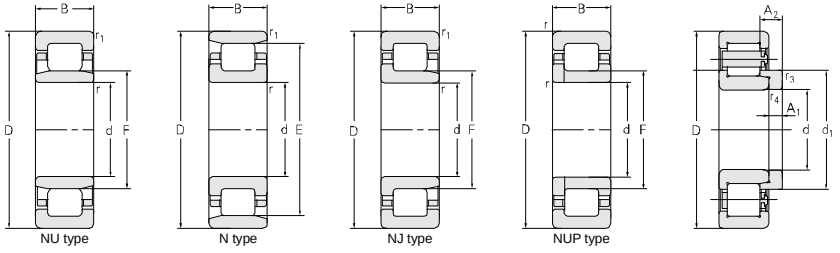
| Abutment and fillet dimensions | | | | | | | Weight | Model | Weight | Separate thrust collar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_{amin}$ | $d_{amax}$ | $d_{bmin}$ | $D_{amax}$ | $D_{amin}$ | $r_{amax}$ | $r_{bmax}$ | | | | A1 | A2 | $r_3.r_4$ |
| mm | | | | | | | kg | | kg | mm | | |
| 54 | 56 | | 75 | | 1 | 1 | 0.309 | | | | | |
| 56.5 | 79 | | 83.5 | 82 | 1 | 1 | 0.559 | | | | | |
| 56.5 | 79 | | 83.5 | 82 | 1 | 1 | 0.566 | | | | | |
| 56.5 | | | 83.5 | 82 | 1 | 1 | 0.565 | | | | | |
| 56.5 | 57 | 62 | 83.5 | | 1 | 1 | 0.564 | | | | | |
| 56.5 | 57 | 62 | 83.5 | | 1 | 1 | 0.557 | | | | | |
| 56.5 | 57 | 62 | 83.5 | | 1 | 1 | 0.562 | | | | | |
| 56.5 | 57 | 66 | 83.5 | | 1 | 1 | 0.573 | | | | | |
| 56.5 | 57 | 66 | 83.5 | | 1 | 1 | 0.503 | | | | | |
| 56.5 | | | 83.5 | 82 | 1 | 1 | 0.578 | | | | | |
| 56.5 | | | 83.5 | 82 | 1 | 1 | 0.596 | | | | | |
| 56.5 | | 66 | 83.5 | | 1 | 1 | 0.591 | | | | | |
| 56.5 | 57 | 62 | 83.5 | | 1 | 1 | 0.65 | | | | | |
| 56.5 | 57 | 66 | 83.5 | | 1 | 1 | 0.563 | | | | | |
| 56.5 | 57 | 66 | 83.5 | | 1 | 1 | 0.666 | | | | | |
| 56.5 | 57 | 66 | 83.5 | | 1 | 1 | 0.579 | | | | | |
| 56 | 58 | 62 | 84 | | 1 | 1 | 0.902 | | | | | |
| 56 | 58 | 62 | 84 | | 1 | 1 | 0.902 | | | | | |
| 60 | 62 | | 94 | | 1 | 1 | 1.21 | | | | | |
| 59 | 63 | 67 | 101 | | 2 | 2 | 1.19 | HJ310E | 0.152 | 8 | 12.74 | 2 |
| 59 | 93 | | 101 | 97 | 2 | 2 | 1.17 | | | | | |
| 59 | 93 | | 101 | 97 | 2 | 2 | 1.31 | HJ310 | 0.158 | 8 | 13.74 | 2 |
| 59 | 63 | 73 | 101 | | 2 | 2 | 1.36 | HJ310 | 0.158 | 8 | 13.74 | 2 |
| 59 | 63 | 73 | 101 | | 2 | 2 | 1.52 | HJ310 | 0.158 | 8 | 13.74 | 2 |
| 59 | 63 | 67 | 101 | | 2 | 2 | 1.29 | | | | | |
| 59 | 95 | | 101 | 99 | 2 | 2 | 1.30 | | | | | |
| 59 | 95 | | 101 | 99 | 2 | 2 | 1.30 | HJ310E | 0.152 | 8 | 12.74 | 2 |
| 59 | 63 | 73 | 101 | | 2 | 2 | 1.33 | HJ310E | 0.152 | 8 | 12.74 | 2 |
| 59 | 63 | 67 | 101 | | 2 | 2 | 1.29 | HJ310E | 0.152 | 8 | 12.74 | 2 |
| 59 | 63 | 67 | 101 | | 2 | 2 | 1.27 | | | | | |
| 59 | 63 | 67 | 101 | | 2 | 2 | 1.34 | | | | | |
| 61 | | 73 | 99 | | 2 | 2 | 1.37 | HJ310 | 0.158 | 8 | 13.74 | 2 |
| 59 | 63 | 73 | 101 | | 2 | 2 | 1.14 | HJ310 | 0.158 | 8 | 13.74 | 2 |
| 59 | 63 | 67 | 101 | | 2 | 2 | 1.10 | | | | | |
| 59 | 61 | 67 | 101 | | 2 | 2 | 1.91 | | | | | |
| 59 | 62 | 73 | 101 | | 2 | 2 | 1.95 | | | | | |

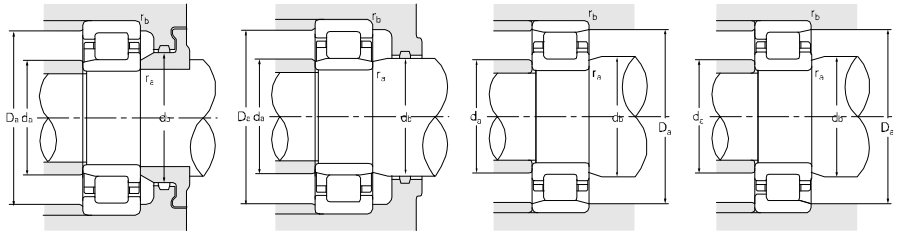


| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1smin}$ | $r_{smin}$ | F | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | | kN | | r/min | | |
| **50** | 110 | 40 | 2 | 2 | 65 | | 180 | 180 | 5000 | 6000 | **NJ2310EM** |
| | 110 | 40 | 2 | 2 | 65 | | 180 | 180 | 5000 | 6000 | **NU2310E** |
| | 110 | 40 | 2 | 2 | 65 | | 180 | 180 | 5000 | 6000 | **NU2310EM** |
| | 110 | 40 | 2 | 2 | 65 | | 180 | 180 | 5000 | 6000 | **NU2310ETN1** |
| | 110 | 40 | 2 | 2 | 65 | | 180 | 180 | 5000 | 6000 | **NJ2310ETN1** |
| | 130 | 31 | 2.1 | 2.1 | | 110 | 150 | 150 | 5000 | 6000 | **N410M** |
| | 130 | 31 | 2.1 | 2.1 | | 110 | 150 | 150 | 5000 | 6000 | **N410** |
| | 130 | 31 | 2.1 | 2.1 | 70 | | 150 | 150 | 5000 | 6000 | **NU410M** |
| | 130 | 31 | 2.1 | 2.1 | 70 | | 150 | 150 | 5000 | 6000 | **NU410** |
| | 130 | 31 | 2.1 | 2.1 | 70 | | 150 | 150 | 5000 | 6000 | **NJ410** |
| | 130 | 31 | 2.1 | 2.1 | 70 | | 150 | 150 | 5000 | 6000 | **NJ410M** |
| | 130 | 31 | 2.1 | 2.1 | 70 | | 150 | 150 | 5000 | 6000 | **NJ410TN1** |
| | 130 | 31 | 2.1 | 2.1 | 70 | | 150 | 150 | 5000 | 6000 | **NU410TN1** |
| **55** | 90 | 18 | 1.1 | 1 | 64.5 | | 55 | 67 | 7000 | 8500 | **NU1011M** |
| | 90 | 18 | 1.1 | 1 | 64.5 | | 55 | 67 | 7000 | 8500 | **NU1011TN1** |
| | 100 | 21 | 1.5 | 1.5 | | 88.5 | 93 | 91 | 6000 | 7000 | **NF211M** |
| | 100 | 21 | 1.5 | 1.5 | | 90 | 93 | 91 | 6000 | 7000 | **NF211E** |
| | 100 | 21 | 1.5 | 1.1 | 66 | | 93 | 91 | 6000 | 7000 | **NJ211E** |
| | 100 | 21 | | 1.5 | 66 | | 93 | 91 | 6000 | 7000 | **NUP211E** |
| | 100 | 21 | | 1.5 | 66 | | 93 | 91 | 6000 | 7000 | **NUP211EM** |
| | 100 | 21 | 1.5 | 1.5 | 66 | | 93 | 91 | 6000 | 7000 | **NU211ETN1/C9** |
| | 100 | 21 | | 1.5 | 66 | | 93 | 91 | 6000 | 7000 | **NUP211ETN1** |
| | 100 | 21 | 1.5 | 1.1 | 66 | | 93 | 91 | 6000 | 7000 | **NJ211ETN1** |
| | 100 | 25 | 1.5 | 1.1 | 66 | | 109 | 113 | 6000 | 7000 | **NJ2211EM** |
| | 100 | 25 | 1.5 | 1.1 | 66 | | 109 | 113 | 6000 | 7000 | **NJ2211ETN1** |
| | 100 | 25 | 1.5 | 1.1 | 66 | | 109 | 113 | 6000 | 7000 | **NU2211EM** |
| | 100 | 33.3 | 1.5 | 1.1 | | 88.9 | 117 | 155 | 4800 | 7000 | **N3211M** |
| | 100 | 33.34 | 1.1 | 1.1 | 66.9 | | 118 | 155 | 4800 | 5600 | **NU5211XPC3** |
| | 100 | 33.34 | 1.1 | 1.1 | 66.9 | | 118 | 155 | 4800 | 5600 | **NU3211X2M/C9YA6** |
| | 120 | 29 | 2 | 2 | | 104.5 | 150 | 137 | 4800 | 5600 | **NF311M** |
| | 120 | 29 | 2 | 2 | | 104.5 | 150 | 137 | 4800 | 5600 | **N311M** |
| | 120 | 29 | 2 | 2 | | 104.5 | 150 | 137 | 4800 | 5600 | **N311J** |
| | 120 | 29 | 2 | 2 | 70.5 | | 150 | 137 | 4800 | 5600 | **NU311M** |
| | 120 | 29 | 2 | 2 | 70.5 | | 150 | 137 | 4800 | 5600 | **NJ311M** |
| | 120 | 29 | | 2 | 70.5 | | 150 | 137 | 4800 | 5600 | **NUP311M** |

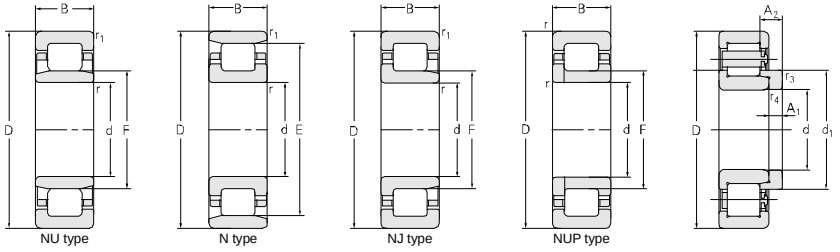
| Abutment and fillet dimensions | | | | | | | Weight | Model | Weight | Separate thrust collar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $da_{min}$ | $da_{max}$ | $db_{min}$ | $Da_{max}$ | $Da_{min}$ | $ra_{max}$ | $rb_{max}$ | | | | A1 | A2 | $r_3.r_4$ |
| mm | | | | | | | kg | | kg | mm | | |
| 59 | 62 | 73 | 101 | | 2 | 2 | 1.92 | | | | | |
| 59 | 61 | 62 | 67 | 101 | 2 | 2 | 1.92 | | | | | |
| 59 | 61 | 67 | 101 | | 2 | 2 | 1.89 | | | | | |
| 59 | 61 | 67 | 101 | | 2 | 2 | 1.71 | | | | | |
| 59 | 62 | 73 | 101 | | 2 | 2 | 1.74 | | | | | |
| 61 | 107 | | 119 | 113 | 2 | 2 | 2.18 | | | | | |
| 61 | 107 | | 119 | 113 | 2 | 2 | 2.09 | | | | | |
| 61 | 68 | 73 | 119 | | 2 | 2 | 2.20 | | | | | |
| 61 | 68 | 73 | 119 | | 2 | 2 | 2.11 | | | | | |
| 61 | 68 | 81 | 119 | | 2 | 2 | 2.15 | | | | | |
| 61 | 68 | 81 | 119 | | 2 | 2 | 2.24 | | | | | |
| 61 | 68 | 81 | 119 | | 2 | 2 | 2.02 | | | | | |
| 61 | 68 | 73 | 119 | | 2 | 2 | 1.99 | | | | | |
| 59.6 | 63 | 67 | 84 | | 1 | 1 | 0.479 | | | | | |
| 59.6 | 63 | 67 | 84 | | 1 | 1 | 0.403 | | | | | |
| 63 | | | 93.5 | 92 | 1.5 | 1.5 | 0.806 | | | | | |
| 63 | | | 93.5 | 92 | 1.5 | 1.5 | 0.757 | | | | | |
| 61.5 | 64 | 73 | 92 | | 1.5 | 1 | 0.767 | | | | | |
| 61.5 | 64 | 73 | 92 | | 1 | 1 | 0.751 | | | | | |
| 61.5 | 64 | 73 | 92 | | 1 | 1 | 0.762 | | | | | |
| 61.5 | 64 | 73 | 92 | | 1 | 1 | 0.67 | | | | | |
| 61.5 | 64 | 73 | 92 | | 1 | 1 | 0.667 | | | | | |
| 61.5 | 64 | 73 | 92 | | 1.5 | 1 | 0.701 | | | | | |
| 61.5 | 64 | 73 | 92 | | 1.5 | 1 | 0.783 | | | | | |
| 61.5 | 64 | 73 | 92 | | 1.5 | 1 | 0.666 | | | | | |
| 61.5 | 64 | 68 | 92 | | 1.5 | 1 | 0.763 | | | | | |
| 63 | 87 | | 93.5 | 92 | 1.5 | 1 | 1.20 | | | | | |
| 61 | 65 | 69 | 93 | | 1 | 1 | 1.21 | | | | | |
| 61 | 65 | 69 | 93 | | 1 | 1 | 1.21 | | | | | |
| 64 | | | 111 | 107 | 2 | 2 | 1.7 | | | | | |
| 64 | 102 | | 111 | 107 | 2 | 2 | 1.65 | | | | | |
| 64 | 102 | | 111 | 107 | 2 | 2 | 1.45 | | | | | |
| 64 | 68 | 73 | 111 | | 2 | 2 | 1.74 | | | | | |
| 64 | 68 | 79 | 111 | | 2 | 2 | 1.75 | | | | | |
| 64 | | 79 | 111 | | 2 | 2 | 1.76 | | | | | |

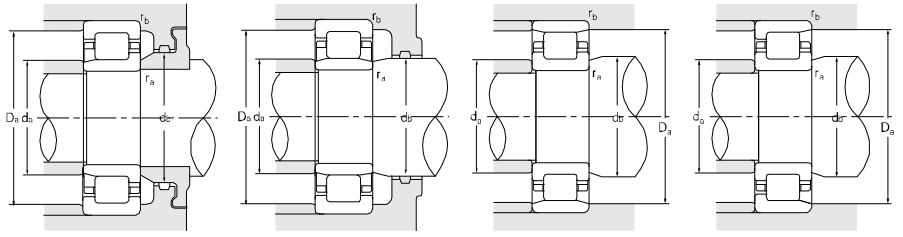


| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1smin}$ | $r_{smin}$ | F | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | | kN | | r/min | | |
| **55** | 120 | 29 | 2 | 2 | 70.5 | | 150 | 137 | 4800 | 5600 | **NJ311M/YA6** |
| | 120 | 29 | 2 | 0.5 | 68.75 | | 150 | 137 | 4800 | 5600 | **NUP311NJC** |
| | 120 | 29 | | 2 | 68.75 | | 150 | 137 | 4800 | 5600 | **NUP311NRJC** |
| | 120 | 29 | 2 | 2 | | 106.5 | 150 | 137 | 4800 | 5600 | **N311EM** |
| | 120 | 29 | 2 | 2 | | 106.5 | 150 | 137 | 4800 | 5600 | **N311E** |
| | 120 | 29 | 2 | 2 | 70.5 | | 150 | 137 | 4800 | 5600 | **NJ311TN1/YA6** |
| | 120 | 29 | 2 | 2 | 70.5 | | 150 | 137 | 4800 | 5600 | **NU311ETN1/C9** |
| | 120 | 29 | 2 | 2 | 70.5 | | 150 | 137 | 4800 | 5600 | **NU311TN1** |
| | 120 | 29 | 2 | 2 | 70.5 | | 150 | 137 | 4800 | 5600 | **NJ311E** |
| | 120 | 29 | 2 | 2 | 70.5 | | 150 | 137 | 4800 | 5600 | **NU311E** |
| | 120 | 29 | 2 | 2 | 70.5 | | 150 | 137 | 4800 | 5600 | **NUP311E** |
| | 120 | 29 | 2 | 2 | | 106.5 | 150 | 137 | 4800 | 5600 | **N311ETN1** |
| | 120 | 29 | 2 | 2 | 70.5 | | 150 | 137 | 4800 | 5600 | **NU311EM** |
| | 120 | 29 | 2 | 2 | 70.5 | | 150 | 137 | 4800 | 5600 | **NU311EM/C9** |
| | 120 | 43 | 2 | 2 | 70.5 | | 156 | 174 | 4800 | 5600 | **NU2311M** |
| | 120 | 43 | 2 | 2 | | 106.5 | 223 | 246 | 4800 | 5600 | **N2311E** |
| | 120 | 43 | 2 | 2 | 70.5 | | 223 | 246 | 4800 | 5600 | **NJ2311E** |
| | 120 | 43 | 2 | 2 | 70.5 | | 223 | 246 | 4800 | 5600 | **NU2311E** |
| | 140 | 33 | 2.1 | 2.1 | | 117.2 | 162 | 168 | 4800 | 5600 | **N411M** |
| | 140 | 33 | 2.1 | 2.1 | 77.2 | | 162 | 168 | 4800 | 5600 | **NJ411M/C5** |
| | 140 | 33 | 2.1 | 2.1 | 77.2 | | 162 | 168 | 4800 | 5600 | **NU411M** |
| **60** | 95 | 18 | 1.1 | 1 | | 85.5 | 50.6 | 66.0 | 6700 | 8000 | **N1012M** |
| | 95 | 18 | 1.1 | 1 | | 85.5 | 50.6 | 66 | 6700 | 8000 | **N1012TN1** |
| | 95 | 18 | 1.1 | 1 | 69.5 | | 50.6 | 66.0 | 6700 | 8000 | **NU1012M** |
| | 110 | 22 | 1.5 | 1.5 | | 100 | 104 | 85 | 5300 | 6300 | **N212EM** |
| | 110 | 22 | 1.5 | 1.5 | | 97.5 | 104 | 85 | 5300 | 6300 | **N212M** |
| | 110 | 22 | 1.5 | 1.5 | | 97.5 | 104 | 85 | 5300 | 6300 | **NF212M** |
| | 110 | 22 | 1.5 | 1.5 | 73.5 | | 104 | 85 | 5300 | 6300 | **NU212M** |
| | 110 | 22 | 1.5 | 1.5 | 72 | | 104 | 85 | 5300 | 6300 | **NU212EM** |
| | 110 | 22 | 1.5 | 1.5 | 73.5 | | 104 | 85 | 5300 | 6300 | **NJ212M** |
| | 110 | 22 | 1.5 | 1.5 | 72 | | 104 | 85 | 5300 | 6300 | **NJ212E** |
| | 110 | 22 | 1.5 | 1.5 | 72 | | 104 | 85 | 5300 | 6300 | **NJ212EM** |
| | 110 | 22 | 1.5 | 1.5 | 72 | | 104 | 85 | 5300 | 6300 | **NJ212ETN1** |
| | 110 | 22 | 1.5 | 1.5 | 72 | | 104 | 85 | 5300 | 6300 | **NU212ETN1/C9** |
| | 110 | 22 | | 1.5 | 73.5 | | 104 | 85 | 5300 | 6300 | **NUP212NM/YB2** |

| Abutment and fillet dimensions | | | | | | | Weight | Model | Weight | Separate thrust collar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_{amin}$ | $d_{amax}$ | $d_{bmin}$ | $D_{amax}$ | $D_{amin}$ | $r_{amax}$ | $r_{bmax}$ | | | | A1 | A2 | $r_3.r_4$ |
| mm | | | | | | | kg | | kg | mm | | |
| 64 | 68 | 80 | 111 | | 2 | 2 | 1.75 | | | | | |
| 64 | | 80 | 111 | | 2 | 2 | 1.65 | | | | | |
| 64 | | 80 | 111 | | 2 | 2 | 1.71 | | | | | |
| 64 | 104 | | 111 | 109 | 2 | 2 | 1.60 | | | | | |
| 64 | 104 | | 111 | 109 | 2 | 2 | 1.61 | | | | | |
| 64 | 68 | 80 | 111 | | 2 | 2 | 1.45 | | | | | |
| 64 | 68 | 73 | 111 | | 2 | 2 | 1.45 | | | | | |
| 64 | 68 | 73 | 111 | | 2 | 2 | 1.44 | | | | | |
| 64 | 68 | 80 | 111 | | 2 | 2 | 1.67 | | | | | |
| 64 | 68 | 73 | 111 | | 2 | 2 | 1.64 | | | | | |
| 64 | | 80 | 111 | | 2 | 2 | 1.69 | | | | | |
| 64 | 104 | | 111 | 109 | 2 | 2 | 1.42 | | | | | |
| 64 | 68 | 73 | 111 | | 2 | 2 | 1.64 | | | | | |
| 64 | 68 | 73 | 111 | | 2 | 2 | 1.63 | | | | | |
| 64 | 68 | 73 | 111 | | 2 | 2 | 2.43 | | | | | |
| 64 | 104 | | 111 | 110 | 2 | 2 | 2.56 | | | | | |
| 64 | 68 | 80 | 111 | | 2 | 2 | 2.62 | | | | | |
| 64 | 68 | 73 | 111 | | 2 | 2 | 2.59 | | | | | |
| 66 | 114 | | 129 | 119 | 2 | 2 | 2.86 | | | | | |
| 66 | 74 | 88 | 129 | | 2 | 2 | 2.95 | | | | | |
| 66 | 74 | 88 | 129 | | 2 | 2 | 2.85 | | | | | |
| 65 | 83 | | 88.5 | 87 | 1 | 1 | 0.432 | | | | | |
| 65 | 83 | | 88.5 | 87 | 1 | 1 | 0.387 | | | | | |
| 65 | 67 | 72 | 90 | | 1 | 1 | 0.466 | | | | | |
| 65 | 70 | | 102 | | 1.5 | 1.5 | 0.910 | | | | | |
| 68 | | | 102 | | 1.5 | 1.5 | 0.937 | | | | | |
| 68 | | | 102 | | 1.5 | 1.5 | 0.957 | | | | | |
| 68 | 70 | 75 | 102 | | 1.5 | 1.5 | 0.938 | | | | | |
| 68 | 70 | 80 | 102 | | 1.5 | 1.5 | 0.916 | | | | | |
| 68 | 70 | 80 | 102 | | 1.5 | 1.5 | 0.952 | | | | | |
| 68 | 70 | 80 | 102 | | 1.5 | 1.5 | 0.947 | | | | | |
| 68 | 70 | 80 | 102 | | 1.5 | 1.5 | 0.938 | | | | | |
| 68 | 70 | 80 | 102 | | 1.5 | 1.5 | 0.842 | | | | | |
| 68 | 70 | 80 | 102 | | 1.5 | 1.5 | 0.820 | | | | | |
| 68 | 70 | 80 | 102 | | 1.5 | 1.5 | 0.978 | | | | | |

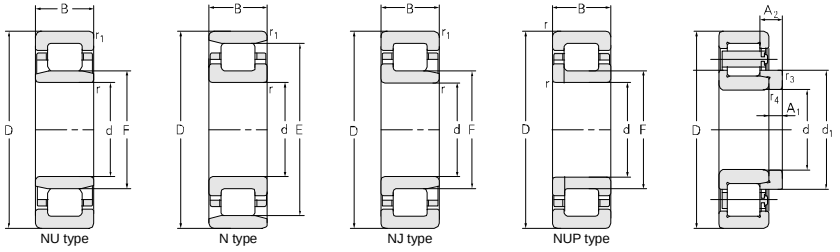


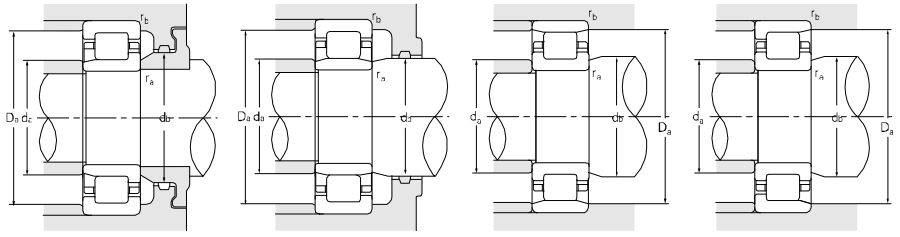



| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1smin}$ | $r_{smin}$ | F | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | | kN | | r/min | | |
| **60** | 110 | 28 | | 1.5 | 73.5 | | 140 | 145 | 5300 | 6300 | **NUP2212M** |
| | 110 | 28 | 1.5 | 1.5 | 72 | | 140 | 145 | 5300 | 6300 | **NU2212EM** |
| | 110 | 28 | 1.5 | 1.5 | 72 | | 140 | 145 | 5300 | 6300 | **NJ2212EM** |
| | 110 | 28 | 1.5 | 1.5 | 72 | | 140 | 145 | 5300 | 6300 | **NJ2212ETN1** |
| | 110 | 36.51 | 1.5 | 1.5 | 72.39 | | 150 | 195 | 4800 | 5600 | **NU5212XPC3** |
| | 110 | 36.51 | 1.5 | 1.5 | 72.39 | | 150 | 195 | 4800 | 5600 | **NU3212X2M/C9YA6** |
| | 110 | 60 | 1.5 | 1.5 | 73.5 | | 105 | 130 | 5300 | 6300 | **NU2212WBM/C3** |
| | 130 | 31 | 2.1 | 2.1 | | 113 | 165 | 150 | 4300 | 5000 | **N312M** |
| | 130 | 31 | 2.1 | 2.1 | 77 | | 141 | 150 | 4300 | 5000 | **NU312M** |
| | 130 | 31 | 2.1 | 2.1 | 77 | | 141 | 150 | 4300 | 5000 | **NU312Q1** |
| | 130 | 31 | 2.1 | 2.1 | 77 | | 141 | 150 | 4300 | 5000 | **NJ312M** |
| | 130 | 31 | 2.1 | 2.1 | | 115 | 165 | 155 | 4300 | 5000 | **N312E** |
| | 130 | 31 | 2.1 | 2.1 | | 115 | 165 | 155 | 4300 | 5000 | **N312EM** |
| | 130 | 31 | 2.1 | 2.1 | | 115 | 165 | 155 | 4300 | 5000 | **N312ETN1** |
| | 130 | 31 | 2.1 | 2.1 | | 115 | 165 | 155 | 4300 | 5000 | **NF312E** |
| | 130 | 31 | 2.1 | 2.1 | | 115 | 165 | 155 | 4300 | 5000 | **NF312EM** |
| | 130 | 31 | 2.1 | 2.1 | 77 | | 165 | 155 | 4300 | 5000 | **NJ312E** |
| | 130 | 31 | 2.1 | 2.1 | 77 | | 165 | 155 | 4300 | 5000 | **NJ312EM/YAB** |
| | 130 | 31 | 2.1 | 2.1 | 77 | | 165 | 155 | 4300 | 5000 | **NU312E** |
| | 130 | 31 | 2.1 | 2.1 | 77 | | 165 | 155 | 4300 | 5000 | **NU312EM** |
| | 130 | 31 | 2.1 | 2.1 | 77 | | 165 | 155 | 4300 | 5000 | **NU312ETN1** |
| | 130 | 31 | 2.1 | 2.1 | 77 | | 165 | 155 | 4300 | 5000 | **NU312ETN1/C9** |
| | 130 | 31 | | 2.1 | 77 | | 165 | 155 | 4300 | 5000 | **NUP312E** |
| | 130 | 31 | | 2.1 | 77 | | 165 | 155 | 4300 | 5000 | **NUP312E/C9** |
| | 130 | 31 | | 2.1 | 77 | | 165 | 155 | 4300 | 5000 | **NUP312ENRM** |
| | 130 | 31 | | 2.1 | 77 | | 165 | 155 | 4300 | 5000 | **NUP312ENRJ/C3** |
| | 130 | 31 | 2.1 | 2.1 | | 113 | 140 | 150 | 4300 | 5000 | **N312TN1** |
| | 130 | 31 | 2.1 | 2.1 | 77 | | 140 | 150 | 4300 | 5000 | **NJ312TN1** |
| | 130 | 46 | 2.1 | 2.1 | | 113 | 190 | 215 | 4300 | 5000 | **N2312M** |
| | 130 | 46 | 2.1 | 2.1 | 77 | | 190 | 215 | 4300 | 5000 | **NJ2312M/C4W124YA8** |
| | 130 | 46 | 2.1 | 2.1 | 77 | | 190 | 215 | 4300 | 5000 | **NJ2312M** |
| | 130 | 46 | 2.1 | 2.1 | 78 | | 190 | 215 | 4300 | 5000 | **NJ2313M** |
| | 130 | 46 | 2.1 | 2.1 | | 115 | 250 | 255 | 4300 | 5000 | **N2312E** |
| | 130 | 46 | 2.1 | 2.1 | 77 | | 250 | 255 | 4300 | 5000 | **NU2312ETN1/C9** |
| | 130 | 46 | 2.1 | 2.1 | 77 | | 250 | 255 | 4300 | 5000 | **NU2312E** |
| | 130 | 46 | 2.1 | 2.1 | 77 | | 250 | 255 | 4300 | 5000 | **NJ2312E** |

| Abutment and fillet dimensions | | | | | | | Weight | Model | Weight | Separate thrust collar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $da_{min}$ | $da_{max}$ | $db_{min}$ | $Da_{max}$ | $Da_{min}$ | $ra_{max}$ | $rb_{max}$ | | | | A1 | A2 | $r_3.r_4$ |
| mm | | | | | | | kg | | kg | mm | | |
| 68 | | 80 | 102 | | 1.5 | 1.5 | 1.27 | | | | | |
| 68 | 70 | 74 | 102 | | 1.5 | 1.5 | 1.21 | | | | | |
| 68 | 70 | 80 | 102 | | 1.5 | 1.5 | 1.23 | | | | | |
| 68 | 70 | 80 | 102 | | 1.5 | 1.5 | 1.07 | | | | | |
| 66 | 70 | 75 | 103 | | 1 | 1 | 1.75 | | | | | |
| 66 | 70 | 75 | 103 | | 1 | 1 | 1.75 | | | | | |
| 68 | 70 | 74 | 102 | | 1.5 | 1.5 | 1.57 | | | | | |
| 71 | 110 | | 119 | 116 | 2 | 2 | 2.04 | | | | | |
| 71 | 72 | 80 | 119 | | 2 | 2 | 2.06 | | | | | |
| 71 | 72 | 80 | 119 | | 2 | 2 | 2.03 | | | | | |
| 71 | 72 | 86 | 119 | | 2 | 2 | 2.10 | | | | | |
| 71 | 112 | | 119 | 118 | 2 | 2 | 1.94 | | | | | |
| 71 | 112 | | 119 | 118 | 2 | 2 | 2.06 | | | | | |
| 71 | 112 | | 119 | 118 | 2 | 2 | 1.79 | | | | | |
| 71 | | | 119 | 118 | 2 | 2 | 2.00 | | | | | |
| 71 | | | 119 | 118 | 2 | 2 | 2.12 | | | | | |
| 71 | 74 | 87 | 119 | | 2 | 2 | 1.98 | | | | | |
| 71 | 74 | 87 | 119 | | 2 | 2 | 2.10 | | | | | |
| 71 | 74 | 79 | 119 | | 2 | 2 | 1.94 | | | | | |
| 71 | 74 | 79 | 119 | | 2 | 2 | 2.06 | | | | | |
| 71 | 74 | 79 | 119 | | 2 | 2 | 1.78 | | | | | |
| 71 | 74 | 79 | 119 | | 2 | 2 | 1.78 | | | | | |
| 71 | | 87 | 119 | | 2 | 2 | 2.03 | | | | | |
| 71 | | 87 | 119 | | 2 | 2 | 2.03 | | | | | |
| 71 | | 87 | 119 | | 2 | 2 | 2.2 | | | | | |
| 71 | | 87 | 119 | | 2 | 2 | 1.92 | | | | | |
| 71 | 110 | | 119 | 116 | 2 | 2 | 1.78 | | | | | |
| 71 | 72 | 86 | 119 | | 2 | 2 | 1.83 | | | | | |
| 71 | 110 | | 119 | 117 | 2 | 2 | 2.95 | | | | | |
| 71 | 73 | 80 | 119 | | 2 | 2 | 3.39 | | | | | |
| 71 | 73 | 87 | 119 | | 2 | 2 | 3.38 | | | | | |
| 71 | 73 | 87 | 119 | | 2 | 2 | 3.39 | | | | | |
| 71 | 112 | | 119 | 118 | 2 | 2 | 2.93 | | | | | |
| 71 | 112 | | 119 | 118 | 2 | 2 | 2.79 | | | | | |
| 71 | 73 | 80 | 119 | | 2 | 2 | 2.95 | | | | | |
| 71 | 73 | 87 | 119 | | 2 | 2 | 3.00 | | | | | |

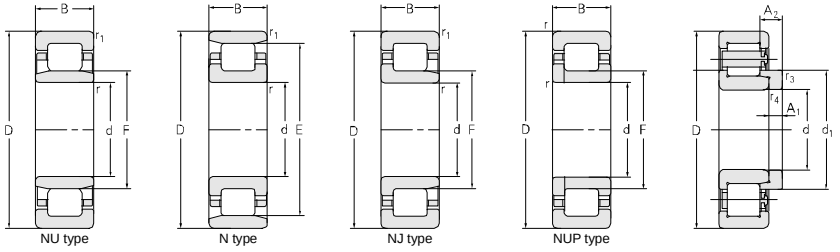
d 60~65 mm

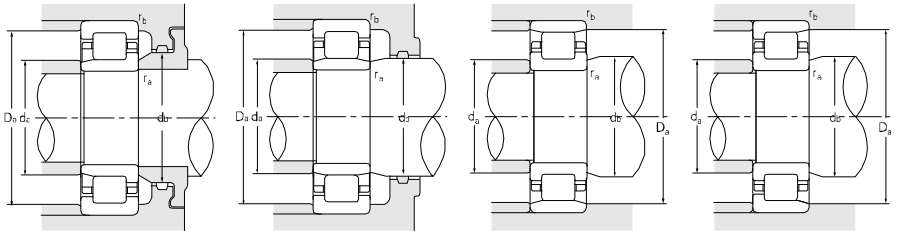


| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1smin}$ | $r_{smin}$ | F | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | | kN | | r/min | | |
| **60** | 140 | 51 | 2.5 | 2.5 | | 122 | 270 | 310 | 4300 | 5000 | **N612M** |
| | 140 | 51 | 2.5 | 2.5 | | 122 | 270 | 310 | 4300 | 5000 | **N612M/C9** |
| | 150 | 35 | 2.1 | 2.1 | | 127 | 195 | 200 | 4300 | 5000 | **N412M** |
| | 150 | 35 | 2.1 | 2.1 | | 127 | 195 | 200 | 4300 | 5000 | **N412** |
| | 150 | 35 | 2.1 | 2.1 | 83 | | 195 | 200 | 4300 | 5000 | **NU412M** |
| | 150 | 35 | 2.1 | 2.1 | 83 | | 195 | 200 | 4300 | 5000 | **NU412** |
| | 150 | 35 | 2.1 | 2.1 | 83 | | 195 | 200 | 4300 | 5000 | **NJ412J** |
| | 150 | 35 | 2.1 | 2.1 | 83 | | 195 | 200 | 4300 | 5000 | **NJ412M** |
| | 150 | 35 | 2.1 | 2.1 | 83 | | 195 | 200 | 4300 | 5000 | **NJ412** |
| | 150 | 35 | | 2.1 | 83 | | 195 | 200 | 4300 | 5000 | **NUP412** |
| | 150 | 35 | | 2.1 | 83 | | 195 | 200 | 4300 | 5000 | **NUP412J** |
| | 150 | 35 | | 2.1 | 83 | | 195 | 200 | 4300 | 5000 | **NUP412M** |
| | 150 | 35 | 2.1 | 2.1 | 83 | | 195 | 200 | 4300 | 5000 | **NU412TN1** |
| **65** | 120 | 23 | 1.5 | 1.5 | | 105.6 | 89 | 102 | 4800 | 5600 | **N213M** |
| | 120 | 23 | 1.5 | 1.5 | 79.6 | | 89 | 102 | 4800 | 5600 | **NU213M** |
| | 120 | 23 | 1.5 | 1.5 | 79.6 | | 89 | 102 | 4800 | 5600 | **NJ213M** |
| | 120 | 23 | 1.5 | 1.5 | 79.6 | | 89 | 102 | 4800 | 5600 | **NUP213M** |
| | 120 | 23 | 1.5 | 1.5 | | 108.5 | 120 | 135 | 4800 | 5600 | **NF213E** |
| | 120 | 23 | 1.5 | 1.5 | | 108.5 | 120 | 135 | 4800 | 5600 | **N213E** |
| | 120 | 23 | 1.5 | 1.5 | 78.5 | | 120 | 135 | 4800 | 5600 | **NU213E** |
| | 120 | 23 | 1.5 | 1.5 | 78.5 | | 120 | 135 | 4800 | 5600 | **NJ213E** |
| | 120 | 23 | | 1.5 | 78.5 | | 120 | 135 | 4800 | 5600 | **NUP213E** |
| | 120 | 23 | | 1.5 | 78.5 | | 120 | 135 | 4800 | 5600 | **NUP213EM** |
| | 120 | 23 | | 1.5 | 78.5 | | 120 | 135 | 4800 | 5600 | **NUP213ETN1** |
| | 120 | 23 | 1.5 | 1.5 | 78.5 | | 120 | 135 | 4800 | 5600 | **NU213ETN1/C9** |
| | 120 | 23 | 1.5 | 1.5 | 78.5 | | 120 | 135 | 4800 | 5600 | **NU213ETN1** |
| | 120 | 31 | 1.5 | 1.5 | 79.6 | | 122 | 155 | 4800 | 5600 | **NJ2213M** |
| | 120 | 31 | 1.5 | 1.5 | 79.6 | | 122 | 155 | 4800 | 5600 | **NU2213M** |
| | 120 | 31 | 1.5 | 1.5 | 79.6 | | 131 | 165 | 4800 | 5600 | **NU2213NM** |
| | 120 | 31 | | 1.5 | 79.6 | | 131 | 165 | 4800 | 5600 | **NUP2213M** |
| | 120 | 31 | | 1.5 | 78.5 | | 163 | 173 | 4800 | 5600 | **NU2213ETN1/C9** |
| | 120 | 31 | | 1.5 | 78.5 | | 122 | 154 | 4800 | 5600 | **NUP2213NM** |
| | 120 | 31 | 1.5 | 1.5 | 78.5 | | 163 | 173 | 4800 | 5600 | **NU2213EM** |
| | 120 | 38.1 | 1.5 | 1.5 | 80.42 | | 166 | 218 | 4000 | 4800 | **NU5213XPC3** |
| | 120 | 38.1 | 1.5 | 1.5 | 80.42 | | 166 | 218 | 4000 | 4800 | **NU3213M/C9YA6** |

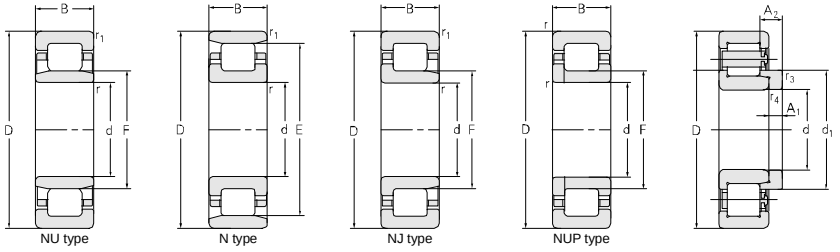
| Abutment and fillet dimensions | | | | | | | Weight | Model | Weight | Separate thrust collar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_{amin}$ | $d_{amax}$ | $d_{bmin}$ | $D_{amax}$ | $D_{amin}$ | $r_{amax}$ | $r_{bmax}$ | | | | A1 | A2 | $r_3.r_4$ |
| mm | | | | | | | kg | | kg | mm | | |
| 72 | 119 | | 128 | 125 | 2 | 2 | 3.96 | | | | | |
| 72 | 119 | | 128 | 125 | 2 | 2 | 3.96 | | | | | |
| 71 | 124 | | 139 | 130 | 2 | 2 | 3.29 | | | | | |
| 71 | 124 | | 139 | 130 | 2 | 2 | 3.18 | | | | | |
| 71 | 80 | 85 | 139 | | 2 | 2 | 3.23 | | | | | |
| 71 | 80 | 85 | 139 | | 2 | 2 | 3.13 | | | | | |
| 71 | 80 | 94 | 139 | | 2 | 2 | 3.13 | | | | | |
| 71 | 80 | 94 | 139 | | 2 | 2 | 3.36 | | | | | |
| 71 | 80 | 94 | 139 | | 2 | 2 | 3.25 | | | | | |
| 71 | | 94 | 139 | | 2 | 2 | 3.43 | | | | | |
| 71 | | 94 | 139 | | 2 | 2 | 3.31 | | | | | |
| 71 | | 94 | 139 | | 2 | 2 | 3.42 | | | | | |
| 71 | 80 | 85 | 139 | | 2 | 2 | 2.91 | | | | | |
| 73 | 103 | | 112 | 111 | 1.5 | 1.5 | 1.11 | | | | | |
| 73 | 76 | 81 | 112 | | 1.5 | 1.5 | 1.12 | | | | | |
| 73 | 76 | 87 | 112 | | 1.5 | 1.5 | 1.14 | | | | | |
| 73 | | 87 | 112 | | 1.5 | 1.5 | 1.22 | | | | | |
| 73 | | | 112 | 111 | 1.5 | 1.5 | 1.14 | | | | | |
| 73 | 106 | | 112 | 111 | 1.5 | 1.5 | 1.05 | | | | | |
| 73 | 76 | 81 | 112 | | 1.5 | 1.5 | 0.994 | | | | | |
| 73 | 76 | 87 | 112 | | 1.5 | 1.5 | 1.13 | | | | | |
| 73 | | 87 | 112 | | 1.5 | 1.5 | 1.16 | | | | | |
| 73 | | 87 | 112 | | 1.5 | 1.5 | 1.22 | | | | | |
| 73 | | 87 | 112 | | 1.5 | 1.5 | 1.07 | | | | | |
| 73 | | 87 | 112 | | 1.5 | 1.5 | 1.02 | | | | | |
| 73 | 76 | 81 | 112 | | 1.5 | 1.5 | 1.00 | | | | | |
| 73 | 76 | 87 | 112 | | 1.5 | 1.5 | 1.65 | | | | | |
| 73 | 76 | 81 | 112 | | 1.5 | 1.5 | 1.65 | | | | | |
| 73 | | 87 | 112 | | 1.5 | 1.5 | 1.64 | | | | | |
| 73 | | 87 | 112 | | 1.5 | 1.5 | 1.75 | | | | | |
| 73 | 76 | 81 | 112 | | 1.5 | 1.5 | 1.43 | | | | | |
| 73 | 76 | 81 | 112 | | 1.5 | 1.5 | 1.74 | | | | | |
| 73 | 76 | 81 | 112 | | 1.5 | 1.5 | 1.61 | | | | | |
| 72 | 78.5 | 82.5 | 113.5 | | 1 | 1 | 1.96 | | | | | |
| 72 | 78.5 | 82.5 | 113.5 | | 1 | 1 | 1.96 | | | | | |

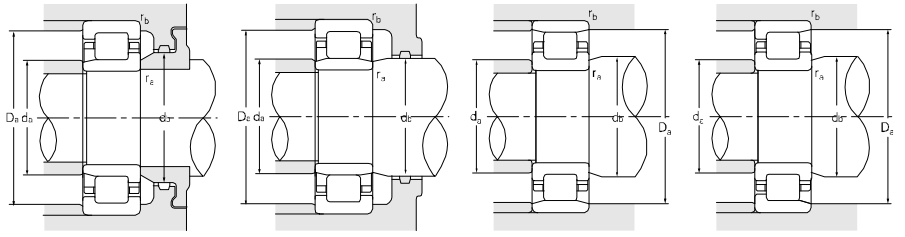


| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1smin}$ | $r_{smin}$ | F | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | | kN | | r/min | | |
| **65** | 140 | 33 | 2.1 | 2.1 | | 121.5 | 156 | 168 | 4000 | 4800 | **N313** |
| | 140 | 33 | 2.1 | 2.1 | | 121.5 | 156 | 168 | 4000 | 4800 | **N313M** |
| | 140 | 33 | 2.1 | 2.1 | | 121.5 | 195 | 210 | 4000 | 4800 | **N313ETN1** |
| | 140 | 33 | 2.1 | 2.1 | 83.5 | | 156 | 168 | 4000 | 4800 | **NJ313M** |
| | 140 | 33 | 2.1 | 2.1 | 83.5 | | 156 | 168 | 4000 | 4800 | **NU313M** |
| | 140 | 33 | 2.1 | 2.1 | 83.5 | | 156 | 168 | 4000 | 4800 | **NU313Q1** |
| | 140 | 33 | 2.1 | 2.1 | 82.5 | | 205 | 188 | 4000 | 4800 | **NJ313EM** |
| | 140 | 33 | 2.1 | 2.1 | | 124.5 | 205 | 188 | 4000 | 4800 | **N313EM** |
| | 140 | 33 | 2.1 | 2.1 | | 124.5 | 205 | 188 | 4000 | 4800 | **NF313EM** |
| | 140 | 33 | 2.1 | 2.1 | 82.5 | | 205 | 188 | 4000 | 4800 | **NU313EM** |
| | 140 | 33 | 2.1 | 2.1 | 82.5 | | 205 | 188 | 4000 | 4800 | **NU313ETN1** |
| | 140 | 33 | 2.1 | 2.1 | | 124.5 | 205 | 188 | 4000 | 4800 | **N313E** |
| | 140 | 33 | 2.1 | 2.1 | 82.5 | | 205 | 188 | 4000 | 4800 | **NJ313E** |
| | 140 | 33 | 2.1 | 2.1 | 82.5 | | 205 | 188 | 4000 | 4800 | **NU313E** |
| | 140 | 33 | | 2.1 | 82.5 | | 205 | 188 | 4000 | 4800 | **NUP313EM** |
| | 140 | 33 | 2.1 | 2.1 | 83.5 | | 205 | 188 | 4000 | 4800 | **NU313M/YA1** |
| | 140 | 48 | 2.1 | 2.1 | 83.5 | | 211 | 248 | 4000 | 4800 | **NJ2313M** |
| | 140 | 48 | 2.1 | 2.1 | 83.5 | | 211 | 248 | 4000 | 4800 | **NU2313M** |
| | 140 | 48 | 2.1 | 2.1 | 83.5 | | 274 | 278 | 4000 | 4800 | **NU2313ETN1** |
| | 140 | 48 | 2.1 | 2.1 | 83.5 | | 274 | 278 | 4000 | 4800 | **NU2313ETN1/C9** |
| | 140 | 48 | 2.1 | 2.1 | | 124.5 | 274 | 278 | 4000 | 4800 | **NF2313E** |
| | 140 | 48 | 2.1 | 2.1 | 82.5 | | 274 | 278 | 4000 | 4800 | **NJ2313E** |
| | 140 | 48 | 2.1 | 2.1 | 82.5 | | 274 | 278 | 4000 | 4800 | **NU2313E** |
| | 160 | 37 | 2.1 | 2.1 | | 135.5 | 209 | 222 | 4000 | 4800 | **N413M** |
| | 160 | 37 | 2.1 | 2.1 | | 135.5 | 209 | 222 | 4000 | 4800 | **N413** |
| | 160 | 37 | 2.1 | 2.1 | 89.5 | | 209 | 222 | 4000 | 4800 | **NU413M** |
| | 160 | 37 | 2.1 | 2.1 | 89.5 | | 209 | 222 | 4000 | 4800 | **NU413** |
| | 160 | 37 | 2.1 | 2.1 | 89.5 | | 209 | 222 | 4000 | 4800 | **NJ413M** |
| | 160 | 37 | 2.1 | 2.1 | 89.5 | | 209 | 222 | 4000 | 4800 | **NJ413M/YA8** |
| | 160 | 37 | 2.1 | 2.1 | 89.5 | | 209 | 222 | 4000 | 4800 | **NJ413W1** |
| | 160 | 37 | 2.1 | 2.1 | 89.5 | | 209 | 222 | 4000 | 4800 | **NUP413M** |
| **70** | 110 | 20 | 1.1 | 1.1 | 80 | | 73.5 | 89.5 | 4600 | 5500 | **NU1014M** |
| | 125 | 24 | 1.5 | 1.5 | 84.5 | | 92.4 | 96 | 4500 | 5300 | **NUP214M** |
| | 125 | 24 | 1.5 | 1.5 | | 110.5 | 92.4 | 110 | 4500 | 5300 | **N214M** |
| | 125 | 24 | 1.5 | 1.5 | | 110.5 | 92.4 | 110 | 4500 | 5300 | **NF214M** |

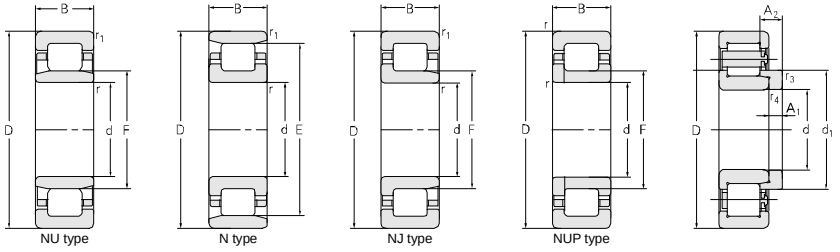
| Abutment and fillet dimensions | | | | | | | Weight | Model | Weight | Separate thrust collar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_{amin}$ | $d_{amax}$ | $d_{bmin}$ | $D_{amax}$ | $D_{amin}$ | $r_{amax}$ | $r_{bmax}$ | | | | A1 | A2 | $r_3.r_4$ |
| mm | | | | | | | kg | | kg | mm | | |
| 76 | 119 | | 129 | 124 | 2 | 2 | 2.24 | | | | | |
| 76 | 119 | | 129 | 124 | 2 | 2 | 2.45 | | | | | |
| 76 | 119 | | 129 | 124 | 2 | 2 | 2.15 | | | | | |
| 76 | 81 | 93 | 129 | | 2 | 2 | 2.60 | | | | | |
| 76 | 81 | 86 | 129 | | 2 | 2 | 2.54 | | | | | |
| 76 | 81 | 86 | 129 | | 2 | 2 | 2.46 | | | | | |
| 76 | 80 | 93 | 129 | | 2 | 2 | 2.5 | | | | | |
| 76 | 122 | | 129 | 127 | 2 | 2 | 2.42 | | | | | |
| 76 | 122 | | 129 | 127 | 2 | 2 | 2.48 | | | | | |
| 76 | 80 | 85 | 129 | | 2 | 2 | 2.45 | | | | | |
| 76 | 80 | 85 | 129 | | 2 | 2 | 2.18 | | | | | |
| 76 | 122 | | 129 | 127 | 2 | 2 | 2.43 | | | | | |
| 76 | 80 | 93 | 129 | | 2 | 2 | 2.59 | | | | | |
| 76 | 80 | 85 | 129 | | 2 | 2 | 2.46 | | | | | |
| 77 | | 93 | 128 | | 2 | | 2.64 | | | | | |
| 76 | 81 | 86 | 129 | | 2 | 2 | 2.46 | | | | | |
| 76 | 79 | 93 | 129 | | 2 | 2 | 3.67 | | | | | |
| 76 | 79 | 85 | 129 | | 2 | 2 | 3.60 | | | | | |
| 76 | 79 | 85 | 129 | | 2 | 2 | 3.26 | | | | | |
| 76 | 79 | 85 | 129 | | 2 | 2 | 3.26 | | | | | |
| 76 | | | 129 | 127 | 2 | 2 | 3.60 | | | | | |
| 76 | 79 | 93 | 129 | | 2 | 2 | 3.55 | | | | | |
| 76 | 79 | 85 | 129 | | 2 | 2 | 3.48 | | | | | |
| 76 | 132 | | 149 | 139 | 2 | 2 | 4.01 | | | | | |
| 76 | 132 | | 149 | 139 | 2 | 2 | 3.92 | | | | | |
| 76 | 86 | 92 | 149 | | 2 | 2 | 4.03 | | | | | |
| 76 | 86 | 92 | 149 | | 2 | 2 | 3.94 | | | | | |
| 76 | 86 | 101 | 149 | | 2 | 2 | 4.09 | | | | | |
| 76 | 86 | 101 | 149 | | 2 | 2 | 4.01 | | | | | |
| 76 | 86 | 101 | 149 | | 2 | 2 | 4.00 | | | | | |
| 76 | | 101 | 149 | | 2 | 2 | 4.19 | | | | | |
| 75 | 76 | | 104 | | 1 | 1 | 0.69 | | | | | |
| 78 | | 92 | 117 | | 1.5 | 1.5 | 1.35 | | | | | |
| 78 | 108 | | 117 | 116 | 1.5 | 1.5 | 1.27 | | | | | |
| 78 | | | 117 | 116 | 1.5 | 1.5 | 1.30 | | | | | |

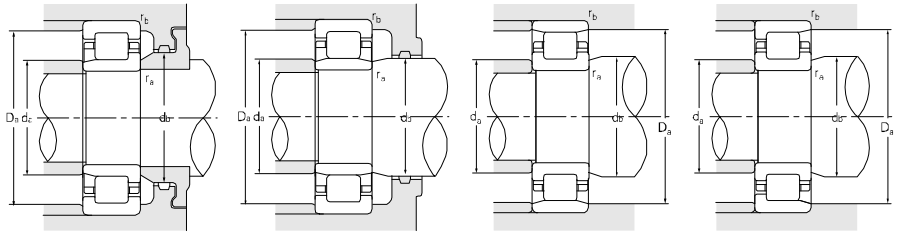


| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1smin}$ | $r_{smin}$ | F | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | | kN | | r/min | | |
| **70** | 125 | 24 | 1.5 | 1.5 | 84.5 | | 92.4 | 116 | 4500 | 5300 | **NU214Q1** |
| | 125 | 24 | 1.5 | 1.5 | 84.5 | | 92.4 | 116 | 4500 | 5300 | **NU214M** |
| | 125 | 24 | 1.5 | 4.3 | | 113.5 | 132 | 152 | 4500 | 5300 | **NF214EJ/C9YB2** |
| | 125 | 24 | 1.5 | 1.5 | | 113.5 | 132 | 152 | 4500 | 5300 | **N214E** |
| | 125 | 24 | 1.5 | 1.5 | | 113.5 | 132 | 152 | 4500 | 5300 | **NF214E** |
| | 125 | 24 | 1.5 | 4.3 | | 113.5 | 132 | 152 | 4500 | 5300 | **NF214E/C9YB2** |
| | 125 | 24 | 1.5 | 4.3 | | 113.5 | 132 | 152 | 4500 | 5300 | **NF214ETN1/C9YB2** |
| | 125 | 24 | | 1.5 | 83.5 | | 132 | 152 | 4500 | 5300 | **NUP214E** |
| | 125 | 24 | 1.5 | 1.5 | 83.5 | | 132 | 152 | 4500 | 5300 | **NJ214E** |
| | 125 | 24 | 1.5 | 1.5 | 83.5 | | 132 | 152 | 4500 | 5300 | **NU214ETN1/C9** |
| | 125 | 24 | 1.5 | 1.5 | 83.5 | | 132 | 152 | 4500 | 5300 | **NJ214E/YA6** |
| | 125 | 24 | 1.5 | 1.5 | 83.5 | | 132 | 152 | 4500 | 5300 | **NU214E** |
| | 125 | 31 | | 1.5 | 84.5 | | 130 | 155 | 4500 | 5300 | **NUP2214M** |
| | 125 | 31 | 1.5 | 1.5 | | 110.5 | 130 | 155 | 4500 | 5300 | **N2214M** |
| | 125 | 31 | 1.5 | 1.5 | 84.5 | | 130 | 155 | 4500 | 5300 | **NU2214M** |
| | 125 | 31 | 1.5 | 1.5 | 84.5 | | 130 | 155 | 4500 | 5300 | **NJ2214M** |
| | 125 | 39.69 | 1.5 | 1.5 | 84.76 | | 166 | 232 | 4500 | 5300 | **NU5214XPC3** |
| | 125 | 39.69 | 1.5 | 1.5 | 84.76 | | 166 | 232 | 4500 | 5300 | **NU5214/C9YA6** |
| | 125 | 39.69 | 1.5 | 1.5 | 84.76 | | 166 | 232 | 4500 | 5300 | **NU3214X2M/C9YA6** |
| | 125 | 41 | 1.5 | 1.5 | 84.5 | | 130 | 155 | 4500 | 5300 | **NU2214WBM/C2** |
| | 150 | 35 | 2.1 | 2.1 | 90 | | 182 | 202 | 3600 | 4300 | **NJ314Q1** |
| | 150 | 35 | 2.1 | 2.1 | | 130 | 182 | 202 | 3600 | 4300 | **N314M** |
| | 150 | 35 | 2.1 | 2.1 | | 130 | 182 | 202 | 3600 | 4300 | **N314J** |
| | 150 | 35 | 2.5 | 2.5 | 90 | | 182 | 202 | 3600 | 4300 | **NU314M** |
| | 150 | 35 | 2.5 | 2.5 | 90 | | 182 | 202 | 3600 | 4300 | **NJ314M** |
| | 150 | 35 | 2.1 | 2.1 | | 130 | 182 | 202 | 3600 | 4300 | **NF314M** |
| | 150 | 35 | 2.1 | 2.1 | 90 | | 182 | 202 | 3600 | 4300 | **NU314Q1** |
| | 150 | 35 | 3 | 2.1 | 90 | | 182 | 202 | 3600 | 4300 | **NU314NRM/YAB** |
| | 150 | 35 | 2.1 | 2.1 | 90 | | 185 | 202 | 3600 | 4300 | **NU314NM/YB2** |
| | 150 | 35 | 2.1 | 2.1 | 90 | | 185 | 202 | 3600 | 4300 | **NU314NTN1/YB2** |
| | 150 | 35 | 2.1 | 2.1 | | 133 | 226.5 | 220 | 3600 | 4300 | **N314E** |
| | 150 | 35 | 2.1 | 2.1 | | 133 | 226.5 | 220 | 3600 | 4300 | **N314EM** |
| | 150 | 35 | 2.1 | 2.1 | 89 | | 226.5 | 220 | 3600 | 4300 | **NJ314E/C9** |
| | 150 | 35 | 2.1 | 2.1 | 89 | | 226.5 | 220 | 3600 | 4300 | **NU314E** |
| | 150 | 35 | 2.1 | 2.1 | 89 | | 226.5 | 220 | 3600 | 4300 | **NJ314E** |
| | 150 | 35 | 2.1 | 2.1 | 89 | | 226.5 | 220 | 3600 | 4300 | **NJ314EM/YAB** |

| Abutment and fillet dimensions | | | | | | | Weight | Model | Weight | Separate thrust collar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $da_{min}$ | $da_{max}$ | $db_{min}$ | $Da_{max}$ | $Da_{min}$ | $ra_{max}$ | $rb_{max}$ | | | | A1 | A2 | $r_3.r_4$ |
| mm | | | | | | | kg | | kg | mm | | |
| 78 | 81 | 86 | 117 | | 1.5 | 1.5 | 1.23 | | | | | |
| 78 | 81 | 86 | 117 | | 1.5 | 1.5 | 1.24 | | | | | |
| 78 | | | 117 | 116 | 4 | 1.5 | 1.21 | | | | | |
| 78 | 111 | | 117 | 116 | 1.5 | 1.5 | 1.29 | | | | | |
| 78 | | | 177 | 116 | 1.5 | 1.5 | 1.31 | | | | | |
| 78 | | | 117 | 116 | 4 | 1.5 | 1.33 | | | | | |
| 78 | | | 117 | 116 | 4 | 1.5 | 1.17 | | | | | |
| 78 | | 92 | 117 | | 1.5 | 1.5 | 1.39 | | | | | |
| 78 | 81 | 92 | 117 | | 1.5 | 1.5 | 1.34 | | | | | |
| 78 | 81 | 92 | 117 | | 1.5 | 1.5 | 1.16 | | | | | |
| 78 | 81 | 92 | 117 | | 1.5 | 1.5 | 1.34 | | | | | |
| 78 | 81 | 86 | 117 | | 1.5 | 1.5 | 1.32 | | | | | |
| 78 | | 92 | 117 | | 1.5 | 1.5 | 1.8 | | | | | |
| 78 | 81 | | 117 | 100 | 1.5 | 1.5 | 1.68 | | | | | |
| 78 | 81 | 86 | 117 | | 1.5 | 1.5 | 1.70 | | | | | |
| 78 | 81 | 92 | 117 | | 1.5 | 1.5 | 1.73 | | | | | |
| 76.5 | 82.5 | 86.5 | 118.5 | | 1 | 1 | 2.17 | | | | | |
| 76.5 | 82.5 | 86.5 | 118.5 | | 1 | 1 | 2.17 | | | | | |
| 76.5 | 82.5 | 86.5 | 118.5 | | 1 | 1 | 2.17 | | | | | |
| 78 | 81 | 86 | 117 | | 1.5 | 1.5 | 1.88 | | | | | |
| 81 | 86 | 100 | 139 | | 2 | 2 | 3.11 | | | | | |
| 81 | 127 | | 139 | 133 | 2 | 2 | 3.00 | | | | | |
| 81 | 127 | | 139 | 133 | 2 | 2 | 2.78 | | | | | |
| 81 | 86 | 93 | 139 | | 2 | 2 | 3.05 | | | | | |
| 81 | 86 | 100 | 139 | | 2 | 2 | 3.12 | | | | | |
| 81 | | | 139 | | 2 | 2 | 3.08 | | | | | |
| 81 | 86 | 92 | 139 | | 2 | 2 | 3.03 | | | | | |
| 81 | 86 | 92 | 139 | | 2 | 2 | 3.05 | | | | | |
| 81 | 86 | 93 | 139 | | 2 | 2 | 2.96 | | | | | |
| 81 | 86 | 93 | 139 | | 2 | 2 | 2.66 | | | | | |
| 81 | 130 | | 139 | 136 | 2 | 2 | 3.00 | | | | | |
| 81 | 130 | | 139 | 136 | 2 | 2 | 3.08 | | | | | |
| 81 | 86 | 100 | 139 | | 2 | 2 | 3.06 | | | | | |
| 81 | 86 | 92 | 139 | | 2 | 2 | 3.01 | | | | | |
| 81 | 86 | 100 | 139 | | 2 | 2 | 3.06 | | | | | |
| 81 | 86 | 100 | 139 | | 2 | 2 | 3.14 | | | | | |

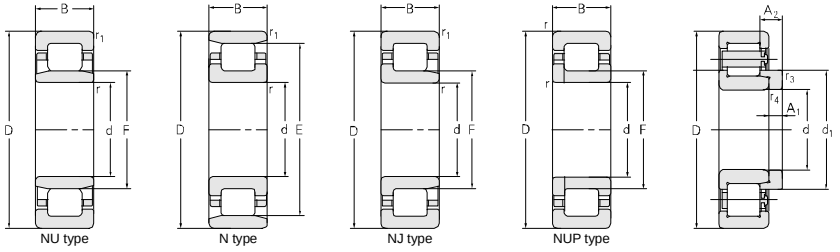


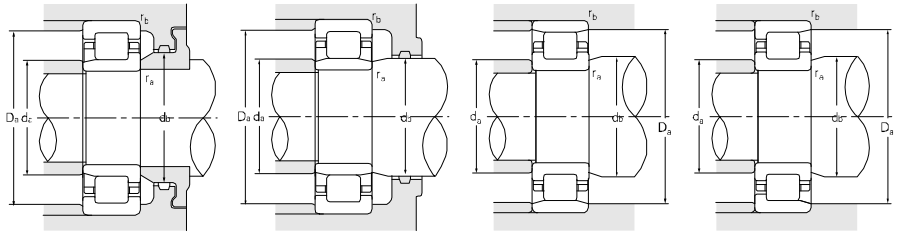



| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1smin}$ | $r_{smin}$ | F | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | | kN | | r/min | | |
| **70** | 150 | 35 | | 2.1 | 89 | | 226.5 | 220 | 3600 | 4300 | **NUP314E** |
| | 150 | 35 | 2.1 | 2.1 | 89 | | 226.5 | 220 | 3600 | 4300 | **NU314EM** |
| | 150 | 35 | 2.1 | 2.1 | 89 | | 226.5 | 220 | 3600 | 4300 | **NU314ETN1** |
| | 150 | 35 | 2.1 | 2.1 | 89 | | 226.5 | 220 | 3600 | 4300 | **NU314ETN1/C9** |
| | 150 | 51 | 2.1 | 2.1 | 90 | | 248 | 300 | 3600 | 4300 | **NU2314M** |
| | 150 | 51 | 2.1 | 2.1 | 90 | | 248 | 300 | 3600 | 4300 | **NJ2314M** |
| | 150 | 51 | 2.1 | 2.1 | 90 | | 248 | 300 | 3600 | 4300 | **NJ2314M/C4W124YA8** |
| | 150 | 51 | 2.1 | 2.1 | | 133 | 302 | 345 | 3600 | 4300 | **N2314E** |
| | 150 | 51 | 2.1 | 2.1 | 89 | | 302 | 345 | 3600 | 4300 | **NU2314ETN1/C9** |
| | 150 | 51 | 2.1 | 2.1 | 89 | | 302 | 345 | 3600 | 4300 | **NU2314E** |
| | 150 | 51 | 2.1 | 2.1 | 89 | | 302 | 345 | 3600 | 4300 | **NJ2314E** |
| | 150 | 51 | 2.1 | 2.1 | 86 | | 320 | 370 | 3600 | 4300 | **NJ2314E/WBYAD** |
| | 180 | 42 | 3 | 3 | | 151 | 262 | 283 | 3600 | 4300 | **N414M** |
| | 180 | 42 | 3 | 3 | | 152 | 262 | 283 | 3600 | 4300 | **N414** |
| | 180 | 42 | 3 | 3 | 100 | | 262 | 283 | 3600 | 4300 | **NU414M** |
| | 180 | 42 | 3 | 3 | 100 | | 262 | 283 | 3600 | 4300 | **NU414** |
| | 180 | 42 | 3 | 3 | 100 | | 262 | 283 | 3600 | 4300 | **NJ414** |
| | 180 | 42 | 3 | 3 | 100 | | 262 | 283 | 3600 | 4300 | **NJ414M** |
| | 180 | 42 | 3 | 3 | 100 | | 262 | 283 | 3600 | 4300 | **NJ414M/YA8** |
| | 180 | 42 | | 3 | 100 | | 262 | 283 | 3600 | 4300 | **NUP414M** |
| **75** | 115 | 20 | 1.1 | 1 | 85 | | 65 | 83.0 | 5600 | 6700 | **NU1015M** |
| | 115.050 | 20 | 1.1 | 1 | | 105 | 60 | 74 | 5600 | 6700 | **NF1015X1M** |
| | 130 | 25 | 1.5 | 1.5 | | 116.5 | 107 | 127 | 4500 | 5300 | **N215M** |
| | 130 | 25 | 1.5 | 1.5 | 88.5 | | 107 | 127 | 4500 | 5300 | **NU215M** |
| | 130 | 25 | 1.5 | 1.5 | 88.5 | | 107 | 127 | 4500 | 5300 | **NJ215M** |
| | 130 | 25 | 1.5 | 1.5 | | 118.5 | 144 | 150 | 4500 | 5300 | **N215E** |
| | 130 | 25 | 1.5 | 1.5 | 88.5 | | 144 | 150 | 4500 | 5300 | **NU215E** |
| | 130 | 25 | 1.5 | 1.5 | 88.5 | | 144 | 150 | 4500 | 5300 | **NU215ETN1** |
| | 130 | 25 | 1.5 | 1.5 | 88.5 | | 144 | 150 | 4500 | 5300 | **NU215ETN1/C9** |
| | 130 | 25 | 1.5 | 1.5 | 88.5 | | 144 | 150 | 4500 | 5300 | **NJ215E** |
| | 130 | 25 | 1.5 | 1.5 | 88.5 | | 144 | 150 | 4500 | 5300 | **NU215EL3/HAP53** |
| | 130 | 25 | | 1.5 | 88.5 | | 144 | 150 | 4500 | 5300 | **NUP215EL3/HAP53** |
| | 130 | 30 | | 1.5 | 88.5 | | 132 | 166 | 4500 | 4500 | **NUP2215M** |
| | 130 | 30 | 1.5 | 1.5 | 88.5 | | 164 | 211 | 4500 | 4500 | **NFP2215E** |
| | 130 | 30 | 1.5 | 1.5 | 88.5 | | 164 | 211 | 4500 | 4500 | **NFP2215EM** |

| Abutment and fillet dimensions | | | | | | | Weight | Model | Weight | Separate thrust collar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_{amin}$ | $d_{amax}$ | $d_{bmin}$ | $D_{amax}$ | $D_{amin}$ | $r_{amax}$ | $r_{bmax}$ | | | | A1 | A2 | $r_3.r_4$ |
| mm | | | | | | | kg | | kg | mm | | |
| 81 | | 100 | 139 | | 2 | 2 | 3.14 | | | | | |
| 82 | 86 | 91 | 138 | | 2 | 2 | 3.45 | | | | | |
| 82 | 86 | 91 | 138 | | 2 | 2 | 2.7 | | | | | |
| 82 | 86 | 91 | 138 | | 2 | 2 | 2.7 | | | | | |
| 81 | 86 | 93 | 139 | | 2 | 2 | 4.52 | | | | | |
| 81 | 86 | 101 | 139 | | 2 | 2 | 4.62 | | | | | |
| 81 | 86 | 101 | 139 | | 2 | 2 | 4.61 | | | | | |
| 81 | 130 | | 139 | 136 | 2 | 2 | 4.27 | | | | | |
| 81 | 86 | 92 | 139 | | 2 | 2 | 3.89 | | | | | |
| 81 | 86 | 92 | 139 | | 2 | 2 | 4.24 | | | | | |
| 81 | 86 | 100 | 139 | | 2 | 2 | 4.33 | | | | | |
| 81 | 86 | 101 | 139 | | 2 | 2 | 4.51 | | | | | |
| 83 | 148 | | 167 | 155 | 2.5 | 2.5 | 5.66 | | | | | |
| 83 | 148 | | 167 | 155 | 2.5 | 2.5 | 6.40 | | | | | |
| 83 | 97 | 102 | 167 | | 2.5 | 2.5 | 5.79 | | | | | |
| 83 | 97 | 102 | 167 | | 2.5 | 2.5 | 6.38 | | | | | |
| 83 | 97 | 113 | 167 | | 2.5 | 2.5 | 6.68 | | | | | |
| 83 | 97 | 113 | 167 | | 2.5 | 2.5 | 5.94 | | | | | |
| 83 | 97 | 113 | 167 | | 2.5 | 2.5 | 5.91 | | | | | |
| 83 | | 102 | 167 | | 2.5 | 2.5 | 6.17 | | | | | |
| 80 | 83 | 87 | 108.5 | | 1 | 1 | 0.739 | | | | | |
| 80 | 83 | 87 | 108.5 | | 1 | 1 | 0.765 | | | | | |
| 83 | 114 | | 122 | 121 | 1.5 | 1.5 | 1.40 | | | | | |
| 83 | 86 | 91 | 122 | | 1.5 | 1.5 | 1.42 | | | | | |
| 83 | 86 | 97 | 122 | | 1.5 | 1.5 | 1.45 | | | | | |
| 83 | 116 | | 122 | 121 | 1.5 | 1.5 | 1.38 | | | | | |
| 83 | 86 | 91 | 122 | | 1.5 | 1.5 | 1.39 | | | | | |
| 83 | 86 | 91 | 122 | | 1.5 | 1.5 | 1.24 | | | | | |
| 83 | 86 | 91 | 122 | | 1.5 | 1.5 | 1.24 | | | | | |
| 83 | 86 | 97 | 122 | | 1.5 | 1.5 | 1.38 | | | | | |
| 83 | 86 | 91 | 122 | | 1.5 | 1.5 | 1.3 | | | | | |
| 83 | | 97 | 122 | | 1.5 | 1.5 | 1.35 | | | | | |
| 83 | | 97 | 122 | | 1.5 | 1.5 | 2.03 | | | | | |
| 83 | | 97 | 122 | | 1.5 | 1.5 | 1.81 | | | | | |
| 83 | | 97 | 122 | | 1.5 | 1.5 | 1.86 | | | | | |

d 75~80 mm

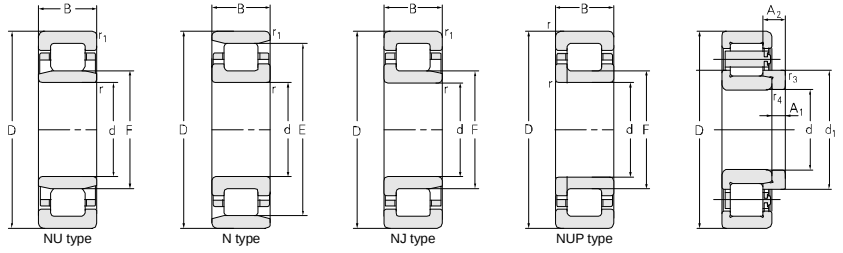


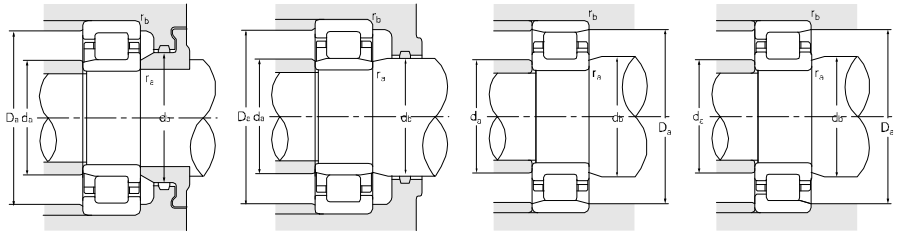



| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1smin}$ | $r_{smin}$ | F | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | | kN | | r/min | | |
| **75** | 130 | 31 | 1.5 | 1.5 | 88.5 | | 164 | 211 | 4500 | 4500 | **NU2215ETN1/C9** |
| | 130 | 31 | 1.5 | 1.5 | 88.5 | | 132 | 166 | 4500 | 5300 | **NU2215M** |
| | 130 | 31 | 1.5 | 1.5 | | 116.5 | 132 | 166 | 4500 | 5300 | **N2215M** |
| | 130 | 31 | | 1.5 | 88.5 | | 132 | 166 | 4500 | 5300 | **NUP2215TN1** |
| | 130 | 41.28 | 1.5 | 1.5 | 89 | | 204 | 268 | 4000 | 4000 | **NU5215XPC3** |
| | 130 | 41.28 | 1.5 | 3 | 89 | | 204 | 268 | 4000 | 4000 | **NU3215X2M/C9YA6** |
| | 160 | 37 | 2.1 | 2.1 | 95.5 | | 204 | 226 | 3400 | 4000 | **NJ315Q1** |
| | 160 | 37 | 2.1 | 2.1 | | 139.5 | 269 | 254 | 3400 | 4000 | **N315EM** |
| | 160 | 37 | 2.1 | 2.1 | | 139.5 | 204 | 226 | 3400 | 4000 | **N315J** |
| | 160 | 37 | 2.1 | 2.1 | 95 | | 269 | 254 | 3400 | 4000 | **NU315EM** |
| | 160 | 37 | 2.1 | 2.1 | 95.5 | | 204 | 226 | 3400 | 4000 | **NU315Q1** |
| | 160 | 37 | 2.1 | 2.1 | | 143 | 269 | 254 | 3400 | 4000 | **N315E** |
| | 160 | 37 | 2.1 | 2.1 | 95 | | 269 | 254 | 3400 | 4000 | **NU315ETN1** |
| | 160 | 37 | 2.1 | 2.1 | 95 | | 269 | 254 | 3400 | 4000 | **NU315ENM** |
| | 160 | 37 | | 2.1 | 95 | | 269 | 254 | 3400 | 4000 | **NUP315EM** |
| | 160 | 37 | 2.1 | 2.1 | | 139.5 | 255 | 226 | 3400 | 4000 | **N315M** |
| | 160 | 37 | 2.1 | 2.1 | 95.5 | | 255 | 226 | 3400 | 4000 | **NU315M** |
| | 160 | 37 | 2.1 | 2.1 | 95 | | 269 | 254 | 3400 | 4000 | **NU315E** |
| | 160 | 37 | 2.1 | 2.1 | 95.5 | | 255 | 226 | 3400 | 4000 | **NJ315M** |
| | 160 | 46 | 2.1 | 2.1 | 95 | | 269 | 303 | 3400 | 4000 | **NJ315X2EM/YAB** |
| | 160 | 37 | 2.1 | 2.1 | 95 | | 269 | 254 | 3400 | 4000 | **NJ315E** |
| | 160 | 55 | 2.1 | 2.1 | | 139.5 | 287 | 345 | 3400 | 4000 | **N2315M** |
| | 160 | 55 | 2.1 | 2.1 | | 139.5 | 287 | 345 | 3400 | 4000 | **N2315Q1** |
| | 160 | 55 | 2.1 | 2.1 | 95.5 | | 287 | 345 | 3400 | 4000 | **NJ2315M** |
| | 160 | 55 | 2.1 | 2.1 | 95.5 | | 287 | 345 | 3400 | 4000 | **NU2315M** |
| | 190 | 45 | 3 | 3 | 104.5 | | 300 | 325 | 3400 | 5300 | **NJ415M** |
| | 190 | 45 | 3 | 3 | 104.5 | | 300 | 325 | 3400 | 5300 | **NJ415M/YA8** |
| | 190 | 45 | 3 | 3 | | 160.5 | 300 | 325 | 3400 | 4000 | **N415M** |
| | 190 | 45 | 3 | 3 | 104.5 | | 300 | 325 | 3400 | 4000 | **NU415M** |
| **80** | 125 | 22 | 1.1 | 1 | | 113.5 | 95 | 122 | 5300 | 6300 | **N1016M** |
| | 125 | 22 | 1.1 | 1 | 91.5 | | 95 | 122 | 5300 | 6300 | **NU1016M** |
| | 140 | 26 | 2 | 2 | | 125 | 127 | 154 | 4000 | 4800 | **NF216M** |
| | 140 | 26 | 2 | 2 | | 125 | 127 | 154 | 4000 | 4800 | **N216M** |
| | 140 | 26 | 2 | 2 | 95 | | 127 | 154 | 4000 | 4800 | **NJ216M** |
| | 140 | 26 | 2 | 2 | 95 | | 127 | 154 | 4000 | 4800 | **NU216M** |

| Abutment and fillet dimensions | | | | | | | Weight | Model | Weight | Separate thrust collar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_{amin}$ | $d_{amax}$ | $d_{bmin}$ | $D_{amax}$ | $D_{amin}$ | $r_{amax}$ | $r_{bmax}$ | | | | A1 | A2 | $r_3.r_4$ |
| mm | | | | | | | kg | | kg | mm | | |
| 83 | | 97 | 122 | | 1.5 | 1.5 | 1.54 | | | | | |
| 83 | 86 | 91 | 122 | | 1.5 | 1.5 | 1.75 | | | | | |
| 83 | 86 | | 122 | 121 | 1.5 | 1.5 | 1.77 | | | | | |
| 83 | | 97 | 122 | | 1.5 | 1.5 | 1.83 | | | | | |
| 81.5 | 92 | 91 | 123.5 | | 1 | 1 | 2.27 | | | | | |
| 81.5 | 92 | 91 | 123.5 | | 1 | 1 | 2.27 | | | | | |
| 86 | 137 | 107 | 149 | 142 | 2 | 2 | 3.75 | | | | | |
| 86 | 140 | | 149 | 146 | 2 | 2 | 3.65 | | | | | |
| 86 | 92 | | 149 | | 2 | 2 | 3.28 | | | | | |
| 86 | 92 | 97 | 149 | | 2 | 2 | 3.62 | | | | | |
| 86 | 92 | 97 | 149 | | 2 | 2 | 3.68 | | | | | |
| 86 | 140 | | 149 | 146 | 2 | 2 | 3.59 | | | | | |
| 86 | 92 | 97 | 149 | | 2 | 2 | 3.25 | | | | | |
| 86 | 92 | 97 | 149 | | 2 | 2 | 3.59 | | | | | |
| 86 | | 107 | 149 | | 2 | 2 | 3.75 | | | | | |
| 86 | 140 | | 149 | 146 | 2 | 2 | 3.59 | | | | | |
| 86 | 92 | 97 | 149 | | 2 | 2 | 3.56 | | | | | |
| 86 | 92 | 97 | 149 | | 2 | 2 | 3.56 | | | | | |
| 86 | 92 | 107 | 149 | | 2 | 2 | 3.63 | | | | | |
| 86 | 92 | 107 | 149 | | 2 | 3 | 4.62 | | | | | |
| 86 | 157 | 107 | 149 | 163 | 2 | 2 | 3.64 | | | | | |
| 86 | 136 | | 149 | 143 | 2 | 2 | 5.30 | | | | | |
| 86 | 136 | | 149 | 143 | 2 | 2 | 5.84 | | | | | |
| 86 | 91 | 107 | 149 | | 2 | 2 | 5.86 | HJ2315 | 0.512 | 11 | 21.8 | 2.1 |
| 86 | 91 | 98 | 149 | | 2 | 2 | 5.96 | HJ2315 | 0.512 | 11 | 21.8 | 2.1 |
| 88 | 87 | 119 | 177 | | 2.5 | 2.5 | 7.14 | | | | | |
| 88 | 87 | 119 | 177 | | 2.5 | 2.5 | 7.20 | | | | | |
| 88 | 101 | | 177 | | 2.5 | 2.5 | 6.86 | | | | | |
| 88 | 101 | 107 | 177 | | 2.5 | 2.5 | 6.94 | | | | | |
| 85 | 110 | | 118.5 | 116.5 | 1 | 1 | 1.00 | | | | | |
| 85 | 90 | 94 | 118.5 | | 1 | 1 | 1.21 | | | | | |
| 89 | | | 131 | | 2 | 2 | 1.72 | | | | | |
| 89 | 123 | | 131 | 128 | 2 | 2 | 1.66 | | | | | |
| 89 | 93 | 104 | 131 | | 2 | 2 | 1.73 | | | | | |
| 89 | 93 | 98 | 131 | | 2 | 2 | 1.69 | | | | | |

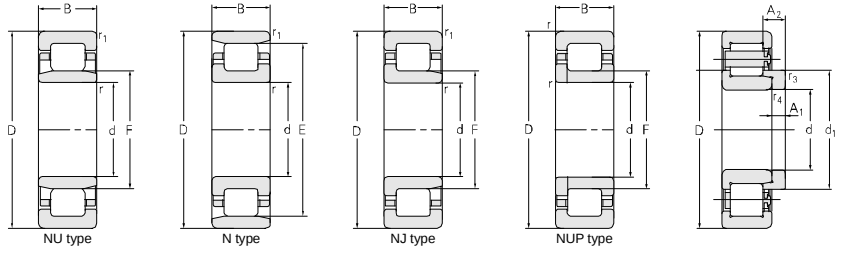
d 80 mm

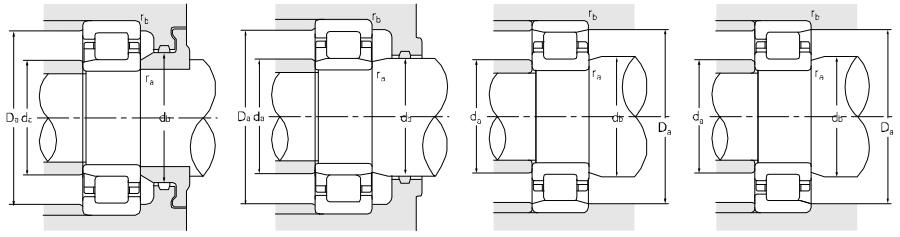


| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1smin}$ | $r_{smin}$ | F | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | | kN | | r/min | | |
| **80** | 140 | 26 | | 2 | 95 | | 127 | 154 | 4000 | 4800 | **NUP216M** |
| | 140 | 26 | 2 | 2 | 95.3 | | 151 | 184 | 4000 | 4800 | **NU216E** |
| | 140 | 26 | 2 | 2 | 95.3 | | 135 | 170 | 4000 | 4800 | **NU216Q1** |
| | 140 | 26 | 2 | 2 | 95.3 | | 151 | 184 | 4000 | 4800 | **NU216ETN1/C9** |
| | 140 | 26 | | 2 | 95.3 | | 151 | 184 | 4000 | 4800 | **NUP216E** |
| | 140 | 26 | 2 | 2 | | 127.3 | 151 | 184 | 4000 | 4800 | **N216E** |
| | 140 | 26 | 2 | 2 | 95.3 | | 151 | 184 | 4000 | 4800 | **NJ216E** |
| | 140 | 26 | | 2 | 95.3 | | 160 | 184 | 4000 | 4800 | **NUP216ENRJ/C3YA6** |
| | 140 | 26 | | 2 | 95.3 | | 160 | 184 | 4000 | 4800 | **NUP216ENRM/YA6** |
| | 140 | 26 | 2 | 2 | 95 | | 120 | 144 | 4000 | 4800 | **NU216M-DT** |
| | 140 | 33 | 2 | 2 | 59.3 | | 152 | 195 | 4000 | 4800 | **NU2216M** |
| | 140 | 33 | 2 | 2 | 95.3 | | 152 | 226 | 4000 | 4800 | **NJ2216M** |
| | 140 | 33 | 2 | 2 | 95.3 | | 204 | 235 | 4000 | 4800 | **NU2216EM** |
| | 140 | 33 | 2 | 2 | 95.3 | | 204 | 235 | 4000 | 4800 | **NJ2216E** |
| | 140 | 33 | 2 | 2 | 95.3 | | 204 | 235 | 4000 | 4800 | **NU2216E** |
| | 140 | 33 | 2 | 2 | | 127.3 | 204 | 235 | 4000 | 4800 | **N2216E** |
| | 140 | 33 | | 2 | 95.3 | | 204 | 235 | 4000 | 4800 | **NUP2216E** |
| | 140 | 44.5 | 2 | 2 | 95.28 | | 220 | 305 | 4000 | 4800 | **NU5216** |
| | 140 | 44.5 | 2 | 2 | 95.28 | | 210 | 290 | 4000 | 4800 | **NU3216X2M/C9YA6** |
| | 150 | 45 | 2 | 2 | 97 | | 245 | 320 | 3800 | 4500 | **NJ3216X3M/P54** |
| | 150 | 45 | 2 | 2 | 97 | | 245 | 320 | 3800 | 4500 | **NJP3216X3M/P54** |
| | 170 | 39 | 2.1 | 2.1 | | 151 | 217 | 246 | 3200 | 3800 | **N316M** |
| | 170 | 39 | 2.1 | 2.1 | | 151 | 217 | 246 | 3200 | 3800 | **NF316M** |
| | 170 | 39 | 2.1 | 2.1 | 103 | | 217 | 246 | 3200 | 3800 | **NU316M** |
| | 170 | 39 | 2.1 | 2.1 | 103 | | 217 | 246 | 3200 | 3800 | **NU316Q1** |
| | 170 | 39 | 2.1 | 2.1 | 103 | | 217 | 246 | 3200 | 3800 | **NJ316M** |
| | 170 | 39 | | 2.1 | 103 | | 217 | 246 | 3200 | 3800 | **NUP316M** |
| | 170 | 39 | 2.1 | 2.1 | 101 | | 288 | 278 | 3200 | 3800 | **NJ316EM** |
| | 170 | 39 | 2.1 | 2.1 | | 151 | 288 | 278 | 3200 | 3800 | **N316EM** |
| | 170 | 39 | 2.1 | 2.1 | 101 | | 288 | 278 | 3200 | 3800 | **NU316EM** |
| | 170 | 39 | 2.1 | 2.1 | 101 | | 288 | 278 | 3200 | 3800 | **NU316EF1/C9** |
| | 170 | 39 | 2.1 | 2.1 | | 151 | 288 | 278 | 3200 | 3800 | **N316E** |
| | 170 | 39 | 2.1 | 2.1 | 101 | | 288 | 278 | 3200 | 3800 | **NJ316E** |
| | 170 | 39 | 2.1 | 2.1 | 101 | | 288 | 278 | 3200 | 3800 | **NU316E** |
| | 170 | 39 | 2.1 | 2.1 | 101 | | 288 | 278 | 3200 | 3800 | **NU316ETN1** |
| | 170 | 58 | 2.1 | 2.1 | | 147 | 305 | 380 | 3200 | 3800 | **N2316M** |

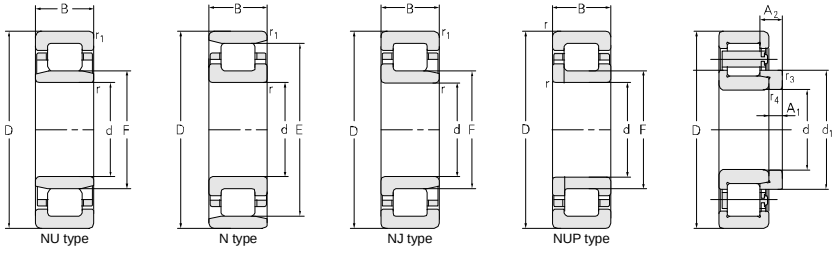
| Abutment and fillet dimensions | | | | | | | Weight | Model | Weight | Separate thrust collar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_{amin}$ | $d_{amax}$ | $d_{bmin}$ | $D_{amax}$ | $D_{amin}$ | $r_{amax}$ | $r_{bmax}$ | | | | A1 | A2 | $r_3.r_4$ |
| mm | | | | | | | kg | | kg | mm | | |
| 89 | | 104 | 131 | | 2 | 2 | 1.77 | | | | | |
| 89 | 93 | 98 | 131 | | 2 | 2 | 1.65 | | | | | |
| 89 | 93 | 98 | 131 | | 2 | 2 | 1.74 | | | | | |
| 89 | 93 | 98 | 131 | | 2 | 2 | 1.48 | | | | | |
| 89 | | 104 | 131 | | 2 | 2 | 1.72 | | | | | |
| 89 | 125 | | 131 | 130 | 2 | 2 | 1.67 | | | | | |
| 89 | 93 | 104 | 131 | | 2 | 2 | 1.68 | | | | | |
| 89 | | 104 | 131 | | 2 | 2 | 1.66 | | | | | |
| 89 | | 104 | 131 | | 2 | 2 | 1.81 | | | | | |
| 89 | 93 | 98 | 131 | | 2 | 2 | 1.65 | | | | | |
| 89 | 93 | 98 | 131 | | 2 | 2 | 2.32 | | | | | |
| 89 | 93 | 104 | 131 | | 2 | 2 | 2.35 | | | | | |
| 89 | 93 | 98 | 131 | | 2 | 2 | 2.39 | | | | | |
| 89 | 93 | 104 | 131 | | 2 | 2 | 2.34 | | | | | |
| 89 | 93 | 98 | 131 | | 2 | 2 | 2.30 | | | | | |
| 89 | 124 | | 131 | 130 | 2 | 2 | 2.16 | | | | | |
| 89 | | 104 | 131 | | 2 | 2 | 2.13 | | | | | |
| 88 | 93 | 97 | 132 | | 1.5 | 1.5 | 3.03 | | | | | |
| 88 | 93 | 97 | 132 | | 1.5 | 1.5 | 3.03 | | | | | |
| 90 | 94 | 104 | 136 | | 2 | 2 | 3.69 | | | | | |
| 90 | 94 | 104 | 136 | | 2 | 2 | 3.69 | | | | | |
| 91 | 144 | | 159 | | 2 | 2 | 4.30 | | | | | |
| 91 | 144 | | 159 | | 2 | 2 | 4.46 | | | | | |
| 91 | 100 | 106 | 159 | 150 | 2 | 2 | 4.37 | | | | | |
| 91 | 100 | 106 | 159 | | 2 | 2 | 4.45 | | | | | |
| 91 | 98 | 113 | 159 | | 2 | 2 | 4.47 | | | | | |
| 91 | | 113 | 159 | | 2 | 2 | 4.58 | | | | | |
| 91 | 98 | 113 | 159 | | 2 | 2 | 4.32 | | | | | |
| 91 | 148 | | 159 | 154 | 2 | 2 | 4.22 | | | | | |
| 91 | 98 | 104 | 159 | | 2 | 2 | 4.26 | | | | | |
| 91 | 98 | 104 | 159 | | 2 | 2 | 4.20 | | | | | |
| 91 | 148 | | 159 | 154 | 2 | 2 | 3.98 | | | | | |
| 91 | 98 | 113 | 159 | 154 | 2 | 2 | 4.08 | | | | | |
| 91 | 98 | 104 | 159 | | 2 | 2 | 4.25 | | | | | |
| 91 | 98 | 104 | 159 | | 2 | 2 | 3.89 | | | | | |
| 91 | 144 | | 159 | | 2 | 2 | 6.15 | | | | | |

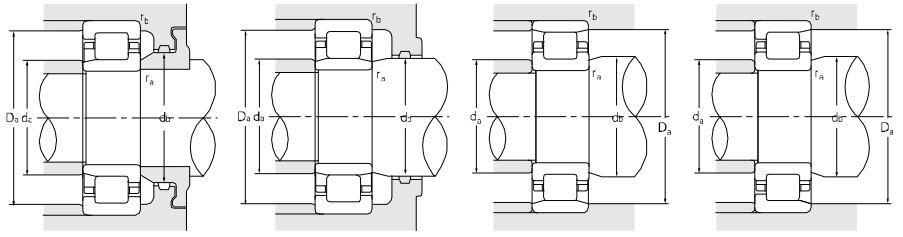


| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1smin}$ | $r_{smin}$ | F | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | | kN | | r/min | | |
| **80** | 170 | 58 | 2.1 | 2.1 | 103 | | 305 | 380 | 3200 | 3800 | **NU2316M** |
| | 170 | 58 | 2.1 | 2.1 | 103 | | 305 | 380 | 3200 | 3800 | **NJ2316M** |
| | 170 | 58 | 2.1 | 2.1 | 103 | | 305 | 380 | 3200 | 3800 | **NJ2316TN1** |
| | 170 | 60 | | 2.1 | 100 | | 430 | 545 | 3200 | 3800 | **NUP2316WB1V** |
| | 170 | 58 | 2.1 | 2.1 | 101 | | 400 | 422 | 3200 | 3800 | **NU2316E** |
| | 170 | 58 | 2.1 | 2.1 | | 151 | 400 | 422 | 3200 | 3800 | **N2316E** |
| | 170 | 58 | 2.1 | 2.1 | 101 | | 400 | 422 | 3200 | 3800 | **NJ2316E** |
| | 170 | 58 | 2.1 | 2.1 | 101 | | 400 | 422 | 3200 | 3800 | **NJ2316EM** |
| | 170 | 58 | | 2.1 | 100 | | 305 | 380 | 3200 | 3800 | **NUP2316M/YAB** |
| | 170 | 62 | | 2.1 | 98 | | 305 | 380 | 3200 | 3800 | **NUP2316X2V** |
| | 200 | 48 | 3 | 3 | | 170 | 341 | 375 | 3200 | 3800 | **N416M** |
| | 200 | 48 | 3 | 3 | 110 | | 341 | 375 | 3200 | 3800 | **NU416M** |
| | 200 | 48 | 3 | 3 | 110 | | 341 | 375 | 3200 | 3800 | **NJ416M** |
| | 200 | 48 | 3 | 3 | 110 | | 341 | 375 | 3200 | 3800 | **NJ416M/YA8** |
| **85** | 130 | 22 | 1.1 | 1.1 | 96.5 | | 89 | 109 | 5000 | 6000 | **NJ1017TN1/C9YA6** |
| | 150 | 28 | 2 | 2 | | 133.8 | 143 | 175 | 3800 | 4500 | **N217M** |
| | 150 | 28 | 2 | 2 | 101.8 | | 143 | 175 | 3800 | 4500 | **NU217M** |
| | 150 | 28 | 2 | 2 | 101.8 | | 143 | 175 | 3800 | 4500 | **NU217M/W124** |
| | 150 | 28 | 2 | 2 | 101.8 | | 143 | 175 | 3800 | 4500 | **NJ217M** |
| | 150 | 28 | 2 | 2 | | 136.5 | 183 | 215 | 3800 | 4500 | **N217E** |
| | 150 | 28 | 2 | 2 | 100.5 | | 183 | 215 | 3800 | 4500 | **NU217E** |
| | 150 | 28 | 2 | 2 | 100.5 | | 183 | 215 | 3800 | 4500 | **NJ217E** |
| | 150 | 28 | | 2 | 100.5 | | 183 | 215 | 3800 | 4500 | **NUP217EM** |
| | 150 | 36 | 2 | 2 | 101.8 | | 195 | 265 | 3800 | 4500 | **NU2217M/C3** |
| | 150 | 36 | 2 | 2 | 100.5 | | 240 | 270 | 3800 | 4500 | **NU2217EM** |
| | 150 | 36 | 2 | 2 | 100.5 | | 240 | 270 | 3800 | 4500 | **NU2217ETN1/C9** |
| | 150 | 36 | 2 | 2 | 100.5 | | 240 | 270 | 3800 | 4500 | **NJ2217EM** |
| | 150 | 49.2 | 2 | 2 | 102 | | 223 | 310 | 3800 | 4500 | **NU3217M/C3** |
| | 150 | 49.21 | 2 | 2 | 102 | | 252 | 350 | 3800 | 4500 | **NU5217XPC3** |
| | 150 | 49.21 | 2 | 2 | 102 | | 240 | 330 | 3800 | 4500 | **NU3217X2M/C9YA6** |
| | 180 | 41 | 3 | 3 | | 160 | 325 | 330 | 3000 | 3600 | **N317EQ1** |
| | 180 | 41 | 3 | 3 | 108 | | 325 | 330 | 3000 | 3600 | **NJ317EQ1** |
| | 180 | 41 | 3 | 3 | 108 | | 325 | 330 | 3000 | 3600 | **NU317E** |
| | 180 | 41 | 3 | 3 | 108 | | 325 | 330 | 3000 | 3600 | **NU317EM** |
| | 180 | 41 | 3 | 3 | 108 | | 325 | 330 | 3000 | 3600 | **NU317ETN1** |

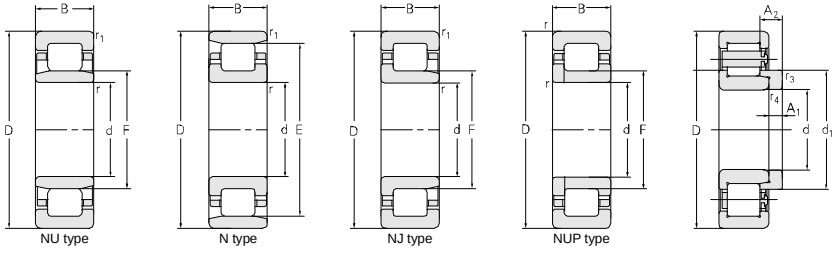
| Abutment and fillet dimensions | | | | | | | Weight | Model | Weight | Separate thrust collar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_{amin}$ | $d_{amax}$ | $d_{bmin}$ | $D_{amax}$ | $D_{amin}$ | $r_{amax}$ | $r_{bmax}$ | | | | A1 | A2 | $r_3.r_4$ |
| mm | | | | | | | kg | | kg | mm | | |
| 91 | 98 | 106 | 159 | 154 | 2 | 2 | 6.34 | | | | | |
| 91 | 98 | 113 | 159 | | 2 | 2 | 6.44 | | | | | |
| 91 | 98 | 113 | 159 | | 2 | 2 | 5.68 | | | | | |
| 91 | 98 | 104 | 159 | | 2 | 2 | 6.51 | | | | | |
| 91 | 98 | 104 | 159 | | 2 | 2 | 6.28 | | | | | |
| 91 | 148 | | 159 | 150 | 2 | 2 | 6.26 | | | | | |
| 91 | 98 | 113 | 159 | | 2 | 2 | 6.94 | | | | | |
| 91 | 98 | 113 | 159 | | 2 | 2 | 6.62 | | | | | |
| 91 | 98 | 118 | 159 | | 2 | 2 | 7.23 | | | | | |
| 91 | 97 | 118 | 159 | | 2 | 2 | 7.19 | | | | | |
| 93 | 167 | | 187 | | 2.5 | 2.5 | 8.02 | | | | | |
| 93 | 106 | 113 | 187 | | 2.5 | 2.5 | 8.19 | HJ416 | 0.37 | 13 | 21.78 | 3 |
| 93 | 106 | 125 | 187 | | 2.5 | 2.5 | 8.31 | HJ416 | 0.37 | 13 | 21.78 | 3 |
| 93 | 106 | 125 | 187 | | 2.5 | 2.5 | 8.27 | HJ416 | 0.37 | 13 | 21.78 | 3 |
| 90 | 95 | 99 | 122 | | 1 | 1 | 0.972 | | | | | |
| 94 | 132 | | 141 | 139 | 2 | 2 | 2.08 | | | | | |
| 94 | 98 | 103 | 141 | | 2 | 2 | 2.09 | | | | | |
| 94 | 98 | 103 | 141 | | 2 | 2 | 2.09 | | | | | |
| 94 | 98 | 110 | 141 | | 2 | 2 | 2.15 | | | | | |
| 94 | 134 | | 141 | 139 | 2 | 2 | 2.08 | | | | | |
| 94 | 98 | 103 | 141 | | 2 | 2 | 2.08 | | | | | |
| 94 | 98 | 110 | 141 | | 2 | 2 | 2.12 | | | | | |
| 94 | | 110 | 141 | | 2 | 2 | 2.27 | | | | | |
| 94 | 98 | 103 | 141 | | 2 | 2 | 2.8 | | | | | |
| 94 | 98 | 103 | 141 | | 2 | 2 | 2.82 | | | | | |
| 94 | 98 | 103 | 141 | | 2 | 2 | 2.42 | | | | | |
| | 98 | 110 | 141 | | 2 | | 2.86 | | | | | |
| 94 | 98 | 103 | 141 | | 2 | 2 | 3.88 | | | | | |
| 94 | 100 | 104 | 141 | | 1.5 | 1.5 | 3.88 | | | | | |
| 94 | 100 | 104 | 141 | | 1.5 | 1.5 | 3.88 | | | | | |
| 98 | 157 | | 167 | 163 | 2.5 | 2.5 | 5.20 | | | | | |
| 98 | 105 | 120 | 167 | | 2.5 | 2.5 | 5.27 | | | | | |
| 98 | 105 | 111 | 167 | | 2.5 | 2.5 | 5.12 | | | | | |
| 98 | 105 | 111 | 167 | | 2.5 | 2.5 | 5.16 | | | | | |
| 98 | 105 | 111 | 167 | | 2.5 | 2.5 | 4.57 | | | | | |

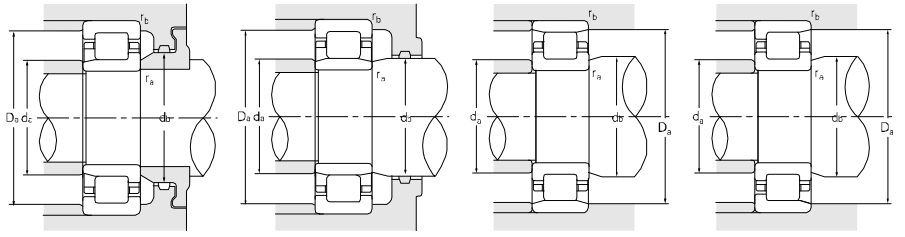


| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1smin}$ | $r_{smin}$ | F | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | | kN | | r/min | | |
| **85** | 180 | 41 | 3 | 3 | 108 | | 325 | 330 | 3000 | 3600 | **NU317EQ1** |
| | 180 | 41 | 3 | 3 | | 160 | 325 | 330 | 3000 | 3600 | **N317E** |
| | 180 | 41 | 3 | 3 | | 160 | 300 | 330 | 3000 | 3600 | **N317E/YA1** |
| | 180 | 41 | 3 | 3 | | 160 | 325 | 330 | 3000 | 3600 | **N317EM** |
| | 180 | 41 | 3 | 3 | | 160 | 325 | 330 | 3000 | 3600 | **N317EN1T** |
| | 180 | 41 | 3 | 3 | 108 | | 325 | 330 | 3000 | 3600 | **NJ317E** |
| | 180 | 41 | 1.1 | 1.1 | 108 | | 325 | 330 | 3000 | 3600 | **NJ317EM** |
| | 180 | 60 | 3 | 3 | 108 | | 347 | 435 | 3000 | 3600 | **NU2317M** |
| | 180 | 60 | 3 | 3 | 108 | | 347 | 435 | 3000 | 3600 | **NJ2317M** |
| | 180 | 60 | 3 | 3 | | 160 | 435 | 470 | 3000 | 3600 | **N2317E** |
| | 180 | 60 | 3 | 3 | 108 | | 435 | 470 | 3000 | 3600 | **NU2317E** |
| | 180 | 60 | 3 | 3 | 108 | | 435 | 470 | 3000 | 3600 | **NJ2317E** |
| | 210 | 52 | 4 | 4 | | 179.5 | 385 | 425 | 3000 | 3600 | **N417M** |
| | 210 | 52 | 4 | 4 | 115.5 | | 385 | 425 | 3000 | 3600 | **NU417M** |
| | 210 | 52 | 4 | 4 | 115.5 | | 385 | 425 | 3000 | 3600 | **NJ417M** |
| | 210 | 52 | 4 | 4 | 115.5 | | 385 | 425 | 3000 | 3600 | **NUP417M** |
| **90** | 140 | 24 | 1.5 | 1.1 | 103 | | 90 | 115 | 3600 | 4300 | **NJ1018M** |
| | 140 | 24 | 1.5 | 1.1 | 103 | | 90 | 115 | 3600 | 4300 | **NUP1018M** |
| | 140 | 24 | 1.5 | 1.1 | 103 | | 90 | 115 | 3600 | 4300 | **NU1018M** |
| | 160 | 30 | 2 | 2 | | 143 | 165 | 195 | 3600 | 4300 | **N218J** |
| | 160 | 30 | 2 | 2 | | 143 | 165 | 195 | 3600 | 4300 | **N218J1** |
| | 160 | 30 | 2 | 2 | | 143 | 170 | 205 | 3600 | 4300 | **NF218M** |
| | 160 | 30 | 2 | 2 | | 143 | 170 | 205 | 3600 | 4300 | **N218M** |
| | 160 | 30 | 2 | 2 | 107 | | 170 | 205 | 3600 | 4300 | **NU218M** |
| | 160 | 30 | 2 | 2 | 107 | | 170 | 205 | 3600 | 4300 | **NU218M/W124** |
| | 160 | 30 | 2 | 2 | 107 | | 170 | 205 | 3600 | 4300 | **NJ218M** |
| | 160 | 30 | 2 | 2 | | 145 | 200 | 215 | 3600 | 4300 | **NF218E** |
| | 160 | 30 | 2 | 2 | | 145 | 200 | 215 | 3600 | 4300 | **N218E** |
| | 160 | 30 | 2 | 2 | 107 | | 200 | 215 | 3600 | 4300 | **NU218ETN1/C9** |
| | 160 | 30 | 2 | 2 | 107 | | 200 | 215 | 3600 | 4300 | **NU218E** |
| | 160 | 30 | 2 | 2 | 107 | | 200 | 215 | 3600 | 4300 | **NJ218E** |
| | 160 | 30 | 2 | 2 | 107 | | 165 | 195 | 3600 | 4300 | **NU218M-DT** |
| | 160 | 30 | | 2 | 107 | | 165 | 195 | 3600 | 4300 | **NUP218M** |
| | 160 | 40 | 2 | 2 | | 143 | 215 | 285 | 3600 | 4300 | **N2218M** |
| | 160 | 40 | | 2 | 107 | | 270 | 300 | 3600 | 4300 | **NUP2218EM** |

| Abutment and fillet dimensions | | | | | | | Weight | Model | Weight | Separate thrust collar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_{amin}$ | $d_{amax}$ | $d_{bmin}$ | $D_{amax}$ | $D_{amin}$ | $r_{amax}$ | $r_{bmax}$ | | | | A1 | A2 | $r_3.r_4$ |
| mm | | | | | | | kg | | kg | mm | | |
| 98 | 105 | 111 | 167 | | 2.5 | 2.5 | 5.18 | | | | | |
| 98 | 157 | | 167 | 163 | 2.5 | 2.5 | 5.14 | | | | | |
| 98 | 157 | | 167 | 163 | 2.5 | 2.5 | 5.13 | | | | | |
| 98 | 157 | | 167 | 163 | 2.5 | 2.5 | 5.20 | | | | | |
| 98 | 157 | | 167 | 163 | 2.5 | 2.5 | 4.59 | | | | | |
| 98 | 105 | 120 | 167 | | 2.5 | 2.5 | 5.21 | | | | | |
| 98 | 105 | 111 | 167 | | 2.5 | 2.5 | 5.27 | | | | | |
| 96 | 103 | 111 | 169 | | 2.5 | 2.5 | 7.36 | HJ2317 | 0.617 | 12 | 23.73 | 3 |
| 96 | 103 | 120 | 169 | | 2.5 | 2.5 | 7.81 | HJ2317 | 0.617 | 12 | 23.73 | 3 |
| 96 | 157 | | 169 | | 2.5 | 2.5 | 7.44 | | | | | |
| 96 | 104 | 111 | 169 | | 2.5 | 2.5 | 7.40 | | | | | |
| 96 | 104 | 120 | 169 | 163 | 2.5 | 2.5 | 7.57 | | | | | |
| 101 | 176 | | 194 | 183 | 3 | 3 | 9.48 | | | | | |
| 101 | 112 | 119 | 194 | | 3 | 3 | 9.66 | HJ417 | 0.4 | 14 | 23.73 | 4 |
| 101 | 109 | 129 | 194 | | 3 | 3 | 9.83 | HJ417 | 0.4 | 14 | 23.73 | 4 |
| 101 | | 129 | 194 | | 3 | 3 | 10.1 | | | | | |
| 96.5 | 101 | 106 | 132 | | 1.5 | 1 | 1.38 | | | | | |
| 96.5 | | 106 | 132 | | 1.5 | 1 | 1.4 | | | | | |
| 96.5 | 99 | 106 | 132 | | 1.5 | 1 | 1.34 | | | | | |
| 99 | 140 | | 151 | 148 | 2 | 2 | 2.37 | | | | | |
| 99 | 140 | | 151 | 148 | 2 | 2 | 2.47 | | | | | |
| 99 | | | 151 | 148 | 2 | 2 | 2.71 | | | | | |
| 99 | 140 | | 151 | 148 | 2 | 2 | 2.64 | | | | | |
| 99 | 104 | 110 | 151 | | 2 | 2 | 2.66 | | | | | |
| 99 | 104 | 110 | 151 | | 2 | 2 | 2.66 | | | | | |
| 99 | 104 | 117 | 151 | | 2 | 2 | 2.72 | | | | | |
| 99 | | | 151 | 148 | 2 | 2 | 2.55 | | | | | |
| 99 | 142 | | 151 | 148 | 2 | 2 | 2.49 | | | | | |
| 99 | 104 | 110 | 151 | | 2 | 2 | 2.26 | | | | | |
| 99 | 104 | 110 | 151 | | 2 | 2 | 2.49 | | | | | |
| 99 | 104 | 117 | 151 | | 2 | 2 | 2.54 | | | | | |
| 99 | 104 | 110 | 151 | | 2 | 2 | 2.57 | | | | | |
| 99 | | 110 | 151 | | 2 | 2 | 2.81 | | | | | |
| 99 | 105 | | 158 | 151 | 2 | 2 | 3.62 | | | | | |
| 99 | | 117 | 151 | | 2 | 2 | 3.68 | | | | | |

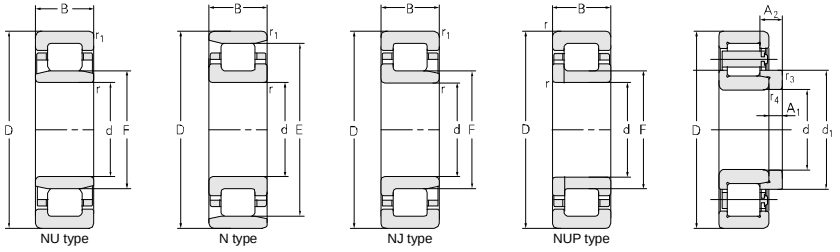


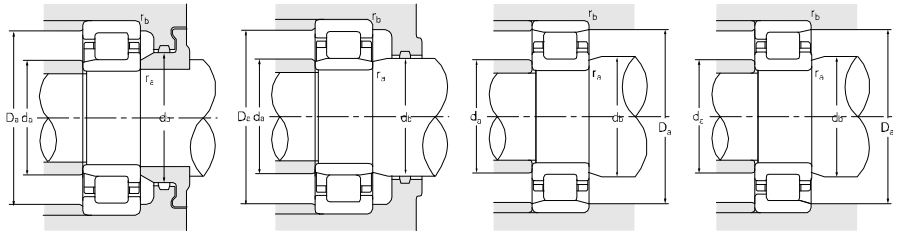



| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1smin}$ | $r_{smin}$ | F | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | | kN | | r/min | | |
| **90** | 160 | 40 | 2 | 2 | 107 | | 270 | 300 | 2800 | 3400 | **NU2218ETN1** |
| | 160 | 40 | | 2 | 107 | | 270 | 300 | 2800 | 3400 | **NUP2218F2-2Z/C9S2YAD** |
| | 160 | 40 | | 2 | 107 | | 270 | 300 | 2800 | 3400 | **NUP2218EM** |
| | 160 | 52.4 | 2 | 2 | 107.218 | | 280 | 390 | 3600 | 4300 | **NU3218A** |
| | 160 | 52.4 | 2 | 2 | 107.218 | | 280 | 390 | 3200 | 3800 | **NU5218XPC3** |
| | 160 | 52.4 | 2 | 2 | 107.218 | | 280 | 390 | 3200 | 3800 | **NU5218/C9YA6** |
| | 160 | 52.4 | 2 | 2 | 107.218 | | 280 | 390 | 3600 | 4300 | **NU3218M/C9YA6** |
| | 190 | 43 | 3 | 3 | | 165 | 274 | 295 | 2800 | 3400 | **NF318** |
| | 190 | 43 | 3 | 3 | | 165 | 274 | 315 | 2800 | 3400 | **NF318M** |
| | 190 | 43 | 3 | 3 | | 165 | 274 | 315 | 2800 | 3400 | **N318M** |
| | 190 | 43 | 3 | 3 | 115 | | 274 | 315 | 2800 | 3400 | **NU318M** |
| | 190 | 43 | 3 | 3 | 115 | | 274 | 315 | 2800 | 3400 | **NU318Q1** |
| | 190 | 43 | 3 | 3 | 115 | | 274 | 315 | 2800 | 3400 | **NJ318M** |
| | 190 | 43 | | 3 | 115 | | 274 | 315 | 2800 | 3400 | **NUP318M** |
| | 190 | 43 | 3 | 3 | 113.5 | | 274 | 315 | 2700 | 3300 | **NJ318M/C4YA8** |
| | 190 | 43 | 3 | 3 | | 169.5 | 350 | 345 | 2800 | 3400 | **N318EM** |
| | 190 | 43 | 3 | 3 | 113.5 | | 350 | 345 | 2800 | 3400 | **NU318EM** |
| | 190 | 43 | 3 | 3 | 113.5 | | 350 | 345 | 2800 | 3400 | **NU318ETN1** |
| | 190 | 43 | 3 | 3 | | 169.5 | 350 | 345 | 2800 | 3400 | **N318E** |
| | 190 | 43 | 3 | 3 | 113.5 | | 350 | 345 | 2800 | 3400 | **NJ318E** |
| | 190 | 43 | | 3 | 113.5 | | 350 | 345 | 2800 | 3400 | **NUP318E** |
| | 190 | 43 | 3 | 3 | 113.5 | | 350 | 345 | 2800 | 3400 | **NU318E** |
| | 190 | 43 | 3 | 3 | 113.5 | | 350 | 345 | 2800 | 3400 | **NH318EQ1/YB2** |
| | 190 | 64 | 3 | 3 | 115 | | 400 | 505 | 2800 | 3400 | **NJ2318M/C4** |
| | 190 | 64 | | 3 | 115 | | 400 | 505 | 2800 | 3400 | **NUP2318M** |
| | 190 | 64 | 3 | 3 | 113.5 | | 480 | 520 | 2800 | 3400 | **NJ2318E** |
| | 190 | 64 | 3 | 3 | 113.5 | | 480 | 520 | 2800 | 3400 | **NU2318E** |
| | 225 | 54 | 4 | 4 | | 191.5 | 430 | 480 | 2800 | 3400 | **N418M** |
| | 225 | 54 | 4 | 4 | 123.5 | | 430 | 480 | 2800 | 3400 | **NU418M** |
| | 225 | 54 | 4 | 4 | 123.5 | | 430 | 480 | 2800 | 3400 | **NJ418M/C5** |
| **95** | 145 | 24 | 1.5 | 1.1 | 108 | | 115 | 165 | 4500 | 5300 | **NJ1019M** |
| | 170 | 32 | 2.1 | 2.1 | | 151.5 | 190 | 230 | 3400 | 4000 | **N219M** |
| | 170 | 32 | 2.1 | 2.1 | 113.5 | | 190 | 230 | 3400 | 4000 | **NU219M** |
| | 170 | 32 | 2.1 | 2.1 | 113.5 | | 190 | 230 | 3400 | 4000 | **NU219M/W124** |
| | 170 | 32 | 2.1 | 2.1 | 113.5 | | 190 | 230 | 3400 | 4000 | **NJ219M** |

| Abutment and fillet dimensions | | | | | | | Weight | Model | Weight | Separate thrust collar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_{amin}$ | $d_{amax}$ | $d_{bmin}$ | $D_{amax}$ | $D_{amin}$ | $r_{amax}$ | $r_{bmax}$ | | | | A1 | A2 | $r_3.r_4$ |
| mm | | | | | | | kg | | kg | mm | | |
| 100 | 105 | 110 | 150 | | 2.5 | 2.5 | 3.12 | | | | | |
| 100 | 105 | 110 | 150 | | 2.5 | 2.5 | 3.45 | | | | | |
| 104 | | 117 | 149 | | 2 | 2 | 3.59 | | | | | |
| 99 | 104 | 110 | 151 | | 2 | 2 | 4.50 | | | | | |
| 95 | 105 | 110 | 151 | | 1.5 | 1.5 | 4.50 | | | | | |
| 95 | 105 | 110 | 151 | | 1.5 | 1.5 | 4.50 | | | | | |
| 95 | 105 | 110 | 151 | | 1.5 | 1.5 | 4.50 | | | | | |
| 103 | | | 177 | 168 | 2.5 | 2.5 | 5.78 | | | | | |
| 103 | | | 177 | 168 | 2.5 | 2.5 | 6.21 | | | | | |
| 103 | 162 | | 177 | 168 | 2.5 | 2.5 | 6.05 | | | | | |
| 103 | 112 | 118 | 177 | | 2.5 | 2.5 | 6.06 | | | | | |
| 103 | 112 | 118 | 177 | | 2.5 | 2.5 | 5.88 | | | | | |
| 103 | 110 | 127 | 177 | | 2.5 | 2.5 | 6.19 | | | | | |
| 103 | | 127 | 177 | | 2.5 | 2.5 | 6.33 | | | | | |
| 103 | 110 | 127 | 177 | | 2.5 | 2.5 | 6.37 | | | | | |
| 103 | 166 | | 177 | 173 | 2.5 | 2.5 | 5.99 | | | | | |
| 103 | 110 | 116 | 177 | | 2.5 | 2.5 | 5.9 | | | | | |
| 103 | 110 | 116 | 177 | | 2.5 | 2.5 | 5.36 | | | | | |
| 103 | 166 | | 177 | 173 | 2.5 | 2.5 | 5.93 | | | | | |
| 103 | 110 | 127 | 177 | | 2.5 | 2.5 | 6.09 | | | | | |
| 103 | | 127 | 177 | | 2.5 | 2.5 | 6.05 | | | | | |
| 103 | 110 | 116 | 177 | | 2.5 | 2.5 | 5.84 | | | | | |
| 103 | 110 | 127 | 177 | | 2.5 | 2.5 | 6.64 | | | | | |
| 103 | 110 | 127 | 177 | | 2.5 | 2.5 | 9.29 | | | | | |
| 103 | 110 | 127 | 177 | | 2.5 | 2.5 | 9.36 | | | | | |
| 103 | 110 | 127 | 177 | | 2.5 | 2.5 | 8.84 | | | | | |
| 103 | 110 | 118 | 177 | | 2.5 | 2.5 | 8.69 | | | | | |
| 106 | 188 | | 209 | 195 | 3 | 3 | 11.3 | | | | | |
| 106 | 120 | 126 | 209 | | 3 | 3 | 11.5 | | | | | |
| 106 | 120 | 140 | 209 | | 3 | 3 | 11.9 | | | | | |
| 101.5 | 104 | 116 | 137 | | 1.5 | 1 | 1.53 | | | | | |
| 106 | 149 | | 159 | 157 | 2 | 2 | 3.07 | | | | | |
| 106 | 110 | 116 | 159 | | 2 | 2 | 3.13 | | | | | |
| 106 | 110 | 116 | 159 | | 2 | 2 | 3.13 | | | | | |
| 106 | 110 | 123 | 159 | | 2 | 2 | 3.23 | | | | | |

d 95 mm

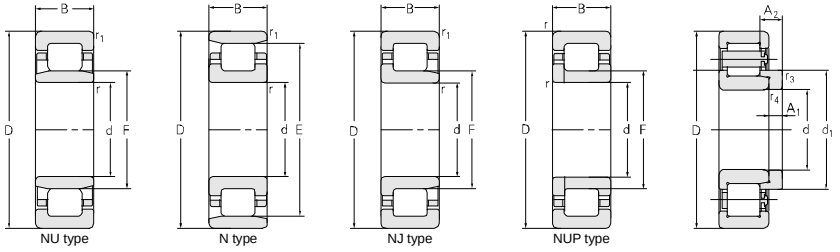


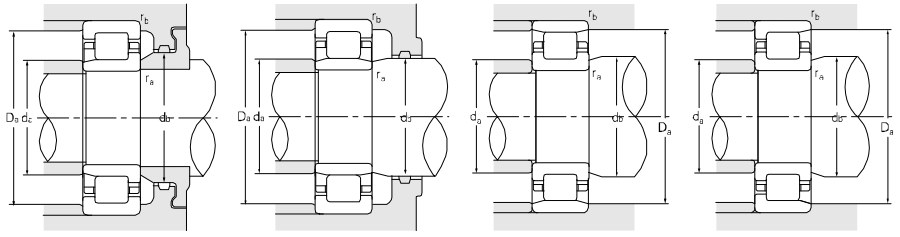



| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1smin}$ | $r_{smin}$ | F | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | | kN | | r/min | | |
| **95** | 170 | 32 | 2.1 | 2.1 | | 154.5 | 245 | 255 | 3400 | 4000 | **N219EJ** |
| | 170 | 32 | 2.1 | 2.1 | | 154.5 | 245 | 255 | 3400 | 4000 | **N219E** |
| | 170 | 32 | 2.1 | 2.1 | 112.5 | | 245 | 255 | 3400 | 4000 | **NU219E** |
| | 170 | 32 | 2.1 | 2.1 | 112.5 | | 245 | 255 | 3400 | 4000 | **NU219ETN1/C9** |
| | 170 | 32 | 2.1 | 2.1 | 112.5 | | 245 | 255 | 3400 | 4000 | **NJ219E** |
| | 170 | 32 | 2.1 | 2.1 | 112.5 | | 245 | 255 | 3400 | 4000 | **NJ219EM** |
| | 170 | 32 | 2.1 | 2.1 | 112.5 | | 245 | 255 | 3400 | 4000 | **NJ219ETN1** |
| | 170 | 32 | 2.1 | 2.1 | | 154.5 | 245 | 255 | 3400 | 4000 | **N219EM** |
| | 170 | 32 | 2.1 | 2.1 | | 154.5 | 245 | 255 | 3400 | 4000 | **NF219EM** |
| | 170 | 43 | 2.1 | 2.1 | | 151.5 | 242 | 315 | 3400 | 4000 | **N2219M** |
| | 170 | 43 | 2.1 | 2.1 | 113.5 | | 242 | 315 | 3200 | 3900 | **NU2219M** |
| | 170 | 43 | 2.1 | 2.1 | 113.5 | | 242 | 315 | 3200 | 3900 | **NJ2219M** |
| | 170 | 55.56 | 3.2 | 2 | | 149.61 | 305 | 445 | 3400 | 4000 | **NU5219XPC3** |
| | 170 | 55.56 | 3.2 | 2 | | 113.612 | 305 | 445 | 3400 | 4000 | **NU3219X2M/C9YA6** |
| | 200 | 45 | 3 | 3 | | 173.5 | 295 | 340 | 2600 | 3200 | **N319M** |
| | 200 | 45 | 3 | 3 | | 173.5 | 295 | 340 | 2600 | 3200 | **N319J** |
| | 200 | 45 | 3 | 3 | 121.5 | | 295 | 340 | 2600 | 3200 | **NU319M** |
| | 200 | 45 | 3 | 3 | 121.5 | | 295 | 340 | 2600 | 3200 | **NJ319M** |
| | 200 | 45 | 3 | 3 | 121.5 | | 375 | 375 | 2600 | 3200 | **NU319EM/Z1** |
| | 200 | 45 | 3 | 3 | | 177.5 | 375 | 375 | 2600 | 3200 | **N319EM** |
| | 200 | 45 | 3 | 3 | 121.5 | | 375 | 375 | 2600 | 3200 | **NU319EM/W124** |
| | 200 | 45 | 3 | 3 | | 177.5 | 375 | 375 | 2600 | 3200 | **N319E** |
| | 200 | 45 | 3 | 3 | | 177.5 | 375 | 375 | 2600 | 3200 | **N319ETN1** |
| | 200 | 45 | 3 | 3 | 121.5 | | 375 | 375 | 2600 | 3200 | **NJ319E** |
| | 200 | 45 | 3 | 3 | 121.5 | | 375 | 375 | 2600 | 3200 | **NU319E** |
| | 200 | 45 | 3 | 3 | 121.5 | | 375 | 375 | 2600 | 3200 | **NU319EM-DT** |
| | 200 | 67 | 3 | 3 | 121.5 | | 435 | 565 | 2600 | 3200 | **NU2319Q1** |
| | 200 | 67 | 3 | 3 | 121.5 | | 435 | 565 | 2600 | 3200 | **NU2319M** |
| | 200 | 67 | 3 | 3 | 121.5 | | 435 | 565 | 2600 | 3200 | **NJ2319M** |
| | 200 | 67 | 3 | 3 | 121.5 | | 435 | 565 | 2600 | 3200 | **NJ2319M/YA8** |
| | 200 | 67 | 3 | 3 | 121.5 | | 435 | 565 | 2600 | 3200 | **NJ2319M/C4W124YA8** |
| | 200 | 67 | 3 | 3 | 121.5 | | 435 | 565 | 2600 | 3200 | **NJ2319M/W20** |
| | 200 | 67 | 3 | 3 | 121.5 | | 510 | 560 | 2600 | 3200 | **NU2319E** |
| | 200 | 67 | 3 | 3 | 121.5 | | 510 | 560 | 2600 | 3200 | **NU2319ETN1/C9** |
| | 200 | 67 | 3 | 3 | 121.5 | | 510 | 560 | 2600 | 3200 | **NJ2319E** |

| Abutment and fillet dimensions | | | | | | | Weight | Model | Weight | Separate thrust collar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_{amin}$ | $d_{amax}$ | $d_{bmin}$ | $D_{amax}$ | $D_{amin}$ | $r_{amax}$ | $r_{bmax}$ | | | | A1 | A2 | $r_3.r_4$ |
| mm | | | | | | | kg | | kg | mm | | |
| 106 | 152 | | 159 | 157 | 2 | 2 | 2.91 | | | | | |
| 106 | 152 | | 159 | 157 | 2 | 2 | 3.07 | | | | | |
| 106 | 110 | 115 | 159 | | 2 | 2 | 3.06 | | | | | |
| 106 | 110 | 115 | 159 | | 2 | 2 | 2.80 | | | | | |
| 106 | 110 | 123 | 159 | | 2 | 2 | 3.12 | | | | | |
| 106 | 110 | 123 | 159 | | 2 | 2 | 3.24 | | | | | |
| 106 | 110 | 123 | 159 | | 2 | 2 | 2.86 | | | | | |
| 106 | 152 | | 159 | 157 | 2 | 2 | 3.19 | | | | | |
| 106 | 152 | | 159 | 157 | 2 | 2 | 3.23 | | | | | |
| 106 | 152 | | 159 | 157 | 2 | 2 | 4.27 | | | | | |
| 107 | 110 | 115 | 158 | | 2 | 2 | 4.31 | | | | | |
| 107 | 110 | 115 | 158 | | 2 | 2 | 4.39 | | | | | |
| 107.5 | 112 | 116 | 161 | | 1.5 | 3 | 5.48 | | | | | |
| 107.5 | 112 | 116 | 161 | | 1.5 | 3 | 5.48 | | | | | |
| 108 | 170 | | 187 | 178 | 2.5 | 2.5 | 6.67 | | | | | |
| 108 | 170 | | 187 | 181 | 2.5 | 2.5 | 6.74 | | | | | |
| 108 | 118 | 124 | 187 | | 2.5 | 2.5 | 7.00 | | | | | |
| 108 | 118 | 133 | 187 | | 2.5 | 2.5 | 7.06 | | | | | |
| 108 | 118 | 124 | 187 | | 2.5 | 2.5 | 6.68 | | | | | |
| 108 | 174 | | 187 | 181 | 2.5 | 2.5 | 7.00 | | | | | |
| 108 | 118 | 124 | 187 | | 2.5 | 2.5 | 6.68 | | | | | |
| 108 | 174 | | 187 | 181 | 2.5 | 2.5 | 6.92 | | | | | |
| 108 | 174 | | 187 | 181 | 2.5 | 2.5 | 6.31 | | | | | |
| 108 | 118 | 135 | 187 | | 2.5 | 2.5 | 6.86 | | | | | |
| 108 | 118 | 124 | 187 | | 2.5 | 2.5 | 6.74 | | | | | |
| 108 | 118 | 124 | 187 | | 2.5 | 2.5 | 6.73 | | | | | |
| 108 | 116 | 124 | 187 | | 2.5 | 2.5 | 9.86 | HJ2319 | 0.864 | 13 | 26.23 | 3 |
| 108 | 116 | 124 | 187 | | 2.5 | 2.5 | 10.3 | HJ2319 | 0.864 | 13 | 26.23 | 3 |
| 108 | 116 | 135 | 187 | | 2.5 | 2.5 | 10.2 | HJ2319 | 0.864 | 13 | 26.23 | 3 |
| 108 | 116 | 135 | 187 | | 2.5 | 2.5 | 10.1 | HJ2319 | 0.864 | 13 | 26.23 | 3 |
| 108 | 116 | 135 | 187 | | 2.5 | 2.5 | 10.1 | HJ2319 | 0.864 | 13 | 26.23 | 3 |
| 108 | 116 | 135 | 187 | | 2.5 | 2.5 | 10.2 | HJ2319 | 0.864 | 13 | 26.23 | 3 |
| 108 | 116 | 124 | 187 | | 2.5 | 2.5 | 9.84 | | | | | |
| 108 | 116 | 124 | 187 | | 2.5 | 2.5 | 9.40 | | | | | |
| 108 | 116 | 135 | 187 | | 2.5 | 2.5 | 9.77 | | | | | |

d 95~100 mm

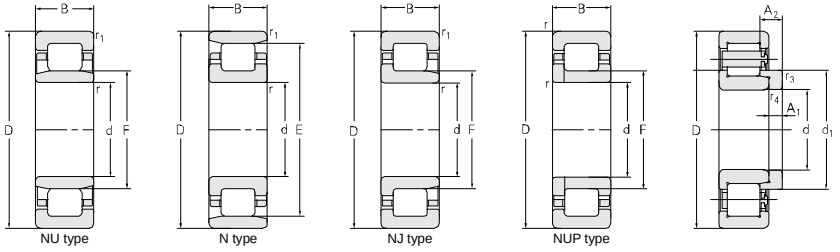


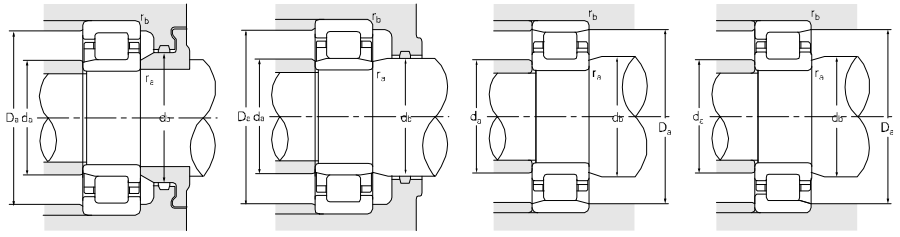



| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1smin}$ | $r_{smin}$ | F | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | | kN | | r/min | | |
| **95** | 200 | 67 | 3 | 3 | | 177.5 | 510 | 560 | 2600 | 3200 | **N2319E** |
| | 240 | 55 | 4 | 4 | | 201.5 | 455 | 525 | 2600 | 3200 | **N419M** |
| | 240 | 55 | 4 | 4 | 133.5 | | 455 | 525 | 2600 | 3200 | **NU419M** |
| | 240 | 55 | 4 | 4 | 133.5 | | 455 | 525 | 2600 | 3200 | **NJ419M** |
| | 240 | 55 | | 4 | 133.5 | | 455 | 525 | 2600 | 3200 | **NUP419M** |
| **99.5** | 180 | 46 | 2.1 | 2.1 | 120 | | 275 | 385 | 3200 | 3800 | **NJ2220X4M/P63** |
| **100** | 140 | 20 | 1.1 | 1.1 | 110 | | 75.5 | 110 | 3600 | 4300 | **NU1920M** |
| | 150 | 24 | 1.5 | 1.1 | 113 | | 94.5 | 125 | 3600 | 4300 | **NJ1020M** |
| | 180 | 34 | 2.1 | 2.1 | | 160 | 208 | 256 | 3200 | 3800 | **N220M** |
| | 180 | 34 | 2.1 | 2.1 | | 160 | 208 | 256 | 3200 | 3800 | **NF220M** |
| | 180 | 34 | 2.1 | 2.1 | 120 | | 208 | 256 | 3200 | 3800 | **NJ220M** |
| | 180 | 34 | 2.1 | 2.1 | 120 | | 208 | 256 | 3200 | 3800 | **NU220M** |
| | 180 | 34 | 2.1 | 2.1 | 120 | | 208 | 256 | 3200 | 3800 | **NU220M/W124** |
| | 180 | 34 | 2.1 | 2.1 | 120 | | 208 | 256 | 3200 | 3800 | **NU220Q1** |
| | 180 | 34 | 2.1 | 2.1 | | 163 | 275 | 330 | 3200 | 3800 | **N220E** |
| | 180 | 34 | 2.1 | 2.1 | | 163 | 275 | 330 | 3200 | 3800 | **N220ETN1** |
| | 180 | 34 | 2.1 | 2.1 | 119 | | 275 | 330 | 3200 | 3800 | **NU220E** |
| | 180 | 34 | 2.1 | 2.1 | 119 | | 275 | 330 | 3200 | 3800 | **NU220ETN1** |
| | 180 | 34 | 2.1 | 2.1 | 119 | | 275 | 330 | 3200 | 3800 | **NU220ETN1/C9** |
| | 180 | 34 | 2.1 | 2.1 | 119 | | 275 | 330 | 3200 | 3800 | **NJ220E** |
| | 180 | 34 | 2.1 | 2.1 | 119 | | 275 | 330 | 3200 | 3800 | **NJ220ETN1** |
| | 180 | 34 | | 2.1 | 119 | | 275 | 330 | 3200 | 3800 | **NUP220E** |
| | 180 | 34 | | 2.1 | 119 | | 275 | 330 | 3200 | 3800 | **NUP220ETN1** |
| | 180 | 34 | | 2.1 | 120 | | 231 | 240 | 3200 | 3800 | **NUP220M** |
| | 180 | 34 | 2.1 | 2.1 | 120 | | 195 | 240 | 3200 | 3800 | **NU220M-DT** |
| | 180 | 46 | 2.1 | 2.1 | | 160 | 275 | 385 | 3200 | 3800 | **N2220M** |
| | 180 | 46 | | 2.1 | 120 | | 275 | 385 | 3200 | 3800 | **NUP2220M** |
| | 180 | 46 | 2.1 | 2.1 | 120 | | 275 | 385 | 3200 | 3800 | **NJP2220M/P63** |
| | 180 | 46 | 2.1 | 2.1 | 120 | | 275 | 385 | 3200 | 3800 | **NJ2220M** |
| | 180 | 46 | 2.1 | 2.1 | 120 | | 275 | 385 | 3200 | 3800 | **NU2220M** |
| | 180 | 46 | 2.1 | 2.1 | 119 | | 365 | 470 | 3200 | 3800 | **NU2220E** |
| | 180 | 46 | 2.1 | 2.1 | 119 | | 365 | 470 | 3200 | 3800 | **NU2220ETN1** |
| | 180 | 60.3 | 2.1 | 2.1 | 120 | | 208 | 256 | 3200 | 3800 | **NU3220M/C3** |
| | 180 | 60.3 | 2.1 | 2.1 | 119 | | 335 | 440 | 3200 | 3800 | **NJP3220TN1/HG2P54** |

| Abutment and fillet dimensions | | | | | | | Weight | Model | Weight | Separate thrust collar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_{amin}$ | $d_{amax}$ | $d_{bmin}$ | $D_{amax}$ | $D_{amin}$ | $r_{amax}$ | $r_{bmax}$ | | | | A1 | A2 | $r_3.r_4$ |
| mm | | | | | | | kg | | kg | mm | | |
| 108 | 116 | | 187 | 181 | 2.5 | 2.5 | 9.76 | | | | | |
| 111 | 198 | | 224 | 205 | 3 | 3 | 13.3 | | | | | |
| 111 | 130 | 136 | 224 | | 3 | 3 | 13.6 | HJ419 | 1.35 | 15 | 25.23 | 4 |
| 111 | 130 | 150 | 224 | | 3 | 3 | 13.9 | HJ419 | 1.35 | 15 | 25.23 | 4 |
| 111 | | 150 | 224 | | 3 | 3 | 14.2 | | | | | |
| 111 | 116 | 130 | 169 | | 2 | 2 | 5.42 | | | | | |
| 102 | 107 | 118 | 133 | | 1 | 1 | 0.900 | | | | | |
| 105 | 110 | 123 | 132 | | 1 | 1 | 1.51 | | | | | |
| 111 | 157 | | 169 | 163 | 2 | 2 | 3.45 | | | | | |
| 111 | | | 169 | 163 | 2 | 2 | 3.55 | | | | | |
| 111 | 116 | 130 | 169 | | 2 | 2 | 3.61 | | | | | |
| 111 | 116 | 123 | 169 | | 2 | 2 | 3.52 | | | | | |
| 111 | 116 | 123 | 169 | | 2 | 2 | 3.52 | | | | | |
| 111 | 116 | 123 | 169 | | 2 | 2 | 3.57 | | | | | |
| 111 | 160 | | 169 | 166 | 2 | 2 | 3.77 | | | | | |
| 111 | 160 | | 169 | 166 | 2 | 2 | 3.75 | | | | | |
| 111 | 116 | 122 | 169 | | 2 | 2 | 3.75 | | | | | |
| 111 | 116 | 122 | 169 | | 2 | 2 | 3.39 | | | | | |
| 111 | 116 | 122 | 169 | | 2 | 2 | 3.39 | | | | | |
| 111 | 116 | 130 | 169 | | 2 | 2 | 3.81 | | | | | |
| 111 | 116 | 130 | 169 | | 2 | 2 | 3.45 | | | | | |
| 111 | | 130 | 169 | | 2 | 2 | 3.90 | | | | | |
| 111 | | 130 | 169 | | 2 | 2 | 3.54 | | | | | |
| 112 | | 130 | 168 | | 2 | 2 | 3.71 | | | | | |
| 111 | 116 | 123 | 169 | | 2 | 2 | 3.03 | | | | | |
| 111 | 116 | | 169 | 166 | 2 | 2 | 5.25 | | | | | |
| 111 | 116 | 130 | 169 | | 2 | 2 | 5.49 | | | | | |
| 111 | 116 | 130 | 169 | | 2 | 2 | 5.38 | | | | | |
| 111 | 116 | 130 | 169 | | 2 | 2 | 5.86 | | | | | |
| 111 | 116 | 122 | 169 | | 2 | 2 | 5.20 | | | | | |
| 111 | 116 | 122 | 169 | | 2 | 2 | 5.08 | | | | | |
| 111 | 116 | 122 | 169 | | 2 | 2 | 4.69 | | | | | |
| 121 | 140 | 147 | 244 | | 3 | 3 | 6.81 | | | | | |
| 121 | 140 | 147 | 244 | | 3 | 3 | 5.98 | | | | | |

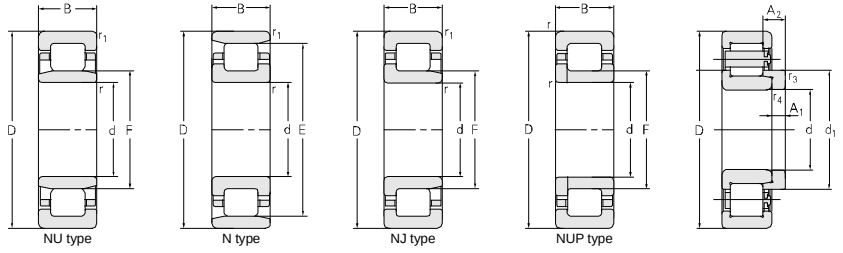
d 100 mm

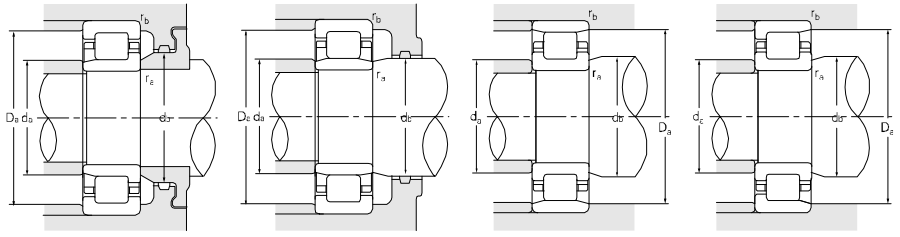


| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1smin}$ | $r_{smin}$ | F | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | | kN | | r/min | | |
| **100** | 180 | 60.3 | 2.1 | 2.1 | 120.8 | | 335 | 440 | 3200 | 3800 | **NU3220Q1/P691YAD-XD** |
| | 180 | 60.3 | 3*45* | 2.1 | 120 | | 208 | 256 | 3200 | 3800 | **NU3220M/P59YAD** |
| | 180 | 60.32 | 4 | 2.1 | 121.005 | | 358 | 515 | 3200 | 3800 | **NU5220XPC3** |
| | 180 | 60.32 | 4 | 2.1 | 121.005 | | 345 | 495 | 3200 | 3800 | **NU3220X2M/C9YA6** |
| | 215 | 47 | 3 | 3 | 127.5 | | 390 | 440 | 2400 | 3000 | **NJ320EM** |
| | 215 | 47 | 3 | 3 | 129.5 | | 335 | 400 | 2400 | 3000 | **NU320Q1** |
| | 215 | 47 | 3 | 3 | 129.5 | | 335 | 400 | 2400 | 3000 | **NH320M** |
| | 215 | 47 | | 3 | 129.5 | | 335 | 400 | 2400 | 3000 | **NUP320M** |
| | 215 | 47 | 3 | 3 | 129.5 | | 335 | 400 | 2400 | 3000 | **NU320M-DT** |
| | 215 | 47 | 3.6 | 4 | 130.19 | | 350 | 420 | 2400 | 3000 | **A-0320-22** |
| | 215 | 47 | 3 | 3 | 128.925 | | 390 | 410 | 2400 | 3000 | **NH320EQ1/HAYB2** |
| | 215 | 47 | 3 | 3 | 127.5 | | 390 | 410 | 2400 | 3000 | **NJ320EQ1/HA** |
| | 215 | 47 | 3 | 3 | | 191.5 | 430 | 465 | 2400 | 3000 | **N320E** |
| | 215 | 47 | 3 | 3 | | 191.5 | 430 | 465 | 2400 | 3000 | **N320EM** |
| | 215 | 47 | 3 | 3 | 127.5 | | 430 | 465 | 2400 | 3000 | **NU320E** |
| | 215 | 47 | 3 | 3 | 127.5 | | 430 | 465 | 2400 | 3000 | **NU320EM** |
| | 215 | 47 | 3 | 3 | 127.5 | | 430 | 465 | 2400 | 3000 | **NU320EM/W124** |
| | 215 | 47 | 3 | 3 | 127.5 | | 430 | 465 | 2400 | 3000 | **NU320EM/C9** |
| | 215 | 47 | 3 | 3 | 127.5 | | 430 | 465 | 2400 | 3000 | **NU320EQ1** |
| | 215 | 47 | 3 | 3 | 127.5 | | 430 | 465 | 2400 | 3000 | **NJ320E** |
| | 215 | 73 | 3 | 3 | | 185.5 | 480 | 625 | 2400 | 3000 | **N2320M** |
| | 215 | 73 | 3 | 3 | 129.5 | | 480 | 625 | 2400 | 3000 | **NU2320M** |
| | 215 | 73 | 3 | 3 | 129.5 | | 480 | 625 | 2400 | 3000 | **NJ2320M** |
| | 215 | 73 | 3 | 3 | 129.5 | | 480 | 625 | 2400 | 3000 | **NJ2320M/YA8** |
| | 215 | 73 | 3 | 3 | 129.5 | | 480 | 625 | 2400 | 3000 | **NJ2320M/C4W124YA8** |
| | 215 | 73 | 3 | 3 | | 191.5 | 645 | 760 | 2400 | 3000 | **N2320E** |
| | 215 | 73 | 3 | 3 | 127.5 | | 645 | 760 | 2400 | 3000 | **NU2320E** |
| | 215 | 73 | 3 | 3 | 127.5 | | 645 | 760 | 2400 | 3000 | **NU2320EM/C9** |
| | 215 | 73 | 3 | 3 | 127.5 | | 645 | 760 | 2400 | 3000 | **NU2320ETN1/C9** |
| | 215 | 73 | 3 | 3 | 127.5 | | 645 | 760 | 2400 | 3000 | **NJ2320E** |
| | 215 | 73 | 3 | 3 | 127.5 | | 645 | 760 | 2400 | 3000 | **NJ2320EQ1** |
| | 215 | 73 | 3 | 3 | 127.5 | | 645 | 760 | 2400 | 3000 | **NU2320EMA** |
| | 215 | 82.6 | 3 | 3 | | 185.5 | 560 | 760 | 2400 | 3000 | **NF3320Q1** |
| | 250 | 58 | 4 | 4 | | 211 | 505 | 590 | 2400 | 3000 | **N420M** |
| | 250 | 58 | 4 | 4 | 139 | | 505 | 590 | 2400 | 3000 | **NU420M** |
| | 250 | 58 | 4 | 4 | 139 | | 505 | 590 | 2400 | 3000 | **NJ420M** |

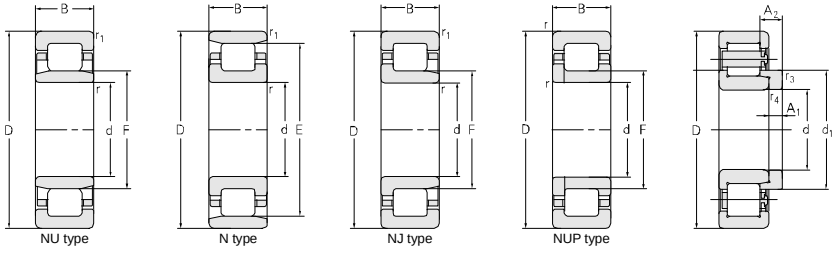
| Abutment and fillet dimensions | | | | | | | Weight | Model | Weight | Separate thrust collar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $da_{min}$ | $da_{max}$ | $db_{min}$ | $Da_{max}$ | $Da_{min}$ | $ra_{max}$ | $rb_{max}$ | | | | A1 | A2 | $r_3.r_4$ |
| mm | | | | | | | kg | | kg | mm | | |
| 121 | 140 | 147 | 244 | | 3 | 3 | 7.17 | | | | | |
| 121 | 140 | 147 | 244 | | 3 | 3 | 7.06 | | | | | |
| 115 | 119 | 123 | 170 | | 2 | 2 | 7.69 | | | | | |
| 115 | 119 | 123 | 170 | | 2 | 2 | 7.69 | | | | | |
| 113 | 124 | 142 | 202 | | 2.5 | 2.5 | 9.82 | HJ320E | 0.888 | 13 | 20.5 | 3 |
| 113 | 124 | 132 | 202 | | 2.5 | 2.5 | 8.78 | HJ320 | 0.867 | 13 | 22.5 | 3 |
| 113 | 124 | 142 | 202 | | 2.5 | 2.5 | 9.64 | | | | | |
| 113 | | 142 | 202 | | 2.5 | 2.5 | 9.05 | | | | | |
| 113 | 120 | | 202 | | 2.5 | 2.5 | 8.55 | HJ320 | 0.867 | 13 | 22.5 | 3 |
| 113 | 124 | 142 | 202 | | 2.5 | 2.5 | 9.15 | | | | | |
| 113 | 124 | 142 | 202 | | 2.5 | 2.5 | 9.69 | | | | | |
| 113 | 124 | 142 | 202 | | 2.5 | 2.5 | 9.59 | HJ320E | 0.888 | 13 | 20.5 | 3 |
| 113 | 188 | | 202 | 195 | 2.5 | 2.5 | 8.24 | | | | | |
| 113 | 188 | | 202 | 195 | 2.5 | 2.5 | 9.67 | | | | | |
| 113 | 124 | 130 | 202 | | 2.5 | 2.5 | 8.35 | HJ320E | 0.888 | 13 | 20.5 | 3 |
| 113 | 124 | 130 | 202 | | 2.5 | 2.5 | 9.67 | HJ320E | 0.888 | 13 | 20.5 | 3 |
| 113 | 124 | 130 | 202 | | 2.5 | 2.5 | 9.67 | HJ320E | 0.888 | 13 | 20.5 | 3 |
| 113 | 124 | 130 | 202 | | 2.5 | 2.5 | 9.67 | HJ320E | 0.888 | 13 | 20.5 | 3 |
| 113 | 124 | 130 | 202 | | 2.5 | 2.5 | 9.59 | HJ320E | 0.888 | 13 | 20.5 | 3 |
| 113 | 124 | 142 | 202 | | 2.5 | 2.5 | 8.50 | HJ320E | 0.888 | 13 | 20.5 | 3 |
| 113 | 182 | | 202 | 190 | 2.5 | 2.5 | 13.1 | | | | | |
| 113 | 125 | 133 | 202 | | 2.5 | 2.5 | 13.2 | HJ2320 | 0.98 | 13 | 27.23 | 3 |
| 113 | 125 | 142 | 202 | | 2.5 | 2.5 | 13.5 | HJ2320 | 0.98 | 13 | 27.23 | 3 |
| 113 | 125 | 142 | 202 | | 2.5 | 2.5 | 13.5 | HJ2320 | 0.98 | 13 | 27.23 | 3 |
| 113 | 125 | 142 | 202 | | 2.5 | 2.5 | 13.5 | HJ2320 | 0.98 | 13 | 27.23 | 3 |
| 113 | 188 | | 202 | 195 | 2.5 | 2.5 | 12.9 | | | | | |
| 113 | 124 | 130 | 202 | | 2.5 | 2.5 | 12.7 | HJ2320E | 0.946 | 23.28 | 23.5 | 3 |
| 113 | 124 | 130 | 202 | | 2.5 | 2.5 | 13.8 | HJ2320E | 0.946 | 23.28 | 23.5 | 3 |
| 113 | 124 | 130 | 202 | | 2.5 | 2.5 | 11.5 | HJ2320E | 0.946 | 23.28 | 23.5 | 3 |
| 113 | 124 | 142 | 202 | | 2.5 | 2.5 | 12.9 | HJ2320E | 0.946 | 23.28 | 23.5 | 3 |
| 113 | | 142 | 202 | | 2.5 | 2.5 | 12.9 | HJ2320E | 0.946 | 23.28 | 23.5 | 3 |
| 113 | 124 | 130 | 202 | | 2.5 | 2.5 | 13.4 | | | | | |
| 113 | | | 202 | 195 | 2.5 | 2.5 | 15.6 | | | | | |
| 116 | 208 | | 234 | 215 | 3 | 3 | 15.4 | | | | | |
| 116 | 135 | 142 | 234 | | 3 | 3 | 15.5 | | | | | |
| 116 | 135 | 156 | 234 | | 3 | 3 | 15.9 | | | | | |

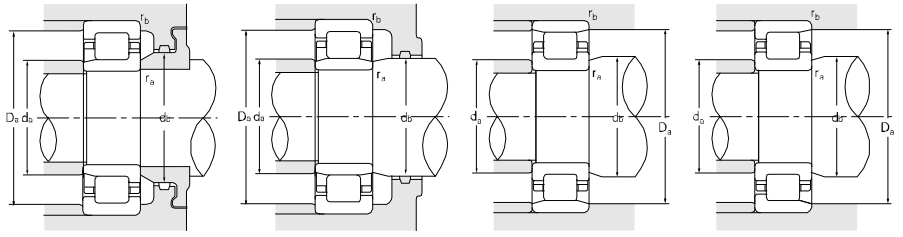


| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1smin}$ | $r_{smin}$ | F | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | | kN | | r/min | | |
| **105** | 160 | 26 | 2 | 1.1 | | 145.5 | 120 | 170 | 4000 | 4800 | **NF1021M** |
| | 160 | 26 | 2 | 1.1 | | 145.5 | 120 | 170 | 4000 | 4800 | **N1021M** |
| | 190 | 36 | 2.1 | 2.1 | | 168.8 | 225 | 285 | 3000 | 3600 | **N221M** |
| | 190 | 36 | 2.1 | 2.1 | 126.8 | | 225 | 285 | 3000 | 3600 | **NJ221M** |
| | 190 | 36 | 2.1 | 2.1 | 126.8 | | 225 | 285 | 3000 | 3600 | **NU221M/W124** |
| | 190 | 36 | 2.1 | 2.1 | 125 | | 290 | 315 | 3000 | 3600 | **NJ221EM** |
| | 190 | 36 | 2.1 | 2.1 | 125 | | 290 | 315 | 3000 | 3600 | **NU221EM/C9** |
| | 190 | 36 | 2.1 | 2.1 | 125 | | 290 | 315 | 3000 | 3600 | **NU221EM** |
| | 190 | 65.1 | 2.1 | 2.1 | 126.8 | | 350 | 500 | 3000 | 3600 | **NU3221M/C3** |
| | 225 | 49 | 3 | 3 | | 201 | 480 | 525 | 2200 | 2800 | **N321EM** |
| | 225 | 49 | 3 | 3 | 133 | | 480 | 525 | 2200 | 2800 | **NJ321EM** |
| | 225 | 49 | 3 | 3 | 133 | | 480 | 525 | 2200 | 2800 | **NU321EM** |
| | 225 | 49 | 3 | 3 | 133 | | 480 | 525 | 2200 | 2800 | **NU321EM/C9** |
| | 225 | 87.3 | 3 | 3 | | 196 | 660 | 910 | 2200 | 2800 | **N3321** |
| | 260 | 60 | 4 | 4 | | 220.5 | 560 | 655 | 2200 | 2800 | **N421M** |
| | 260 | 60 | 4 | 4 | 144.5 | | 560 | 655 | 2200 | 2800 | **NU421M** |
| | 260 | 60 | 4 | 4 | 144.5 | | 560 | 655 | 2200 | 2800 | **NJ421M/C5** |
| **107.95** | 165.1 | 57.15 | 2.5 | 2.5 | 127 | | 285 | 590 | 3000 | 3600 | **NA6/107X4/C9** |
| **110** | 170 | 28 | 2 | 1.1 | | 155 | 140 | 195 | 3800 | 4500 | **N1022M** |
| | 170 | 28 | 2 | 1.1 | 125 | | 140 | 195 | 3800 | 4500 | **NU1022M** |
| | 170 | 28 | 2 | 1.1 | 125 | | 140 | 195 | 3800 | 4500 | **NJ1022M** |
| | 170 | 28 | | 2 | 125 | | 140 | 195 | 3800 | 4500 | **NUP1022M** |
| | 170 | 28 | | 2 | 125 | | 140 | 195 | 3800 | 4500 | **NUP1022TN1/C9YB2** |
| | 200 | 38 | 2.1 | 2.1 | | 178.5 | 255 | 315 | 2800 | 3400 | **N222J** |
| | 200 | 38 | 2.1 | 2.1 | 132.5 | | 255 | 315 | 2800 | 3400 | **NU222M/YA8** |
| | 200 | 38 | 2.1 | 2.1 | 132.5 | | 255 | 315 | 2800 | 3400 | **NU222Q1** |
| | 200 | 38 | 2.1 | 2.1 | | 178.5 | 255 | 315 | 2800 | 3400 | **NF222M** |
| | 200 | 38 | 2.1 | 2.1 | | 178.5 | 270 | 335 | 2800 | 3400 | **N222M** |
| | 200 | 38 | 2.1 | 2.1 | 132.5 | | 270 | 335 | 2800 | 3400 | **NJ222M** |
| | 200 | 38 | 2.1 | 2.1 | 132.5 | | 270 | 335 | 2800 | 3400 | **NU222M/W124** |
| | 200 | 38 | 2.1 | 2.1 | 132.5 | | 270 | 335 | 2800 | 3400 | **NU222M** |
| | 200 | 38 | 2.1 | 2.1 | 132.5 | | 320 | 350 | 2800 | 3400 | **NU222EM/C9** |
| | 200 | 38 | 2.1 | 2.1 | | 180.5 | 320 | 350 | 2800 | 3400 | **N222EM** |
| | 200 | 38 | 2.1 | 2.1 | 132.5 | | 320 | 350 | 2800 | 3400 | **NJ222EM** |

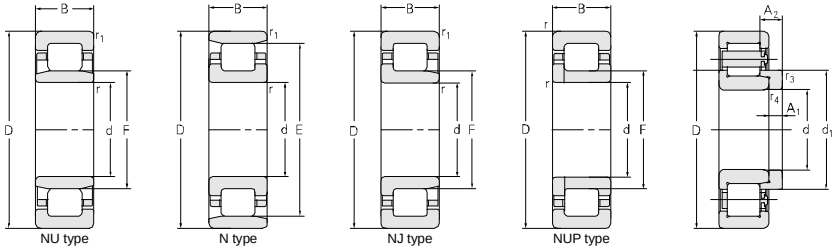
| Abutment and fillet dimensions | | | | | | | Weight | Model | Weight | Separate thrust collar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $da_{min}$ | $da_{max}$ | $db_{min}$ | $Da_{max}$ | $Da_{min}$ | $ra_{max}$ | $rb_{max}$ | | | | A1 | A2 | $r_3.r_4$ |
| mm | | | | | | | kg | | kg | mm | | |
| 111.5 | 141 | | 151 | 149 | 2 | 1 | 1.93 | | | | | |
| 111.5 | 166 | | 151 | 149 | 2 | 1 | 1.85 | | | | | |
| 116 | 121 | | 179 | 172 | 2 | 2 | 4.33 | | | | | |
| 116 | 198 | 137 | 179 | | 2 | 2 | 4.34 | | | | | |
| 116 | 198 | 137 | 179 | | 2 | 2 | 4.25 | | | | | |
| 116 | 198 | 137 | 179 | | 2 | 2 | 4.52 | | | | | |
| 116 | 198 | 137 | 179 | | 2 | 2 | 4.42 | | | | | |
| 116 | 198 | 137 | 179 | | 2 | 2 | 4.33 | | | | | |
| 116 | 122 | 128 | 179 | | 2 | 2 | 8.22 | | | | | |
| 118 | 130 | | 212 | 203 | 2.5 | 2.5 | 10.5 | | | | | |
| 118 | 130 | 148 | 212 | | 2.5 | 2.5 | 10.7 | | | | | |
| 118 | 217 | 136 | 212 | | 2.5 | 2.5 | 10.6 | | | | | |
| 118 | 217 | 136 | 212 | | 2.5 | 2.5 | 10.6 | | | | | |
| 116 | 193 | | 208 | 199 | 2.5 | 2.5 | 18.3 | | | | | |
| 121 | 151 | | 244 | 224 | 3 | 3 | 17.2 | | | | | |
| 121 | 217 | 136 | 244 | | 3 | 3 | 17.3 | | | | | |
| 121 | 217 | 136 | 244 | | 3 | 3 | 17.6 | | | | | |
| 114 | 121 | 125 | 155 | | 2 | 2 | 5.11 | | | | | |
| 116.5 | 123 | | 161 | 157 | 2 | 1 | 2.31 | | | | | |
| 116.5 | 175 | 128 | 161 | | 2 | 1 | 2.32 | | | | | |
| 116.5 | 175 | 128 | 161 | | 2 | 1 | 2.39 | | | | | |
| 116 | | 135 | 161 | | 2 | 2 | 2.45 | | | | | |
| 116 | | 135 | 161 | | 2 | 2 | 2.17 | | | | | |
| 121 | 175 | | 189 | 181 | 2 | 2 | 4.70 | | | | | |
| 121 | 129 | 135 | 189 | | 2 | 2 | 5.30 | | | | | |
| 121 | 177 | 135 | 189 | | 2 | 2 | 5.36 | | | | | |
| 121 | 129 | | 189 | 181 | 2 | 2 | 5.17 | | | | | |
| 121 | 129 | | 189 | 181 | 2 | 2 | 5.02 | | | | | |
| 121 | 129 | 145 | 189 | | 2 | 2 | 5.10 | | | | | |
| 121 | 129 | 135 | 189 | | 2 | 2 | 5.05 | | | | | |
| 121 | 129 | 135 | 189 | | 2 | 2 | 5.05 | | | | | |
| 121 | 129 | | 189 | 183 | 2 | 2 | 5.28 | | | | | |
| 121 | 129 | | 189 | 183 | 2 | 2 | 5.27 | | | | | |
| 121 | 204 | 145 | 189 | | 2 | 2 | 5.38 | | | | | |

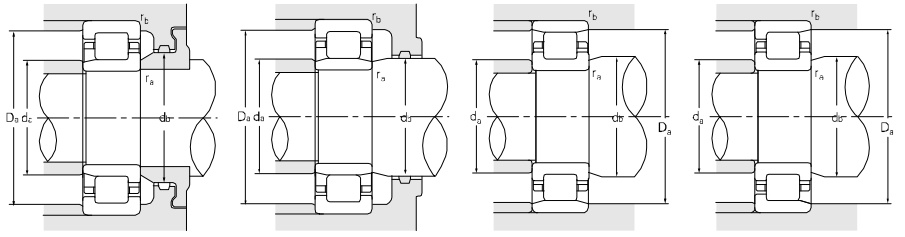


| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1smin}$ | $r_{smin}$ | F | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | | kN | | r/min | | |
| **110** | 200 | 38 | 2.1 | 2.1 | | 180.5 | 320 | 350 | 2800 | 3400 | **N222E** |
| | 200 | 38 | 2.1 | 2.1 | 132.5 | | 320 | 350 | 2800 | 3400 | **NU222E** |
| | 200 | 38 | 2.1 | 2.1 | 132.5 | | 320 | 350 | 2800 | 3400 | **NJ222E** |
| | 200 | 53 | | 2 | 132 | | 352 | 470 | 2800 | 3400 | **NUP2222M** |
| | 200 | 53 | 2.1 | 2.1 | 132 | | 352 | 470 | 2800 | 3400 | **NU2222M** |
| | 200 | 53 | 2.1 | 2.1 | 132 | | 352 | 470 | 2800 | 3400 | **NJ2222M** |
| | 200 | 53 | 2 | 2 | 132 | | 420 | 520 | 2800 | 3400 | **NU2222ETN1/C9** |
| | 200 | 69.8 | 2.1 | 2.1 | 132.5 | | 450 | 655 | 2800 | 3400 | **NU3222M/C3** |
| | 240 | 50 | 3 | 3 | | 207 | 410 | 480 | 2000 | 2600 | **N322** |
| | 240 | 50 | 3 | 3 | 143 | | 410 | 480 | 2000 | 2600 | **NU322M-DT** |
| | 240 | 50 | 3 | 3 | | 207 | 430 | 515 | 2000 | 2600 | **N322M** |
| | 240 | 50 | 3 | 3 | 143 | | 430 | 515 | 2000 | 2600 | **NJ322M** |
| | 240 | 50 | 3 | 3 | 143 | | 430 | 515 | 2000 | 2600 | **NU322M** |
| | 240 | 50 | 3 | 3 | 143 | | 430 | 515 | 2000 | 2600 | **NU322Q1** |
| | 240 | 50 | | 3 | 143 | | 430 | 515 | 2000 | 2600 | **NUP322M** |
| | 240 | 50 | 3 | 3 | | 211 | 510 | 520 | 2000 | 2600 | **N322EM** |
| | 240 | 50 | 3 | 3 | 143 | | 510 | 520 | 2000 | 2600 | **NU322EM** |
| | 240 | 50 | 3 | 3 | 143 | | 510 | 520 | 2000 | 2600 | **NU322ETN1/C9** |
| | 240 | 50 | 3 | 3 | 143 | | 510 | 520 | 2000 | 2600 | **NU322EM/W124** |
| | 240 | 50 | 3 | 3 | | 211 | 510 | 520 | 2000 | 2600 | **N322E** |
| | 240 | 50 | 3 | 3 | 143 | | 510 | 520 | 2000 | 2600 | **NJ322E** |
| | 240 | 50 | 3 | 3 | 143 | | 510 | 520 | 2000 | 2600 | **NU322E** |
| | 240 | 50 | 3 | 3 | 143 | | 510 | 520 | 2000 | 2600 | **NU322EQ1/C9** |
| | 240 | 80 | 3 | 3 | 143 | | 750 | 865 | 2000 | 2600 | **NU2322EQ1** |
| | 240 | 80 | 3 | 3 | 143 | | 750 | 865 | 2000 | 2600 | **NJ2322EM/YA8** |
| | 240 | 80 | 3 | 3 | 143 | | 750 | 865 | 2000 | 2600 | **NJ2322EM** |
| | 240 | 80 | 3 | 3 | 143 | | 750 | 865 | 2000 | 2600 | **NU2322EM** |
| | 240 | 80 | 3 | 3 | 143 | | 750 | 865 | 2000 | 2600 | **NU2322M/C9** |
| | 240 | 80 | 3 | 3 | 143 | | 750 | 865 | 2000 | 2600 | **NU2322E** |
| | 240 | 80 | 3 | 3 | | 211 | 750 | 865 | 2000 | 2600 | **N2322E** |
| | 240 | 80 | 3 | 3 | 143 | | 750 | 865 | 2000 | 2600 | **FL-NU2322EM/P6** |
| | 280 | 65 | 4 | 4 | | 235 | 615 | 725 | 2000 | 2600 | **N422M** |
| | 280 | 65 | 4 | 4 | 155 | | 615 | 725 | 2000 | 2600 | **NU422M** |
| | 280 | 65 | 4 | 4 | 155 | | 615 | 725 | 2000 | 2600 | **NJ422M** |
| **120** | 160 | 27 | 1.1 | 1.1 | 152 | | 105 | 170 | 3400 | 4000 | **NF2924X1M** |

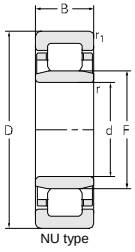
| Abutment and fillet dimensions | | | | | | | Weight | Model | Weight | Separate thrust collar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_{amin}$ | $d_{amax}$ | $d_{bmin}$ | $D_{amax}$ | $D_{amin}$ | $r_{amax}$ | $r_{bmax}$ | | | | A1 | A2 | $r_3.r_4$ |
| mm | | | | | | | kg | | kg | mm | | |
| 121 | 177 | | 189 | 183 | 2 | 2 | 5.11 | | | | | |
| 121 | 129 | 135 | 189 | | 2 | 2 | 5.12 | | | | | |
| 121 | 204 | 145 | 189 | | 2 | 2 | 5.02 | | | | | |
| 121 | | 145 | 189 | | 2 | 2 | 7.95 | | | | | |
| 121 | 129 | 135 | 189 | | 2 | 2 | 7.63 | | | | | |
| 121 | 138 | 145 | 189 | | 2 | 2 | 7.83 | | | | | |
| 121 | | 145 | 189 | | 2 | 2 | 6.57 | | | | | |
| 121 | 129 | 135 | 189 | | 2 | 2 | 9.92 | | | | | |
| 123 | 208 | | 227 | 210 | 2.5 | 2.5 | 10.2 | | | | | |
| 123 | 139 | 146 | 227 | | 2.5 | 2.5 | 11.6 | HJ322E | 1.25 | 14 | 22 | 3 |
| 123 | 139 | | 227 | 210 | 2.5 | 2.5 | 11.4 | | | | | |
| 123 | 139 | 159 | 227 | | 2.5 | 2.5 | 11.8 | | | | | |
| 123 | 139 | 146 | 227 | | 2.5 | 2.5 | 11.6 | | | | | |
| 123 | | 146 | 227 | | 2.5 | 2.5 | 11.6 | | | | | |
| 123 | 230 | 159 | 227 | | 2.5 | 2.5 | 10.3 | | | | | |
| 123 | 204 | | 227 | 215 | 2.5 | 2.5 | 11.4 | | | | | |
| 123 | 139 | 146 | 227 | | 2.5 | 2.5 | 11.5 | HJ322E | 1.25 | 14 | 22 | 3 |
| 123 | 139 | 146 | 227 | | 2.5 | 2.5 | 10.4 | HJ322E | 1.25 | 14 | 22 | 3 |
| 123 | 139 | 146 | 227 | | 2.5 | 2.5 | 11.5 | HJ322E | 1.25 | 14 | 22 | 3 |
| 123 | 204 | | 227 | 215 | 2.5 | 2.5 | 11.2 | | | | | |
| 123 | 139 | 159 | 227 | | 2.5 | 2.5 | 11.4 | HJ322E | 1.25 | 14 | 22 | 3 |
| 123 | 139 | 146 | 227 | | 2.5 | 2.5 | 11.3 | HJ322E | 1.25 | 14 | 22 | 3 |
| 123 | 139 | 146 | 227 | | 2.5 | 2.5 | 11.8 | HJ322E | 1.25 | 14 | 22 | 3 |
| 123 | 138 | 146 | 227 | | 2.5 | 2.5 | 17.6 | HJ2322E1.31 | | 14 | 26.22 | 3 |
| 123 | 138 | 159 | 227 | | 2.5 | 2.5 | 18.8 | HJ2322E1.31 | | 14 | 26.22 | 3 |
| 123 | 138 | 159 | 227 | | 2.5 | 2.5 | 18.7 | HJ2322E1.31 | | 14 | 26.22 | 3 |
| 123 | 138 | 146 | 227 | | 2.5 | 2.5 | 18.3 | HJ2322E1.31 | | 14 | 26.22 | 3 |
| 123 | 133 | 146 | 227 | | 2.5 | 2.5 | 18.3 | HJ2322E1.31 | | 14 | 26.22 | 3 |
| 123 | 138 | 146 | 227 | | 2.5 | 2.5 | 17.6 | HJ2322E1.31 | | 14 | 26.22 | 3 |
| 123 | 138 | | 227 | 215 | 2.5 | 2.5 | 17.5 | | | | | |
| 123 | 138 | 146 | 227 | | 2.5 | 2.5 | 18.6 | | | | | |
| 126 | 150 | | 264 | 240 | 3 | 3 | 21.8 | | | | | |
| 126 | 150 | 158 | 264 | | 3 | 3 | 22.0 | | | | | |
| 126 | 129 | 174 | 264 | | 3 | 3 | 22.3 | | | | | |
| 126 | 130 | | 158 | 150 | 1 | 1 | 1.74 | | | | | |



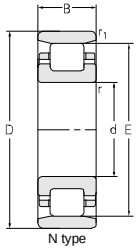



| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1smin}$ | $r_{smin}$ | F | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | | kN | | r/min | | |
| **120** | 180 | 28 | 2 | 1.1 | 135 | | 145 | 205 | 3400 | 4000 | **NU1024M** |
| | 180 | 28 | 2 | 1.1 | 135 | | 145 | 205 | 3400 | 4000 | **NU1024MA** |
| | 180 | 28 | 2 | 1.1 | 135 | | 145 | 205 | 3400 | 4000 | **NJ1024M** |
| | 215 | 40 | 2.1 | 2.1 | 143.5 | | 290 | 210 | 2400 | 3000 | **NU224M/P59** |
| | 215 | 40 | 2.1 | 2.1 | | 191.5 | 305 | 390 | 2400 | 3000 | **N224M** |
| | 215 | 40 | 2.1 | 2.1 | 143.5 | | 305 | 390 | 2400 | 3000 | **NJ224M** |
| | 215 | 40 | 2.1 | 2.1 | 143.5 | | 305 | 390 | 2400 | 3000 | **NU224M** |
| | 215 | 40 | 2.1 | 2.1 | 143.5 | | 305 | 390 | 2400 | 3000 | **NU224M-DT** |
| | 215 | 40 | 2.1 | 2.1 | 143.5 | | 375 | 420 | 2400 | 3000 | **NU224EMA** |
| | 215 | 40 | 2.1 | 2.1 | | 195.5 | 375 | 420 | 2400 | 3000 | **N224E** |
| | 215 | 40 | 2.1 | 2.1 | 143.5 | | 375 | 420 | 2400 | 3000 | **NU224E** |
| | 215 | 40 | 2.1 | 2.1 | 143.5 | | 375 | 420 | 2400 | 3000 | **NJ224E** |
| | 215 | 40 | 2.1 | 2.1 | 143.5 | | 375 | 420 | 2400 | 3000 | **NJ224EM** |
| | 215 | 40 | 2.1 | 2.1 | 143.5 | | 375 | 420 | 2400 | 3000 | **NUP224E** |
| | 215 | 40 | 2.1 | 2.1 | 143.5 | | 375 | 420 | 2400 | 3000 | **NU224EQ1** |
| | 215 | 40 | 2.1 | 2.1 | 143.5 | | 375 | 420 | 2400 | 3000 | **NU224EM** |
| | 215 | 40 | 2.1 | 2.1 | 143.5 | | 375 | 420 | 2400 | 3000 | **NU224EM/W124** |
| | 215 | 40 | 2.1 | 2.1 | 143.5 | | 375 | 420 | 2400 | 3000 | **NU224EM/C9** |
| | 215 | 58 | 2.1 | 2.1 | | 191.5 | 395 | 550 | 2400 | 3000 | **N2224M** |
| | 215 | 58 | 2.1 | 2.1 | 143.5 | | 395 | 550 | 2400 | 3000 | **NU2224M** |
| | 215 | 58 | 2.1 | 2.1 | 143.5 | | 395 | 550 | 2400 | 3000 | **NJ2224M** |
| | 215 | 58 | 2.1 | 2.1 | 143.5 | | 500 | 605 | 2400 | 3000 | **NJ2224EM** |
| | 215 | 58 | 2.1 | 2.1 | | 195.5 | 500 | 605 | 2400 | 3000 | **NF2224EM** |
| | 215 | 58 | 2.1 | 2.1 | | 195.5 | 500 | 605 | 2400 | 3000 | **N2224E** |
| | 215 | 58 | 2.1 | 2.1 | 143.5 | | 500 | 605 | 2400 | 3000 | **NU2224E** |
| | 215 | 58 | 2.1 | 2.1 | 143.5 | | 500 | 605 | 2400 | 3000 | **NU2224ETN1** |
| | 215 | 58 | 2.1 | 2.1 | 143.5 | | 500 | 605 | 2400 | 3000 | **NU2224ETN1/C9** |
| | 215 | 58 | 2.1 | 2.1 | 143.5 | | 500 | 605 | 2400 | 3000 | **NJ2224E** |
| | 215 | 76 | 2.1 | 2.1 | 145.14 | | 515 | 780 | 2400 | 3000 | **NU3224M** |
| | 215 | 76 | 2.1 | 2.1 | 145.14 | | 515 | 780 | 2400 | 3000 | **NU3224M/C4** |
| | 215 | 76.2 | 5.1 | 2 | 145.14 | | 515 | 780 | 2200 | 2800 | **NU3224X2M/C9YA6** |
| | 215 | 76.2 | 5.1 | 2 | 145.14 | | 550 | 845 | 2200 | 2800 | **NU5224XPC3** |
| | 240 | 80 | 3 | 3.7 | 150 | | 530 | 790 | 2400 | 3200 | **NJ624M** |
| | 260 | 55 | 3 | 3 | | 226 | 505 | 600 | 2400 | 3000 | **NF324M** |
| | 260 | 55 | 3 | 3 | | 226 | 460 | 600 | 2400 | 3000 | **NF324M/YA8** |
| | 260 | 55 | 3 | 3 | | 226 | 490 | 645 | 1900 | 2400 | **N324M** |

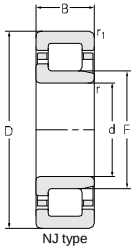
| Abutment and fillet dimensions | | | | | | | Weight | Model | Weight | Separate thrust collar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_{amin}$ | $d_{amax}$ | $d_{bmin}$ | $D_{amax}$ | $D_{amin}$ | $r_{amax}$ | $r_{bmax}$ | | | | A1 | A2 | $r_3.r_4$ |
| mm | | | | | | | kg | | kg | mm | | |
| 126.5 | 133 | 138 | 171 | | 2 | 1 | 2.96 | | | | | |
| 126.5 | 133 | 138 | 171 | | 2 | 1 | 2.96 | | | | | |
| 126.5 | 188 | 144 | 171 | | 2 | 1 | 3.09 | | | | | |
| 131 | 140 | 146 | 204 | | 2 | 2 | 6.27 | | | | | |
| 131 | 140 | | 204 | 195 | | | 6.11 | | | | | |
| 131 | 140 | 156 | 204 | | 2 | 2 | 6.39 | HJ224 | 0.698 | 11 | 18.73 | 2.1 |
| 131 | 192 | 146 | 204 | | 2 | 2 | 6.27 | HJ224 | 0.698 | 11 | 18.73 | 2.1 |
| 131 | 192 | 146 | 204 | | 2 | 2 | 6.19 | | | | | |
| 131 | 192 | 146 | 204 | | 2 | 2 | 6.92 | | | | | |
| 131 | 140 | | 204 | 199 | 2 | 2 | 6.32 | | | | | |
| 131 | 140 | 146 | 204 | | 2 | 2 | 6.73 | | | | | |
| 131 | | 156 | 204 | | 2 | 2 | 6.67 | | | | | |
| 131 | | 156 | 204 | | 2 | 2 | 6.68 | | | | | |
| 131 | | 156 | 204 | | 2 | 2 | 6.80 | | | | | |
| 131 | 140 | 146 | 204 | | 2 | 2 | 6.88 | | | | | |
| 131 | 140 | 146 | 204 | | 2 | 2 | 6.74 | | | | | |
| 131 | 140 | 146 | 204 | | 2 | 2 | 6.78 | | | | | |
| 131 | 140 | 146 | 204 | | 2 | 2 | 6.74 | | | | | |
| 131 | 188 | | 204 | 195 | 2 | 2 | 8.92 | | | | | |
| 131 | 139 | 146 | 204 | | 2 | 2 | 9.31 | | | | | |
| 131 | 139 | 156 | 204 | | 2 | 2 | 9.46 | | | | | |
| 131 | 140 | 156 | 204 | | 2 | 2 | 9.80 | | | | | |
| 130 | | | 206 | 199 | 2 | 2 | 9.72 | | | | | |
| 131 | 192 | | 204 | 199 | 2 | 2 | 9.15 | | | | | |
| 131 | 140 | 146 | 204 | | 2 | 2 | 9.00 | | | | | |
| 131 | 140 | 146 | 204 | | 2 | 2 | 8.33 | | | | | |
| 131 | 140 | 146 | 204 | | 2 | 2 | 8.33 | | | | | |
| 131 | 140 | 156 | 204 | | 2 | 2 | 9.15 | | | | | |
| 131 | 140 | 146 | 204 | | 2 | 2 | 12.4 | | | | | |
| 131 | 140 | 146 | 204 | | 2 | 2 | 12.4 | | | | | |
| 135.6 | 142 | 148 | 204 | | 1.5 | 2 | 12.6 | | | | | |
| 135.6 | 142 | 148 | 204 | | 1.5 | 2 | 12.6 | | | | | |
| 140 | 147 | 165 | 222 | | 2.5 | 2.5 | 17.7 | | | | | |
| 133 | 222 | | 247 | 230 | 2.5 | 2.5 | 14.3 | | | | | |
| 133 | 222 | | 247 | 230 | 2.5 | 2.5 | 14.3 | | | | | |
| 133 | | | 247 | 230 | 2.5 | 2.5 | 15.1 | | | | | |



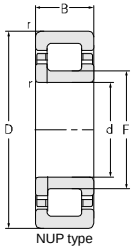
NU type



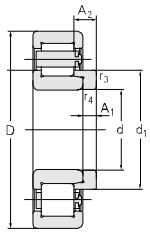
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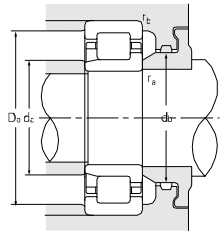


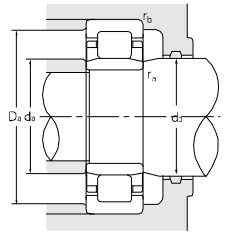
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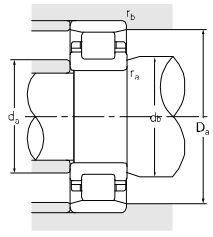


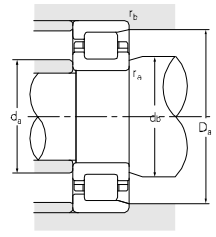
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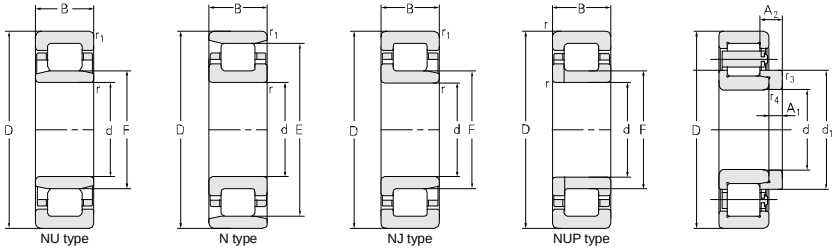



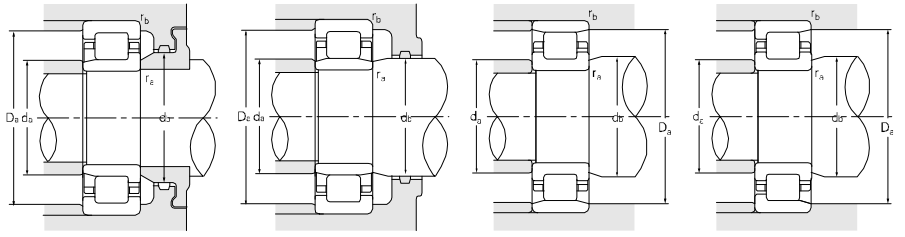




| Principal dimensions | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1smin}$ | $r_{smin}$ | F | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | | kN | | r/min | | |
| **120**260 | 55 | 3 | 3 | | | 226 | 490 | 645 | 1900 | 2400 | **N324J** |
| 260 | 55 | 3 | 3 | | 154 | | 540 | 645 | 1900 | 2400 | **NU324M** |
| 260 | 55 | 3 | 3 | | 154 | | 540 | 645 | 1900 | 2400 | **NU324M/W124** |
| 260 | 55 | 3 | 3 | | 154 | | 540 | 645 | 1900 | 2400 | **NU324Q1** |
| 260 | 55 | 3 | 3 | | 154 | | 540 | 645 | 1900 | 2400 | **NJ324M** |
| 260 | 55 | 3 | 3 | | 154 | | 560 | 660 | 1900 | 2400 | **NJ324EQ1A/C9YA8** |
| 260 | 55 | | 3 | | 154 | | 540 | 645 | 1900 | 2400 | **NUP324M** |
| 260 | 55 | 3 | 3 | | 154 | | 590 | 710 | 1900 | 2400 | **NU324EM** |
| 260 | 55 | 3 | 3 | | | 230 | 540 | 710 | 1900 | 2400 | **N324E** |
| 260 | 55 | 3 | 3 | | 154 | | 595 | 710 | 1900 | 2400 | **NU324E** |
| 260 | 55 | 3 | 3 | | 154 | | 590 | 710 | 1900 | 2400 | **NU324ETN1/C9** |
| 260 | 55 | 3 | 3 | | 154 | | 594 | 710 | 1900 | 2400 | **NJ324E** |
| 260 | 55 | 3 | 3 | | 154 | | 490 | 710 | 1900 | 2400 | **NU324M-DT/YB2** |
| 260 | 55 | 3 | 3 | | 154 | | 490 | 710 | 1900 | 2400 | **NU324L3-DT/YB2** |
| 260 | 55 | 3 | 3 | | 154 | | 490 | 710 | 1900 | 2400 | **NU324L3-DT** |
| 260 | 55 | 3 | 3 | | 154 | | 490 | 710 | 1900 | 2400 | **NU324M-DT** |
| 260 | 86 | 3 | 3 | | | 226 | 735 | 970 | 1900 | 2400 | **N2324M** |
| 260 | 86 | 3 | 3 | | 154 | | 735 | 970 | 1900 | 2400 | **NU2324M** |
| 260 | 86 | 3 | 3 | | 154 | | 780 | 1040 | 1900 | 2400 | **NJ2324M/YA8-1** |
| 260 | 86 | 3 | 3 | | 154 | | 735 | 970 | 1900 | 2400 | **NJ2324M** |
| 260 | 86 | 3 | 3 | | 154 | | 780 | 1040 | 1900 | 2400 | **NJ2324M/C4YA8** |
| 260 | 86 | 3 | 3 | | 154 | | 780 | 1040 | 1900 | 2400 | **NJ2324M/C4W124YA8-1** |
| 260 | 86 | 3 | 3 | | 154 | | 860 | 1040 | 1900 | 2400 | **FL-NJ2324EQ1A** |
| 260 | 86 | 3 | 3 | | 154 | | 860 | 1040 | 1900 | 2400 | **FL-NJ2324EQ1A/C3** |
| 260 | 104.775 | 3 | 3 | | | 230 | 910 | 1240 | 1900 | 2400 | **N3324X2M** |
| 260 | 106 | 3 | 3 | | | 230 | 990 | 1380 | 1900 | 2400 | **NF3324Q1** |
| 310 | 72 | 5 | 5 | | | 260 | 770 | 915 | 1900 | 2400 | **N424M** |
| 310 | 72 | 5 | 5 | | 170 | | 770 | 915 | 1900 | 2400 | **NU424M** |
| 310 | 72 | 5 | 5 | | 170 | | 770 | 915 | 1900 | 2400 | **NU424Q1** |
| 310 | 72 | 5 | 5 | | 170 | | 770 | 915 | 1900 | 2400 | **NJ424M** |
| **127**228.6 | 34.925 | 2 | 1.1 | | | 199.8 | 295 | 410 | 1900 | 2400 | **N6/127M/YAB** |
| **129**250 | 80 | 3 | 3.7 | | 158 | | 665 | 807 | 1800 | 2200 | **NJP3226X1K2** |
| 250 | 80 | 3 | 3.7 | | 158 | | 665 | 807 | 1800 | 2200 | **NJ3226X1K2** |

| Abutment and fillet dimensions | | | | | | | Weight | Model | Weight | Separate thrust collar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_{amin}$ | $d_{amax}$ | $d_{bmin}$ | $D_{amax}$ | $D_{amin}$ | $r_{amax}$ | $r_{bmax}$ | | | | A1 | A2 | $r_3.r_4$ |
| mm | | | | | | | kg | | kg | mm | | |
| 133 | 222 | | 247 | 230 | 2.5 | 2.5 | 13.9 | | | | | |
| 133 | 150 | 157 | 247 | | 2.5 | 2.5 | 15.4 | | | | | |
| 133 | 150 | 157 | 247 | | 2.5 | 2.5 | 15.4 | | | | | |
| 133 | 150 | 157 | 247 | | 2.5 | 2.5 | 15.2 | | | | | |
| 133 | 150 | 171 | 247 | | 2.5 | 2.5 | 15.7 | | | | | |
| 133 | 150 | 171 | 247 | | 2.5 | 2.5 | 15.4 | | | | | |
| 133 | | 171 | 247 | | 2.5 | 2.5 | 16.0 | | | | | |
| 133 | 150 | 157 | 247 | | 2.5 | 2.5 | 16.3 | | | | | |
| 133 | 226 | | 247 | 234 | 2.5 | 2.5 | 14.3 | | | | | |
| 133 | 150 | 157 | 247 | | 2.5 | 2.5 | 15.8 | | | | | |
| 133 | 150 | 157 | 247 | | 2.5 | 2.5 | 14.6 | | | | | |
| 133 | 150 | 171 | 247 | | 2.5 | 2.5 | 16.0 | | | | | |
| 133 | 150 | 157 | 247 | | 2.5 | 2.5 | 15.0 | | | | | |
| 133 | 150 | 157 | 247 | | 2.5 | 2.5 | 14.3 | | | | | |
| 133 | 150 | 157 | 247 | | 2.5 | 2.5 | 14.9 | | | | | |
| 133 | 150 | 157 | 247 | | 2.5 | 2.5 | 15.0 | | | | | |
| 133 | 223 | | 247 | 229 | 2.5 | 2.5 | 22.9 | | | | | |
| 133 | 149 | 157 | 247 | | 2.5 | 2.5 | 23.1 | HJ2324 | 1.52 | 14 | 27.72 | 3 |
| 133 | 149 | 170 | 247 | | 2.5 | 2.5 | 23.7 | HJ2324 | 1.52 | 14 | 27.72 | 3 |
| 133 | 149 | 170 | 247 | | 2.5 | 2.5 | 23.6 | HJ2324 | 1.52 | 14 | 27.72 | 3 |
| 133 | 149 | 170 | 247 | | 2.5 | 2.5 | 24.6 | HJ2324 | 1.52 | 14 | 27.72 | 3 |
| 133 | 149 | 170 | 247 | | 2.5 | 2.5 | 23.7 | HJ2324 | 1.52 | 14 | 27.72 | 3 |
| 133 | 149 | 170 | 247 | | 2.5 | 2.5 | 31.0 | | | | | |
| 133 | 149 | 170 | 247 | | 2.5 | 2.5 | 31.0 | | | | | |
| 133 | 226 | | 247 | 234 | 2.5 | 2.5 | 28.0 | | | | | |
| 133 | 149 | 170 | 247 | | 2.5 | 2.5 | 29.9 | | | | | |
| 140 | 254 | | 290 | 266 | 4 | 4 | 29.0 | | | | | |
| 140 | 165 | 173 | 290 | | 4 | 4 | 29.1 | | | | | |
| 140 | 165 | 173 | 290 | | 4 | 4 | 28.8 | | | | | |
| 140 | 165 | 191 | 290 | | 4 | 4 | 29.7 | | | | | |
| 134 | 196 | | 223 | 204 | 1 | 1 | 5.60 | | | | | |
| 150 | 170 | 200 | 230 | | 3 | 3 | 18.6 | | | | | |
| 150 | 170 | 200 | 230 | | 3 | 3 | 18.4 | | | | | |

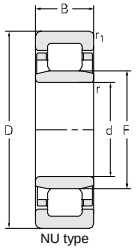


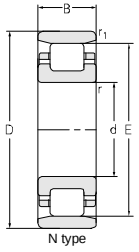
| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1smin}$ | $r_{smin}$ | F | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | | kN | | r/min | | |
| 129.5 | 250 | 80 | 3 | 3.7 | 158 | | 665 | 807 | 1800 | 2200 | **NJP3226X1K1** |
| | 250 | 80 | 3 | 3.7 | 158 | | 665 | 807 | 1800 | 2200 | **NJ3226X1K1** |
| 130 | 180 | 50 | 1.5 | 1.5 | 150 | | 220 | 555 | 1900 | 2400 | **NA4926/C9** |
| | 200 | 33 | 2 | 1.1 | | 182 | 190 | 274 | 3200 | 3800 | **N1026M** |
| | 200 | 33 | 2 | 1.1 | 148 | | 190 | 274 | 3200 | 3800 | **NU1026M** |
| | 200 | 33 | 2 | 1.1 | 148 | | 190 | 274 | 3200 | 3800 | **NJ1026M** |
| | 200 | 42 | 2 | 1.1 | 147 | | 280 | 415 | 3000 | 3700 | **NU2026EMA** |
| | 220 | 62 | 2 | 2.1 | 150 | | 528 | 675 | 2200 | 2800 | **NJP2226X3TN1/HG2** |
| | 230 | 64 | 3 | 3 | 150 | | 410 | 580 | 2200 | 2800 | **NJP2226Q1/C4S0** |
| | 220 | 62 | 2 | 2.1 | 150 | | 528 | 675 | 2200 | 2800 | **NJ2226X3TN1/HG2** |
| | 230 | 40 | 3 | 3 | | 204 | 301 | 395 | 2200 | 2800 | **N226J** |
| | 230 | 40 | 3 | 3 | | 204 | 315 | 415 | 2200 | 2800 | **N226M** |
| | 230 | 40 | 3 | 3 | 156 | | 315 | 415 | 2200 | 2800 | **NU226M** |
| | 230 | 40 | 3 | 3 | 156 | | 315 | 415 | 2200 | 2800 | **NU226M/W124** |
| | 230 | 40 | 3 | 3 | 156 | | 315 | 415 | 2200 | 2800 | **NJ226M** |
| | 230 | 40 | 3 | 3 | 153.5 | | 400 | 465 | 2200 | 2800 | **NU226EQ1** |
| | 230 | 40 | 3 | 3 | 153.5 | | 400 | 465 | 2200 | 2800 | **NU226EM/C9** |
| | 230 | 40 | 3 | 3 | 153.5 | | 400 | 465 | 2200 | 2800 | **NJ226EQ1** |
| | 230 | 40 | 3 | 3 | | 209.5 | 400 | 465 | 2200 | 2800 | **N226E** |
| | 230 | 40 | 3 | 3 | | 209.5 | 340 | 420 | 2200 | 2800 | **NF226EM** |
| | 230 | 40 | 3 | 3 | 153.5 | | 400 | 465 | 2200 | 2800 | **NJ226E** |
| | 230 | 40 | 3 | 3 | 153.5 | | 400 | 465 | 2200 | 2800 | **NJ226EM** |
| | 230 | 40 | 3 | 3 | 153.5 | | 400 | 465 | 2200 | 2800 | **NU226E** |
| | 230 | 40 | | 3 | 153.5 | | 400 | 465 | 2200 | 2800 | **NUP226E** |
| | 230 | 40 | 3 | 3 | 156 | | 315 | 415 | 2200 | 2800 | **NU226M-DT** |
| | 230 | 64 | 3 | 3 | | 204 | 430 | 625 | 2200 | 2800 | **NF2226M** |
| | 230 | 64 | 3 | 3 | | 204 | 430 | 625 | 2200 | 2800 | **N2226M** |
| | 230 | 64 | 3 | 3 | 156 | | 430 | 625 | 2200 | 2800 | **NU2226M** |
| | 230 | 64 | 3 | 3 | 156 | | 430 | 625 | 2200 | 2800 | **NJ2226M** |
| | 230 | 64 | 3 | 3 | 156 | | 430 | 625 | 2200 | 2800 | **NJ2226Q1** |
| | 230 | 64 | | 3 | 156 | | 430 | 625 | 2200 | 2800 | **NUP2226M** |
| | 230 | 64 | 3 | 3 | 153.5 | | 530 | 735 | 2200 | 2800 | **NU2226E** |
| | 230 | 64 | 3 | 3 | 153.5 | | 595 | 795 | 2200 | 2800 | **FL-NU2226EMA/C3** |
| | 230 | 64 | 3 | 3 | 153.5 | | 530 | 735 | 2200 | 2800 | **NU2226EQ1** |

| Abutment and fillet dimensions | | | | | | | Weight | Model | Weight | Separate thrust collar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $da_{min}$ | $da_{max}$ | $db_{min}$ | $Da_{max}$ | $Da_{min}$ | $ra_{max}$ | $rb_{max}$ | | | | A1 | A2 | $r_3.r_4$ |
| mm | | | | | | | kg | | kg | mm | | |
| 150 | 170 | 200 | 230 | | 3 | 3 | 18.5 | | | | | |
| 150 | 170 | 200 | 230 | | 3 | 3 | 18.4 | | | | | |
| 150 | 170 | 145 | 160 | | 1.5 | 1.5 | 4.36 | | | | | |
| 136.5 | 178 | | 191 | 184 | 2 | 1 | 4.57 | | | | | |
| 136.5 | 145 | 151 | 191 | | 2 | 1 | 4.66 | | | | | |
| 136.5 | 145 | 151 | 191 | | 2 | 1 | 4.61 | | | | | |
| 143 | 149 | 167 | 217 | | 1 | 1 | 4.95 | | | | | |
| 143 | 149 | 167 | 217 | | 2.5 | 2.5 | 8.68 | | | | | |
| 143 | 149 | 167 | 217 | | 2.5 | 2.5 | 11.9 | | | | | |
| 143 | 149 | 167 | 217 | | 2.5 | 2.5 | 8.69 | | | | | |
| 143 | 200 | | 217 | 207 | 2.5 | 2.5 | 6.52 | | | | | |
| 143 | 200 | | 217 | 207 | 2.5 | 2.5 | 7.08 | | | | | |
| 143 | 153 | 159 | 217 | | 2.5 | 2.5 | 7.22 | | | | | |
| 143 | 153 | 159 | 217 | | 2.5 | 2.5 | 7.54 | | | | | |
| 143 | 153 | 167 | 217 | | 2.5 | 2.5 | 7.32 | | | | | |
| 143 | 150 | 156 | 217 | | 2.5 | 2.5 | 7.38 | | | | | |
| 143 | 150 | 156 | 217 | | 2.5 | 2.5 | 7.54 | | | | | |
| 143 | 150 | 167 | 217 | | 2.5 | 2.5 | 7.50 | | | | | |
| 143 | 206 | | 217 | 213 | 2.5 | 2.5 | 7.09 | | | | | |
| 143 | 206 | | 217 | 213 | 2.5 | 2.5 | 7.57 | | | | | |
| 143 | 150 | 167 | 217 | | 2.5 | 2.5 | 7.38 | | | | | |
| 143 | 150 | 167 | 217 | | 2.5 | 2.5 | 7.66 | | | | | |
| 143 | 150 | 156 | 217 | | 2.5 | 2.5 | 7.26 | | | | | |
| 143 | | 167 | 217 | | 2.5 | 2.5 | 7.49 | | | | | |
| 143 | 153 | 159 | 217 | | 2.5 | 2.5 | 7.12 | | | | | |
| 143 | | | 217 | 209 | 2.5 | 2.5 | 11.7 | | | | | |
| 143 | 200 | | 217 | 209 | 2.5 | 2.5 | 11.6 | | | | | |
| 143 | 153 | 159 | 217 | | 2.5 | 2.5 | 11.8 | | | | | |
| 143 | 153 | 167 | 217 | | 2.5 | 2.5 | 11.9 | | | | | |
| 143 | 153 | 167 | 217 | | 2.5 | 2.5 | 11.9 | | | | | |
| 143 | | 167 | 217 | | 2.5 | 2.5 | 12.2 | | | | | |
| 143 | 149 | 156 | 217 | | 2.5 | 2.5 | 11.5 | | | | | |
| 143 | 149 | 156 | 217 | | 2.5 | 2.5 | 11.2 | | | | | |
| 143 | 149 | 156 | 217 | | 2.5 | 2.5 | 11.1 | | | | | |

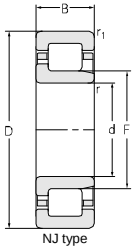
d 130 mm



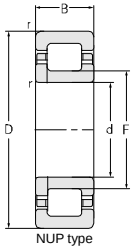
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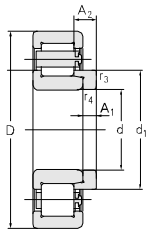
N type

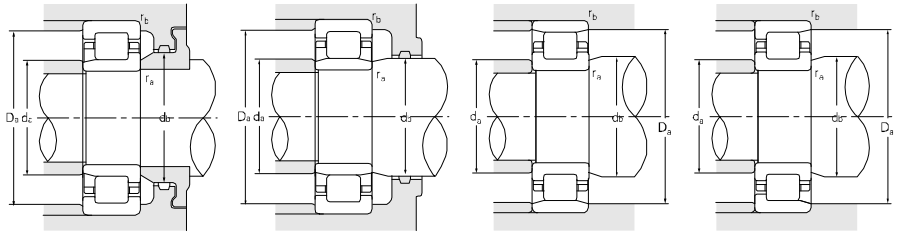


NJ type



NUP type

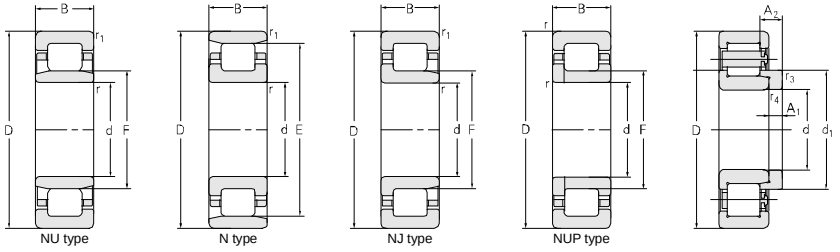


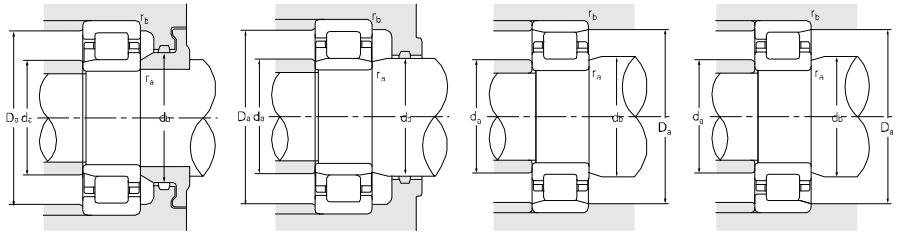




| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1smin}$ | $r_{smin}$ | F | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | | kN | | r/min | | |
| **130** | 230 | 64 | 3 | 3 | | 204 | 430 | 625 | 2200 | 2800 | **N2226M/YA1** |
| | 230 | 64 | 3 | 3 | 153.5 | | 550 | 780 | 2200 | 2800 | **NJ2226EQ1** |
| | 230 | 79.38 | 3 | 5.3 | 155 | | 590 | 890 | 1800 | 2200 | **NU3226X2M/C9YA6** |
| | 240 | 80 | 3 | 3 | 158 | | 655 | 975 | 1800 | 2200 | **NJ3226X1M-1** |
| | 240 | 85 | 3 | 3 | 158 | | 655 | 975 | 1800 | 2200 | **NJP3226X1WBM-1** |
| | 240 | 87 | 3 | 3 | 156 | | 580 | 800 | 1800 | 2200 | **NJ3226X1SCTN** |
| | 240 | 87 | 3 | 3 | 156 | | 580 | 800 | 1800 | 2200 | **NJP3226X1SCTN** |
| | 250 | 80 | 3 | 3 | 158 | | 665 | 805 | 1800 | 2200 | **NJP3226X1TN1** |
| | 250 | 80 | 3 | 3 | 158 | | 665 | 805 | 1800 | 2200 | **NJ3226X1TN1** |
| | 250 | 80 | 3 | 3 | 158 | | 605 | 805 | 1800 | 2200 | **NJ3226X1K1** |
| | 280 | 58 | 3 | 3 | 167 | | 732 | 780 | 1800 | 2200 | **NU326Q1/HAC9YA5** |
| | 280 | 58 | 4 | 4 | | 243 | 570 | 690 | 1800 | 2200 | **N326M** |
| | 280 | 58 | 4 | 4 | 167 | | 570 | 690 | 1800 | 2200 | **NU326M** |
| | 280 | 58 | 4 | 4 | 167 | | 595 | 795 | 1800 | 2200 | **NU326EM/W124** |
| | 280 | 58 | 4 | 4 | 167 | | 570 | 690 | 1800 | 2200 | **NU326Q1** |
| | 280 | 58 | 4 | 4 | 167 | | 570 | 690 | 1800 | 2200 | **NJ326M** |
| | 280 | 58 | 4 | 4 | 167 | | 595 | 795 | 1800 | 2200 | **FL-NU326EMA** |
| | 280 | 58 | 4 | 4 | | 247 | 595 | 795 | 1800 | 2200 | **N326EM** |
| | 280 | 58 | 4 | 4 | | 247 | 595 | 795 | 1800 | 2200 | **NJ326EM** |
| | 280 | 58 | 4 | 4 | 167 | | 595 | 795 | 1800 | 2200 | **NU326EM/W124** |
| | 280 | 58 | 4 | 4 | 167 | | 655 | 795 | 1800 | 2200 | **NU326E** |
| | 280 | 58 | 4 | 4 | | 247 | 655 | 795 | 1800 | 2200 | **N326E** |
| | 280 | 58 | 4 | 4 | 167 | | 655 | 795 | 1800 | 2200 | **NJ326E** |
| | 280 | 93 | 4 | 4 | 167 | | 870 | 1180 | 1800 | 2200 | **NU2326M** |
| | 280 | 93 | 4 | 4 | 167 | | 870 | 1180 | 1800 | 2200 | **NJ2326M/YA8** |
| | 280 | 93 | 4 | 4 | 167 | | 870 | 1180 | 1800 | 2200 | **NJ2326M/YA8-2** |
| | 280 | 93 | 4 | 4 | | 243 | 870 | 1180 | 1800 | 2200 | **N2326M** |
| | 280 | 93 | 4 | 4 | 167 | | 870 | 1180 | 1800 | 2200 | **NJ2326M** |
| | 280 | 93 | 4 | 4 | 167 | | 900 | 1200 | 1800 | 2200 | **NU2326EM/C9** |
| | 280 | 93 | 4 | 4 | 167 | | 790 | 1180 | 1800 | 2200 | **NJ2326M/C4W124YA8-1** |
| | 280 | 93 | 4 | 4 | 167 | | 870 | 1180 | 1800 | 2200 | **NJ2326J** |
| | 280 | 93 | | 4 | 167 | | 870 | 1180 | 1800 | 2200 | **NUP2326M** |
| | 280 | 93 | 4 | 4 | 167 | | 780 | 1060 | 1800 | 2200 | **32626QTY** |
| | 280.01 | 58.001 | 4.318 | 6.477 | 166.848 | | 660 | 795 | 1800 | 2200 | **A-0326-WAB-30-1** |
| | 340 | 78 | 5 | 5 | 185 | | 941 | 1110 | 1800 | 2200 | **NU426M** |

| Abutment and fillet dimensions | | | | | | | Weight | Model | Weight | Separate thrust collar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_{amin}$ | $d_{amax}$ | $d_{bmin}$ | $D_{amax}$ | $D_{amin}$ | $r_{amax}$ | $r_{bmax}$ | | | | A1 | A2 | $r_3.r_4$ |
| mm | | | | | | | kg | | kg | mm | | |
| 143 | 200 | | 217 | 209 | 2.5 | 2.5 | 11.6 | | | | | |
| 143 | 149 | 167 | 217 | | 2.5 | 2.5 | 11.5 | | | | | |
| 146 | 240 | | 264 | 246 | 3 | 3 | 14.6 | | | | | |
| 146 | 153 | 167 | 227 | | 2.5 | 2.5 | 17.0 | | | | | |
| 146 | 153 | 167 | 227 | | 2.5 | 2.5 | 17.3 | | | | | |
| 146 | 153 | 167 | 227 | | 2.5 | 2.5 | 14.95 | | | | | |
| 146 | 153 | 167 | 227 | | 2.5 | 2.5 | 14.79 | | | | | |
| 146 | 153 | 167 | 227 | | 2.5 | 2.5 | 16.8 | | | | | |
| 146 | 153 | 167 | 227 | | 2.5 | 2.5 | 16.8 | | | | | |
| 146 | 153 | 167 | 227 | | 2.5 | 2.5 | 18.4 | | | | | |
| 146 | 163 | 170 | 264 | | 3 | 3 | 19 | | | | | |
| 146 | 239 | | 264 | 247 | 3 | 3 | 17.8 | | | | | |
| 146 | 163 | 170 | 264 | | 3 | 3 | 17.9 | | | | | |
| 146 | 163 | 170 | 264 | | 3 | 3 | 18.7 | | | | | |
| 146 | 163 | 170 | 264 | | 3 | 3 | 17.9 | | | | | |
| 146 | 163 | 185 | 264 | | 3 | 3 | 18.2 | | | | | |
| 146 | 163 | 170 | 264 | | 3 | 3 | 18.7 | | | | | |
| 146 | 243 | | 264 | 251 | 3 | 3 | 18.5 | | | | | |
| 146 | 243 | | 264 | 251 | 3 | 3 | 19.0 | | | | | |
| 146 | 163 | 170 | 264 | | 3 | 3 | 18.7 | | | | | |
| 146 | 163 | 170 | 264 | | 3 | 3 | 18.7 | | | | | |
| 146 | 243 | | 264 | 251 | 3 | 3 | 18.5 | | | | | |
| 146 | 163 | 185 | 264 | | 3 | 3 | 19.0 | | | | | |
| 146 | 161 | 170 | 264 | | 3 | 3 | 28.7 | HJ2326 | 1.8 | 14 | 29.17 | 4 |
| 146 | 161 | 185 | 264 | | 3 | 3 | 30.0 | HJ2326 | 1.8 | 14 | 29.17 | 4 |
| 146 | 161 | 185 | 264 | | 3 | 3 | 29.4 | HJ2326 | 1.8 | 14 | 29.17 | 4 |
| 146 | 240 | | 264 | 246 | 3 | 3 | 29.01 | | | | | |
| 146 | 161 | 185 | 264 | | 3 | 3 | 29.0 | HJ2326 | 1.8 | 14 | 29.17 | 4 |
| 146 | 161 | 185 | 264 | | 3 | 3 | 29.3 | HJ2326E | 1.79 | 14 | 27.69 | 4 |
| 146 | 161 | 185 | 264 | | 3 | 3 | 29.1 | HJ2326 | 1.8 | 14 | 29.17 | 4 |
| 146 | 161 | 185 | 264 | | 3 | 3 | 30.0 | HJ2326 | 1.8 | 14 | 29.17 | 4 |
| 146 | | 185 | 264 | | 3 | 3 | 29.5 | | | | | |
| 146 | 161 | 170 | 264 | | 3 | 3 | 29.3 | | | | | |
| 146 | 161 | 170 | 264 | | 3 | 3 | 18.7 | | | | | |
| 150 | 180 | 190 | 320 | | 4 | 4 | 39.5 | | | | | |

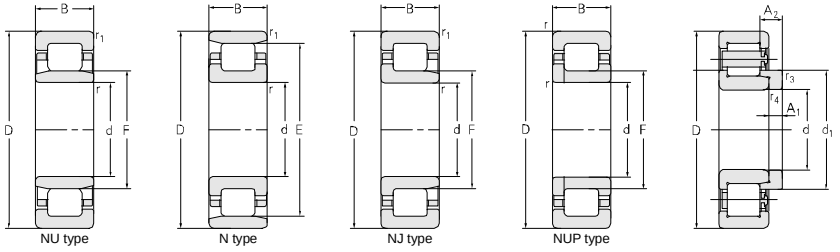
d 140 mm

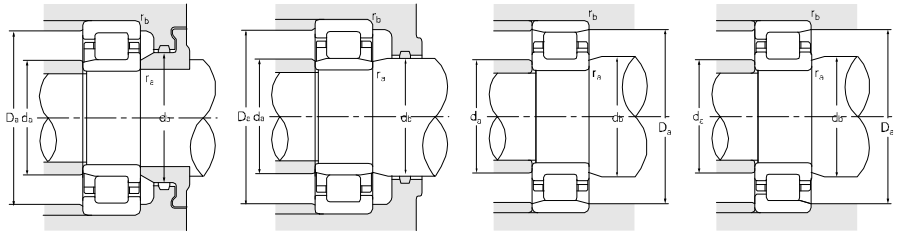


| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1smin}$ | $r_{smin}$ | F | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | | kN | | r/min | | |
| **140** | 190 | 30 | 1.5 | 1.1 | | 178 | 184 | 315 | 3000 | 3600 | **NF2928M** |
| | 190 | 30 | 1.5 | 1.5 | 152 | | 184 | 315 | 3000 | 3600 | **NJ2928M** |
| | 210 | 33 | 2 | 1.1 | 158 | | 183 | 263 | 3000 | 3600 | **NU1028M** |
| | 210 | 33 | 2 | 1.1 | 158 | | 183 | 263 | 3000 | 3600 | **FL-NU1028M** |
| | 210 | 33 | 2 | 1.1 | 158 | | 195 | 287 | 3000 | 3600 | **NJ1028M** |
| | 210 | 53 | 2 | 1.1 | 158 | | 358 | 630 | 2600 | 3400 | **NU3028M** |
| | 220 | 36 | 2.7 | 2.3 | 160 | | 245 | 345 | 660 | 1300 | **NU1128X3M** |
| | 250 | 42 | 3 | 3 | | 221 | 319 | 410 | 2400 | 3000 | **N228Q1** |
| | 250 | 42 | 3 | 3 | | 221 | 341 | 450 | 2000 | 2600 | **NCF228J** |
| | 250 | 42 | 3 | 3 | | 221 | 363 | 490 | 2400 | 3000 | **N228M** |
| | 250 | 42 | 3 | 3 | 169 | | 363 | 490 | 2000 | 2600 | **NU228M** |
| | 250 | 42 | 3 | 3 | 169 | | 363 | 490 | 2000 | 2600 | **NJ228M** |
| | 250 | 42 | | 3 | 169 | | 363 | 490 | 2000 | 2600 | **NUP228M** |
| | 250 | 42 | 3 | 3 | | 225 | 402 | 530 | 2400 | 3000 | **N228E** |
| | 250 | 42 | 3 | 3 | 169 | | 402 | 530 | 2000 | 2600 | **NJ228E** |
| | 250 | 42 | 3 | 3 | 169 | | 402 | 530 | 2000 | 2600 | **NU228E** |
| | 250 | 42 | 3 | 3 | 169 | | 400 | 530 | 2000 | 2600 | **NU228EM** |
| | 250 | 42 | 3 | 3 | 169 | | 400 | 530 | 2000 | 2600 | **NU228EMA** |
| | 250 | 42 | 3 | 3 | 169 | | 400 | 530 | 2000 | 2600 | **NU228EM/C9** |
| | 250 | 42 | 3 | 3 | 169 | | 400 | 530 | 2000 | 2600 | **NU228EM/W124** |
| | 250 | 42 | 3 | 3 | 169 | | 402 | 530 | 2000 | 2600 | **NU228EQ1** |
| | 250 | 42 | 3 | 3 | 169 | | 350 | 470 | 2000 | 2600 | **NU228M-DT** |
| | 250 | 42 | 3 | 3 | | 225 | 400 | 530 | 2000 | 2600 | **N228EM** |
| | 250 | 42 | 3 | 3 | 169 | | 365 | 490 | 2000 | 2600 | **NJ228Q1** |
| | 250 | 68 | 3 | 3 | 169 | | 570 | 840 | 2000 | 2600 | **NU2228EM** |
| | 250 | 68 | 3 | 3 | 169 | | 510 | 755 | 2000 | 2600 | **NJP2228Q1/C4S0** |
| | 250 | 68 | 3 | 3 | 169 | | 510 | 755 | 2000 | 2600 | **NJ2228Q1/C4S0** |
| | 250 | 68 | 3 | 3 | 169 | | 574 | 836 | 2000 | 2600 | **FL-NU2228EMA/C3** |
| | 250 | 68 | 3 | 3 | 169 | | 480 | 700 | 2000 | 2600 | **FL-NJ2228M/P6** |
| | 250 | 68 | 3 | 3 | 169 | | 506 | 755 | 2000 | 2600 | **NU2228M** |
| | 250 | 68 | 3 | 3 | 169 | | 506 | 755 | 2000 | 2600 | **NJ2228M** |
| | 250 | 68 | 3 | 3 | 169 | | 517 | 770 | 2000 | 2600 | **NJ2228M/C4YA8** |
| | 250 | 68 | 3 | 3 | 169 | | 572 | 840 | 2000 | 2600 | **NJ2228E** |
| | 250 | 68 | 3 | 3 | 169 | | 572 | 840 | 2000 | 2600 | **NU2228E** |
| | 250 | 68 | 3 | 3 | | 225 | 570 | 840 | 2000 | 2600 | **N2228E** |
| | 250 | 80 | 3 | 3 | 169 | | 682 | 1040 | 2000 | 2600 | **NJ3228X2M** |

| Abutment and fillet dimensions | | | | | | | Weight | Model | Weight | Separate thrust collar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_{amin}$ | $d_{amax}$ | $d_{bmin}$ | $D_{amax}$ | $D_{amin}$ | $r_{amax}$ | $r_{bmax}$ | | | | A1 | A2 | $r_3.r_4$ |
| mm | | | | | | | kg | | kg | mm | | |
| 146.5 | 155 | 161 | 181 | | 1 | 1 | 2.59 | | | | | |
| 146.5 | 155 | 161 | 181 | | 2 | 1 | 2.6 | | | | | |
| 146.5 | 155 | 161 | 201 | | 2 | 1 | 3.89 | | | | | |
| 146.5 | 155 | 161 | 201 | | 2 | 1 | 3.89 | | | | | |
| 146.5 | 155 | 161 | 201 | | 2 | 1 | 4.01 | | | | | |
| 147 | 154 | 162 | 200 | | 2 | 1 | 7.64 | | | | | |
| 151 | 157 | 163 | 209 | | 2 | 2 | 5.03 | | | | | |
| 153 | 218 | | 237 | 225 | 2.5 | 2.5 | 8.66 | | | | | |
| 153 | | | 237 | 225 | 2.5 | 2.5 | 7.77 | | | | | |
| 153 | 218 | | 237 | 225 | 2.5 | 2.5 | 9.14 | | | | | |
| 153 | 166 | 172 | 237 | | 2.5 | 2.5 | 9.16 | | | | | |
| 153 | 166 | 183 | 237 | | 2.5 | 2.5 | 9.38 | | | | | |
| 153 | | 183 | 237 | | 2.5 | 2.5 | 9.51 | | | | | |
| 153 | 221 | | 237 | 232 | 2.5 | 2.5 | 9.01 | | | | | |
| 150 | 167 | 181 | 237 | | 2.5 | 2.5 | 9.20 | | | | | |
| 150 | 167 | 171 | 237 | | 2.5 | 2.5 | 9.05 | | | | | |
| 150 | 167 | 171 | 237 | | 2.5 | 2.5 | 9.23 | | | | | |
| 150 | 167 | 171 | 237 | | 2.5 | 2.5 | 9.11 | | | | | |
| 150 | 167 | 171 | 237 | | 2.5 | 2.5 | 9.23 | | | | | |
| 150 | 167 | 171 | 237 | | 2.5 | 2.5 | 9.23 | | | | | |
| 153 | 166 | 172 | 237 | | 2.5 | 2.5 | 9.37 | | | | | |
| 153 | 166 | 172 | 237 | | 2.5 | 2.5 | 9.16 | | | | | |
| 153 | 221 | | 237 | 232 | 2.5 | 2.5 | 9.19 | | | | | |
| 153 | 166 | 183 | 237 | | 2.5 | 2.5 | 9.24 | | | | | |
| 153 | 164 | 172 | 237 | | 2.5 | 2.5 | 14.3 | | | | | |
| 153 | | 183 | 237 | | 2.5 | 2.5 | 15.1 | | | | | |
| 153 | 164 | 183 | 237 | | 2.5 | 2.5 | 15.1 | | | | | |
| 153 | 164 | 172 | 237 | | 2.5 | 2.5 | 14.2 | | | | | |
| 153 | 164 | 183 | 237 | | 2.5 | 2.5 | 14.8 | | | | | |
| 153 | 164 | 172 | 237 | | 2.5 | 2.5 | 14.4 | HJ2228 | 1.13 | 11 | 24.68 | 3 |
| 153 | 164 | 183 | 237 | | 2.5 | 2.5 | 14.8 | HJ2228 | 1.13 | 11 | 24.68 | 3 |
| 153 | 164 | 183 | 237 | | 2.5 | 2.5 | 15.0 | HJ2228 | 1.13 | 11 | 24.68 | 3 |
| 153 | 164 | 183 | 237 | | 2.5 | 2.5 | 14.5 | | | | | |
| 153 | 164 | 172 | 237 | | 2.5 | 2.5 | 14.2 | | | | | |
| 154 | 218 | 224 | 236 | | 2.5 | 2.5 | 14.2 | | | | | |
| 153 | 164 | 183 | 237 | | 2.5 | 2.5 | 17.8 | | | | | |

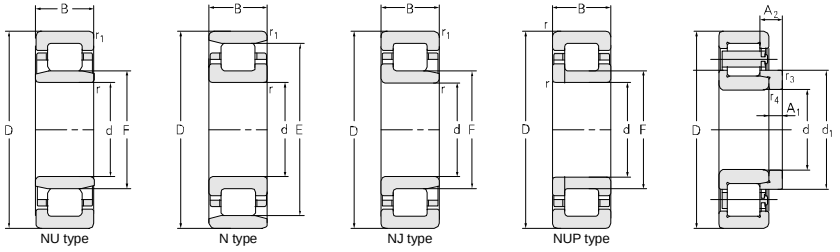


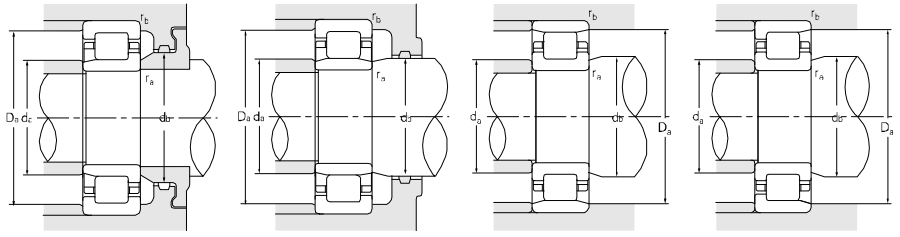



| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1smin}$ | $r_{smin}$ | F | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | | kN | | r/min | | |
| **140** | 250 | 82.5 | 5.1 | 3 | 168.46 | | 693 | 1060 | 2000 | 2600 | **NU5228XPC3** |
| | 250 | 82.5 | 5.1 | 3 | 168.46 | | 640 | 980 | 2000 | 2600 | **NU3228X2M/C9YA6** |
| | 250 | 100 | 3 | 3 | 169 | | 506 | 755 | 2000 | 2600 | **NU2228MWB** |
| | 300 | 62 | 4 | 4 | | 260 | 660 | 810 | 1900 | 2400 | **N328M** |
| | 300 | 62 | 3.7 | 3.7 | | 260 | 655 | 805 | 1900 | 2400 | **NF328M** |
| | 300 | 62 | 4 | 4 | 180 | | 660 | 810 | 1800 | 2200 | **NJ328M** |
| | 300 | 62 | 4 | 4 | 180 | | 660 | 810 | 1800 | 2200 | **NU328M** |
| | 300 | 62 | 4 | 4 | 180 | | 660 | 810 | 1800 | 2200 | **NU328Q1/S0** |
| | 300 | 62 | | 4 | 180 | | 660 | 810 | 1800 | 2200 | **NUP328M** |
| | 300 | 62 | 4 | 4 | 180 | | 655 | 805 | 1800 | 2200 | **NJ328Q1** |
| | 300 | 62 | 4 | 4 | 180 | | 715 | 880 | 1800 | 2200 | **NU328EM** |
| | 300 | 62 | 4 | 4 | 180 | | 655 | 805 | 1800 | 2200 | **NU328M-DT** |
| | 300 | 102 | 4 | 4 | | 260 | 960 | 1310 | 1800 | 2200 | **N2328M** |
| | 300 | 102 | 4 | 4 | 180 | | 960 | 1310 | 1800 | 2200 | **NU2328M** |
| | 300 | 102 | 4 | 4 | 180 | | 1000 | 1400 | 1800 | 2200 | **NJ2328M/YA8** |
| | 300 | 102 | 4 | 4 | 180 | | 960 | 1310 | 1800 | 2200 | **NJ2328M** |
| | 300 | 102 | 4 | 4 | 180 | | 960 | 1310 | 1800 | 2200 | **NJ2328M/W20** |
| | 360 | 82 | 5 | 5 | 196 | | 1010 | 1200 | 1800 | 2200 | **NJ428M** |
| | 360 | 82 | 6 | 6 | 196 | | 950 | 1120 | 1800 | 2200 | **NJ428MA/YAD** |
| **149.959** | 320 | 65 | 3 | 3 | 189.796 | | 864 | 930 | 1700 | 2000 | **NU3/149X4EM** |
| | 320 | 65 | 3 | 3 | 190.144 | | 880 | 950 | 1700 | 2000 | **NU3/149X4Q1/HAYB2** |
| **150** | 210 | 28 | 4 | 3 | 165 | | 171 | 270 | 2700 | 3300 | **NJ1930NB1M/YA16** |
| | 210 | 28 | 3 | 4 | 165 | | 171 | 270 | 2700 | 3300 | **NJ1930B1M/YA6** |
| | 210 | 28 | 2 | 4 | 165 | | 170 | 270 | 2700 | 3300 | **NJ1930B1M/YA6-1** |
| | 215.88 | 28 | 4 | 3 | | 195 | 180 | 290 | 2700 | 3300 | **NF1930X1WCM/YA6** |
| | 225 | 35 | 2.1 | 1.5 | 169.5 | | 212 | 310 | 2600 | 3200 | **NJ1030M** |
| | 225 | 35 | 2.1 | 2.1 | 169.5 | | 212 | 310 | 2600 | 3200 | **NU1030M** |
| | 225 | 35 | 2 | 1.5 | 169.5 | | 238 | 320 | 2600 | 3200 | **NU1030Q1/HAYA6** |
| | 225 | 56 | 2.1 | 2.1 | 169.5 | | 363 | 620 | 2400 | 3000 | **NU3030M/P6** |
| | 270 | 45 | 3 | 3 | | 238 | 418 | 565 | 2000 | 2600 | **N230M** |
| | 270 | 45 | 3 | 3 | | 238 | 405 | 550 | 2000 | 2600 | **NF230M** |
| | 270 | 45 | 3 | 3 | 182 | | 418 | 565 | 1900 | 2400 | **NU230M** |
| | 270 | 45 | 3 | 3 | 182 | | 418 | 565 | 1900 | 2400 | **NJ230M** |
| | 270 | 45 | | 3 | 182 | | 418 | 565 | 1900 | 2400 | **NUP230M** |
| | 270 | 45 | 3 | 3 | | 242 | 457 | 610 | 1900 | 2400 | **N230E** |

| Abutment and fillet dimensions | | | | | | | Weight | Model | Weight | Separate thrust collar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $da_{min}$ | $da_{max}$ | $db_{min}$ | $Da_{max}$ | $Da_{min}$ | $ra_{max}$ | $rb_{max}$ | | | | A1 | A2 | $r_3.r_4$ |
| mm | | | | | | | kg | | kg | mm | | |
| 155 | 166 | 172 | 237 | | 2.5 | 3 | 18.3 | | | | | |
| 155 | 166 | 172 | 237 | | 2.5 | 3 | 18.3 | | | | | |
| 153 | 164 | 172 | 237 | | 2.5 | 2.5 | 16.2 | | | | | |
| 156 | 256 | | 284 | 264 | 3 | 3 | 21.9 | | | | | |
| 156 | | | 284 | 264 | 3 | 3 | 21.8 | | | | | |
| 156 | 176 | 199 | 284 | | 3 | 3 | 22.6 | HJ328 | 1.2 | 15 | 25.69 | 4 |
| 156 | 176 | 183 | 284 | | 3 | 3 | 22.2 | HJ328 | 1.2 | 15 | 25.69 | 4 |
| 156 | 176 | 183 | 284 | | 3 | 3 | 21.7 | HJ328 | 1.2 | 15 | 25.69 | 4 |
| 156 | | 199 | 284 | | 3 | 3 | 22.3 | | | | | |
| 156 | 176 | 199 | 284 | | 3 | 3 | 22.1 | HJ328 | 1.2 | 15 | 25.69 | 4 |
| 156 | 176 | 183 | 284 | | 3 | 3 | 21.8 | | | | | |
| 156 | 176 | 183 | 284 | | 3 | 3 | 21.9 | HJ328 | 1.2 | 15 | 25.69 | 4 |
| 156 | 256 | | 284 | 264 | 3 | 3 | 34.6 | | | | | |
| 156 | 176 | 183 | 284 | | 3 | 3 | 33.6 | HJ2328 | 2.34 | 15 | 33.17 | 3 |
| 156 | 176 | 199 | 284 | | 3 | 3 | 34.7 | HJ2328 | 2.34 | 15 | 33.17 | 3 |
| 156 | 176 | 199 | 284 | | 3 | 3 | 34.8 | HJ2328 | 2.34 | 15 | 33.17 | 3 |
| 156 | 176 | 199 | 284 | | 3 | 3 | 34.8 | HJ2328 | 2.34 | 15 | 33.17 | 3 |
| 160 | 192 | 219 | 340 | | 4 | 4 | 46.3 | | | | | |
| 160 | 192 | 219 | 340 | | 4 | 4 | 48.6 | | | | | |
| 166 | 189 | 196 | 304 | | 3 | 3 | 26.4 | | | | | |
| 166 | 189 | 196 | 304 | | 3 | 3 | 26.7 | | | | | |
| 166 | 189 | 165 | 180 | | 3 | 3 | 2.86 | | | | | |
| 166 | 189 | 165 | 180 | | 3 | 3 | 2.94 | | | | | |
| 166 | 189 | 165 | 180 | | 3 | 3 | 2.94 | | | | | |
| 136.5 | 145 | 151 | 191 | | 3 | 2 | 4.18 | | | | | |
| 159 | 166 | 178 | 214 | | 2 | 2 | 5.05 | | | | | |
| 159 | 166 | 172 | 214 | | 2 | 2 | 4.94 | | | | | |
| 159 | 166 | 172 | 214 | | 2 | 2 | 5.13 | | | | | |
| 159 | 166 | 172 | 214 | | 2 | 2 | 7.99 | | | | | |
| 163 | 234 | | 257 | 242 | 2.5 | 2.5 | 11.6 | | | | | |
| 163 | 234 | | 257 | 242 | 2.5 | 2.5 | 12.1 | | | | | |
| 163 | 178 | 185 | 257 | | 2.5 | 2.5 | 11.8 | | | | | |
| 163 | 178 | 197 | 257 | | 2.5 | 2.5 | 12.0 | | | | | |
| 163 | | 197 | 257 | | 2.5 | 2.5 | 12.3 | | | | | |
| 163 | 238 | | 257 | 246 | 2.5 | 2.5 | 11.5 | | | | | |

d 150 mm

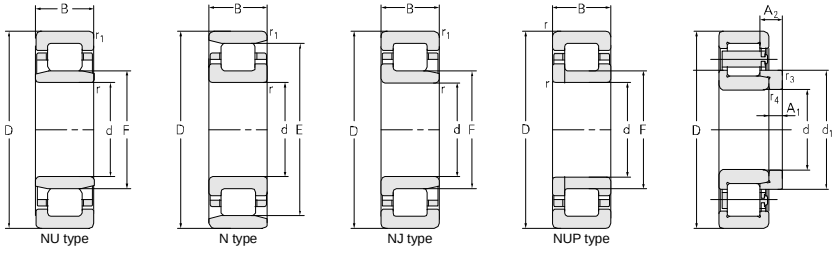


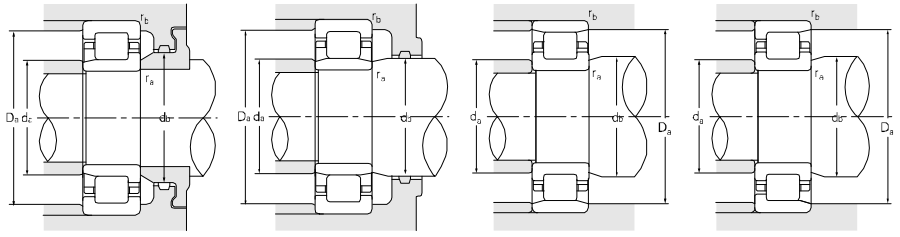



| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1smin}$ | $r_{smin}$ | F | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | | kN | | r/min | | |
| **150** | 270 | 45 | 3 | 3 | 182 | | 457 | 610 | 1900 | 2400 | **NU230E** |
| | 270 | 45 | 3 | 3 | 182 | | 435 | 570 | 1900 | 2400 | **NU230EM/C9** |
| | 270 | 45 | 3 | 3 | 182 | | 435 | 570 | 1900 | 2400 | **NU230EM/W124** |
| | 270 | 45 | 3 | 3 | 182 | | 457 | 610 | 1900 | 2400 | **NU230EQ1** |
| | 270 | 45 | 3 | 3 | 182 | | 457 | 610 | 1900 | 2400 | **NJ230E** |
| | 270 | 45 | 3 | 3 | 182 | | 405 | 550 | 2000 | 2600 | **NU230M-DT** |
| | 270 | 45 | 3 | 3 | 182 | | 435 | 570 | 2000 | 2600 | **NU230EMA** |
| | 270 | 73 | 3 | 3 | 182 | | 634 | 925 | 1900 | 2400 | **FL-NU2230EMA/C3** |
| | 270 | 73 | 3 | 3 | 182 | | 660 | 980 | 1900 | 2400 | **NJ2230E** |
| | 270 | 88.9 | 2.6 | 6.4 | 181.53 | | 1020 | 1610 | 1800 | 2200 | **NU5230XPC3** |
| | 270 | 88.9 | 2.6 | 7.5 | 181.53 | | 980 | 1550 | 1800 | 2200 | **NU3230X2M/C9YA6** |
| | 320 | 65 | 4 | 4 | | 277 | 715 | 890 | 1700 | 2000 | **N330M** |
| | 320 | 65 | 4 | 4 | | 277 | 815 | 1010 | 1700 | 2000 | **N330ENM** |
| | 320 | 65 | 4 | 4 | 193 | | 715 | 890 | 1700 | 2000 | **NU330M** |
| | 320 | 65 | 4 | 4 | 193 | | 715 | 890 | 1700 | 2000 | **NJ330M** |
| | 320 | 65 | | 4 | 193 | | 715 | 890 | 1700 | 2000 | **NUP330M** |
| | 320 | 65 | 4 | 4 | 193 | | 814 | 1010 | 1700 | 2000 | **NU330EQ1** |
| | 320 | 65 | 4 | 4 | 193 | | 814 | 1010 | 1700 | 2000 | **NU330EQ1/C9** |
| | 320 | 65 | 4 | 4 | 193 | | 814 | 1010 | 1700 | 2000 | **NJ330EM** |
| | 320 | 65 | 4 | 4 | 193 | | 996 | 920 | 1700 | 2000 | **NU330EQ1/YB2** |
| | 320 | 108 | 4 | 4 | 193 | | 814 | 1010 | 1700 | 2000 | **NU330EWBM** |
| | 320 | 108 | | 4 | 193 | | 1030 | 1420 | 1700 | 2000 | **NUP2330M** |
| | 320 | 108 | 4 | 4 | | 277 | 1070 | 1480 | 1700 | 2000 | **NF2330M** |
| | 320 | 108 | 4 | 4 | 193 | | 1070 | 1480 | 1700 | 2000 | **NU2330M** |
| | 320 | 108 | 4 | 4 | 193 | | 1141 | 1570 | 1700 | 2000 | **NU2330MA** |
| | 320 | 108 | 4 | 4 | 193 | | 1140 | 1570 | 1700 | 2000 | **NU2330EMA** |
| | 320 | 108 | 4 | 4 | 193 | | 1030 | 1420 | 1700 | 2000 | **NJ2330M** |
| | 320 | 108 | 4 | 4 | 193 | | 1070 | 1480 | 1700 | 2000 | **NJ2330M/YA8-1** |
| | 320 | 108 | 4 | 4 | 193 | | 1070 | 1480 | 1700 | 2000 | **NJ2330M/YA8** |
| | 320 | 108 | 4 | 4 | 193 | | 1070 | 1480 | 1700 | 2000 | **NJ2330M/C4W124YA8** |
| | 320 | 108 | 4 | 4 | | 277 | 1030 | 1420 | 1700 | 2000 | **N2330M** |
| | 320 | 108 | 4 | 4 | 193 | | 1140 | 1570 | 1700 | 2000 | **FL-NU2330EMA/C3** |
| | 320 | 128 | 4 | 4 | 193 | | 1320 | 1880 | 1400 | 1800 | **NJ3330M** |
| | 320 | 128 | 4 | 4 | 193 | | 1320 | 1870 | 1400 | 1800 | **NJ330X2EM** |

| Abutment and fillet dimensions | | | | | | | Weight | Model | Weight | Separate thrust collar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_{amin}$ | $d_{amax}$ | $d_{bmin}$ | $D_{amax}$ | $D_{amin}$ | $r_{amax}$ | $r_{bmax}$ | | | | A1 | A2 | $r_3.r_4$ |
| mm | | | | | | | kg | | kg | mm | | |
| 163 | 178 | 185 | 247 | | 2.5 | 2.5 | 11.2 | | | | | |
| 163 | 178 | 185 | 247 | | 2.5 | 2.5 | 11.3 | | | | | |
| 163 | 178 | 185 | 247 | | 2.5 | 2.5 | 11.3 | | | | | |
| 163 | 178 | 185 | 257 | | 2.5 | 2.5 | 11.8 | | | | | |
| 163 | 178 | 197 | 257 | | 2.5 | 2.5 | 11.6 | | | | | |
| 163 | 178 | 185 | 257 | | 2.5 | 2.5 | 11.7 | | | | | |
| 163 | 178 | 185 | 247 | | 2.5 | 2.5 | 11.6 | | | | | |
| 163 | 173 | | 257 | | 2.5 | 2.5 | 18.4 | | | | | |
| 163 | 177 | 197 | 257 | | 2.5 | 2.5 | 18.1 | | | | | |
| 167 | 180 | 185 | 260.5 | | 2 | 2 | 23.6 | | | | | |
| 167 | 180 | 185 | 260.5 | | 2 | 2 | 23.6 | | | | | |
| 166 | 272 | | 304 | 282 | 3 | 3 | 26.5 | | | | | |
| 166 | 272 | | 304 | 282 | 3 | 3 | 24.8 | | | | | |
| 166 | 189 | 196 | 304 | | 3 | 3 | 26.6 | | | | | |
| 166 | 189 | 213 | 304 | | 3 | 3 | 26.9 | | | | | |
| 166 | | 213 | 304 | | 3 | 3 | 27.4 | | | | | |
| 166 | 189 | 196 | 304 | | 3 | 3 | 26.2 | | | | | |
| 166 | 189 | 196 | 304 | | 3 | 3 | 26.2 | | | | | |
| 166 | 189 | 213 | 304 | | 3 | 3 | 26.2 | | | | | |
| 166 | 189 | 196 | 304 | | 3 | 3 | 26.7 | | | | | |
| 166 | 189 | 196 | 304 | | 3 | 3 | 29.5 | | | | | |
| 166 | | 213 | 304 | | 3 | 3 | 43.1 | | | | | |
| 166 | | | 304 | 284 | 3 | 3 | 43.6 | | | | | |
| 166 | 186 | 196 | 304 | | 3 | 3 | 41.5 | HJ2330 | 2.8 | 15 | 33.67 | 3.7 |
| 166 | 186 | 196 | 304 | | 3 | 3 | 44.9 | HJ2330 | 2.8 | 15 | 33.67 | 3.7 |
| 166 | 189 | 196 | 304 | | 3 | 3 | 44.9 | HJ2330E | 2.64 | 15 | 31.19 | 4 |
| 166 | 186 | 213 | 304 | | 3 | 3 | 42.4 | HJ2330 | 2.8 | 15 | 33.67 | 3.7 |
| 166 | 186 | 213 | 304 | | 3 | 3 | 42.7 | HJ2330 | 2.8 | 15 | 33.67 | 3.7 |
| 166 | 186 | 213 | 304 | | 3 | 3 | 42.7 | HJ2330 | 2.8 | 15 | 33.67 | 3.7 |
| 166 | 186 | 213 | 304 | | 3 | 3 | 43.2 | HJ2330 | 2.8 | 15 | 33.67 | 3.7 |
| 166 | | | 304 | 284 | 3 | 3 | 42.8 | | | | | |
| 166 | 189 | 196 | 304 | | 3 | 3 | 42.6 | | | | | |
| 166 | 189 | 213 | 304 | | 3 | 3 | 49.9 | | | | | |
| 166 | 189 | 213 | 304 | | 3 | 3 | 49.9 | | | | | |

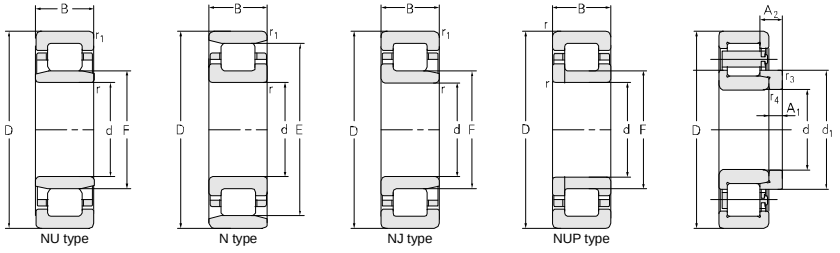
d 158.75~160 mm

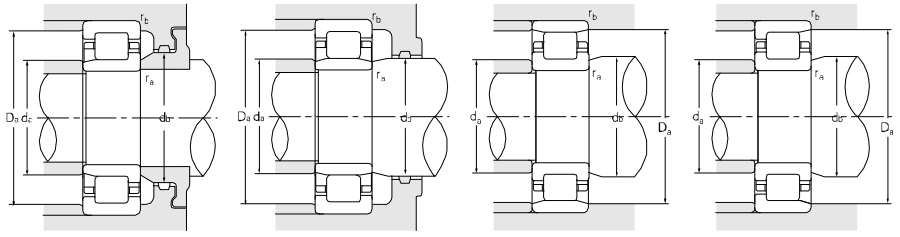


| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1smin}$ | $r_{smin}$ | F | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | | kN | | r/min | | |
| **158** | 290 | 110 | 3 | 3 | 193 | | 935 | 1130 | 1800 | 2200 | **NJ2232WBK3** |
| **158.5** | 290 | 110 | 3 | 3 | 193 | | 935 | 1130 | 1800 | 2200 | **NJ2232WBK2** |
| **158.75** | 231.775 | 161.925 | 2.1 | 2.1 | 176.5 | | 1020 | 2390 | 2400 | 3000 | **N231.775Q4/W33** |
| **159** | 290 | 85 | 3 | 3 | 193 | | 935 | 1130 | 2400 | 3000 | **NJ2232WBYK1** |
| | 290 | 110 | 3 | 3 | 193 | | 935 | 1130 | 2400 | 3000 | **NJ2232WBK1** |
| **160** | 220 | 36 | 2 | 2 | 173 | | 255 | 435 | 2500 | 3200 | **NJ2932M** |
| | 230 | 22 | 1.5 | 1.5 | | 209 | 160 | 240 | 2900 | 3500 | **N032X3M** |
| | 240 | 25 | 1.5 | 1.5 | | 216 | 193 | 300 | 2800 | 3400 | **N032M** |
| | 240 | 38 | 2.1 | 2.1 | | 220 | 260 | 365 | 2400 | 3000 | **N1032M** |
| | 240 | 38 | 2.1 | 1.5 | 180 | | 259 | 380 | 2400 | 3000 | **NJ1032M** |
| | 240 | 38 | 2.1 | 2.1 | 180 | | 259 | 380 | 2400 | 3000 | **NU1032M** |
| | 240 | 38 | 2.1 | 2.1 | 180 | | 259 | 380 | 2400 | 3000 | **NU1032Q1** |
| | 290 | 48 | 3 | 3 | | 257 | 495 | 655 | 1800 | 2200 | **N232M** |
| | 290 | 48 | 3 | 3 | 193 | | 495 | 655 | 1800 | 2200 | **NU232M** |
| | 290 | 48 | 3 | 3 | 193 | | 495 | 655 | 1800 | 2200 | **NJ232M** |
| | 290 | 48 | | 3 | 193 | | 495 | 655 | 1800 | 2200 | **NUP232M** |
| | 290 | 48 | 3 | 3 | | 259 | 517 | 695 | 1800 | 2200 | **N232E** |
| | 290 | 48 | 3 | 3 | 195 | | 517 | 695 | 1800 | 2200 | **NU232E** |
| | 290 | 48 | 3 | 3 | 195 | | 517 | 695 | 1800 | 2200 | **NU232EM/W124** |
| | 290 | 48 | 3 | 3 | 195 | | 517 | 695 | 1800 | 2200 | **NU232EM/P59V2** |
| | 290 | 48 | 3 | 3 | 195 | | 515 | 695 | 1800 | 2200 | **NU232EM/C91** |
| | 290 | 48 | 3 | 3 | 195 | | 515 | 695 | 1800 | 2200 | **NU232EM/YA8** |
| | 290 | 48 | 3 | 3 | 195 | | 495 | 665 | 1800 | 2200 | **NU232EMA** |
| | 290 | 48 | 3 | 3 | 195 | | 515 | 695 | 1800 | 2200 | **NU232EQ1** |
| | 290 | 48 | 3 | 3 | 195 | | 515 | 695 | 1800 | 2200 | **NJ232E** |
| | 290 | 48 | | 3 | 195 | | 515 | 695 | 1800 | 2200 | **NUP232E** |
| | 290 | 48 | 3 | 3 | 195 | | 470 | 615 | 1800 | 2200 | **NU232EM-DT** |
| | 290 | 48 | 3 | 3 | 195 | | 515 | 695 | 1800 | 2200 | **NU232EM/P4YA8** |
| | 290 | 80 | 3 | 3 | 193 | | 688 | 1000 | 1800 | 2200 | **NU2232** |
| | 290 | 80 | 3 | 3 | 193 | | 810 | 1190 | 1800 | 2200 | **NU2232EM** |
| | 290 | 80 | 3 | 3 | 193 | | 810 | 1190 | 1800 | 2200 | **NU2232EM/YA8** |
| | 290 | 80 | 3 | 3 | 193 | | 809 | 1190 | 1800 | 2200 | **NJ2232E** |
| | 290 | 80 | 3 | 3 | 195 | | 700 | 1050 | 1800 | 2200 | **NJ2232M** |
| | 290 | 80 | 3 | 3 | 193 | | 1030 | 1130 | 1800 | 2200 | **NJ2232WB11Q1/YB2** |
| | 290 | 80 | 3 | 3 | 193 | | 1030 | 1130 | 1800 | 2200 | **NJ2232WB1Q1/YB2** |
| | 290 | 80 | 3 | 3 | 193 | | 810 | 1190 | 1800 | 2200 | **NU2232EMA/YA8-1** |

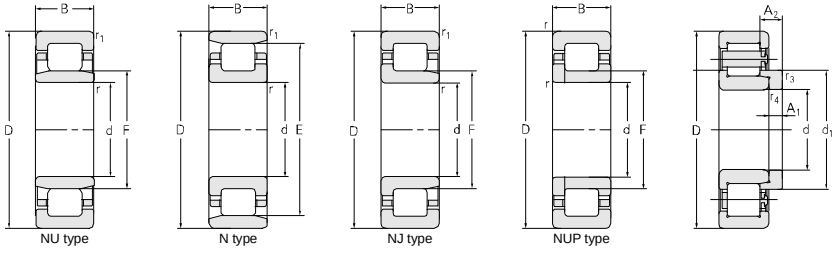
| Abutment and fillet dimensions | | | | | | | Weight | Model | Weight | Separate thrust collar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $da_{min}$ | $da_{max}$ | $db_{min}$ | $Da_{max}$ | $Da_{min}$ | $ra_{max}$ | $rb_{max}$ | | | | A1 | A2 | $r_3.r_4$ |
| mm | | | | | | | kg | | kg | mm | | |
| 173 | 188 | 208 | 277 | | 2.5 | 2.5 | 26 | | | | | |
| 173 | 188 | 208 | 277 | | 2.5 | 2.5 | 26 | | | | | |
| 167 | 172 | 177 | 220 | | 2 | 2 | 23.9 | | | | | |
| 173 | 188 | 208 | 277 | | 2.5 | 2.5 | 24.4 | | | | | |
| 173 | 188 | 208 | 277 | | 2.5 | 2.5 | 26 | | | | | |
| 169 | 171 | 181 | 211 | | 1.5 | 1.5 | 4.17 | | | | | |
| 168 | 205 | | 220 | 210 | 1.5 | 1.5 | 3.37 | | | | | |
| 168 | 213 | | 229 | 220 | 1.5 | 1.5 | 4.47 | | | | | |
| 168 | 217 | | 232 | 223 | 2 | 2 | 5.96 | | | | | |
| 168 | 177 | 191 | 229 | | 2 | 1.5 | 6.13 | | | | | |
| 168 | 177 | 183 | 229 | | 2 | 2 | 5.96 | | | | | |
| 168 | 177 | 183 | 229 | | 2 | 2 | 5.86 | | | | | |
| 173 | 255 | | 277 | 263 | 2.5 | 2.5 | 14.3 | | | | | |
| 173 | 191 | 198 | 277 | | 2.5 | 2.5 | 14.4 | HJ232 | 1.4 | 12 | 19.68 | 3 |
| 173 | 191 | 210 | 277 | | 2.5 | 2.5 | 14.2 | HJ232 | 1.4 | 12 | 19.68 | 3 |
| 173 | | 210 | 277 | | 2.5 | 2.5 | 14.6 | | | | | |
| 173 | 255 | | 277 | 263 | 2.5 | 2.5 | 13.9 | | | | | |
| 173 | 191 | 198 | 277 | | 2.5 | 2.5 | 14.0 | | | | | |
| 173 | 191 | 198 | 277 | | 2.5 | 2.5 | 14.3 | | | | | |
| 173 | 191 | 198 | 277 | | 2.5 | 2.5 | 14.3 | | | | | |
| 173 | 191 | 198 | 277 | | 2.5 | 2.5 | 14.3 | | | | | |
| 173 | 191 | 198 | 277 | | 2.5 | 2.5 | 13.8 | | | | | |
| 173 | 191 | 198 | 277 | | 2.5 | 2.5 | 14.3 | | | | | |
| 173 | 191 | 198 | 277 | | 2.5 | 2.5 | 14.3 | | | | | |
| 173 | 191 | 210 | 277 | | 2.5 | 2.5 | 14.3 | | | | | |
| 173 | | 210 | 277 | | 2.5 | 2.5 | 14.5 | | | | | |
| 173 | 191 | 198 | 277 | | 2.5 | 2.5 | 14.0 | | | | | |
| 173 | 191 | 198 | 277 | | 2.5 | 2.5 | 13.8 | | | | | |
| 173 | 189 | 196 | 277 | | 2.5 | 2.5 | 23.3 | | | | | |
| 173 | 189 | 196 | 277 | | 2.5 | 2.5 | 24.2 | | | | | |
| 173 | 189 | 196 | 277 | | 2.5 | 2.5 | 23.6 | | | | | |
| 173 | 188 | 208 | 277 | | 2.5 | 2.5 | 24.7 | | | | | |
| 173 | 189 | 196 | 277 | | 2.5 | 2.5 | 23.9 | | | | | |
| 173 | 188 | 208 | 277 | | 2.5 | 2.5 | 24.2 | | | | | |
| 173 | 188 | 208 | 277 | | 2.5 | 2.5 | 26 | | | | | |
| 173 | 189 | 196 | 277 | | 2.5 | 2.5 | 23.1 | | | | | |

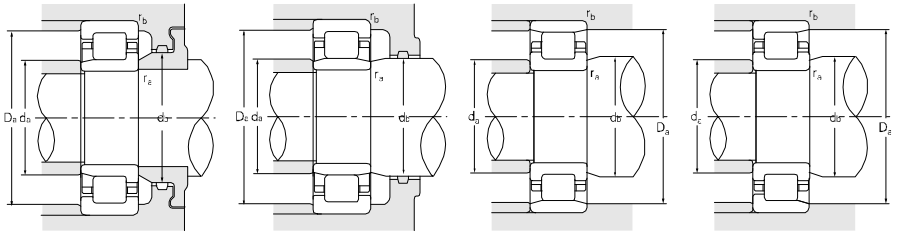


| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1smin}$ | $r_{smin}$ | F | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | | kN | | r/min | | |
| **160** | 290 | 80 | 3 | 3 | | 261 | 810 | 1190 | 1800 | 2200 | **N2232ENM** |
| | 290 | 97.5 | 3 | 3 | 193 | | 1030 | 1130 | 1800 | 2200 | **NU2232WBQ1/YB2** |
| | 290 | 97.5 | 3 | 3 | 193 | | 935 | 1130 | 1800 | 2200 | **NJ2232WBY** |
| | 290 | 110 | 3 | 3 | 193 | | 935 | 1130 | 1800 | 2200 | **NJ2232WB** |
| | 320 | 108 | 4 | 4 | 198 | | 1070 | 1490 | 1500 | 1800 | **N632M** |
| | 340 | 68 | 4 | 4 | | 292 | 750 | 970 | 1500 | 1800 | **N332M** |
| | 340 | 68 | 4 | 4 | 208 | | 750 | 970 | 1500 | 1800 | **NU332M** |
| | 340 | 68 | 4 | 4 | 208 | | 750 | 970 | 1500 | 1800 | **NU332M/YA8** |
| | 340 | 68 | 4 | 4 | 208 | | 750 | 970 | 1500 | 1800 | **NJ332M** |
| | 340 | 68 | 4 | 4 | 204 | | 858 | 1050 | 1500 | 1800 | **NU332EQ1/HA** |
| | 340 | 68 | 4 | 4 | 204 | | 919 | 1150 | 1500 | 1800 | **NU332EQ1** |
| | 340 | 68 | 4 | 4 | 208 | | 755 | 970 | 1500 | 1800 | **NU332M-DT** |
| | 340 | 68 | 4 | 4 | 204 | | 870 | 1080 | 1500 | 1800 | **FL-NU332EMA/C3** |
| | 340 | 114 | 4 | 4 | | 292 | 1120 | 1610 | 1350 | 1700 | **N2332M** |
| | 340 | 114 | 4 | 4 | 204 | | 1260 | 1730 | 1350 | 1700 | **NU2332EM/C9** |
| | 340 | 114 | 4 | 4 | 204 | | 1120 | 1730 | 1350 | 1700 | **NU2332EMA** |
| | 340 | 114 | 4 | 4 | 204 | | 1310 | 1820 | 1350 | 1700 | **NU2332E/YA5** |
| | 340 | 114 | 4 | 4 | 204 | | 1120 | 1610 | 1350 | 1700 | **NU2332M** |
| | 340 | 114 | 4 | 4 | 208 | | 1120 | 1610 | 1350 | 1700 | **NJ2332M** |
| | 340 | 114 | | 4 | 204 | | 1120 | 1610 | 1350 | 1700 | **NUP2332M** |
| **170** | 230 | 28 | 2 | 1.1 | | 216 | 193 | 310 | 2400 | 2900 | **N1934M** |
| | 260 | 42 | 2.1 | 2.1 | | 237 | 299 | 400 | 2200 | 2800 | **N1034M** |
| | 260 | 42 | 2.1 | 2.1 | 193 | | 299 | 440 | 2200 | 2800 | **NU1034M** |
| | 260 | 42 | 2.1 | 2.1 | 193 | | 299 | 440 | 2200 | 2800 | **NJ1034M** |
| | 265 | 42 | 2.1 | 2.1 | | 237 | 330 | 500 | 580 | 1100 | **N1034X1M** |
| | 310 | 52 | 4 | 4 | | 272 | 500 | 780 | 1800 | 2200 | **N234M** |
| | 310 | 52 | 4 | 4 | 208 | | 550 | 780 | 1800 | 2200 | **NU234M** |
| | 310 | 52 | 4 | 4 | 208 | | 550 | 780 | 1800 | 2200 | **NU234M/YA8** |
| | 310 | 52 | 4 | 4 | 208 | | 550 | 780 | 1800 | 2200 | **NU234Q1** |
| | 310 | 52 | 4 | 4 | 208 | | 550 | 780 | 1800 | 2200 | **NJ234M** |
| | 310 | 52 | 4 | 4 | 207 | | 640 | 870 | 1800 | 2200 | **NU234EM** |
| | 310 | 52 | 4 | 4 | 207 | | 640 | 870 | 1800 | 2200 | **NU234EM/P59V2** |
| | 310 | 52 | 4 | 4 | 207 | | 640 | 870 | 1800 | 2200 | **NU234EM-DT** |
| | 310 | 52 | 4 | 4 | 207 | | 640 | 870 | 1800 | 2200 | **FL-NU234EM** |

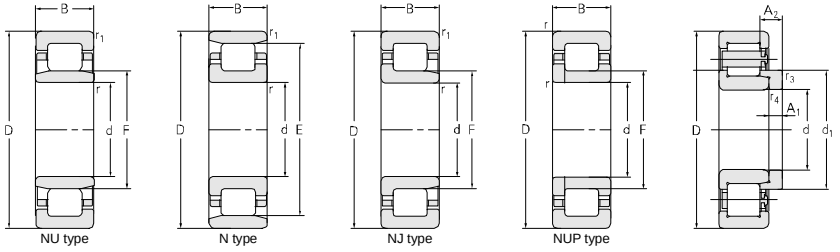
| Abutment and fillet dimensions | | | | | | | Weight | Model | Weight | Separate thrust collar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_{amin}$ | $d_{amax}$ | $d_{bmin}$ | $D_{amax}$ | $D_{amin}$ | $r_{amax}$ | $r_{bmax}$ | | | | A1 | A2 | $r_3.r_4$ |
| mm | | | | | | | kg | | kg | mm | | |
| 173 | 198 | | 277 | | 2.5 | 2.5 | 23.5 | | | | | |
| 173 | 189 | 196 | 277 | | 2.5 | 2.5 | 24.8 | | | | | |
| 173 | 188 | 208 | 277 | | 2.5 | 2.5 | 25.8 | | | | | |
| 173 | 188 | 208 | 277 | | 2.5 | 2.5 | 26 | | | | | |
| 176 | 188 | 208 | 304 | | 3 | 3 | 40.9 | | | | | |
| 176 | 288 | | 324 | 296 | 3 | 3 | 30.8 | | | | | |
| 176 | 204 | 211 | 324 | | 3 | 3 | 30.9 | | | | | |
| 176 | 204 | 211 | 324 | | 3 | 3 | 30.9 | | | | | |
| 176 | 204 | 225 | 324 | | 3 | 3 | 31.5 | | | | | |
| 176 | 200 | 207 | 324 | | 3 | 3 | 31.3 | | | | | |
| 176 | 200 | 207 | 324 | | 3 | 3 | 27.8 | | | | | |
| 176 | 204 | 211 | 324 | | 3 | 3 | 30.6 | | | | | |
| 176 | 200 | 207 | 324 | | 3 | 3 | 31.4 | | | | | |
| 176 | 201 | 209 | 324 | | 3 | 3 | 51.6 | | | | | |
| 176 | 201 | 209 | 324 | | 3 | 3 | 52.4 | | | | | |
| 176 | 201 | 209 | 324 | | 3 | 3 | 53.9 | | | | | |
| 176 | 201 | 209 | 324 | | 3 | 3 | 50.7 | | | | | |
| 176 | 201 | 209 | 324 | | 3 | 3 | 54.4 | HJ2332 | 3.21 | 15 | 36.67 | 4 |
| 176 | 215 | 194 | 324 | | 3 | 3 | 54.3 | HJ2332 | 3.21 | 15 | 36.67 | 4 |
| 176 | 201 | 209 | 324 | | 3 | 3 | 56.5 | | | | | |
| 180 | | 213 | 222 | 219 | 1.5 | 1 | 3.64 | | | | | |
| 181 | 233 | | 249 | 241 | 2 | 2 | 8.02 | | | | | |
| 181 | 190 | 196 | 249 | | 2 | 2 | 8.23 | | | | | |
| 181 | 190 | 205 | 249 | | 2 | 2 | 8.47 | | | | | |
| 186 | 234 | | 254 | 241 | 2 | 2 | 7.97 | | | | | |
| 186 | 266 | | 294 | 278 | 3 | 3 | 18.2 | | | | | |
| 186 | 203 | 210 | 294 | | 3 | 3 | 17.9 | | | | | |
| 186 | 203 | 210 | 294 | | 3 | 3 | 17.4 | | | | | |
| 186 | 203 | 210 | 294 | | 3 | 3 | 18.1 | | | | | |
| 186 | 203 | 224 | 294 | | 3 | 3 | 19.2 | | | | | |
| 186 | 203 | 210 | 294 | | 3 | 3 | 18.4 | | | | | |
| 186 | 203 | 210 | 294 | | 3 | 3 | 18.4 | | | | | |
| 186 | 203 | 210 | 294 | | 3 | 3 | 18 | | | | | |
| 186 | 203 | 210 | 294 | | 3 | 3 | 18.4 | | | | | |

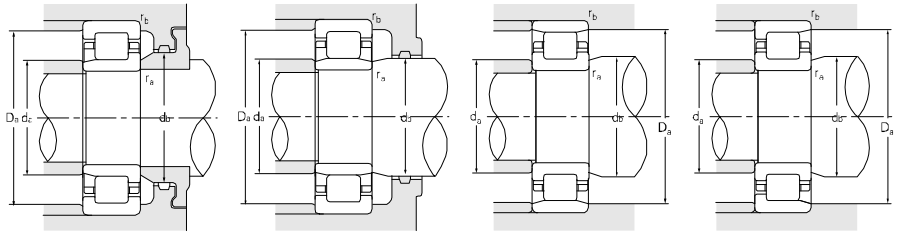


| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1smin}$ | $r_{smin}$ | F | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | | kN | | r/min | | |
| **170** | 310 | 86 | 4 | 4 | 207 | | 644 | 870 | 1800 | 2200 | **NU234EWBM** |
| | 310 | 86 | 4 | 4 | 205 | | 1000 | 1480 | 1800 | 2200 | **NU2234EM** |
| | 310 | 86 | 4 | 4 | 208 | | 875 | 1400 | 1800 | 2200 | **NU2234M** |
| | 310 | 86 | 4 | 4 | 205 | | 1000 | 1480 | 1800 | 2300 | **NJ2234EQ1** |
| | 310 | 86 | 4 | 4 | 205 | | 1000 | 1480 | 1800 | 2300 | **NJ2234EM** |
| | 310 | 86 | 4 | 4 | 205 | | 1000 | 1480 | 1800 | 2300 | **NJ2234EQ1/YA1** |
| | 310 | 108 | 4 | 4 | 198 | | 1070 | 1490 | 1500 | 1800 | **NU634M** |
| | 340 | 114 | 4 | 4 | | 292 | 1120 | 1610 | 1500 | 1800 | **N2334M** |
| | 340 | 114 | 4 | 4 | 208 | | 1120 | 1610 | 1500 | 1800 | **NU2334M** |
| | 360 | 72 | 4 | 4 | | 310 | 815 | 1040 | 1400 | 1700 | **N334M** |
| | 360 | 72 | 4 | 4 | 220 | | 810 | 1040 | 1400 | 1700 | **NU334M** |
| | 360 | 72 | 4 | 4 | 220 | | 810 | 1040 | 1400 | 1700 | **NJ334M** |
| | 360 | 120 | 4 | 4 | 220 | | 1270 | 1850 | 1400 | 1700 | **NJ2334M** |
| | 360 | 120 | 4 | 4 | 220 | | 1270 | 1850 | 1400 | 1700 | **NU2334M** |
| | 360 | 120 | 4 | 4 | 220 | | 1270 | 1850 | 1400 | 1700 | **NU2334MA** |
| | 360 | 120 | 4 | 4 | 220 | | 1270 | 1850 | 1400 | 1700 | **NU2334M/C9** |
| **180** | 250 | 33 | 2 | 1.1 | | 233 | 237 | 380 | 2200 | 2800 | **NF1936M** |
| | 280 | 31 | 2 | 2 | | 250 | 270 | 420 | 2000 | 2400 | **N036M** |
| | 280 | 31 | 2 | 2 | | 250 | 270 | 420 | 2000 | 2400 | **N036L** |
| | 280 | 31 | 2 | 2 | | 260 | 330 | 472 | 2000 | 2400 | **N036EM** |
| | 280 | 33 | 2 | 2 | | 260 | 341 | 540 | 1900 | 2200 | **N036X2** |
| | 280 | 46 | 2.1 | 2.1 | | 255 | 380 | 565 | 2000 | 2600 | **N1036M** |
| | 280 | 50 | 2.1 | 2.1 | | 255 | 420 | 640 | 2000 | 2600 | **NF1036X2M** |
| | 280 | 46 | 2.1 | 2.1 | 205 | | 418 | 565 | 2000 | 2600 | **NU1036M** |
| | 280 | 46 | 2.1 | 2.1 | 205 | | 380 | 565 | 2000 | 2600 | **NJ1036M** |
| | 320 | 52 | 4 | 4 | | 282 | 555 | 785 | 1700 | 2000 | **N236M** |
| | 320 | 52 | 4 | 4 | 218 | | 555 | 785 | 1700 | 2000 | **NU236M** |
| | 320 | 52 | 4 | 4 | 218 | | 555 | 785 | 1700 | 2000 | **NU236M/YA8** |
| | 320 | 52 | 4 | 4 | 217 | | 615 | 830 | 1700 | 2000 | **NU236EM** |
| | 320 | 52 | 4 | 4 | 218 | | 555 | 785 | 1700 | 2000 | **NU236M-DT** |
| | 320 | 52 | 4 | 4 | 218 | | 555 | 785 | 1700 | 2000 | **NJ236M** |
| | 320 | 52 | | 4 | 218 | | 555 | 785 | 1700 | 2000 | **NUP236M** |
| | 320 | 52 | 4 | 4 | 218 | | 555 | 785 | 1700 | 2000 | **NU236M-DT/YB2** |
| | 320 | 52 | 4 | 4 | 218 | | 555 | 785 | 1700 | 2000 | **NU236L3-DT** |
| | 320 | 52 | 4 | 4 | 218 | | 555 | 785 | 1700 | 2000 | **NU236L3-DT/YB2** |

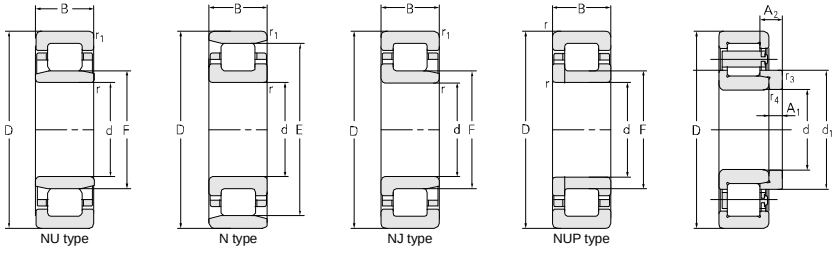
| Abutment and fillet dimensions | | | | | | | Weight | Model | Weight | Separate thrust collar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $da_{min}$ | $da_{max}$ | $db_{min}$ | $Da_{max}$ | $Da_{min}$ | $ra_{max}$ | $rb_{max}$ | | | | A1 | A2 | $r_3.r_4$ |
| mm | | | | | | | kg | | kg | mm | | |
| 186 | 203 | 210 | 294 | | 3 | 3 | 21.4 | | | | | |
| 186 | 201 | 208 | 294 | | 3 | 3 | 29.0 | | | | | |
| 187 | 203 | 211 | 293 | | 3 | 3 | 30.5 | | | | | |
| 187 | | 212 | 293 | | 3 | 3 | 29.5 | | | | | |
| 187 | | 212 | 293 | | 3 | 3 | 29.5 | | | | | |
| 187 | | 212 | 293 | | 3 | 3 | 29.5 | | | | | |
| 176 | 195 | 201 | 304 | | 3 | 3 | 40.9 | | | | | |
| 176 | 288 | | 324 | 295 | 3 | 3 | 51.6 | | | | | |
| 176 | 200 | 211 | 324 | | 3 | 3 | 54.4 | | | | | |
| 186 | 307 | | 344 | 315 | 3 | 3 | 37.3 | | | | | |
| 186 | 214 | 223 | 344 | | 3 | 3 | 37.7 | | | | | |
| 186 | 214 | 243 | 344 | | 3 | 3 | 38.4 | | | | | |
| 186 | 212 | 240 | 344 | | 3 | 3 | 62.5 | | | | | |
| 186 | 212 | 223 | 344 | | 3 | 3 | 61.1 | | | | | |
| 186 | 212 | 223 | 344 | | 3 | 3 | 61.5 | | | | | |
| 186 | 212 | 223 | 344 | | 3 | 3 | 61.3 | | | | | |
| 190 | | | 240 | 236 | 1.5 | 1.5 | 4.96 | | | | | |
| 191 | 246 | | 269 | 254 | 2 | 2 | 8.59 | | | | | |
| 191 | 246 | | 269 | 254 | 2 | 2 | 7.08 | | | | | |
| 191 | 246 | | 269 | 254 | 2 | 2 | 7.15 | | | | | |
| 191 | 256 | | 269 | 264 | 2 | 2 | 8.44 | | | | | |
| 191 | 221 | | 265 | 260 | 2 | 2 | 10.3 | | | | | |
| 191 | 221 | | 265 | 260 | 2 | 2 | 11.9 | | | | | |
| 191 | 202 | 208 | 269 | | 2 | 2 | 10.4 | | | | | |
| 191 | 202 | 208 | 269 | | 2 | 2 | 10.7 | | | | | |
| 196 | 278 | | 304 | 286 | 3 | 3 | 19.7 | | | | | |
| 196 | 213 | 220 | 304 | | 3 | 3 | 19.2 | | | | | |
| 196 | 213 | 220 | 304 | | 3 | 3 | 19.4 | | | | | |
| 196 | 202 | 208 | 304 | | 3 | 3 | 18.7 | | | | | |
| 196 | 213 | 220 | 304 | | 3 | 3 | 19.4 | | | | | |
| 196 | 213 | 234 | 304 | | 3 | 3 | 19.3 | | | | | |
| 196 | | 234 | 304 | | 3 | 3 | 20.5 | | | | | |
| 196 | 213 | 220 | 304 | | 3 | 3 | 19.4 | | | | | |
| 196 | 213 | 220 | 304 | | 3 | 3 | 18.6 | | | | | |
| 196 | 213 | 220 | 304 | | 3 | 3 | 18.6 | | | | | |

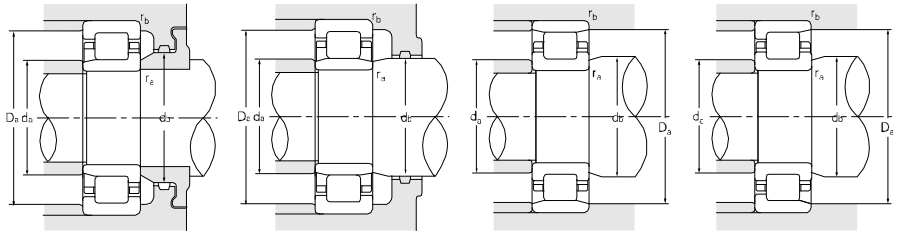


| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1smin}$ | $r_{smin}$ | F | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | | kN | | r/min | | |
| **180** | 320 | 86 | 4 | 4 | 215 | | 1050 | 1580 | 1700 | 2000 | **NU2236M** |
| | 320 | 86 | 4 | 4 | 215 | | 1100 | 1580 | 1700 | 2000 | **NU2236EM** |
| | 320 | 86 | 4 | 4 | 215 | | 1050 | 1580 | 1700 | 2000 | **NJ2236M** |
| | 320 | 86 | 4 | 4 | 215 | | 1100 | 1580 | 1700 | 2000 | **NJ2236EM** |
| | 320 | 86 | 4 | 4 | 215 | | 1100 | 1580 | 1700 | 2000 | **NJ2236EQ1** |
| | 320 | 86 | | 4 | 215 | | 1050 | 1580 | 1700 | 2000 | **NUP2236M** |
| | 320 | 112 | 4 | 4 | 218 | | 1120 | 1950 | 1700 | 2000 | **NU3236M/C3** |
| | 320 | 112 | 4 | 4 | 218 | | 1120 | 1950 | 1700 | 2000 | **NU3236M/HC** |
| | 380 | 75 | 4 | 4 | | 330 | 990 | 1260 | 1500 | 1800 | **N336M** |
| | 380 | 75 | 4 | 4 | 230 | | 990 | 1260 | 1500 | 1800 | **NU336M** |
| | 380 | 75 | 4 | 4 | 230 | | 990 | 1260 | 1500 | 1800 | **NJ336M** |
| | 380 | 75 | 4 | 4 | 231 | | 1170 | 1360 | 1500 | 1800 | **NJ336EM** |
| | 380 | 75 | 4 | 4 | 231 | | 1170 | 1360 | 1500 | 1800 | **NU336EM** |
| | 380 | 75 | 4 | 4 | 231 | | 1060 | 1360 | 1500 | 1800 | **NU336EMA** |
| | 380 | 126 | 4 | 4 | 232 | | 1360 | 1850 | 1300 | 1600 | **NJ2336M** |
| | 380 | 126 | 4 | 4 | 232 | | 1360 | 1850 | 1300 | 1600 | **NU2336M** |
| **190** | 260 | 42 | 2 | 1.1 | 208 | | 347 | 685 | 2200 | 2800 | **NU2938Q1** |
| | 260 | 42 | 2 | 2 | 208 | | 315 | 610 | 2200 | 2800 | **NJ2938** |
| | 290 | 46 | 2.1 | 2.1 | 215 | | 413 | 640 | 2000 | 2600 | **NU1038M** |
| | 290 | 46 | 2.1 | 2.1 | 215 | | 435 | 600 | 2000 | 2600 | **NJ1038Q1/HAP63** |
| | 340 | 55 | 4 | 4 | 231 | | 710 | 980 | 1600 | 1900 | **NU238EM/C9** |
| | 340 | 55 | 4 | 4 | 231 | | 620 | 885 | 1600 | 1900 | **NU238M** |
| | 340 | 55 | 4 | 4 | 231 | | 620 | 885 | 1600 | 1900 | **NJ238M** |
| | 340 | 55 | | 4 | 231 | | 620 | 885 | 1600 | 1900 | **NUP238M** |
| | 340 | 55 | 4 | 4 | | 306 | 710 | 980 | 1600 | 1900 | **N238EM** |
| | 340 | 55 | 4 | 4 | 230 | | 710 | 980 | 1600 | 1900 | **NU238EM-DT** |
| | 340 | 92 | 4 | 4 | 228 | | 1140 | 1750 | 1600 | 1900 | **NU2238M** |
| | 340 | 92 | 4 | 4 | 228 | | 1210 | 1660 | 1600 | 1900 | **NJ2238EM** |
| | 340 | 120 | 4 | 4 | 231 | | 1320 | 2340 | 1600 | 1900 | **NU3238M/C3** |
| | 400 | 78 | 5 | 5 | 245 | | 1040 | 1370 | 1200 | 1500 | **NJ338M** |
| | 400 | 78 | 5 | 5 | 245 | | 1040 | 1370 | 1200 | 1500 | **NU338M** |
| | 400 | 78 | 5 | 5 | | 345 | 1040 | 1730 | 1200 | 1500 | **N338M** |
| | 400 | 132 | 5 | 5 | 240 | | 1870 | 2450 | 1200 | 1500 | **NU2338EMA** |
| | 400 | 132 | 5 | 5 | 245 | | 1560 | 2300 | 1200 | 1500 | **NU2338M** |

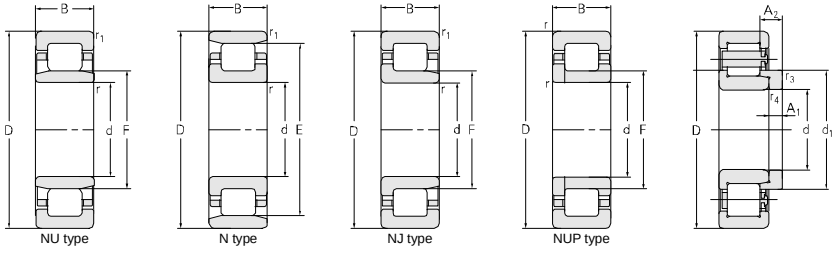
| Abutment and fillet dimensions | | | | | | | Weight | Model | Weight | Separate thrust collar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_{amin}$ | $d_{amax}$ | $d_{bmin}$ | $D_{amax}$ | $D_{amin}$ | $r_{amax}$ | $r_{bmax}$ | | | | A1 | A2 | $r_3.r_4$ |
| mm | | | | | | | kg | | kg | mm | | |
| 196 | 211 | 218 | 304 | | 3 | 3 | 31.4 | | | | | |
| 196 | 211 | 218 | 304 | | 3 | 3 | 30.3 | HJ2236E | 1.94 | 12 | 23.67 | 4 |
| 196 | 211 | 232 | 304 | | 3 | 3 | 31.9 | | | | | |
| 196 | 211 | 232 | 304 | | 3 | 3 | 31.0 | HJ2236E | 1.94 | 12 | 23.67 | 4 |
| 196 | 211 | 232 | 304 | | 3 | 3 | 31.7 | | | | | |
| 196 | | 232 | 304 | | 3 | 3 | 32.1 | | | | | |
| 196 | 211 | 218 | 304 | | 3 | 3 | 41.6 | | | | | |
| 196 | 211 | 218 | 304 | | 3 | 3 | 41.6 | | | | | |
| 196 | 325 | | 364 | 335 | 3 | 3 | 39.6 | | | | | |
| 196 | 226 | 236 | 364 | | 3 | 3 | 42.8 | HJ336 | 3.1 | 17 | 29.16 | 4 |
| 196 | 226 | 236 | 364 | | 3 | 3 | 43.6 | HJ336 | 3.1 | 17 | 29.16 | 4 |
| 196 | 226 | 254 | 364 | | 3 | 3 | 42.7 | | | | | |
| 196 | 226 | 236 | 364 | | 3 | 3 | 42.1 | | | | | |
| 196 | 226 | 236 | 364 | | 3 | 3 | 43.3 | | | | | |
| 196 | 227 | 255 | 364 | | 3 | 3 | 72.0 | | | | | |
| 196 | 227 | 236 | 364 | | 3 | 3 | 69.5 | | | | | |
| 196 | 206 | 210 | 252 | | 1.5 | 1 | 6.98 | | | | | |
| 196 | 206 | 210 | 252 | | 1.5 | 1 | 7.24 | | | | | |
| 201 | 212 | 218 | 279 | | 2 | 2 | 10.9 | | | | | |
| 201 | 212 | 218 | 279 | | 2 | 2 | 11.2 | | | | | |
| 206 | 226 | 234 | 324 | | 3 | 3 | 22.8 | | | | | |
| 206 | 226 | 234 | 324 | | 3 | 3 | 21.6 | HJ238 | 2.04 | 13 | 23.13 | 4 |
| 206 | 226 | 248 | 324 | | 3 | 3 | 22.0 | HJ238 | 2.04 | 13 | 23.13 | 4 |
| 206 | | 248 | 324 | | 3 | 3 | 22.3 | | | | | |
| 206 | 236 | | 324 | | 3 | 3 | 22.6 | | | | | |
| 206 | 226 | 234 | 324 | | 3 | 3 | 22.5 | | | | | |
| 206 | 223 | 232 | 324 | | 3 | 3 | 38.6 | | | | | |
| 206 | 232 | 218 | 324 | | 3 | 3 | 39.6 | | | | | |
| 206 | 223 | 232 | 324 | | 3 | 3 | 51.2 | | | | | |
| 206 | 240 | 266 | 380 | | 4 | 4 | 49.4 | HJ338 | 4.3 | 18 | 31.65 | 5 |
| 210 | 240 | 249 | 380 | | 4 | 4 | 48.5 | HJ338 | 4.3 | 18 | 31.65 | 5 |
| 210 | 340 | 380 | 350 | | 4 | 4 | 50.2 | | | | | |
| 210 | 235 | 249 | 380 | | 4 | 4 | 82.8 | | | | | |
| 210 | | 230 | 380 | | 4 | 4 | 82.9 | | | | | |

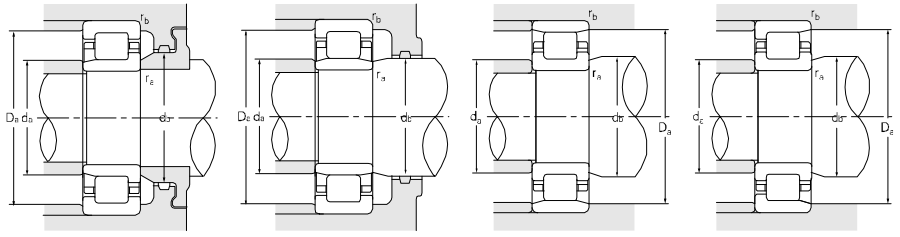


| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1smin}$ | $r_{smin}$ | F | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | | kN | | r/min | | |
| **190.5** | 266.7 | 103.188 | 2 | 1.1 | 2.8 | | 715 | 1480 | 1500 | 1800 | **NU6/190.5/W33X** |
| **200** | 310 | 34 | 2 | 2 | | 277 | 336 | 545 | 2200 | 2800 | **N040M** |
| | 310 | 51 | 2.1 | 2.1 | 227 | | 468 | 705 | 1900 | 2400 | **NU1040M** |
| | 310 | 51 | 2.1 | 2.1 | 227 | | 468 | 705 | 1900 | 2400 | **NJ1040M** |
| | 310 | 100 | 2.5 | 2.5 | 275.5 | 234.5 | 930 | 2110 | 1900 | 2400 | **NAOL4040X2** |
| | 320 | 48 | 2.1 | 2.1 | | 283 | 473 | 705 | 1900 | 2400 | **N640M** |
| | 320 | 88.9 | 3 | 3 | 232.689 | | 776 | 1350 | 1700 | 2000 | **NU3040X3M/C3** |
| | 320 | 88.9 | 3 | 3 | 232.689 | | 776 | 1350 | 1700 | 2000 | **NU3040X3M/C4-NJB** |
| | 360 | 58 | 4 | 4 | | 316 | 690 | 995 | 1500 | 1800 | **N240M** |
| | 360 | 58 | 4 | 4 | 244 | | 688 | 995 | 1500 | 1800 | **NU240M** |
| | 360 | 58 | 4 | 4 | 244 | | 780 | 1090 | 1500 | 1800 | **NU240EMA** |
| | 360 | 58 | 4 | 4 | 244 | | 625 | 995 | 1500 | 1800 | **NJ240M** |
| | 360 | 98 | 4 | 4 | 244 | | 970 | 1550 | 1500 | 1800 | **NJ2240M** |
| | 360 | 98 | | 4 | 244 | | 996 | 1600 | 1500 | 1800 | **NUP2240M** |
| | 360 | 98 | 4 | 4 | | 325 | 1240 | 1900 | 1500 | 1800 | **N2240EM** |
| | 360 | 98 | 4 | 4 | 241 | | 1230 | 1980 | 1500 | 1800 | **NU2240EM** |
| | 360 | 98 | 4 | 4 | 241 | | 1230 | 1900 | 1500 | 1800 | **NU2240EM/C9W33A** |
| | 360 | 98 | 4 | 4 | | 325 | 1240 | 1900 | 1500 | 1800 | **N2240EM/YA1** |
| | 360 | 98 | 4 | 4 | 241 | | 1240 | 1900 | 1500 | 1800 | **FL-NJ2240EMA/P6** |
| | 360 | 115 | 4 | 4 | 244 | | 957 | 1520 | 1900 | 2400 | **NU1240X2WBM/HG2** |
| | 360 | 120.65 | 4 | 4 | 244 | | 1280 | 2190 | 1900 | 2400 | **NU5240XPC3** |
| | 420 | 80 | 5 | 5 | 260 | | 1090 | 1400 | 1300 | 1600 | **NU340M** |
| | 420 | 138 | 5 | 5 | 260 | | 1650 | 2510 | 1200 | 1500 | **NJ2340M** |
| | 420 | 138 | 5 | 5 | | 364 | 1650 | 2510 | 1200 | 1500 | **N2340M** |
| | 420 | 138 | 5 | 5 | 260 | | 1650 | 2510 | 1200 | 1500 | **NU2340MA** |
| | 420 | 138 | 5 | 5 | 253 | | 2040 | 2880 | 1200 | 1500 | **NU2340EM/P5YA4-FYT** |
| | 420 | 138 | 5 | 5 | 256 | | 1970 | 2450 | 1200 | 1500 | **NJ2340M/YA4** |
| | 420 | 165 | 5 | 5 | 260 | | 2150 | 3540 | 1200 | 1500 | **NU3340M** |
| | 420 | 165 | | 5 | 260 | | 2150 | 3540 | 1200 | 1500 | **NUP3340** |
| | 420 | 165 | 5 | 5 | 260 | | 2310 | 3400 | 1200 | 1500 | **NU3340M/HCW20T** |
| **203.23** | 310 | 82 | 3 | 3 | 229.006 | | 880 | 1410 | 1000 | 1200 | **NU30/203X4Q1/HA** |
| **220** | 300 | 48 | 2.1 | 1.5 | 240 | | 407 | 755 | 1900 | 2400 | **NU2944Q1** |

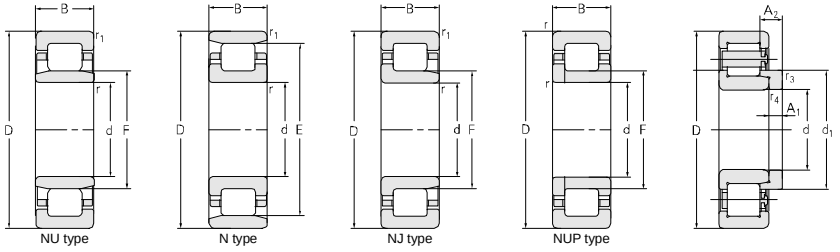
| Abutment and fillet dimensions | | | | | | | Weight | Model | Weight | Separate thrust collar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_{amin}$ | $d_{amax}$ | $d_{bmin}$ | $D_{amax}$ | $D_{amin}$ | $r_{amax}$ | $r_{bmax}$ | | | | A1 | A2 | $r_3.r_4$ |
| mm | | | | | | | kg | | kg | mm | | |
| 197 | | 200 | 257 | | 2 | 1 | 18 | | | | | |
| 211 | 274 | | 299 | 280 | 2 | 2 | 10.1 | | | | | |
| 211 | 225 | 233 | 299 | | 2 | 2 | 14.3 | HJ1040 | 1.70 | 13 | 24.13 | 2.1 |
| 211 | 225 | 242 | 299 | | 2 | 2 | 14.7 | HJ1040 | 1.70 | 13 | 24.13 | 2.1 |
| 211 | 225 | 233 | 299 | | 2 | 2 | 30.2 | | | | | |
| 211 | 280 | | 299 | 286 | 2 | 2 | 14.7 | | | | | |
| 211 | 225 | 235 | 309 | | 3 | 3 | 28.7 | | | | | |
| 211 | 225 | 235 | 309 | | 3 | 3 | 28.7 | | | | | |
| 216 | 310 | | 344 | 322 | 3 | 3 | 26.8 | | | | | |
| 216 | 239 | 247 | 344 | | 3 | 3 | 26.5 | | | | | |
| 216 | 239 | 247 | 344 | | 3 | 3 | 27.5 | HJ240E | 2.72 | 14 | 23 | 4 |
| 216 | 239 | 262 | 344 | | 3 | 3 | 27.1 | | | | | |
| 216 | 236 | 260 | 344 | | 3 | 3 | 45.5 | | | | | |
| 216 | | 260 | 344 | | 3 | 3 | 46.3 | | | | | |
| 216 | 320 | | 344 | 330 | 3 | 3 | 44.9 | | | | | |
| 216 | 236 | 245 | 344 | | 3 | 3 | 42.2 | | | | | |
| 216 | 236 | 245 | 344 | | 3 | 3 | 42.0 | | | | | |
| 216 | 320 | | 344 | 330 | 3 | 3 | 44.9 | | | | | |
| 216 | 236 | 230 | 344 | | 3 | 3 | 46.7 | | | | | |
| 211 | 225 | 233 | 299 | | 2 | 2 | 42.9 | | | | | |
| 211 | 225 | 233 | 299 | | 2 | 2 | 57.6 | | | | | |
| 220 | 253 | 264 | 400 | | 4 | 4 | 56.7 | HJ340 | 5.2 | 18 | 32.63 | 5 |
| 220 | 241 | 251 | 400 | | 4 | 4 | 99 | HJ2340 | 6.13 | 18 | 41.6 | 5 |
| 220 | 360 | | 400 | 368 | 4 | 4 | 94.5 | | | | | |
| 220 | | 243 | 400 | | 4 | 4 | 95.6 | HJ2340 | 6.13 | 18 | 41.6 | 5 |
| 220 | | 240 | 400 | | 4 | 4 | 96.7 | | | | | |
| 220 | 241 | 251 | 400 | | 4 | 4 | 98.4 | HJ2340 | 6.13 | 18 | 41.6 | 5 |
| 220 | 253 | 264 | 400 | | 4 | 4 | 118 | | | | | |
| 220 | | 282 | 400 | | 4 | 4 | 121 | | | | | |
| 220 | 253 | 264 | 400 | | 4 | 4 | 115 | | | | | |
| 220 | 253 | 230 | 290 | | 2 | 2 | 23.9 | | | | | |
| 229 | 237 | 243 | 289 | | 2 | 1 | 10.5 | | | | | |

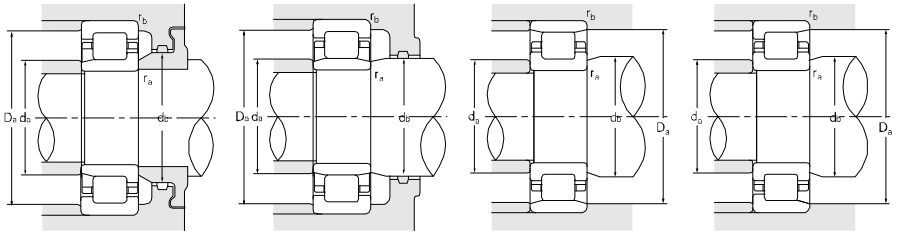


| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1smin}$ | $r_{smin}$ | F | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | | kN | | r/min | | |
| **220** | 300 | 48 | 2.1 | 2.1 | 240 | | 407 | 750 | 1900 | 2400 | **NJ2944M** |
| | 340 | 56 | 3 | 3 | 250 | | 517 | 775 | 1800 | 2200 | **NU1044Q1** |
| | 340 | 56 | 3 | 3 | 250 | | 534 | 810 | 1800 | 2200 | **NJ1044M** |
| | 340 | 56 | 3 | 3 | 250 | | 534 | 810 | 1800 | 2200 | **NU1044M** |
| | 340 | 56 | 3 | 3 | | 310 | 530 | 810 | 1800 | 2200 | **NFP1044M** |
| | 340 | 90 | 3 | 3 | 251.409 | | 1060 | 1820 | 1800 | 2200 | **NU3044Q1/HA** |
| | 350 | 98.4 | 3 | 3 | 253 | | 1280 | 2090 | 1800 | 2200 | **NU3044X3M/C9** |
| | 350 | 90 | 3 | 3 | 253 | | 965 | 1830 | 1800 | 2200 | **NU3044M/HG2W33A** |
| | 350 | 98.4 | 3 | 3 | 253 | | 1280 | 2090 | 1800 | 2200 | **NU3044X3M/C9-NJB** |
| | 350 | 98.4 | 3 | 3 | 253 | | 1280 | 2090 | 1800 | 2200 | **NU3044X3M/C91YA6** |
| | 350 | 98.4 | 3 | 5 | 253 | | 1280 | 2090 | 1800 | 2200 | **NU3044X3M/C92YA6-LS** |
| | 400 | 65 | 4 | 4 | | 350 | 836 | 1220 | 1500 | 1800 | **N244M** |
| | 400 | 65 | 4 | 4 | 270 | | 835 | 1220 | 1500 | 1800 | **NJ244M** |
| | 400 | 65 | 4 | 4 | 270 | | 835 | 1440 | 1990 | 1800 | **NU244M** |
| | 400 | 65 | | 4 | 270 | | 835 | 1220 | 1500 | 1800 | **NUP244M** |
| | 400 | 108 | 4 | 4 | 270 | | 1220 | 1990 | 1300 | 1600 | **NU2244M** |
| | 400 | 144 | 4 | 4 | 270 | | 1950 | 3350 | 1500 | 1800 | **NB3244F1** |
| | 400 | 108 | 4 | 4 | 270 | | 1440 | 1990 | 1300 | 1600 | **NJ2244M** |
| | 400 | 108 | 4 | 4 | 270 | | 1490 | 2280 | 1300 | 1600 | **NU2244EM** |
| | 400 | 108 | 4 | 4 | | 350 | 1440 | 1990 | 1300 | 1600 | **N2244M/YA1** |
| | 400 | 108 | 4 | 4 | 265 | | 1490 | 2280 | 1300 | 1600 | **NU2244EM/HC** |
| | 400 | 108 | 4 | 4 | 265 | | 1490 | 2280 | 1300 | 1600 | **NU2244EMA** |
| | 400 | 108 | 4 | 4 | | 350 | 1440 | 1990 | 1300 | 1600 | **N2244M** |
| | 460 | 88 | 5 | 5 | 284 | | 1280 | 1730 | 1000 | 1300 | **NU344M** |
| | 460 | 88 | 5 | 5 | 282 | | 1370 | 1840 | 1000 | 1300 | **NJ344EM** |
| | 460 | 145 | 5 | 5 | 284 | | 2040 | 2780 | 1000 | 1300 | **NU2344M/C3** |
| | 460 | 145 | 5 | 5 | 284 | | 2040 | 2780 | 1000 | 1300 | **NU2344M** |
| | 460 | 145 | 5 | 5 | 284 | | 2170 | 3270 | 1000 | 1300 | **NU2344M/C9** |
| | 460 | 145 | 5 | 5 | 275 | | 2310 | 3400 | 1000 | 1300 | **NU2344E/YA5** |
| | 460 | 145 | 5 | 5 | | 407 | 2300 | 3360 | 1000 | 1300 | **N2344EM** |
| | 460 | 145 | 5 | 5 | 275 | | 2230 | 3250 | 950 | 1100 | **NU2344EMA** |
| **240** | 320 | 38 | 2.5 | 1.8 | 260 | | 308 | 540 | 1900 | 2400 | **NU1948M** |
| | 320 | 38 | 2.5 | 1.8 | 260 | | 310 | 540 | 1900 | 2400 | **NJ1948M** |
| | 360 | 56 | 3 | 3 | 270 | | 512 | 775 | 1700 | 2000 | **NU1048M** |

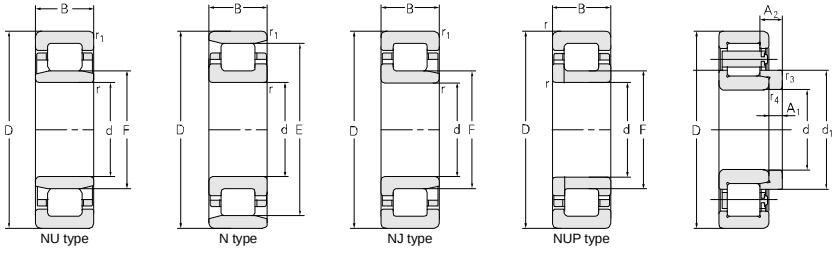
| Abutment and fillet dimensions | | | | | | | Weight | Model | Weight | Separate thrust collar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $da_{min}$ | $da_{max}$ | $db_{min}$ | $Da_{max}$ | $Da_{min}$ | $ra_{max}$ | $rb_{max}$ | | | | A1 | A2 | $r_3.r_4$ |
| mm | | | | | | | kg | | kg | mm | | |
| 229 | 237 | 243 | 289 | | 2 | 2 | 10.8 | | | | | |
| 233 | 246 | 254 | 327 | | 2.5 | 2.5 | 19.4 | | | | | |
| 233 | 246 | 265 | 327 | | 2.5 | 2.5 | 19.6 | | | | | |
| 233 | 246 | 254 | 327 | | 2.5 | 2.5 | 19.2 | | | | | |
| 233 | 246 | 254 | 327 | | 2.5 | 2.5 | 20.2 | | | | | |
| 233 | 246 | 254 | 327 | | 2.5 | 2.5 | 32 | | | | | |
| 233 | 248 | 257 | 332 | | 2.5 | 2.5 | 38.1 | | | | | |
| 233 | 248 | 257 | 332 | | 2.5 | 2.5 | 32.4 | | | | | |
| 233 | 248 | 257 | 332 | | 2.5 | 2.5 | 38.1 | | | | | |
| 233 | 248 | 257 | 332 | | 2.5 | 2.5 | 38 | | | | | |
| 233 | 248 | 257 | 332 | | 2.5 | 2.5 | 38 | | | | | |
| 236 | 342 | | 384 | 358 | 3 | 3 | 36.7 | | | | | |
| 236 | 263 | 290 | 384 | | 3 | 3 | 35.4 | HJ244 | 3.78 | 15 | 27.13 | 4 |
| 236 | 263 | 276 | 384 | | 3 | 3 | 35.0 | HJ244 | 3.78 | 15 | 27.13 | 4 |
| 236 | 263 | 276 | 384 | | 3 | 3 | 38.8 | | | | | |
| 236 | 262 | 274 | 384 | | 3 | 3 | 62.2 | | | | | |
| 236 | 263 | 276 | 384 | | 3 | 3 | 77.3 | | | | | |
| 236 | 262 | 290 | 384 | | 3 | 3 | 63.3 | | | | | |
| 237 | 255 | 264 | 383 | | 3 | 3 | 62.8 | | | | | |
| 237 | 255 | 360 | 383 | | 3 | 3 | 61.8 | | | | | |
| 237 | 255 | 264 | 383 | | 3 | 3 | 62.8 | | | | | |
| 237 | 255 | 264 | 383 | | 3 | 3 | 63.8 | | | | | |
| 237 | 255 | 360 | 383 | | 3 | 3 | 61.8 | | | | | |
| 240 | 277 | 288 | 440 | | 4 | 4 | 73.4 | HJ344 | 6.7 | 20 | 35.62 | 5 |
| 240 | 292 | 270 | 440 | | 4 | 4 | 75.6 | | | | | |
| 240 | 276 | 288 | 440 | | 4 | 4 | 125 | | | | | |
| 240 | 276 | 288 | 440 | | 4 | 4 | 125 | | | | | |
| 240 | 276 | 288 | 440 | | 4 | 4 | 114 | | | | | |
| 240 | 403 | | 440 | 411 | 4 | 4 | 121 | | | | | |
| 240 | 403 | | 440 | 411 | 4 | 4 | 114 | | | | | |
| 240 | 268 | 280 | 440 | | 4 | 4 | 116 | | | | | |
| 249 | 257 | 263 | 308 | | 2 | 1.5 | 8.50 | | | | | |
| 249 | 251 | 260 | 308 | | 2 | 1.5 | 8.74 | | | | | |
| 253 | 266 | 274 | 347 | | 2.5 | 2.5 | 20.5 | | | | | |

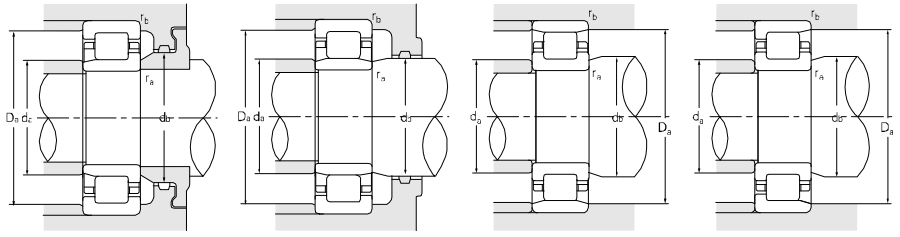


| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1smin}$ | $r_{smin}$ | F | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | | kN | | r/min | | |
| **240** | 360 | 56 | 3 | 3 | 270 | | 512 | 775 | 1700 | 2000 | **NJ1048M** |
| | 360 | 56 | 3 | 3 | 270 | | 545 | 855 | 1700 | 2000 | **NU1048Q1** |
| | 360 | 56 | 3 | 3 | 270 | | 510 | 775 | 1700 | 2000 | **NU1048MA** |
| | 360 | 56 | 3 | 3 | 270 | | 510 | 775 | 1700 | 2000 | **NU1048MA/P4** |
| | 390 | 108 | 4 | 4 | 278 | | 1210 | 2060 | 1500 | 1800 | **NU2148X3M** |
| | 390 | 107.95 | 3 | 3 | 272.26 | | 1400 | 2230 | 1500 | 1800 | **NUFP2148X3M/C9YA1** |
| | 440 | 72 | 4 | 4 | 295 | | 1050 | 1540 | 1300 | 1600 | **NU248M** |
| | 440 | 72 | 4 | 4 | 295 | | 1050 | 1185 | 1690 | 1600 | **NU248EMA** |
| | 440 | 72 | 4 | 4 | 295 | | 1050 | 1540 | 1300 | 1600 | **NJ248M** |
| | 440 | 72 | 4 | 4 | | 385 | 1050 | 1540 | 1300 | 1600 | **N248M** |
| | 440 | 72 | 4 | 4 | | 393 | 1180 | 1690 | 1300 | 1600 | **N248EM** |
| | 440 | 120 | 4 | 4 | 295 | | 1490 | 2450 | 1200 | 1500 | **NU2248MA** |
| | 440 | 146 | 4 | 4 | 290 | | 2240 | 3820 | 1100 | 1400 | **NU5248/P5** |
| | 500 | 95 | 5 | 5 | | 430 | 1530 | 2120 | 1000 | 1300 | **N348M** |
| | 500 | 95 | 5 | 5 | 310 | | 1530 | 2120 | 1000 | 1300 | **NU348M** |
| | 500 | 95 | 5 | 5 | 306 | | 1670 | 2190 | 1000 | 1300 | **NU348EM** |
| | 500 | 155 | 5 | 5 | 310 | | 2190 | 3360 | 950 | 1200 | **NU2348MA** |
| | 500 | 155 | 5 | 5 | 310 | | 2190 | 3360 | 950 | 1200 | **NU2348M** |
| | 500 | 155 | 5 | 5 | 303 | | 2640 | 4000 | 950 | 1200 | **NU2348E/YA5** |
| **250** | 308 | 50 | 6 | 2.3 | | 347 | 655 | 1050 | 1800 | 2300 | **N650EM/HAC9** |
| **260** | 360 | 46 | 2.1 | 2.1 | | 337 | 445 | 785 | 1600 | 1850 | **NF1952M** |
| | 360 | 75 | | 3 | 285 | | 740 | 1470 | 1600 | 1850 | **NUP3952M/C9W33YA8** |
| | 360 | 75 | | 3 | 285 | | 860 | 1780 | 1600 | 1850 | **NUP3952M/C9W33** |
| | 400 | 65 | 4 | 4 | | 347 | 690 | 1090 | 1500 | 1800 | **NU1052M** |
| | 400 | 65 | | 4 | 296 | | 690 | 1090 | 1500 | 1800 | **NUP1052M** |
| | 400 | 65 | 4 | 4 | 296 | | 690 | 1090 | 1500 | 1800 | **NJ1052M** |
| | 400 | 82 | 4 | 4 | 294 | | 1080 | 1880 | 1300 | 1700 | **NU2052EM** |
| | 400 | 82 | 4 | 4 | 294 | | 1090 | 1880 | 1300 | 1700 | **NU2052ENM** |
| | 400 | 104 | 4 | 4 | 290.5 | | 1350 | 2340 | 1150 | 1450 | **NU3052M** |
| | 440 | 144 | 4 | 4 | 298.5 | | 2050 | 3450 | 950 | 1250 | **NU3152M** |
| | 440 | 144 | 4 | 4 | 305 | | 2090 | 3800 | 950 | 1250 | **NB3152M** |
| | 480 | 80 | 5 | 5 | 320 | | 1220 | 1800 | 1100 | 1400 | **NU252M** |
| | 480 | 80 | 5 | 5 | 320 | | 1370 | 1970 | 1100 | 1400 | **NU252EMA** |
| | 480 | 80 | 5 | 5 | 320 | | 1220 | 1800 | 1050 | 1350 | **NJ252M** |

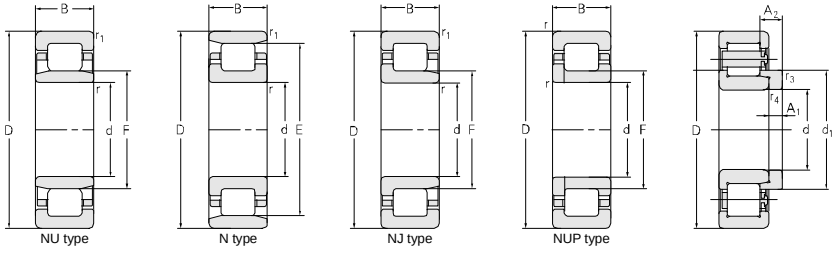
| Abutment and fillet dimensions | | | | | | | Weight | Model | Weight | Separate thrust collar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_{amin}$ | $d_{amax}$ | $d_{bmin}$ | $D_{amax}$ | $D_{amin}$ | $r_{amax}$ | $r_{bmax}$ | | | | A1 | A2 | $r_3.r_4$ |
| mm | | | | | | | kg | | kg | mm | | |
| 253 | 266 | 274 | 347 | | 2.5 | 2.5 | 21.1 | | | | | |
| 253 | 266 | 274 | 347 | | 2.5 | 2.5 | 21.2 | | | | | |
| 253 | 266 | 274 | 347 | | 2.5 | 2.5 | 19.6 | | | | | |
| 253 | 266 | 274 | 347 | | 2.5 | 2.5 | 19.6 | | | | | |
| 253 | 266 | 280 | 410 | | 3 | 3 | 51.2 | | | | | |
| 253 | 266 | 280 | 410 | | 2.5 | 2.5 | 50.5 | | | | | |
| 256 | 288 | 299 | 424 | | 3 | 3 | 46.9 | | | | | |
| 256 | 288 | 299 | 424 | | 3 | 3 | 51.3 | | | | | |
| 256 | 288 | 317 | 424 | | 3 | 3 | 49.6 | | | | | |
| 256 | 288 | 317 | 424 | | 3 | 3 | 49.1 | | | | | |
| 256 | 288 | 300 | 424 | | 3 | 3 | 50.5 | | | | | |
| 256 | 284 | 299 | 423 | | 3 | 3 | 84.8 | | | | | |
| 256 | 287 | 293 | 424 | | 3 | 3 | 104 | | | | | |
| 260 | 426 | | 480 | 434 | 4 | 4 | 96.3 | | | | | |
| 260 | 302 | 314 | 480 | | 4 | 4 | 96.3 | | | | | |
| 260 | 296 | 313 | 480 | | 4 | 4 | 94.9 | | | | | |
| 260 | 296 | 314 | 480 | | 4 | 4 | 155 | | | | | |
| 260 | 296 | 314 | 480 | | 4 | 4 | 154 | | | | | |
| 260 | 296 | 314 | 480 | | 4 | 4 | 154 | | | | | |
| 268 | 343 | | 368 | 351 | 5 | 2 | 21.4 | | | | | |
| 276 | 280 | 295 | 346 | | 2 | 2 | 14.9 | | | | | |
| 274 | | 287 | 346 | | 2 | 2 | 24.5 | | | | | |
| 274 | | 287 | 346 | | 3 | 3 | 24.9 | | | | | |
| 276 | 291 | 300 | 384 | | 3 | 3 | 30.2 | | | | | |
| 276 | | 313 | 384 | | 3 | 3 | 37.2 | | | | | |
| 276 | 291 | 300 | 384 | | 3 | 3 | 36.3 | | | | | |
| 276 | 291 | 300 | 384 | | 3 | 3 | 40.1 | | | | | |
| 276 | 291 | 300 | 384 | | 3 | 3 | 40.1 | | | | | |
| 275 | 286 | 295 | 385 | | 3 | 3 | 49.5 | | | | | |
| 277 | 295 | 302 | 423 | | 3 | 3 | 98 | | | | | |
| 277 | 295 | 302 | 423 | | 3 | 3 | 86.4 | | | | | |
| 280 | 313 | 324 | 460 | | 4 | 4 | 67.1 | | | | | |
| 280 | 313 | 324 | 460 | | 4 | 4 | 68.4 | | | | | |
| 280 | 313 | 324 | 460 | | 4 | 4 | 68.5 | | | | | |

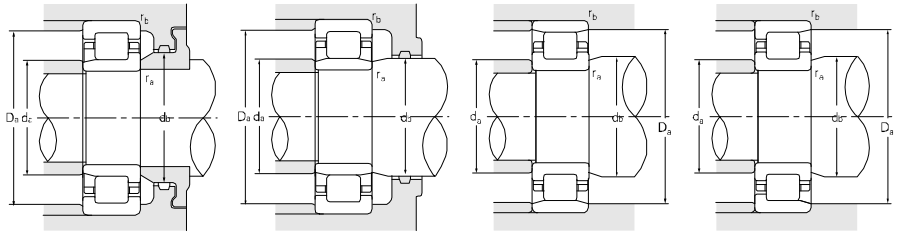


| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1smin}$ | $r_{smin}$ | F | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | | kN | | r/min | | |
| **260** | 480 | 80 | 5 | 5 | 320 | | 1220 | 1800 | 1050 | 1350 | **NJ252MA** |
| | 480 | 80 | | 5 | 320 | | 1220 | 1800 | 1050 | 1350 | **NUP252M** |
| | 480 | 80 | 5 | 5 | 317 | | 1370 | 1970 | 1050 | 1350 | **NJ252EM/YA8** |
| | 480 | 130 | 5 | 5 | 320 | | 1780 | 2910 | 1000 | 1300 | **NU2252** |
| | 480 | 130 | 5 | 5 | 320 | | 1750 | 2910 | 1000 | 1300 | **NU2252MA** |
| | 480 | 130 | 5 | 5 | | 420 | 1780 | 2910 | 950 | 1250 | **N2252M** |
| | 480 | 130 | 5 | 5 | 320 | | 1780 | 2910 | 950 | 1250 | **NJ2252M** |
| | 480 | 150 | 5 | 5 | 320 | | 2100 | 3600 | 950 | 1250 | **NU2252X2M** |
| | 540 | 102 | 6 | 6 | 336 | | 1690 | 2290 | 850 | 1050 | **NU352M** |
| | 540 | 165 | 6 | 6 | 319 | | 3150 | 4500 | 850 | 1050 | **NU2352M** |
| | 540 | 165 | 6 | 6 | 319 | | 3200 | 4720 | 850 | 1050 | **NJD2352M/YA8** |
| **280** | 340 | 30 | 2 | 2 | | 327 | 308 | 690 | 1800 | 2200 | **N1856X3M/HG2** |
| | 350 | 42 | 2 | 2 | 299 | | 363 | 790 | 1800 | 2200 | **NJ2856M** |
| | 360 | 30 | 2 | 2 | 301 | | 385 | 625 | 1700 | 1900 | **NJ1856X3M/HG2** |
| | 360 | 30 | 2 | 2 | | 341 | 385 | 625 | 1700 | 1900 | **N1856X3M/HG2P6-1** |
| | 380 | 46 | 2.1 | 2.1 | 306 | | 473 | 865 | 1700 | 1900 | **NU1956M** |
| | 380 | 46 | 2.1 | 2.1 | | 354 | 325 | 533 | 1700 | 1900 | **NF1956M** |
| | 420 | 65 | 4 | 4 | | 384 | 700 | 1150 | 1400 | 1700 | **N1056M** |
| | 420 | 65 | 4 | 4 | 316 | | 700 | 1150 | 1400 | 1700 | **NU1056M** |
| | 420 | 65 | 4 | 4 | 316 | | 700 | 1150 | 1400 | 1700 | **NJ1056M** |
| | 420 | 82 | 4 | 4 | 314 | | 1190 | 2170 | 1050 | 1300 | **NU2056M** |
| | 420 | 82 | 4 | 4 | 314 | | 1110 | 1980 | 1050 | 1300 | **NU2056EMA** |
| | 440 | 135 | 3 | 3 | 318 | | 1880 | 3400 | 1100 | 1400 | **NB4056X3M** |
| | 460 | 123.825 | 5 | 5 | 320.675 | | 1900 | 3300 | 900 | 1150 | **NU2156X2M/YA4-1** |
| | 500 | 80 | 5 | 5 | 340 | | 1100 | 1750 | 1150 | 1450 | **NJ256M** |
| | 500 | 80 | 5 | 5 | 340 | | 1100 | 1750 | 1150 | 1450 | **NU256M** |
| | 500 | 80 | 5 | 5 | 440 | | 1140 | 1700 | 1150 | 1450 | **N256M/SPC9W33** |
| | 500 | 130 | 5 | 5 | 333 | | 2090 | 3270 | 1100 | 1400 | **NU2256E** |
| | 500 | 130 | 5 | 5 | 333 | | 2080 | 3270 | 1100 | 1400 | **NU2256EF3** |
| | 500 | 130 | 5 | 5 | 333 | | 2080 | 3270 | 1100 | 1400 | **NU2256EM** |
| | 500 | 130 | 5 | 5 | 333 | | 2080 | 3270 | 1100 | 1400 | **NU2256EM-1** |
| | 500 | 165.1 | 5 | 5 | 333 | | 2820 | 4900 | 950 | 1300 | **NU3256X2/C9YA1** |
| | 580 | 108 | 6 | 6 | 362 | | 1880 | 2660 | 850 | 1000 | **NU356M** |

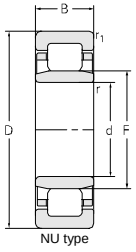
| Abutment and fillet dimensions | | | | | | | Weight | Model | Weight | Separate thrust collar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_{amin}$ | $d_{amax}$ | $d_{bmin}$ | $D_{amax}$ | $D_{amin}$ | $r_{amax}$ | $r_{bmax}$ | | | | A1 | A2 | $r_3.r_4$ |
| mm | | | | | | | kg | | kg | mm | | |
| 280 | 313 | 324 | 460 | | 4 | 4 | 68.3 | | | | | |
| 280 | 313 | 324 | 460 | | 4 | 4 | 70 | | | | | |
| 280 | 313 | 324 | 460 | | 4 | 4 | 68.8 | | | | | |
| 280 | 309 | 324 | 460 | | 4 | 4 | 106 | | | | | |
| 280 | 309 | 324 | 460 | | 4 | 4 | 107 | | | | | |
| 280 | 416 | 427 | 460 | | 4 | 4 | 105 | | | | | |
| 280 | 309 | 324 | 460 | | 4 | 4 | 108 | | | | | |
| 280 | 309 | 324 | 460 | | 4 | 4 | 128 | | | | | |
| 286 | 330 | 341 | 514 | | 5 | 5 | 120 | | | | | |
| 286 | 310 | 323 | 514 | | 5 | 5 | 188 | | | | | |
| 286 | 310 | 323 | 514 | | 5 | 5 | 165 | | | | | |
| 289 | | 324 | 330 | 330 | 2 | 2 | 5.76 | | | | | |
| 289 | 309 | 324 | 330 | | 2 | 2 | 9.15 | | | | | |
| 289 | 309 | 334 | 340 | | 2 | 2 | 8.11 | | | | | |
| 289 | 309 | | 340 | 330 | 2 | 2 | 8 | | | | | |
| 291 | 303 | 309 | 369 | | 2 | 2 | 15.5 | | | | | |
| 291 | | | 340 | 308 | 2 | 2 | 16.9 | | | | | |
| 296 | 380 | | 411 | 388 | 3 | 3 | 31.5 | | | | | |
| 296 | 311 | 320 | 404 | | 3 | 3 | 30.9 | | | | | |
| 296 | 311 | 332 | 404 | | 3 | 3 | 32.2 | | | | | |
| 295 | 310 | 318 | 405 | | 3 | 3 | 39.5 | | | | | |
| 295 | 310 | 318 | 405 | | 3 | 3 | 42 | | | | | |
| 296 | 311 | 340 | 424 | | 3 | 3 | 75.4 | | | | | |
| 300 | 316 | 325 | 440 | | 4 | 4 | 85.8 | | | | | |
| 300 | 333 | 364 | 480 | | 4 | 4 | 71.5 | | | | | |
| 300 | 333 | 344 | 480 | | 4 | 4 | 70 | | | | | |
| 300 | 350 | | 480 | | 4 | 4 | 70.2 | | | | | |
| 300 | 333 | 344 | 480 | | 4 | 4 | 116 | | | | | |
| 300 | 333 | 344 | 480 | | 4 | 4 | 116 | | | | | |
| 300 | 333 | 344 | 480 | | 4 | 4 | 118 | | | | | |
| 300 | 333 | 344 | 480 | | 4 | 4 | 118 | | | | | |
| 300 | 333 | 344 | 480 | | 4 | 4 | 142 | | | | | |
| 300 | 347 | 366 | 480 | | 4 | 4 | 147 | | | | | |
| 306 | | | 554 | | 5 | 5 | 232 | | | | | |



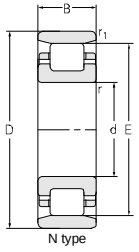



| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1smin}$ | $r_{smin}$ | F | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | | kN | | r/min | | |
| **290** | 420 | 65 | 4 | 4 | | 389 | 730 | 1200 | 1300 | 1600 | **NFP10/290K** |
| **300** | 380 | 48 | 2.1 | 2.1 | 321 | | 450 | 1000 | 1370 | 1650 | **NJ2860M** |
| | 380 | 48 | 2.1 | 2.1 | 321 | | 450 | 1000 | 1370 | 1650 | **NU2860M** |
| | 380 | 60 | 2.1 | 2.1 | | 360 | 468 | 990 | 1200 | 1500 | **N3860M/HG2** |
| | 420 | 90 | | 3 | 328.5 | | 1150 | 2250 | 1350 | 1600 | **NUP3960M/C9W33YA8** |
| | 420 | 90 | | 3 | 328.5 | | 1150 | 2250 | 1350 | 1600 | **NUP3960M/C9W33** |
| | 460 | 57 | 4 | 4 | 344 | | 770 | 1250 | 1400 | 1700 | **NJ1060X2M** |
| | 460 | 74 | 4 | 4 | 340 | | 935 | 1510 | 1200 | 1500 | **NJ1060M** |
| | 460 | 74 | 4 | 4 | 340 | | 935 | 1510 | 1200 | 1500 | **NU1060M** |
| | 460 | 74 | 4 | 4 | 340 | | 935 | 1510 | 1200 | 1500 | **NU1060M/HA** |
| | 460 | 95 | 4 | 4 | 341 | | 1400 | 2510 | 980 | 1250 | **NU2060M** |
| | 460 | 95 | 4 | 4 | 341 | | 1400 | 2510 | 980 | 1250 | **NU2060MA** |
| | 460 | 118 | 4 | 4 | 340 | | 1470 | 2700 | 1200 | 1500 | **NU3060M** |
| | 540 | 85 | 5 | 5 | 364 | | 1510 | 2270 | 1000 | 1300 | **NU260M** |
| | 540 | 140 | 5 | 5 | 364 | | 2080 | 3450 | 1000 | 1200 | **NU2260M** |
| | 620 | 109 | 7.5 | 7.5 | 385 | | 2310 | 3300 | 900 | 1100 | **NU360M** |
| **320** | 400 | 38 | 2.1 | 1.5 | 341 | | 365 | 715 | 1270 | 1550 | **NU1864M** |
| | 400 | 48 | 2.1 | 1.5 | 341 | | 490 | 1050 | 1250 | 1550 | **NU2864M** |
| | 440 | 56 | 3 | 3 | 350 | | 638 | 1130 | 1100 | 1400 | **NU1964M** |
| | 440 | 56 | 3 | 3 | 350 | | 670 | 1150 | 1100 | 1400 | **FL-NU1964EMA** |
| | 440 | 90 | | 3 | 350 | | 1060 | 2190 | 1100 | 1400 | **NUP3964M/C9** |
| | 480 | 74 | 4 | 4 | 360 | | 960 | 1580 | 1100 | 1400 | **NJ1064M** |
| | 480 | 74 | 4 | 4 | 360 | | 910 | 1490 | 1100 | 1400 | **NU1064M** |
| | 480 | 74 | 4 | 4 | 360 | | 915 | 1490 | 1100 | 1400 | **NU1064MA** |
| | 480 | 74 | 4 | 4 | 360 | | 957 | 1580 | 1100 | 1400 | **NU1064KM/C9** |
| | 480 | 74 | 4 | 4 | 360 | | 910 | 1490 | 1100 | 1400 | **NUP1064M** |
| | 480 | 95 | 4 | 4 | 360 | | 1380 | 2650 | 970 | 1250 | **NU2064M** |
| | 540 | 176 | 5 | 5 | 374 | | 2780 | 5000 | 870 | 1050 | **NU3164M** |
| | 580 | 92 | 5 | 5 | 390 | | 1620 | 2450 | 960 | 1200 | **NU264M** |
| | 580 | 150 | 5 | 5 | 390 | | 2480 | 4150 | 900 | 1100 | **NU2264** |
| | 580 | 150 | 5 | 5 | 380 | | 2700 | 4200 | 900 | 1100 | **NU2264EM** |
| | 580 | 170 | 5 | 5 | 390 | | 2940 | 5200 | 900 | 1100 | **NU2264X2M-1** |

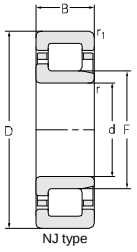
| Abutment and fillet dimensions | | | | | | | Weight | Model | Weight | Separate thrust collar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_{amin}$ | $d_{amax}$ | $d_{bmin}$ | $D_{amax}$ | $D_{amin}$ | $r_{amax}$ | $r_{bmax}$ | | | | A1 | A2 | $r_3.r_4$ |
| mm | | | | | | | kg | | kg | mm | | |
| 305 | 320 | 332 | 404 | | 3 | 3 | 33.2 | | | | | |
| 310 | 318 | 332 | 370 | | 1.5 | 1.5 | 15.5 | | | | | |
| 310 | 318 | 324 | 370 | | 1.5 | 1.5 | 14.5 | | | | | |
| 316 | 335 | | 444 | 440 | 4 | 4 | 16.6 | | | | | |
| 314 | | 333 | 406 | | | | 41 | | | | | |
| 314 | | 333 | 406 | | | | 40.7 | | | | | |
| 316 | 335 | 358 | 444 | | 3 | 3 | 36.5 | | | | | |
| 316 | 335 | 358 | 444 | | 3 | 3 | 45.1 | | | | | |
| 316 | 335 | 344 | 444 | | 3 | 3 | 44.1 | | | | | |
| 316 | 335 | 344 | 444 | | 3 | 3 | 44.1 | | | | | |
| 317 | 336 | 345 | 443 | | 3 | 3 | 60 | | | | | |
| 317 | 336 | 345 | 443 | | 3 | 3 | 60 | | | | | |
| 316 | 335 | 344 | 444 | | 3 | 3 | 72.5 | | | | | |
| 320 | 358 | 368 | 520 | | 4 | 4 | 86.9 | | | | | |
| 320 | 352 | 368 | 520 | | 4 | 4 | 146 | | | | | |
| 330 | 379 | 390 | 590 | | 7 | 7 | 166 | | | | | |
| 327 | 337 | 345 | 389 | | 2 | 1.5 | 11.3 | | | | | |
| 327 | 337 | 345 | 389 | | 2 | 1.5 | 15 | | | | | |
| 335 | 346 | 354 | 425 | | 2.5 | 2.5 | 24.7 | | | | | |
| 335 | 346 | 354 | 425 | | 2.5 | 2.5 | 24.7 | | | | | |
| 334 | | 354 | 426 | | 2.5 | 2.5 | 45.8 | | | | | |
| 336 | 355 | 380 | 464 | | 3 | 3 | 47.8 | | | | | |
| 336 | 355 | 364 | 464 | | 3 | 3 | 48.2 | | | | | |
| 336 | 355 | 364 | 464 | | 3 | 3 | 48.2 | | | | | |
| 336 | 355 | 364 | 464 | | 3 | 3 | 46.3 | | | | | |
| 336 | | 380 | 464 | | 3 | 3 | 49.1 | | | | | |
| 335 | 357 | 364 | 465 | | 3 | 3 | 63 | | | | | |
| 367 | 369 | 387 | 490 | | 4 | 4 | 172 | | | | | |
| 340 | 383 | 394 | 560 | | 4 | 4 | 112 | | | | | |
| 340 | 377 | 394 | 560 | | 4 | 4 | 181 | | | | | |
| 340 | 377 | 394 | 560 | | 4 | 4 | 181 | | | | | |
| 340 | 377 | 394 | 560 | | 4 | 4 | 212 | | | | | |



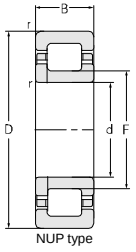
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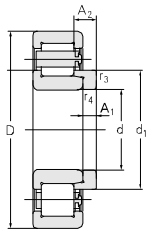
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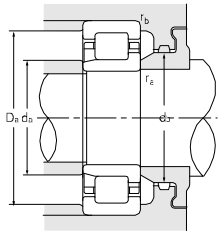


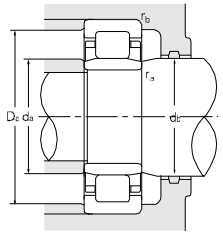
NJ type

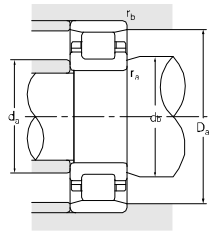


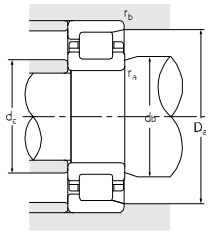
NUP type



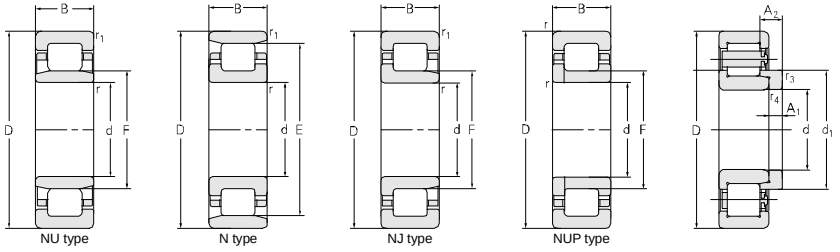



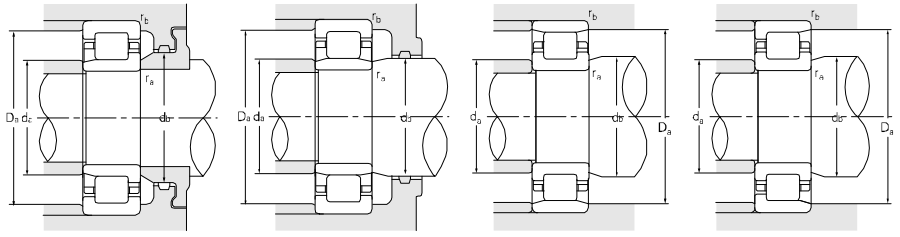




| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1smin}$ | $r_{smin}$ | F | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | | kN | | r/min | | |
| **320** | 580 | 190.5 | 5 | 5 | 390 | | 3050 | 5480 | 900 | 1100 | **NU2264X2M** |
| | 580 | 150 | 5 | 5 | 377 | | 3190 | 4720 | 900 | 1100 | **NUD2264M/YA8** |
| | 670 | 200 | 7.5 | 7.5 | 410 | | 4590 | 7200 | 1100 | 1400 | **NU2364/HCR** |
| | 670 | 200 | 7.5 | 7.5 | 410 | | 4150 | 6500 | 1100 | 1400 | **NU2364F1/HC** |
| **330** | 580 | 151 | 6 | 6 | 395 | | 2750 | 4800 | 900 | 1100 | **NU666/HCYA8** |
| **340** | 420 | 48 | 2.1 | 2.1 | 361 | | 490 | 1150 | 1150 | 1450 | **NJ2868M** |
| | 440 | 56 | 3 | 3 | 365 | | 690 | 1380 | 1050 | 1350 | **NU1968X1M** |
| | 440 | 56 | 3 | 3 | 365 | | 690 | 1380 | 1050 | 1350 | **NJ1968X1M** |
| | 460 | 56 | 3 | 3 | 370 | | 700 | 1400 | 1050 | 1350 | **NU1968M** |
| | 460 | 72 | 3 | 3 | 373 | | 785 | 1650 | 1050 | 1350 | **NU2968M** |
| | 520 | 82 | 5 | 5 | 385 | | 1130 | 1910 | 1000 | 1300 | **NU1068M** |
| | 520 | 82 | 5 | 5 | 385 | | 1130 | 1830 | 1000 | 1300 | **NJ1068M** |
| | 580 | 190 | 5 | 5 | 399 | | 3300 | 5900 | 760 | 910 | **NU3168E** |
| | 580 | 190 | 5 | 5 | 400 | | 3550 | 6650 | 760 | 910 | **NU3168** |
| | 580 | 200 | 5 | 5 | 400 | | 3550 | 6650 | 760 | 910 | **NU3168WB** |
| | 580 | 190 | 5 | 5 | 399 | | 3300 | 5900 | 760 | 910 | **NU3168EF3** |
| | 620 | 165 | 6 | 6 | 416 | | 2950 | 4900 | 810 | 950 | **NU2268** |
| | 620 | 165 | 6 | 6 | 416 | | 2950 | 4900 | 810 | 950 | **NU2268MA** |
| | 620 | 165 | 6 | 6 | 416 | | 2950 | 4900 | 810 | 950 | **NU2268F3** |
| | 620 | 224 | 6 | 6 | 410 | | 4600 | 8600 | 810 | 950 | **NU3268** |
| **360** | 480 | 72 | 3 | 3 | 388 | | 1220 | 2300 | 1100 | 1300 | **NJ2972E** |
| | 480 | 72 | 3 | 3 | 388 | | 1110 | 2300 | 1100 | 1300 | **NF2972EM** |
| | 480 | 72 | 3 | 3 | 388 | | 1110 | 2300 | 1100 | 1300 | **NU2972E** |
| | 480 | 90 | | 3 | 388 | | 1220 | 2590 | 1100 | 1300 | **NUP3972M/C9W33YA8** |
| | 480 | 90 | | 3 | 388 | | 1220 | 2590 | 1100 | 1300 | **NUP3972M/C9W33** |
| | 540 | 82 | 5 | 5 | | 495 | 1180 | 2000 | 980 | 1280 | **N1072M/C9W33A** |
| | 540 | 82 | 5 | 5 | 405 | | 1190 | 2000 | 980 | 1280 | **NU1072MA** |
| | 540 | 82 | 5 | 5 | 405 | | 1190 | 2000 | 980 | 1280 | **NU1072M** |
| | 540 | 82 | 5 | 5 | | 499 | 1180 | 2000 | 980 | 1280 | **NF1072M** |
| | 540 | 106 | 5 | 5 | 405 | | 1890 | 3560 | 870 | 1050 | **NU2072M** |
| | 540 | 134 | 5 | 5 | 405 | | 2060 | 4050 | 800 | 1000 | **NU3072M** |
| | 600 | 192 | 5 | 5 | 420 | | 3520 | 6500 | 900 | 1000 | **NU3172** |

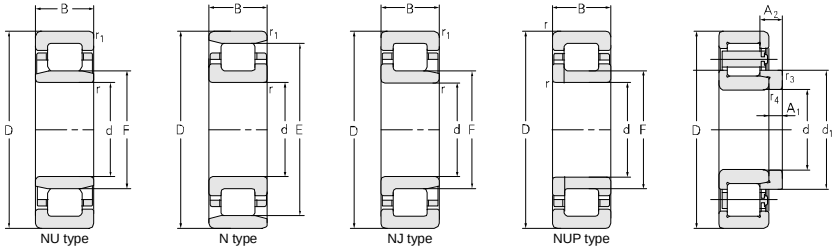
| Abutment and fillet dimensions | | | | | | | Weight | Model | Weight | Separate thrust collar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $da_{min}$ | $da_{max}$ | $db_{min}$ | $Da_{max}$ | $Da_{min}$ | $ra_{max}$ | $rb_{max}$ | | | | A1 | A2 | $r_3.r_4$ |
| mm | | | | | | | kg | | kg | mm | | |
| 340 | 377 | 394 | 560 | | 4 | 4 | 232 | | | | | |
| 340 | 377 | 394 | 560 | | 4 | 4 | 151 | | | | | |
| 360 | 377 | 390 | 642 | | 7 | 7 | 349 | | | | | |
| 360 | 377 | 390 | 642 | | 7 | 7 | 349 | | | | | |
| 350 | 387 | 411 | 560 | | 5 | 5 | 177 | | | | | |
| 350 | 357 | 372 | 410 | | 2 | 2 | 15.5 | | | | | |
| 348 | 355 | 366 | 427 | | 2.5 | 2.5 | 22.3 | | | | | |
| | | | | | 2.5 | 2.5 | 22.7 | | | | | |
| 353 | 365 | 374 | 447 | | 2.5 | 2.5 | 28.3 | | | | | |
| 353 | 369 | 377 | 447 | | 2.5 | 2.5 | 36.2 | | | | | |
| 360 | 380 | 389 | 500 | | 4 | 4 | 65.0 | | | | | |
| 360 | 380 | 389 | 500 | | 4 | 4 | 64.7 | | | | | |
| 360 | 388 | 403 | 560 | | 4 | 4 | 211 | | | | | |
| 360 | 388 | 403 | 560 | | 4 | 4 | 211 | | | | | |
| 360 | 388 | 403 | 560 | | 4 | 4 | 213 | | | | | |
| 360 | 388 | 403 | 560 | | 4 | 4 | 211 | | | | | |
| 366 | 401 | 421 | 594 | | 5 | 5 | 229 | | | | | |
| 366 | 401 | 421 | 594 | | 5 | 5 | 230 | | | | | |
| 366 | 401 | 421 | 594 | | 5 | 5 | 229 | | | | | |
| 366 | 401 | 421 | 594 | | 5 | 5 | 307 | | | | | |
| 380 | 400 | 380 | 464 | | 2.5 | 2.5 | 38.1 | | | | | |
| 380 | 400 | 380 | 464 | | 2.5 | 2.5 | 37.6 | | | | | |
| 380 | 400 | 380 | 464 | | 2.5 | 2.5 | 37.4 | | | | | |
| 380 | | 380 | 464 | | 2.5 | 2.5 | 47.7 | | | | | |
| 380 | | 380 | 464 | | 2.5 | 2.5 | 51.3 | | | | | |
| 378 | | 410 | 522 | 508 | 4 | 4 | 65.2 | | | | | |
| 378 | 400 | 410 | 522 | | 4 | 4 | 66.2 | HJ1072 | 7.7 | 21 | 39.03 | 5 |
| 378 | 400 | 410 | 522 | | 4 | 4 | 65.9 | HJ1072 | 7.7 | 21 | 39.03 | 5 |
| 378 | 400 | 410 | 522 | | 4 | 4 | 67.7 | | | | | |
| 380 | 399 | 410 | 520 | | 4 | 4 | 89.5 | | | | | |
| 381 | 400 | 410 | 520 | | 4 | 4 | 112 | | | | | |
| 373 | 417 | | 587 | 423 | 4 | 4 | 219 | | | | | |

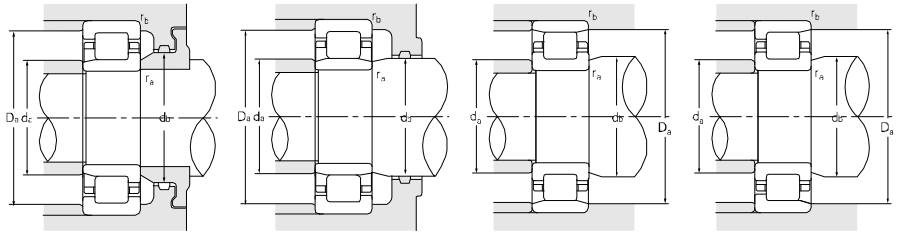


| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1smin}$ | $r_{smin}$ | F | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | | kN | | r/min | | |
| **360** | 650 | 170 | 6 | 6 | 437 | | 3150 | 5400 | 800 | 950 | **NU2272M** |
| | 650 | 232 | 6 | 6 | 435 | | 4400 | 8050 | 800 | 950 | **NU3272M/HC** |
| | 750 | 224 | 7.5 | 7.5 | 455 | | 5390 | 8650 | 700 | 850 | **NU2372** |
| | 750 | 224 | | 7.5 | 455 | | 4900 | 7600 | 700 | 850 | **NUP2372M** |
| **379.5** | 480 | 60 | 2.1 | 2.1 | | 454 | 550 | 680 | 900 | 1180 | **N2876K/P69** |
| | 480 | 60 | 2.1 | 2.1 | | 454 | 550 | 680 | 900 | 1180 | **N2876/P69** |
| | 480 | 60 | | 2.1 | 406 | | 550 | 680 | 900 | 1180 | **NUP2876K/P69** |
| **380** | 480 | 60 | 2.1 | 2.1 | 406 | | 550 | 680 | 900 | 1180 | **N2876/P69** |
| | 480 | 46 | 2.1 | 2.1 | 406 | | 525 | 1050 | 950 | 1250 | **NU1876M** |
| | 480 | 46 | | 2.1 | 406 | | 525 | 1050 | 950 | 1250 | **NUP1876M** |
| | 520 | 82 | 4 | 4 | | | 1180 | 2540 | 920 | 1200 | **N2976M** |
| | 560 | 82 | 5 | 5 | 425 | | 1220 | 2090 | 950 | 1200 | **NU1076M** |
| | 560 | 106 | 5 | 5 | 425 | | 1930 | 3750 | 800 | 950 | **NU2076EM** |
| | 560 | 135 | 5 | 5 | 425 | | 2250 | 4700 | 800 | 950 | **NU3076EM** |
| | 680 | 175 | 6 | 6 | 462 | | 3050 | 5500 | 730 | 860 | **NU2276EM** |
| | 680 | 175 | 6 | 6 | 462 | | 2860 | 5400 | 730 | 860 | **NU2276MA** |
| | 680 | 175 | 7.5 | 7.5 | 462 | | 2860 | 5400 | 730 | 860 | **NU2276MA/YA36** |
| | 680 | 240 | 6 | 6 | 458 | | 5860 | 9290 | 730 | 860 | **NU3276/HC** |
| **400** | 500 | 46 | 2.1 | 2.1 | 423 | | 565 | 1150 | 980 | 1250 | **NU1880M** |
| | 500 | 75 | 2.1 | 2.1 | 425 | | 855 | 2010 | 980 | 1250 | **NU3880Q1** |
| | 540 | 65 | 4 | 4 | 435 | | 900 | 1750 | 900 | 1150 | **NU1980M** |
| | 540 | 65 | 4 | 4 | 435 | | 1000 | 1850 | 900 | 1150 | **NU1980** |
| | 540 | 82 | 4 | 4 | 435 | | 1350 | 2850 | 900 | 1150 | **NU2980EM** |
| | 540 | 82 | 4 | 4 | 435 | | 1340 | 2780 | 900 | 1150 | **FL-NJ2980/HCEC9** |
| | 540 | 82 | 4 | 4 | 438 | | 1250 | 2510 | 900 | 1150 | **NU2980M** |
| | 540 | 82 | 4 | 4 | | 506 | 1250 | 2510 | 900 | 1150 | **NF2980M** |
| | 600 | 90 | | 5 | 450 | | 1450 | 2470 | 900 | 1100 | **NUP1080M** |
| | 600 | 90 | 5 | 5 | 450 | | 1450 | 2470 | 900 | 1100 | **NU1080M** |
| | 600 | 90 | 5 | 5 | 450 | | 1330 | 2210 | 900 | 1100 | **NU1080MA** |
| | 600 | 90 | 5 | 5 | 450 | | 1450 | 2480 | 900 | 1100 | **NJ1080** |
| | 600 | 118 | 5 | 5 | 449 | | 2150 | 4800 | 750 | 900 | **NU2080EM** |
| | 600 | 148 | 5 | 5 | 450 | | 2330 | 4550 | 900 | 1100 | **NU3080M** |

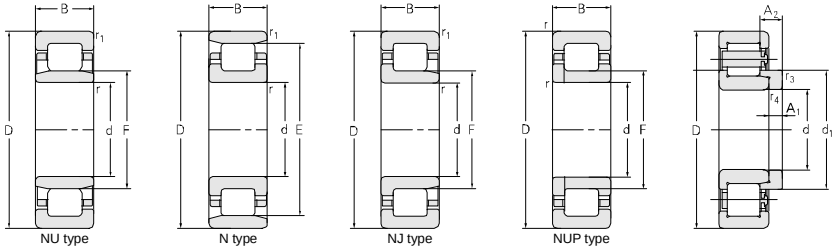
| Abutment and fillet dimensions | | | | | | | Weight | Model | Weight | Separate thrust collar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_{amin}$ | $d_{amax}$ | $d_{bmin}$ | $D_{amax}$ | $D_{amin}$ | $r_{amax}$ | $r_{bmax}$ | | | | A1 | A2 | $r_3.r_4$ |
| mm | | | | | | | kg | | kg | mm | | |
| 386 | 428 | 442 | 624 | | 5 | 5 | 262 | | | | | |
| 381 | 400 | 410 | 520 | | 5 | 5 | 352 | | | | | |
| 390 | 445 | 460 | 720 | | 7 | 7 | 480 | | | | | |
| 390 | 445 | 460 | 720 | | 7 | 7 | 513 | | | | | |
| 391 | | 406 | 468 | 463 | 2 | 2 | 26.0 | | | | | |
| 391 | | 406 | 468 | 463 | 2 | 2 | 25.9 | | | | | |
| 391 | | 406 | 468 | | 2 | 2 | 27.1 | | | | | |
| 390 | 401 | 410 | 470 | | 2 | 2 | 25.9 | | | | | |
| 390 | 401 | 410 | 470 | | 2 | 2 | 23.5 | | | | | |
| 390 | 401 | 410 | 470 | | 2 | 2 | 24 | | | | | |
| 400 | 419 | 428 | 490 | | 3 | 3 | 82.8 | | | | | |
| 400 | 420 | 430 | 540 | | 4 | 4 | 71.0 | HJ1076 | 8.48 | 21 | 39.03 | 5 |
| 398 | 422 | 430 | 542 | | 4 | 4 | 93 | | | | | |
| 398 | 417 | 430 | 542 | | 4 | 4 | 116 | | | | | |
| 406 | 443 | 443 | 654 | | 5 | 5 | 276 | | | | | |
| 406 | 443 | 443 | 654 | | 5 | 5 | 289 | | | | | |
| 406 | 443 | 443 | 654 | | 7 | 7 | 289 | | | | | |
| 406 | 435 | 435 | 654 | | 5 | 5 | 383 | | | | | |
| 410 | 419 | 428 | 490 | | 2 | 2 | 21.2 | | | | | |
| 410 | 419 | 428 | 490 | | 2 | 2 | 33.4 | | | | | |
| 415 | 429 | 439 | 525 | | 3 | 3 | 42 | | | | | |
| 415 | 429 | 439 | 525 | | 3 | 3 | 41.7 | | | | | |
| 415 | 429 | 439 | 525 | | 3 | 3 | 57.8 | | | | | |
| 415 | 429 | 439 | 525 | | 3 | 3 | 56.2 | | | | | |
| 415 | 434 | 442 | 525 | | 3 | 3 | 55.2 | | | | | |
| 415 | 434 | 442 | 525 | | 3 | 3 | 52.6 | | | | | |
| 420 | | 455 | 580 | | 4 | 4 | 93.6 | | | | | |
| 420 | 446 | 455 | 580 | | 4 | 4 | 92.5 | | | | | |
| 420 | 446 | 455 | 580 | | 4 | 4 | 93 | | | | | |
| 420 | 446 | 472 | 580 | | 4 | 4 | 90.6 | | | | | |
| 418 | 446 | 454 | 582 | | 4 | 4 | 122 | | | | | |
| 420 | 446 | 455 | 580 | | 4 | 4 | 153 | | | | | |

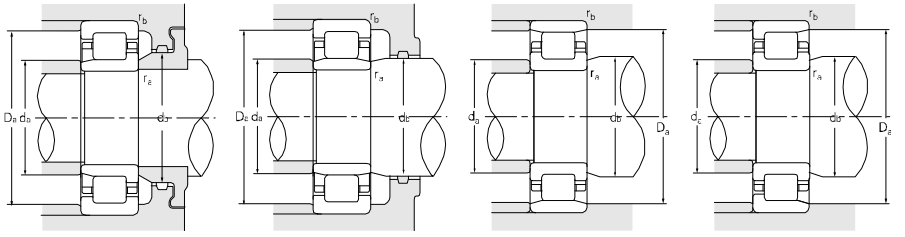


| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1smin}$ | $r_{smin}$ | F | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | | kN | | r/min | | |
| **400** | 650 | 145 | 6 | 6 | 460 | | 2920 | 5190 | 700 | 850 | **NU2180M** |
| | 650 | 200 | 6 | 6 | 460 | | 3760 | 7170 | 700 | 850 | **NU3180M** |
| **406** | 502 | 76 | 2 | 2 | | 481 | 1130 | 2660 | 1000 | 1200 | **NF6/406/C9W33** |
| **406.362** | 501.688 | 76.2 | 3 | 3 | | 481.33 | 1050 | 2550 | 1000 | 1200 | **N6/406X4M/C9W520** |
| **420** | 520 | 46 | 2.1 | 2.1 | 447 | | 605 | 1270 | 900 | 1100 | **NU1884** |
| | 520 | 46 | | 2.1 | 447 | | 605 | 1270 | 900 | 1100 | **NUP1884** |
| | 520 | 46 | 2.1 | 2.1 | 447 | | 605 | 1270 | 900 | 1100 | **NU1884M** |
| | 520 | 75 | 2.1 | 2.1 | 447 | | 900 | 2250 | 930 | 1150 | **NJ3884M** |
| | 560 | 65 | 4 | 4 | | 528 | 1080 | 2010 | 930 | 1150 | **NF1984F3** |
| | 560 | 65 | 4 | 4 | 449 | | 1080 | 1950 | 930 | 1150 | **NJ1984MA** |
| | 560 | 82 | 4 | 4 | 458 | | 1290 | 2800 | 930 | 1150 | **NU2984M** |
| | 560 | 82 | 4 | 4 | 458 | | 1290 | 2800 | 930 | 1150 | **NJ2984** |
| | 560 | 106 | | 4 | 458 | | 1550 | 3700 | 930 | 1150 | **NUP3984M/C9W33** |
| | 580 | 130 | 4 | 4 | 468 | | 1790 | 4660 | 930 | 1150 | **NU684ZWF1/C9YA3** |
| | 620 | 90 | 5 | 5 | 470 | | 1440 | 2490 | 900 | 1100 | **NU1084M/C3** |
| | 620 | 118 | 5 | 5 | 469 | | 2400 | 4750 | 770 | 950 | **NU2084EM** |
| | 700 | 224 | 6 | 6 | 485 | | 4950 | 8950 | 650 | 780 | **NU3184EM** |
| | 760 | 280 | 7.5 | 7.5 | 507 | | 6800 | 13400 | 560 | 700 | **NU3284X2/HCYA3** |
| **440** | 600 | 74 | 4 | 4 | 482 | | 1010 | 1980 | 870 | 1050 | **NU1988M** |
| | 600 | 74 | 4 | 4 | 482 | | 1030 | 1900 | 870 | 1050 | **NJ1988M** |
| | 600 | 95 | 4 | 4 | 481.5 | | 1670 | 3550 | 870 | 1050 | **NJ2988EM** |
| | 600 | 118 | | 4 | 481.5 | | 1940 | 4250 | 850 | 1000 | **NUP3988EM** |
| | 650 | 94 | 6 | 6 | 493 | | 1570 | 2430 | 850 | 1000 | **NU1088M** |
| | 650 | 94 | 6 | 6 | 493 | | 1570 | 2430 | 850 | 1000 | **NJ1088M** |
| | 650 | 122 | 6 | 6 | 487 | | 2450 | 5000 | 670 | 820 | **NU2088EM** |
| | 720 | 122 | 6 | 6 | | 648 | 2850 | 4300 | 800 | 950 | **N1188** |
| | 720 | 226 | 6 | 6 | 508 | | 5230 | 9800 | 600 | 750 | **NU3188** |
| | 790 | 255 | 7.5 | 7.5 | 530 | | 5760 | 10700 | 650 | 800 | **NU3288X2/HC** |
| **445** | 815 | 210 | 7.5 | 7.5 | 539 | | 4800 | 7950 | 750 | 1100 | **NU689M/C9** |

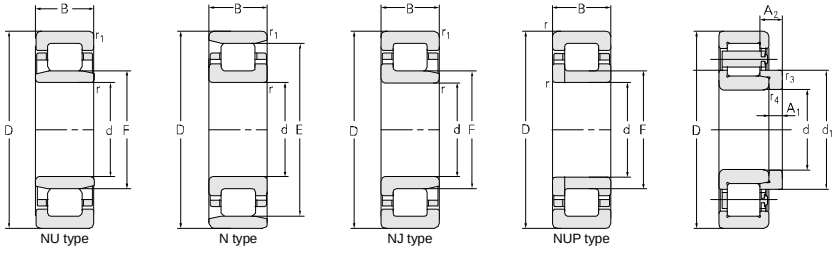
| Abutment and fillet dimensions | | | | | | | Weight | Model | Weight | Separate thrust collar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_{amin}$ | $d_{amax}$ | $d_{bmin}$ | $D_{amax}$ | $D_{amin}$ | $r_{amax}$ | $r_{bmax}$ | | | | A1 | A2 | $r_3.r_4$ |
| mm | | | | | | | kg | | kg | mm | | |
| 420 | 450 | 460 | 590 | | 4 | 4 | 197 | | | | | |
| 420 | 450 | 460 | 590 | | 4 | 4 | 274 | | | | | |
| 420 | | | 490 | 470 | 2 | 2 | 31.2 | | | | | |
| 418 | | 432 | 491 | 489 | 2.5 | 2.5 | 34.1 | | | | | |
| 440 | 466 | 380 | 500 | | 2 | 2 | 20.7 | | | | | |
| 440 | 466 | 380 | 500 | | 2 | 2 | 23.7 | | | | | |
| 440 | 466 | 380 | 500 | | 2 | 2 | 22.7 | | | | | |
| 427 | 441 | 462 | 510 | | 2 | 2 | 33.3 | | | | | |
| 435 | 523 | | 530 | 533 | 3 | 3 | 45.2 | | | | | |
| 435 | 442 | 466 | 545 | | 3 | 3 | 46 | | | | | |
| 435 | 452 | 463 | 545 | | 3 | 3 | 58.1 | | | | | |
| 435 | 452 | 463 | 545 | | 3 | 3 | 59.5 | | | | | |
| 435 | | 463 | 545 | | 3 | 3 | 78.7 | | | | | |
| 435 | 452 | 463 | 567 | 558 | 3 | 3 | 110 | | | | | |
| 440 | 466 | 475 | 600 | | 4 | 4 | 98.0 | | | | | |
| 438 | 466 | 474 | 602 | | 4 | 4 | 127 | | | | | |
| 446 | 478 | 490 | 694 | | 5 | 5 | 368 | | | | | |
| 446 | 478 | 490 | 730 | | 6 | 6 | 577 | | | | | |
| 455 | 477 | 487 | 585 | | 3 | 3 | 65 | | | | | |
| 455 | 477 | 487 | 585 | | 3 | 3 | 61.4 | | | | | |
| 455 | 477 | 500 | 585 | | 3 | 3 | 83.5 | | | | | |
| 455 | | 483 | 585 | | 3 | 3 | 106 | | | | | |
| 466 | 488 | 498 | 624 | | 5 | 5 | 102 | HJ1088 | 12.8 | 24 | 44.47 | 6 |
| 466 | 488 | 498 | 624 | | 5 | 5 | 106 | HJ1088 | 12.8 | 24 | 44.47 | 6 |
| 463 | 483 | 492 | 627 | | 5 | 5 | 146 | | | | | |
| 466 | 488 | | 690 | 670 | 5 | 5 | 207 | | | | | |
| 460 | 498 | 518 | 700 | | 5 | 5 | 374 | | | | | |
| 468 | 498 | 510 | 762 | | 6 | 6 | 583 | | | | | |
| 478 | 535 | 560 | 770 | | 6 | 6 | 501 | | | | | |

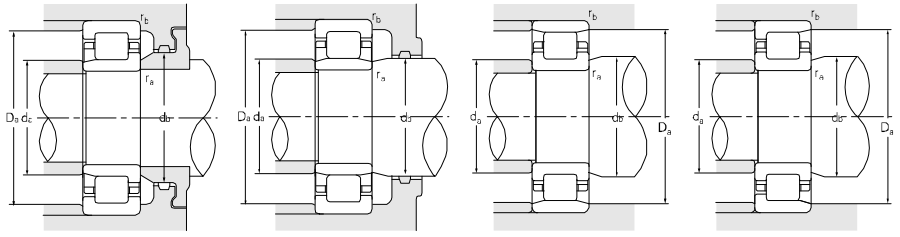


| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1smin}$ | $r_{smin}$ | F | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | | kN | | r/min | | |
| **452** | 680 | 100 | 6 | 6 | 516 | | 1690 | 2630 | 600 | 750 | **NU10/452M/YB2** |
| **460** | 580 | 56 | 3 | 3 | | 553 | 795 | 1720 | 800 | 950 | **N1892M** |
| | 580 | 56 | 3 | 3 | | 553 | 840 | 1730 | 800 | 950 | **NF1892M** |
| | 580 | 56 | 3 | 3 | 489 | | 840 | 1730 | 800 | 950 | **NJ1892M** |
| | 580 | 72 | 3 | 3 | 489 | | 1030 | 2350 | 860 | 1050 | **NJ2892EM** |
| | 580 | 72 | 3 | 3 | 490 | | 1090 | 2480 | 860 | 1050 | **FL-NJ2892/HCEC9** |
| | 620 | 95 | 4 | 4 | 502 | | 1640 | 3500 | 800 | 950 | **NJ2992** |
| | 620 | 95 | | 4 | 502 | | 1670 | 1600 | 800 | 950 | **NUP2992** |
| | 620 | 95 | 4 | 4 | 502 | | 1670 | 1600 | 800 | 950 | **NU2992** |
| | 620 | 118 | | 4 | 502 | | 1950 | 4400 | 800 | 950 | **NUP3992M/C9W33-1** |
| | 620 | 118 | | 4 | 502 | | 1950 | 4400 | 800 | 950 | **NUP3992M/C9W33** |
| | 680 | 100 | 6 | 6 | 516 | | 1690 | 2630 | 800 | 950 | **NU1092M** |
| | 680 | 128 | 6 | 6 | 513 | | 2700 | 5450 | 650 | 800 | **NU2092EM** |
| | 680 | 128 | 6 | 6 | 513 | | 2450 | 4800 | 650 | 800 | **NU2092EMA** |
| | 680 | 128 | 6 | 6 | 516 | | 2450 | 4800 | 650 | 800 | **NU2092MA** |
| | 680 | 163 | 6 | 6 | 516 | | 2970 | 6150 | 650 | 790 | **NU3092M** |
| | 760 | 240 | 7.5 | 7.5 | 531 | | 5450 | 10400 | 400 | 480 | **NU3192** |
| | 760 | 240 | 7.5 | 7.5 | 531 | | 5450 | 10400 | 400 | 480 | **NU3192MA** |
| | 760 | 240 | 7.5 | 7.5 | 531 | | 5310 | 10400 | 400 | 480 | **NU3192F3** |
| | 830 | 165 | 7.5 | 7.5 | 554 | | 4200 | 6800 | 600 | 720 | **NU1292** |
| | 830 | 212 | 7.5 | 7.5 | 554 | | 5700 | 10000 | 580 | 670 | **NU2292/HCYAD** |
| | 820 | 200 | 7.5 | 7.5 | 554 | | 5650 | 9070 | 580 | 670 | **NU2292X3/HC** |
| | 830 | 212 | 7.5 | 7.5 | 554 | | 4850 | 8000 | 580 | 670 | **NU2292M** |
| | 830 | 212 | 7.5 | 7.5 | 554 | | 4850 | 8000 | 580 | 670 | **NU2292MA** |
| | 830 | 212 | 7.5 | 7.5 | 554 | | 4850 | 8000 | 580 | 670 | **NU2292MA/HC** |
| | 830 | 212 | 7.5 | 7.5 | 554 | | 4850 | 8000 | 580 | 670 | **NU2292MA-1** |
| | 830 | 212 | 7.5 | 7.5 | 554 | | 4850 | 8000 | 580 | 670 | **NU2292MA/HCC9** |
| **480** | 600 | 56 | 3 | 3 | 511 | | 750 | 1620 | 840 | 950 | **NU1896M** |
| | 600 | 56 | 3 | 3 | 511 | | 785 | 1680 | 840 | 950 | **NU1896** |
| | 600 | 56 | 3 | 3 | 511 | | 785 | 1680 | 840 | 950 | **NJ1896M** |
| | 600 | 72 | 3 | 3 | 509.5 | | 1050 | 2400 | 840 | 950 | **NJ2896EM** |
| | 600 | 72 | 3 | 3 | 509.5 | | 1140 | 2600 | 840 | 950 | **NJ2896EM** |
| | 650 | 78 | 5 | 5 | 525 | | 1130 | 2200 | 780 | 920 | **NU1996/HCYA4** |

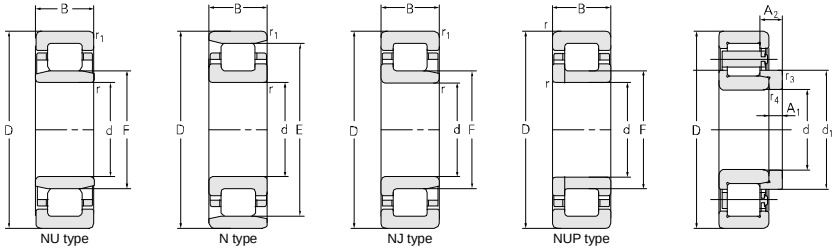
| Abutment and fillet dimensions | | | | | | | Weight | Model | Weight | Separate thrust collar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $da_{min}$ | $da_{max}$ | $db_{min}$ | $Da_{max}$ | $Da_{min}$ | $ra_{max}$ | $rb_{max}$ | | | | A1 | A2 | $r_3.r_4$ |
| mm | | | | | | | kg | | kg | mm | | |
| 470 | 510 | 580 | 660 | | 5 | 5 | 116 | HJ10/452 | 15.1 | 25 | 47.47 | 6 |
| 473 | 548 | | 567 | 558 | 2.5 | 2.5 | 37.2 | | | | | |
| 473 | 548 | | 567 | 558 | 2.5 | 2.5 | 36.5 | | | | | |
| 473 | 480 | 503 | 567 | | 2.5 | 2.5 | 36.3 | | | | | |
| 473 | 485 | 505 | 567 | | 2.5 | 2.5 | 48.7 | | | | | |
| 473 | 485 | 505 | 567 | | 2.5 | 2.5 | 46.1 | | | | | |
| 486 | 511 | 550 | 610 | | 3 | 3 | 83.4 | | | | | |
| 480 | | 524 | 600 | | 3 | 3 | 85.0 | | | | | |
| 480 | | 524 | 600 | | 3 | 3 | 98.3 | | | | | |
| 476 | | 510 | 604 | | 3 | 3 | 107 | | | | | |
| 476 | | 510 | 604 | | 3 | 3 | 107 | | | | | |
| 486 | 511 | 521 | 654 | | 5 | 5 | 111 | | | | | |
| 483 | 509 | 518 | 657 | | 5 | 5 | 166 | | | | | |
| 483 | 509 | 518 | 657 | | 5 | 5 | 164 | | | | | |
| 483 | 496 | 508 | 657 | | 5 | 5 | 164 | | | | | |
| 483 | 496 | 508 | 657 | | 5 | 5 | 211 | | | | | |
| 490 | 526 | 536 | 730 | | 6 | 6 | 467 | | | | | |
| 490 | 526 | 536 | 730 | | 6 | 6 | 481 | | | | | |
| 490 | 526 | 536 | 730 | | 6 | 6 | 467 | | | | | |
| 492 | 542 | 559 | 798 | | 6 | 6 | 405 | | | | | |
| 492 | 542 | 559 | 798 | | 6 | 6 | 505 | | | | | |
| 492 | 542 | 559 | 798 | | 6 | 6 | 505 | | | | | |
| 492 | 542 | 559 | 798 | | 6 | 6 | 515 | | | | | |
| 492 | 542 | 559 | 798 | | 6 | 6 | 518 | | | | | |
| 492 | 542 | 559 | 798 | | 6 | 6 | 518 | | | | | |
| 492 | 542 | 559 | 798 | | 6 | 6 | 518 | | | | | |
| 492 | 542 | 559 | 798 | | 6 | 6 | 518 | | | | | |
| 439 | 507 | 516 | 587 | | 2.5 | 2.5 | 37.5 | | | | | |
| 439 | 507 | 516 | 587 | | 2.5 | 2.5 | 36.3 | | | | | |
| 439 | 507 | 516 | 587 | | 2.5 | 2.5 | 37.4 | | | | | |
| 493 | 504 | 524 | 587 | | 2.5 | 2.5 | 46.5 | | | | | |
| 493 | 504 | 524 | 587 | | 2.5 | 2.5 | 49.0 | | | | | |
| 498 | 517 | 530 | 632 | | 4 | 4 | 74.3 | | | | | |

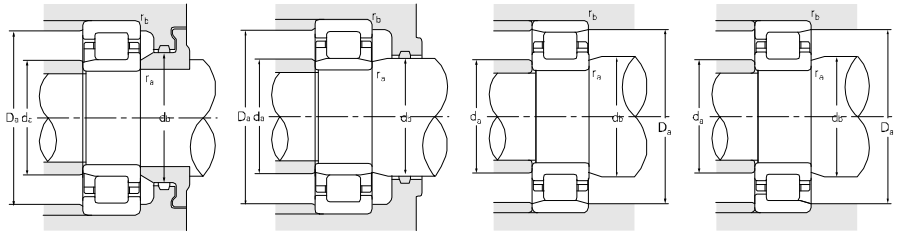


| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1smin}$ | $r_{smin}$ | F | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | | kN | | r/min | | |
| **480** | 700 | 100 | 6 | 6 | 536 | | 1600 | 2970 | 720 | 860 | **NU1096M** |
| | 700 | 100 | 6 | 6 | 536 | | 1900 | 3500 | 720 | 860 | **NU1096MA** |
| | 700 | 128 | 6 | 6 | 536 | | 2600 | 5250 | 600 | 720 | **NU2096MA** |
| | 790 | 248 | 7.5 | 7.5 | 547 | | 5650 | 10700 | 500 | 600 | **NU3196EM** |
| | 790 | 248 | 7.5 | 7.5 | 556 | | 5700 | 11000 | 500 | 600 | **NU3196M** |
| **488.95** | 660.4 | 149.225 | 5 | 5 | 532 | | 2350 | 5480 | 600 | 750 | **NU6/488X4/W33X** |
| **500** | 620 | 56 | 3 | 3 | | 592 | 795 | 1700 | 780 | 940 | **NF18/500EM** |
| | 620 | 72 | 3 | 3 | 530 | | 1130 | 2670 | 780 | 940 | **NU28/500EM** |
| | 670 | 78 | 5 | 5 | 544 | | 1160 | 2350 | 720 | 880 | **NU19/500EM** |
| | 670 | 100 | 5 | 5 | 543 | | 1930 | 4300 | 750 | 900 | **NU29/500** |
| | 670 | 100 | 5 | 5 | 543 | | 1860 | 4100 | 750 | 900 | **NJ29/500** |
| | 670 | 100 | 5 | 5 | 543 | | 1940 | 4300 | 750 | 900 | **NU29/500F3** |
| | 670 | 100 | 5 | 5 | | 627 | 1860 | 4100 | 750 | 900 | **N29/500** |
| | 670 | 128 | | 5 | 543 | | 2300 | 5350 | 670 | 840 | **NUP39/500M/C9W33-1** |
| | 670 | 128 | | 5 | 543 | | 2400 | 5700 | 670 | 840 | **NUP39/500M/C9W33** |
| | 670 | 128 | 5 | 5 | | 633 | 2250 | 5150 | 670 | 840 | **N39/500EM** |
| | 720 | 100 | 6 | 6 | 556 | | 1680 | 3050 | 720 | 880 | **NJ10/500** |
| | 720 | 128 | 6 | 6 | 553 | | 2850 | 5900 | 620 | 720 | **NU20/500EM** |
| | 720 | 167 | 6 | 6 | 556 | | 3210 | 6970 | 620 | 720 | **NU30/500** |
| | 830 | 264 | 7.5 | 7.5 | 581 | | 6250 | 12200 | 480 | 580 | **NU31/500** |
| | 830 | 264 | 7.5 | 7.5 | 581 | | 7500 | 12200 | 480 | 580 | **NU31/500/HCC9YA3** |
| | 900 | 210 | 7.5 | 7.5 | 600 | | 6500 | 11800 | 540 | 600 | **NU12/500X3/HC** |
| | 900 | 210 | 7.5 | 7.5 | 600 | | 6500 | 11800 | 540 | 600 | **NU12/500X3/HCYB2** |
| | 920 | 185 | 7.5 | 7.5 | 603.1 | | 5050 | 8450 | 540 | 650 | **NU12/500M** |
| | 920 | 185 | 7.5 | 7.5 | 603.1 | | 5800 | 9800 | 540 | 650 | **NU12/500/HCEC9** |
| **508** | 622.3 | 95.25 | | 4 | 538 | | 1360 | 3430 | 740 | 850 | **NUP6/508Q1/C9** |
| **530** | 650 | 72 | 3 | 3 | | 622 | 1170 | 2890 | 900 | 1100 | **NF28/530** |
| | 650 | 72 | 3 | 3 | 562 | | 1160 | 2890 | 900 | 1100 | **NJ28/530** |
| | 710 | 82 | 5 | 5 | 573 | | 1500 | 2980 | 680 | 830 | **NJ19/530EM** |
| | 710 | 106 | | 5 | 580 | | 2000 | 4600 | 400 | 500 | **NUP29/530** |
| | 710 | 106 | | 5 | 580 | | 2000 | 4600 | 400 | 500 | **NUP29/530F3** |
| | 710 | 106 | 5 | 5 | 580 | | 1990 | 4550 | 400 | 500 | **NU29/530/YA1** |

| Abutment and fillet dimensions | | | | | | | Weight | Model | Weight | Separate thrust collar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_{amin}$ | $d_{amax}$ | $d_{bmin}$ | $D_{amax}$ | $D_{amin}$ | $r_{amax}$ | $r_{bmax}$ | | | | A1 | A2 | $r_3.r_4$ |
| mm | | | | | | | kg | | kg | mm | | |
| 503 | 531 | 538 | 677 | | 5 | 5 | 128 | | | | | |
| 503 | 531 | 538 | 677 | | 5 | 5 | 129 | | | | | |
| 503 | 529 | 538 | 677 | | 5 | 5 | 176 | | | | | |
| 512 | 536 | 552 | 758 | | 6 | 6 | 495 | | | | | |
| 512 | 545 | 561 | 767 | | 6 | 6 | 508 | | | | | |
| 507 | 517 | | 640 | | 4 | 4 | 153 | | | | | |
| 513 | | | 607 | 598 | 2.5 | 2.5 | 38.5 | | | | | |
| 513 | 526 | 534 | 607 | | 2.5 | 2.5 | 48.5 | | | | | |
| 518 | 537 | 549 | 652 | | 4 | 4 | 80 | | | | | |
| 522 | 537 | 549 | 648 | | 3 | 3 | 101 | | | | | |
| 522 | 537 | 549 | 648 | | 3 | 3 | 105 | | | | | |
| 522 | 537 | 549 | 648 | | 3 | 3 | 102 | | | | | |
| 519 | 537 | | 648 | | 3 | 3 | 103 | | | | | |
| 522 | | 549 | 648 | | 3 | 3 | 137 | | | | | |
| 522 | | 549 | 648 | | 3 | 3 | 137 | | | | | |
| 518 | 627 | 638 | 652 | | 4 | 4 | 128 | | | | | |
| 523 | 550 | | 697 | | 5 | 5 | 136 | | | | | |
| 523 | 549 | 558 | 697 | | 5 | 5 | 175 | | | | | |
| 523 | 530 | 545 | 697 | | 5 | 5 | 232 | | | | | |
| 532 | 550 | 580 | 798 | | 6 | 6 | 602 | | | | | |
| | | | | | 6 | 6 | 602 | | | | | |
| 532 | 593 | 610 | 868 | | 6 | 6 | 606 | | | | | |
| 532 | 593 | 610 | 868 | | 6 | 6 | 606 | | | | | |
| 532 | 593 | 610 | 888 | | 6 | 6 | 585 | | | | | |
| 532 | 593 | 610 | 888 | | 6 | 6 | 572 | | | | | |
| 520 | 526 | 534 | 607 | | 3 | 3 | 65.6 | | | | | |
| 544 | | | 645 | 625 | 2.5 | 2.5 | 52.2 | | | | | |
| 544 | | | 645 | 625 | 2.5 | 2.5 | 54.4 | | | | | |
| 548 | 568 | 598 | 692 | | 4 | 4 | 94.5 | | | | | |
| 555 | | 605 | 585 | | 4 | 4 | 125 | | | | | |
| 555 | | 605 | 585 | | 4 | 4 | 125 | | | | | |
| 555 | 585 | 605 | 585 | | 4 | 4 | 125 | HJ29/530 | 13.2 | 24 | 41.42 | 5 |

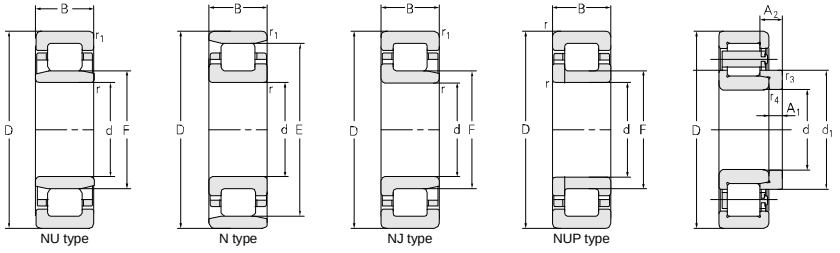


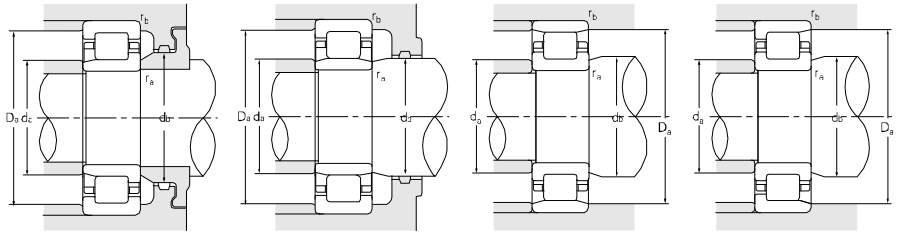



| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1smin}$ | $r_{smin}$ | F | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | | kN | | r/min | | |
| **530** | 710 | 106 | 5 | 5 | 580 | | 2000 | 4800 | 400 | 500 | **NU29/530F3** |
| | 780 | 112 | 6 | 6 | 593 | | 2200 | 4050 | 650 | 780 | **NU10/530M** |
| | 780 | 145 | 6 | 6 | 591 | | 3650 | 7360 | 550 | 650 | **NU20/530EM** |
| | 870 | 272 | 7.5 | 7.5 | 612 | | 7250 | 14500 | 460 | 550 | **NU31/530EM** |
| | 870 | 272 | 7.5 | 7.5 | 612 | | 7500 | 13500 | 460 | 550 | **NU31/530/HCE** |
| | 870 | 272 | 7.5 | 7.5 | 612 | | 7000 | 13500 | 460 | 550 | **NU31/530** |
| | 870 | 272 | 7.5 | 7.5 | 612 | | 6900 | 13500 | 460 | 550 | **NU31/530/HG2** |
| | 870 | 272 | 7.5 | 7.5 | 612 | | 7500 | 13500 | 460 | 550 | **NU31/530/HCYA6** |
| **558.8** | 685.8 | 100 | | 5 | 590.5 | | 1680 | 4450 | 670 | 820 | **NUP6/558.8Q1/C9-NJB** |
| **560** | 680 | 56 | 3 | 3 | 591 | | 810 | 1830 | 670 | 820 | **NJ18/560M** |
| | 680 | 56 | 3 | 3 | 591 | | 810 | 1830 | 670 | 820 | **NJ18/560MA** |
| | 680 | 72 | 3 | 3 | | 651 | 1170 | 2950 | 670 | 820 | **NF28/560** |
| | 750 | 85 | 5 | 5 | 608 | | 1630 | 3200 | 650 | 780 | **NU19/560EM** |
| | 750 | 85 | 5 | 5 | 608 | | 1660 | 3250 | 650 | 780 | **NJ19/560** |
| | 750 | 85 | 5 | 5 | 608 | | 1660 | 3250 | 650 | 780 | **NJ19/560MA** |
| | 750 | 112 | 5 | 5 | 607 | | 2400 | 5450 | 650 | 780 | **NJ29/560** |
| | 750 | 112 | 5 | 5 | 607 | | 2400 | 5450 | 650 | 780 | **NJ29/560F3** |
| | 750 | 112 | 5 | 5 | | 703 | 2420 | 5600 | 650 | 780 | **N29/560** |
| | 750 | 112 | 5 | 5 | 607 | | 2470 | 5570 | 650 | 780 | **FL-NU29/560/C3** |
| | 820 | 115 | 6 | 6 | 625 | | 2250 | 4200 | 620 | 720 | **NU10/560M** |
| | 820 | 150 | 6 | 6 | 626 | | 3650 | 7600 | 500 | 600 | **NU20/560EM** |
| | 960 | 270 | 9.5 | 9.5 | 670 | | 8900 | 17000 | 480 | 550 | **NU6/560/HC** |
| | 1030 | 206 | 9.5 | 9.5 | 668 | | 6850 | 11000 | 460 | 550 | **NU12/560MA** |
| **600** | 730 | 60 | 3 | 3 | 632 | | 860 | 2000 | 650 | 780 | **NU18/600EM** |
| | 730 | 78 | 3 | 3 | 632 | | 1250 | 3350 | 620 | 730 | **NU28/600EM** |
| | 800 | 90 | 5 | 5 | 649 | | 1900 | 3800 | 620 | 750 | **NU19/600EM** |
| | 800 | 90 | 5 | 5 | 649 | | 1860 | 3600 | 620 | 750 | **NU19/600** |
| | 800 | 90 | | 5 | 649 | | 1900 | 3800 | 620 | 750 | **NUP19/600EM** |
| | 800 | 90 | 5 | 5 | | 757 | 1900 | 3800 | 620 | 750 | **NF19/600EM** |
| | 800 | 90 | 5 | 5 | 649 | | 1860 | 3600 | 620 | 750 | **NJ19/600M** |
| | 800 | 118 | 5 | 5 | 649 | | 2900 | 6550 | 620 | 750 | **NU29/600E** |
| | 830 | 150 | 5 | 5 | 655 | | 3410 | 7450 | 600 | 700 | **NU6/600** |

| Abutment and fillet dimensions | | | | | | | Weight | Model | Weight | Separate thrust collar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_{amin}$ | $d_{amax}$ | $d_{bmin}$ | $D_{amax}$ | $D_{amin}$ | $r_{amax}$ | $r_{bmax}$ | | | | A1 | A2 | $r_3.r_4$ |
| mm | | | | | | | kg | | kg | mm | | |
| 555 | 585 | 605 | 585 | | 4 | 4 | 125 | HJ29/530 | 13.2 | 24 | 41.42 | 5 |
| 553 | 585 | 598 | 757 | | 5 | 5 | 187 | | | | | |
| 553 | 587 | 596 | 757 | | 5 | 5 | 252 | | | | | |
| 562 | 605 | 617 | 838 | | 6 | 6 | 663 | | | | | |
| 562 | 605 | 617 | 838 | | 6 | 6 | 670 | | | | | |
| 562 | 605 | 617 | 838 | | 6 | 6 | 670 | | | | | |
| 562 | 605 | 617 | 838 | | 6 | 6 | 670 | | | | | |
| 562 | 605 | 617 | 838 | | 6 | 6 | 670 | | | | | |
| 573 | 584 | 590 | 667 | | 4 | 4 | 82.9 | | | | | |
| 573 | 584 | 606 | 667 | | 2.5 | 2.5 | 42.5 | | | | | |
| 573 | 584 | 606 | 667 | | 2.5 | 2.5 | 44.2 | | | | | |
| 573 | 645 | | 665 | 657 | 2.5 | 2.5 | 53 | | | | | |
| 578 | 600 | 613 | 732 | | 4 | 4 | 108 | | | | | |
| 578 | 600 | 613 | 732 | | 4 | 4 | 111 | | | | | |
| 578 | 600 | 613 | 732 | | 4 | 4 | 111 | | | | | |
| 586 | 620 | 693 | 724 | | 4 | 4 | 148 | | | | | |
| 586 | 620 | 693 | 724 | | 4 | 4 | 148 | | | | | |
| 586 | | 693 | 724 | 713 | 4 | 4 | 138 | | | | | |
| 586 | 620 | 693 | 724 | | 4 | 4 | 146 | | | | | |
| 583 | 617 | 630 | 797 | | 5 | 5 | 215 | | | | | |
| 583 | 616 | 631 | 797 | | 5 | 5 | 289 | | | | | |
| 588 | 630 | 646 | 932 | | 8 | 8 | 846 | | | | | |
| 600 | 657 | 674 | 990 | | 8 | 8 | 809 | | | | | |
| 613 | 625 | 637 | 717 | | 2.5 | 2.5 | 49.3 | | | | | |
| 613 | 625 | 637 | 717 | | 2.5 | 2.5 | 68.5 | | | | | |
| 618 | 642 | 645 | 782 | | 4 | 4 | 128 | | | | | |
| 618 | 642 | 645 | 782 | | 4 | 4 | 128 | | | | | |
| 618 | | 675 | 782 | | 4 | 4 | 135 | | | | | |
| 618 | | 675 | 782 | | 4 | 4 | 130 | | | | | |
| 619 | 642 | 657 | 782 | | 4 | 4 | 130 | | | | | |
| 618 | | 675 | 782 | | 4 | 4 | 163 | | | | | |
| 619 | 647 | 703 | 806 | | 4 | 4 | 237 | | | | | |

d 600~660.4 mm

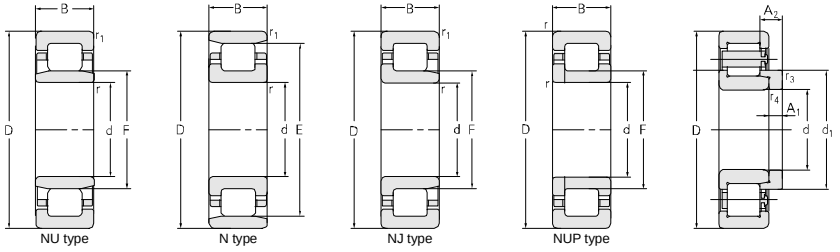


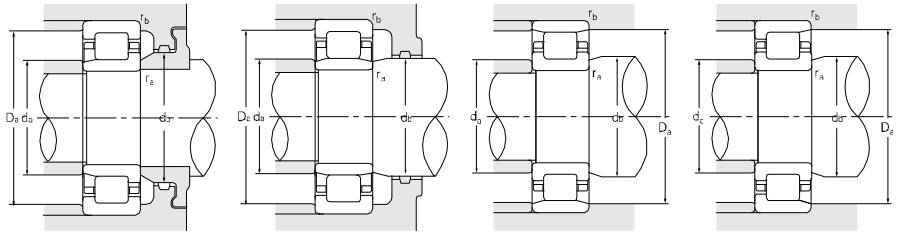



| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1smin}$ | $r_{smin}$ | F | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | | kN | | r/min | | |
| **600** | 870 | 118 | 6 | 6 | 667 | | 2840 | 5250 | 590 | 680 | **NU10/600** |
| | 870 | 155 | 6 | 6 | 661 | | 4180 | 8000 | 500 | 600 | **NU20/600EM** |
| | 870 | 200 | 6 | 6 | 661 | | 5390 | 11000 | 500 | 600 | **NU30/600E** |
| | 870 | 200 | 6 | 6 | 661 | | 5400 | 11000 | 500 | 600 | **NU30/600F3/HCYA4** |
| | 1090 | 155 | 9.5 | 9.5 | 740 | | 5100 | 8400 | 500 | 600 | **NU2/600MA/HC** |
| | 1090 | 155 | 9.5 | 9.5 | 740 | | 5100 | 8400 | 500 | 600 | **NU2/600M/YB2** |
| **620** | 780 | 102 | 4 | 4 | | 740 | 1950 | 4800 | 600 | 750 | **NFP6/620Q1** |
| | 780 | 102 | 4 | 4 | | 0 740 | 1950 | 4800 | 600 | 750 | **N620/780** |
| **630** | 780 | 88 | 4 | 4 | | 0 | 1800 | 4500 | 630 | 750 | **N28/630M** |
| | 780 | 88 | 4 | 4 | 668 | | 1800 | 4500 | 630 | 750 | **NU28/630M** |
| | 780 | 112 | 4 | 4 | | 740 | 2150 | 5750 | 550 | 650 | **N38/630M** |
| | 780 | 112 | 4 | 4 | | 4 | 2150 | 5750 | 550 | 650 | **NF38/630M** |
| | 850 | 100 | 6 | 6 | 688 | | 1980 | 4000 | 600 | 700 | **NU19/630M** |
| | 850 | 100 | 6 | 6 | 688 | 740 | 1980 | 4000 | 600 | 700 | **NJ19/630** |
| | 850 | 100 | 6 | 6 | 683 | 5 | 2150 | 4250 | 600 | 700 | **NU19/630EM** |
| | 850 | 128 | 6 | 6 | 688 | 740 | 3050 | 6950 | 580 | 680 | **NU29/630** |
| | 850 | 128 | 6 | 6 | 683 | 5 | 3250 | 7250 | 580 | 680 | **NU29/630EM** |
| | 850 | 128 | 6 | 6 | 683 | | 3250 | 7250 | 580 | 680 | **NJ29/630EM** |
| | 920 | 128 | 7.5 | 7.5 | 702 | | 3400 | 6250 | 450 | 530 | **NU10/630EM** |
| | 920 | 128 | | 7.5 | 702 | | 3400 | 6250 | 450 | 530 | **NUP10/630EM** |
| | 920 | 170 | 7.5 | 7.5 | 699 | | 4700 | 9500 | 480 | 560 | **NU20/630EM** |
| | 920 | 170 | 7.5 | 7.5 | 699 | | 4650 | 9150 | 480 | 560 | **NU20/630EM** |
| | 920 | 170 | 7.5 | 7.5 | 699 | | 4650 | 9150 | 480 | 560 | **NU20/630MA** |
| | 920 | 212 | 7.5 | 7.5 | 699 | | 6450 | 14500 | 450 | 530 | **NU30/630** |
| **640** | 960 | 140 | 7.5 | 7.5 | 710 | | 4370 | 7900 | 400 | 480 | **NJFP6/640K/HCC3** |
| **660.4** | 812.8 | 107.95 | | 4 | 697 | | 2280 | 6000 | 560 | 670 | **NUP6/660.4Q1/C9-1** |
| | 863.6 | 107.95 | | 5.1 | 704 | | 3000 | 6050 | 560 | 670 | **NUP6/660.4Q1/C9** |
| | 863.6 | 107.95 | | 5.1 | 704 | | 3000 | 6050 | 560 | 670 | **NUP6/660.4Q1/C9-LS** |
| | 863.6 | 107.95 | | 5.1 | 704 | | 3000 | 6050 | 560 | 670 | **NUP6/660.4Q1/C91-NJB** |

| Abutment and fillet dimensions | | | | | | | Weight | Model | Weight | Separate thrust collar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_{amin}$ | $d_{amax}$ | $d_{bmin}$ | $D_{amax}$ | $D_{amin}$ | $r_{amax}$ | $r_{bmax}$ | | | | A1 | A2 | $r_3.r_4$ |
| mm | | | | | | | kg | | kg | mm | | |
| 623 | 658 | 672 | 847 | | 5 | 5 | 234 | | | | | |
| 623 | 652 | 667 | 847 | | 5 | 5 | 320 | | | | | |
| 623 | 655 | 666 | 847 | | 5 | 5 | 412 | | | | | |
| 623 | 655 | 666 | 847 | | 5 | 5 | 416 | | | | | |
| 623 | 655 | 666 | 1062 | | 8 | 8 | 686 | HJ2/600 | 54.4 | 30 | 54.67 | 9.5 |
| 623 | 655 | 666 | 1062 | | 8 | 8 | 676 | HJ2/600 | 54.4 | 30 | 54.67 | 9.5 |
| 654 | 680 | 695 | 765 | | 3 | 3 | 124 | | | | | |
| 654 | 680 | 695 | 765 | | 3 | 3 | 124 | | | | | |
| 645 | 737 | | 765 | 744 | 3 | 3 | 95.6 | | | | | |
| 645 | 660 | 674 | 765 | | 3 | 3 | 96 | | | | | |
| 645 | 739 | | 765 | 744 | 3 | 3 | 118 | | | | | |
| 645 | 739 | | 765 | 744 | 3 | 3 | 120 | | | | | |
| 653 | 681 | 694 | 827 | | 5 | 5 | 158 | | | | | |
| 653 | 681 | 694 | 827 | | 5 | 5 | 167 | | | | | |
| 653 | 676 | 688 | 827 | | 5 | 5 | 160 | | | | | |
| 653 | 678 | 689 | 827 | | 5 | 5 | 210 | | | | | |
| 653 | 678 | 689 | 827 | | 5 | 5 | 214 | | | | | |
| 653 | 678 | 689 | 827 | | 5 | 5 | 222 | | | | | |
| 658 | 691 | 706 | 892 | | 6 | 6 | 284 | | | | | |
| 658 | 691 | 706 | 892 | | 6 | 6 | 284 | | | | | |
| 658 | 690 | 705 | 892 | | 6 | 6 | 395 | | | | | |
| 658 | 690 | 705 | 892 | | 6 | 6 | 399 | | | | | |
| 658 | 690 | 705 | 892 | | 6 | 6 | 399 | | | | | |
| 658 | 690 | 705 | 892 | | 6 | 6 | 485 | | | | | |
| 655 | 670 | | 952 | | 6 | 6 | 345 | | | | | |
| 680 | | 734 | 843 | | 4 | 4 | 127 | | | | | |
| 680 | | 734 | 843 | | 4 | 4 | 179 | | | | | |
| 680 | | 734 | 843 | | 4 | 4 | 170 | | | | | |
| 680 | | 734 | 843 | | 4 | 4 | 170 | | | | | |

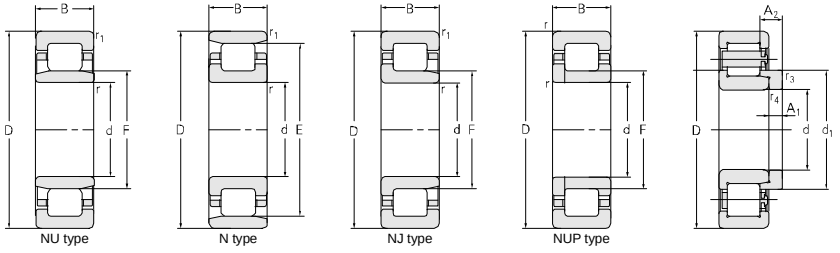
d 666.75~723.8 mm

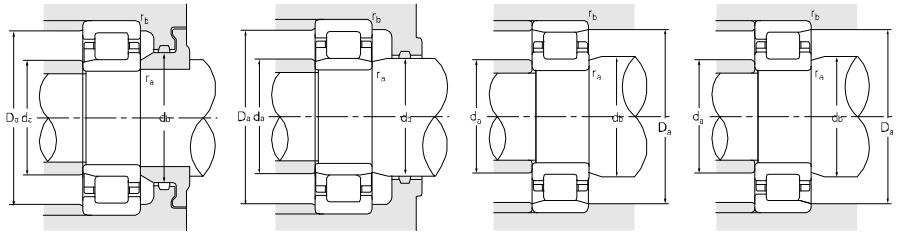


| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1smin}$ | $r_{smin}$ | F | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | | kN | | r/min | | |
| **666.75** | 838.2 | 114.3 | 3 | 6 | | 796 | 2870 | 6850 | 560 | 680 | **NFP6/666X4Q1/C9** |
| | 838.2 | 114.3 | 3 | 6 | | 796 | 2870 | 6850 | 560 | 680 | **NFP6/666X4Q1/C91-LS** |
| | 838.2 | 114.3 | 3 | 6 | | 796 | 2870 | 6850 | 560 | 680 | **NFP6/666X4Q1/C9-LS** |
| **670** | 820 | 69 | 4 | 4 | 708 | | 1230 | 2800 | 550 | 650 | **NJ18/670** |
| | 820 | 69 | 4 | 4 | | 786 | 1450 | 3350 | 550 | 650 | **NF18/670** |
| | 820 | 112 | 4 | 4 | 706 | | 2570 | 7000 | 560 | 670 | **NJ38/670Q1** |
| | 820 | 112 | 4 | 4 | | 786 | 2490 | 6700 | 560 | 670 | **NFP38/670Q1/C9YAD** |
| | 900 | 103 | | 6 | 731 | | 2420 | 4900 | 530 | 630 | **NUP19/670** |
| | 900 | 103 | 6 | 6 | 731 | | 2420 | 4900 | 530 | 630 | **NU19/670** |
| | 980 | 136 | 7.5 | 7.5 | 747 | | 3700 | 6800 | 430 | 500 | **NU10/670** |
| | 980 | 180 | 7.5 | 7.5 | 746 | | 5400 | 11500 | 430 | 500 | **NU20/670E** |
| | 980 | 230 | 7.5 | 7.5 | | 914 | 6930 | 15000 | 430 | 500 | **N30/670** |
| | 980 | 230 | 7.5 | 7.5 | 744 | | 6500 | 14500 | 430 | 500 | **NU30/670M** |
| **700** | 930 | 160 | 6 | 6 | 760 | | 3520 | 8500 | 500 | 600 | **NU6/700** |
| | 930 | 160 | 6 | 6 | 760 | | 3200 | 8520 | 500 | 600 | **NU6/700M** |
| | 930 | 160 | 6 | 6 | 760 | | 3520 | 8500 | 500 | 600 | **NU6/700F3** |
| | 930 | 160 | | 6 | 760 | | 3520 | 8500 | 500 | 600 | **NUP6/700** |
| | 930 | 160 | | 6 | 760 | | 3520 | 8500 | 500 | 600 | **NUP6/700F3** |
| **710** | 870 | 74 | 4 | 4 | | 830 | 1450 | 3370 | 500 | 600 | **N8/710/HC** |
| | 870 | 95 | 4 | 4 | | 831 | 1880 | 4950 | 480 | 560 | **NF280/710** |
| | 900 | 106 | 4 | 4 | | 845 | 1800 | 5200 | 480 | 560 | **N28/710X3/W33** |
| | 950 | 106 | 6 | 6 | | 884 | 2450 | 6000 | 480 | 560 | **N19/710F3/CNL** |
| | 950 | 106 | 6 | 6 | | 884 | 2450 | 6000 | 480 | 560 | **NF19/710F3** |
| | 950 | 106 | 6 | 6 | 770 | | 2590 | 5500 | 480 | 560 | **NU19/710** |
| | 950 | 140 | 6 | 6 | 766 | | 3650 | 8250 | 480 | 560 | **NU29/710EM** |
| | 950 | 140 | 6 | 6 | 776 | | 3000 | 7000 | 480 | 560 | **NU29/710M** |
| | 1030 | 140 | 7.5 | 7.5 | 778 | | 4550 | 8400 | 420 | 490 | **NU10/710EM** |
| | 1030 | 185 | 7.5 | 7.5 | 787 | | 5800 | 12000 | 420 | 490 | **NU20/710EM** |
| | 1150 | 185 | 9.5 | 9.5 | 835 | | 5900 | 11700 | 400 | 450 | **NU11/710X2** |
| **711.2** | 863.6 | 107.95 | | 6.35 | 743 | | 3300 | 6700 | 500 | 600 | **NUP6/711.2M/C9** |
| **723.8** | 908.05 | 120.65 | 5 | 5 | | 865 | 3350 | 8300 | 480 | 550 | **NFP6/723.8Q1/C9** |

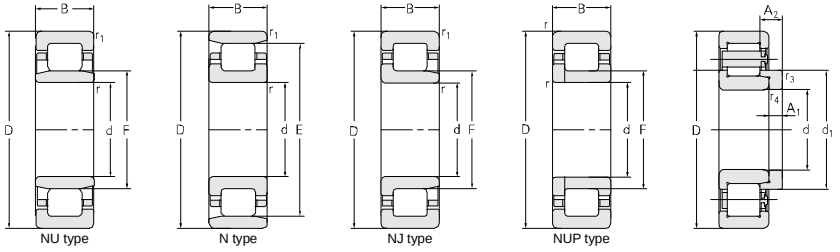
| Abutment and fillet dimensions | | | | | | | Weight | Model | Weight | Separate thrust collar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_{amin}$ | $d_{amax}$ | $d_{bmin}$ | $D_{amax}$ | $D_{amin}$ | $r_{amax}$ | $r_{bmax}$ | | | | A1 | A2 | $r_3.r_4$ |
| mm | | | | | | | kg | | kg | mm | | |
| 682 | 790 | | 820 | 812 | 5 | 3 | 160 | | | | | |
| 682 | 790 | | 820 | 812 | 5 | 3 | 158 | | | | | |
| 682 | 790 | | 820 | 812 | 5 | 3 | 158 | | | | | |
| 654 | 700 | 727 | 805 | | 3 | 3 | 83.8 | | | | | |
| 654 | 698 | 712 | 805 | 797 | 3 | 3 | 85.8 | | | | | |
| 640 | 700 | 727 | 805 | | 3 | 3 | 133 | HJ38/670 | 7.8 | 15 | 25 | 4 |
| 640 | 780 | | 800 | 792 | 3 | 3 | 133 | | | | | |
| 693 | 730 | 755 | 877 | | 5 | 5 | 193 | | | | | |
| 693 | 730 | 755 | 877 | | 5 | 5 | 193 | | | | | |
| 698 | 736 | 753 | 952 | | 6 | 6 | 344 | | | | | |
| 698 | 736 | 752 | 952 | | 6 | 6 | 477 | | | | | |
| | 908 | | 952 | 919 | 6 | 6 | 594 | | | | | |
| 698 | 736 | 750 | 952 | | 6 | 6 | 596 | | | | | |
| 733 | 760 | 772 | 900 | | 5 | 5 | 306 | | | | | |
| 733 | 760 | 772 | 900 | | 5 | 5 | 309 | | | | | |
| 733 | 760 | 772 | 900 | | 5 | 5 | 306 | | | | | |
| 733 | | 772 | 900 | | 5 | 5 | 316 | | | | | |
| 733 | | 772 | 900 | | 5 | 5 | 316 | | | | | |
| 725 | | | 855 | 835 | 3 | 3 | 102 | | | | | |
| 725 | 825 | | 855 | 835 | 3 | 3 | 126 | | | | | |
| 740 | 755 | | 880 | 850 | 3 | 3 | 168 | | | | | |
| 740 | 875 | | 910 | 890 | 5 | 5 | 227 | | | | | |
| 740 | 875 | | 910 | 890 | 5 | 5 | 229 | | | | | |
| 740 | 755 | | 900 | | 5 | 5 | 210 | | | | | |
| 733 | 760 | 772 | 927 | | 5 | 5 | 294 | | | | | |
| 733 | 760 | 772 | 927 | | 5 | 5 | 291 | | | | | |
| 738 | 769 | 783 | 1002 | | 6 | 6 | 420 | | | | | |
| 738 | 780 | 793 | 1002 | | 6 | 6 | 535 | | | | | |
| 743 | 790 | 815 | 1116 | | 9 | 9 | 874 | HJ11/710 | 67.7 | 35 | 62 | 9.5 |
| 740 | 750 | 800 | 835 | | 5 | 5 | 136 | | | | | |
| 752 | 765 | | 883 | 850 | 4 | 4 | 197 | | | | | |

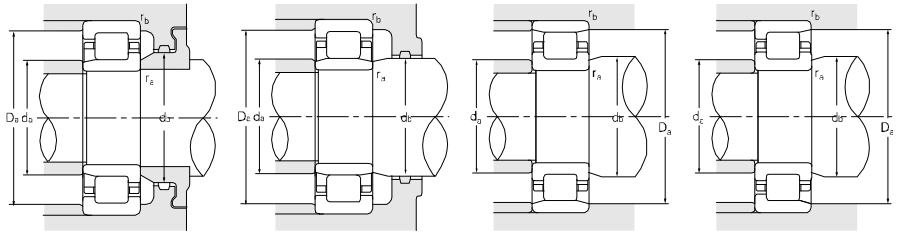


| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1smin}$ | $r_{smin}$ | F | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | | kN | | r/min | | |
| **750** | 920 | 78 | 5 | 5 | 794 | | 1450 | 3500 | 480 | 590 | **NU18/750M** |
| | 920 | 78 | 5 | 5 | | 880 | 1510 | 3480 | 480 | 590 | **NF18/750M** |
| | 920 | 78 | 5 | 5 | | 880 | 1510 | 3480 | 480 | 590 | **NF18/750F3** |
| | 920 | 100 | 5 | 5 | | 880 | 2160 | 5500 | 480 | 590 | **N28/750** |
| | 920 | 100 | 5 | 5 | | 880 | 2160 | 5500 | 480 | 590 | **N28/750F3** |
| | 920 | 120 | 5 | 5 | | 880 | 2690 | 7300 | 480 | 590 | **N38/750X2M** |
| | 1000 | 100 | 6 | 6 | 815 | | 3030 | 6500 | 460 | 550 | **NU19/750X2/C9** |
| | 1000 | 112 | 6 | 6 | | 943 | 2750 | 5750 | 470 | 550 | **NF19/750EM** |
| | 1000 | 112 | | 6 | 815 | | 2660 | 5500 | 470 | 550 | **NUP19/750** |
| | 1090 | 150 | 7.5 | 7.5 | 830 | | 4500 | 8500 | 350 | 415 | **NU10/750EM** |
| | 1090 | 195 | 7.5 | 7.5 | 832 | | 6700 | 14500 | 350 | 415 | **NU20/750EM** |
| | 1320 | 185 | 6 | 6 | 895 | | 8200 | 14100 | 320 | 400 | **NU2/750X3** |
| **800** | 980 | 82 | 5 | 5 | | 936 | 1690 | 4000 | 430 | 510 | **NF18/800** |
| | 980 | 82 | 5 | 5 | 846 | | 1700 | 4200 | 430 | 510 | **NJ18/800EM** |
| | 1060 | 115 | 6 | 6 | 870 | | 2880 | 6150 | 400 | 450 | **NU19/800** |
| | 1150 | 155 | 7.5 | 7.5 | 883 | | 5400 | 10500 | 320 | 380 | **NU10/800EM** |
| | 1150 | 200 | 7.5 | 7.5 | 882 | | 6900 | 14500 | 320 | 380 | **NU20/800EM** |
| | 1150 | 200 | 7.5 | 7.5 | 885 | | 7910 | 14600 | 320 | 380 | **NU20/800MA/HC** |
| **812.8** | 1016 | 139.7 | | 6 | 865 | | 4150 | 10500 | 420 | 500 | **NUP6/812X4** |
| **820** | 990 | 72 | 5 | 5 | | 943 | 1180 | 2960 | 450 | 530 | **N6/820** |
| **850** | 1030 | 106 | 5 | 5 | 902 | | 2050 | 5900 | 410 | 480 | **NU28/850M** |
| | 1030 | 106 | 5 | 5 | 902 | | 2050 | 6490 | 410 | 480 | **NU28/850MB** |
| | 1030 | 106 | 5 | 5 | 902 | | 2250 | 6500 | 410 | 480 | **NJ28/850M** |
| | 1030 | 106 | 5 | 5 | | 982 | 2250 | 6490 | 410 | 480 | **N28/850MB** |
| | 1120 | 118 | 6 | 6 | 919 | | 3050 | 6900 | 390 | 460 | **NU19/850EM** |
| | 1120 | 118 | 6 | 6 | 919 | | 2930 | 7000 | 390 | 460 | **NJ19/850** |
| | 1220 | 212 | 7.5 | 7.5 | 935 | | 7300 | 15400 | 390 | 460 | **NU20/850EM/HC** |
| **900** | 1090 | 85 | 5 | 5 | 949 | | 1900 | 4850 | 370 | 440 | **NU18/900M** |
| | 1090 | 112 | 5 | 5 | 949 | | 2650 | 7150 | 370 | 440 | **NU28/900M** |

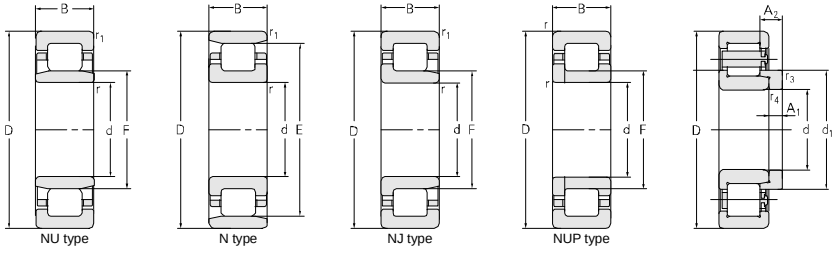
| Abutment and fillet dimensions | | | | | | | Weight | Model | Weight | Separate thrust collar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_{amin}$ | $d_{amax}$ | $d_{bmin}$ | $D_{amax}$ | $D_{amin}$ | $r_{amax}$ | $r_{bmax}$ | | | | A1 | A2 | $r_3.r_4$ |
| mm | | | | | | | kg | | kg | mm | | |
| 770 | 784 | 800 | 900 | | 4 | 4 | 105 | | | | | |
| 770 | 784 | 800 | 900 | | 4 | 4 | 102 | | | | | |
| 773 | 875 | | 900 | 885 | 5 | 5 | 101 | | | | | |
| 773 | 875 | | 900 | 885 | 5 | 5 | 145 | | | | | |
| 773 | 875 | | 900 | 885 | 5 | 5 | 145 | | | | | |
| 773 | 875 | | 900 | 885 | 5 | 5 | 176 | | | | | |
| 733 | 750 | 770 | 977 | | 5 | 5 | 220 | | | | | |
| 773 | 938 | | 977 | 953 | 5 | 5 | 264 | | | | | |
| 733 | | 770 | 977 | | 5 | 5 | 252 | | | | | |
| 778 | 823 | 838 | 1062 | | 6 | 6 | 492 | | | | | |
| 778 | 823 | 838 | 1062 | | 6 | 6 | 634 | | | | | |
| 773 | 820 | 876 | 1296 | | 5 | 5 | 1105 | HJ750 | 115 | 40 | 70 | 6 |
| 818 | 930 | | 950 | 942 | 5 | 5 | 133 | | | | | |
| 818 | 838 | 866 | 962 | | 4 | 4 | 144 | | | | | |
| 824 | 838 | 856 | 1036 | | 5 | 5 | 279 | | | | | |
| 828 | 869 | 889 | 1122 | | 6 | 6 | 565 | | | | | |
| 828 | 868 | 888 | 1122 | | 6 | 6 | 710 | | | | | |
| 828 | 868 | 888 | 1122 | | 6 | 6 | 725 | | | | | |
| 830 | 860 | 880 | 986 | | 5 | 5 | 277 | | | | | |
| 840 | 937 | | 970 | 944 | 4 | 4 | 128 | | | | | |
| 868 | 891 | 908 | 1012 | | 4 | 4 | 192 | | | | | |
| 868 | 891 | 908 | 1012 | | 4 | 4 | 192 | | | | | |
| 868 | 891 | 908 | 1012 | | 4 | 4 | 191 | | | | | |
| 868 | 891 | | 1010 | 994 | 4 | 4 | 187 | | | | | |
| 873 | 909 | 926 | 1097 | | 5 | 5 | 325 | | | | | |
| 873 | 909 | 926 | 1097 | | 5 | 5 | 326 | | | | | |
| 878 | 981 | 912 | 1192 | | 6 | 6 | 835 | | | | | |
| 918 | 942 | 956 | 1072 | | 4 | 4 | 172 | | | | | |
| 918 | 944 | 956 | 1072 | | 4 | 4 | 234 | | | | | |

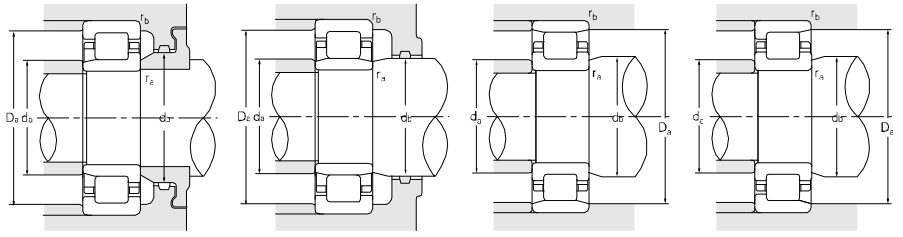


| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1smin}$ | $r_{smin}$ | F | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | | kN | | r/min | | |
| **900** | 1090 | 112 | 5 | 5 | | 1045 | 2700 | 7250 | 370 | 440 | **NF28/900** |
| | 1090 | 140 | 5 | 5 | 945 | | 3300 | 9100 | 350 | 420 | **NU38/900** |
| | 1180 | 122 | 6 | 6 | 966.5 | | 4050 | 8700 | 350 | 420 | **NU19/900EM** |
| | 1180 | 165 | 6 | 6 | 969 | | 5750 | 13500 | 350 | 420 | **NU29/900EM** |
| | 1200 | 150 | 6 | 6 | | 1124 | 4450 | 10200 | 350 | 420 | **N6/900** |
| **950** | 1250 | 175 | 7.5 | 7.5 | 1024 | | 5560 | 13000 | 340 | 400 | **NU29/950** |
| | 1250 | 175 | | 7.5 | 1024 | | 5670 | 13400 | 140 | 170 | **NUP29/950** |
| | 1250 | 175 | 7.5 | 7.5 | 1024 | | 5560 | 13000 | 340 | 400 | **NU29/950F3** |
| **1000** | 1220 | 100 | 6 | 6 | 1053 | | 2650 | 6550 | 350 | 420 | **NU18/1000M** |
| | 1220 | 100 | 6 | 6 | 1053 | | 2650 | 6550 | 350 | 420 | **NJ18/1000M** |
| | 1220 | 128 | 6 | 6 | 1053 | | 3600 | 9500 | 350 | 420 | **NJ28/1000EM** |
| | 1320 | 185 | 7.5 | 7.5 | 1082 | | 6700 | 17000 | 290 | 350 | **NU29/1000E** |
| **1060** | 1280 | 128 | 6 | 6 | | 1225 | 3550 | 10500 | 310 | 370 | **N28/1060M** |
| | 1400 | 150 | 7.5 | 7.5 | 1148 | | 5280 | 12100 | 290 | 350 | **NU19/1060M** |
| | 1400 | 195 | 7.5 | 7.5 | 1146 | | 7200 | 17000 | 290 | 350 | **NU29/1060EM** |
| | 1400 | 250 | 7.5 | 7.5 | 1146 | | 9000 | 23500 | 250 | 310 | **NU39/1060EM** |
| | 1500 | 325 | 9.5 | 9.5 | | 1390 | 12500 | 32500 | 230 | 290 | **N30/1060** |
| **1120** | 1360 | 106 | 6 | 6 | 1182 | | 3350 | 8600 | 270 | 330 | **NJ18/1120EM** |
| | 1360 | 106 | 6 | 6 | 1185 | | 3250 | 8550 | 270 | 330 | **NJ18/1120F3/W20** |
| | 1360 | 106 | 6 | 6 | 1185 | | 3250 | 8550 | 270 | 330 | **NJ18/1120F3/W20YB2** |
| | 1360 | 106 | 6 | 6 | 1185 | | 3250 | 8550 | 270 | 330 | **NJ18/1120M** |
| **1180** | 1420 | 106 | 6 | 6 | 1242 | | 2950 | 7750 | 250 | 320 | **NJ18/1180EM** |
| | 1420 | 106 | 6 | 6 | 1242 | | 3050 | 8000 | 250 | 320 | **NJ18/1180M** |
| | 1540 | 206 | 7.5 | 7.5 | 1258 | | 8950 | 21500 | 180 | 220 | **NU29/1180EM** |
| | 1540 | 272 | 7.5 | 7.5 | | 1466 | 11000 | 28500 | 190 | 250 | **N39/1180M** |
| **1200** | 1520 | 185 | 7.5 | 7.5 | 1289 | | 6220 | 17000 | 110 | 140 | **NU6/1200/C91** |
| | 1520 | 185 | 7.5 | 7.5 | 1289 | | 6220 | 17000 | 110 | 140 | **NU6/1200/C9** |
| | 1520 | 185 | 7.5 | 7.5 | | 1439 | 6240 | 17000 | 110 | 140 | **FL-N6/1200/YAD** |
| **1250** | 1500 | 112 | 6 | 6 | 1316 | | 3630 | 9550 | 300 | 380 | **NU18/1250C9** |

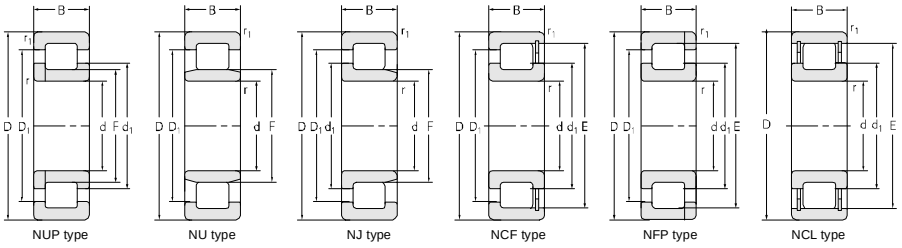
| Abutment and fillet dimensions | | | | | | | Weight | Model | Weight | Separate thrust collar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_{amin}$ | $d_{amax}$ | $d_{bmin}$ | $D_{amax}$ | $D_{amin}$ | $r_{amax}$ | $r_{bmax}$ | | | | A1 | A2 | $r_3.r_4$ |
| mm | | | | | | | kg | | kg | mm | | |
| 918 | 944 | 956 | 1072 | | 4 | 4 | 228 | | | | | |
| 918 | | 956 | 1072 | | 4 | 4 | 268 | | | | | |
| 923 | 957 | 973 | 1157 | | 5 | 5 | 378 | | | | | |
| 923 | 958 | 975 | 1157 | | 5 | 5 | 565 | | | | | |
| 923 | 985 | | 1165 | | 5 | 5 | 485 | | | | | |
| 978 | 1013 | 1013 | 1222 | | 6 | 6 | 596 | | | | | |
| 990 | | 1069 | 1210 | | 6 | 6 | 616 | | | | | |
| 978 | 1013 | 1013 | 1222 | | 6 | 6 | 596 | | | | | |
| 1023 | 1040 | 1060 | 1197 | | 5 | 5 | 264 | | | | | |
| 1023 | | 1060 | 1197 | | 5 | 5 | 252 | | | | | |
| 1023 | 1040 | 1082 | 1197 | | 5 | 5 | 345 | | | | | |
| 1028 | 1072 | 1089 | 1292 | | 6 | 6 | 705 | | | | | |
| 1083 | 1218 | | 1257 | 1230 | 5 | 5 | 355 | | | | | |
| 1088 | 1010 | 1133 | | | 6 | 6 | 653 | | | | | |
| 1028 | 1133 | 1152 | 1372 | | 6 | 6 | 875 | | | | | |
| 1028 | 1140 | 1153 | 1372 | | 6 | 6 | 1060 | | | | | |
| 1094 | 1382 | | 1466 | 1402 | 8 | 8 | 1880 | | | | | |
| 1143 | 1175 | 1210 | 1337 | | 5 | 5 | 330 | | | | | |
| 1143 | 1175 | 1210 | 1337 | | 5 | 5 | 327 | | | | | |
| 1143 | 1175 | 1210 | 1337 | | 5 | 5 | 329 | | | | | |
| 1143 | 1175 | 1210 | 1337 | | 5 | 5 | 329 | | | | | |
| 1203 | 1228 | 1270 | 1397 | | 5 | 5 | 354 | | | | | |
| 1203 | 1228 | 1270 | 1397 | | 5 | 5 | 340 | | | | | |
| 1208 | 1250 | 1266 | 1512 | | 6 | 6 | 1046 | | | | | |
| 1208 | 1458 | | 1512 | 1474 | 6 | 6 | 1350 | | | | | |
| 1240 | 1274 | 1304 | 1480 | | 6 | 6 | 825 | | | | | |
| 1240 | 1274 | 1304 | 1480 | | 6 | 6 | 825 | | | | | |
| 1240 | 1274 | | 1480 | | 6 | 6 | 838 | | | | | |
| 1280 | 1306 | 1326 | 1470 | | 5 | 5 | 386 | | | | | |

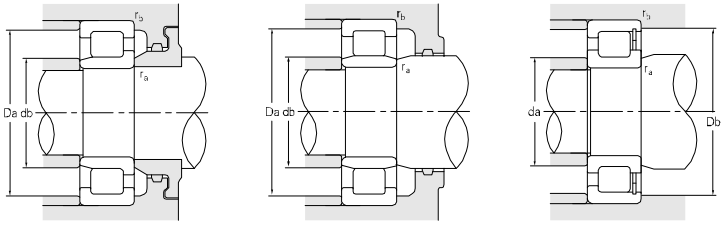


| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1smin}$ | $r_{smin}$ | F | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | | kN | | r/min | | |
| **1250** | 1500 | 112 | 6 | 6 | 1316 | | 3630 | 9550 | 300 | 380 | **NU18/1250F3/C9** |
| | 1500 | 145 | 6 | 6 | 1316 | | 4900 | 14000 | 300 | 380 | **NU18/1250/HCE** |
| | 1750 | 290 | 9.5 | 9.5 | | 1635 | 12500 | 29500 | 165 | 190 | **N20/1250M** |
| **1320** | 1600 | 122 | 6 | 6 | 1395 | | 3650 | 9500 | 190 | 250 | **NU18/1320M** |
| | 1640 | 185 | 7.5 | 15 | 1040 | | 6520 | 17730 | 190 | 250 | **FL-NU6/1320** |
| | 1720 | 175 | 7.5 | 7.5 | 1425 | | 7920 | 19500 | 190 | 240 | **NU19/1320** |
| | 1720 | 175 | 7.5 | 7.5 | 1475 | | 6700 | 16200 | | | **NU19/1320D/HCRYAD** |
| | 1720 | 230 | 7.5 | 7.5 | 1420 | | 10900 | 29000 | 180 | 230 | **NU29/1320E** |
| | 1720 | 300 | 7.5 | 7.5 | | 1640 | 12600 | 32500 | 175 | 210 | **N39/1320M** |
| **1400** | 1700 | 175 | 7.5 | 7.5 | | 1637 | 6300 | 1750 | 175 | 210 | **N28/1400EM** |
| **1500** | 1770 | 160 | 4 | 7.5 | 1580 | | 5700 | 19200 | 200 | 260 | **NU6/1500/HCC9YA34** |
| | 1820 | 140 | 7.5 | 7.5 | 1585 | | 6220 | 17300 | 195 | 250 | **NU18/1500/HC** |
| | 1820 | 140 | 7.5 | 7.5 | | 1735 | 6220 | 17300 | 195 | 250 | **NF18/1500/HC** |
| **1600** | 1950 | 155 | 7.5 | 7.5 | | 1857 | 6560 | 18300 | 150 | 185 | **FL-N18/1600** |
| | 1950 | 200 | 7.5 | 7.5 | 1690 | | 8340 | 24300 | 150 | 185 | **NU28/1600F3** |
| **1700** | 2060 | 160 | 7.5 | 7.5 | 1784 | | 6950 | 18500 | 125 | 155 | **NU18/1700EM** |
| **1900** | 2300 | 175 | 9.5 | 9.5 | | 2204 | 8150 | 23700 | 90 | 115 | **N18/1900** |

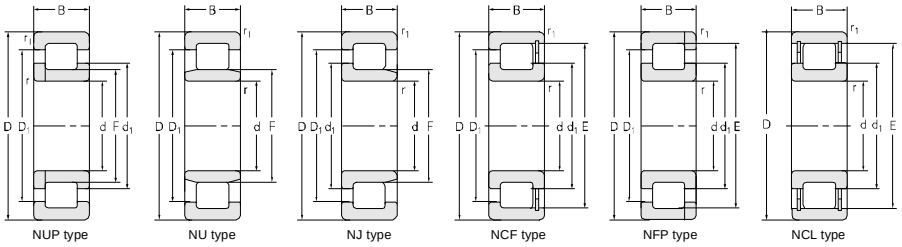
| Abutment and fillet dimensions | | | | | | | Weight | Model | Weight | Separate thrust collar | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_{amin}$ | $d_{amax}$ | $d_{bmin}$ | $D_{amax}$ | $D_{amin}$ | $r_{amax}$ | $r_{bmax}$ | | | | A1 | A2 | $r_3.r_4$ |
| mm | | | | | | | kg | | kg | mm | | |
| 1280 | 1306 | 1326 | 1470 | | 5 | 5 | 386 | | | | | |
| 1280 | 1306 | 1326 | 1470 | | 5 | 5 | 517 | | | | | |
| 1284 | 1625 | | 1716 | 1650 | 8 | 8 | 2310 | | | | | |
| 1343 | 1382 | 1403 | 1577 | | 5 | 5 | 525 | | | | | |
| 1364 | 1376 | 1382 | 1610 | | | 6 | 893 | | | | | |
| 1348 | 1406 | 1428 | 1692 | | 6 | 6 | 1110 | | | | | |
| 1348 | 1460 | 1478 | 1692 | | | | 1080 | | | | | |
| 1348 | 1405 | 1430 | 1692 | | 6 | 6 | 1510 | | | | | |
| 1348 | 1630 | | 1692 | 1655 | 6 | 6 | 1890 | | | | | |
| 1362 | 1727 | | 1803 | 1747 | 10 | 10 | 3540 | | | | | |
| 1428 | 1627 | | 1672 | 1647 | 6 | 6 | 858 | | | | | |
| 1528 | 1570 | | 1742 | | | | 730 | | | | | |
| 1528 | 1570 | 1748 | 1792 | | 6 | 6 | 773 | | | | | |
| 1528 | 1728 | | 1792 | 1745 | 6 | 6 | 773 | | | | | |
| 1630 | 1680 | 1700 | 1886 | 1876 | 6 | 6 | 1030 | | | | | |
| 1655 | 1680 | 1700 | 1886 | | 6 | 6 | 1272 | | | | | |
| 1728 | 1771 | 1795 | 2032 | | 6 | 6 | 1156 | | | | | |
| 1934 | 2194 | | 2266 | 2219 | 8 | 8 | 1480 | | | | | |

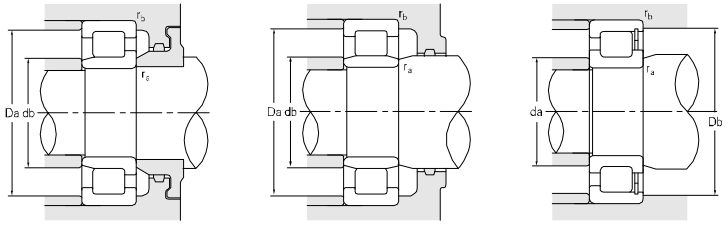


| Principal dimensions | | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1min}$ | $r_{min}$ | F、E | $C_r$ | $C_{or}$ | Grease | Oil |
| mm | | | | | | kN | | r/min | |
| **25** | 52 | 18 | 0.5 | 0.7 | 31 | 46.2 | 51.0 | 11000 | 13600 |
| | 52 | 18 | 1 | 1.1 | 31 | 41.3 | 43.5 | 11000 | 13600 |
| | 52 | 18 | 1 | 0.3 | 31 | 43.5 | 48 | 11000 | 13600 |
| | 52 | 18 | 1 | 0.5 | 30.998 | 35 | 35 | 11000 | 13600 |
| | 62 | 20 | 1.1 | 3 | 34 | 56 | 60.5 | 9820 | 12100 |
| | 62 | 24 | 1.1 | 3 | 34 | 63.0 | 74.5 | 9820 | 12100 |
| | 62 | 24 | 1.1 | 1.1 | 34.35 | 69.0 | 66.0 | 9820 | 12100 |
| **30** | 62 | 19 | 1 | 2 | 38.2 | 52.0 | 58.5 | 9310 | 11470 |
| | 72 | 19 | 2.0 | 2.0 | 40.4 | 80.0 | 60.5 | 8430 | 10400 |
| | 72 | 21 | 1.1 | 1.1 | 38.5 | 80.0 | 68.5 | 8430 | 10400 |
| | 72 | 30.162 | 1.0 | 1.5 | 60.409 | 275 | 445 | 8430 | 10400 |
| | 80 | 21 | 1.1 | 2.5 | 43.8 | 85.0 | 86.5 | 7500 | 9200 |
| **35** | 80 | 21 | 1.5 | 1.5 | 46.2 | 103 | 89.0 | 7500 | 9200 |
| | 80 | 21 | 1.5 | 0.5 | 46.2 | 103 | 89.0 | 7500 | 9200 |
| | 80 | 21 | 1.5 | 1.5 | 46.2 | 103 | 89.0 | 7500 | 9200 |
| | 80 | 21 | 1.5 | 3.0 | 46.2 | 103 | 89.0 | 7500 | 9200 |
| | 80 | 21 | 1.1 | 1.5 | 45.806 | 103 | 106 | 7500 | 9200 |
| | 80 | 23 | 1.5 | 3.5 | 45.8 | 69 | 48.0 | 7500 | 9200 |
| | 82 | 23 | 1.1 | 1.1 | 64.5 | 79.0 | 112 | 7500 | 9200 |
| | 90 | 23 | 2 | 5 | 49.7 | 96.0 | 102 | 7170 | 8840 |
| | 90 | 23 | 2 | 5 | 49.7 | 96.0 | 102 | 7170 | 8840 |
| | 90 | 23 | 2.5 | 1 | 49 | 112 | 95.0 | 7170 | 8840 |
| | 90 | 23 | 5 | 1.5 | 48.5 | 112 | 83.5 | 7170 | 8840 |
| | 90 | 23 | 1.5 | 1.5 | 47.88 | 99.5 | 98 | 7170 | 8840 |
| | 90 | 23 | 2 | 1.5 | 49.7 | 96 | 102 | 7170 | 8840 |
| | 90 | 23 | 1.5 | 2.1 | 47.88 | 99.5 | 98.0 | 7170 | 8840 |
| | 90 | 29 | 1.5 | 1.5 | 48 | 113 | 131 | 7170 | 8840 |
| | 90 | 29 | 1.5 | 0.5 | 48 | 124 | 131 | 7170 | 8840 |
| **40** | 80 | 31 | 1.5 | 3.5 | 49 | 114 | 140 | 7170 | 8840 |
| | 90 | 23 | 1.1 | 1.1 | 53.44 | 140 | 110 | 7170 | 8840 |
| | 90 | 23 | 3.5 | 1.5 | 53.44 | 140 | 110 | 7170 | 8840 |
| | 90 | 23 | 3.2 | 2 | 53.44 | 140 | 106 | 7170 | 8840 |
| | 90 | 23 | 3.5 | 1.5 | 52 | 140 | 95.5 | 7170 | 8840 |

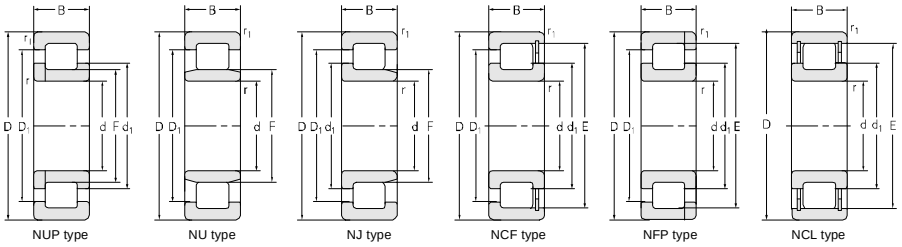
| Designations | Other dimensions | | Contact surface and chamfer dimensions | | | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| | d1 | D1 | $d_{amin}$ | $d_{bmin}$ | $D_{amax}$ | $D_{bmax}$ | $r_{amax}$ | $r_{bmax}$ | |
| | mm | | mm | | | | | | kg |
| **NUP2205NV/C91YAD** | 34 | 41 | 31 | | 48 | | 0.5 | 0.6 | 0.193 |
| **NU2205V/C9YA6** | | 40 | | 29 | 48 | | 1.0 | 1.0 | 0.176 |
| **NUP2205NV/HAC9YA** | 34 | 41 | 31 | | 47 | | 1.0 | 0.3 | 0.193 |
| **NUP2205NV/HAC9Y** | 34 | 42.8 | 31 | | 47 | | 1.0 | 0.5 | 0.173 |
| **NJ305X2V/C3YA46** | 38 | | 33 | 33 | 56 | | 1.0 | 3.0 | 0.321 |
| **NJ2305V/C3YA46** | 38 | 49.5 | 35 | 31 | 56 | | 1.0 | 3.0 | 0.378 |
| **NUP2305V** | 39 | 47 | 34 | | 56 | | 1.0 | 1.0 | 0.401 |
| **NCL2206X2V/YA6** | 41.5 | | 38 | | | 57 | 1.0 | 2.0 | 0.272 |
| **NU306EV/C9YA6** | | 56.5 | | 37 | 65 | | 2.0 | 2.0 | 0.399 |
| **NU306X2V/C3** | | 55.5 | | 35 | 66 | | 1.0 | 1.0 | 0.431 |
| **NCL3306X2V** | 44.25 | | 36 | | | 67 | 1.0 | 1.5 | 0.647 |
| **NU306X3V** | | 63.5 | | 39 | 74 | | 1.1 | 2.5 | 0.565 |
| **NJ307NV/C9** | 52.2 | 64.3 | 48 | 42 | 73 | | 1.5 | 1.5 | 0.548 |
| **NUP307NV/C9** | 52.2 | 64.3 | 47 | | 73 | | 1.5 | 0.5 | 0.579 |
| **NJ307EV/C3** | 51 | 64.3 | 46 | 40 | 73 | | 1.5 | 1.5 | 0.540 |
| **NJ307EV/YA4** | 51 | 64.3 | 46 | 40 | 73 | | 1.5 | 3.0 | 0.540 |
| **NJ307EV/C9YAD** | 50.8 | 64 | 46 | 40 | 73 | | 1.0 | 1.5 | 0.537 |
| **NJ607V** | 51 | 64 | 46 | 40 | 73 | | 1.5 | 3.5 | 0.568 |
| **NFP2207X1V** | 50 | 59 | 41 | | 75 | 78 | 1.0 | 1.0 | 0.681 |
| **NUP2207X1V/C9YB2** | 55.5 | 69 | 51 | | 82 | | 2.0 | 5.0 | 0.795 |
| **NJ2207X1V/C9YB2** | 55.5 | 69 | 51 | 45 | 82 | | 2.0 | 5.0 | 0.780 |
| **NUP407X3V/C9YA6** | 55 | 71 | 51 | | 80 | | 2.5 | 1.0 | 0.75 |
| **NCF407X3V/C9YA6** | 53 | 71 | 49 | | 82 | 82 | 5.0 | 1.5 | 0.763 |
| **NUP307X3EV/C3** | 54.6 | 71 | 42 | | 82 | | 1.5 | 1.5 | 0.790 |
| **NUP2207X1V/C9YB2-SG** | 55.5 | 69 | 49 | | 82 | | 2.0 | 1.5 | 0.795 |
| **NUP307X3EV/C3YAB** | 54.6 | 71 | 39 | | 82 | | 1.5 | 2.0 | 0.790 |
| **NJ607NV** | 56.5 | 70 | 42 | 43 | 82 | | 1.5 | 1.5 | 0.998 |
| **NJ607NV/YB2** | 56.5 | 70 | 42 | | 82 | | 1.5 | 0.5 | 0.998 |
| **NJ3208X2V/C9** | 54.5 | 65.5 | 51 | | 72 | | 1.5 | 3.5 | 0.724 |
| **NUP308NV** | 59.2 | 75 | 44 | | 83 | | 1.0 | 1.0 | 0.499 |
| **NJ308V** | 59.2 | 75 | 53 | 48 | 82 | | 3.5 | 1.5 | 0.719 |
| **NJ308V/C9YA6** | 59.2 | 75 | 50 | 48 | 82 | | 3.2 | 2.0 | 0.719 |
| **NJ308V/C3YA5** | 57.5 | 73.4 | 53 | 47 | 82 | | 3.5 | 1.5 | 0.724 |

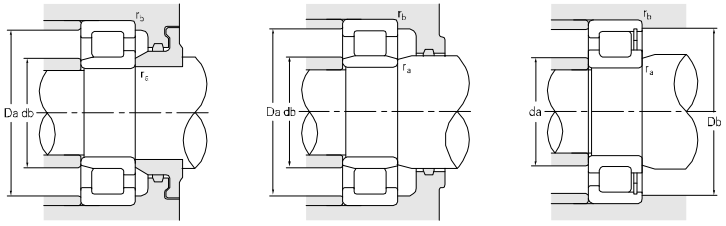


| Principal dimensions | | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1min}$ | $r_{min}$ | F、E | $C_r$ | $C_{or}$ | Grease | Oil |
| mm | | | | | | kN | | r/min | |
| **40** | 90 | 25 | 1.5 | 1.5 | 51 | 143 | 118 | 7170 | 8840 |
| | 90 | 33 | 3.2 | 2 | 53.44 | 145 | 155 | 7170 | 8840 |
| | 94 | 30 | 5 | 1.5 | 51.1 | 127 | 131 | 6940 | 8560 |
| **45** | 100 | 25 | 1.5 | 1.5 | 57.85 | 136 | 127 | 5940 | 7300 |
| | 100 | 25 | 1.5 | 1.5 | 57.3 | 118 | 126 | 5940 | 7300 |
| | 100 | 25 | 1.5 | 2.2 | 57.3 | 118 | 126 | 5940 | 7300 |
| | 100 | 31 | 1.5 | 0.5 | 56 | 141 | 153 | 5940 | 7300 |
| | 100 | 31 | 4.5 | 1.5 | 56 | 165 | 153 | 5940 | 7300 |
| **48** | 120 | 35 | 2 | 3.5 | 71.3 | 167 | 215 | 5100 | 6300 |
| **50** | 80 | 28 | 1.1 | 0.6 | 58.5 | 94.5 | 177 | 6680 | 8230 |
| | 110 | 27 | 2 | 2 | 66.72 | 160 | 156 | 5370 | 6620 |
| | 110 | 27 | 2 | 2 | 66.72 | 160 | 156 | 5370 | 6620 |
| | 110 | 27 | 2 | 2 | 66.72 | 160 | 156 | 5370 | 6620 |
| | 110 | 27 | 2 | 2 | 66.72 | 160 | 156 | 5370 | 6620 |
| **55** | 120 | 29 | 2 | 2 | 68.75 | 169 | 166 | 4900 | 6040 |
| | 120 | 29 | 2 | 2 | 68.75 | 169 | 166 | 4900 | 6040 |
| **56** | 160 | 60 | 2 | 2 | 77.15 | 300 | 360 | 3950 | 4870 |
| **60** | 110 | 28 | 1.5 | 2 | 71.1 | 155 | 196 | 5050 | 6230 |
| **65** | 140 | 33 | 2.1 | 2.1 | 82.7 | 212 | 249 | 4170 | 5140 |
| | 140 | 33 | 2.1 | 2.1 | 82.7 | 212 | 249 | 4170 | 5140 |
| | 140 | 33 | 2.1 | 2.1 | 82.7 | 212 | 249 | 4170 | 5140 |
| **70** | 150 | 35 | 2.1 | 2.1 | 90.97 | 320 | 272 | 3870 | 4770 |
| | 150 | 35 | 2.1 | 0.3 | 90.97 | 320 | 272 | 3870 | 4770 |
| **75** | 115 | 30 | 1.1 | 1.1 | 108 | 140 | 195 | 4500 | 5560 |
| | 130 | 31 | 1.5 | 1.5 | 89.2 | 170 | 230 | 4170 | 5140 |
| | 160 | 55 | 2.1 | 2.1 | 91.24 | 350 | 410 | 3600 | 4450 |

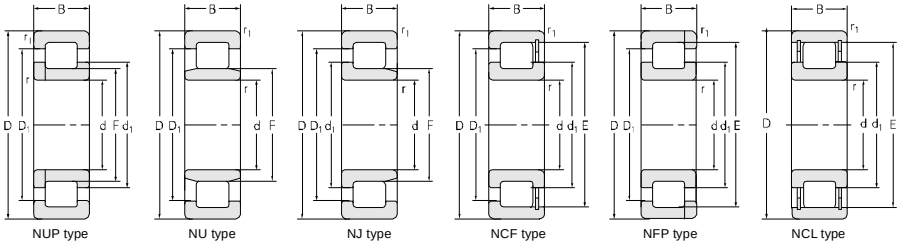
| Designations | Other dimensions | | Contact surface and chamfer dimensions | | | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| | d1 | D1 | $d_{amin}$ | $d_{bmin}$ | $D_{amax}$ | $D_{bmax}$ | $r_{amax}$ | $r_{bmax}$ | |
| | mm | | mm | | | | | | kg |
| **NCF308X2V** | 58 | 75 | 49 | | 85 | 84 | 1.5 | 1.5 | 0.755 |
| **NJ2308V/C9YA6** | 59.2 | 73 | 50 | 48 | 81 | | 3.0 | 2.0 | 1.02 |
| **NJ608V/YA13** | 58 | 75 | 45 | 45 | 86 | | 5.0 | 1.5 | 1.02 |
| **NJ309V** | 64 | 79 | 52 | 52 | 92 | | 1.5 | 1.5 | 0.904 |
| **NUP309EV/C3** | 61 | 80.5 | 52 | | 92 | | 1.5 | 1.5 | 0.996 |
| **NUP309ENRV/C3YA6** | 64 | 80.5 | 48 | | 92 | | 1.5 | 2.0 | 1.02 |
| **NJ2309X2NV/C9YA26** | 63 | 81 | 58 | 54 | 92 | | 1.5 | 0.5 | 1.17 |
| **NJ2309X2NRV/C3YA6** | 63 | 81 | 60 | 50 | 92 | | 4.5 | 1.5 | 1.21 |
| **NJ6/48V/C9YA6** | 77.8 | 92.8 | 60 | 64 | 111 | | 2.0 | 3.5 | 2.18 |
| **NU4010X2V/YAB** | | 67 | | 54 | 73 | | 1.0 | 0.6 | 0.575 |
| **NUP310NV** | 73.2 | 89 | 53 | | 101 | | 2.0 | 2.0 | 1.28 |
| **NJ310V** | 73.2 | 89 | 59 | 62 | 101 | | 2.0 | 2.0 | 1.25 |
| **NJ310V/HAC3YA6** | 73.2 | 89 | 59 | 62 | 101 | | 2.0 | 2.0 | 1.25 |
| **NUP310NRV/HAC3YA6** | 73.2 | 89 | 59 | | 101 | | 2.0 | 2.0 | 1.32 |
| **NUP311NV** | 75.5 | 98 | 63 | | 111 | | 2.0 | 2.0 | 1.63 |
| **NUP311NRV** | 75.5 | 98 | 63 | | 111 | | 2.0 | 2.0 | 1.69 |
| **NUP6/56V** | 88.2 | 108.2 | 65 | | 151 | | 2.0 | 2.0 | 7.29 |
| **NJ2212EV/YA6** | 77 | 93.5 | 69 | 66 | 102 | | 1.5 | 2.0 | 1.17 |
| **NUP313NV** | 91.3 | 114 | 76 | | 129 | | 2.0 | 2.0 | 2.15 |
| **NUP313NRV/HAC3YA6** | 91.3 | 114 | 70 | | 128 | | 2.0 | 2.0 | 2.59 |
| **NUP313NRV/C3** | 91.3 | 114 | 70 | | 128 | | 2.0 | 2.0 | 2.59 |
| **NUP314NV/HA** | 99.5 | 127 | 74 | | 138 | | 2.0 | 2.0 | 2.96 |
| **NUP314NV/YA6** | 99.5 | 127 | 74 | | 138 | | 2.0 | 0.3 | 2.96 |
| **NCF3015V** | 89.1 | 103 | 81 | | 108 | 109 | 1.0 | 1.0 | 1.05 |
| **NUP2215V-2ZL** | 108 | 110.5 | 82 | | 122 | | 1.5 | 1.5 | 1.91 |
| **NJ2315V** | 102 | 131 | 86 | 83 | 150 | | 2.0 | 2.0 | 5.16 |

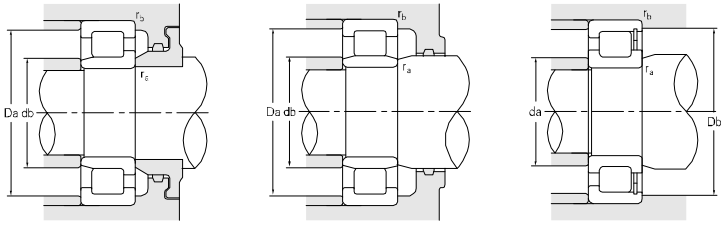


| Principal dimensions | | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1min}$ | $r_{min}$ | F、E | Cr | Cor | Grease | Oil |
| mm | | | | | | kN | | r/min | |
| **85** | 180 | 41 | 3 | 3 | 108 | 320 | 380 | 3160 | 3900 |
| **114.3** | 152.4 | 51.05 | 2 | 1.5 | 127.05 | 198 | 545 | 3140 | 3870 |
| **120** | 215 | 58 | 2.1 | 2.1 | 192.8 | 515 | 730 | 2420 | 2980 |
| **140** | 250 | 68 | 3 | 3 | 169 | 645 | 1020 | 2000 | 2470 |
| **150** | 210 | 36 | 2 | 2 | 163.5 | 303 | 540 | 2220 | 2740 |
| **220** | 300 | 48 | 2.1 | 1.5 | 282.4 | 550 | 985 | 1400 | 1720 |
| **240** | 320 | 28 | 2.1 | 2.1 | 303.3 | 335 | 570 | 1270 | 1560 |
| **300** | 420 | 72 | 3 | 3 | 390.5 | 1090 | 2155 | 870 | 1070 |
| | 420 | 72 | 3 | 3 | 390.5 | 1240 | 2160 | 870 | 1070 |
| | 460 | 118 | 4 | 4 | 421 | 1910 | 3700 | 840 | 1040 |
| **320** | 500 | 74 | 4 | 4 | 462 | 1420 | 2380 | 760 | 940 |
| **340** | 460 | 72 | 3 | 3 | 367 | 1170 | 2420 | 785 | 970 |
| | 520 | 133 | 5 | 5 | 482 | 2300 | 4300 | 710 | 870 |
| **360** | 520 | 82 | 5 | 5 | 483 | 1430 | 2620 | 685 | 845 |
| **380** | 520 | 82 | 4 | 4 | 484.5 | 1480 | 3130 | 665 | 820 |
| **400** | 540 | 82 | 4 | 4 | 511 | 1600 | 3400 | 620 | 765 |
| **440** | 540 | 60 | 2.1 | 1.5 | 516 | 1020 | 2550 | 580 | 720 |
| | 600 | 60 | 2.1 | 2.1 | 563 | 1240 | 2440 | 560 | 695 |
| | 750 | 46 | 2.1 | 2.1 | 538.5 | 820 | 1630 | 445 | 550 |
| **530** | 650 | 56 | 3 | 3 | 624.5 | 990 | 2240 | 450 | 555 |
| | 710 | 72 | 5 | 5 | 672 | 1800 | 3550 | 420 | 515 |

| Designations | Other dimensions | | Contact surface and chamfer dimensions | | | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| | d1 | D1 | damin | dbmin | Damax | Dbmax | ramax | rbmax | |
| | mm | | mm | | | | | | kg |
| **NUP317EV-RSZ** | 117 | 152 | 98 | | 167 | | 3.0 | 3.0 | 5.06 |
| **NCL6/114.3V/W33X** | | | | 122 | | 145 | 2.0 | 1.5 | 2.81 |
| **NCF2224V** | 150 | 184 | 131 | | 204 | 204 | 2.0 | 2.0 | 8.97 |
| **NJ2228EV/YA4** | 181.2 | 212.8 | 152 | 160 | 236 | | 3.0 | 3.0 | 14.1 |
| **NCF2930V** | 171 | 188 | 140 | | 200 | 202 | 2.0 | 2.0 | 3.89 |
| **NCF2944V** | 248 | 274 | 232 | | 288 | 288 | 2.0 | 1.5 | 9.63 |
| **NCF2948X2V** | 269 | 293 | 248 | | 308 | 309 | 2.0 | 2.0 | 6.05 |
| **NCF2960V/C3** | 342 | 375 | 314 | | 406 | 406 | 3.0 | 3.0 | 31.0 |
| **NCF2960V/HC** | 342 | 375 | 314 | | 406 | 406 | 3.0 | 3.0 | 31.0 |
| **NCF3060V** | 355 | 405 | 316 | | 443 | 445 | 4.0 | 4.0 | 71.1 |
| **NCF1064X1V** | 389 | 439 | 336 | | 484 | 485 | 4.0 | 4.0 | 52.4 |
| **NCF2968V/C3** | 383 | 415 | 354 | | 445 | 446 | 3.0 | 3.0 | 34.3 |
| **NCF3068V/HC** | 402 | 462 | 360 | | 500 | 500 | 5.0 | 5.0 | 98.6 |
| **NCF1072X1V** | 414 | 465 | 380 | | 500 | 500 | 5.0 | 5.0 | 55.1 |
| **NCF2976V** | 430.3 | 466.5 | 396 | | 504 | 505 | 4.0 | 4.0 | 52.9 |
| **NCF2980V** | 450 | 496 | 416 | | 522 | 524 | 4.0 | 4.0 | 52.8 |
| **NCF2888V** | 476 | 504 | 456 | | 528 | 530 | 2.0 | 1.5 | 28.9 |
| **NCF2988X2V** | 502 | 545 | 455 | | 588 | 588 | 2.0 | 2.0 | 50.6 |
| **NCF1888X1V** | 486 | 525 | 458 | | 558 | 559 | 2.0 | 2.0 | 29.8 |
| **FL-NCF18/530V/CNL** | 573 | 612 | 543 | | 635 | 636 | 3.0 | 3.0 | 33.9 |
| **NCF29/530X2V** | 592 | 652 | 550 | | 690 | 690 | 5.0 | 5.0 | 77.8 |

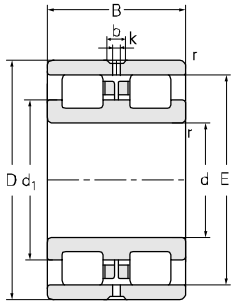


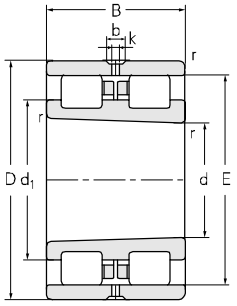
| Principal dimensions | | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1min}$ | $r_{min}$ | F、E | Cr | Cor | Grease | Oil |
| mm | | | | | | kN | | r/min | |
| **560** | 750 | 89 | 5 | 5 | 709 | 2200 | 4480 | 350 | 430 |
| **600** | 730 | 60 | 3 | 3 | 696 | 1050 | 2530 | 310 | 380 |
| | 730 | 60 | 3 | 3 | 696 | 1080 | 2620 | 310 | 380 |
| | 800 | 90 | 5 | 5 | 753 | 2310 | 4700 | 350 | 430 |
| **750** | 920 | 100 | 5 | 5 | 878 | 2720 | 6590 | 255 | 310 |
| **800** | 980 | 106 | 5 | 5 | 935.5 | 2860 | 7600 | 220 | 275 |
| **850** | 1030 | 106 | 5 | 5 | 985 | 2910 | 8100 | 200 | 245 |
| **900** | 1180 | 165 | 6 | 6 | 1120 | 5950 | 14500 | 170 | 220 |
| **950** | 1150 | 118 | 5 | 5 | 1101 | 3500 | 9600 | 170 | 220 |

| Designations | Other dimensions | | Contact surface and chamfer dimensions | | | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| | d1 | D1 | damin | dbmin | Damax | Dbmax | ramax | rbmax | |
| | mm | | mm | | | | | | kg |
| **NCF19/560X2V** | 622 | 689 | 582 | | 728 | 729 | 5.0 | 5.0 | 104 |
| **FL-NCF18/600V/CNL** | 644 | 687 | 614 | | 716 | 716 | 3.0 | 3.0 | 49.4 |
| **NCF18/600V/HCER** | 644 | 684 | 614 | | 716 | 716 | 3.0 | 3.0 | 49.7 |
| **NCF19/600V** | 668 | 726 | 624 | | 778 | 778 | 5.0 | 5.0 | 122 |
| **FL-NCF28/750V** | 812 | 862 | 774 | | 898 | 898 | 5.0 | 5.0 | 140 |
| **NCF28/800V** | 862 | 919 | 824 | | 958 | 958 | 5.0 | 5.0 | 169 |
| **NCF28/850V** | 910 | 968 | 874 | | 1006 | 1008 | 5.0 | 5.0 | 175 |
| **NCF29/900V** | 996 | 1093 | 934 | | 1146 | 1148 | 6.0 | 6.0 | 469 |
| **NCF28/950V** | 1013 | 1083 | 974 | | 1143 | 1144 | 5.0 | 5.0 | 238 |

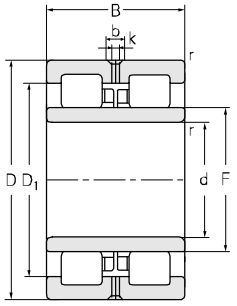
d 50~90 mm



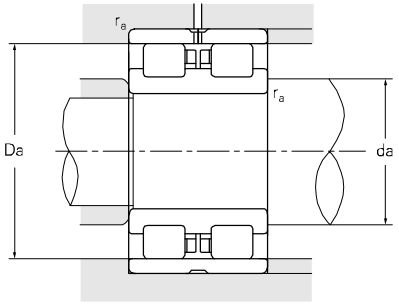

NN type




NN...K type

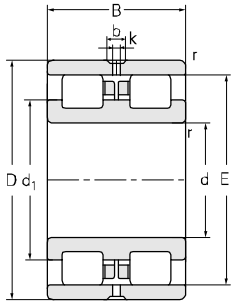



NNU type

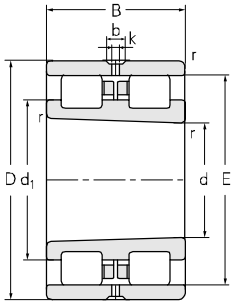



| Principal dimensions | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|
| d | D | B | r | E.F | Cr | Cor | Grease | Oil |
| mm | | | | | kN | | r/min | |
| **50** | 80 | 23 | 1 | 72.5 | 60.0 | 85 | 10000 | 13000 |
| | 80 | 23 | 1 | 72.5 | 60.0 | 84.5 | 10000 | 13000 |
| | 80 | 23 | 1 | 72.5 | 60.0 | 84.5 | 10000 | 13000 |
| **60** | 95 | 26 | 1.1 | 86.1 | 77.0 | 114 | 9000 | 10000 |
| **70** | 110 | 30 | 1.1 | 100 | 98.5 | 151 | 8000 | 9000 |
| | 110 | 30 | 1.1 | 100 | 98.5 | 151 | 8000 | 9000 |
| | 110 | 30 | 1.1 | 100 | 98.5 | 151 | 8000 | 9000 |
| | 110 | 30 | 1.1 | 100 | 98.5 | 151 | 8000 | 9000 |
| | 110 | 30 | 1.1 | 100 | 104 | 161 | 8000 | 9000 |
| **75** | 115 | 30 | 1.1 | 105 | 106 | 165 | 6700 | 8000 |
| | 115 | 30 | 1.1 | 105 | 106 | 165 | 6700 | 8000 |
| | 115 | 30 | 1.1 | 105 | 106 | 168 | 6700 | 8000 |
| **80** | 125 | 34 | 1.1 | 113 | 130 | 207 | 4500 | 5600 |
| | 125 | 34 | 1.1 | 113 | 130 | 207 | 4500 | 5600 |
| | 125 | 34 | 1.1 | 113 | 130 | 207 | 6300 | 7500 |
| | 125 | 34 | 1.1 | 113 | 130 | 207 | 6300 | 7500 |
| | 125 | 34 | 1.1 | 113 | 128 | 207 | 6300 | 7500 |
| | 125 | 34 | 1.1 | 113 | 130 | 207 | 6300 | 7500 |
| | 125 | 34 | 1.1 | 113 | 130 | 207 | 6300 | 7500 |
| | 125 | 34 | 1.1 | 113 | 130 | 207 | 6300 | 7500 |
| | 125 | 34 | 1.1 | 113 | 130 | 207 | 6300 | 7500 |
| **85** | 130 | 34 | 1.1 | 118 | 135 | 224 | 4300 | 5300 |
| | 130 | 34 | 1.1 | 118 | 135 | 224 | 4300 | 5300 |
| | 130 | 34 | 1.1 | 118 | 135 | 224 | 4300 | 5300 |
| **90** | 140 | 37 | 1.5 | 127 | 147 | 260 | 4000 | 5000 |
| | 140 | 37 | 1.5 | 127 | 147 | 260 | 5600 | 6700 |
| | 140 | 37 | 1.5 | 127 | 147 | 260 | 5600 | 6700 |
| | 140 | 37 | 1.5 | 127 | 147 | 260 | 5600 | 6700 |
| | 140 | 37 | 1.5 | 127 | 147 | 260 | 5600 | 6700 |
| | 140 | 37 | 1.5 | 127 | 147 | 260 | 5600 | 6700 |

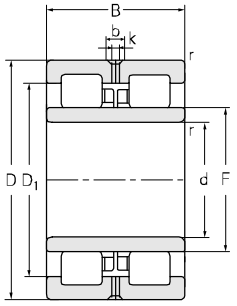
| Designations | Other dimensions | | | | Contact surface and chamfer dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|
| | d1 | D1 | b | k | damin | Damax | ramax | |
| | mm | | | | mm | | | kg |
| **NN3010K/YA8** | 61.3 | | | | 55 | 75 | 1 | 0.428 |
| **NN3010/YA8** | 61.3 | | | | 55 | 75 | 1 | 0.431 |
| **NN3010K/YA8W33** | 61.3 | | 4.5 | 3 | 55 | 75 | 1 | 0.415 |
| **NN3012K** | 73.3 | | | | 66 | 89 | 1 | 0.691 |
| **NN3014KTN1/P492** | 85.6 | | | | 80 | 103 | 1 | 1.04 |
| **NN3014K/W33** | 85.6 | | 6.5 | 3 | 80 | 103 | 1 | 1.06 |
| **NN3014KTN1/P491** | 85.6 | | | | 80 | 103 | 1 | 1.04 |
| **NN3014K** | 85.6 | | | | 80 | 103 | 1 | 1.06 |
| **NN3014** | 85.6 | | | | 80 | 103 | 1 | 1.06 |
| **NN3015K/YA8** | 90.6 | | | | 81.5 | 108.5 | 1 | 1.14 |
| **NN3015KTN1** | 90.6 | | | | 81.5 | 108.5 | 1 | 1.07 |
| **NN3015K/W33** | 90.6 | | 6.5 | 4 | 81.5 | 108.5 | 1 | 1.13 |
| **NN3016K/C9** | 97 | | | | 87 | 118 | 1 | 1.50 |
| **NN3016K** | 97 | | | | 87 | 118 | 1 | 1.50 |
| **NN3016K/YA8** | 97 | | | | 87 | 118 | 1 | 1.50 |
| **NN3016K/W33YA8** | 97 | | 6 | 2.5 | 87 | 118 | 1 | 1.50 |
| **NN3016K/C9W33** | 97 | | 6 | 2.5 | 87 | 118 | 1 | 1.50 |
| **NN3016KTN1/P592W33** | 97 | | 6 | 2.5 | 87 | 118 | 1 | 1.49 |
| **NN3016KTN1/P492W33** | 97 | | 6 | 2.5 | 87 | 118 | 1 | 1.48 |
| **NN3016KTN1/P491** | 97 | | | | 87 | 118 | 1 | 1.49 |
| **NN3016KTN1/P492** | 97 | | | | 87 | 118 | 1 | 1.49 |
| **NN3017K/YA8** | 102 | | | | 91.5 | 123.5 | 1 | 1.63 |
| **NN3017K/C9** | 102 | | | | 91.5 | 123.5 | 1 | 1.64 |
| **NN3017K/W33** | 102 | | 6.5 | 3 | 91.5 | 123.5 | 1 | 1.62 |
| **NN3018/YA8** | 109.4 | | | | 98 | 132 | 1.5 | 1.98 |
| **NN3018K/YA8** | 109.4 | | | | 98 | 132 | 1.5 | 1.95 |
| **NN3018K/C9** | 109.4 | | | | 106.5 | 133.5 | 1 | 1.95 |
| **NN3018K/YA8W33** | 109.4 | | 6.5 | 4 | 98 | 132 | 1.5 | 1.92 |
| **NN3018KTN1/P593W33** | 109.4 | | 6.5 | 4 | 98 | 132 | 1.5 | 1.41 |
| **NN3018KTN1/P493W33** | 109.4 | | 6.5 | 4 | 98 | 132 | 1.5 | 1.82 |



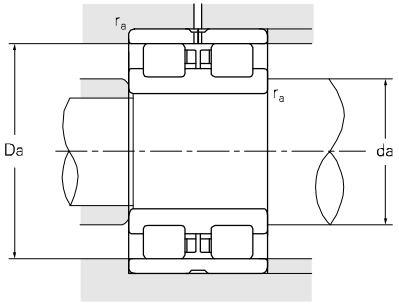

NN type




NN...K type



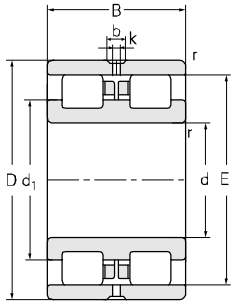

NNU type



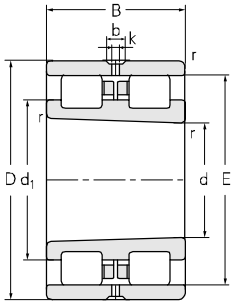

| Principal dimensions | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|
| d | D | B | r | E.F | Cr | Cor | Grease | Oil |
| mm | | | | | kN | | r/min | |
| **90** | 140 | 37 | 1.5 | 127 | 154 | 251 | 5600 | 6700 |
| | 140 | 37 | 1.5 | 127 | 154 | 251 | 5600 | 6700 |
| | 140 | 37 | 1.5 | 127 | 147 | 260 | 5600 | 6700 |
| | 140 | 37 | 1.5 | 127 | 147 | 260 | 5600 | 6700 |
| **95** | 145 | 37 | 1.5 | 132 | 135 | 224 | 3800 | 4300 |
| | 145 | 37 | 1.5 | 132 | 150 | 246 | 3800 | 4300 |
| | 145 | 37 | 1.5 | 132 | 150 | 246 | 3800 | 4300 |
| **100** | 140 | 40 | 1.1 | 113 | 133 | 267 | 5200 | 6200 |
| | 140 | 40 | 1.1 | 113 | 133 | 267 | 5200 | 6200 |
| | 150 | 37 | 1.5 | 137 | 168 | 292 | 5300 | 6300 |
| | 150 | 37 | 1.5 | 137 | 168 | 292 | 5300 | 6300 |
| | 150 | 37 | 1.5 | 137 | 168 | 292 | 3600 | 4500 |
| | 150 | 37 | 1.5 | 137 | 168 | 292 | 3600 | 4500 |
| | 150 | 37 | 1.5 | 137 | 168 | 292 | 3600 | 4500 |
| | 150 | 37 | 1.5 | 137 | 168 | 292 | 3600 | 4500 |
| | 150 | 37 | 1.5 | 137 | 168 | 292 | 3600 | 4500 |
| | 150 | 37 | 1.5 | 137 | 168 | 292 | 3600 | 4500 |
| | 150 | 37 | 1.5 | 137 | 168 | 292 | 5300 | 6300 |
| | 150 | 37 | 1.5 | 137 | 168 | 292 | 5300 | 6300 |
| | 150 | 37 | 1.5 | 137 | 168 | 292 | 5300 | 6300 |
| | 150 | 37 | 1.5 | 137 | 168 | 270 | 5300 | 6300 |
| | 150 | 50 | 1.5 | 115 | 168 | 292 | 3600 | 4500 |
| **105** | 145 | 40 | 1.1 | 118 | 141 | 292 | 4000 | 4800 |
| | 160 | 41 | 2.0 | 146 | 192 | 350 | 4000 | 4800 |
| | 160 | 41 | 2.0 | 146 | 192 | 350 | 4000 | 4800 |
| | 160 | 41 | 2.0 | 146 | 192 | 350 | 4000 | 4800 |
| | 160 | 41 | 2.0 | 146 | 211 | 350 | 4000 | 4800 |
| **110** | 150 | 40 | 1.1 | 123 | 137 | 284 | 5000 | 6000 |
| | 170 | 45 | 2.0 | 155 | 220 | 405 | 5000 | 6000 |
| | 170 | 45 | 2.0 | 155 | 220 | 405 | 3200 | 4000 |
| | 170 | 45 | 2.0 | 155 | 220 | 405 | 3200 | 4000 |
| | 170 | 45 | 2.0 | 155 | 220 | 405 | 3200 | 4000 |

| Designations | Other dimensions | | | | Contact surface and chamfer dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|
| | d1 | D1 | b | k | damin | Damax | ramax | |
| | mm | | | | mm | | | kg |
| **NN3018KTN1/P491W33** | 109.4 | | 6.5 | 4 | 98 | 132 | 1.5 | 1.82 |
| **NN3018KTN1/P493** | 109.4 | | | | 98 | 132 | 1.5 | 1.82 |
| **NN3018K/C91W33** | 109.4 | | 6.5 | 4 | 98 | 132 | 1.5 | 1.92 |
| **NN3018K/SPC91W33** | 109.4 | | 6.5 | 4 | 98 | 132 | 1.5 | 1.92 |
| **NN3019K** | 114.4 | | | | 103 | 137 | 1.5 | 2.26 |
| **NN3019KTN1/P491** | 114.4 | | | | 103 | 137 | 1.5 | 2.17 |
| **NN3019K/P4W33** | 114.4 | | 6.5 | 3 | 103 | 137 | 1.5 | 2.24 |
| **NNU4920/W33** | | 126 | 5.5 | 3 | 108 | 132 | 1.5 | 1.95 |
| **NNU4920K/W33** | | 126 | 5.5 | 3 | 108 | 132 | 1.5 | |
| **NN3020K/YA8** | 119.4 | | | | 108 | 142 | 1.5 | 2.20 |
| **NN3020KTN1** | 119.4 | | | | 108 | 142 | 1.5 | 2.09 |
| **NN3020** | 119.4 | | | | 108 | 142 | 1.5 | 2.25 |
| **NN3020K/W33** | 119.4 | | 6 | 2.5 | 108 | 142 | 1.5 | 2.17 |
| **NN3020K/C9YA8** | 119.4 | | | | 108 | 142 | 1.5 | 2.18 |
| **NN3020K/YA8W33** | 119.4 | | 6 | 2.5 | 108 | 142 | 1.5 | 2.17 |
| **NN3020K/C91W33** | 119.4 | | 6 | 2.5 | 108 | 142 | 1.5 | 2.17 |
| **NN3020K/C91** | 119.4 | | | | 108 | 142 | 1.5 | 2.20 |
| **NN3020K/C1LW33** | 119.4 | | 6 | 2.5 | 108 | 142 | 1.5 | 2.17 |
| **NN3020K/C9W33** | 120 | | 6 | 4 | 108 | 142 | 1.5 | 2.17 |
| **NN3020K/UPC1W33** | 120 | | 6 | 4 | 108 | 142 | 1.5 | 2.17 |
| **NN3020KTN1/P493YA8W33** | 119.4 | | 6 | 4 | 108 | 142 | 1.5 | 2.05 |
| **NNU4020/YA8** | | 133 | | | 108 | 142 | 1.5 | 3.11 |
| **NNU4921/P49** | | 130.8 | | | 112 | 138 | 1 | 2.01 |
| **NN3021** | 125.2 | | | | 116.5 | 154 | 1 | 2.94 |
| **NN3021K** | 125.2 | | | | 116.5 | 154 | 1 | 2.93 |
| **NN3021K/C9** | 125.2 | | | | 116.6 | 154 | 1 | 2.93 |
| **NN3021K/W33** | 125.2 | | 12 | 4 | 116.6 | 154 | 1 | 2.93 |
| **NNU4922K/C91W33YA8** | | 135.2 | 8 | 3 | 116.5 | 143 | | 2.11 |
| **NN3022K** | 132.6 | | | | 116.5 | 163 | 1 | 3.73 |
| **NN3022/YA8** | 132.6 | | | | 116.5 | 163 | 1 | 3.74 |
| **NN3022KL/P49W33** | 132.6 | | 12 | 4 | 116.5 | 163 | 1 | 3.54 |
| **NN3022K/P49W33** | 132.6 | | 12 | 4 | 116.5 | 163 | 1 | 3.71 |

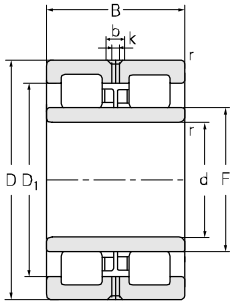
d 110~140 mm



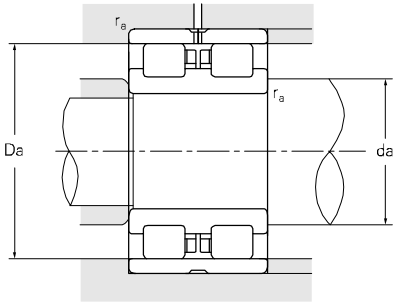
NN type



NN...K type

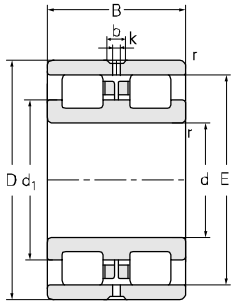


NNU type

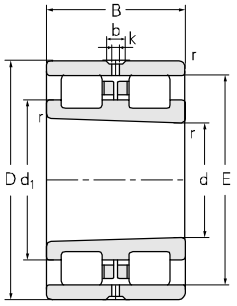



| Principal dimensions | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|
| d | D | B | r | E.F | Cr | Cor | Grease | Oil |
| mm | | | | | kN | | r/min | |
| **110** | 170 | 45 | 2.0 | 155 | 220 | 405 | 3200 | 4000 |
| | 170 | 45 | 2.0 | 155 | 220 | 405 | 3200 | 4000 |
| | 170 | 45 | 2.0 | 155 | 220 | 405 | 3200 | 4000 |
| | 170 | 45 | 2.0 | 155 | 220 | 405 | 3200 | 4000 |
| | 225 | 150 | 3.5 | 138 | 950 | 1460 | 3200 | 4000 |
| **117.61** | 288.925 | 134 | 2.1 | 208 | 1240 | 2390 | 2800 | 3400 |
| **120** | 180 | 46 | 2.0 | 165 | 243 | 445 | 4300 | 5000 |
| | 180 | 46 | 2.0 | 165 | 243 | 445 | 4300 | 5000 |
| | 180 | 46 | 2.0 | 165 | 243 | 445 | 3000 | 3800 |
| | 180 | 46 | 2.0 | 165 | 243 | 445 | 3000 | 3800 |
| | 180 | 46 | 2.0 | 165 | 243 | 445 | 3000 | 3800 |
| | 180 | 46 | 2.0 | 160 | 243 | 445 | 3000 | 3800 |
| | 180 | 46 | 2.0 | 165 | 253 | 438 | 3000 | 3800 |
| | 180 | 46 | 2.0 | 165 | 253 | 438 | 3000 | 3800 |
| **130** | 180 | 50 | 1.5 | 146 | 250 | 520 | 2900 | 3700 |
| | 200 | 52 | 2.0 | 182 | 305 | 530 | 2800 | 3600 |
| | 200 | 52 | 2.0 | 182 | 305 | 530 | 2800 | 3600 |
| | 200 | 52 | 2.0 | 182 | 305 | 530 | 2800 | 3600 |
| | 200 | 52 | 2.0 | 182 | 305 | 530 | 2800 | 3600 |
| | 200 | 52 | 2.0 | 182 | 305 | 530 | 2800 | 3600 |
| | 200 | 52 | 2.0 | 182 | 305 | 530 | 2800 | 3600 |
| | 200 | 52 | 2.0 | 182 | 305 | 530 | 2800 | 3600 |
| | 200 | 52 | 2.0 | 193.9 | 305 | 530 | 2800 | 3600 |
| | 200 | 52 | 2.0 | 182 | 305 | 530 | 2800 | 3600 |
| | 200 | 52 | 2.0 | 182 | 305 | 530 | 2800 | 3600 |
| | 200 | 52 | 2.0 | 182 | 305 | 530 | 2800 | 3600 |
| | 200 | 52 | 2.0 | 182 | 305 | 530 | 2800 | 3600 |
| | 200 | 52 | 2.0 | 182 | 305 | 530 | 2800 | 3600 |
| | 300 | 172.644 | 3.0 | 159.5 | 1360 | 2870 | 1900 | 2400 |
| **139.7** | 203.2 | 146.558 | 2.0 | 155.5 | 830 | 1900 | 1900 | 2400 |
| **140** | 190 | 50 | 1.5 | 156 | 199 | 405 | 2800 | 3400 |

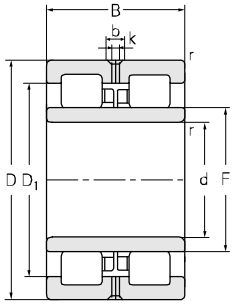
| Designations | Other dimensions | | | | Contact surface and chamfer dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|
| | d1 | D1 | b | k | damin | Damax | ramax | |
| | mm | | | | mm | | | kg |
| **NN3022K/SPC91W33** | 132.6 | | 12 | 4 | 116.5 | 163 | 1 | 3.71 |
| **NN3022** | 132.6 | | | | 116.5 | 163 | 1 | 3.74 |
| **NN3022KTN1/P491** | 132.6 | | | | 116.5 | 163 | 1 | 3.54 |
| **NN3022KTN1/P49** | 132.6 | | | | 116.5 | 163 | 1 | 3.54 |
| **NNU622Q1/HCYA7** | | 186 | | | 120 | 215 | 3.5 | 28.0 |
| **NNU6/177X4M/W33X** | | 252.8 | 11.1 | 6 | 188 | 277 | 2 | 35.1 |
| **NN3024K** | 142.6 | | | | 130 | 171 | 2 | 3.85 |
| **NN3024K/W33** | 142.6 | | 7.5 | 4 | 130 | 171 | 2 | 3.65 |
| **NN3024K/C9** | 142.6 | | | | 130 | 171 | 2 | 3.85 |
| **NN3024K/C1LW33** | 142.6 | | 7.5 | 4 | 130 | 171 | 2 | 3.65 |
| **NN3024K/C91W33** | 142.6 | | 7.5 | 4 | 130 | 171 | 2 | 3.65 |
| **NN3024** | 142.6 | | | | 130 | 171 | 2 | 3.86 |
| **NN3024KTN1/P492W33YA5** | 143 | | 7.5 | 4 | 130 | 171 | 2 | 3.89 |
| **NN3024KTN1/P491W33YA5** | 143 | | 7.5 | 4 | 130 | 171 | 2 | 3.89 |
| **NNU4926/W33YAD** | | 163.5 | 5.5 | 3 | 139 | 171 | 2 | 3.95 |
| **NN3026** | 156.4 | | | | 139 | 191 | 2 | 5.54 |
| **NN3026K/C9W33** | 156.4 | | 9.6 | 3 | 139 | 191 | 2 | 5.34 |
| **NN3026K/C91** | 156.4 | | | | 139 | 191 | 2 | 5.34 |
| **NN3026K** | 156.4 | | | | 139 | 191 | 2 | 5.34 |
| **NN3026K/C93** | 152.6 | | | | 139 | 191 | 2 | 5.34 |
| **NN3026K/P494** | 152.6 | | | | 139 | 191 | 2 | 5.34 |
| **NN3026K/W33** | 152.6 | | 9.6 | 5 | 139 | 191 | 2 | 5.35 |
| **NN3026K/C92W33** | 152.6 | | 9.6 | 5 | 139 | 191 | 2 | 5.35 |
| **NN3026/W33** | 156.4 | | 9.6 | 3 | 139 | 191 | 2 | 5.53 |
| **NN3026KTN1/P492** | 156.4 | | | | 139 | 191 | 2 | 5.32 |
| **NN3026KTN1/P49W33** | 156.4 | | 9.6 | 3 | 139 | 191 | 2 | 5.32 |
| **NN3026K/P492** | 156.4 | | | | 139 | 191 | 2 | 5.34 |
| **NN3026K/P492W33** | 156.4 | | 9.6 | 3 | 139 | 191 | 2 | 5.35 |
| **NNFP3326X3** | 175 | | | 9 | 139 | 291 | 2 | 74.7 |
| **NNU6/139.7Q1/C9W33YA2** | | 182 | 8 | 4 | 150 | 200 | 2 | 16.4 |
| **NNJ4928** | | 172 | | | 149 | 182 | 2 | 4.19 |



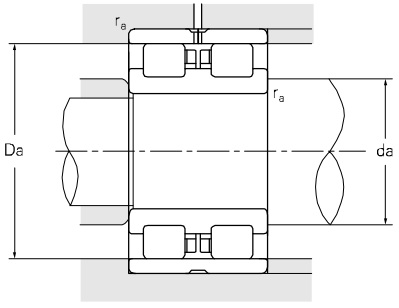
NN type



NN...K type



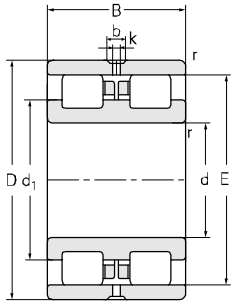
NNU type



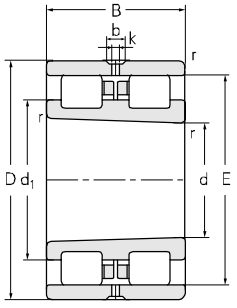

| Principal dimensions | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|
| d | D | B | r | E.F | Cr | Cor | Grease | Oil |
| mm | | | | | kN | | r/min | |
| **140** | 210 | 53 | 2.0 | 160 | 320 | 575 | 2600 | 3400 |
| | 210 | 53 | 2.0 | 192 | 320 | 575 | 3800 | 4500 |
| | 210 | 53 | 2.0 | 192 | 320 | 575 | 2600 | 3400 |
| | 210 | 53 | 2.0 | 192 | 320 | 575 | 2600 | 3400 |
| | 210 | 53 | 2.0 | 192 | 320 | 575 | 2600 | 3400 |
| | 210 | 53 | 2.0 | 192 | 320 | 575 | 2600 | 3400 |
| | 210 | 53 | 2.0 | 192 | 320 | 575 | 2600 | 3400 |
| | 210 | 53 | 2.0 | 192 | 320 | 575 | 2600 | 3400 |
| **150** | 225 | 56 | 2.1 | 206 | 363 | 650 | 3400 | 4000 |
| | 225 | 56 | 2.1 | 206 | 363 | 650 | 3400 | 4000 |
| | 225 | 56 | 2.1 | 206 | 363 | 650 | 2400 | 3200 |
| | 225 | 56 | 2.1 | 206 | 363 | 650 | 2400 | 3200 |
| | 225 | 56 | 2.1 | 206 | 363 | 650 | 2400 | 3200 |
| | 225 | 56 | 2.1 | 206 | 363 | 650 | 2400 | 3200 |
| | 225 | 56 | 2.1 | 206 | 363 | 650 | 2400 | 3200 |
| **158.75** | 231.775 | 161.925 | 2.1 | 176.5 | 1020 | 2390 | 2200 | 3000 |
| **160** | 220 | 60 | 2 | 178.5 | 345 | 790 | 3200 | 3800 |
| | 240 | 60 | 2.1 | 219 | 375 | 675 | 3200 | 3800 |
| | 240 | 60 | 2.1 | 219 | 380 | 675 | 3200 | 3800 |
| | 240 | 60 | 2.1 | 219 | 380 | 675 | 3200 | 3800 |
| | 240 | 60 | 2.1 | 219 | 380 | 335 | 3200 | 3800 |
| | 240 | 60 | 2.1 | 219 | 380 | 675 | 2200 | 3000 |
| | 240 | 60 | 2.1 | 219 | 380 | 675 | 2200 | 3000 |
| | 240 | 60 | 2.1 | 219 | 380 | 675 | 2200 | 3000 |
| | 240 | 60 | 2.1 | 219 | 380 | 675 | 2200 | 3000 |
| | 240 | 60 | 2.1 | 219 | 380 | 675 | 2200 | 3000 |
| | 265 | 120 | 3.0 | 190 | 1060 | 1990 | 1800 | 2200 |
| **170** | 260 | 67 | 2.1 | 236 | 470 | 860 | 2200 | 3000 |
| | 260 | 67 | 2.1 | 236 | 470 | 860 | 2200 | 3000 |
| | 260 | 67 | 2.1 | 236 | 470 | 860 | 2200 | 3000 |
| | 260 | 67 | 2.1 | 236 | 470 | 860 | 2200 | 3000 |
| | 306 | 278 | | 276 | 1650 | 2690 | 1700 | 2200 |

| Designations | Other dimensions | | | | Contact surface and chamfer dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|
| | d1 | D1 | b | k | damin | Damax | ramax | |
| | mm | | | | mm | | | kg |
| **NNU3028/C9W33** | | 185.6 | 9.6 | 5 | 149 | 201 | 2 | 6.18 |
| **NN3028K** | 166.4 | | | | 149 | 201 | 2 | 6.05 |
| **NN3028K/C9** | 166.4 | | | | 149 | 201 | 2 | 6.05 |
| **NN3028KTN1** | 166.4 | | | | 149 | 201 | 2 | 5.76 |
| **NN3028** | 166.4 | | | | 149 | 201 | 2 | 6.05 |
| **NN3028K/C91W33** | 166.4 | | 9.6 | 5 | 149 | 201 | 2 | 6.00 |
| **NN3028K/W33** | 166.4 | | 9.6 | 5 | 149 | 201 | 2 | 6.00 |
| **NN3028K/SPC1W33** | 166.4 | | 9.6 | 5 | 149 | 201 | 2 | 6.00 |
| **NN3030K** | 178.8 | | | | 161 | 214 | 2 | 7.70 |
| **NN3030/YA8** | 178.8 | | | | 161 | 214 | 2 | 7.75 |
| **NN3030** | 178.8 | | | | 161 | 214 | 2 | 7.75 |
| **NN3030/C9** | 178.8 | | | | 161 | 214 | 2 | 7.75 |
| **NN3030/C9YA8** | 178.8 | | | | 161 | 214 | 2 | 7.75 |
| **NN3030K/C91W33** | 178.8 | | 8.5 | 4.5 | 161 | 214 | 2 | 7.70 |
| **NN3030K/W33** | 178.8 | | 8.5 | 4.5 | 161 | 214 | 2 | 7.70 |
| **NNU6/158X4Q1/W33X** | | 205.5 | 8.3 | 4 | 170 | 220 | 2 | 23.9 |
| **NNU4932K/C9W33** | | 197.7 | 6.5 | 3 | 171 | 210 | 1 | 6.73 |
| **NN3032K/C91W33** | 190.2 | | 8.5 | 4.5 | 171 | 229 | 2 | 8.38 |
| **NN3032K** | 190.2 | | | | 171 | 229 | 2 | 8.39 |
| **NN3032K/P494** | 190.2 | | | | 171 | 229 | 2 | 8.39 |
| **NN3032KTN1** | 190.2 | | | | 171 | 229 | 2 | 7.86 |
| **NN3032K/W33** | 190.2 | | 8.5 | 4.5 | 171 | 229 | 2 | 8.38 |
| **NN3032K/SPC1W33** | 190.2 | | 8.5 | 4.5 | 171 | 229 | 2 | 8.38 |
| **NN3032K/YB2** | 190.2 | | | | 171 | 229 | 2 | 8.39 |
| **NN3032K/C9W33YB2** | 190.2 | | 8.5 | 4.5 | 171 | 229 | 2 | 8.38 |
| **NN3032** | 190.2 | | | | 171 | 229 | 2 | 8.38 |
| **NNU4132X3/HCYA7W33X** | | 242 | 6.5 | 3.2 | 171 | 232 | 2 | 29 |
| **NN3034K** | 204 | | | | 181 | 249 | 2 | 12.9 |
| **NN3034/YA8** | 204 | | | | 181 | 249 | 2 | 13.3 |
| **NN3034K/C9** | 204 | | | | 181 | 249 | 2 | 12.9 |
| **NN3034K/W33** | 204 | | 9.6 | 5 | 181 | 249 | 2 | 12.9 |
| **1-2029** | 215 | | | | 181 | 287 | | 67.2 |

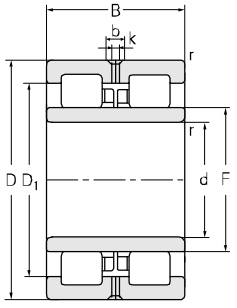
d 177.8~220 mm



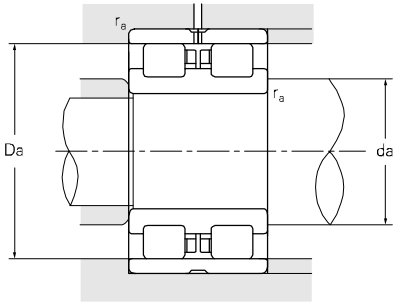

NN type




NN...K type



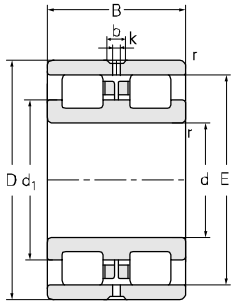

NNU type



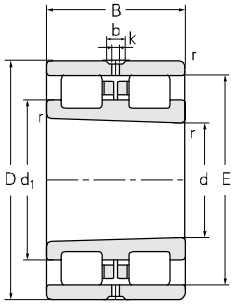

| Principal dimensions | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|
| d | D | B | r | E.F | Cr | Cor | Grease | Oil |
| mm | | | | | kN | | r/min | |
| **177.8** | 257.175 | 196.85 | 2 | 197.5 | 1250 | 3050 | 1800 | 2500 |
| **180** | 250 | 69 | 2 | 201 | 382 | 703 | 2000 | 2800 |
| | 260 | 88 | 2.0 | 198 | 578 | 1045 | 2000 | 2600 |
| | 280 | 74 | 2.1 | 255 | 605 | 1090 | 2800 | 3400 |
| | 280 | 74 | 2.1 | 255 | 605 | 1090 | 2800 | 3400 |
| | 280 | 74 | 2.1 | 255 | 605 | 1090 | 2000 | 2800 |
| | 280 | 219 | 3.5 | 205 | 1580 | 3490 | 2000 | 2800 |
| **190** | 260 | 69 | 3.0 | 212 | 616 | 1250 | 1900 | 2600 |
| | 260 | 69 | 2.0 | 212 | 462 | 905 | 1900 | 2600 |
| | 260 | 69 | 2 | 212 | 500 | 1100 | 1900 | 2600 |
| | 260 | 69 | 2 | 212 | 420 | 905 | 1900 | 2600 |
| | 260 | 69 | 2 | 212 | 420 | 905 | 1900 | 2600 |
| | 290 | 75 | 2.1 | 265 | 622 | 1140 | 2600 | 3200 |
| | 290 | 75 | 2.1 | 265 | 622 | 1140 | 1900 | 2600 |
| | 290 | 75 | 2.1 | 265 | 622 | 1140 | 1900 | 2600 |
| | 290 | 180 | 2.1 | 219 | 1390 | 3200 | 1900 | 2600 |
| **200** | 280 | 80 | 2.1 | 225 | 484 | 1040 | 2500 | 3200 |
| | 310 | 82 | 2.1 | 282 | 675 | 1340 | 2400 | 3000 |
| | 310 | 82 | 2.1 | 282 | 675 | 1340 | 1900 | 2400 |
| | 310 | 82 | 2.1 | 282 | 675 | 1340 | 1900 | 2400 |
| | 310 | 82 | 2.1 | 282 | 740 | 1340 | 1900 | 2400 |
| | 310 | 109 | 2.1 | 227 | 1030 | 1920 | 1900 | 2400 |
| **206.375** | 285.75 | 222.25 | 4.0 | 226 | 1460 | 4500 | 1800 | 2200 |
| | 285.75 | 222.25 | 5.0 | 226 | 1460 | 4500 | 1800 | 2200 |
| **220** | 300 | 80 | 2.1 | 245 | 530 | 1200 | 1800 | 2200 |
| | 300 | 80 | 2.1 | 245 | 530 | 1200 | 1800 | 2200 |
| | 300 | 80 | 2.1 | 245 | 530 | 1200 | 1800 | 2200 |
| | 300 | 80 | 2.1 | 279 | 530 | 1200 | 1700 | 2000 |
| | 300 | 95 | 2.1 | 245 | 535 | 1200 | 1800 | 2200 |
| | 310 | 110 | 2.1 | 288.3 | 820 | 1790 | 1800 | 2200 |
| | 340 | 90 | 3.0 | 310 | 875 | 1610 | 1800 | 2200 |

| Designations | Other dimensions | | | | Contact surface and chamfer dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|
| | d1 | D1 | b | k | damin | Damax | ramax | |
| | mm | | | | mm | | | kg |
| **NNU6/177X4Q1/C9-1-NJB** | | 230.5 | 15.88 | 9.5 | 188 | 247 | 2 | 33.9 |
| **NNU4936K** | | 228 | | | 191 | 239 | 2 | 9.80 |
| **NND5936X3/C4YB4** | | 234.8 | | | 191 | 250 | 2 | 14.8 |
| **NN3036K** | 218.2 | | | | 191 | 269 | 2 | 16.9 |
| **NN3036K/W33** | 218.2 | | 12.2 | 6 | 191 | 269 | 2 | 16.9 |
| **NN3036** | 218.2 | | | | | | 2 | 16.9 |
| **NNU6036X2/C91-LS** | | 247.5 | 15 | 8 | 191 | 269 | 3.5 | 51.4 |
| **NNU4938B-W33** | | 257 | 9.5 | 5 | 201 | 249 | 2 | 11 |
| **NNU4938/C4YA4** | | 236 | | | 201 | 249 | 2 | 11.0 |
| **NNU4938/W33A** | | 237.6 | 9.5 | 6 | 201 | 249 | 2 | 11.0 |
| **NNU4938K/W33** | | 236 | 9.5 | 5 | 201 | 249 | 2 | 10.4 |
| **NNU4938K/P491** | | 236 | | | 201 | 249 | 2 | 10.4 |
| **NN3038K** | 228.2 | | | | 201 | 279 | 2 | 17.9 |
| **NN3038K/W33** | 228.2 | | 15 | 6 | 201 | 279 | 2 | 17.1 |
| **NN3038** | 228.2 | | | | 201 | 279 | 2 | 18.0 |
| **NNU6038** | | 236 | | | 201 | 279 | 2 | 43.6 |
| **NNU4940K/W33** | | 253 | 12.2 | 6 | 211 | 269 | 2 | 14.8 |
| **NN3040K** | 242 | | | | 211 | 299 | 2 | 22.0 |
| **NN3040** | 242 | | | | 211 | 299 | 2 | 22.1 |
| **NN3040K/C9** | 242 | | | | 211 | 299 | 2 | 22 |
| **NN3040K/W33** | 242 | | 12.2 | 5 | 211 | 299 | 2 | 21.8 |
| **NNU4040/C9W33X** | | 272 | 11.1 | 6 | 211 | 299 | 2 | 29.9 |
| **NNU6/206X4M/C9** | | 259 | 12.7 | 8 | 218 | 273 | 3.0 | 43.9 |
| **NNU6/206X4Q1/C9-NJB** | | 259 | 15.88 | 9.5 | 218 | 273 | 4.0 | 43.9 |
| **NNU4944/P53W33** | | 273 | 12.2 | 6 | 231 | 289 | 2 | 16.6 |
| **NNU4944K/SPC1W33** | | 273 | 12.2 | 6 | 231 | 289 | 2 | 16.6 |
| **NNU4944K** | | 273 | | | 231 | 289 | 2 | 16.0 |
| **NN4944K/W33** | 251 | | 12.2 | 6 | 231 | 289 | 2 | 16.0 |
| **NNU4944WB/W33** | | 273 | 12.2 | 6 | 231 | 289 | | 17.7 |
| **NN3044X3/C9W33T** | 254.7 | | 12 | 6 | 231 | 309 | 2 | 25.7 |
| **NN3044K** | 265.2 | | | | 233 | 327 | 2.5 | 30.1 |

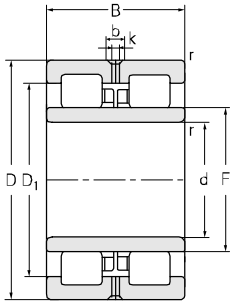
d 220~280 mm



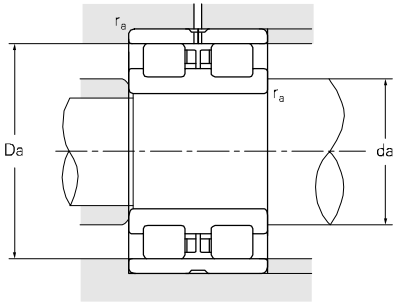

NN type




NN...K type



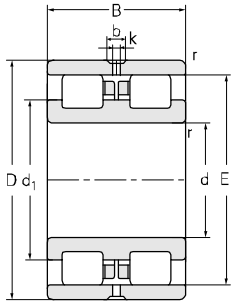

NNU type



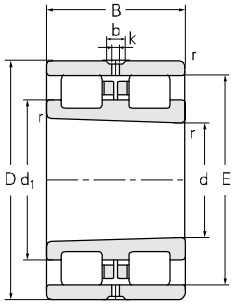

| Principal dimensions | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|
| d | D | B | r | E.F | Cr | Cor | Grease | Oil |
| mm | | | | | kN | | r/min | |
| **220** | 340 | 90 | 3.0 | 310 | 875 | 1610 | 1800 | 2200 |
| | 340 | 90 | 3.0 | 310 | 875 | 1610 | 1800 | 2200 |
| | 340 | 90 | 3.0 | 310 | 875 | 1610 | 1800 | 2200 |
| | 370 | 150 | 4.0 | 258 | 1660 | 3030 | 1800 | 2200 |
| **240** | 320 | 80 | 2.1 | 265 | 625 | 1470 | 1700 | 2000 |
| | 320 | 80 | 2.1 | 265 | 625 | 1470 | 1700 | 2000 |
| | 320 | 80 | 2.1 | 265 | 625 | 1470 | 1700 | 2000 |
| | 320 | 80 | 2.1 | 265 | 625 | 1470 | 1700 | 2000 |
| | 320 | 80 | 2.1 | 265 | 630 | 1470 | 1700 | 2000 |
| | 320 | 80 | 2.1 | 301 | 630 | 1470 | 1700 | 2000 |
| | 360 | 92 | 3.0 | 330 | 885 | 1690 | 2000 | 2600 |
| | 360 | 92 | 3.0 | 330 | 885 | 1690 | 1700 | 2000 |
| | 360 | 92 | 3.0 | 330 | 885 | 1690 | 1700 | 2000 |
| | 360 | 92 | 3.0 | 330 | 885 | 1690 | 1700 | 2000 |
| **260** | 360 | 80 | 2.1 | 292 | 666 | 1500 | 1600 | 1900 |
| | 360 | 100 | 2.1 | 292 | 760 | 2030 | 1400 | 1700 |
| | 360 | 100 | 2.1 | 292 | 760 | 2030 | 1400 | 1700 |
| | 360 | 100 | 2.1 | 292 | 790 | 1850 | 1400 | 1700 |
| | 360 | 100 | 2.1 | 292 | 835 | 2030 | 1400 | 1700 |
| | 360 | 100 | 2.1 | 292 | 835 | 2030 | 1400 | 1700 |
| | 360 | 100 | 2.1 | 292 | 760 | 2030 | 1400 | 1700 |
| | 400 | 104 | 2.1 | 364 | 1010 | 2120 | 1900 | 2600 |
| | 400 | 104 | 2.1 | 364 | 1010 | 2120 | 1900 | 2600 |
| | 400 | 104 | 2.1 | 364 | 1010 | 2120 | 1900 | 2600 |
| | 400 | 104 | 4 | 364 | 1140 | 2200 | 1900 | 2600 |
| | 400 | 104 | 4.0 | 364 | 1110 | 2120 | 1900 | 2600 |
| | 400 | 104 | 4.0 | 364 | 1110 | 2120 | 1900 | 2600 |
| | 400 | 110 | 4.0 | 364 | 1110 | 2120 | 1900 | 2600 |
| | 400 | 140 | 4 | 295 | 1570 | 3000 | 1150 | 1500 |
| | 440 | 180 | 4.0 | 306 | 2240 | 4500 | 1000 | 1300 |
| **280** | 380 | 100 | 2.1 | 309 | 870 | 2200 | 1300 | 1600 |
| | 380 | 100 | 2.1 | 309 | 870 | 2200 | 1300 | 1600 |

| Designations | Other dimensions | | | | Contact surface and chamfer dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|
| | d1 | D1 | b | k | damin | Damax | ramax | |
| | mm | | | | mm | | | kg |
| **NN3044K/W33** | 265.2 | | 15 | 6 | 233 | 327 | 2.5 | 30.0 |
| **NN3044** | 265.2 | | | | 233 | 327 | 2.5 | 31.0 |
| **NN3044/C1W33** | 265.2 | | 15 | 6 | 233 | 327 | 2.5 | 30.9 |
| **NNU4144/W33** | 321 | | 13.9 | 6 | 236 | 354 | 3.0 | 64.3 |
| **NNU4948/P63W33** | | 295 | 12.2 | 6 | 251 | 309 | 2 | 17.8 |
| **NNU4948/P53W33** | | 295 | 12.2 | 6 | 251 | 309 | 2 | 17.8 |
| **NNU4948/C3W33** | | 295 | 12.2 | 6 | 251 | 309 | 2 | 17.8 |
| **NNU4948K/SPC1W33** | | 295 | 12.2 | 6 | 251 | 309 | 2 | 17.7 |
| **NN4948K/W33** | 271.4 | | 12.2 | 6 | 251 | 309 | 2 | 17.2 |
| **NN4948/W33** | 271.4 | | 12.2 | 6 | 251 | 309 | 2 | 18.0 |
| **NN3048K** | 285.2 | | | | 253 | 347 | 2.5 | 32.7 |
| **NN3048** | 285.2 | | | | 253 | 347 | 2.5 | 31.6 |
| **NN3048K/P51W33** | 285.2 | | 15 | 6 | 253 | 347 | 2.5 | 32.6 |
| **NN3048K/SPC1W33** | 285.2 | | 15 | 6 | 253 | 347 | 2.5 | 32.6 |
| **NNU4952X2/C9W33** | | 325 | 9.5 | 5 | 273 | 347 | 2.5 | 28.2 |
| **NNU4952/W33YA4** | | 325 | 15 | 6 | 273 | 347 | 2.6 | 31.7 |
| **NNU4952/W33** | | 325 | 15 | 6 | 273 | 347 | 2.7 | 31.7 |
| **NNU4952K/P4-HS** | | 324 | | | 273 | 347 | 2 | 30.8 |
| **NNU4952K/P4** | | 325 | | | 273 | 347 | 2 | 30.4 |
| **NNU4952K/SPC1W33** | | 325 | 15 | 6 | 273 | 347 | 2 | 30.4 |
| **NNU4952K/W33** | 326 | | 15 | 6 | 273 | 347 | 2 | 30.4 |
| **NN3052/SPW33** | 312.8 | | 15 | 6 | 276 | 384 | 2 | 49.2 |
| **NN3052K/SPW33** | 312.8 | | 15 | 6 | 276 | 384 | 2 | 49.6 |
| **NN3052K/P49W33YB5** | 312.8 | | 15 | 6 | 276 | 384 | 2 | 49.2 |
| **NN3052** | 312.8 | | | | 276 | 384 | 2 | 49.8 |
| **NN3052K/P51W33** | 312.8 | | 15 | 6 | 276 | 384 | 3 | 49.2 |
| **NN3052K** | 312.8 | | | | 276 | 384 | 3 | 49.3 |
| **NN3052WCK/W33XYA8** | 312.8 | | 18 | 10 | 276 | 384 | 3 | 49.6 |
| **NNU4052/W33** | | 358 | 13.9 | 7.5 | 276 | 384 | 3 | 63.4 |
| **NNU4152** | | 387 | | | 276 | 424 | 3 | 111 |
| **NNU4956K/P52W33** | | 347 | 15 | 6 | 291 | 369 | 2 | 27.5 |
| **NNU4956** | 326 | 347 | | | 291 | 369 | 2 | 29 |

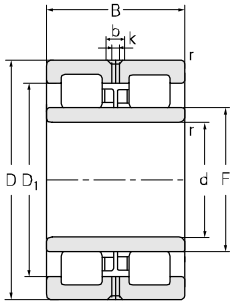
d 280~360 mm



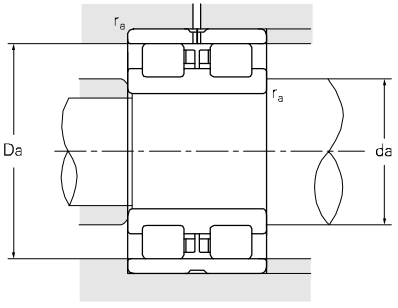
NN type



NN...K type



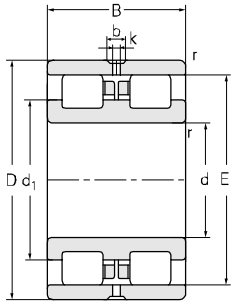
NNU type



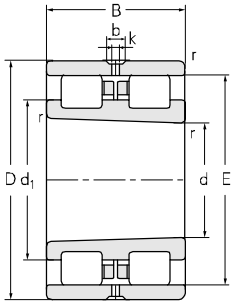

| Principal dimensions | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|
| d | D | B | r | E.F | Cr | Cor | Grease | Oil |
| mm | | | | | kN | | r/min | |
| **280** | 380 | 100 | 2.1 | 312 | 810 | 1980 | 1300 | 1600 |
| | 420 | 106 | 4.0 | 384 | 1170 | 2290 | 1800 | 2200 |
| | 420 | 106 | 4.0 | 384 | 1170 | 2290 | 1400 | 1700 |
| | 420 | 106 | 4.0 | 384 | 1170 | 2290 | 1400 | 1700 |
| | 420 | 106 | 4.0 | 384 | 1170 | 2290 | 1400 | 1700 |
| | 460 | 180 | 5.0 | 326 | 2500 | 4700 | 900 | 1200 |
| **285** | 415 | 102 | 3.0 | 317 | 1350 | 2780 | 900 | 1200 |
| **300** | 420 | 118 | 3.0 | 339 | 1050 | 2800 | 1200 | 1500 |
| | 420 | 118 | 3.0 | 339 | 1050 | 2800 | 1200 | 1500 |
| | 420 | 118 | 3 | 387 | 1150 | 2800 | 1200 | 1500 |
| | 420 | 118 | 3.0 | 339 | 1150 | 2800 | 1200 | 1500 |
| | 460 | 118 | 3 | 418 | 1420 | 2790 | 1200 | 1500 |
| | 460 | 118 | 3 | 339 | 1150 | 2800 | 1200 | 1500 |
| | 460 | 118 | 4.0 | 418 | 1290 | 2790 | 1200 | 1500 |
| | 460 | 118 | 4.0 | 418 | 1290 | 2790 | 1200 | 1500 |
| | 460 | 118 | 4.0 | 418 | 1560 | 2790 | 1200 | 1500 |
| **320** | 440 | 118 | 3.0 | 359 | 1090 | 3040 | 1100 | 1400 |
| | 460 | 120 | 4.0 | 363.65 | 1460 | 3510 | 1100 | 1400 |
| | 480 | 121 | 4.0 | 438 | 1360 | 2910 | 1100 | 1400 |
| | 480 | 121 | 4.0 | 438 | 1360 | 2910 | 1100 | 1400 |
| | 480 | 121 | 4.0 | 438 | 1500 | 2910 | 1100 | 1400 |
| | 480 | 121 | 4.0 | 438 | 1500 | 2910 | 1100 | 1400 |
| | 480 | 145 | 3.7 | 364 | 1820 | 3870 | 1100 | 1300 |
| | 480 | 160 | 4.0 | 360 | 2130 | 4400 | 1100 | 1300 |
| | 540 | 176 | 5.0 | 384 | 2500 | 4900 | 900 | 1100 |
| **340** | 520 | 133 | 5 | 473 | 1730 | 3780 | 900 | 1050 |
| | 520 | 133 | 5 | 473 | 1900 | 3780 | 900 | 1050 |
| | 520 | 133 | 5 | 473 | 1900 | 3780 | 900 | 1050 |
| | 520 | 180 | 5 | 385 | 2490 | 4800 | 860 | 1000 |
| | 580 | 243 | 5 | 402 | 4000 | 7550 | 780 | 940 |
| **360** | 540 | 134 | 5.0 | 493 | 1940 | 3900 | 900 | 1100 |

| Designations | Other dimensions | | | | Contact surface and chamfer dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|
| | d1 | D1 | b | k | damin | Damax | ramax | |
| | mm | | | | mm | | | kg |
| **NNU4956K/P4-HS** | | 344 | | | 291 | 369 | 2 | 32.8 |
| **NN3056K** | 332.8 | | | | 296 | 404 | 3 | 49.7 |
| **NN3056** | 332.8 | | | | 296 | 404 | 3 | 52.3 |
| **NN3056K/P52W33** | 332.8 | | 15 | 6 | 296 | 404 | 3 | 49.6 |
| **NN3056K/SPW33** | 332.8 | | 15 | 6 | 296 | 404 | 3 | 49.7 |
| **NNU4156** | | 407 | | | 300 | 440 | 4 | 118 |
| **NNP657/HCRYAD** | | 368 | | | 300 | 406 | 2.5 | 48.4 |
| **NNU4960/C3W33** | | 379 | 17.7 | 9 | 314 | 406 | 2.5 | 51.6 |
| **NNU4960/C9** | | 379 | | | 314 | 406 | 2.5 | 52.2 |
| **NN4960/W33** | 347 | | 17.7 | 9 | 314 | 406 | 2.5 | 52 |
| **NNU4960K/W33** | | 379 | 17.7 | 9 | 314 | 406 | 2.5 | 49.3 |
| **NN3060K** | 360.4 | | 17.7 | 9 | 316 | 444 | 3 | 75.9 |
| **NNU4960K/SPC1W33** | | | | | 316 | 444 | 3 | 49.3 |
| **NN3060K/YA8** | 360.4 | | | | 316 | 444 | 3 | 76.2 |
| **NN3060/YA8** | 360.4 | | 17.7 | 9 | 316 | 444 | 3 | 77.9 |
| **NN3060K/P51W33YA8** | 360.4 | 379 | | | 316 | 444 | 3 | 75.8 |
| **NNU4964/W33** | | 399 | 17.7 | 9 | 334 | 426 | 2.5 | 54.9 |
| **NU3064X3ZW/HAP55S2YA3** | | | | | 336 | 444 | 3 | 71.4 |
| **NN3064/W33** | 377 | | 17.7 | 8 | 336 | 464 | 3 | 76.3 |
| **NN3064K/P52W33** | 377 | | 17.7 | 8 | 336 | 464 | 3 | 72.8 |
| **NN3064K/P4W33** | 377 | | 17.7 | 8 | 336 | 464 | 3 | 75.3 |
| **NN3064K/SPW33** | 377 | | 17.7 | 8 | 336 | 464 | 3 | 75.3 |
| **NNU4064X2/C9W33** | | 424 | 18 | 8 | 336 | 464 | 3 | 93.3 |
| **NNU4064M/W33** | | 426 | 16.7 | 9 | 336 | 464 | 4 | 102 |
| **NNU3164/HCW33** | | 463 | 16.7 | 8 | 340 | 520 | 5 | 169 |
| **NN3068K/W33** | 406 | | 16.7 | 9 | 360 | 500 | 4 | 99.5 |
| **NN3068K/SPW33** | 406 | | 16.7 | 9 | 360 | 500 | 4 | 99.5 |
| **NN3068K/P4W33** | | | 16.7 | 9 | 360 | 500 | 4 | 99.5 |
| **NNU4068/W33X** | 406 | 460 | 12 | 6 | 360 | 500 | 4 | 136 |
| **NNU4168** | | 510 | | | 360 | 560 | 4 | 267 |
| **NN3072K/P52W33** | 426 | | 17.7 | 12 | 380 | 497 | 4 | 105 |

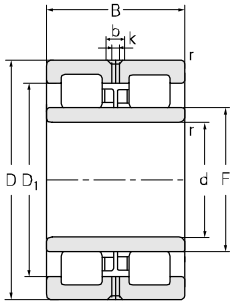
d 380~460 mm



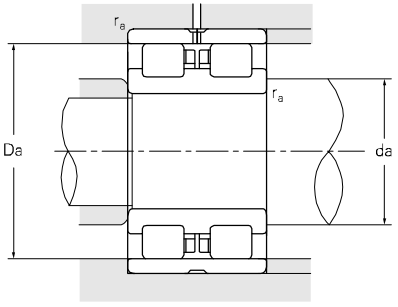

NN type




NN...K type



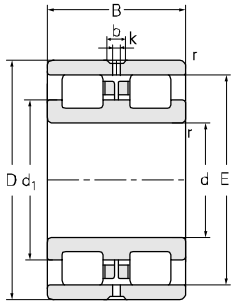

NNU type



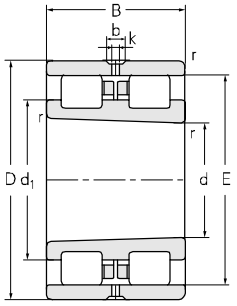

| Principal dimensions | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|
| d | D | B | r | E.F | Cr | Cor | Grease | Oil |
| mm | | | | | kN | | r/min | |
| **380** | 520 | 140 | 4.0 | 426 | 1640 | 4280 | 1300 | 1500 |
| | 520 | 140 | 4.0 | 426 | 1640 | 4280 | 1300 | 1500 |
| | 560 | 135 | 5.0 | 431 | 1860 | 3800 | 1300 | 1500 |
| | 560 | 135 | 5.0 | 515 | 1800 | 4100 | 1300 | 1500 |
| | 620 | 243 | 5.0 | 442 | 4130 | 8350 | 700 | 850 |
| | 620 | 243 | 5.0 | 442 | 4140 | 8350 | 700 | 850 |
| | 620 | 243 | 5.0 | 442 | 4100 | 8350 | 700 | 850 |
| **400** | 540 | 140 | 4 | 446 | 1700 | 4500 | 950 | 1000 |
| | 540 | 140 | 4 | 502 | 1700 | 4500 | 950 | 1000 |
| | 600 | 148 | 5 | 549 | 2360 | 4750 | 1150 | 1300 |
| | 600 | 170 | 5.0 | 450 | 2900 | 6000 | 800 | 950 |
| | 650 | 250 | 6.0 | 463 | 4700 | 9550 | 1000 | 1250 |
| | 650 | 250 | 6.0 | 463 | 4700 | 9550 | 1000 | 1250 |
| | 650 | 250 | 6.0 | 463 | 4700 | 9550 | 1000 | 1250 |
| **420** | 560 | 140 | 4.0 | 466 | 1650 | 4750 | 850 | 1000 |
| | 560 | 140 | 4.0 | 466 | 1810 | 4750 | 850 | 1000 |
| | 560 | 140 | 4.0 | 466 | 1810 | 4750 | 850 | 1000 |
| | 580 | 130 | 4.0 | 468 | 1790 | 4660 | 860 | 1100 |
| | 580 | 130 | 4.0 | 468 | 1790 | 4660 | 860 | 1100 |
| | 620 | 150 | 5 | 569 | 2100 | 4500 | 1000 | 1250 |
| | 620 | 150 | 5 | 469 | 2750 | 5570 | 1000 | 1250 |
| | 620 | 200 | 5 | 469 | 3450 | 7500 | 750 | 900 |
| | 620 | 220 | 5 | 469 | 3250 | 7810 | 750 | 900 |
| **440** | 640 | 230 | 6.0 | 482 | 4790 | 10400 | 700 | 850 |
| | 650 | 212 | 6 | 487 | 3850 | 8250 | 700 | 850 |
| | 650 | 212 | 6 | 487 | 3850 | 8250 | 700 | 850 |
| | 720 | 280 | 6 | 511 | 5650 | 11500 | 600 | 700 |
| | 720 | 280 | 6 | 511 | 5650 | 11500 | 600 | 700 |
| **460** | 680 | 163 | 6.0 | 624 | 2600 | 6200 | 1000 | 1200 |
| | 680 | 163 | 6 | 624 | 2600 | 6200 | 1000 | 1200 |

| Designations | Other dimensions | | | | Contact surface and chamfer dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|
| | d1 | D1 | b | k | damin | Damax | ramax | |
| | mm | | | | mm | | | kg |
| **NNU4976K/SPC1W33** | | 471 | 16.7 | 9 | 396 | 504 | 4 | 86.7 |
| **NNU4976K/W33** | | 471 | 16.7 | 9 | 396 | 504 | 4 | 86.7 |
| **NNU3076** | | 498 | | | 400 | 517 | 4 | 113.6 |
| **NN3076K/P52W33** | 448 | | 17.7 | 12 | 400 | 517 | 4 | 110 |
| **NNU4176/C9** | | 538 | | | 400 | 580 | 4 | 288 |
| **NNU4176** | | 538 | | | 400 | 580 | 4 | 288 |
| **NNU4176/C9W33** | | 538 | 16.7 | 9 | 400 | 580 | 4 | 287 |
| **NNU4980K/W33** | | 491 | 16.7 | 8 | 416 | 524 | 3 | 90.6 |
| **NN4980K/SPW33** | | 457 | 16.7 | 8 | 416 | 524 | 3 | 90.4 |
| **NN3080K** | 472 | | | | 426 | 580 | 4 | 141 |
| **NNU3080X2/HC** | | 532 | 22 | 10 | 426 | 580 | 4 | 172 |
| **NNU4180** | | 568 | | | 426 | 624 | 5 | 328 |
| **NNU4180/W33** | | 568 | 22.3 | 12 | 426 | 624 | 5 | 326 |
| **NNU4180/HG2W33** | | 568 | 22.3 | 12 | 426 | 624 | 5 | 326 |
| **NNU4984K/P52W33** | | 515 | 17.7 | 9 | 436 | 539 | 4 | 93.3 |
| **NNU4984/SPW33** | | 515 | 17.7 | 9 | 436 | 539 | 4 | 94.3 |
| **NNU4984K/SPW33** | | 515 | 17.7 | 9 | 436 | 600 | 4 | 93.3 |
| **NU684ZWF1/YA3** | | 522 | | | 563 | 465 | 4 | 110 |
| **NU684ZWF1/C9YA3** | | 522 | | | 563 | 465 | 4 | 110 |
| **NN3084K/W33** | 497 | | 16.7 | 9 | 574 | 539 | 4 | 135 |
| **NNU3084** | | 556 | | | 574 | 600 | 4 | 152 |
| **NNU4084/W33** | | 556 | 16.7 | 9 | 440 | 600 | 4 | 204 |
| **NNU4084X3/HCEW33X** | | 536 | 12 | 6 | 440 | 600 | 4 | 205 |
| **NNP4088X3/W33** | | 602 | 16.7 | 7.5 | 466 | 614 | 5 | 256 |
| **NNU4088/W33** | | 582 | 22.3 | 12 | 466 | 624 | 5 | 214 |
| **NNU4088K/W33** | | 582 | 22.3 | 12 | 466 | 624 | 5 | 214 |
| **NNU4188K30M/W33** | | 638 | 22.3 | 12 | 466 | 694 | 5 | 452 |
| **NNU4188/W33** | | 638 | 22.3 | 12 | 466 | 694 | 5 | 452 |
| **NN3092K/P52W33** | 544 | | 20.5 | 12 | 486 | 627 | 5 | 198 |
| **NN3092/SPYB5W33** | 544 | | 20.5 | 12 | 486 | 627 | 5 | 199 |

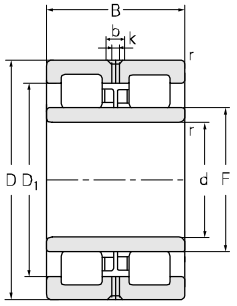
d 460~500 mm



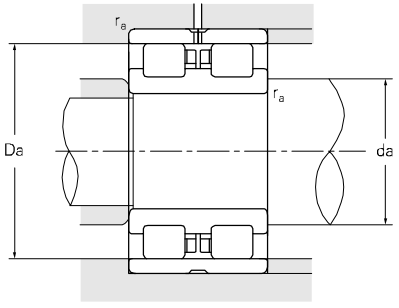

NN type




NN...K type



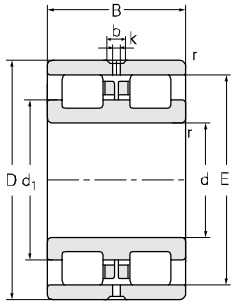

NNU type



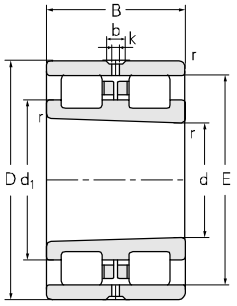

| Principal dimensions | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|
| d | D | B | r | E.F | Cr | Cor | Grease | Oil |
| mm | | | | | kN | | r/min | |
| **460** | 580 | 118 | 3 | 497 | 1150 | 3250 | 840 | 950 |
| | 580 | 118 | 3 | 497 | 1150 | 3250 | 840 | 950 |
| | 620 | 160 | 4 | 510 | 2000 | 5400 | 800 | 900 |
| | 620 | 160 | 4 | 510 | 2000 | 5400 | 800 | 900 |
| | 680 | 163 | 6 | 624 | 2500 | 5500 | 950 | 1150 |
| | 680 | 218 | 6 | 513 | 4250 | 9300 | 650 | 780 |
| | 680 | 218 | 6 | 513 | 4250 | 9300 | 650 | 780 |
| | 680 | 218 | 6 | 513 | 3930 | 8860 | 650 | 780 |
| | 760 | 300 | 7.5 | 537 | 6350 | 13000 | 550 | 650 |
| | 760 | 300 | 7.5 | 537 | 6350 | 13000 | 550 | 650 |
| **480** | 650 | 170 | 5 | 534 | 2300 | 6150 | 720 | 880 |
| | 650 | 170 | 5 | 534 | 2300 | 6150 | 720 | 880 |
| | 650 | 170 | 5 | 534 | 2270 | 6100 | 720 | 880 |
| | 700 | 165 | 6 | 644 | 2500 | 5800 | 930 | 1000 |
| | 700 | 165 | 6 | 644 | 2500 | 5800 | 930 | 1000 |
| | 700 | 218 | 6 | 533 | 4200 | 9600 | 620 | 720 |
| | 790 | 308 | 7.5 | 557 | 7000 | 14400 | 500 | 600 |
| | 790 | 308 | 7.5 | 557 | 7000 | 14400 | 500 | 600 |
| | 790 | 308 | 7.5 | 557 | 6550 | 13400 | 500 | 600 |
| **500** | 670 | 160 | 5.0 | 554 | 2450 | 6800 | 750 | 1000 |
| | 670 | 170 | 5 | 554 | 2330 | 6100 | 750 | 1000 |
| | 670 | 170 | 5 | 554 | 2330 | 6100 | 750 | 1000 |
| | 720 | 167 | 6 | 664 | 2650 | 5800 | 950 | 1100 |
| | 720 | 167 | 6 | 664 | 2650 | 5800 | 950 | 1100 |
| | 720 | 218 | 6 | 553 | 4450 | 10500 | 620 | 740 |
| | 720 | 218 | 6 | 553 | 4450 | 10500 | 620 | 740 |
| | 720 | 218 | 6.0 | 554 | 4900 | 9300 | 580 | 700 |
| | 720 | 270 | 6.0 | 559 | 5586 | 14300 | 580 | 700 |
| | 730 | 305 | 6.0 | 676 | 6200 | 15100 | 600 | 700 |
| | 830 | 325 | 7.5 | 582 | 7400 | 14500 | 580 | 700 |
| | 830 | 325 | 7.5 | 583 | 8400 | 14500 | 580 | 700 |

| Designations | Other dimensions | | | | Contact surface and chamfer dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|
| | d1 | D1 | b | k | damin | Damax | ramax | |
| | mm | | | | mm | | | kg |
| **NNU4892K/W33** | | 537 | 16.7 | 9 | 474 | 566 | 2.5 | 75 |
| **NNU4892/W33** | | 537 | 16.7 | 9 | 474 | 566 | 2.5 | 75 |
| **NNU4992/W33** | | 565 | 16.7 | 9 | 476 | 604 | 3 | 132 |
| **NNU4992K/W33** | | 565 | 16.7 | 9 | 476 | 604 | 3 | 128 |
| **NN3092K/W33** | 544 | | 22.3 | 12 | 627 | 654 | 5 | 185 |
| **NNU4092/W33** | | 614 | 22.3 | 12 | 486 | 654 | 5 | 238 |
| **NNU4092K/W33** | | 614 | 22.3 | 12 | 486 | 654 | 5 | 235 |
| **NNU4092/HCW33** | | 602 | 22.3 | 12 | 486 | 654 | 5 | 281 |
| **NNU4192K30** | | 672 | | | 493 | 727 | 6 | 533 |
| **NNU4192** | | 672 | | | 493 | 727 | 6 | 535 |
| **NNU4996/W33** | | 592 | 22.3 | 12 | 500 | 630 | 4 | 150 |
| **NNU4996K/W33** | | 592 | 22.3 | 12 | 500 | 630 | 4 | 148 |
| **NNU4996K/SPC1W33** | | 588 | 22.3 | 12 | 500 | 630 | 4 | 161 |
| **NN3096/W33** | 564 | | 22.3 | 12 | 648 | 674 | 5 | 198 |
| **NN3096K/W33** | 564 | | 22.3 | 12 | 648 | 674 | 5 | 192 |
| **NNU4096/W33** | | 634 | 22.3 | 12 | 506 | 674 | 5 | 272 |
| **NNU4196/W33** | | 701 | 22.3 | 12 | 513 | 757 | 6 | 591 |
| **NNU4196K/W33** | | 701 | 22.3 | 12 | 513 | 757 | 6 | 585 |
| **NNU4196/HCW33YB2** | | 691 | 27.5 | 12 | 513 | 757 | 6 | 613 |
| **NNU49/500X2F1/YA34** | | 612 | | | 520 | 650 | 4 | 174 |
| **NNU49/500F1/W33X** | | 612 | 22.3 | 12 | 520 | 650 | 4 | 178 |
| **NNU49/500K/W33X** | | 612 | 22.3 | 12 | 520 | 650 | 4 | 178 |
| **NN30/500K/SPC1W33** | 584 | | 22.3 | 12 | 668 | 694 | 5 | 221 |
| **NN30/500K/P51W33** | 584 | | 22.3 | 12 | 668 | 694 | 5 | 221 |
| **NNU40/500/W33** | | 654 | 22.3 | 12 | 526 | 694 | 5 | 285 |
| **NNU40/500K/W33** | | 654 | 22.3 | 12 | 526 | 694 | 5 | 282 |
| **NNU40/500/HCW33** | | 647 | 22.3 | 12 | 520 | 697 | 5 | 288 |
| **NNU50/500X2/HCP59W33T** | | 648 | 32.3 | 20 | 520 | 697 | 5 | 383 |
| **NNP6/500/HCP63W33YB5** | 556 | 658 | 22.3 | 12 | 526 | 704 | 5 | 435 |
| **NNU41/500/W33** | | 734 | 22.3 | 12 | 533 | 797 | 6 | 705 |
| **NNU41/500/HCEW33** | | 725 | 23.7 | 12 | 533 | 797 | 5 | 696 |

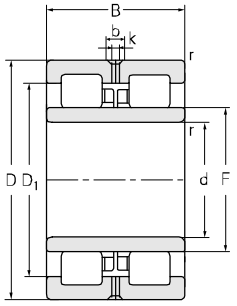
d 530~630 mm



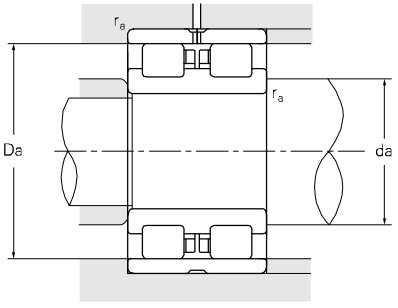

NN type




NN...K type



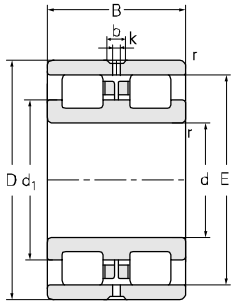

NNU type



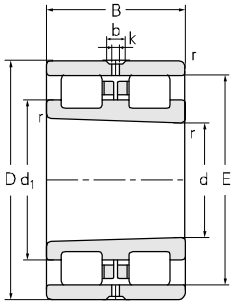

| Principal dimensions | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|
| d | D | B | r | E.F | Cr | Cor | Grease | Oil |
| mm | | | | | kN | | r/min | |
| **530** | 710 | 180 | 5.0 | 588 | 2930 | 7450 | 700 | 950 |
| | 760 | 260 | 5.0 | 587 | 5800 | 14100 | 880 | 950 |
| | 780 | 185 | 6.0 | 715 | 3110 | 6800 | 880 | 950 |
| | 780 | 185 | 6.0 | 715 | 3110 | 6800 | 880 | 950 |
| | 780 | 335 | 7.5 | 612 | 8800 | 16500 | 880 | 950 |
| | 780 | 185 | 6 | 715 | 3250 | 7250 | 880 | 980 |
| | 780 | 185 | 6 | 715 | 3250 | 7250 | 880 | 980 |
| | 780 | 250 | 6 | 591 | 5400 | 12100 | 550 | 650 |
| | 780 | 250 | 6 | 591 | 5400 | 12100 | 550 | 650 |
| | 870 | 335 | 7.5 | 618 | 7750 | 15500 | 460 | 550 |
| | 870 | 335 | 7.5 | 618 | 7750 | 15500 | 460 | 550 |
| **560** | 750 | 190 | 5.0 | 623 | 3210 | 8950 | 630 | 750 |
| | 750 | 190 | 5.0 | 693 | 2690 | 7900 | 630 | 750 |
| | 750 | 190 | 5.0 | 703 | 3190 | 8800 | 630 | 750 |
| | 750 | 190 | 5.0 | 623 | 3210 | 8950 | 630 | 750 |
| | 750 | 190 | 5.0 | 623 | 3210 | 8950 | 630 | 750 |
| | 750 | 190 | 5.0 | 693 | 2690 | 7900 | 630 | 750 |
| | 820 | 195 | 6.0 | 755 | 3720 | 8170 | 600 | 850 |
| | 820 | 195 | 6.0 | 755 | 3720 | 8150 | 600 | 850 |
| | 820 | 258 | 6.0 | 756 | 5900 | 14000 | 600 | 850 |
| | 820 | 258 | 6.0 | 756 | 5900 | 14000 | 530 | 630 |
| | 820 | 258 | 6.0 | 626 | 5900 | 14000 | 530 | 630 |
| **600** | 800 | 200 | 5.0 | 666 | 3700 | 11400 | 560 | 670 |
| | 860 | 300 | 6.0 | 802 | 7000 | 17000 | 580 | 700 |
| | 870 | 200 | 6.0 | 805 | 4460 | 9850 | 600 | 800 |
| | 870 | 200 | 6.0 | 805 | 4650 | 10500 | 600 | 800 |
| | 870 | 200 | 6.0 | 805 | 4460 | 9850 | 600 | 800 |
| | 980 | 375 | 7.5 | 699 | 9800 | 21000 | 380 | 450 |
| | 980 | 375 | 7.5 | 699 | 9800 | 21000 | 380 | 450 |
| **630** | 780 | 150 | 4.0 | 738 | 2270 | 6900 | 500 | 600 |
| | 920 | 212 | 7.5 | 850 | 4350 | 10600 | 550 | 750 |
| | 920 | 212 | 7.5 | 850 | 4350 | 10600 | 550 | 750 |

| Designations | Other dimensions | | | | Contact surface and chamfer dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|
| | d1 | D1 | b | k | damin | Damax | ramax | |
| | mm | | | | mm | | | kg |
| **NNU49/530/HCW33** | | 649 | 17.7 | 6 | 550 | 690 | 4 | 203 |
| **NNP40/530X3/HCW33** | | 684 | 22.3 | 12 | 550 | 751 | 4 | 394 |
| **NN30/530K/P51W33** | 625 | | | | 720 | 754 | 5 | 302 |
| **NN30/530/P5W33** | 626 | | 22.3 | 12 | 720 | 754 | 5 | 311 |
| **NNU41/530/HCW33** | | 760 | 23.8 | 12 | 558 | 752 | | 783 |
| **NN30/530/W33** | 625 | | 22.3 | 12 | 720 | 754 | 5 | 262 |
| **NN30/530K/W33** | 625 | | 22.3 | 12 | 720 | 754 | 5 | 258 |
| **NNU40/530/W33** | | 706 | 22.3 | 12 | 556 | 754 | 5 | 415 |
| **NNU40/530K/W33** | | 706 | 22.3 | 12 | 556 | 754 | 5 | 410 |
| **NNU41/530K30/W33** | | 770 | 22.3 | 12 | 563 | 837 | 6 | 788 |
| **NNU41/530/W33** | | 770 | 22.3 | 12 | 563 | 837 | 6 | 788 |
| **NNU49/560/W33** | | 689 | 22.3 | 12 | 580 | 730 | 4 | 245 |
| **NN49/560K/P41W33** | 632 | | 23.5 | 12 | 580 | 730 | 4 | 233 |
| **NN49/560/P49W33XYB5** | 637 | | 22.3 | 12 | 580 | 730 | 4 | 240 |
| **NNU49/560K/W33** | | 689 | 22.3 | 12 | 580 | 730 | 4 | 235 |
| **NNU49/560K/W33X** | | 689 | 22.3 | 12 | 580 | 730 | 4 | 235 |
| **NN49/560K/P51W33** | 632 | | 23.5 | 12 | 580 | 730 | 4 | 233 |
| **NN30/560K** | 658.4 | | | | 590 | 790 | 6 | 337 |
| **NN30/560K/P5W33** | 658.4 | | 22.3 | 12 | 590 | 790 | 6 | 336 |
| **NN40/560/HCW33** | 650 | | 22.3 | 12 | 590 | 790 | 6 | 465 |
| **NN40/560/W33** | 650 | | 22.3 | 12 | 590 | 790 | 6 | 465 |
| **NNU40/560/P63W33YB5** | | 732 | 22.3 | 12 | 590 | 790 | 6 | 468 |
| **NNU49/600/P63W33YB5** | | 737 | 22.3 | 12 | 620 | 780 | 4 | 282 |
| **NN40/600X3K/P49W33YB5** | 690 | | 22.3 | 12 | 624 | 836 | 5 | 535 |
| **NN30/600KF1/YA8** | 701 | | | | 630 | 840 | 6 | 384 |
| **NN30/600F3/YA8** | 701 | | 15 | 8 | 630 | 840 | 6 | 403 |
| **NN30/600F1/YA8** | 701 | | 15 | 8 | 630 | 840 | 6 | 403 |
| **NNU41/600/HCW33** | | 864 | 22.3 | 12 | 634 | 946 | 6 | 1123 |
| **NNU41/600/HCCNHW33YA3** | | 864 | 22.3 | 12 | 634 | 946 | 6 | 1123 |
| **NN48/630K/P51W33** | 686 | | 20.5 | 8 | 650 | 760 | 4 | 161 |
| **NN30/630KF1/YA8** | 738 | | | | 660 | 890 | 6 | 438 |
| **NN30/630F1/YA8** | 738 | | 15 | 8 | 660 | 890 | 6 | 460 |

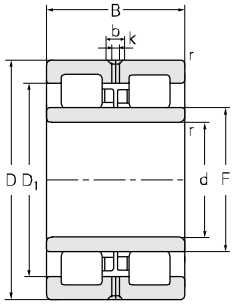
d 670~900 mm



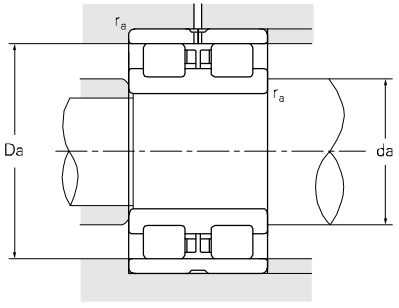
NN type



NN...K type



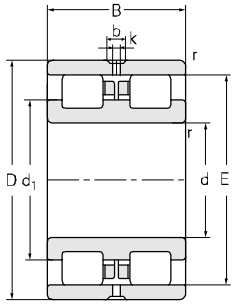
NNU type



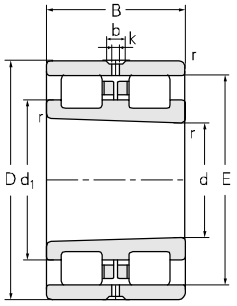

| Principal dimensions | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|
| d | D | B | r | E.F | Cr | Cor | Grease | Oil |
| mm | | | | | kN | | r/min | |
| **670** | 900 | 230 | 6.0 | 738 | 4900 | 12500 | 500 | 600 |
| | 900 | 230 | 6.0 | 738 | 4750 | 13300 | 500 | 600 |
| | 980 | 230 | 7.5 | 760 | 4980 | 11300 | 670 | 750 |
| | 980 | 230 | 7.5 | 900 | 4980 | 11300 | 670 | 750 |
| **690** | 980 | 365 | 7.5 | 759 | 9950 | 26100 | 560 | 670 |
| **710** | 870 | 180 | 4 | 823 | 2600 | 8500 | 480 | 550 |
| | 950 | 243 | 6.0 | 770 | 5730 | 15200 | 450 | 530 |
| | 950 | 243 | 6.0 | 782 | 5730 | 16500 | 450 | 530 |
| | 950 | 243 | 6.0 | 782 | 5250 | 15000 | 450 | 530 |
| | 1030 | 236 | 7.5 | 951 | 5500 | 12500 | 580 | 650 |
| | 1030 | 315 | 7.5 | 784 | 9000 | 21500 | 380 | 450 |
| | 1150 | 438 | 9.5 | 820 | 12800 | 28000 | 310 | 370 |
| **750** | 920 | 170 | 5 | 879 | 3550 | 10000 | 460 | 530 |
| | 1000 | 250 | 6 | 831 | 5400 | 15800 | 420 | 480 |
| | 1090 | 250 | 7.5 | 1013 | 6800 | 15000 | 550 | 600 |
| | 1090 | 250 | 7.5 | 1007 | 7050 | 16000 | 550 | 620 |
| | 1090 | 335 | 7.5 | 830 | 10000 | 23500 | 350 | 420 |
| | 1220 | 475 | 9.5 | 871 | 16000 | 35600 | 280 | 350 |
| **800** | 1060 | 258 | 6 | 884 | 5800 | 16500 | 360 | 440 |
| | 1150 | 258 | 7.5 | 1065 | 7500 | 17500 | 510 | 580 |
| | 1150 | 258 | 7.5 | 1065 | 7500 | 17500 | 510 | 580 |
| | 1150 | 345 | 7.5 | 885 | 10500 | 26500 | 330 | 380 |
| | 1280 | 475 | 9.5 | 921 | 15500 | 36000 | 270 | 325 |
| **850** | 1120 | 272 | 6 | 939 | 5650 | 17500 | 350 | 420 |
| | 1220 | 272 | 7.5 | 1130 | 7800 | 18000 | 470 | 520 |
| | 1220 | 272 | 7.5 | 1130 | 7800 | 18000 | 470 | 520 |
| | 1220 | 365 | 7.5 | 940 | 11000 | 28000 | 290 | 350 |
| | 1360 | 500 | 12 | 976 | 19000 | 44500 | 230 | 285 |
| **900** | 1180 | 280 | 6 | 986 | 6300 | 19000 | 330 | 380 |
| | 1280 | 280 | 7.5 | 1185 | 7920 | 19000 | 310 | 370 |

| Designations | Other dimensions | | | | Contact surface and chamfer dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|
| | d1 | D1 | b | k | damin | Damax | ramax | |
| | mm | | | | mm | | | kg |
| **NNU49/670/C3** | | 822 | | | 696 | 870 | 5 | 424 |
| **NNU49/670/W33T-JG** | | 822 | 18 | 10 | 696 | 870 | 5 | 424 |
| **NNU30/670** | | 872 | | | 704 | 907 | 6 | 594 |
| **NN30/670K/P49W33** | 788 | | 22.3 | 12 | 704 | 907 | 6 | 593 |
| **NNU6/690/HCEC9W33YB2** | | 881 | 30 | 15 | 724 | 940 | 6 | 912 |
| **NN48/710X2K** | 771.8 | | | | 736 | 850 | 4 | 223 |
| **NNP49/710/C9YA57** | | 890 | | | 736 | 896 | 5 | 493 |
| **NNP49/710/C9YA7** | | 878 | | | 736 | 896 | 5 | 512 |
| **NNU49/710K/SPC1W33** | | 868 | 22.3 | 12 | 736 | 896 | 5 | 469 |
| **NN30/710/W33** | 831 | | 22.3 | 12 | 744 | 957 | 6 | 595 |
| **NNU40/710/W33** | | 937 | 22.3 | 12 | 744 | 996 | 6 | 858 |
| **NNU41/710/W33** | | 1024 | 22.3 | 12 | 750 | 1110 | 8 | 1800 |
| **NN48/750K30/W33** | 811 | | 22.3 | 12 | 770 | 887 | 4 | 235 |
| **NNU49/750** | | 918 | | | 776 | 974 | 5 | 535 |
| **NN30/750/W33** | 877 | | 22.3 | 12 | 784 | 1011 | 6 | 700 |
| **NN30/750/P63W33YB5** | | | 22.3 | 12 | | | 6 | 767 |
| **NNU40/750/W33** | | 991 | 22.3 | 12 | 784 | 1000 | 6 | 924 |
| **NNU41/750/W33** | | 1083 | 22.3 | 12 | 790 | 1180 | 8 | 2240 |
| **NNU49/800/W33X** | | 974 | 22.3 | 12 | 826 | 1034 | 5 | 614 |
| **NN30/800K/W33** | 929 | | 22.3 | 12 | 833 | 1071 | 6 | 750 |
| **NN30/800/W33** | 929 | | 22.3 | 12 | 833 | 1071 | 6 | 785 |
| **NNU40/800/W33** | | 1046 | 22.3 | 12 | 833 | 1117 | 6 | 1150 |
| **NNU41/800/W33** | | 1141 | 22.3 | 12 | 840 | 1240 | 8 | 2380 |
| **NNU49/850/W33X** | | 1029 | 22.3 | 12 | 876 | 1094 | 5 | 715 |
| **NN30/850/W33** | 986 | | 22.3 | 12 | 883 | 1187 | 6 | 935 |
| **NN30/850K/W33** | 986 | | 22.3 | 12 | 883 | 1187 | 6 | 930 |
| **NNU40/850/W33** | | 1110 | 22.3 | 12 | 883 | 1187 | 6 | 1350 |
| **NNU41/850/W33** | | 1213 | 22.3 | 12 | 897 | 1334 | 10 | 2890 |
| **NNU49/900/W33X** | | 1082 | 22.3 | 12 | 926 | 1154 | 5 | 843 |
| **NN30/900/W33** | | 1185 | 22.3 | 12 | 933 | 1191 | 6 | 1050 |

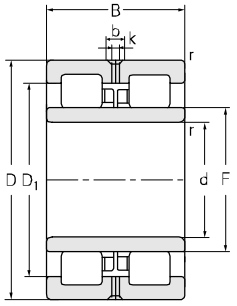
d 900~1250 mm



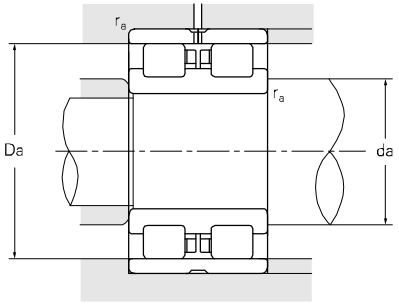

NN type




NN...K type



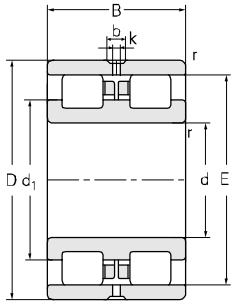

NNU type



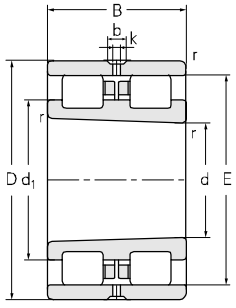

| Principal dimensions | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|
| d | D | B | r | E.F | Cr | Cor | Grease | Oil |
| mm | | | | | kN | | r/min | |
| **900** | 1280 | 375 | 7.5 | 990 | 12500 | 31000 | 275 | 330 |
| | 1420 | 515 | 12 | 1032 | 20500 | 47000 | 210 | 270 |
| | 1420 | 515 | 12 | 1032 | 20500 | 47000 | 210 | 270 |
| **950** | 1250 | 300 | 7.5 | 1046 | 7050 | 22300 | 410 | 460 |
| | 1360 | 300 | 7.5 | 1255 | 8750 | 22500 | 390 | 440 |
| | 1360 | 300 | 7.5 | 1255 | 8750 | 22500 | 390 | 440 |
| | 1360 | 412 | 7.5 | 1050 | 13500 | 35000 | 250 | 315 |
| | 1500 | 545 | 12 | 1092 | 24500 | 56500 | 195 | 250 |
| **1000** | 1320 | 315 | 7.5 | 1238 | 8500 | 26000 | 380 | 440 |
| | 1320 | 315 | 7.5 | 1103 | 8500 | 26000 | 380 | 440 |
| | 1420 | 308 | 7.5 | 1316 | 10000 | 24600 | 370 | 420 |
| | 1420 | 412 | 7.5 | 1101 | 15000 | 38000 | 230 | 290 |
| | 1580 | 580 | 12 | 1154 | 27200 | 62500 | 190 | 250 |
| **1060** | 1400 | 335 | 7.5 | 1160 | 10000 | 30600 | 350 | 380 |
| | 1400 | 335 | 7.5 | 1160 | 10000 | 30600 | 350 | 380 |
| | 1500 | 325 | 9.5 | 1391 | 10500 | 37500 | 350 | 380 |
| | 1500 | 325 | 9.5 | 1391 | 10500 | 37500 | 350 | 380 |
| | 1660 | 600 | 15 | 1214 | 29000 | 69400 | 175 | 210 |
| | 1660 | 600 | 15 | 1214 | 29000 | 69400 | 175 | 210 |
| **1120** | 1460 | 335 | 7.5 | 1220 | 10000 | 31500 | 330 | 370 |
| | 1460 | 335 | 7.5 | 1220 | 10000 | 31500 | 330 | 370 |
| | 1750 | 630 | 15 | 1279 | 33500 | 76600 | 165 | 190 |
| | 1750 | 630 | 15 | 1279 | 33500 | 76600 | 165 | 190 |
| **1180** | 1540 | 355 | 7.5 | 1285 | 11500 | 35500 | 310 | 350 |
| | 1540 | 355 | 7.5 | 1285 | 11500 | 35500 | 310 | 350 |
| | 1850 | 670 | 15 | 1350 | 35500 | 83500 | 150 | 185 |
| | 1850 | 670 | 15 | 1350 | 35500 | 83500 | 150 | 185 |
| **1250** | 1950 | 710 | 15 | 1426 | 41500 | 98500 | 120 | 160 |
| | 1950 | 710 | 15 | 1426 | 41500 | 98500 | 120 | 160 |

| Designations | Other dimensions | | | | Contact surface and chamfer dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|
| | d1 | D1 | b | k | damin | Damax | ramax | |
| | mm | | | | mm | | | kg |
| **NNU40/900/W33** | 990 | | 22.3 | 12 | 933 | 1257 | 6 | 1510 |
| **NNU41/900/W33** | 1032 | | 22.3 | 12 | 947 | 1394 | 10 | 3160 |
| **NNU41/900K/W33** | 1032 | | 22.3 | 12 | 947 | 1394 | 10 | 3160 |
| **NNU49/950/W33X** | | 1149 | 22.3 | 12 | 983 | 1217 | 6 | 958 |
| **NN30/950/W33** | 1103 | | 22.3 | 12 | 983 | 1263 | 6 | 1418 |
| **NN30/950K/W33** | 1103 | | 22.3 | 12 | 983 | 1263 | 6 | 1374 |
| **NNU40/950/W33** | | 1237 | 22.3 | 12 | 983 | 1327 | 6 | 1890 |
| **NNU41/950/W33** | | 1338 | 22.3 | 12 | 997 | 1474 | 10 | 3850 |
| **NN49/1000** | 1124 | | 22.3 | 12 | 1249 | 1287 | 6 | 1210 |
| **NNU49/1000/W33X** | | 1212 | 22.3 | 12 | 1033 | 1287 | 6 | 1250 |
| **NN30/1000/W33** | 1156 | | 22.3 | 12 | 1324 | 1387 | 6 | 1385 |
| **NNU40/1000/W33** | | 1296 | 22.3 | 12 | 1033 | 1387 | 6 | 1985 |
| **NNU41/1000K30/W33** | | 1408 | 22.3 | 12 | 1047 | 1474 | 10 | 4250 |
| **NNU49/1060/W33** | | 1288 | 22.3 | 12 | 1093 | 1367 | 6 | 1360 |
| **NNU49/1060K/W33** | | 1288 | 22.3 | 12 | 1093 | 1367 | 6 | 1360 |
| **NN30/1060/W33** | 1223 | | 22.3 | 12 | 1100 | 1399 | 8 | 1650 |
| **NN30/1060K/W33** | 1223 | | 22.3 | 12 | 1100 | 1399 | 8 | 1650 |
| **NNU41/1060/W33** | | 1485 | 22.3 | 12 | 1116 | 1627 | 12 | 5075 |
| **NNU41/1060K/W33** | | 1485 | 22.3 | 12 | 1116 | 1627 | 12 | 5075 |
| **NNU49/1120/W33** | | 1348 | 22.3 | 12 | 1153 | 1427 | 6 | 1440 |
| **NNU49/1120K/W33** | | 1348 | 22.3 | 12 | 1153 | 1427 | 6 | 1440 |
| **NNU41/1120/W33** | | 1567 | 22.3 | 12 | 1176 | 1717 | 12 | 5570 |
| **NNU41/1120K30/W33** | | 1567 | 22.3 | 12 | 1176 | 1717 | 12 | 5570 |
| **NNU49/1180/W33** | | 1421 | 22.3 | 12 | 1213 | 1507 | 6 | 1660 |
| **NNU49/1180K30/W33** | | 1421 | 22.3 | 12 | 1213 | 1507 | 6 | 1660 |
| **NNU41/1180/W33** | | 1655 | 22.3 | 12 | 1227 | 1817 | 6 | 7200 |
| **NNU41/1180K/W33** | | 1655 | 22.3 | 12 | 1227 | 1817 | 6 | 7200 |
| **NNU41/1250/W33** | | 1748 | 22.3 | 12 | 1297 | 1917 | 12 | 8000 |
| **NNU41/1250K30/W33** | | 1748 | 22.3 | 12 | 1297 | 1917 | 12 | 8000 |

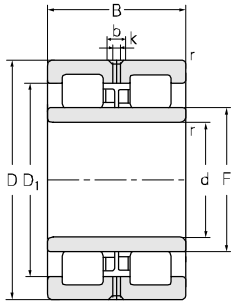
d 1320~1500 mm



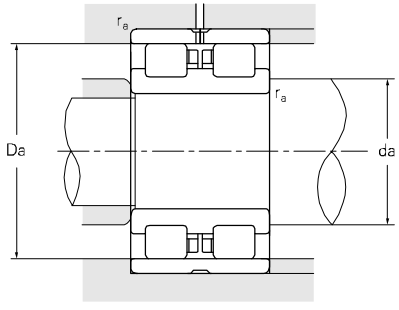

NN type




NN...K type



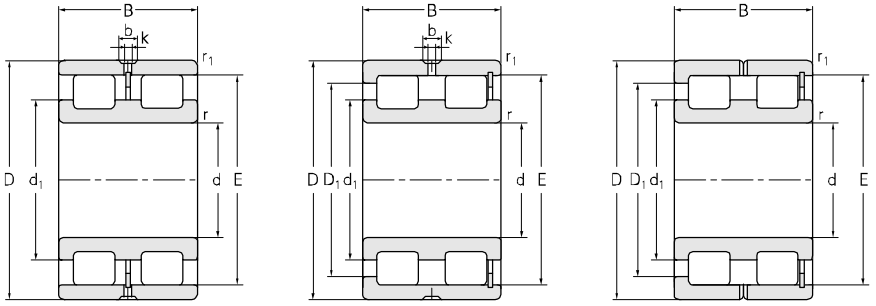

NNU type

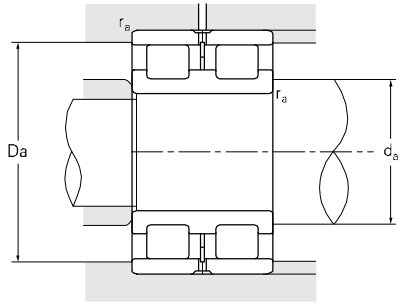



| Principal dimensions | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|
| d | D | B | r | E.F | Cr | Cor | Grease | Oil |
| mm | | | | | kN | | r/min | |
| **1320** | 1720 | 400 | 7.5 | 1620 | 13200 | 42500 | 260 | 300 |
| | 1720 | 400 | 7.5 | 1620 | 13200 | 42500 | 260 | 300 |
| | 1720 | 400 | 7.5 | 1442 | 13500 | 42500 | 260 | 300 |
| | 1720 | 400 | 7.5 | 1442 | 13500 | 42500 | 260 | 300 |
| | 2060 | 750 | 15 | 1507 | 45600 | 106000 | 130 | 150 |
| | 2060 | 750 | 15 | 1507 | 45600 | 106000 | 130 | 150 |
| **1400** | 2180 | 775 | 19 | 1598 | 49500 | 117000 | 90 | 120 |
| | 2180 | 775 | 19 | 1598 | 49500 | 117000 | 90 | 120 |
| **1500** | 2300 | 800 | 19 | 1709 | 52500 | 132000 | 85 | 110 |

| Designations | Other dimensions | | | | Contact surface and chamfer dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|
| | d1 | D1 | b | k | damin | Damax | ramax | |
| | mm | | | | mm | | | kg |
| **NN49/1320/W33** | 1468 | | 22.3 | 12 | 1353 | 1640 | 6 | 3040 |
| **NN49/1320K/W33** | 1468 | | 22.3 | 12 | 1353 | 1640 | 6 | 3040 |
| **NNU49/1320/W33** | | 1592 | 22.3 | 12 | 1353 | 1687 | 6 | 3100 |
| **NNU49/1320K/W33** | | 1592 | 22.3 | 12 | 1353 | 1687 | 6 | 3100 |
| **NNU41/1320/W33** | | 1846 | 22.3 | 12 | 1367 | 2027 | 6 | 9450 |
| **NNU41/1320K/W33** | | 1846 | 22.3 | 12 | 1367 | 2027 | 6 | 9450 |
| **NNU41/1400/W33** | | 1954 | 22.3 | 12 | 1470 | 2140 | 8 | 10700 |
| **NNU41/1400K30/W33** | | 1954 | 22.3 | 12 | 1470 | 2140 | 8 | 10700 |
| **NNU41/1500/W33** | | 2065 | 22.3 | 12 | 1570 | 2260 | 8 | 12300 |

d 40~300 mm

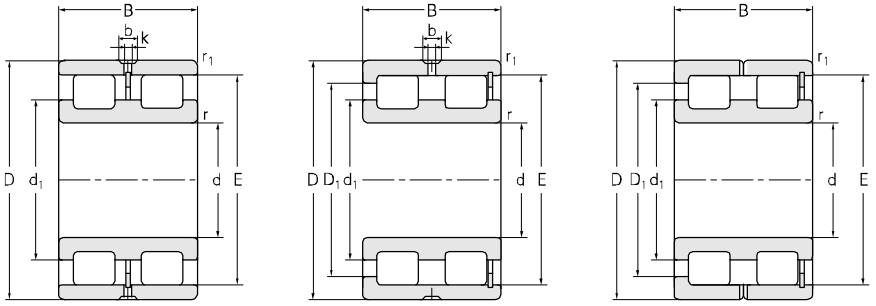


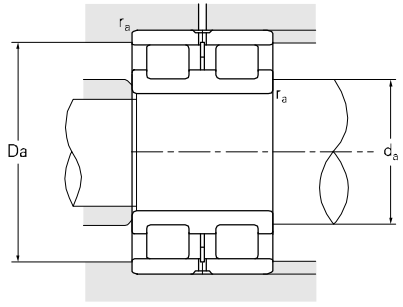




| Principal dimensions | | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1min}$ | $r_{min}$ | E | Cr | Cor | Grease | Oil |
| mm | | | | | | kN | | r/min | |
| **40** | 68 | 38 | 0.6 | 0.8*30* | 60.8 | 102 | 135 | 5840 | 7240 |
| | 68 | 38 | 1.0 | 0.8*30* | 60.8 | 102 | 135 | 5840 | 7240 |
| | 68 | 38 | 0.6 | 0.8*30* | 60.8 | 102 | 135 | 5840 | 7240 |
| **80** | 125 | 60 | 1.1 | 1.1 | 115.6 | 295 | 440 | 3000 | 3800 |
| **85** | 130 | 60 | 1.1 | 1.1 | 121.4 | 308 | 455 | 3000 | 3700 |
| **89** | 125 | 58 | 1.1 | 1.1 | 97.22 | 155 | 295 | 2900 | 3600 |
| **90** | 125 | 58 | 1.1 | 1.1 | 97.22 | 155 | 295 | 2900 | 3600 |
| | 140 | 67 | 1.5 | 1.5 | 130 | 360 | 550 | 2700 | 3350 |
| **110** | 170 | 80 | 2.0 | 2.0 | 154.5 | 500 | 800 | 2200 | 2700 |
| | 260 | 110 | 1.0 | 1.0 | 132 | 1010 | 1500 | 1580 | 1950 |
| **120** | 165 | 45 | 1.1 | 1.1 | 154.3 | 245 | 465 | 2140 | 2650 |
| **130** | 200 | 95 | 2.0 | 2.0 | 185 | 735 | 1200 | 1800 | 2240 |
| **140** | 210 | 95 | 2.0 | | 195.5 | 780 | 1320 | 1700 | 2100 |
| **180** | 250 | 69 | 2.0 | 2.0 | 231 | 570 | 1200 | 1300 | 1600 |
| **190** | 290 | 136 | 2.1 | 2.1 | 269.6 | 1420 | 2500 | 1130 | 1400 |
| **220** | 300 | 80 | 2.1 | 2.1 | 276.8 | 710 | 1570 | 950 | 1180 |
| **240** | 320 | 80 | 2.1 | 2.1 | 299.8 | 765 | 1800 | 930 | 1150 |
| **260** | 400 | 190 | 4 | 4 | 366.2 | 2750 | 5000 | 740 | 920 |
| **280** | 420 | 190 | 4 | 4 | 391.5 | 2810 | 5600 | 690 | 850 |
| | 420 | 190 | 4 | 4 | 391.5 | 2810 | 5600 | 690 | 850 |
| **300** | 380 | 80 | 2.1 | 2.1 | 358.5 | 850 | 2200 | 720 | 890 |

| Designations | Other dimensions | | | | Contact surface and chamfer dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|
| | d1 | D1 | b | k | $da_{min}$ | $Da_{max}$ | $ra_{max}$ | |
| | mm | | | | mm | | | kg |
| **NNF5008V** | 50.3 | | | | 44 | 63 | 0.6 | 0.553 |
| **NNCF5008V** | 50.3 | 57.3 | 7 | 3 | 44 | 63 | 1.0 | 0.553 |
| **NNF5008CV** | 50.4 | | 4.5 | 3 | 44 | 63 | 0.6 | 0.552 |
| **NNCF5016V** | 96.4 | 110.8 | 5 | 3.5 | 85 | 120 | 1.0 | 2.65 |
| **NNCF5017V/W33** | 99.5 | 115.2 | 4 | 2 | 91.5 | 123.5 | 1.0 | 2.73 |
| **NUCL6/89V/YA3DF** | | 111.6 | | | 96.5 | 118.5 | 1.0 | 1.87 |
| **NUCL3918X2V/YA3DF** | | 111.6 | | | 106.5 | 114 | 1.0 | 1.81 |
| **NNCF5018V** | 106.5 | 124 | | | 106.5 | 133.5 | 1.0 | 3.68 |
| **NNCF5022V** | 130 | | | | 116.5 | 164 | 1.0 | 6.49 |
| **NNFPL2422X3V/HAP59** | | 184 | | | 116.5 | 238 | 1 | 34 |
| **NNCL4924V/W33** | 135.5 | | 6 | 3.5 | 127 | 158 | 1 | 2.72 |
| **NNCF5026V** | 156.2 | 177.8 | 7 | 4 | 140 | 191 | 2.0 | 10.8 |
| **NNCF5028V** | 164.5 | 188.9 | | | 147 | 205 | 2.0 | 11.3 |
| **NNCF4936V** | 206 | 224 | 8.66 | 4 | 190 | 240 | 2.0 | 10.3 |
| **NNCF5038V** | 199 | 231 | 9.5 | 4 | 200 | 280 | 2.0 | 32.5 |
| **NNCF4944V/C3** | 248 | 269 | 9.3 | 4 | 231 | 319 | 2.0 | 16.8 |
| **NNC4948V/C3** | 273 | 292 | 8 | 4 | 251 | 309 | 2.0 | 18.3 |
| **FL-NNCF5052V/C3** | 304.6 | 351.8 | 9.4 | 5 | 276 | 384 | 3.0 | 85.0 |
| **NNCF5056V** | 323 | 375 | 9.4 | 5 | 296 | 403 | 3.0 | 89.4 |
| **NNCF5056V/YA2** | 323 | 375 | 9.4 | 5 | 296 | 403 | 3.0 | 89.4 |
| **NNCL4860V** | 327.5 | 351.5 | 12 | 5 | 312 | 369 | 2.0 | 21.0 |

d 300~670 mm

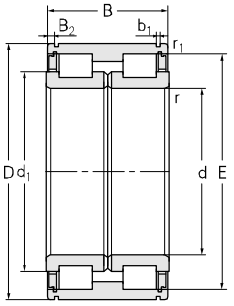


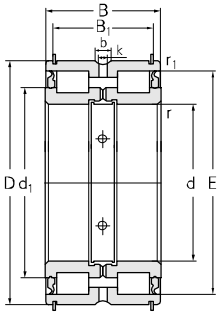



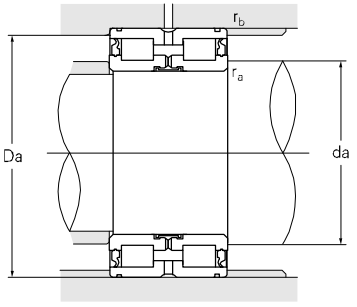

| Principal dimensions | | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1min}$ | $r_{min}$ | E | Cr | Cor | Grease | Oil |
| mm | | | | | | kN | | r/min | |
| **300** | 420 | 118 | 3.0 | 3.0 | 390.2 | 1445 | 3300 | 660 | 820 |
| **380** | 540 | 260 | 4.0 | 4.0 | 508 | 4150 | 9840 | 470 | 580 |
| **420** | 520 | 100 | 2.1 | 2.1 | 493 | 1675 | 4950 | 455 | 560 |
| **460** | 580 | 118 | 3.0 | 3.0 | 544 | 1740 | 5480 | 390 | 485 |
| **480** | 600 | 118 | 3.0 | 3.0 | 567 | 2000 | 5750 | 370 | 460 |
| | 650 | 170 | 5.0 | 5.0 | 605 | 3100 | 8000 | 370 | 460 |
| **500** | 670 | 170 | 5.0 | 5.0 | 554 | 2390 | 6870 | 335 | 415 |
| **560** | 820 | 258 | 6.0 | 6.0 | 762 | 6850 | 15600 | 260 | 320 |
| | 820 | 400 | 6.0 | 6.0 | 771 | 9810 | 23200 | 260 | 320 |
| **630** | 850 | 218 | 6.0 | 6.0 | 795 | 5270 | 14200 | 230 | 290 |
| **670** | 1090 | 412 | 7.5 | 7.5 | 774 | 13985 | 30720 | 175 | 220 |

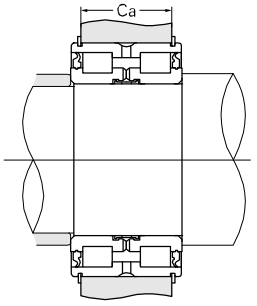
| Designations | Other dimensions | | | | Contact surface and chamfer dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|
| | d1 | D1 | b | k | $da_{min}$ | $Da_{max}$ | $ra_{max}$ | |
| | mm | | | | mm | | | kg |
| **NNCF4960V/C3** | 343 | 381 | | | 314 | 412 | 2.5 | 49.3 |
| **NNCL5076X3V/HCC9T** | 436 | | | | 396 | 524 | 3.0 | 154 |
| **NNCL4884V/C9W33X** | 456 | | 10 | 8 | 428 | 509 | 2.0 | 48.4 |
| **NNCS4892V/W33** | 506 | | 20.5 | 12 | 474 | 560 | 2.5 | 75.5 |
| **NNCS4896V/W33** | 529 | | 20.5 | 12 | 500 | 588 | 2.5 | 78.4 |
| **NNCF4996V** | 538 | 588 | | | 500 | 630 | 4.0 | 163 |
| **NNU49/500/W33** | | 607 | 22.3 | 12 | 520 | 650 | 4.0 | 174 |
| **NNCL40/560V/W33** | 652 | | 22.3 | 12 | 574 | 806 | 5.0 | 451 |
| **NNCL50/560X2V/HCC9T** | 651 | | | | 590 | 790 | 5.0 | 578 |
| **NNCL49/630V/W33** | 710 | | 22.3 | 12 | 646 | 826 | 5.0 | 351 |
| **NNU41/670/HCW33** | | 948 | 23.5 | 12 | 700 | 1060 | 6.0 | 1530 |

d 30~120 mm



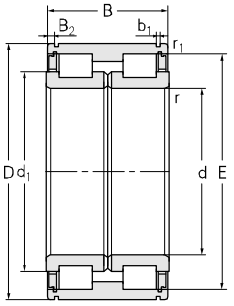



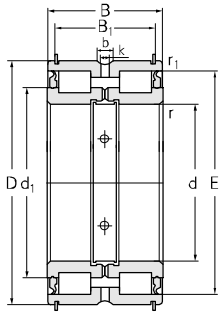



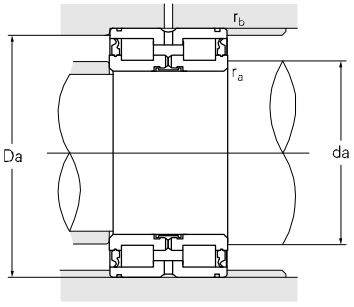

| Principal dimensions | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1min}$ | $r_{min}$ | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | kN | | r/min | | |
| **30** | 70 | 60 | 1.1 | 1.1 | | 154 | 232 | 6000 | 7500 | **NNUP6206X1V-2RS/HCO** |
| | 70 | 60 | 1.1 | 1.1 | | 154 | 232 | 6000 | 7500 | **NNUP6206X1V-2RS** |
| **40** | 68 | 38 | 0.6 | 0.8*30* | 60.8 | 86.0 | 129 | 5600 | 7000 | **NNF5008-2LSV** |
| | 68 | 38 | 0.6 | 0.8*30* | 62 | 81.0 | 118 | 5600 | 7000 | **NNF5008-2LSV/W33** |
| | 68 | 38 | 0.6 | 0.8*30* | 62 | 81.0 | 118 | 5600 | 7000 | **NNF5008-2LS1V/W33** |
| | 68 | 38 | 0.6 | 0.8*30* | 62 | 81.0 | 118 | 5600 | 7000 | **NNF5008-2LS1V** |
| | 80 | 40 | 0.5 | 1.5*30* | 62 | 99 | 154 | 5600 | 7000 | **NNF4208R-2LS1V** |
| **55** | 110 | 46 | 0.5 | 1.5*30* | 85.2 | 150 | 220 | 3800 | 4500 | **NNF4211X1R-2LS1V** |
| **65** | 100 | 46 | 0.6 | 1.0*30* | 90 | 137 | 244 | 3800 | 4500 | **NNF5013-2LSNRV** |
| **70** | 110 | 54 | 0.6 | 1.0*30* | 100 | 190 | 325 | 3500 | 4300 | **NNF5014-2LSNV** |
| | 110 | 54 | 0.6 | 1.0*30* | 100.2 | 200 | 350 | 3500 | 4300 | **NNF5014-2LSNRV** |
| | 110 | 54 | 0.6 | 1.0*30* | 100.2 | 190 | 325 | 3500 | 4300 | **NNF5014-2LS1NRV/DIN** |
| | 110 | 54 | 0.6 | 1.0*30* | 101.9 | 190 | 325 | 3500 | 4300 | **NNF5014-2LS1NV** |
| **75** | 115 | 54 | 0.6 | 1.0*30* | 106.2 | 210 | 380 | 3300 | 4000 | **NNF5015-2LS1V** |
| **80** | 125 | 60 | 0.6 | 1.5*30* | 115.6 | 251 | 428 | 3000 | 3700 | **NNF5016-2LSNRV** |
| **85** | 130 | 60 | 0.6 | 1.5*30* | 119.5 | 255 | 445 | 2900 | 3500 | **NNF5017-2LSNRV** |
| **90** | 140 | 67 | 0.6 | 1.5*30* | 127.2 | 303 | 568 | 2600 | 3200 | **NNF5018-2LSNRV-XG** |
| | 140 | 67 | 0.6 | 1.5*30* | 128.6 | 303 | 568 | 2600 | 3200 | **NNF5018-2LS1NV** |
| **100** | 150 | 67 | 1.0 | 1.0*30* | 138 | 320 | 590 | 2400 | 3000 | **NNF5020-2RSV** |
| **110** | 170 | 80 | 1.5 | 1.0*30* | 154 | 380 | 790 | 2100 | 2700 | **NNF5022-2LSV** |
| | 170 | 80 | 0.6 | 1.8*30* | 154.6 | 405 | 750 | 2100 | 2700 | **NNF5022-2LSNRV** |
| | 170 | 80 | 1.5 | 1.0*30* | 155.4 | 380 | 790 | 2100 | 2700 | **NNF5022-2LS1V** |
| | 170 | 80 | 0.6 | 1.0*30* | 155.4 | 405 | 750 | 2100 | 2700 | **NNF5022-2LS1NRV** |
| **120** | 180 | 80 | 0.6 | 1.8*30* | 164 | 445 | 885 | 2000 | 2500 | **NNF5024-2LSNV** |
| | 180 | 80 | 0.6 | 1.8*30* | 164.5 | 430 | 830 | 2000 | 2500 | **NNF5024-2LSNRV** |

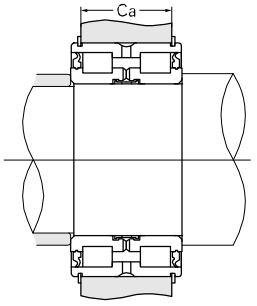
| Other dimensions | | | Contact surface and chamfer dimensions | | | | Dimensions related to snap ring | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d1 | b | k | $da_{min}$ | $Da_{max}$ | $ra_{max}$ | $rb_{max}$ | B1 | B2 | b1 | Ca | |
| mm | | | mm | | | | mm | | | | kg |
| 43 | | | 50 | 62 | 1.0 | 1.0 | | | | | 1.31 |
| 43 | | | 50 | 62 | 1.0 | 1.0 | | | | | 1.31 |
| 50.3 | | | 44 | 63 | 0.8 | 0.5 | | | | | 0.553 |
| 50.3 | 4.5 | 3 | 44 | 63 | 0.8 | 0.5 | | | | | 0.583 |
| 50.3 | 4.5 | 3 | 44 | 63 | 0.8 | 0.5 | | | | | 0.583 |
| 50.3 | | | 44 | 63 | 0.8 | 0.5 | | | | | 0.583 |
| 50.3 | | | 45 | 73 | 1.5 | 0.5 | | | | | 1.16 |
| 69 | | | 60 | 102 | 1.5 | 0.5 | | | | | 2.54 |
| 77.2 | | | 73 | 94 | 1.0 | 0.5 | 40.2 | 2.4 | 3.2 | 35 | 1.35 |
| 85 | | | 75 | 105 | 1.0 | 0.5 | 48.2 | 2.4 | 4.2 | 42 | 1.85 |
| 84.2 | 7.2 | 3.5 | 75 | 105 | 1.0 | 0.5 | 48.2 | 2.4 | 4.2 | 42 | 1.90 |
| 84.2 | | | 75 | 105 | 1.0 | 0.5 | 48 | 2.5 | 4.2 | 40 | 1.99 |
| 85 | | | 75 | 105 | 1.0 | 0.5 | 48.2 | 2.4 | 4.2 | 42 | 1.85 |
| 91.2 | | | 82 | 110 | 1.0 | 0.5 | | | | | 2.06 |
| 97.5 | | | 88 | 120 | 1.5 | 0.5 | 54.2 | 2.4 | 4.2 | 49 | 2.81 |
| 102.5 | 7.2 | 3 | 92 | 125 | 1.5 | 0.5 | 54.2 | 2.4 | 4.2 | 49 | 2.88 |
| 108.6 | 7.2 | 3.5 | 98 | 134 | 1.5 | 0.5 | 59 | 3.5 | 4.2 | 54 | 3.76 |
| 108.6 | | | | | 1.5 | 0.5 | 59 | 3.5 | 2.7 | | 3.99 |
| 118 | | | 106 | 145 | 1.0 | 0.5 | | | | | 3.99 |
| 131 | | | 117 | 165 | 1.0 | 1.5 | | | | | 6.93 |
| 131 | 7.2 | 3.5 | 117 | 165 | 1.8 | 0.5 | 70.2 | 4.4 | 4.2 | 65 | 6.63 |
| 131 | | | 117 | 165 | 1.0 | 1.5 | | | | | 6.93 |
| | | | 117 | 165 | 1.0 | 0.5 | 70 | 4.5 | 4.2 | 62 | 6.63 |
| 141 | | | 127 | 175 | 1.8 | 0.5 | 74 | 4.0 | 3.2 | | 7.41 |
| 141 | 7.2 | 3.5 | 127 | 175 | 1.8 | 0.5 | 71.2 | 3.9 | 4.2 | 65 | 7.08 |

d 120~240 mm



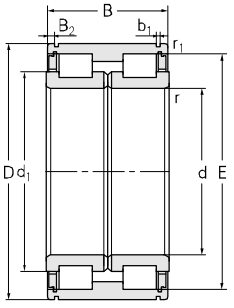



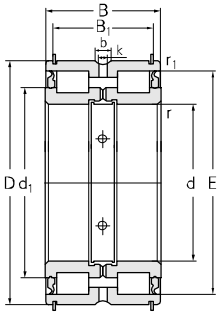



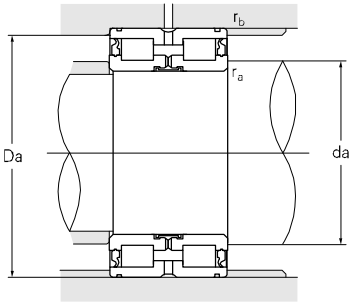



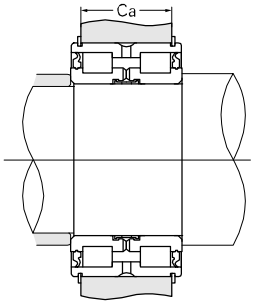

| Principal dimensions | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1min}$ | $r_{min}$ | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | kN | | r/min | | |
| **120** | 180 | 80 | 0.6 | 1.8*30* | 164.5 | 430 | 830 | 2000 | 2500 | **NNF5024-2LSNRV/YA1** |
| | 180 | 80 | 0.6 | 1.8*30* | 165.4 | 445 | 885 | 2000 | 2500 | **NNF5024-2LS1NV** |
| | 215 | 80 | 0.6 | 1.8*30* | 189 | 515 | 850 | 1600 | 2100 | **NNF5024X1-2LSV** |
| **130** | 200 | 94 | 1.0 | 1.8*30* | 185.2 | 540 | 1000 | 1800 | 2200 | **NNF5026-2LSNRV** |
| | 200 | 95 | 1.0 | 1.8*30* | 185.2 | 540 | 1000 | 1800 | 2200 | **NNF5026-LS1NRV** |
| | 200 | 95 | 1.0 | 1.8*30* | 186.6 | 540 | 1000 | 1800 | 2200 | **NNF5026-2LS1NRV** |
| **140** | 190 | 150 | 1.5 | 1.5 | 176.5 | 280 | 550 | 1800 | 2200 | **NNCD4928V-2RS** |
| | 200 | 80 | 0.6 | 1.8*30* | 183.2 | 470 | 960 | 1700 | 2100 | **NNF4028X2-2LSNRV** |
| | 210 | 95 | 0.6 | 1.8*30* | 191.3 | 610 | 1100 | 1600 | 2000 | **NNF5028-2LSNRV** |
| **150** | 210 | 80 | 0.6 | 1.8*30* | 193.3 | 490 | 1100 | 1600 | 2000 | **NNF5930-2LSNRV** |
| | 225 | 100 | 0.6 | 2*30* | 207.5 | 710 | 1400 | 1500 | 1900 | **NNF5030-2LSNRV** |
| **160** | 240 | 109 | 0.6 | 2*30* | 222.6 | 835 | 1680 | 1400 | 1700 | **NNF5032-2LSNRV** |
| | 240 | 109 | 1.1 | 2*30* | 224 | 835 | 1680 | 1400 | 1700 | **NNF5032-2LS1NRV/YB2** |
| | 240 | 109 | 0.6 | 2*30* | 224 | 835 | 1680 | 1400 | 1700 | **NNF5032-2LS1NRV/DIN** |
| | 240 | 109 | 0.6 | 2*30* | 224 | 835 | 1680 | 1400 | 1700 | **NNF5032-2LS1NRV** |
| | 240 | 109 | 1.1 | 2*30* | 222.6 | 835 | 1680 | 1400 | 1700 | **NNF5032-2LSNRV/YB2** |
| **170** | 230 | 80 | 0.6 | 1.8*30* | 216.2 | 520 | 1170 | 1400 | 1700 | **NNF5934-2LSNRV** |
| | 260 | 122 | 0.6 | 2*30* | 239 | 1010 | 1990 | 1300 | 1600 | **NNF5034-2RSV** |
| | 260 | 122 | 0.6 | 2*30* | 239 | 1010 | 1990 | 1300 | 1600 | **NNF5034-2RSNV** |
| | 260 | 122 | 0.6 | 2*30* | 239 | 1010 | 1990 | 1300 | 1600 | **NNF5034-2LSNRV** |
| | 260 | 122 | 0.6 | 2*30* | 239 | 1010 | 1990 | 1300 | 1600 | **NNF5034-2LSNRV-1** |
| **180** | 280 | 135 | 0.6 | 2*30* | 254 | 1140 | 2380 | 1200 | 1400 | **NNF5036-2LSNRV** |
| | 280 | 135 | 2.1 | 2*30* | 254 | 1140 | 2380 | 1200 | 1400 | **NNF5036-2LSV** |
| | 280 | 136 | 2.1 | 2*30* | 255.5 | 600 | 2380 | 1200 | 1400 | **NNF5036-2LS1V** |
| | 280 | 136 | 0.6 | 2*30* | 255.5 | 660 | 2380 | 1200 | 1400 | **NNF5036-2LS1NRV/DIN** |
| | 280 | 136 | 0.6 | 2*30* | 255.5 | 660 | 2380 | 1200 | 1400 | **NNF5036-2LS1NRV** |
| **200** | 270 | 80 | 0.6 | 1.8*30* | 251 | 590 | 1380 | 1100 | 1400 | **NNF4940X1-2LSNRV** |
| **240** | 360 | 160 | 1.1 | 2*30* | 329.5 | 1580 | 3850 | 1000 | 1300 | **NNF5048-2LS1NRV/DIN** |

| Other dimensions | | | Contact surface and chamfer dimensions | | | | Dimensions related to snap ring | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d1 | b | k | $da_{min}$ | $Da_{max}$ | $ra_{max}$ | $rb_{max}$ | B1 | B2 | b1 | Ca | |
| mm | | | mm | | | | mm | | | | kg |
| 141 | 7.2 | 3.5 | 127 | 175 | 1.8 | 0.5 | 71.2 | 3.9 | 4.2 | 63 | 7.08 |
| 141 | | | 127 | 175 | 1.8 | 0.5 | 71 | 4.0 | 3.2 | | 7.41 |
| 156 | 7.2 | 3.5 | 127 | 208 | 1.8 | 0.5 | | | | | 12.5 |
| 158 | | | 137 | 195 | 1.8 | 1.0 | 83 | 5.5 | 3.2 | 77 | 11.1 |
| 158 | | | 137 | 195 | 1.8 | 1.0 | 83 | 5.5 | 3.2 | 77 | 10.8 |
| 158 | | | 137 | 195 | 1.8 | 1.0 | 83 | 5.5 | 3.2 | 77 | 11.1 |
| 159.5 | | | 150 | 180 | 1.5 | 1.5 | | | | | 4.03 |
| 159.6 | 7.2 | 3.5 | 147 | 194 | 1.8 | 0.5 | 71.2 | 3.9 | 4.2 | 65 | 8.17 |
| 166 | 7.2 | 3.5 | 147 | 204 | 1.8 | 0.5 | 83.2 | 5.4 | 5.2 | 77 | 11.7 |
| 171.3 | 7.2 | 3.5 | 159 | 204 | 1.8 | 0.5 | 71.2 | 3.9 | 5.2 | 65 | 8.6 |
| 177.5 | 9.3 | 4.5 | 159 | 218 | 2.0 | 0.5 | 87.2 | 5.9 | 5.2 | 81 | 13.7 |
| 191 | | | 167 | 235 | 2.0 | 0.5 | 96 | 6.0 | 6.0 | 86 | 18.8 |
| 191 | | | 167 | 232 | 2.0 | 1.0 | 95 | 6.5 | 4.0 | 89 | 18.4 |
| 191 | | | 167 | 235 | 2.0 | 0.5 | 95.2 | 6.4 | 5.2 | 85.2 | 18.8 |
| 191 | | | 167 | 235 | 2.0 | 0.5 | 96 | 6.0 | 6.0 | 86 | 18.8 |
| 191 | | | 167 | 232 | 2.0 | 1.0 | 95 | 6.5 | 4.0 | 89 | 18.4 |
| 192.2 | 7.2 | 3.5 | 178 | 224 | 1.8 | 0.5 | 71.2 | 3.9 | 5.2 | 65 | 9.42 |
| 203 | | | 177 | 255 | 2.0 | 0.5 | | | | | 23.5 |
| 203 | | | 177 | 255 | 2.0 | 0.5 | 107.2 | 6.9 | 5.2 | 99 | 23.5 |
| 203 | 12 | 6 | 177 | 255 | 2.0 | 0.5 | 107.2 | 6.9 | 5.2 | 99 | 23.5 |
| 203 | | | 177 | 255 | 2.0 | 0.5 | 107.2 | 6.9 | 5.2 | 99 | 24.5 |
| 218 | | | 191 | 272 | 2.0 | 0.5 | 118.2 | 8.4 | 5.2 | 110 | 33.3 |
| 218 | | | 191 | 269 | 2.0 | 2.0 | | | | | 32.5 |
| 218 | | | 191 | 269 | 2.0 | 2.0 | | | | | 32.5 |
| 218 | | | 191 | 272 | 2.0 | 0.5 | 118.2 | 8.4 | 5.2 | 108.2 | 33.5 |
| 218 | | | 191 | 272 | 2.0 | 0.5 | 118.2 | 8.4 | 5.2 | 110 | 33.3 |
| 225 | 7.2 | 3.5 | 208 | 264 | 1.8 | 0.5 | 73.2 | 2.9 | 5.2 | 65 | 13.6 |
| 279.5 | | | 248 | 352 | 2.0 | 1.0 | 138.2 | 10.4 | 6.3 | 126 | 60.7 |



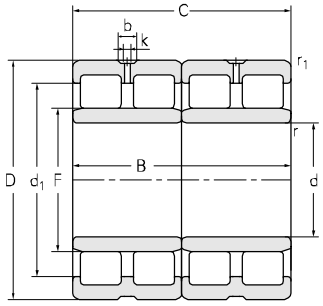



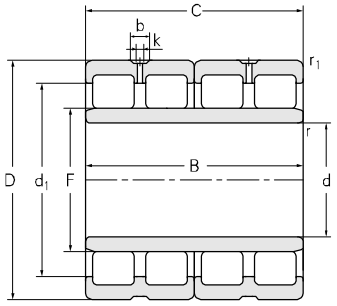




| Principal dimensions | | | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{1min}$ | $r_{min}$ | E | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | | | kN | | r/min | | |
| **240** | 360 | 160 | 1.1 | 2*30* | 329.5 | 1580 | 3850 | 1000 | 1300 | **NNF5048-2LS1NRV** |
| **260** | 400 | 190 | 1.1 | 3*30* | 362.5 | 2180 | 4800 | 740 | 920 | **NNF5052-2LS1NRV** |
| **280** | 420 | 190 | 1.5 | 2*30* | 384 | 2050 | 4910 | 680 | 840 | **NNF5056-2LS1NRV** |

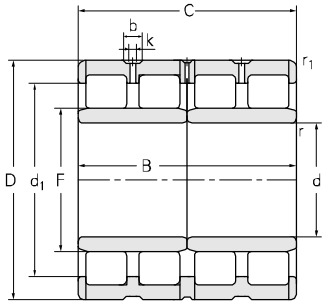
| Other dimensions | | | Contact surface and chamfer dimensions | | | | Dimensions related to snap ring | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d1 | b | k | $da_{min}$ | $Da_{max}$ | $ra_{max}$ | $rb_{max}$ | B1 | B2 | b1 | Ca | |
| mm | | | mm | | | | mm | | | | kg |
| 279.5 | | | 248 | 352 | 2.0 | 1.0 | 142.6 | 8.2 | 6.3 | 130 | 60.7 |
| 309 | | | 275 | 392 | 3.0 | 1.0 | 168 | 10.5 | 8.1 | 154 | 92.4 |
| 326 | | | 288 | 410 | 2.0 | 1.5 | 168.2 | 10.4 | 8.1 | 154 | 95.8 |



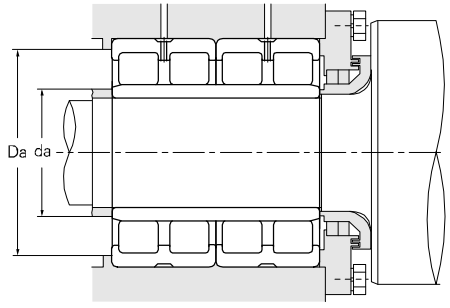

FCD type




FC type

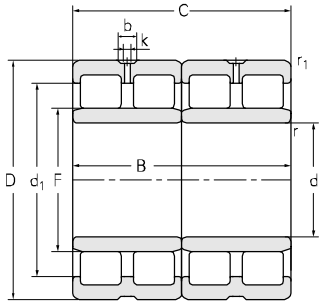



FCDP type

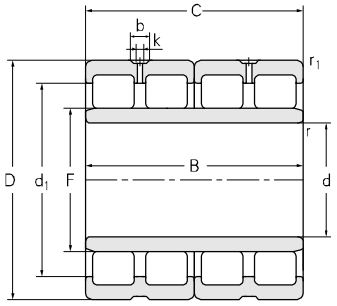



| Principal dimensions | | | | | | | Basic load ratings | |
|---|---|---|---|---|---|---|---|---|
| d | D | B | C | $r_{1min}$ | $r_{min}$ | F | Cr | Cor |
| mm | | | | | | | kN | |
| **90** | 140 | 70 | 70 | 1.5 | 1.1 | 105 | 253 | 425 |
| | 140 | 70 | 70 | 1.1 | 1.5 | 105 | 275 | 425 |
| | 140 | 70 | 70 | 1.1 | 1.5 | 105 | 250 | 425 |
| **100** | 140 | 70 | 70 | 1.5 | 1.1 | 111 | 209 | 435 |
| | 140 | 70 | 70 | 1.5 | 1.1 | 111 | 228 | 435 |
| | 140 | 70 | 70 | 1.1 | 1.5 | 111 | 209 | 435 |
| | 140 | 70 | 70 | 1.1 | 1.5 | 111 | 210 | 435 |
| | 140 | 104 | 104 | 1.5 | 1.1 | 111 | 330 | 775 |
| | 140 | 104 | 104 | 1.1 | 1.5 | 111 | 396 | 870 |
| | 140 | 104 | 104 | 1.1 | 1.5 | 111 | 330 | 775 |
| | 140 | 104 | 104 | 1.5 | 1.1 | 111 | 360 | 870 |
| | 150 | 106 | 106 | 1.1 | 1.5 | 113 | 425 | 890 |
| | 150 | 106 | 106 | 1.1 | 1.5 | 113 | 425 | 890 |
| **110** | 170 | 120 | 120 | 2 | 2 | 127 | 583 | 1110 |
| | 170 | 120 | 120 | 2 | 2 | 127 | 534 | 1110 |
| | 170 | 120 | 120 | 2 | 2 | 127 | 530 | 1110 |
| **119.5** | 215 | 126 | 126 | 2 | 2 | 147 | 755 | 1350 |
| **120** | 165 | 90 | 90 | 1.5 | 1.5 | 132 | 400 | 860 |
| | 180 | 105 | 105 | 2 | 2 | 135 | 413 | 770 |
| | 180 | 105 | 105 | 2 | 2 | 135 | 561 | 1100 |
| | 180 | 105 | 105 | 2 | 2 | 135 | 410 | 770 |
| **130** | 200 | 125 | 125 | 2 | 2 | 149 | 583 | 1200 |
| | 200 | 125 | 125 | 2 | 2 | 149 | 638 | 1200 |
| | 200 | 125 | 125 | 2 | 2 | 149 | 580 | 1200 |
| **140** | 210 | 125 | 125 | 2 | 2 | 158 | 594 | 1160 |
| | 210 | 125 | 125 | 2 | 2 | 158 | 594 | 1050 |
| | 210 | 125 | 125 | 2 | 2 | 158 | 590 | 1160 |
| | 210 | 125 | 125 | 2 | 2 | 158 | 594 | 1050 |
| | 210 | 155 | 155 | 2 | 2 | 166 | 693 | 1610 |
| | 210 | 155 | 155 | 2 | 2 | 166 | 720 | 1680 |

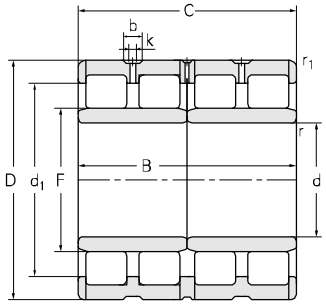
| Designations | Abutment and fillet dimensions | | | | | Weight |
|---|---|---|---|---|---|---|
| | $D1_{min}$ | $b_{max}$ | $k_{max}$ | Da | da | |
| | mm | | | | | kg |
| **FC182870** | 123 | 6.5 | 4 | 129 | 97 | 3.78 |
| **FC182870A** | 122.6 | 6.5 | 4 | 129 | 97 | 3.78 |
| **FC182870S** | 123 | 6.5 | 4 | 129 | 97 | 3.78 |
| **FC202870/YA3** | 125.4 | | | 129 | 106 | 3.10 |
| **NNQD6920X2/YB3** | 125.9 | | | 129 | 106 | 3.08 |
| **FC202870A/YA3** | 125.4 | | | 129 | 107 | 3.62 |
| **FC202870S/YA3** | 125.4 | | | 129 | 107 | 3.1 |
| **FC2028104** | 125.4 | 8 | 4 | 129 | 106 | 4.99 |
| **FC2028104A** | 125.4 | 8 | 4 | 129 | 107 | 4.99 |
| **FC2028104S** | 125.4 | 8 | 4 | 129 | 107 | 4.99 |
| **FCD2028104** | 125.4 | 8 | 4 | 129 | 106 | 4.99 |
| **FC2030106** | 132 | 8 | 4 | 140 | 107 | 6.67 |
| **FCD2030106/C9YB2** | 132 | 8 | 4 | 140 | 107 | 6.63 |
| **FC2234120A** | 149 | 6.5 | 4 | 158 | 118 | 10.1 |
| **FC2234120** | 149 | 6.5 | 4 | 158 | 118 | 10.1 |
| **FC2234120S** | 149 | 6.5 | 4 | 158 | 118 | 10.1 |
| **FC2443126X4ZW-XF** | 183.6 | 9 | 4 | 203 | 128 | 19.6 |
| **FC243390/YA34** | 151.2 | | | 154 | 126 | 5.59 |
| **FC2436105** | 160 | 6.5 | 4 | 168 | 128 | 9.13 |
| **FC2436105A** | 159 | 6.5 | 4 | 168 | 128 | 9.13 |
| **FC2436105S** | 160 | 6.5 | 4 | 168 | 128 | 9.13 |
| **FC2640125** | 174 | 6.5 | 4 | 188 | 138 | 14.6 |
| **FC2640125A** | 174 | 6.5 | 4 | 188 | 138 | 14.6 |
| **FC2640125S** | 174 | 6.5 | 4 | 188 | 138 | 14.6 |
| **FC2842125** | 188 | 9.5 | 5 | 198 | 148 | 14.7 |
| **FC2842125A** | 186.8 | 9.5 | 5 | 198 | 148 | 14.7 |
| **FC2842125S** | 188 | 9.5 | 5 | 198 | 148 | 14.7 |
| **FC2842125AF3** | 186.8 | 9.5 | 5 | 198 | 148 | 14.6 |
| **FC2842155K/C9YA3** | 190.9 | | | 198 | 148 | 18.1 |
| **FC2842155SK/C9YA3** | 190.9 | | | 198 | 148 | 18.1 |



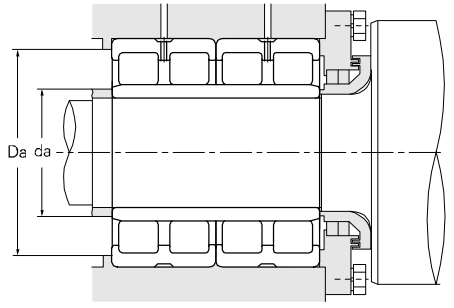

FCD type




FC type

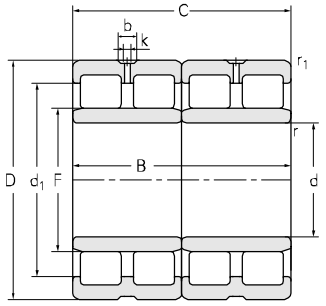



FCDP type

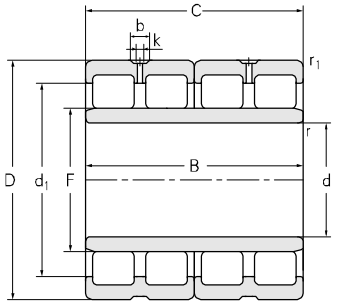



| Principal dimensions | | | | | | | Basic load ratings | |
|---|---|---|---|---|---|---|---|---|
| d | D | B | C | $r_{1min}$ | $r_{min}$ | F | Cr | Cor |
| mm | | | | | | | kN | |
| **145** | 210 | 155 | 155 | 2 | 2 | 166 | 752 | 1610 |
| | 210 | 155 | 155 | 2 | 2 | 166 | 754 | 1800 |
| | 210 | 155 | 155 | 2 | 2 | 166 | 690 | 1610 |
| | 210 | 155 | 155 | 1.1 | 1.1 | 166 | 752 | 1610 |
| | 225 | 156 | 156 | 2 | 2 | 169 | 913 | 1800 |
| | 225 | 156 | 156 | 2 | 2 | 169 | 913 | 1800 |
| **150** | 210 | 120 | 120 | 2 | 2 | 166 | 570 | 1320 |
| | 225 | 120 | 120 | 2 | 2 | 169 | 710 | 1450 |
| | 225 | 120 | 120 | 2 | 2 | 169 | 809 | 1620 |
| | 225 | 120 | 120 | 2 | 2 | 169 | 781 | 1450 |
| | 225 | 120 | 120 | 2 | 2 | 169 | 710 | 1450 |
| | 225 | 120 | 120 | 2 | 2 | 169 | 710 | 1450 |
| | 225 | 150 | 150 | 2 | 2 | 169 | 900 | 1950 |
| | 225 | 120 | 120 | 2 | 2 | 169 | 710 | 1450 |
| | 230 | 156 | 156 | 2 | 2 | 174 | 852 | 1790 |
| | 230 | 156 | 156 | 2 | 2 | 174 | 1010 | 2090 |
| **160** | 230 | 130 | 130 | 1.5 | 1.5 | 180 | 742 | 1705 |
| | 230 | 130 | 130 | 1.5 | 1.5 | 180 | 770 | 1620 |
| | 230 | 130 | 130 | 1.5 | 1.5 | 180 | 680 | 1380 |
| | 230 | 130 | 130 | 1.5 | 1.5 | 180 | 660 | 1560 |
| | 230 | 168 | 168 | 2.1 | 2.1 | 180 | 852 | 2170 |
| | 230 | 168 | 168 | 2.1 | 2.1 | 180 | 897 | 2200 |
| | 230 | 168 | 168 | 2.1 | 2.1 | 180 | 900 | 2200 |
| | 230 | 168 | 168 | 2.1 | 2.1 | 179 | 940 | 2250 |
| | 230 | 168 | 168 | 2 | 1.1 | 182 | 855 | 2180 |
| | 240 | 124 | 124 | 2.1 | 2.1 | 183 | 810 | 1530 |
| | 240 | 124 | 124 | 2.1 | 2.1 | 183 | 810 | 1530 |
| | 240 | 124 | 124 | 2.1 | 2.1 | 183 | 810 | 1530 |
| | 240 | 124 | 124 | 2.1 | 2.1 | 183 | 810 | 1530 |
| | 240 | 124 | 124 | 2.1 | 2.1 | 183 | 810 | 1530 |
| | 240 | 124 | 124 | 2.1 | 2.1 | 183 | 760 | 1530 |
| | 240 | 124 | 124 | 2.1 | 2.1 | 183 | 760 | 1530 |
| | 240 | 124 | 124 | 2.1 | 2.1 | 183 | 685 | 1530 |
| | 240 | 124 | 124 | 2.1 | 2.1 | 183 | 685 | 1530 |

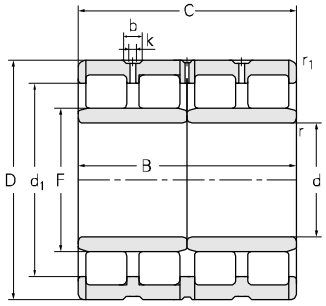
| Designations | Abutment and fillet dimensions | | | | | Weight |
|---|---|---|---|---|---|---|
| | $D1_{min}$ | $b_{max}$ | $k_{max}$ | Da | da | |
| | mm | | | | | kg |
| **FC2942155/YA3** | 190.9 | | | 198 | 153 | 18.3 |
| **FC2942155A/YA3** | 190 | | | 198 | 153 | 18 |
| **FC2942155S/YA3** | 190.9 | | | 198 | 153 | 18.3 |
| **FC2942155** | 190.9 | | | 200 | 151 | 18.3 |
| **FC2945156/C3** | 197.8 | 9.5 | 5 | 213 | 153 | 23.6 |
| **FC2945156/YA3** | 197.8 | 9.5 | 5 | 213 | 153 | 23.6 |
| **FC3042120/YA3** | 188.5 | 8.1 | 4 | 198 | 158 | 12.9 |
| **FC3045120** | 200 | 9 | 4 | 213 | 158 | 16.7 |
| **FC3045120ZW/C9** | 202.4 | 9 | 4 | 213 | 158 | 17.9 |
| **FC3045120A** | 199.4 | 9 | 4 | 213 | 158 | 16.7 |
| **FC3045120S** | 200 | 9 | 4 | 213 | 158 | 16.7 |
| **FC3045120A/YA3** | 199.4 | 9 | 4 | 213 | 158 | 16.7 |
| **FC3045150/HCYA34** | 199.4 | 9.5 | 4 | 213 | 158 | 20.9 |
| **FCD3045120** | 199.4 | 9 | 4 | 213 | 158 | 16.6 |
| **FC3046156** | 204 | 9.5 | 5 | 218 | 158 | 23.6 |
| **FC3046156A** | 202.8 | 9.5 | 5 | 218 | 158 | 23.6 |
| **FC3246130** | 210 | | | 219 | 167 | 16.9 |
| **FC3246130A/YA3** | 210 | | | 219 | 167 | 17.3 |
| **FC3246130S** | 210 | | | 219 | 167 | 16.9 |
| **FC3246130/YA5** | 204 | 9 | 4 | 219 | 167 | 18.1 |
| **FC3246168/YA3** | 206.6 | | | 218 | 168 | 22.1 |
| **FC3246168A/YA3** | 205.6 | | | 218 | 168 | 22.3 |
| **FC3246168/W33AYA3** | 205.6 | 9.5 | 4 | 218 | 168 | 22.3 |
| **FC3246168/YA34** | 204 | | | 218 | 168 | 23.4 |
| **FC3246168F3/C9YAD** | 207 | | | 218 | 168 | 23.5 |
| **FC3248124/C9** | 216 | 9 | 4 | 228 | 168 | 20.3 |
| **FC3248124** | 216 | 9 | 4 | 228 | 168 | 20.3 |
| **FC3248124A** | 215 | 9 | 4 | 228 | 168 | 20.3 |
| **FC3248124A/YA31** | 215 | 9 | 4 | 228 | 168 | 20.2 |
| **FC3248124/YA31** | 215 | 9 | 4 | 228 | 168 | 20.2 |
| **FC3248124S/YA31** | 216 | 9 | 4 | 228 | 168 | 20.2 |
| **FC3248124S** | 216 | 9 | 4 | 228 | 168 | 20.3 |
| **FC3248124A/YA3** | 215 | 9 | 4 | 228 | 168 | 20.3 |
| **FC3248124AF3** | 215 | 9 | 4 | 228 | 168 | 20.1 |



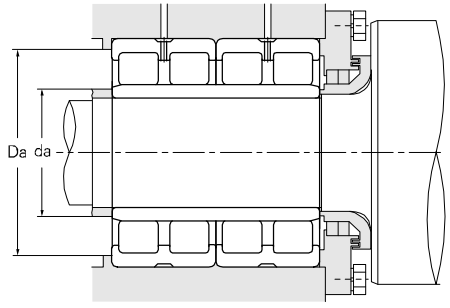

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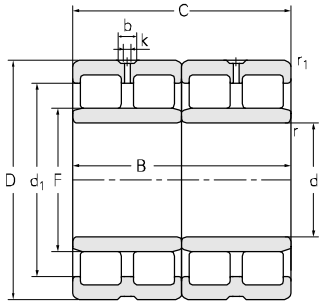

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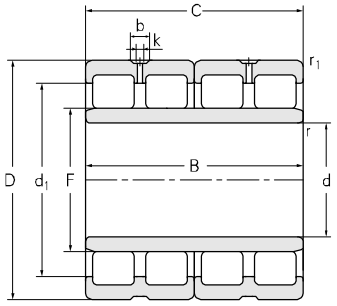

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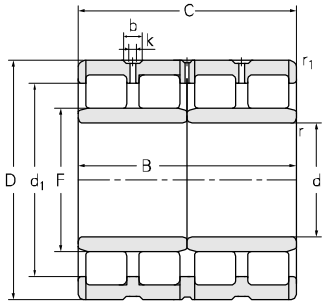

| Principal dimensions | | | | | | | Basic load ratings | | Designations | Abutment and fillet dimensions | | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | C | $r_{1min}$ | $r_{min}$ | F | Cr | Cor | | D1min | bmax | kmax | Da | da | |
| mm | | | | | | | kN | | | mm | | | | | kg |
| **160** | 240 | 168 | 168 | 2.1 | 2.1 | 183 | 1060 | 2350 | **FC3248168** | 216 | 10 | 5 | 228 | 168 | 26.4 |
| | 240 | 168 | 168 | 2.1 | 2.1 | 183 | 1060 | 2350 | **FC3248168S** | 216 | 10 | 5 | 228 | 168 | 26.4 |
| | 240 | 168 | 168 | 2.1 | 2.1 | 183 | 1240 | 2560 | **NNQD6032X2/C4** | 215 | | | 228 | 168 | 28.1 |
| | 240 | 168 | 168 | 2.1 | 2.1 | 183 | 1060 | 2350 | **FC3248168A** | 215 | 10 | 5 | 228 | 168 | 26.4 |
| **165.1** | 225.425 | 168.275 | 168.275 | 1.5 | 1.5 | 181 | 950 | 1950 | **FCD3345168X4/YA3** | 205 | | | 214 | 172 | 19.7 |
| **170** | 230 | 160 | 160 | 2 | 2 | 185.5 | 1210 | 2360 | **FCD3446160** | 211.5 | 7.5 | 3 | 218 | 178 | 20.0 |
| | 230 | 160 | 160 | 2 | 2 | 185.5 | 1100 | 2360 | **FCD3446160AF3** | 211.1 | 7.5 | 3 | 218 | 178 | 18.6 |
| | 230 | 160 | 160 | 2 | 2 | 185.5 | 935 | 2360 | **FCD3446160S** | 211.5 | 7.5 | 3 | 218 | 178 | 20.0 |
| | 230 | 160 | 160 | 2 | 2 | 185.5 | 950 | 2390 | **FC3446160/YA34/W281** | 211.1 | 7.5 | 3 | 218 | 178 | 20.1 |
| | 230 | 160 | 160 | 2 | 2 | 185.5 | 950 | 2390 | **FC3446160/YA34** | 211.1 | 7.5 | 3 | 218 | 178 | 20.1 |
| | 230 | 180 | 180 | 2 | 2 | 186 | 1010 | 2720 | **FC3446180/YAD** | 210 | 8 | 3 | 218 | 178 | 21.7 |
| | 230 | 180 | 180 | 2 | 2 | 186 | 1010 | 2720 | **FC3446180/YA4** | 210 | 8 | 3 | 218 | 178 | 21.7 |
| | 240 | 170 | 170 | 2.1 | 2.1 | 189 | 940 | 2390 | **FC3448170/YAD** | 215 | 10 | 6 | 228 | 178 | 24.7 |
| | 240 | 170 | 170 | 2.1 | 2.1 | 189 | 940 | 2390 | **FC3448170/YA3** | 215 | 10 | 6 | 228 | 178 | 24.7 |
| | 250 | 170 | 170 | 2.1 | 2.1 | 192 | 1280 | 2500 | **FC3450170** | 225 | 12 | 6 | 238 | 178 | 28.5 |
| | 250 | 170 | 170 | 2.1 | 2.1 | 192 | 1100 | 2570 | **FC3450170AF3** | 224 | 12 | 6 | 238 | 178 | 28.5 |
| | 250 | 170 | 170 | 2.1 | 2.1 | 192 | 1090 | 2500 | **FC3450170S** | 225 | 12 | 6 | 238 | 178 | 28.5 |
| | 250 | 170 | 170 | 2.1 | 2.1 | 192 | 1280 | 2590 | **FC3450170Q1/HG2YA4** | 225 | 9.5 | 5 | 238 | 178 | 28.9 |
| | 250 | 170 | 170 | 2.1 | 2.1 | 192 | 1380 | 2550 | **FC3450170A** | 224 | 12 | 6 | 238 | 178 | 28.8 |
| | 260 | 120 | 120 | 2.1 | 2.1 | 195 | 867 | 1790 | **FC3452120** | 228 | 9.5 | 5 | 246 | 178 | 24.6 |
| | 260 | 120 | 120 | 2.1 | 2.1 | 195 | 867 | 1790 | **FC3452120A** | 227 | 9.5 | 5 | 247 | 178 | 24.6 |
| | 260 | 120 | 120 | 2.1 | 2.1 | 195 | 840 | 1790 | **FC3452120S** | 228 | 9.5 | 5 | 246 | 178 | 24.6 |
| | 260 | 150 | 150 | 2.1 | 2.1 | 195 | 1000 | 2240 | **FC3452150** | 227 | 9.5 | 5 | 247 | 178 | 29.7 |
| **180** | 250 | 133 | 133 | 2 | 2 | 234 | 1050 | 1870 | **NNQ6936X2V/YA7** | 234 | 12 | 6 | 238 | 190 | 18.2 |
| | 250 | 156 | 156 | 2.1 | 2.1 | 200 | 1210 | 1770 | **FC3650156/C4YA4** | 226 | 9.5 | 6.5 | 238 | 188 | 22.7 |
| | 250 | 156 | 156 | 2 | 2 | 200 | 1210 | 2315 | **FC3650156/YA34** | 226.8 | | | 238 | 188 | 23.9 |
| | 250 | 156 | 156 | 2.1 | 2.1 | 200 | 740 | 1770 | **FC3650156** | 226 | 9.5 | 6.5 | 238 | 188 | 22.7 |
| | 250 | 156 | 156 | 2 | 2 | 198 | 785 | 1950 | **FC3650156/YA3-1** | 226.8 | 9.5 | 5 | 238 | 188 | 23.6 |
| | 250 | 156 | 156 | 2 | 2 | 198 | 1220 | 1950 | **FC3650156/YA3** | 226.8 | | | 244 | 188 | 23.7 |
| | 260 | 124 | 124 | 2.1 | 2.1 | 202 | 809 | 1730 | **FC3652124** | 234.8 | 9.5 | 5 | 248 | 188 | 21.7 |
| | 260 | 124 | 124 | 2.1 | 2.1 | 202 | 810 | 1730 | **FC3652124S** | 234.8 | 9.5 | 5 | 248 | 188 | 21.7 |
| | 260 | 168 | 168 | 2.1 | 2.1 | 202 | 1180 | 2790 | **FC3652168** | 234.8 | 12 | 6 | 248 | 188 | 30.2 |
| | 260 | 168 | 168 | 2.1 | 2.1 | 202 | 1180 | 2790 | **FC3652168/YA3** | 234.8 | 12 | 6 | 248 | 188 | 30.1 |



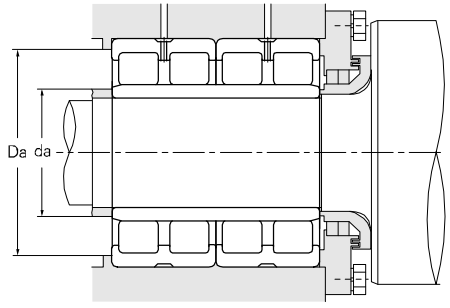

FCD type



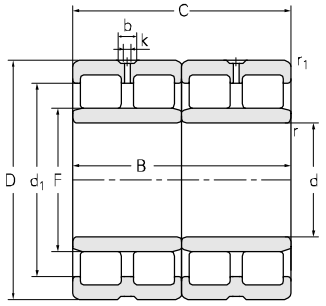

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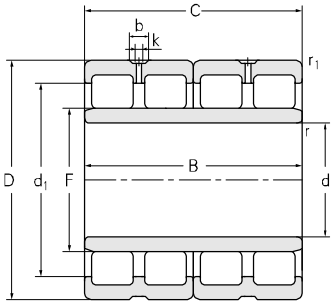

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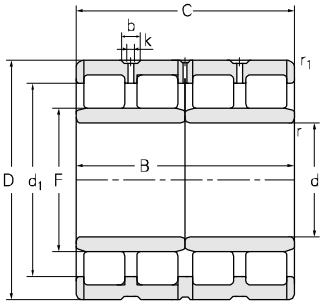

| Principal dimensions | | | | | | | Basic load ratings | | Designations | Abutment and fillet dimensions | | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | C | $r_{1min}$ | $r_{min}$ | F | Cr | Cor | | D1min | bmax | kmax | Da | da | |
| mm | | | | | | | kN | | | mm | | | | | kg |
| **180** | 260 | 168 | 168 | 2.1 | 2.1 | 202 | 1530 | 2790 | **FC3652168Q1/HG2YA4** | 234.8 | 9.5 | 5 | 248 | 188 | 30.6 |
| | 260 | 168 | 168 | 2.1 | 2.1 | 202 | 1180 | 2790 | **FC3652168/C4YAD** | 232.4 | | | 248 | 188 | 30.1 |
| | 260 | 168 | 168 | 2.1 | 2.1 | 202 | 1180 | 2790 | **FC3652168A** | 234 | 12 | 6 | 248 | 188 | 30.2 |
| | 260 | 168 | 168 | 2.1 | 2.1 | 202 | 1180 | 2790 | **FC3652168A/YA3** | 234 | 12 | 6 | 248 | 188 | 30.1 |
| | 260 | 168 | 168 | 2.1 | 2.1 | 202 | 1180 | 2790 | **FC3652168/YA31** | 237.6 | 9.5 | 5 | 248 | 188 | 30.1 |
| | 260 | 168 | 168 | 2.1 | 2.1 | 202 | 1070 | 2790 | **FC3652168/YAD-2** | 232.4 | | | 248 | 188 | 30.1 |
| | 260 | 168 | 168 | 2.1 | 2.1 | 202 | 1120 | 2700 | **FC3652168ZW/YA4** | 232.4 | | | 248 | 188 | 30.6 |
| | 260 | 168 | 168 | 2.1 | 2.1 | 202 | 1100 | 2660 | **FC3652168F3/YA4-2** | 232.4 | | | 248 | 188 | 29.5 |
| | 260 | 168 | 168 | 2.1 | 2.1 | 202 | 1180 | 2790 | **FC3652168S** | 234.8 | 12 | 6 | 248 | 188 | 30.2 |
| | 260 | 168 | 168 | 2.1 | 2.1 | 202 | 1180 | 2790 | **FC3652168S/YA31** | 234.8 | 12 | 6 | 248 | 188 | 30.1 |
| | 260 | 168 | 168 | 2.1 | 2.1 | 202 | 1180 | 2790 | **FC3652168S/YA3** | 234.8 | 12 | 6 | 248 | 188 | 30.1 |
| | 260 | 168 | 168 | 2.1 | 2.1 | 202 | 1100 | 2660 | **FC3652168F3/YA4** | 232.4 | 12 | 6 | 248 | 188 | 29.1 |
| | 260 | 168 | 168 | 2.1 | 2.1 | 202 | 1070 | 2790 | **FC3652168AF3** | 234 | 12 | 6 | 248 | 188 | 30 |
| | 260 | 168 | 168 | 2.1 | 2.1 | 202 | 1100 | 2660 | **FC3652168/YA4-2** | 232.4 | | | 248 | 188 | 29.7 |
| | 260 | 180 | 180 | 2.1 | 2.1 | 202 | 1250 | 3000 | **FC3652180S** | 234.8 | 12 | 6 | 248 | 188 | 31.5 |
| | 260 | 180 | 180 | 2.1 | 2.1 | 202 | 1250 | 3000 | **FC3652180** | 234.8 | 12 | 6 | 248 | 188 | 31.5 |
| | 260 | 168 | 168 | 2.1 | 2.1 | 202 | 1100 | 2660 | **FC3652168/YA4** | 232.4 | 12 | 6 | 248 | 188 | 29.3 |
| | 280 | 180 | 180 | 2.1 | 2.1 | 207 | 1300 | 2800 | **FC3656180F3** | 246 | 9.5 | 5 | 268 | 188 | 42.0 |
| | 280 | 180 | 180 | 2.1 | 2.1 | 207 | 1300 | 2800 | **FC3656180** | 246 | 9.5 | 5 | 268 | 188 | 42.0 |
| **190** | 260 | 168 | 168 | 2.1 | 2.1 | 212 | 1450 | 2600 | **FC3852168/YA3** | 237.6 | 9.5 | 5 | 248 | 198 | 23.1 |
| | 260 | 168 | 168 | 2.1 | 2.1 | 212 | 1450 | 2600 | **FC3852168A** | 237.6 | 9.5 | 5 | 248 | 198 | 23.1 |
| | 260 | 168 | 168 | 2.1 | 2.1 | 208 | 1000 | 2600 | **FC3852168/YAB** | 235 | 8.5 | 5 | 248 | 198 | 26.8 |
| | 260 | 168 | 168 | 2.1 | 2.1 | 212 | 1450 | 2600 | **FC3852168/YA34** | 237.6 | 8 | 4 | 248 | 198 | 26.2 |
| | 260 | 168 | 168 | 2.1 | 2.1 | 208 | 1000 | 2600 | **FC3852168/HG2YAB** | 235 | 9.5 | 5 | 248 | 198 | 26.8 |
| | 260 | 168 | 168 | 2.1 | 2.1 | 212 | 1020 | 2750 | **FC3852168S** | 238.6 | 9.5 | 5 | 248 | 198 | 22.6 |
| | 260 | 168 | 168 | 2.1 | 2.1 | 212 | 870 | 2600 | **FC3852168F3/YA3-1** | 232.8 | 9.5 | 5 | 248 | 198 | 27.7 |
| | 260 | 168 | 168 | 2.1 | 2.1 | 212 | 870 | 2600 | **FC3852168/YAD** | 232.8 | 9.5 | 5 | 248 | 198 | 27.8 |
| | 270 | 168 | 168 | 2.1 | 2.1 | 212 | 1050 | 2430 | **FC3854168AF3/YA3** | 244 | 9.5 | 5 | 248 | 198 | 30.4 |
| | 270 | 168 | 168 | 2.1 | 2.1 | 212 | 1050 | 2430 | **FC3854168S/YA3** | 245.2 | 9.5 | 5 | 248 | 198 | 29.9 |
| | 270 | 168 | 168 | 2.1 | 2.1 | 212 | 1420 | 2430 | **FC3854168** | 245.2 | 9.5 | 5 | 258 | 198 | 30.2 |
| | 270 | 168 | 168 | 2.1 | 2.1 | 212 | 1420 | 2430 | **FC3854168/YA3** | 245.2 | 9.5 | 5 | 258 | 198 | 29.9 |
| | 270 | 168 | 168 | 2.1 | 2.1 | 212 | 1420 | 2430 | **FC3854168Q1/HG2C9YA4** | 245.2 | 9.5 | 5 | 258 | 198 | 30.8 |
| | 270 | 168 | 168 | 2.1 | 2.1 | 212 | 1420 | 2430 | **FC3854168A** | 244 | 9.5 | 5 | 258 | 198 | 31.9 |
| | 270 | 168 | 168 | 2.1 | 2.1 | 212 | 1420 | 2430 | **FC3854168A/YA3** | 244 | 9.5 | 5 | 258 | 198 | 31 |
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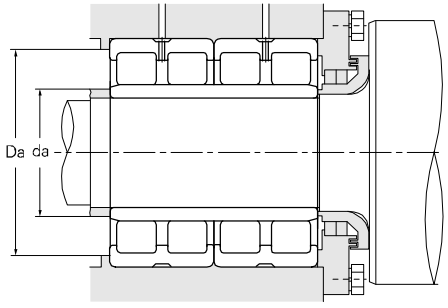

FCD type




FC type

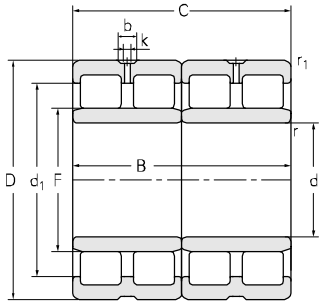



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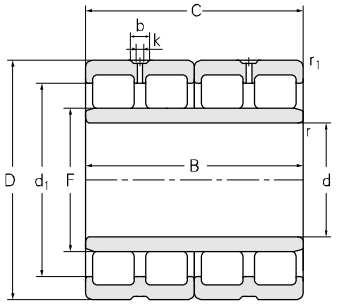



| Principal dimensions | | | | | | | Basic load ratings | |
|---|---|---|---|---|---|---|---|---|
| d | D | B | C | $r_{1min}$ | $r_{min}$ | F | Cr | Cor |
| mm | | | | | | | kN | |
| **190** | 270 | 170 | 170 | 2.1 | 2.1 | 212 | 1430 | 2430 |
| | 270 | 170 | 170 | 2.1 | 2.1 | 212 | 1430 | 2650 |
| | 270 | 170 | 170 | 2.1 | 2.1 | 212 | 1050 | 2430 |
| | 270 | 200 | 200 | 2.1 | 2.1 | 212 | 1520 | 3180 |
| | 270 | 200 | 200 | 2.1 | 2.1 | 212 | 1580 | 3275 |
| | 270 | 200 | 200 | 2.1 | 2.1 | 212 | 1300 | 3200 |
| | 270 | 200 | 200 | 2.1 | 2.1 | 212 | 1280 | 3150 |
| **200** | 270 | 170 | 170 | 2.1 | 2.1 | 222 | 1120 | 2270 |
| | 270 | 170 | 170 | 2.1 | 2.1 | 222 | 1120 | 2270 |
| | 270 | 170 | 170 | 2.1 | 2.1 | 222 | 1120 | 2740 |
| | 270 | 170 | 170 | 2.1 | 2.1 | 222 | 910 | 2740 |
| | 270 | 170 | 170 | 2.1 | 2.1 | 222 | 910 | 2740 |
| | 270 | 170 | 170 | 2.1 | 2.1 | 222 | 950 | 2780 |
| | 270 | 170 | 170 | 2.1 | 2.1 | 222 | 910 | 2740 |
| | 270 | 170 | 170 | 2.1 | 2.1 | 222 | 950 | 2780 |
| | 270 | 170 | 170 | 2.1 | 2.1 | 222 | 1120 | 2740 |
| | 280 | 170 | 170 | 2.1 | 2.1 | 222 | 1110 | 3000 |
| | 280 | 170 | 170 | 2.1 | 2.1 | 222 | 1110 | 3000 |
| | 280 | 188 | 188 | 2.1 | 2.1 | 222 | 1430 | 2580 |
| | 280 | 188 | 188 | 2.1 | 2.1 | 222 | 1560 | 3000 |
| | 280 | 188 | 188 | 2.1 | 2.1 | 222 | 1220 | 3000 |
| | 280 | 200 | 200 | 2.1 | 2.1 | 222 | 1340 | 3400 |
| | 280 | 200 | 200 | 2.1 | 2.1 | 222 | 1400 | 3850 |
| | 280 | 200 | 200 | 2.1 | 2.1 | 222 | 1340 | 3400 |
| | 280 | 200 | 200 | 2.1 | 2.1 | 222 | 1340 | 3400 |
| | 290 | 192 | 192 | 2.1 | 2.1 | 226 | 1400 | 3400 |
| | 290 | 192 | 192 | 2.1 | 2.1 | 226 | 1430 | 3450 |
| | 290 | 192 | 192 | 2.1 | 2.1 | 226 | 1430 | 3450 |
| | 290 | 192 | 192 | 2.1 | 2.1 | 226 | 1400 | 3400 |
| | 290 | 192 | 192 | 2.1 | 2.1 | 226 | 1360 | 3695 |
| | 290 | 192 | 192 | 2.1 | 2.1 | 226 | 1460 | 3250 |
| | 290 | 192 | 192 | 2.1 | 2.1 | 226 | 1490 | 3300 |
| | 290 | 192 | 192 | 2.1 | 2.1 | 226 | 1460 | 3695 |
| | 290 | 192 | 192 | 2.1 | 2.1 | 226 | 1460 | 3350 |
| | 290 | 192 | 192 | 2.1 | 2.1 | 226 | 1400 | 3500 |

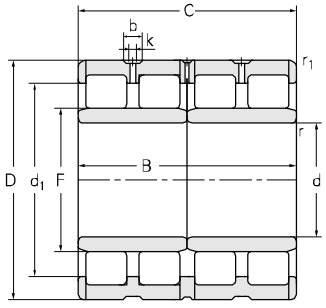
| Designations | Abutment and fillet dimensions | | | | | Weight |
|---|---|---|---|---|---|---|
| | $D1_{min}$ | $b_{max}$ | $k_{max}$ | Da | da | |
| | mm | | | | | kg |
| **FC3854170/YA3** | 245.2 | 9.5 | 5 | 258 | 198 | 30.2 |
| **FC3854170A/YA3** | 244 | 9.5 | 5 | 258 | 198 | 31.8 |
| **FC3854170S/YA3** | 245.2 | 9.5 | 5 | 258 | 198 | 30.2 |
| **FC3854200** | 245.2 | 15 | 7 | 258 | 198 | 35.0 |
| **FC3854200A** | 244 | 15 | 7 | 258 | 198 | 35 |
| **FC3854200SQ1** | 245.2 | 15 | 7 | 258 | 198 | 35 |
| **FC3854200/YA5** | 244 | 15 | 5 | 258 | 198 | 33.4 |
| **FC4054170Q1/YA3** | 246.5 | 9.5 | 5 | 258 | 208 | 28.7 |
| **FC4054170Q1/HG2C4Y** | 246.5 | | | 258 | 208 | 28.7 |
| **FC4054170A/C4YA3** | 247.6 | 9.5 | 5 | 258 | 208 | 28.7 |
| **FC4054170/YAD-2** | 247.6 | 9.5 | 5 | 258 | 208 | 28.7 |
| **FC4054170AF3/YAB** | 247.6 | 9.5 | 5 | 258 | 208 | 28.5 |
| **FC4054170F3/YAD-1** | 244.4 | | | 258 | 208 | 29.1 |
| **FC4054170AF3/C4YA3** | 247.6 | 9.5 | 5 | 258 | 208 | 28.5 |
| **FC4054170/YAD-1** | 244.4 | | | 268 | 208 | 29.3 |
| **FC4054170/HCC4YA3** | 247.6 | 9.5 | 5 | 258 | 208 | 28.7 |
| **FC4056170F3** | 254 | 9.5 | 5 | 268 | 208 | 33.6 |
| **FC4056170** | 254 | 9.5 | 5 | 268 | 208 | 33.3 |
| **FC4056188** | 255 | 9.5 | 5 | 268 | 208 | 35.7 |
| **FC4056188A** | 254 | 9.5 | 5 | 268 | 208 | 35.9 |
| **FC4056188S** | 255 | 9.5 | 5 | 268 | 208 | 35.7 |
| **FC4056200F3/YA3** | 254 | 9.5 | 5 | 268 | 208 | 38.3 |
| **FC4056200ZW/YAD** | 250.8 | | | 268 | 208 | 39.7 |
| **FC4056200/YAD-1** | 254 | | | 268 | 208 | 39 |
| **FC4056200/YAD** | 254 | 9.5 | 5 | 268 | 208 | 38.8 |
| **FC4058192F3/YAD** | 261 | | | 278 | 208 | 41.6 |
| **FC4058192S** | 262 | 15 | 6 | 278 | 208 | 40.9 |
| **FC4058192S/YA4** | 261 | 15 | 6 | 278 | 208 | 40.9 |
| **FC4058192F3/YA34/W281** | 261 | 15 | 6 | 278 | 208 | 41.6 |
| **FC4058192AF3** | 261 | 15 | 6 | 278 | 208 | 40.7 |
| **FC4058192** | 262 | 15 | 6 | 278 | 208 | 40.9 |
| **FC4058192/YA4** | 261 | 15 | 6 | 278 | 208 | 40.9 |
| **FC4058192A** | 261 | 15 | 6 | 278 | 208 | 40.9 |
| **FC4058192A/YA4** | 261 | 15 | 6 | 278 | 208 | 41.3 |
| **FC4058192ZWF3/YA34** | 258 | | | 278 | 208 | 44.6 |



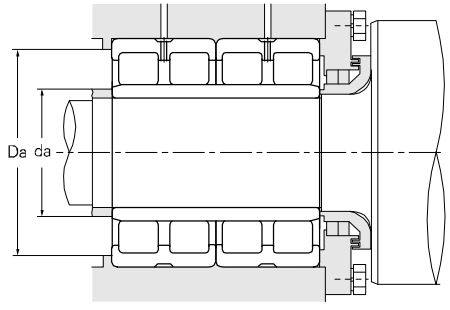

FCD type




FC type

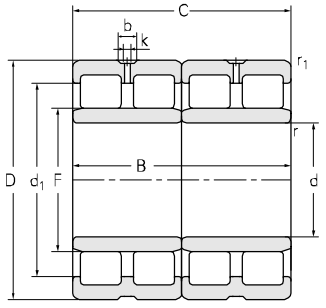



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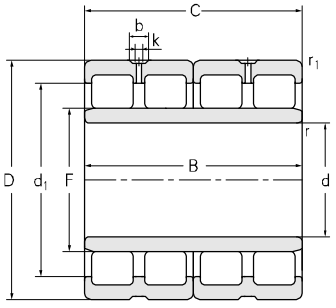



| Principal dimensions | | | | | | | Basic load ratings | |
|---|---|---|---|---|---|---|---|---|
| d | D | B | C | $r_{1min}$ | $r_{min}$ | F | Cr | Cor |
| mm | | | | | | | kN | |
| **200** | 290 | 192 | 192 | 2.1 | 2.1 | 226 | 1430 | 3450 |
| | 310 | 175 | 175 | 2.1 | 2.1 | 229 | 1420 | 3050 |
| **199.86** | 280 | 170 | 170 | 2.1 | 2.1 | 222 | 1110 | 3000 |
| **210** | 300 | 210 | 210 | 2.1 | 2.1 | 234 | 1560 | 3950 |
| | 300 | 210 | 210 | 2.1 | 2.1 | 234 | 1560 | 3950 |
| | 300 | 210 | 210 | 2.1 | 2.1 | 234 | 1780 | 4140 |
| | 300 | 210 | 210 | 2.1 | 2.1 | 234 | 1780 | 4140 |
| | 300 | 210 | 210 | 2.1 | 2.1 | 234 | 1620 | 4150 |
| | 300 | 210 | 210 | 2.1 | 2.1 | 234 | 1620 | 4150 |
| | 300 | 210 | 210 | 2.1 | 2.1 | 234 | 1625 | 4140 |
| | 300 | 170 | 170 | 2.1 | 2.1 | 234 | 1320 | 3150 |
| | 300 | 260 | 260 | 2.1 | 2.1 | 234 | 2100 | 4670 |
| **220** | 300 | 192 | 192 | 2.5 | 2.5 | 242 | 1280 | 3390 |
| | 300 | 192 | 192 | 2.5 | 2.5 | 242 | 1290 | 3300 |
| | 300 | 192 | 192 | 2.5 | 2.5 | 242 | 1280 | 3390 |
| | 300 | 192 | 192 | 2.5 | 2.5 | 245 | 1360 | 3700 |
| | 300 | 190 | 192 | 2.5 | 2.5 | 242 | 1150 | 3250 |
| | 300 | 192 | 192 | 2.5 | 2.5 | 242 | 1280 | 3390 |
| | 310 | 192 | 192 | 2.1 | 2.1 | 246 | 1600 | 1910 |
| | 310 | 192 | 192 | 2.1 | 2.1 | 246 | 1600 | 1910 |
| | 310 | 192 | 192 | 2.1 | 2.1 | 246 | 1600 | 3600 |
| | 310 | 192 | 192 | 2.1 | 2.1 | 246 | 1600 | 3600 |
| | 310 | 192 | 192 | 2.1 | 2.1 | 246 | 1320 | 3600 |
| | 310 | 192 | 192 | 2.1 | 2.1 | 246 | 1480 | 3750 |
| | 310 | 192 | 192 | 2.1 | 2.1 | 246 | 1480 | 3750 |
| | 310 | 192 | 192 | 2.1 | 2.1 | 246 | 1480 | 3750 |
| | 310 | 192 | 192 | 2.1 | 2.1 | 246 | 1320 | 3600 |
| | 310 | 225 | 225 | 2.1 | 2.1 | 246 | 1600 | 4400 |
| | 310 | 225 | 225 | 2.1 | 2.1 | 246 | 1500 | 4000 |
| | 310 | 225 | 225 | 0.6 | 2.1 | 244 | 1850 | 4050 |
| | 310 | 265 | 265 | 2.1 | 2.1 | 246 | 1800 | 4850 |
| | 320 | 210 | 210 | 2.1 | 2.1 | 248 | 1900 | 3800 |
| | 320 | 210 | 210 | 2.1 | 2.1 | 248 | 1900 | 4000 |

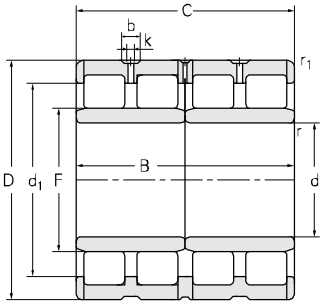
| Designations | Abutment and fillet dimensions | | | | | Weight |
|---|---|---|---|---|---|---|
| | $D1_{min}$ | $b_{max}$ | $k_{max}$ | Da | da | |
| | mm | | | | | kg |
| **FC4058192/HG2YAD** | 262 | 15 | 6 | 278 | 208 | 40.9 |
| **FC4062175/YA3** | 270.6 | 9.5 | 5 | 297 | 208 | 49.8 |
| **FC4056170X4/YA3** | 254 | | | 268 | 208 | 33.3 |
| **FC4260210** | 271 | 9.5 | 5 | 288 | 218 | 48.3 |
| **FC4260210/C9YA4** | 271 | 9.5 | 5 | 288 | 218 | 48.3 |
| **FC4260210A** | 269 | 9.5 | 5 | 288 | 218 | 48.3 |
| **FC4260210A/C9YA4** | 269 | 9.5 | 5 | 288 | 218 | 48.3 |
| **FC4260210S** | 271 | 9.5 | 5 | 288 | 218 | 48.3 |
| **FC4260210S/C9YA4** | 271 | 9.5 | 5 | 288 | 218 | 48.3 |
| **FC4260210/YA34** | 269 | 9.5 | 5 | 288 | 218 | 48.3 |
| **FC4260170** | 269 | 9.5 | 5 | 288 | 218 | 39.1 |
| **FC4260260** | 269 | 9.5 | 5 | 288 | 218 | 58.9 |
| **FC4460192/YA34-1** | 272 | 9.5 | 4 | 287 | 229 | 39.6 |
| **FC4460192F3/YA4** | 274 | 9.5 | 5 | 287 | 229 | 38.5 |
| **FC4460192F3** | 272 | 9.5 | 5 | 287 | 229 | 39.6 |
| **FC4460192ZW** | 275 | 9 | 4 | 288 | 235 | 43.4 |
| **FC4460192F3/C4YA4** | 274 | 9.5 | 5 | 287 | 229 | 38.9 |
| **FC4460192/YA4-1** | 272 | 9.5 | 5 | 287 | 229 | 39.8 |
| **FC4462192/YA3** | 282.5 | 15 | 6 | 298 | 228 | 45.8 |
| **FC4462192** | 282.5 | 15 | 6 | 298 | 228 | 45.8 |
| **FC4462192A** | 281.2 | 15 | 6 | 298 | 228 | 46.2 |
| **FC4462192A/YA3** | 281.2 | 15 | 6 | 298 | 228 | 46.1 |
| **FC4462192A/YA1** | 281.2 | | | 298 | 228 | 46.1 |
| **FC4462192F3** | 282.5 | 15 | 6 | 298 | 228 | 45.3 |
| **FC4462192S** | 282.5 | 15 | 6 | 298 | 228 | 45.8 |
| **FC4462192S/YA3** | 282.5 | 15 | 6 | 298 | 228 | 45.7 |
| **FC4462192AF3** | 281.2 | 15 | 6 | 298 | 228 | 45.9 |
| **FC4462225F3/HCYA4** | 278 | 9.5 | 5 | 298 | 228 | 54.4 |
| **FC4462225F3/YA3** | 278 | 5.5 | 3.5 | 298 | 228 | 54 |
| **FC4462225** | 280 | | | 300 | 228 | 53.9 |
| **FCD4462265** | 281.2 | 9.5 | 5 | 298 | 228 | 63.3 |
| **FC4464210/YA3** | 287 | | | 308 | 228 | 56.5 |
| **FC4464210A/YA3** | 286.4 | | | 308 | 228 | 58.2 |



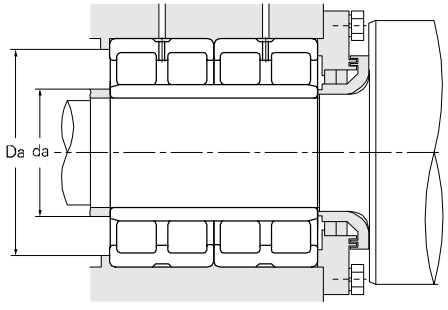

FCD type




FC type

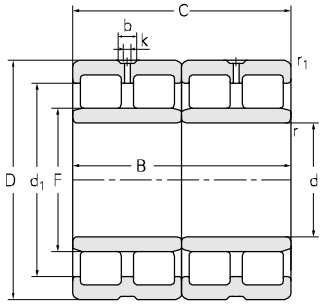



FCDP type

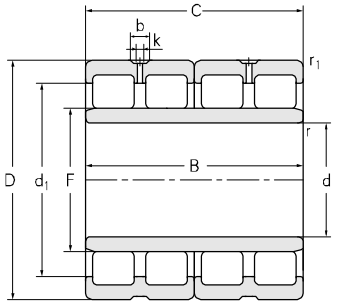



| Principal dimensions | | | | | | | Basic load ratings | |
|---|---|---|---|---|---|---|---|---|
| d | D | B | C | $r_{1min}$ | $r_{min}$ | F | Cr | Cor |
| mm | | | | | | | kN | |
| **220** | 320 | 210 | 210 | 2.1 | 2.1 | 248 | 1500 | 4000 |
| | 320 | 210 | 210 | 2.1 | 2.1 | 248 | 1500 | 4000 |
| | 320 | 210 | 210 | 2.1 | 2.1 | 248 | 1500 | 4000 |
| | 320 | 210 | 210 | 2.1 | 2.1 | 248 | 1640 | 4000 |
| | 320 | 210 | 210 | 2.1 | 2.1 | 248 | 1900 | 4000 |
| | 340 | 200 | 200 | 4 | 4 | 250 | 1950 | 3550 |
| | 340 | 192 | 192 | 2.1 | 2.1 | 250 | 1620 | 3390 |
| **224.88** | 310 | 225 | 225 | 2.1 | 2.1 | 244.7 | 1260 | 3030 |
| **230** | 330 | 170 | 170 | 2.1 | 2.1 | 260 | 1250 | 3100 |
| | 330 | 170 | 170 | 2.1 | 2.1 | 260 | 1250 | 3100 |
| | 330 | 206 | 206 | 2.1 | 2.1 | 260 | 1780 | 3800 |
| | 330 | 206 | 260 | 2.1 | 2.1 | 258 | 1880 | 4350 |
| | 330 | 206 | 206 | 2.1 | 2.1 | 260 | 1500 | 4350 |
| | 330 | 206 | 206 | 2.1 | 2.1 | 260 | 1880 | 4350 |
| | 330 | 206 | 206 | 2.1 | 2.1 | 260 | 1500 | 4350 |
| | 330 | 206 | 206 | 2.1 | 2.1 | 260 | 1500 | 4350 |
| | 330 | 206 | 206 | 2.1 | 2.1 | 260 | 1540 | 4000 |
| | 330 | 206 | 206 | 2.1 | 2.1 | 260 | 1500 | 4350 |
| | 330 | 206 | 206 | 2.1 | 2.1 | 260 | 1500 | 4350 |
| | 330 | 206 | 206 | 2.1 | 2.1 | 260 | 1500 | 4350 |
| | 330 | 206 | 206 | 2.1 | 2.1 | 260 | 1500 | 4350 |
| | 330 | 206 | 206 | 2.1 | 2.1 | 260 | 1880 | 3900 |
| | 330 | 206 | 206 | 2.1 | 2.1 | 260 | 1500 | 4350 |
| | 330 | 206 | 206 | 2.5 | 2.5 | 257 | 1880 | 3900 |
| | 330 | 206 | 206 | 2.1 | 2.1 | 260 | 1880 | 4350 |
| | 340 | 260 | 260 | 2.1 | 2.1 | 261 | 2120 | 5350 |
| | 340 | 260 | 260 | 2.1 | 2.1 | 261 | 2120 | 5350 |
| | 340 | 260 | 260 | 2.1 | 2.1 | 261 | 2120 | 5350 |
| | 340 | 260 | 260 | 2.1 | 2.1 | 261 | 2120 | 5350 |
| | 340 | 260 | 260 | 2.1 | 2.1 | 261 | 2120 | 5350 |
| | 365 | 250 | 250 | 2.1 | 2.1 | 266 | 2400 | 5400 |
| **240** | 330 | 220 | 220 | 2.1 | 2.1 | 264 | 1780 | 4850 |

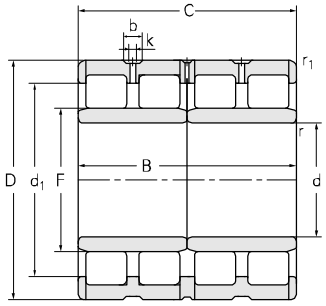
| Designations | Abutment and fillet dimensions | | | | | Weight |
|---|---|---|---|---|---|---|
| | $D1_{min}$ | $b_{max}$ | $k_{max}$ | Da | da | |
| | mm | | | | | kg |
| **FC4464210F3/YA3** | 286.4 | 12.5 | 5 | 308 | 228 | 57.2 |
| **FC4464210/QPC9W33XYAB** | 286.4 | 9.5 | 5 | 308 | 228 | 57.6 |
| **FC4464210/YA3W33** | 286.4 | 12.5 | 5 | 308 | 228 | 57.6 |
| **FC4464210S/YA3** | 287 | | | 308 | 228 | 56.5 |
| **FCD4464210** | 286.4 | 9.5 | 5 | 308 | 228 | 57.1 |
| **FC4468200/YB2** | 308.3 | 15 | 6 | 324 | 232 | 63.4 |
| **FC4468192/YA3** | 287 | 9.5 | 5 | 328 | 228 | 64.6 |
| **FCD4562225X4/YA3** | 278 | | | 298 | 233 | 50.4 |
| **FC4666170/YAD-1** | 295 | | | 317 | 238 | 49.6 |
| **FC4666170/YAD** | 295 | | | 317 | 238 | 49.6 |
| **FC4666206/YA3** | 296 | 9.5 | 5 | 318 | 238 | 56.5 |
| **FC4666206/C4YAD** | 293 | | | 316 | 238 | 59.1 |
| **FC4666206/YAD-3** | 295 | 9.5 | 5 | 317 | 238 | 57.8 |
| **FC4666206A/YA3** | 295 | 9.5 | 5 | 317 | 238 | 57.8 |
| **FC4666206/YAB** | 295 | 9.5 | 6 | 317 | 238 | 57.8 |
| **FC4666206F1/HCOYA34/W281** | 295 | 9.5 | 5 | 317 | 238 | 57.5 |
| **FC4666206S/YA3** | 296 | 9.5 | 5 | 318 | 238 | 56.5 |
| **FC4666206F3/YA34/W281** | 295 | 9.5 | 5 | 317 | 238 | 58.2 |
| **FC4666206F1/YA34/W281** | 295 | 9.5 | 5 | 317 | 238 | 58.2 |
| **FC4666206AF3/YA3** | 265 | 9.5 | 5 | 317 | 238 | 57.5 |
| **FC4666206/YA34/W283** | 295 | 9.5 | 5 | 317 | 238 | 57.8 |
| **FC4666206F1/P64YAD** | 297 | | | 318 | 238 | 58.4 |
| **FC4666206/YAD-4** | 295 | | | 317 | 238 | 57.8 |
| **FC4666206/YA4** | 295.6 | 9.5 | 5 | 317 | 239 | 58.3 |
| **FC4666206/YA34** | 295 | 9.5 | 5 | 318 | 238 | 57.8 |
| **FC4668260/HCYA3** | 303 | 9.5 | 5 | 328 | 238 | 82.1 |
| **FC4668260/HCYA3-SY** | 303 | 9.5 | 5 | 328 | 238 | 82.1 |
| **FC4668260/C9YA3** | 303 | 8.5 | 5 | 328 | 238 | 81.9 |
| **FC4668260/YA3** | 303 | 8.5 | 5 | 328 | 238 | 82.1 |
| **FC4668260/YA3-SY** | 303 | 9.5 | 5 | 328 | 238 | 82.1 |
| **FC4673250F3/W281** | 317.2 | 9.5 | 5 | 352 | 238 | 102 |
| **FC4866220/YA3** | 301 | 9.5 | 5 | 317 | 248 | 56.5 |



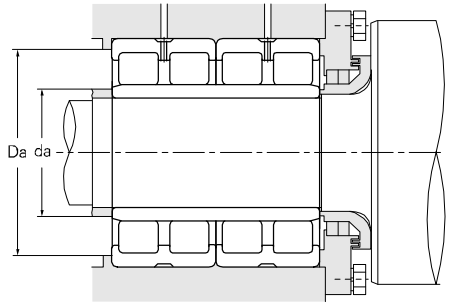

FCD type




FC type



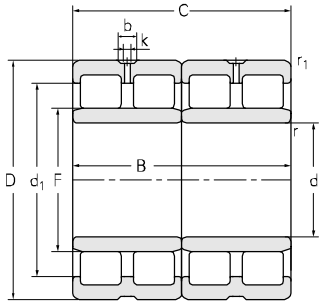

FCDP type



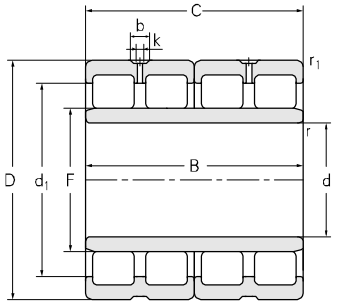

| Principal dimensions | | | | | | | Basic load ratings | |
|---|---|---|---|---|---|---|---|---|
| d | D | B | C | $r_{1min}$ | $r_{min}$ | F | Cr | Cor |
| mm | | | | | | | kN | |
| **240** | 330 | 220 | 220 | 2.1 | 2.1 | 264 | 1780 | 4850 |
| | 330 | 220 | 220 | 2.1 | 2.1 | 264 | 1960 | 5335 |
| | 330 | 220 | 220 | 2.1 | 2.1 | 264 | 1960 | 5335 |
| | 330 | 220 | 220 | 2.1 | 2.1 | 264 | 1960 | 5335 |
| | 330 | 220 | 220 | 2.1 | 2.1 | 264 | 1780 | 4850 |
| | 330 | 220 | 220 | 2.1 | 2.1 | 264 | 1780 | 4850 |
| | 340 | 192 | 192 | 2.1 | 2.1 | 265 | 1440 | 3380 |
| | 340 | 192 | 192 | 2.1 | 2.1 | 265 | 1540 | 3650 |
| | 340 | 192 | 192 | 2.1 | 2.1 | 266 | 1560 | 3850 |
| | 350 | 224 | 224 | 3 | 3 | 270 | 1850 | 4600 |
| | 360 | 200 | 200 | 2.1 | 2.1 | 272 | 1870 | 4410 |
| | 360 | 220 | 220 | 2.5 | 2.5 | 272 | 1870 | 4410 |
| | 360 | 220 | 220 | 2.1 | 2.1 | 272 | 2430 | 4410 |
| | 360 | 220 | 220 | 2.1 | 2.1 | 272 | 1930 | 4600 |
| | 360 | 220 | 220 | 2.1 | 2.1 | 272 | 2530 | 4850 |
| | 360 | 220 | 220 | 2.1 | 2.1 | 272 | 1950 | 4600 |
| | 360 | 220 | 220 | 2.1 | 2.1 | 272 | 1750 | 4600 |
| | 360 | 220 | 220 | 2.1 | 2.1 | 272 | 1880 | 4400 |
| | 360 | 220 | 220 | 2.1 | 2.1 | 272 | 1880 | 4400 |
| | 360 | 220 | 220 | 2.1 | 2.1 | 272 | 1950 | 4600 |
| | 360 | 290 | 290 | 4 | 4 | 270 | 2460 | 5940 |
| **250** | 340 | 230 | 230 | 3.5 | 3.5 | 276 | 1750 | 4700 |
| | 350 | 220 | 220 | 3 | 3 | 278 | 1740 | 4980 |
| | 350 | 220 | 220 | 3 | 3 | 278 | 1840 | 4980 |
| | 350 | 220 | 220 | 3 | 3 | 278 | 1740 | 4450 |
| | 350 | 220 | 220 | 3 | 3 | 278 | 2160 | 4980 |
| | 360 | 220 | 220 | 3 | 3 | 282 | 1650 | 4250 |
| | 360 | 220 | 220 | 3 | 3 | 282 | 1710 | 4670 |
| | 360 | 220 | 220 | 3 | 3 | 282 | 1650 | 4250 |
| | 360 | 220 | 220 | 3 | 3 | 282 | 1900 | 5350 |
| | 360 | 220 | 220 | 3 | 3 | 282 | 1900 | 5350 |
| **260** | 360 | 200 | 200 | 3 | 3 | 288 | 2000 | 4650 |
| | 360 | 200 | 200 | 3 | 3 | 288 | 2000 | 4650 |
| | 360 | 200 | 200 | 3 | 3 | 288 | 1770 | 4650 |

| Designations | Abutment and fillet dimensions | | | | | Weight |
|---|---|---|---|---|---|---|
| | $D1_{min}$ | $b_{max}$ | $k_{max}$ | Da | da | |
| | mm | | | | | kg |
| **FC4866220** | 301 | | | 317 | 248 | 56.7 |
| **FC4866220A** | 299 | | | 316 | 248 | 57.1 |
| **FC4866220A/HG2** | 299 | | | 316 | 248 | 57.1 |
| **FC4866220A/YA3** | 299 | | | 316 | 248 | 56.8 |
| **FC4866220S/YA3** | 301 | | | 317 | 248 | 56.5 |
| **FCD4866220** | 299 | 9.5 | 5 | 316 | 248 | 57.1 |
| **FC4868192A1** | 308 | 9.5 | 5 | 327 | 248 | 52.8 |
| **FC4868192A** | 305 | 9.5 | 5 | 325 | 248 | 54.7 |
| **FC4868192/YA4** | 305.5 | 9.5 | 5 | 327 | 248 | 55.5 |
| **FC4870224/HG2YAD** | 310 | 9.5 | 6 | 336 | 250 | 75.1 |
| **FC4872220** | 318 | 12 | 6 | 346 | 248 | 78.0 |
| **FC4872220A/C4YA3** | 320 | | | 348 | 249 | 78.0 |
| **FC4872220Q1/HG2YA4** | 320 | 9.5 | 5 | 348 | 248 | 78.4 |
| **FC4872220A** | 316.8 | 12 | 6 | 346 | 248 | 79.1 |
| **FC4872220AQ1/HG2YA4** | 316.8 | 12 | 6 | 346 | 248 | 79.1 |
| **FC4872220/YA34** | 316.8 | 9.5 | 5 | 346 | 248 | 80.1 |
| **FC4872220AF3** | 316.8 | 12 | 6 | 346 | 248 | 78.7 |
| **FC4872220S** | 318 | 12 | 6 | 347 | 248 | 78 |
| **FC4872220SA1/C4YA3** | 320 | | | 348 | 248 | 78 |
| **FC4872220/YA3/W283** | 316.8 | 9.5 | 6 | 346 | 248 | 79.1 |
| **FCD4872290/YAD** | 318 | 9.5 | 5 | 347 | 252 | 102 |
| **FCD5068230/HCOYA34** | 312 | 9.5 | 5 | 325 | 261 | 60.8 |
| **FC5070220/YA3** | 316 | 9.5 | 5 | 336 | 260 | 65.5 |
| **FC5070220A/YA3** | 316.4 | 9.5 | 5 | 336 | 260 | 67.5 |
| **FC5070220S/YA3** | 316 | 9.5 | 5 | 336 | 260 | 65.5 |
| **FC5070220/HCYA3** | 316.4 | 9.5 | 5 | 336 | 260 | 67.5 |
| **FC5072220/YA3** | 320 | 9.5 | 5 | 346 | 260 | 76.9 |
| **FC5072220A/YA3** | 320 | 9.5 | 5 | 346 | 260 | 76.8 |
| **FC5072220S/YA3** | 320 | 9.5 | 5 | 346 | 260 | 76.9 |
| **FC5072220ZW/HCO** | 317.2 | 9.5 | 5 | 346 | 270 | 80.5 |
| **FC5072220ZW** | 317.2 | 9.5 | 5 | 346 | 260 | 80.5 |
| **FC5272200/YA3B2** | 328 | 9.5 | 5 | 346 | 272 | 63.0 |
| **FC5272200A/YA3B2** | 326 | 9.5 | 5 | 346 | 272 | 63 |
| **FC5272200/YA34** | 326 | 9.5 | 5 | 346 | 272 | 63 |

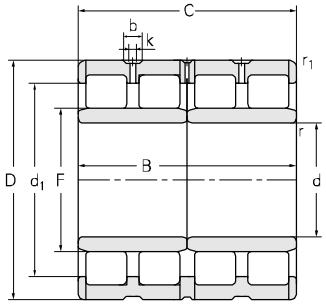
d 260~280 mm



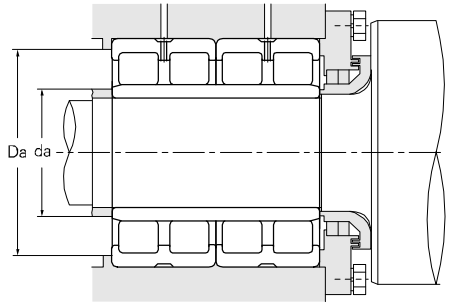

FCD type




FC type

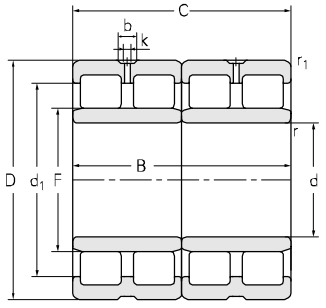



FCDP type

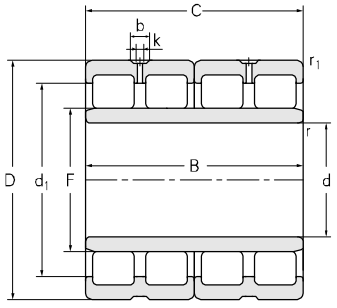



| Principal dimensions | | | | | | | Basic load ratings | |
|---|---|---|---|---|---|---|---|---|
| d | D | B | C | $r_{1min}$ | $r_{min}$ | F | Cr | Cor |
| mm | | | | | | | kN | |
| **260** | 360 | 200 | 200 | 3 | 3 | 292 | 1730 | 4250 |
| | 360 | 200 | 200 | 3 | 3 | 288 | 1690 | 4650 |
| | 370 | 200 | 200 | 3 | 3 | 290 | 1710 | 4100 |
| | 370 | 200 | 200 | 3 | 3 | 292 | 2050 | 4250 |
| | 370 | 200 | 200 | 3 | 3 | 292 | 2150 | 4250 |
| | 370 | 220 | 220 | 3 | 3 | 292 | 2100 | 4900 |
| | 370 | 220 | 220 | 3 | 3 | 292 | 2100 | 4900 |
| | 370 | 220 | 220 | 3 | 3 | 292 | 2150 | 4900 |
| | 370 | 220 | 220 | 3 | 3 | 292 | 2100 | 4800 |
| | 370 | 220 | 220 | 3 | 3 | 292 | 1840 | 4900 |
| | 370 | 220 | 220 | 3 | 3 | 292 | 1960 | 5000 |
| | 370 | 220 | 220 | 3 | 3 | 292 | 1680 | 4400 |
| | 370 | 220 | 220 | 3 | 3 | 292 | 1930 | 4900 |
| | 370 | 220 | 220 | 3 | 3 | 292 | 1930 | 4900 |
| | 370 | 220 | 220 | 3 | 3 | 292 | 1810 | 4800 |
| | 370 | 220 | 220 | 3 | 3 | 292 | 1810 | 4800 |
| | 370 | 220 | 220 | 3 | 3 | 292 | 2100 | 4900 |
| | 380 | 220 | 220 | 3 | 3 | 290 | 2150 | 4750 |
| | 380 | 280 | 280 | 3 | 3 | 294 | 2640 | 6050 |
| | 380 | 280 | 280 | 3 | 3 | 294 | 2640 | 6050 |
| | 380 | 280 | 280 | 3 | 3 | 294 | 2640 | 6050 |
| | 380 | 280 | 280 | 3 | 3 | 294 | 2640 | 6050 |
| | 400 | 290 | 290 | 4 | 4 | 296 | 1800 | 1720 |
| **270** | 380 | 230 | 230 | 3 | 3 | 298 | 1890 | 4800 |
| | 380 | 230 | 230 | 3 | 3 | 298 | 1970 | 4800 |
| | 380 | 230 | 230 | 3 | 3 | 298 | 1970 | 4800 |
| | 380 | 230 | 230 | 3 | 3 | 298 | 2010 | 5000 |
| | 380 | 230 | 230 | 3 | 3 | 298 | 1930 | 4800 |
| | 380 | 230 | 230 | 3 | 3 | 298 | 1930 | 4800 |
| | 380 | 230 | 230 | 3 | 3 | 298 | 1970 | 4800 |
| | 390 | 236 | 236 | 3 | 3 | 312 | 2100 | 5950 |
| | 390 | 236 | 236 | 3 | 3 | 312 | 2310 | 5950 |
| | 390 | 236 | 236 | 3 | 3 | 312 | 2310 | 5950 |
| **280** | 375 | 200 | 200 | 3 | 3 | 306 | 1700 | 4800 |

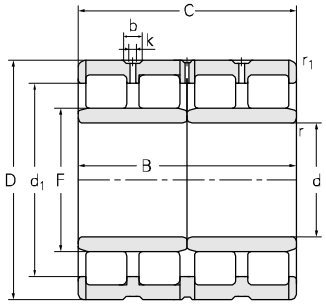
| Designations | Abutment and fillet dimensions | | | | | Weight |
|---|---|---|---|---|---|---|
| | $D1_{min}$ | $b_{max}$ | $k_{max}$ | Da | da | |
| | mm | | | | | kg |
| **FC5274200S** | 335.2 | 15 | 6 | 346 | 272 | 73 |
| **FC5272200S/YA3B2** | 328 | 9.5 | 5 | 346 | 272 | 63 |
| **FCD5274200/C4YAB** | 332 | | | 356 | 272 | 73 |
| **FC5274200** | 335.2 | 15 | 6 | 356 | 272 | 73.0 |
| **FC5274200A** | 333.6 | 15 | 6 | 356 | 272 | 73.8 |
| **FC5274220/YA3** | 335.5 | 9.5 | 5 | 356 | 272 | 79.2 |
| **FC5274220** | 335.5 | 9.5 | 5 | 356 | 272 | 80.0 |
| **FC5274220A** | 333.6 | 9.5 | 5 | 356 | 272 | 80.4 |
| **FC5274220A/YA4** | 330 | 9.5 | 5 | 356 | 272 | 78.7 |
| **FC5274220F3/YA4-1** | 330 | 9.5 | 5 | 356 | 272 | 78.2 |
| **FC5274220F3/YA3** | 335.5 | 9.5 | 5 | 356 | 272 | 78.7 |
| **FC5274220S/YA4** | 330 | 9.5 | 5 | 356 | 272 | 81 |
| **FC5274220S/YA3** | 335.5 | 9.5 | 5 | 356 | 272 | 79.2 |
| **FC5274220S** | 335.5 | 9.5 | 5 | 356 | 272 | 80 |
| **FC5274220/YA4-1** | 330 | 9.5 | 5 | 356 | 272 | 78.7 |
| **FC5274220A/YAD** | 330 | | | 356 | 272 | 79.7 |
| **FC5274220/YA34** | 335.5 | 9.5 | 5 | 356 | 272 | 79.6 |
| **FC5276220/C4YA4** | 332 | | | 366 | 272 | 87.9 |
| **FC5276280/YA3-SY** | 335.6 | 8.5 | 5 | 366 | 272 | 111 |
| **FC5276280/YA3** | 335.6 | 8.5 | 5 | 366 | 272 | 111 |
| **FC5276280/HCYA3** | 335.6 | 9.5 | 5 | 366 | 272 | 111 |
| **FC5276280/HCYA3-SY** | 335.6 | 9.5 | 5 | 366 | 272 | 111 |
| **FCD5280290/P63YA3** | 352 | 9.5 | 5 | 384 | 274 | 136 |
| **FC5476230/YA3** | 346 | 9.5 | 5 | 366 | 282 | 80.2 |
| **FC5476230A** | 342.8 | 9.5 | 5 | 366 | 282 | 82.1 |
| **FC5476230A/YA3** | 342.8 | 9.5 | 5 | 366 | 282 | 81.9 |
| **FC5476230AF3/YA3** | 342.8 | 9.5 | 5 | 366 | 282 | 81.3 |
| **FC5476230S-XXZG** | 346 | 9.5 | 5 | 366 | 282 | 80.5 |
| **FC5476230S** | 346 | 9.5 | 5 | 366 | 282 | 80.5 |
| **FC5476230/YA3-1** | 342.8 | 9.5 | 5 | 366 | 282 | 81.9 |
| **FC5478236S** | 352 | 9.5 | 5 | 376 | 282 | 97.8 |
| **FC5478236** | 352 | 9.5 | 5 | 376 | 282 | 97.8 |
| **FC5478236A** | 350.4 | 9.5 | 5 | 376 | 282 | 98.3 |
| **FC5675200/YA3** | 341 | 9.5 | 5 | 361 | 292 | 62.9 |



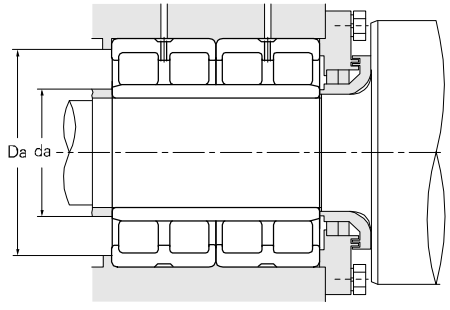

FCD type




FC type

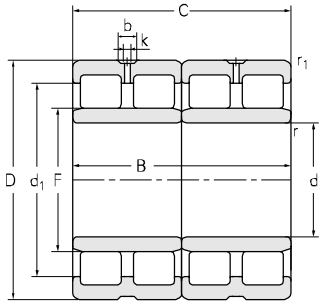



FCDP type

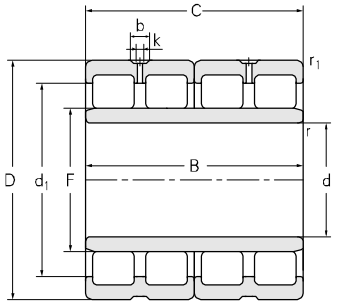



| Principal dimensions | | | | | | | Basic load ratings | | Designations | Abutment and fillet dimensions | | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | C | $r_{1min}$ | $r_{min}$ | F | Cr | Cor | | D1min | bmax | kmax | Da | da | |
| mm | | | | | | | kN | | | mm | | | | | kg |
| **280** | 390 | 220 | 220 | 3 | 3 | 312 | 2130 | 5150 | **FC5678220** | 355.5 | 12 | 6 | 376 | 292 | 86.5 |
| | 390 | 220 | 220 | 3 | 3 | 312 | 2130 | 5200 | **FC5678220A** | 350.4 | 12 | 6 | 376 | 292 | 89 |
| | 390 | 220 | 220 | 3 | 3 | 312 | 1980 | 5200 | **FC5678220S** | 355.5 | 12 | 6 | 376 | 292 | 86.5 |
| | 390 | 220 | 220 | 3 | 3 | 312 | 2680 | 5000 | **FC5678220/YA3** | 355.5 | 12 | 6 | 376 | 292 | 86.6 |
| | 390 | 220 | 220 | 3 | 3 | 312 | 2130 | 5200 | **FC5678220A/YA3** | 350.4 | 12 | 6 | 376 | 292 | 88.6 |
| | 390 | 220 | 220 | 3 | 3 | 312 | 2440 | 5000 | **FC5678220S/YA3** | 355.5 | 12 | 6 | 376 | 292 | 86.3 |
| | 390 | 220 | 220 | 3 | 3 | 312 | 1650 | 5100 | **FC5678220AF3/C4YAB** | 355.5 | 12 | 6 | 376 | 292 | 88.2 |
| | 390 | 240 | 240 | 3 | 3 | 312 | 2570 | 5850 | **FC5678240/YAD** | 355.5 | 12 | 6 | 376 | 292 | 90.4 |
| | 390 | 240 | 240 | 3 | 3 | 312 | 2570 | 5850 | **FC5678240/YA34-1** | 354.5 | 12 | 6 | 376 | 292 | 90.4 |
| | 390 | 220 | 220 | 3 | 3 | 312 | 1980 | 5200 | **FC5678220F3** | 355.5 | 12 | 6 | 376 | 292 | 83.4 |
| | 390 | 220 | 220 | 3 | 3 | 312 | 1900 | 5200 | **FC5678220/C4HYAD-2** | 350.4 | 12 | 6 | 376 | 292 | 88.6 |
| | 390 | 220 | 220 | 3 | 3 | 312 | 1900 | 5200 | **FC5678220/YAD-1** | 350.4 | 12 | 6 | 376 | 292 | 88.6 |
| | 390 | 275 | 275 | 3 | 3 | 308 | 2360 | 6650 | **FCD5678275/YA3** | 348 | 9.5 | 5 | 376 | 292 | 105 |
| | 390 | 275 | 275 | 3 | 3 | 308 | 2360 | 6650 | **FCD5678275F1/HCOYA34-1/W281** | 348 | 9.5 | 5 | 376 | 292 | 105 |
| | 390 | 275 | 275 | 3 | 3 | 308 | 2360 | 6650 | **FCD5678275F3/YA34-1/W281** | 348 | 9.5 | 5 | 376 | 292 | 104 |
| | 390 | 275 | 275 | 3 | 3 | 308 | 2360 | 6650 | **FCD5678275F1/YA34-1/W281** | 348 | 9.5 | 5 | 376 | 292 | 104 |
| | 390 | 275 | 275 | 3 | 3 | 308 | 2360 | 6650 | **FCD5678275F3/YA34-1** | 348 | 9.5 | 5 | 376 | 292 | 104 |
| | 390 | 275 | 275 | 3 | 3 | 308 | 2360 | 6650 | **FCD5678275F3/HCOYA34-1** | 348 | 9.5 | 5 | 376 | 292 | 104 |
| | 390 | 275 | 275 | 3 | 3 | 308 | 2360 | 6650 | **FCD5678275/HCOYA34-1** | 348 | 9.5 | 5 | 376 | 292 | 105 |
| | 390 | 275 | 275 | 3 | 3 | 308 | 2360 | 6650 | **FCD5678275** | 348 | 9.5 | 5 | 376 | 292 | 105 |
| | 390 | 275 | 275 | 1.5 | 1.1 | 308 | 2360 | 6650 | **FCDP5678275** | 354.2 | 9.5 | 5 | 379 | 288 | 102 |
| | 390 | 275 | 275 | 3 | 3 | 308 | 2360 | 6650 | **FCD5678275/C3YA34** | 352.8 | 9.5 | 5 | 376 | 292 | 102 |
| | 390 | 240 | 240 | 3 | 3 | 312 | 2570 | 5850 | **FC5678240** | 354.5 | 12 | 6 | 376 | 292 | 90.4 |
| | 390 | 240 | 240 | 3 | 3 | 312 | 2570 | 5850 | **FC5678240/HCYA34** | 354.5 | 12 | 6 | 376 | 292 | 90.4 |
| | 390 | 240 | 240 | 3 | 3 | 312 | 2570 | 5850 | **FC5678240/YA34** | 354.5 | 12 | 6 | 376 | 292 | 90.4 |
| | 390 | 240 | 240 | 3 | 3 | 312 | 2570 | 5850 | **FC5678240/YA3** | 354.5 | 12 | 6 | 376 | 292 | 90.4 |
| | 390 | 220 | 220 | 3 | 3 | 312 | 2300 | 5100 | **FC5678220/HCYAD** | 352.3 | | | 376 | 292 | 83 |
| | 390 | 220 | 220 | 3 | 3 | 312 | 2300 | 5100 | **FC5678220F1/HCC4YAD** | 352.3 | | | 376 | 292 | 83 |
| | 390 | 275 | 275 | 3 | 3 | 308 | 2360 | 6650 | **FCD5678275/YA34-1** | 348 | 9.5 | 5 | 376 | 292 | 105 |
| | 390 | 275 | 275 | 3 | 3 | 312 | 2300 | 6860 | **FC5678275/YA4** | 351 | 9.5 | 5 | 376 | 292 | 106 |
| | 400 | 244 | 244 | 7.5 | 4 | 312 | 2300 | 6000 | **FCD5680244F3/YAD** | 357 | 15 | 8 | 377 | 294 | 102 |
| | 410 | 300 | 300 | 4 | 4 | 313 | 2760 | 7570 | **FCD5682300-KM** | 359.2 | 15 | 6 | 394 | 294 | 140 |
| | 420 | 280 | 280 | 4 | 4 | 318 | 3500 | 7000 | **FC5684280** | 373 | 12 | 6 | 404 | 294 | 139 |
| **290** | 410 | 240 | 240 | 4 | 4 | 320 | 2340 | 5900 | **FC5882240/C4YA3** | 368 | 15 | 8 | 394 | 304 | 102 |

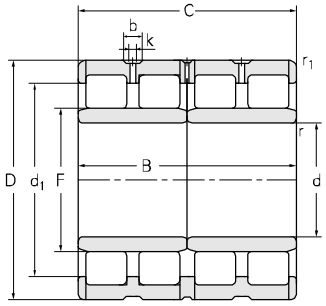
d 290~320 mm



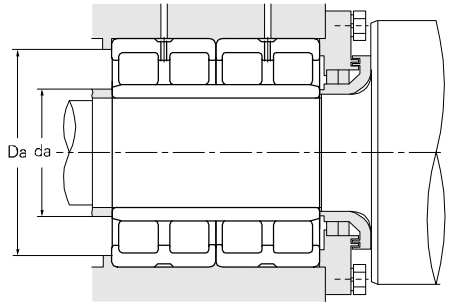

FCD type




FC type

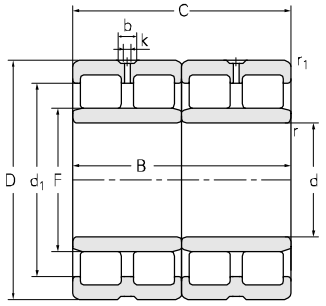



FCDP type

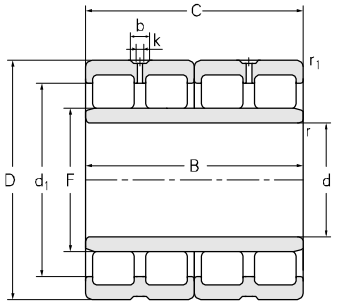



| Principal dimensions | | | | | | | Basic load ratings | |
|---|---|---|---|---|---|---|---|---|
| d | D | B | C | $r_{1min}$ | $r_{min}$ | F | Cr | Cor |
| mm | | | | | | | kN | |
| **290** | 420 | 300 | 300 | 4 | 4 | 327 | 2800 | 7850 |
| | 430 | 280 | 280 | 4 | 4 | 330 | 2900 | 7400 |
| **300** | 420 | 218 | 218 | 4 | 4 | 332 | 2270 | 5700 |
| | 420 | 218 | 218 | 4 | 4 | 332 | 2270 | 5700 |
| | 420 | 240 | 240 | 4 | 4 | 332 | 2450 | 6300 |
| | 420 | 240 | 240 | 4 | 4 | 332 | 2450 | 6300 |
| | 420 | 240 | 240 | 4 | 4 | 332 | 2450 | 6300 |
| | 420 | 240 | 240 | 4 | 4 | 332 | 2400 | 6300 |
| | 420 | 240 | 240 | 4 | 4 | 332 | 2500 | 6600 |
| | 420 | 240 | 240 | 4 | 4 | 332 | 2550 | 6800 |
| | 420 | 240 | 240 | 4 | 4 | 332 | 3450 | 6300 |
| | 420 | 240 | 240 | 4 | 4 | 332 | 3450 | 6300 |
| | 420 | 240 | 240 | 4 | 4 | 332 | 3450 | 6300 |
| | 420 | 240 | 240 | 4 | 4 | 332 | 3450 | 6300 |
| | 420 | 240 | 240 | 4 | 4 | 332 | 2500 | 6600 |
| | 420 | 300 | 300 | 3 | 3 | 332 | 3550 | 6800 |
| | 420 | 300 | 300 | 3 | 3 | 332 | 3550 | 6800 |
| | 420 | 300 | 300 | 3 | 3 | 332 | 2270 | 6800 |
| | 420 | 300 | 300 | 3 | 3 | 332 | 3750 | 8800 |
| | 420 | 300 | 300 | 3 | 7*20* | 332 | 3750 | 8800 |
| | 420 | 300 | 300 | 3 | 3 | 332 | 2650 | 6950 |
| | 420 | 300 | 300 | 3 | 3 | 332 | 2270 | 6800 |
| | 420 | 300 | 300 | 3 | 3 | 332 | 2850 | 7700 |
| | 420 | 300 | 300 | 3 | 3 | 332 | 2570 | 6680 |
| | 420 | 300 | 300 | 3 | 7*20* | 332 | 3750 | 8800 |
| | 420 | 300 | 300 | 3 | 7*20* | 332 | 3750 | 8800 |
| | 420 | 300 | 300 | 3 | 3 | 332 | 3550 | 6800 |
| | 460 | 350 | 350 | 4 | 5 | 340 | 4100 | 10500 |
| | 460 | 350 | 350 | 4 | 5 | 340 | 4100 | 10500 |
| **320** | 440 | 240 | 240 | 4 | 4 | 351 | 2550 | 6700 |
| | 450 | 240 | 240 | 4 | 4 | 355 | 2760 | 6720 |
| | 450 | 240 | 240 | 4 | 4 | 355 | 2970 | 6720 |
| | 450 | 240 | 240 | 4 | 4 | 355 | 2700 | 6720 |
| | 450 | 240 | 240 | 4 | 4 | 355 | 2630 | 7050 |
| | 450 | 240 | 240 | 4 | 4 | 355 | 2760 | 6720 |

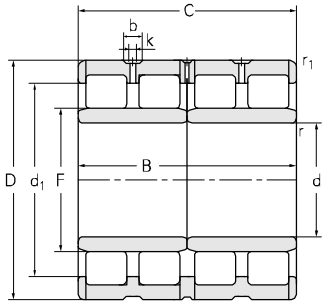
| Designations | Abutment and fillet dimensions | | | | | Weight |
|---|---|---|---|---|---|---|
| | $D1_{min}$ | $b_{max}$ | $k_{max}$ | Da | da | |
| | mm | | | | | kg |
| **FCD5884300** | 371.8 | 12 | 6 | 404 | 304 | 144 |
| **FCD5886280F3/HG2** | 381.2 | 12 | 6 | 414 | 304 | 143 |
| **FC6084218F3/YA4** | 380 | 9.5 | 5 | 404 | 314 | 93.7 |
| **FC6084218/YA4** | 380 | 9.5 | 5 | 404 | 314 | 94.3 |
| **FC6084240AF3/YA3** | 380 | 15 | 8 | 404 | 314 | 103 |
| **FC6084240S** | 382 | 15 | 8 | 404 | 314 | 111 |
| **FC6084240S/YA3** | 382 | 15 | 8 | 404 | 314 | 111 |
| **FCD6084240/P6YAB** | 380 | 15 | 8 | 404 | 314 | 109 |
| **FC6084240ZW/YA3** | 381 | | | 402 | 322 | 110 |
| **FCD6084240ZW/YAB** | 379.5 | | | 404 | 316 | 110 |
| **FC6084240** | 382 | 15 | 8 | 404 | 314 | 111 |
| **FC6084240YA3** | 382 | 15 | 8 | 404 | 314 | 111 |
| **FC6084240A** | 380 | 15 | 8 | 404 | 314 | 111 |
| **FC6084240A/YA3** | 380 | 15 | 8 | 404 | 314 | 111 |
| **FC6084240/HCYA3** | 380 | 15 | 8 | 404 | 314 | 104 |
| **FCD6084300/YA34** | 382 | 12 | 6 | 406 | 312 | 129 |
| **FCD6084300/YA3** | 382 | 12 | 6 | 406 | 312 | 129 |
| **FCD6084300/W33AYA3** | 382 | 12 | 6 | 406 | 312 | 127 |
| **FCDP6084300F3/HCYAD** | 479.4 | 12 | 6 | 406 | 312 | 133 |
| **FCDP6084300F3/YAD** | 379.4 | 12 | 6 | 406 | 312 | 133 |
| **FCD6084300/HCYA4** | 382 | 12 | 6 | 406 | 312 | 129 |
| **FCD6084300F3/YA3** | 382 | | | 406 | 312 | 128 |
| **FCD6084300F1/YAD** | 382 | 15 | 6 | 406 | 312 | 135 |
| **FCD6084300/HCC4YA3/W283** | 382 | 12 | 6 | 406 | 312 | 127 |
| **FCDP6084300F1/YAD** | 379.4 | 12 | 6 | 406 | 312 | 133 |
| **FCDP6084300WB/HCYAD** | 379.4 | 12 | 6 | 406 | 312 | 137 |
| **FCD6084300/HC** | 382 | 12 | 6 | 406 | 312 | 129 |
| **FCD6092350ZWF3/HCYAD** | 399 | 20 | 10 | 444 | 316 | 226 |
| **FCD6092350ZWF3/HG2YAD** | 399 | 20 | 10 | 444 | 316 | 226 |
| **FCD6488240** | 399 | 12 | 6 | 422 | 336 | 110 |
| **FC6490240/YA3** | 412 | 12 | 6 | 432 | 336 | 119 |
| **FC6490240/C4YA3** | 409.4 | 12 | 6 | 432 | 336 | 120 |
| **FC6490240/YAD-1** | 409.4 | 12 | 6 | 432 | 336 | 120 |
| **FC6490240F3/YAD** | 403 | 12 | 6 | 432 | 336 | 122 |
| **FC6490240/YA34** | 412 | 12 | 6 | 432 | 336 | 120 |



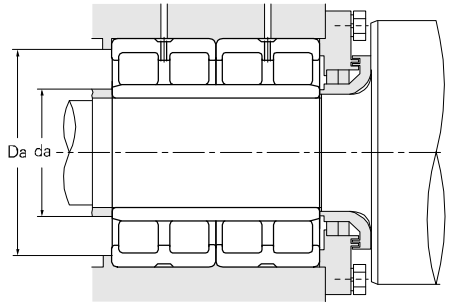

FCD type




FC type



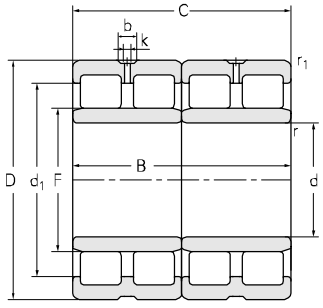

FCDP type



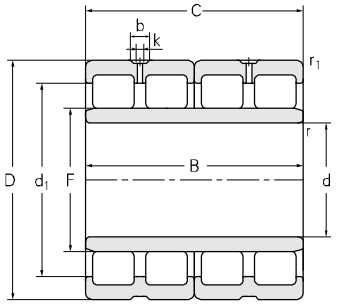

| Principal dimensions | | | | | | | Basic load ratings | |
|---|---|---|---|---|---|---|---|---|
| d | D | B | C | $r_{1min}$ | $r_{min}$ | F | Cr | Cor |
| mm | | | | | | | kN | |
| **320** | 460 | 240 | 240 | 3 | 3 | 364 | 2710 | 7550 |
| | 460 | 280 | 280 | 4 | 4 | 357 | 2900 | 7650 |
| | 460 | 340 | 340 | 4 | 4 | 357 | 3700 | 10000 |
| | 460 | 340 | 340 | 4 | 4 | 357 | 3700 | 10000 |
| | 450 | 240 | 240 | 4 | 4 | 355 | 2760 | 6720 |
| | 460 | 240 | 240 | 3 | 3 | 364 | 3370 | 7550 |
| | 460 | 240 | 240 | 3 | 3 | 364 | 2700 | 7050 |
| | 460 | 240 | 240 | 3 | 3 | 364 | 2700 | 7050 |
| | 480 | 306 | 306 | 4 | 4 | 364 | 3950 | 8250 |
| | 480 | 350 | 350 | 4 | 4 | 364 | 5150 | 10500 |
| | 480 | 306 | 306 | 4 | 4 | 364 | 3950 | 8250 |
| | 480 | 350 | 350 | 4 | 4 | 364 | 5150 | 10500 |
| | | | | | 4 | | | |
| **330** | 460 | 340 | 340 | 4 | 4 | 365 | 3550 | 9950 |
| | 460 | 340 | 340 | 4 | | 365 | 3550 | 9950 |
| | | | | | 4 | | | |
| **340** | 450 | 250 | 250 | 4 | 4 | 371 | 2420 | 7250 |
| | 450 | 250 | 250 | 4 | 4 | 371 | 2420 | 7500 |
| | 450 | 250 | 250 | 4 | 4 | 371 | 2420 | 7250 |
| | 450 | 250 | 250 | 4 | 4 | 371 | 2420 | 7250 |
| | 450 | 250 | 250 | 4 | 4 | 371 | 2430 | 6800 |
| | 450 | 250 | 250 | 4 | 4 | 370 | 2430 | 6800 |
| | 450 | 250 | 250 | 4 | 4 | 370 | 2430 | 6800 |
| | 450 | 250 | 250 | 4 | 4 | 369 | 2430 | 6820 |
| | 450 | 250 | 250 | 4 | 4 | 369 | 2430 | 6820 |
| | 450 | 250 | 250 | 4 | 4 | 369 | 2430 | 6820 |
| | 450 | 250 | 250 | 4 | 4 | 366 | 2460 | 7250 |
| | 450 | 250 | 250 | 4 | 4 | 371 | 2400 | 7250 |
| | 450 | 250 | 250 | 4 | 4 | 371 | 2400 | 7250 |
| | 450 | 260 | 260 | 4 | 4 | 370 | 2760 | 7600 |
| | 480 | 350 | 350 | 4 | 4 | 378 | 3750 | 10600 |
| | 480 | 350 | 350 | 4 | 4 | 378 | 3200 | 10300 |
| | 480 | 350 | 350 | 4 | 4 | 378 | 4070 | 11570 |
| | 480 | 350 | 350 | 4 | 4 | 378 | 3750 | 10600 |
| | 480 | 350 | 350 | 4 | 4 | 378 | 3750 | 10600 |
| | 480 | 350 | 350 | 4 | | 378 | 3800 | 10800 |

| Designations | Abutment and fillet dimensions | | | | | Weight |
|---|---|---|---|---|---|---|
| | $D1_{min}$ | $b_{max}$ | $k_{max}$ | Da | da | |
| | mm | | | | | kg |
| **FCD6492240ZW/HG2IYA3** | 417 | | | 404 | 340 | 141 |
| **FC6492280/YA34** | 408 | | | 442 | 336 | 157 |
| **FCD6492340/YA3** | 413 | 12 | 6 | 442 | 336 | 189 |
| **FCD6492340F3/YA3** | 413 | 12 | 6 | 442 | 336 | 187 |
| **FC6490240/YA34** | 412 | 12 | 6 | 432 | 336 | 120 |
| **FCD6492240ZW/HCC4YA3** | 417 | | | 444 | 334 | 141 |
| **FC6492240ZW/YA34** | 417 | | | 444 | 334 | 141 |
| **FCD6492240ZW/YA34/W281** | 417 | | | 444 | 334 | 141 |
| **FCD6496306/HG2YA3** | 427 | 12 | 6 | 462 | 336 | 197 |
| **FCD6496350F3/HG2YA34** | 427 | 16 | 8 | 462 | 336 | 230 |
| **FCD6496306/HCYA3** | 427 | 12 | 6 | 462 | 336 | 197 |
| **FCD6496350F3/HCYA34** | 427 | 12 | 6 | 462 | 336 | 230 |
| **FCD6692340** | 416.2 | 12 | 6 | 442 | 346 | 210 |
| **FC6692340-ZH** | 416.2 | 12 | 6 | 442 | 346 | 211 |
| **FCD6890250/C3YA4** | 406.2 | 12 | 6 | 432 | 356 | 115 |
| **FCD6890250/C9YA4-1** | 410.6 | 12 | 6 | 432 | 356 | 109 |
| **FCD6890250/C4YA34** | 410.6 | 12 | 6 | 432 | 356 | 109 |
| **FCD6890250/HCYA34** | 410.6 | 12 | 6 | 432 | 356 | 109 |
| **FC6890250/HG2** | 416 | | | 432 | 356 | 107 |
| **FC6890250/YAB** | 406.8 | 12 | 8 | 432 | 356 | 111 |
| **FC6890250/YAB-1** | 406.8 | 12 | 8 | 432 | 356 | 111 |
| **FC6890250/YAD** | 415 | 12 | 6 | 432 | 356 | 105 |
| **FC6890250/YAD-1** | 415 | 12 | 6 | 432 | 356 | 105 |
| **FC6890250/YAD-2** | 415 | 12 | 6 | 432 | 356 | 105 |
| **FC6890250/YA4-2** | 408 | 12 | 6 | 432 | 356 | 111.8 |
| **FCD6890250/YA34-1** | 410.6 | 12 | 6 | 432 | 356 | 109 |
| **FCD6890250F3/C4YA34** | 410.6 | 12 | 6 | 432 | 356 | 108 |
| **FCD6892260** | 418 | 12 | 6 | 432 | 356 | 125 |
| **FCD6896350** | 430.8 | 12 | 6 | 462 | 356 | 202 |
| **FCD6896350/YAB** | 419.6 | 12 | 6 | 462 | 356 | 212 |
| **FCDP6896350/HCYA4** | 432.4 | 12 | 6 | 462 | 356 | 203 |
| **FCD6896350F3/HC** | 430.8 | 12 | 6 | 462 | 356 | 200 |
| **FC6896350/YA34** | 430.8 | | | 462 | 356 | 202 |
| **FC6896350ZW/YA34** | 431 | | | 462 | 356 | 212 |

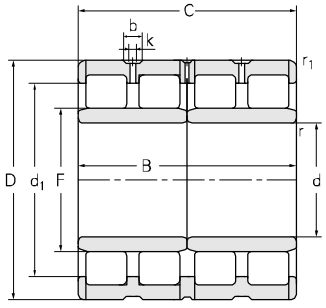
d 350~380 mm



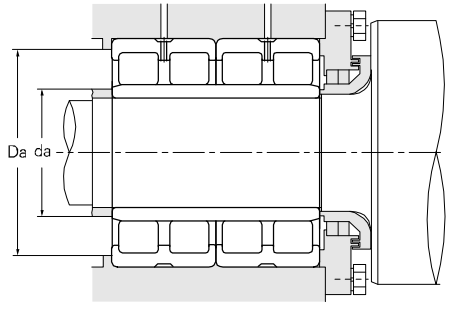

FCD type




FC type



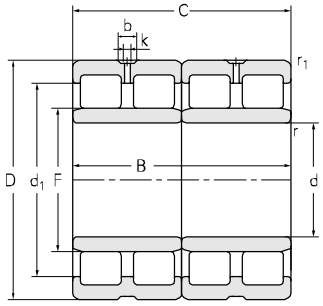

FCDP type



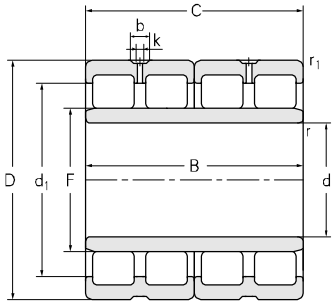

| Principal dimensions | | | | | | | Basic load ratings | |
|---|---|---|---|---|---|---|---|---|
| d | D | B | C | $r_{1min}$ | $r_{min}$ | F | Cr | Cor |
| mm | | | | | | | kN | |
| **350** | 500 | 380 | 380 | 6 | 3 | 388 | 4030 | 10200 |
| | 500 | 380 | 380 | 3 | 6 | 388 | 3580 | 10600 |
| | 500 | 410 | 410 | 3 | 11.5*20* | 388 | 5800 | 13500 |
| | 520 | 300 | 300 | 5 | 8*20* | 401 | 4200 | 9000 |
| **360** | 480 | 340 | 340 | 4 | 4 | 392 | 3700 | 11300 |
| | 510 | 370 | 370 | 4 | 4 | 397 | 4950 | 11400 |
| | 510 | 370 | 370 | 4 | 4 | 399.5 | 4950 | 11300 |
| | 510 | 370 | 370 | 4 | 4 | 397 | 4220 | 11400 |
| | 500 | 250 | 250 | 3 | 3 | 394 | 3600 | 7730 |
| | 500 | 250 | 250 | 3 | 3 | 394 | 3300 | 8000 |
| | 500 | 250 | 250 | 3 | 3 | 394 | 3600 | 7730 |
| | 500 | 250 | 250 | 3 | 3 | 394 | 3600 | 7730 |
| | 500 | 300 | 300 | 3 | 3 | 394 | 4100 | 11000 |
| | 550 | 430 | 430 | 5 | 5 | 408 | 5000 | 13000 |
| **365** | 540 | 300 | 300 | 2 | 2 | 421 | 5000 | 11000 |
| **370** | 520 | 380 | 380 | 1.5 | 1.5 | 409 | 5230 | 12000 |
| | 520 | 380 | 380 | 1.5 | 1.5 | 409 | 4300 | 12000 |
| | 530 | 400 | 400 | 4 | 4 | 413 | 4650 | 12600 |
| | 540 | 400 | 400 | 5 | 5 | 416 | 4490 | 13600 |
| **375** | 520 | 360 | 360 | 5 | 15*20* | 422 | 3500 | 12300 |
| | 600 | 440 | 440 | 2 | 2 | 470 | 5350 | 15600 |
| **380** | 500 | 315 | 315 | 4 | 4 | 412 | 3000 | 8700 |
| | 520 | 290 | 290 | 4 | 4 | 426 | 2770 | 9100 |
| | 520 | 290 | 290 | 4 | 4 | 426 | 2770 | 9100 |
| | 540 | 260 | 260 | 4 | 4 | 428 | 3350 | 8550 |
| | 540 | 300 | 300 | 2 | 8.5*20* | 421 | 4650 | 10100 |
| | 540 | 304 | 304 | 4 | 4 | 422 | 4650 | 10100 |
| | 540 | 340 | 340 | 4 | 4 | 422 | 5250 | 11900 |
| | 540 | 360 | 360 | 4 | 4 | 422 | 4850 | 12900 |
| | 540 | 400 | 400 | 4 | 4 | 422 | 5050 | 14200 |
| | 560 | 300 | 300 | 2 | 13.5*20* | 424 | 4950 | 9650 |
| | 560 | 325 | 325 | 5 | 5 | 425 | 4840 | 10000 |

| Designations | Abutment and fillet dimensions | | | | | Weight |
|---|---|---|---|---|---|---|
| | $D1_{min}$ | $b_{max}$ | $k_{max}$ | Da | da | |
| | mm | | | | | kg |
| **FCDSP70100380/HC** | 440 | 12 | 6 | 478 | 364 | 225 |
| **FCDSP70100380** | 440 | 12 | 6 | 484 | 370 | 225 |
| **FCDP70100410** | 455 | 16.7 | 9 | 484 | 362 | 280 |
| **FC70104300** | 468 | | | 500 | 361 | 213 |
| **FCD7296340/HCYB2** | 441.5 | 12 | 6 | 462 | 376 | 172 |
| **FCD72102370** | 460 | 12 | 6 | 492 | 376 | 220 |
| **FCD72102370/YA4** | 462 | 12 | 6 | 492 | 376 | 241 |
| **FCD72102370F3** | 460 | 12 | 6 | 492 | 376 | 249 |
| **FC72100250ZW/HCYA3** | 456 | | | 484 | 374 | 156 |
| **FCD72100250F3/HC** | 456 | | | 484 | 374 | 124 |
| **FC72100250ZW/YA3** | 456 | | | 484 | 374 | 156 |
| **FC72100250ZW/HCYA3** | 456 | | | 484 | 374 | 156 |
| **FCD72100300/YA3** | 160 | 11 | 6 | 484 | 374 | 179 |
| **FCD72110430-KM** | 477.4 | 18 | 10 | 530 | 378 | 379 |
| **FC73108300** | 490 | 12 | 6 | 526 | 377 | 225 |
| **FCDP74104380** | 474 | 12 | 6 | 507 | 381 | 296 |
| **FCDP74104380/YAD** | 474 | 12 | 6 | 507 | 381 | 258 |
| **FCDP74106400/HCG2I** | 478 | 12 | 6 | 512 | 386 | 299 |
| **FCD74108400-KM** | 472 | 16 | 8 | 520 | 388 | 327 |
| **FCD75104360/HG2IYAD** | 470 | 12 | 6 | 500 | 388 | 241 |
| **FCDP75120440/P63** | 535 | 15 | 6 | 586 | 387 | 527 |
| **FCD76100300/YAG** | 460 | | | 482 | 396 | 157 |
| **FCD76104290F3/YA3/W281** | 467 | 12 | 6 | 502 | 396 | 192 |
| **FCD76104290F1/YA3/W281** | 467 | 12 | 6 | 502 | 396 | 192 |
| **FCD76108260** | 495 | | | 522 | 396 | 198 |
| **FCD76108300** | 490 | 12 | 6 | 526 | 395 | 220 |
| **FC76108304** | 488 | 12 | 6 | 522 | 396 | 227 |
| **FC76108340** | 488 | 12 | 6 | 522 | 396 | 256 |
| **FC76108360/HCC9** | 480 | 20 | 12 | 522 | 396 | 276 |
| **FCD76108400/YA3** | 488 | 12 | 6 | 522 | 396 | 297 |
| **FCD76112300** | 488 | 13.9 | 7.5 | 546 | 398 | 261 |
| **FCD76112325** | 506 | | | 540 | 398 | 263 |

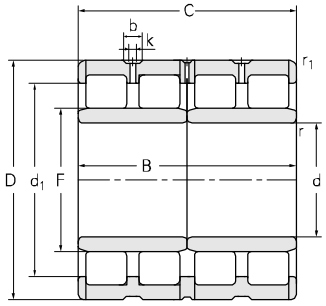
d 390~440 mm



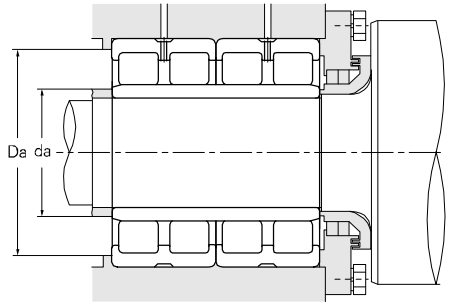

FCD type




FC type

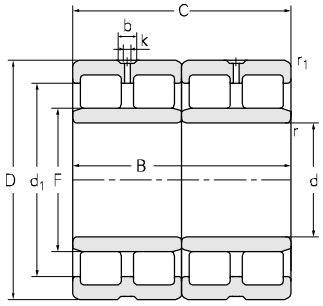



FCDP type

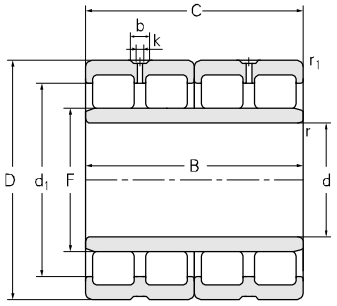



| Principal dimensions | | | | | | | Basic load ratings | |
|---|---|---|---|---|---|---|---|---|
| d | D | B | C | $r_{1min}$ | $r_{min}$ | F | Cr | Cor |
| mm | | | | | | | kN | |
| **390** | 540 | 320 | 320 | 2 | 10*20* | 431 | 5200 | 12000 |
| | 550 | 400 | 400 | 4 | 4 | 432.3 | 4850 | 13400 |
| | 550 | 400 | 400 | 5 | 1.5 | 434 | 4850 | 13400 |
| | 550 | 400 | 400 | 4 | 4 | 432.3 | 4850 | 13400 |
| **400** | 550 | 300 | 300 | 5 | 5 | 442 | 4460 | 5050 |
| | 550 | 300 | 300 | 5 | 5 | 442 | 4640 | 5450 |
| | 550 | 300 | 300 | 5 | 5 | 442 | 3450 | 9500 |
| | 560 | 300 | 300 | 4 | 4 | 442 | 4550 | 10000 |
| | 560 | 410 | 410 | 2 | 13.5*20* | 445 | 6250 | 15600 |
| | 560 | 410 | 410 | 5 | 5 | 445 | 4500 | 14000 |
| | 560 | 410 | 410 | 5 | 12*20* | 445 | 5200 | 15000 |
| | 590 | 440 | 440 | 5 | 5 | 450 | 7250 | 16500 |
| | 590 | 440 | 440 | 5 | 5 | 450 | 7100 | 15900 |
| **410** | 560 | 400 | 400 | 2 | 11*20* | 450 | 6400 | 15800 |
| | 560 | 400 | 400 | 2 | 11*20* | 450 | 5600 | 14400 |
| | 600 | 440 | 440 | 5 | 5 | 460 | 6450 | 18300 |
| | 600 | 440 | 440 | 5 | 5 | 460 | 6450 | 18300 |
| | 600 | 440 | 440 | 5 | 5 | 460 | 6450 | 18300 |
| | 600 | 440 | 440 | 5 | 5 | 460 | 6500 | 16700 |
| | 600 | 440 | 440 | 5 | 5 | 460 | 6450 | 18300 |
| **420** | 580 | 260 | 260 | 4 | 4 | 468 | 4350 | 9600 |
| | 580 | 320 | 320 | 4 | 4 | 463 | 4680 | 10800 |
| | 600 | 440 | 440 | 5 | 5 | 470 | 5550 | 16300 |
| | 600 | 440 | 440 | 5 | 5 | 470 | 5550 | 16300 |
| | 600 | 440 | 440 | 5 | 5 | 470 | 7100 | 19500 |
| | 600 | 440 | 440 | 5 | 10*20* | 470 | 7100 | 19500 |
| | 620 | 400 | 400 | 5 | 5 | 473 | 5800 | 15400 |
| **440** | 620 | 450 | 450 | 5 | 5 | 487 | 7420 | 15800 |
| | 620 | 450 | 450 | 5 | 5 | 487 | 7420 | 15800 |
| | 620 | 450 | 450 | 5 | 12*20* | 487 | 6700 | 21100 |
| | 620 | 450 | 450 | 5 | 5 | 487 | 6700 | 21100 |
| | 620 | 450 | 450 | 5 | 5 | 487 | 6700 | 21100 |
| | 620 | 450 | 450 | 5 | 5 | 487 | 6700 | 21100 |
| | 650 | 355 | 355 | 3 | 3 | 509.5 | 6250 | 14600 |

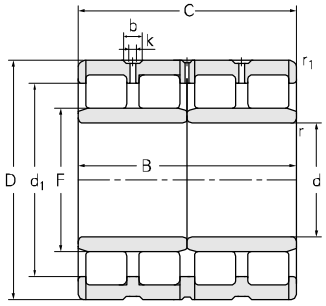
| Designations | Abutment and fillet dimensions | | | | | Weight |
|---|---|---|---|---|---|---|
| | $D1_{min}$ | $b_{max}$ | $k_{max}$ | Da | da | |
| | mm | | | | | kg |
| **FCD78108320** | 500 | 13.9 | 7.5 | 526 | 405 | 228 |
| **FC78110400K/HCYA4** | 496.5 | 12 | 6 | 532 | 406 | 330 |
| **FCD78110400/HG2YAD** | 498 | 20 | 10 | 530 | 401 | 300 |
| **FC78110400K/HG2YA4** | 496.5 | 12 | 6 | 532 | 406 | 330 |
| **FC80110300** | 502 | 12 | 6 | 530 | 418 | 223 |
| **FC80110300A** | 499.6 | 12 | 6 | 530 | 418 | 225 |
| **FC80110300S** | 502 | 12 | 6 | 530 | 418 | 223 |
| **FC80112300** | 513 | | | 542 | 416 | 242 |
| **FCD80112410** | 509 | 13.9 | 7.5 | 546 | | 310 |
| **FCD80112410/HG2YA4** | 500 | 15 | 8 | 540 | 418 | 325 |
| **FCD80112410/HCYA34** | 509 | 13 | 7 | 540 | | 320 |
| **FCD80114440** | 530 | | | 570 | 418 | 410 |
| **FCD80118440/HCYAD-SY** | 528 | 15 | 8 | 570 | 418 | 415 |
| **FCDP82112400** | 515 | 16.7 | 9 | 544 | 428 | 287 |
| **FCDP82112400/HCYAD** | 508 | 16.7 | 9 | 544 | 428 | 286 |
| **FCDP82120440/HCYA34** | 533 | 20 | 10 | 578 | 430 | 445 |
| **FCDP82120440-ZH** | 533 | 20 | 10 | 578 | 430 | 445 |
| **FCDP82120440/HCYA34** | 533 | 20 | 10 | 578 | 430 | 445 |
| **FCD82120440/HCYAD** | 533 | 20 | 10 | 578 | 430 | 425 |
| **FCDP82120440-ZH/W283** | 533 | 20 | 10 | 578 | 430 | 433 |
| **FCD84116260** | 536 | | | 560 | 438 | 205 |
| **FCD84116320** | 525 | | | 560 | 438 | 249 |
| **FCD84120440/HC** | 535 | 18 | 8 | 578 | 440 | 414 |
| **FCD84120440/HCP6YAB** | 535 | 18 | 8 | 578 | 440 | 414 |
| **FCDP84120440/HCYAD-1** | 540 | 29 | 15.9 | 578 | 440 | 417 |
| **FCDP84120440/HCYAD** | 540 | 29 | 15.9 | 578 | 445 | 417 |
| **FCD84124400/HC** | 550 | 15 | 8 | 598 | 440 | 423 |
| **FCDP88124450** | 563 | 15 | 8 | 598 | 460 | 452 |
| **FCDP88124450/YA6** | 563 | 15 | 8 | 598 | 460 | 452 |
| **FCDP88124450/HCYAD-KM** | 564.5 | 15 | 8 | 598 | 459 | 439 |
| **FCDP88124450/HC** | 563 | 15 | 8 | 598 | 460 | 436 |
| **FCDP88124450/HCYA36** | 563 | 15 | 8 | 598 | 460 | 436 |
| **FCDP88124450//HCEYA6** | 563 | 15 | 8 | 598 | 460 | 436 |
| **FC88130355** | 585 | | | 632 | 456 | 400 |



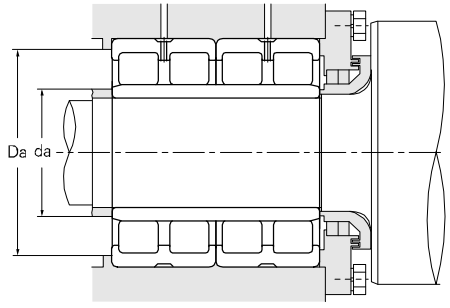

FCD type




FC type

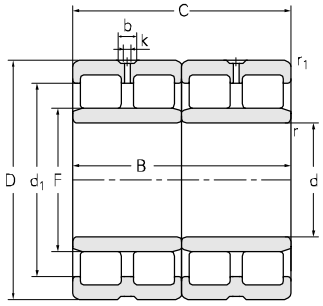



FCDP type

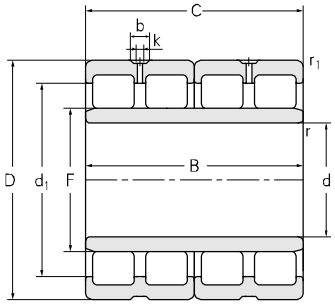



| Principal dimensions | | | | | | | Basic load ratings | |
|---|---|---|---|---|---|---|---|---|
| d | D | B | C | $r_{1min}$ | $r_{min}$ | F | Cr | Cor |
| mm | | | | | | | kN | |
| **440** | 650 | 355 | 355 | 4 | 12.5*20* | 494 | 6700 | 14700 |
| | 660 | 340 | 340 | 6 | 6 | 492 | 5100 | 13500 |
| **447.295** | 635.176 | 463.55 | 463.55 | 5 | 13.5*20* | 495 | 8400 | 20500 |
| **450** | 590 | 300 | 300 | 4 | 14.5*45* | 490 | 3900 | 12200 |
| **455** | 700 | 310 | 310 | 6 | 6 | 640 | 5550 | 13900 |
| | 700 | 310 | 310 | 6 | 6 | 640 | 5550 | 13900 |
| **460** | 620 | 400 | 400 | 4 | 4 | 502 | 6150 | 15400 |
| | 650 | 355 | 355 | 3 | 12*20* | 509.5 | 6250 | 14500 |
| | 650 | 424 | 424 | 3 | 12*20* | 510 | 7800 | 18200 |
| | 650 | 470 | 470 | 3 | 12*20* | 509 | 8750 | 21500 |
| | 650 | 470 | 470 | 3 | 12*20* | 509 | 8750 | 21500 |
| | 650 | 470 | 470 | 3 | 12*20* | 509 | 8750 | 22400 |
| | 680 | 400 | 400 | 6 | 6 | 518 | 8050 | 17400 |
| **462** | 615.95 | 386 | 386 | 4 | 2 | 585 | 3470 | 8350 |
| **475** | 600 | 368 | 368 | 3 | 3 | 504 | 5500 | 14700 |
| | 600 | 392 | 392 | 3 | 3 | 504 | 5500 | 14700 |
| **480** | 650 | 450 | 450 | 6 | 6 | 525 | 7840 | 15400 |
| | 650 | 450 | 450 | 6 | 6 | 525 | 5350 | 1580 |
| | 650 | 450 | 450 | 6 | 6 | 525 | 5350 | 1580 |
| | 680 | 500 | 500 | 6 | 6 | 532 | 7980 | 23400 |
| | 680 | 420 | 420 | 3 | 12*20* | 528 | 8400 | 19400 |
| | 680 | 500 | 500 | 6 | 6 | 532 | 7980 | 23400 |
| | 680 | 500 | 500 | 6 | 6 | 532 | 7100 | 22900 |
| | 680 | 500 | 500 | 6 | 6 | 532 | 7250 | 23400 |
| | 700 | 420 | 420 | 6 | 12*20* | 533 | 7800 | 20900 |

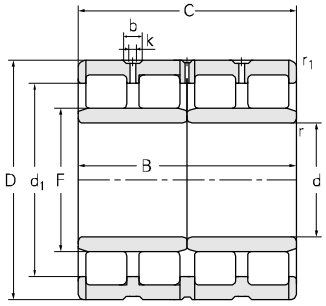
| Designations | Abutment and fillet dimensions | | | | | Weight |
|---|---|---|---|---|---|---|
| | $D1_{min}$ | $b_{max}$ | $k_{max}$ | Da | da | |
| | mm | | | | | kg |
| **FC88130355A** | 584 | 11.1 | 6 | 630 | 459 | 421 |
| **FCD88132340ZW/HCC4YA3** | 582 | | | 636 | 462 | 425 |
| **FCDP89127463X4/HCYAD/W283** | 575 | 22 | 8 | 613 | 467 | 478 |
| **FC90114300** | 528 | 12 | 6 | 570 | 482 | 240 |
| **NNQP692KZW/P4YB5** | | | | 686 | 470 | 422 |
| **NNQP692KZW/P5YB5** | | | | 686 | 470 | 422 |
| **FCDP92124400/HCYAD** | 568 | 15 | 8 | 600 | 478 | 359 |
| **FCD92130355** | 584 | 11.1 | 6 | 632 | 479 | 375 |
| **FCD92130424** | 594 | 16.7 | 9 | 632 | 479 | 452 |
| **FCDP92130470** | 588 | 22 | 12 | 632 | 479 | 516 |
| **FCDP92130470/HCYAD/W283** | 588 | 22 | 12 | 632 | 479 | 488 |
| **FCD92130470** | 584 | 11.1 | 6 | 632 | 479 | 512 |
| **FC92136400** | 618 | 24 | 8 | 656 | 482 | 630 |
| **CCT6/462** | 570 | | | 596 | 476 | 338 |
| **FCDP95120368HC/YA3** | 563 | 16.7 | 9 | 582 | 491 | 237 |
| **FCDP95120392/YA3** | 577 | 16.7 | 9 | 582 | 491 | 242 |
| **FCD96130450** | 593 | 15 | 8 | 626 | 502 | 419 |
| **FCDP96130450/HCRG2/W283** | 593 | 15 | 8 | 626 | 502 | 430 |
| **FCDP96130450/HC** | 593 | 15 | 8 | 626 | 502 | 430 |
| **FCDP96136500/P54** | 632 | 15 | 9 | 656 | 502 | 599 |
| **FCD96136420** | 616 | 16.7 | 9 | 662 | 502 | 510 |
| **FCDP96136500/HCP64** | 632 | 15 | 9 | 656 | 502 | 599 |
| **FCD96136500/P64YA3** | 632 | 15 | 9 | 656 | 502 | 588 |
| **FCDP96136500/HCR** | 616 | 15 | 9 | 656 | 502 | 600 |
| **FCD96140420/HCYA3** | 625 | 18 | 8 | 676 | 502 | 554 |



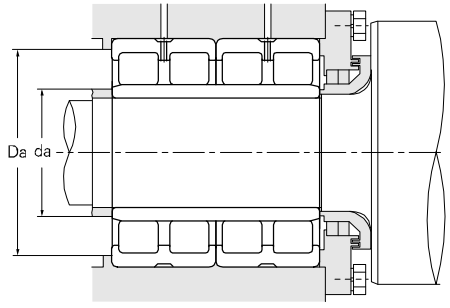

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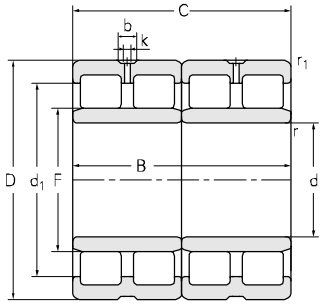

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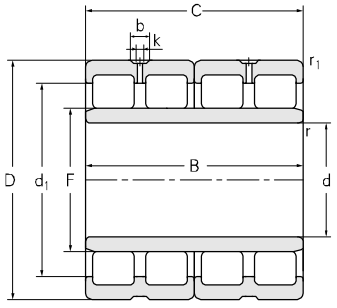

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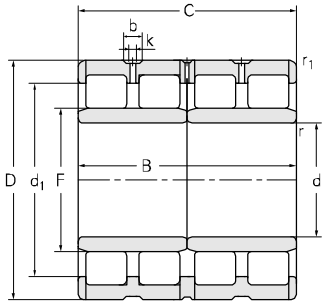

| Principal dimensions | | | | | | | Basic load ratings | | Designations | Abutment and fillet dimensions | | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | C | $r_{1min}$ | $r_{min}$ | F | Cr | Cor | | D1min | bmax | kmax | Da | da | |
| mm | | | | | | | kN | | | mm | | | | | kg |
| **500** | 650 | 260 | 260 | 5 | 5 | 542 | 4000 | 10000 | **FCD100130260** | 600 | | | 628 | 520 | 220 |
| | 670 | 450 | 450 | 6 | 6 | 540 | 7840 | 20100 | **FC100134450/P69** | 615 | 15 | 7 | 646 | 520 | 446 |
| | 670 | 450 | 450 | 6 | 6 | 540 | 8640 | 23700 | **FCD100134450/P69HCYA3** | 617 | 15 | 8 | 646 | 520 | 460 |
| | 670 | 450 | 450 | 5 | 12.5*20* | 540 | 8580 | 22500 | **FCDP100134450/HCC9YAD-1** | 614 | 18 | 10 | 648 | 520 | 451 |
| | 670 | 450 | 450 | 5 | 12.5*20* | 540 | 8400 | 22700 | **FCDP100134450/HCYA4/W283** | 614 | 18 | 10 | 648 | 520 | 452 |
| | 670 | 450 | 450 | 5 | 12.5*20* | 540 | 8400 | 22700 | **FCDP100134450/HCRG2YA4/W283** | 614 | 18 | 10 | 648 | 520 | 452 |
| | 670 | 450 | 450 | 5 | 12.5*20* | 540 | 8400 | 22700 | **FCDP100134450/HCC9YAD-2** | 614 | 18 | 10 | 648 | 520 | 454 |
| | 670 | 450 | 450 | 5 | 5 | 540 | 8000 | 21500 | **FCD100132450** | 612 | 16.7 | 9 | 648 | 520 | 455 |
| | 670 | 485 | 450 | 5 | 12.5*20* | 540 | 8400 | 22700 | **FCDP100134450/HCEC9YAD** | 614 | 18 | 10 | 648 | 520 | 463 |
| | 680 | 450 | 450 | 2 | 5 | 550 | 8200 | 22000 | **FCD100136450** | 622 | 13.9 | 7.5 | 664 | 520 | 485 |
| | 680 | 450 | 450 | 5 | 12.5*20* | 540 | 7600 | 22200 | **FCDP100136450/HCYAD** | 623 | 18 | 10 | 658 | 520 | 488 |
| | 700 | 500 | 500 | 6 | 6 | 554 | 8600 | 21600 | **FCDP100140500/HC** | 633.6 | 18 | 10 | 676 | 522 | 632 |
| | 710 | 480 | 480 | 6 | 17*20* | 558 | 8100 | 23600 | **FCDP100142480/HCERC9YA4/W283** | 642 | 22 | 12 | 686 | 522 | 622 |
| | 710 | 480 | 480 | 5 | 18*20* | 558 | 8780 | 21500 | **FCDP100142480/YA6** | 642 | 13.9 | 7.5 | 688 | 522 | 604 |
| | 720 | 400 | 400 | 3 | 6 | 558 | 7850 | 17500 | **FC100144400** | 656 | 22.3 | 12 | 702 | 522 | 526 |
| | 720 | 400 | 400 | 5 | 5 | 550 | 8500 | 18300 | **FCD100144400ZW/HCYA3** | 646 | | | 700 | 520 | 469 |
| | 720 | 530 | 530 | 6 | 15*20* | 568 | 8550 | 28100 | **FCDP100144530/HCRYA34** | 650 | 15 | 8 | 696 | 528 | 752 |
| | 720 | 530 | 530 | 6 | 15*20* | 568 | 8550 | 28100 | **FCDP100144530/HCYAD-1/W283** | 650 | 15 | 5 | 696 | 528 | 752 |
| | 720 | 530 | 530 | 5 | 13*20* | 568 | 10500 | 28500 | **FCD100144530/YA6** | 651 | 16.7 | 9 | 698 | 528 | 729 |
| | 738 | 500 | 500 | 6 | 18*20* | 556 | 10500 | 23000 | **FCD100148500X1** | 671 | 22.3 | 12 | 714 | 522 | 732 |
| **510** | 680 | 500 | 500 | 5 | 7.5*20* | 560 | 8950 | 26200 | **FCDP102136500** | 627 | | 12 | 654 | 534 | 525 |
| | 680 | 500 | 500 | 5 | 5 | 560 | 8300 | 25200 | **FCDP102136500/HCRG2YAD** | 644 | 22 | 12 | 654 | 534 | 522 |
| | 680 | 500 | 500 | 5 | 5 | 560 | 8300 | 25200 | **FCDP102136500/HCYAD/W283** | 628 | 22 | 12 | 654 | 534 | 521 |
| | 730 | 520 | 520 | 6 | 6 | 565 | 11000 | 27000 | **FCDP102146520/HCYB2** | 660 | 18 | 8 | 702 | 536 | 722 |
| | 730 | 520 | 520 | 6 | 17.5*20* | 569 | 9480 | 21500 | **FCD102146520** | 665 | | | 702 | 537 | 744 |
| | 760 | 550 | 550 | 3 | 16*20* | 570 | 12000 | 26500 | **FCDP102152550** | 688 | 16.7 | 9 | 738 | 537 | 947 |
| | 760 | 550 | 550 | 6 | 16*20* | 570 | 11200 | 29300 | **FCDP102152550/HCYAD-KM** | 685 | 22 | 10 | 732 | 537 | 898 |
| **520** | 735 | 535 | 535 | 5 | 20*20* | 574.5 | 11000 | 27800 | **FCDP104147535/HCYAD** | 664.5 | 22 | 12 | 709 | 548 | 757 |
| **530** | 760 | 520 | 520 | 5 | 12*20* | 587 | 11500 | 28500 | **FCDP106152520** | 683 | 16.7 | 9 | 734 | 552 | 773 |
| | 760 | 520 | 520 | 5 | 12*20* | 587 | 11100 | 27000 | **FCDP106152520/HCYAD** | 684 | 22.3 | 12 | 734 | 552 | 788 |
| | 760 | 520 | 520 | 5 | 12*20* | 587 | 11100 | 27000 | **FCDP106152520/HCRG2YAD** | 684 | 22.3 | 12 | 734 | 552 | 788 |
| | 780 | 570 | 570 | 3 | 14*20* | 601 | 12700 | 32500 | **FCD106156570** | 697 | 22.3 | 12 | 758 | 556 | 954 |
| | 780 | 570 | 570 | 6 | 6 | 595 | 13000 | 32000 | **FCDP1061565570/HCRG2YAD** | 694 | 19 | 10 | 752 | 556 | 970 |
| | 780 | 570 | 570 | 6 | 6 | 601 | 11000 | 30000 | **FCDP106156570/HCRG2YAD-1/W283** | 695 | 27.5 | 12 | 752 | 556 | 972 |
| | 780 | 570 | 570 | 6 | 6 | 601 | 11000 | 30000 | **FCDP106156570/HCEYAD-1/W283** | 695 | 27.5 | 12 | 752 | 556 | 972 |
| | 780 | 570 | 570 | 6 | 6 | 595 | 13000 | 32000 | **FCDP106156570/HCEYAD/W283** | 694 | 19 | 10 | 752 | 556 | 971 |



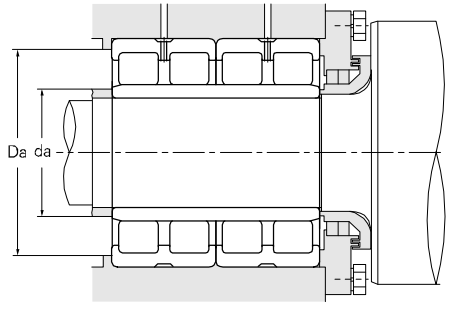

FCD type




FC type

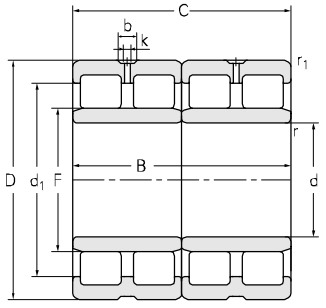



FCDP type

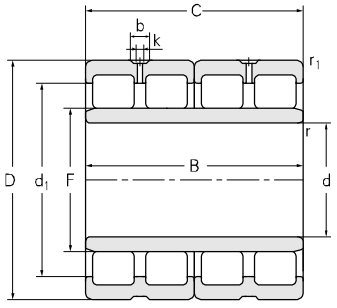



| Principal dimensions | | | | | | | Basic load ratings | |
|---|---|---|---|---|---|---|---|---|
| d | D | B | C | $r_{1min}$ | $r_{min}$ | F | Cr | Cor |
| mm | | | | | | | kN | |
| **530** | 780 | 500 | 500 | 6 | 6 | 591 | 9300 | 20500 |
| **550** | 740 | 510 | 510 | 2 | 15*20* | 600 | 10000 | 27500 |
| | 800 | 520 | 520 | 6 | 10*20* | 612 | 11500 | 26000 |
| | 800 | 560 | 560 | 6 | 18.5*20* | 610 | 12000 | 28000 |
| | 800 | 520 | 520 | 6 | 6 | 612 | 10300 | 28500 |
| | 800 | 520 | 520 | 6 | 6 | 612 | 12200 | 28500 |
| | 800 | 520 | 520 | 6 | 6 | 612 | 12200 | 28500 |
| | 800 | 560 | 560 | 6 | 18.5*20* | 610 | 11900 | 32500 |
| | 800 | 560 | 560 | 6 | 6 | 612 | 13100 | 31300 |
| | 800 | 560 | 560 | 6 | 18.5*20* | 610 | 13600 | 32500 |
| | 800 | 560 | 560 | 6 | 18.5*20* | 610 | 13600 | 32500 |
| | 800 | 560 | 560 | 6 | 6 | 610 | 13600 | 32500 |
| | 800 | 560 | 560 | 6 | 6 | 609 | 13500 | 32500 |
| **560** | 800 | 600 | 600 | 7.5 | 7.5 | 620 | 13000 | 33500 |
| | 820 | 315 | 279 | 3 | 6 | 625 | 13500 | 36000 |
| | 820 | 600 | 600 | 3 | 20*20* | 625 | 14200 | 34000 |
| | 820 | 600 | 600 | 6 | 20*20* | 625 | 12800 | 34000 |
| | 820 | 630 | 630 | 3 | 3 | 625 | 14400 | 36000 |
| **570** | 750 | 530 | 530 | 6 | 6 | 622 | 9000 | 26600 |
| | 800 | 514 | 514 | 6 | 6 | 626 | 11000 | 29000 |
| | 800 | 514 | 514 | 6 | 6 | 626 | 11000 | 29000 |
| | 815 | 594 | 594 | 6 | 6 | 628 | 13000 | 35200 |
| **580** | 780 | 520 | 486 | 2 | 12*20* | 634 | 9900 | 27000 |
| | 780 | 521 | 486 | 2 | 12*20* | 634 | 9900 | 27000 |
| | 780 | 558 | 486 | 2 | 12*20* | 634 | 9900 | 27000 |
| | 850 | 540 | 540 | 6 | 6 | 652 | 11500 | 33200 |
| | 850 | 540 | 540 | 6 | 6 | 652 | 11500 | 33200 |
| **590** | 820 | 590 | 590 | 6 | 6 | 649 | 12800 | 35100 |

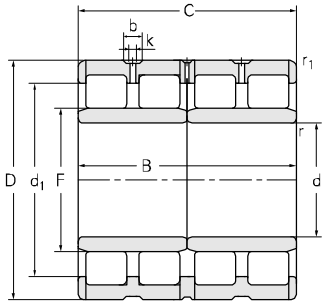
| Designations | Abutment and fillet dimensions | | | | | Weight |
|---|---|---|---|---|---|---|
| | $D1_{min}$ | $b_{max}$ | $k_{max}$ | Da | da | |
| | mm | | | | | kg |
| **FCD106156500** | 690 | | | 752 | 556 | 810 |
| **FCDP110148510/YA6** | 680 | 22.3 | 12 | 720 | 575 | 612 |
| **FCD110160520/YA6** | 721 | | | 772 | 576 | 890 |
| **FCD110160550/YA6** | 725 | | | 772 | 576 | 928 |
| **FCDP110160520** | 721 | | | 772 | 576 | 890 |
| **FCDP110160520/HC** | 721 | | | 772 | 576 | 890 |
| **FCDP110160520/HC/W283** | 721 | 18 | 10 | 772 | 576 | 893 |
| **FCDP110160560/HCYAD-2** | 725 | 24 | 12 | 772 | 576 | 958 |
| **FCDP110160560/HCG2I** | 721 | 18 | 10 | 772 | 576 | 957 |
| **FCDP110160560/HCRG2-YL** | 725 | 24 | 12 | 772 | 576 | 950 |
| **FCDP110160560/HCYAD-KM** | 725 | 24 | 12 | 772 | 576 | 950 |
| **FCDP110160560/HCYAD-1/W283** | 725 | 24 | 12 | 772 | 576 | 950 |
| **FCDP110160560/HCYAD/W283** | 724 | 24 | 12 | 772 | 576 | 956 |
| **FCDP112160600** | 722755 | 16.7 | 9 | 769 | 589 | 1010 |
| **FCDP112164630/HCC4YA3** | 743 | 18 | 10 | 798 | 586 | 1164 |
| **FCDP112164600** | 743 | 16.7 | 9 | 798 | 586 | 1075 |
| **FCDP112164600/HCYAD/W283** | 743 | 22 | 12 | 792 | 586 | 1091 |
| **FCDP112164630** | 690 | 16.7 | 9 | 798 | 580 | 1170 |
| **FC114150530/HCYA3** | 746 | | 8 | 722 | 596 | 625 |
| **FCDP114160514/HCC9YAD** | 746 | 22 | 14 | 772 | 596 | 835 |
| **FCDP114160514/HCC9YAD-DNL** | 740 | 25 | 10 | 772 | 596 | 841 |
| **FCDP114163594** | 717 | 22 | 14 | 787 | 596 | 1010 |
| **FCDP116156486/WB** | 717 | 16.7 | 9 | 760 | 602 | 696 |
| **FCDP116156486/WB-1** | 717 | 16.7 | 9 | 760 | 602 | 700 |
| **FCDP116156486/WB-2** | 756 | 16.7 | 9 | 760 | 602 | 713 |
| **FCDP116170540/HCC9/W283** | 756 | 24 | 12 | 822 | 606 | 1082 |
| **FCDP116170540/HCC9** | 748 | 24 | 12 | 822 | 606 | 1082 |
| **FCDP118164590** | | 16.7 | 9 | 792 | 616 | 990 |



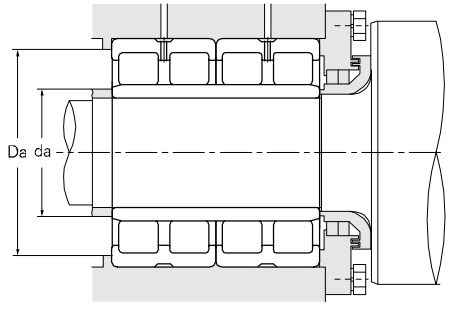

FCD type




FC type

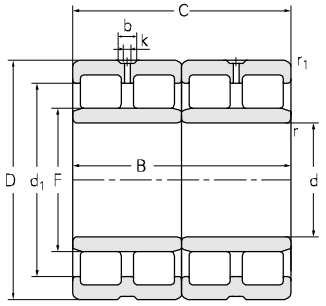



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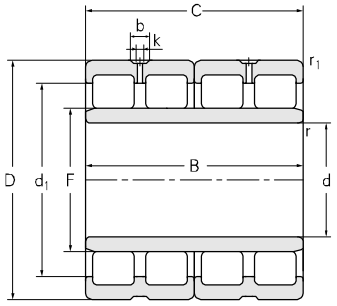



| Principal dimensions | | | | | | | Basic load ratings | |
|---|---|---|---|---|---|---|---|---|
| d | D | B | C | $r_{1min}$ | $r_{min}$ | F | Cr | Cor |
| mm | | | | | | | kN | |
| **600** | 820 | 575 | 575 | 3 | 6 | 660 | 12300 | 35000 |
| | 820 | 575 | 575 | 3 | 6 | 660 | 9750 | 35000 |
| | 820 | 575 | 575 | 3 | 17*20* | 659 | 10900 | 35100 |
| | 820 | 575 | 575 | 3 | 6 | 660 | 9750 | 35000 |
| | 870 | 640 | 640 | 6 | 6 | 669 | 12000 | 38500 |
| | 870 | 640 | 640 | 6 | 6 | 682 | 15500 | 41200 |
| | 870 | 640 | 640 | 6 | 6 | 669 | 12000 | 38500 |
| | 870 | 640 | 640 | 6 | 6 | 672 | 15700 | 41000 |
| | 870 | 640 | 640 | 6 | 6 | 669 | 13200 | 38500 |
| | 870 | 540 | 540 | 4 | 22*20* | 672 | 13000 | 31500 |
| | 870 | 540 | 540 | 6 | 6 | 672 | 12500 | 35700 |
| | 870 | 540 | 540 | 6 | 6 | 672 | 12500 | 35700 |
| **610** | 870 | 660 | 660 | 6 | 12*20* | 680 | 16900 | 44000 |
| | 870 | 660 | 660 | 6 | 12*20* | 680 | 16900 | 44000 |
| **630** | 920 | 515 | 515 | 7.5 | 7.5 | 700 | 13700 | 17160 |
| | 850 | 436 | 436 | 6 | 6 | 690 | 7450 | 23500 |
| | 850 | 536 | 536 | 6 | 6 | 690 | 7800 | 23000 |
| | 800 | 360 | 360 | 5 | 5 | 675 | 6850 | 19500 |
| **640** | 880 | 600 | 600 | 6 | 6 | 700 | 13500 | 40000 |
| **650** | 900 | 650 | 650 | 7.5 | 7.5 | 704 | 16900 | 43000 |
| | 900 | 650 | 650 | 7.5 | 7.5 | 704 | 16900 | 43000 |
| | 900 | 650 | 650 | 7.5 | 7.5 | 704 | 16900 | 43000 |
| | 900 | 650 | 650 | 7.5 | 20*20* | 704 | 14000 | 42000 |
| | 920 | 670 | 670 | 4 | 17*20* | 723 | 14300 | 44500 |
| | 920 | 690 | 690 | 7.5 | 7.5 | 723 | 14500 | 45000 |
| | 920 | 670 | 670 | 4 | 17*20* | 723 | 17100 | 45000 |
| | 920 | 670 | 670 | 7.5 | 17*20* | 723 | 14300 | 44500 |
| | 920 | 670 | 670 | 4 | 17*20* | 723 | 14300 | 44500 |
| | 920 | 670 | 670 | 7.5 | 7.5 | 723 | 14300 | 44500 |
| | 920 | 670 | 670 | 4 | 17*20* | 723 | 14300 | 44500 |
| **660** | 820 | 440 | 440 | 4 | 7.5 | 702 | 7450 | 22700 |

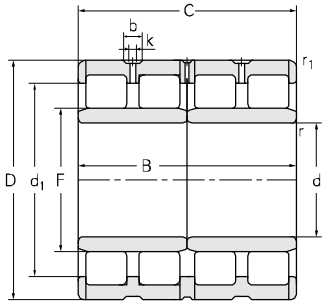
| Designations | Abutment and fillet dimensions | | | | | Weight |
|---|---|---|---|---|---|---|
| | $D1_{min}$ | $b_{max}$ | $k_{max}$ | Da | da | |
| | mm | | | | | kg |
| **FCDP120164575/HCYA6-1** | 768 | 18 | 9 | 798 | 626 | 945 |
| **FCDP120164575/HCRYA6/W283** | 750 | 18 | 9 | 798 | 626 | 947 |
| **FCDP120164575/HCYA4** | 750 | 18 | 10 | 798 | 626 | 951 |
| **FCDP120164575/HCYA6/W283** | 750 | 18 | 9 | 798 | 626 | 947 |
| **FCDP120174640/HCEYA34-AL** | 781 | 18 | 10 | 842 | 626 | 1313 |
| **FCDP120174640/HCYAD-1/W283** | 784 | 18 | 10 | 842 | 626 | 1324 |
| **FCDP120174640/HCYA34-FSBJ** | 781 | 18 | 10 | 842 | 626 | 1313 |
| **FCDP120174640/HCYAD/W283** | 784 | 18 | 10 | 842 | 626 | 1330 |
| **FCDP120174640/HCYA34** | 809 | 18 | 10 | 842 | 626 | 1347 |
| **FCDP120174540** | 780 | 16.7 | 9 | 846 | 626 | 1100 |
| **FCDP120174540/HCYAD** | 784 | 18 | 10 | 842 | 626 | 1120 |
| **FCDP120174540/HCYAD-FSDT** | 784 | 18 | 10 | 842 | 626 | 1120 |
| **FCDP122174660/HCYA34/W283-LG** | 790 | 20 | 12 | 842 | 633 | 1316 |
| **FCDP122174660/HCYA34** | 790 | 20 | 12 | 842 | 633 | 1316 |
| **FCD126184515/HC** | 825 | 25 | 12 | 889 | 659 | 1182 |
| **FCD126170436** | 770 | | | 822 | 656 | 720 |
| **NNU49/630/HCDT** | 780 | 24 | 10 | 822 | 656 | 778 |
| **FCD126160360** | 742 | | | 774 | 654 | 560 |
| **FCDP128176600** | 743 | 25 | 12 | 852 | 666 | 1120 |
| **FCDP130180650/HCYAD** | 821.4 | 30 | 12 | 869 | 679 | 1253 |
| **FCDP130180650/HCRG2YAD-1** | 821.4 | 30 | 12 | 869 | 679 | 1253 |
| **FCDP130180650/HCYAD-FSBJ** | 821.4 | 30 | 12 | 869 | 679 | 1257 |
| **FCDP130180650/HC** | 819.4 | 30 | 12 | 869 | 679 | 1275 |
| **FCDP130184670/HCYA3** | 829 | 18 | 10 | 896 | 679 | 1460 |
| **FCDP130184690** | 829 | 18 | 10 | 889 | 679 | 1490 |
| **FCDP130184670/HCYA34** | 829 | 18 | 10 | 896 | 681 | 1454 |
| **FCDP130184670/HCYAD/W283-1** | 829 | 22 | 14 | 889 | 681 | 1456 |
| **FCDP130184670/HCRG2YAD/W283** | 829 | 18 | 12 | 896 | 681 | 1457 |
| **FCDP130184670/HCYAD-1** | 829 | 18 | 10 | 889 | 681 | 1457 |
| **FCDP130184670/HCYAD/W283** | 829 | 18 | 12 | 896 | 681 | 1454 |
| **FCD132164440** | 766 | | | 796 | 689 | 532 |



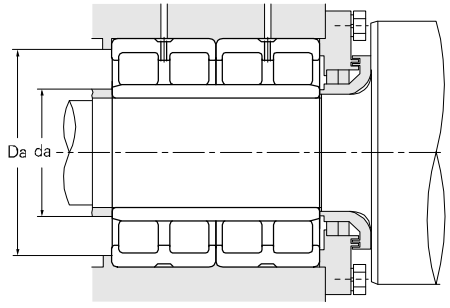

FCD type




FC type

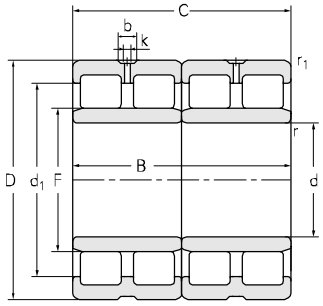



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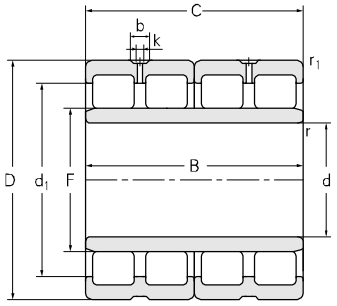



| Principal dimensions | | | | | | | Basic load ratings | |
|---|---|---|---|---|---|---|---|---|
| d | D | B | C | $r_{1min}$ | $r_{min}$ | F | Cr | Cor |
| mm | | | | | | | kN | |
| **660** | 880 | 450 | 450 | 6 | 6 | 727 | 7500 | 23500 |
| **680** | 920 | 600 | 600 | 6 | 18*20* | 743 | 12400 | 41600 |
| | 980 | 640 | 640 | 4 | 20*20* | 760 | 17700 | 46000 |
| | 1020 | 680 | 680 | 6 | 6 | 775 | 20000 | 49500 |
| **690** | 980 | 715 | 715 | 20*20* | 4 | 767.5 | 18800 | 51500 |
| | 980 | 750 | 750 | 7.5 | 11.4*20* | 766 | 18800 | 51500 |
| | 980 | 750 | 750 | 7.5 | 7.5 | 766 | 20500 | 57500 |
| | 980 | 750 | 750 | 7.5 | 7.5 | 766 | 20500 | 57500 |
| | 980 | 750 | 750 | 7.5 | 20*20* | 766 | 16100 | 51500 |
| | 980 | 715 | 715 | 20*20* | 4 | 767.5 | 18800 | 51500 |
| **700** | 930 | 620 | 620 | 3 | 18*20* | 763 | 15000 | 42800 |
| | 930 | 620 | 620 | 3 | 18*20* | 763 | 15100 | 44000 |
| | 980 | 700 | 700 | 6 | 6 | 774 | 17500 | 48500 |
| | 1000 | 710 | 710 | 4 | 4 | 770 | 19000 | 47500 |
| **710** | 1000 | 715 | 715 | 7.5 | 17*20* | 787.5 | 20100 | 55500 |
| | 1000 | 715 | 715 | 7.5 | 7.5 | 787.5 | 16700 | 54200 |
| | 1000 | 715 | 715 | 7.5 | 17*20* | 787.5 | 20100 | 55500 |
| | 1000 | 715 | 715 | 7.5 | 7.5 | 787.5 | 16700 | 54200 |
| | 1020 | 710 | 710 | 4 | 4 | 785 | 19500 | 49700 |
| **725** | 1000 | 700 | 700 | 6 | 6 | 796 | 18000 | 49500 |
| **730** | 960 | 620 | 620 | 3 | 20*20* | 790 | 15400 | 45000 |
| | 1000 | 700 | 700 | 4 | 20*20* | 802 | 16600 | 54500 |
| | 1030 | 750 | 750 | 6 | 21*20* | 809 | 20500 | 58500 |
| | 1030 | 750 | 750 | 6 | 21*20* | 809 | 21000 | 58000 |
| | 1030 | 750 | 750 | 6 | 21*20* | 809 | 21000 | 58000 |
| | 1030 | 750 | 750 | 6 | 21*20* | 809 | 21000 | 58000 |
| **750** | 1000 | 670 | 670 | 3 | 20*20* | 813 | 17000 | 48500 |
| | 1000 | 670 | 670 | 3 | 20*20* | 813 | 17000 | 48500 |
| | 1000 | 670 | 670 | 3 | 20*20* | 813 | 18000 | 52000 |

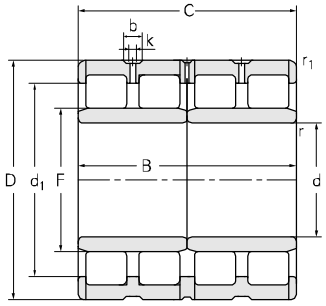
| Designations | Abutment and fillet dimensions | | | | | Weight |
|---|---|---|---|---|---|---|
| | $D1_{min}$ | $b_{max}$ | $k_{max}$ | Da | da | |
| | mm | | | | | kg |
| **FCD132176450** | 806 | | | 852 | 686 | 782 |
| **FCDP136184600/HCG2IYAD** | 839 | 22 | 12 | 892 | 708 | 1178 |
| **FCDP136196640/HCC4YAD/W283** | 875 | 22 | 12 | 956 | 710 | 1652 |
| **FCDP136204680** | 929 | 22 | 12 | 992 | 710 | 2050 |
| **FCDP138196715/HCP69YAD** | 907.5 | 22 | 12 | 949 | 712 | 1805 |
| **FCDP138196750/HCC9YA6** | 880 | 45 | 13 | 949 | 719 | 1920 |
| **FCDP138196750/HCYAD/W283-2-LG** | 880 | 27 | 15 | 949 | 719 | 1898 |
| **FCDP138196750/HCYAD/W283-2** | 880 | 28 | 15 | 949 | 719 | 1898 |
| **FCDP138196750/HCYAD/W283** | 880 | 45 | 15.9 | 949 | 719 | 1876 |
| **FCDP138196715/HCP69YAD-1** | 907.5 | 22 | 12 | 949 | 712 | 1805 |
| **FCDP140186620** | 859 | 22.3 | 12 | 908 | 727 | 1170 |
| **FCDP140186620/HCEC9YAD/W283** | 854 | 22.3 | 12 | 908 | 727 | 1201 |
| **FCDP140196700** | 900 | 22.3 | 12 | 952 | 726 | 1680 |
| **FCDP140200710** | 916 | 22.3 | 12 | 976 | 722 | 1820 |
| **FCDP142200715/HCYAD** | 902 | 22.3 | 12 | 969 | 739 | 1844 |
| **FCDP142200715/HCRG2YA4** | 902 | 22.3 | 12 | 969 | 739 | 1848 |
| **FCDP142200715/HCYAD/W283** | 902 | 22.3 | 12 | 969 | 739 | 1844 |
| **FCDP142200715/HCYA4/W283** | 902 | 22.3 | 12 | 969 | 739 | 1844 |
| **FCDP142204710** | 932 | 22.3 | 12 | 996 | 732 | 1940 |
| **FCDP145200700** | 920 | 22.3 | 12 | 972 | 751 | 1750 |
| **FCDP146192620** | 886 | 22.3 | 12 | 938 | 758 | 1218 |
| **FCDP146200700/HCEYAD/W283** | 916 | 45 | 15.9 | 976 | 758 | 1681 |
| **FCDP146206750** | 929 | 22.3 | 12 | 1002 | 760 | 2035 |
| **FCDP146206750/HCEYAD/W283-LG** | 924.2 | 22 | 12 | 1002 | 760 | 2076 |
| **FCDP146206750/HCRG2YAD** | 924.2 | 22 | 12 | 1002 | 760 | 2076 |
| **FCDP146206750/HC-FY/W283** | 924.2 | 22 | 12 | 1002 | 760 | 2081 |
| **FCDP150200670/HCC9** | 921 | 22.3 | 12 | 978 | 779 | 1522 |
| **FCDP150200670/HCC91** | 921 | 22.3 | 12 | 978 | 779 | 1522 |
| **FCDP150200670/HCYAD/W283** | 919 | 22.3 | 12 | 978 | 779 | 1497 |



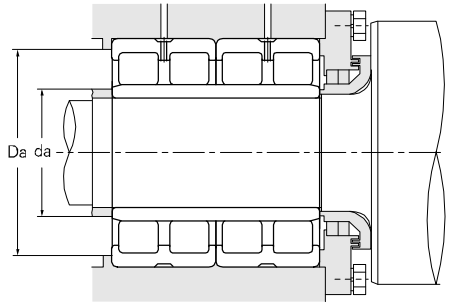

FCD type




FC type

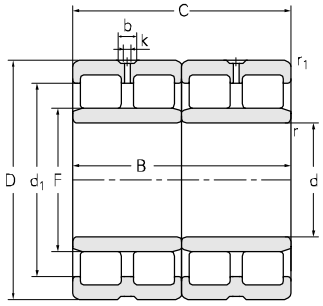



FCDP type

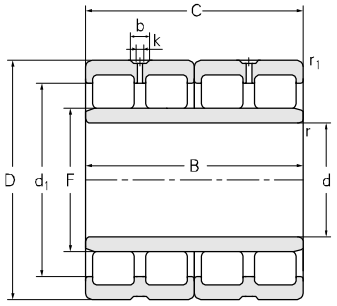



| Principal dimensions | | | | | | | Basic load ratings | |
|---|---|---|---|---|---|---|---|---|
| d | D | B | C | $r_{1min}$ | $r_{min}$ | F | Cr | Cor |
| mm | | | | | | | kN | |
| **750** | 1080 | 665 | 650 | 7.5 | 7.5 | 833 | 19500 | 48000 |
| | 1090 | 750 | 750 | 7.5 | 22*20* | 832 | 21500 | 51500 |
| | 1133 | 670 | 670 | 6 | 6 | 848 | 21000 | 50500 |
| **760** | 1015 | 700 | 700 | 7.5 | 7.5 | 832 | 18500 | 55000 |
| | 1030 | 750 | 750 | 7.5 | 7.5 | 828 | 21000 | 61200 |
| | 1079.5 | 787 | 787 | 7.5 | 7.5 | 846 | 26600 | 64000 |
| | 1079.6 | 787.4 | 787.4 | 5 | 22*20* | 846 | 26600 | 64000 |
| | 1080 | 805 | 790 | 6 | 6 | 846 | 23500 | 65000 |
| | 1080 | 790 | 790 | 7.5 | 7.5 | 846 | 23500 | 65000 |
| **761.425** | 1079.6 | 787.4 | 787.4 | 5 | 22*20* | 846 | 26600 | 64000 |
| **780** | 1070 | 780 | 780 | 6 | 25*20* | 853 | 22000 | 60000 |
| | 1070 | 780 | 780 | 7.5 | 7.5 | 853 | 21000 | 63000 |
| | 1070 | 780 | 780 | 7.5 | 7.5 | 849 | 21400 | 65700 |
| **790** | 1015.9 | 610 | 610 | 6 | 6 | 850 | 17500 | 50000 |
| **800** | 1080 | 700 | 700 | 3 | 3 | 878 | 18800 | 48500 |
| | 1080 | 700 | 700 | 5 | 5 | 878 | 19030 | 59500 |
| | 1080 | 700 | 700 | 5 | 5 | 878 | 17300 | 59500 |
| | 1080 | 750 | 750 | 6 | 6 | 880 | 20000 | 60000 |
| **820** | 1130 | 800 | 800 | 4 | 23*20* | 903 | 19700 | 67000 |
| | 1130 | 800 | 800 | 4 | 23*20* | 903 | 19700 | 67000 |
| | 1130 | 800 | 800 | 4 | 23*20* | 903 | 19700 | 67000 |
| | 1130 | 800 | 800 | 4 | 23*20* | 903 | 19700 | 67000 |
| | 1130 | 800 | 800 | 4 | 23*20* | 903 | 19700 | 67000 |
| | 1130 | 800 | 800 | 4 | 23*20* | 903 | 19700 | 67000 |
| | 1130 | 800 | 800 | 4 | 23*20* | 903 | 19700 | 67000 |
| | 1160 | 840 | 840 | 7.5 | 7.5 | 910 | 21600 | 68500 |
| **830** | 1080 | 710 | 710 | 7.5 | 25*20* | 896 | 14500 | 60500 |
| **840** | 1160 | 840 | 840 | 7.5 | 7.5 | 920 | 24700 | 70800 |

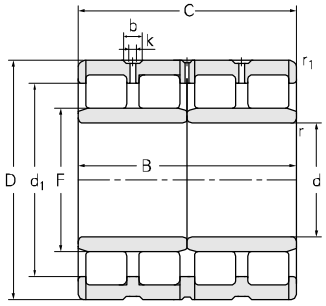
| Designations | Abutment and fillet dimensions | | | | | Weight |
|---|---|---|---|---|---|---|
| | $D1_{min}$ | $b_{max}$ | $k_{max}$ | Da | da | |
| | mm | | | | | kg |
| **FCDP150216650/WB** | 989 | 22.3 | 12 | 1049 | 779 | 2020 |
| **FCDP150218750** | 993 | 22.3 | 12 | 1059 | 780 | 2410 |
| **FCDP150226670X1** | 1023 | 22.3 | 12 | 1105 | 780 | 2450 |
| **FCDP152203700** | 973 | 22.3 | 12 | 984 | 789 | 1600 |
| **FCDP152206750** | 988 | 22.3 | 12 | 999 | 789 | 1870 |
| **FCDP152215787X4/HC-1** | 982 | 23.5 | 12 | 1048 | 789 | 2373 |
| **FCDP152215787X4/HC** | 982 | 23.5 | 12 | 1054 | 789 | 2373 |
| **FCDP152216790X1** | 974 | 22.3 | 12 | 1052 | 789 | 2450 |
| **FCDP152216790** | 974 | 22.3 | 12 | 1049 | 789 | 2420 |
| **FCDP152215787X4/HC/W283** | 982 | 23.5 | 12 | 1054 | 789 | 2365 |
| **FCDP156214780** | 988 | 22.3 | 12 | 1042 | 809 | 2280 |
| **FCDP156214780/HCYAD-1/W283** | 971 | 23.5 | 12 | 1039 | 809 | 2177 |
| **FCDP156214780/HCYAD** | 967 | 23.5 | 12 | 1039 | 809 | 2164 |
| **FCDP158203610X1** | 960 | 22.3 | 12 | 988 | 816 | 1280 |
| **FCDP160216700/HC** | 982 | 23.5 | 12 | 1058 | 820 | 1850 |
| **FCDP160216700/HCP64YAD** | 1018 | 30 | 12 | 1054 | 824 | 1918 |
| **FCDP160216700/HCC4YAD/W283** | 990 | 30 | 12 | 1054 | 824 | 1930 |
| **FCDP160216750** | 1020 | 23.5 | 12 | 1052 | 826 | 2030 |
| **FCDP164226800/HC** | 1026 | 23.5 | 12 | 1106 | 856 | 2534 |
| **FCDP164226800/HCYA3** | 1026 | 23.5 | 12 | 1106 | 856 | 2534 |
| **FCDP164226800/HCP6YA3-SY** | 1026 | 23.5 | 12 | 1106 | 856 | 2534 |
| **FCDP164226800/HCG2IYA3** | 1026 | 23.5 | 12 | 1106 | 856 | 2511 |
| **FCDP164226800/HCYA3-SY/W283** | 1026 | 23.5 | 12 | 1106 | 856 | 2521 |
| **FCDP164226800/HCYA34/W283** | 1026 | 23.5 | 12 | 1106 | 856 | 2521 |
| **FCDP164226800/HCYA3/W283** | 1026 | 23.5 | 12 | 1106 | 856 | 2521 |
| **FCDP164232840** | 1045 | 23.5 | 12 | 1129 | 855 | 2750 |
| **FCDP166216710/HCC9YA3** | 995 | 23.5 | 12 | 1049 | 858 | 1838 |
| **FCDP168232840** | 1016 | 22.3 | 12 | 1129 | 875 | 2730 |



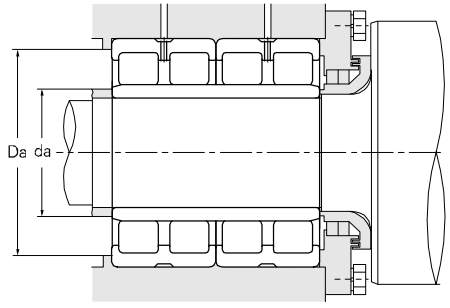

FCD type




FC type

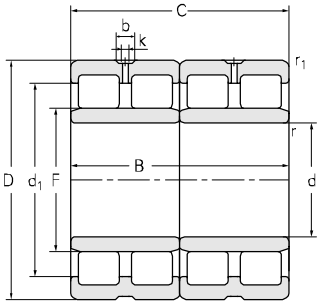



FCDP type

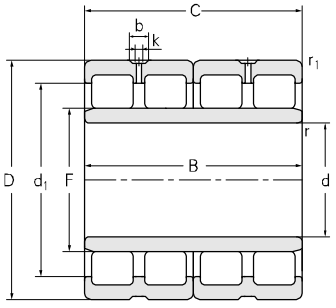



| Principal dimensions | | | | | | | Basic load ratings | |
|---|---|---|---|---|---|---|---|---|
| d | D | B | C | $r_{1min}$ | $r_{min}$ | F | Cr | Cor |
| mm | | | | | | | kN | |
| **850** | 1150 | 840 | 840 | 4 | 23*20* | 928 | 25400 | 76500 |
| | 1150 | 840 | 840 | 6 | 23*20* | 928 | 24000 | 75000 |
| | 1150 | 840 | 840 | 6 | 23*20* | 928 | 25000 | 75500 |
| | 1150 | 840 | 840 | 6 | 23*20* | 928 | 24000 | 75000 |
| | 1180 | 650 | 650 | 7.5 | 7.5 | 945 | 19000 | 50500 |
| | 1180 | 850 | 850 | 4 | 20*20* | 940 | 26100 | 74000 |
| | 1180 | 875 | 850 | 7.5 | 7.5 | 940 | 26100 | 74000 |
| **860** | 1140 | 750 | 750 | 7.5 | 7.5 | 938 | 20500 | 61000 |
| | 1160 | 735 | 710 | 6 | 6 | 940 | 21000 | 60000 |
| **880** | 1140 | 80 | 800 | 6 | 6 | 946 | 24000 | 76000 |
| **900** | 1220 | 840 | 840 | 4 | 24*20* | 989 | 26300 | 80000 |
| | 1220 | 840 | 840 | 4 | 24*20* | 989 | 20000 | 80000 |
| | 1220 | 840 | 840 | 4 | 24*20* | 989 | 25300 | 83500 |
| | 1230 | 895 | 870 | 7.5 | 7.5 | 990 | 26400 | 80000 |
| | 1280 | 780 | 780 | 7.5 | 23*20* | 998 | 28500 | 80500 |
| | 1280 | 930 | 930 | 4 | 25*20* | 1000 | 32500 | 93500 |
| | 1280 | 1050 | 840 | 7.5 | 7.5 | 1000 | 28900 | 80500 |
| **920** | 1280 | 815 | 800 | 7.5 | 7.5 | 1010 | 28700 | 80000 |
| | 1280 | 865 | 850 | 7.5 | 7.5 | 1015 | 27600 | 77500 |
| | 1300 | 975 | 950 | 7.5 | 7.5 | 1019 | 32500 | 92500 |
| **949.85** | 1300 | 850 | 850 | 7.5 | 25*20* | 1044 | 27300 | 90500 |
| **950** | 1300 | 850 | 850 | 7.5 | 7.5 | 1044 | 32200 | 85000 |
| | 1300 | 850 | 850 | 10 | 10 | 1044 | 28600 | 80500 |
| | 1300 | 850 | 850 | 10 | 10 | 1044 | 21500 | 64000 |
| | 1300 | 850 | 850 | 7.5 | 7.5 | 1044 | 33300 | 90500 |
| | 1300 | 850 | 850 | 7.5 | 7.5 | 1044 | 23000 | 85000 |
| | 1360 | 975 | 975 | 6 | 26*20* | 1075 | 34000 | 100000 |
| | 1360 | 1000 | 1000 | 5 | 22*20* | 1075 | 37500 | 105000 |
| | 1360 | 1000 | 1000 | 5 | 5 | 1075 | 37500 | 105000 |
| | 1360 | 1000 | 1000 | 5 | 22*20* | 1075 | 41500 | 113000 |

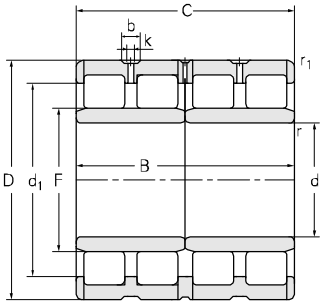
| Designations | Abutment and fillet dimensions | | | | | Weight |
|---|---|---|---|---|---|---|
| | $D1_{min}$ | $b_{max}$ | $k_{max}$ | Da | da | |
| | mm | | | | | kg |
| **FCDP170230840/HC** | 1056 | 22.3 | 12 | 1126 | 882 | 2560 |
| **FCDP170230840/HCRG2YAD/W283** | 1056 | 23.5 | 12 | 1122 | 882 | 2550 |
| **FCDP170230840/HCE/W283** | 1055 | 23.5 | 12 | 1122 | 882 | 2598 |
| **FCDP170230840/HCYAD/W283** | 1056 | 23.5 | 12 | 1122 | 882 | 2545 |
| **FCDP170236650** | 1088 | 22.3 | 12 | 1149 | 885 | 2100 |
| **FCDP170236850/HC** | 1084 | 22.3 | 12 | 1156 | 885 | 2920 |
| **FCDP170236850/WB** | 1084 | 22.3 | 12 | 1149 | 885 | 2950 |
| **FCDP172228750** | 1060 | 22.3 | 12 | 1109 | 895 | 2100 |
| **FCDP172232710/WB** | 1070 | 22.3 | 12 | 1132 | 895 | 2150 |
| **FCDP176228800** | 1040 | 22.3 | 12 | 1112 | 906 | 2210 |
| **FCDP180244840/HC** | 1117 | 22.3 | 12 | 1196 | 929 | 3050 |
| **FCDP180244840/HCYAD/W283** | 1113 | 22.3 | 12 | 1196 | 929 | 2970 |
| **FCDP180244840/HCYAD-1** | 1116 | 22.3 | 12 | 1176 | 929 | 2958 |
| **FCDP180246870/WB** | 1123 | 22.3 | 12 | 1199 | 929 | 3150 |
| **FCDP180256780** | 1175 | 22.3 | 12 | 1249 | 929 | 3250 |
| **FCDP180256930/HC** | 1152 | 22.3 | 12 | 1256 | 929 | 4050 |
| **FCDP180256840/WB** | 1152 | 22.3 | 12 | 1249 | 929 | 3890 |
| **FCDP184256800/WB** | 1238 | 22.3 | 12 | 1249 | 949 | 3280 |
| **FCDP184256850/WB** | 1238 | 22.3 | 12 | 1249 | 949 | 3450 |
| **FCDP184268950/WB** | 1256 | 22.3 | 12 | 1269 | 949 | 4180 |
| **FCDP190260850E/HCC9YA3-JG** | 1196 | 30 | 14 | 1269 | 982 | 3537 |
| **FCDP190260850/C9HCYA3** | 1182 | 30 | 14 | 1269 | 979 | 3390 |
| **FCDP190260850/HCC9** | 1182 | 30 | 16 | 1264 | 984 | 3390 |
| **FCDP190260850/HCP69YAD** | 1186.8 | 32 | 12 | 1264 | 984 | 3360 |
| **FCDP190260850E/HCC9YA3** | 1234 | 30 | 14 | 1269 | 979 | 3550 |
| **FCDP190260850/HCC9YA3** | 1182 | 30 | 14 | 1269 | 979 | 3443 |
| **FCDP190272975** | 1227 | 22.3 | 12 | 1332 | 982 | 4895 |
| **FCDP1902721000** | 1229 | 22.3 | 12 | 1334 | 982 | 5013 |
| **FCDP1902721000/K30** | 1229 | 22.3 | 12 | 1334 | 982 | 4820 |
| **FCDP1902721000/HCEYAD/W281** | 1233 | 30 | 18 | 1334 | 982 | 5027 |



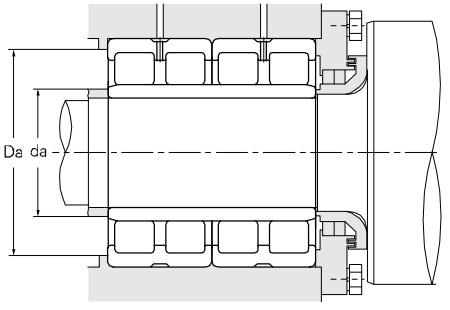

FCD type




FC type




FCDP type




| Principal dimensions | | | | | | | Basic load ratings | |
|---|---|---|---|---|---|---|---|---|
| d | D | B | C | $r_{1min}$ | $r_{min}$ | F | Cr | Cor |
| mm | | | | | | | kN | |
| **970** | 1145 | 705 | 685 | 6 | 6 | 940 | 20500 | 63000 |
| **980** | 1310 | 880 | 880 | 14*45* | 20*20* | 1061.7 | 28500 | 86500 |
| **1000** | 1360 | 800 | 800 | 4 | 23*20* | 1101 | 27000 | 82800 |
| **1030** | 1380 | 850 | 850 | 7.5 | 7.5 | 1124 | 29000 | 90500 |
| **1040** | 1440 | 1000 | 1000 | 7.5 | 27*20* | 1133 | 37900 | 93500 |
| **1200** | 1590 | 1050 | 1050 | 6 | 30*20* | 1305 | 41800 | 13500 |
| **1270** | 1602 | 850 | 850 | 7.5 | 7.5 | 1354 | 42000 | 13600 |
| **1300** | 1655 | 890 | 880 | 7.5 | 7.5 | 1391 | 37300 | 122000 |
| **1350** | 1765 | 1360 | 1360 | 7.5 | 42*20* | 1457 | 40000 | 122000 |
| **1400** | 1780 | 1200 | 1200 | 9.5 | 40*20* | 1493 | 52300 | 163000 |
| | 1900 | 1360 | 1360 | 12 | 40*20* | 1521 | 61500 | 182000 |
| **1480** | 1849.74 | 1100 | 1100 | 7.5 | 7.5 | 1574 | 52500 | 164000 |

| Designations | Abutment and fillet dimensions | | | | | Weight |
|---|---|---|---|---|---|---|
| | $D1_{min}$ | $b_{max}$ | $k_{max}$ | Da | da | |
| | mm | | | | | kg |
| **FCDP174229685/WB** | 1044 | 22.3 | 12 | 1117 | 996 | 1990 |
| **FCDP196262880** | 1198 | 30 | 16 | 1266 | 1010 | 3300 |
| **FCDP200272800** | 1237 | 22.3 | 12 | 1336 | 1036 | 3560 |
| **FCDP206276850** | 1258 | 22.3 | 12 | 1349 | 1065 | 3650 |
| **FCDP2082881000** | 1335 | 22.3 | 12 | 1409 | 1080 | 5090 |
| **FCDP2403181050** | 1465 | 24 | 15 | 1562 | 1242 | 5980 |
| **FCDP254320850X1** | 1568 | 22.3 | 12 | 1571 | 1305 | 6000 |
| **FCDP260331880HC/WB** | 1552 | 22.3 | 12 | 1624 | 1335 | 4800 |
| **FCDP2703531360** | 1620 | 22.3 | 12 | 1734 | 1400 | 9110 |
| **FCDP2703561200** | 1671 | | 12 | 1745 | 1450 | 7380 |
| **FCDP2703801360** | 1670 | 22.3 | 12 | 1860 | 1450 | 11300 |
| **FCDP296370110X1** | 1700 | 22.3 | 12 | 1818 | 1515 | 7450 |

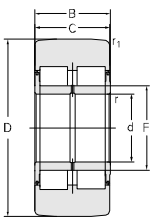


Figure1

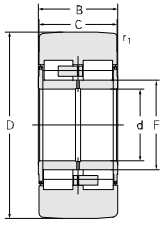


Figure2

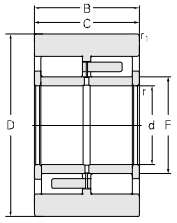


Figure3

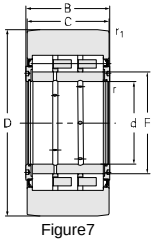


Figure7

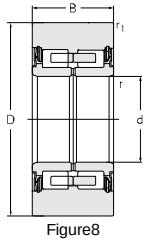


Figure8

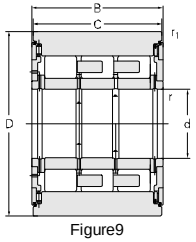


Figure9

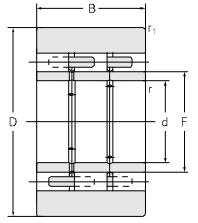


Figure4

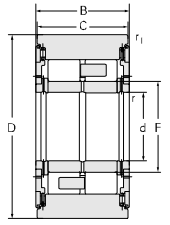


Figure5

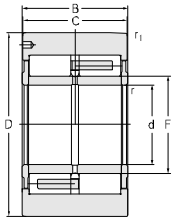


Figure6

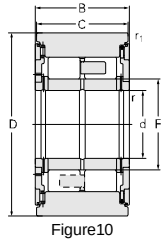


Figure10

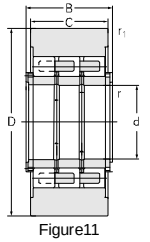


Figure11

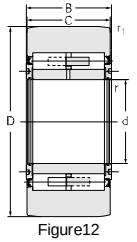


Figure12

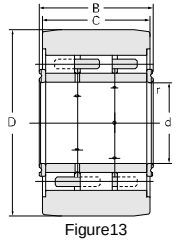


Figure13

| Designations | Principal dimensions | | | | | | | Basic load ratings | | Weight | Graph |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | d | D | B | C | $r_{1min}$ | $r_{min}$ | F | $C_r$ | $C_{or}$ | | |
| | mm | | | | | | | kN | | kg | |
| **BNPF102060X1-2RZ** | **51** | 98.4 | 60 | 54 | 2 | 0.5*45* | 61.14 | 154 | 270 | 4.53 | Figure1 |
| **BNPF112564X1-2RZ** | **55** | 126 | 64 | 63.2 | 2 | 0.5*45* | 69 | 172 | 260 | 4.53 | Figure2 |
| **BNPF123075-2RZ** | **60** | 150 | 75 | 73 | 1 | 0.8 | 75 | 270 | 390 | 7.85 | Figure2 |
| **BNPF123075-2RZ-1** | **60** | 150 | 75 | 73 | 1 | 1.2 | 75 | 270 | 390 | 7.85 | Figure2 |
| **SJ-NNFP130** | **130** | 300 | 172.64 | 172.64 | 4 | 2 | 158.45 | 1390 | 2500 | 69.6 | Figure3 |
| **SJ-TCNB130** | **130** | 300 | 172.64 | | 4 | 2.5 | 158.455 | 1720 | 2670 | 72.3 | Figure4 |
| **SJ-TCNB130/WN26** | **130** | 300 | 172.64 | | 4 | 2.5 | 158.455 | 1720 | 2670 | 72.2 | Figure4 |
| **SJ-TCNB130-2** | **130** | 300 | 172.64 | | 4 | 2.5 | 159.455 | 1880 | 2940 | 73.6 | Figure4 |
| **SJ-TCNB130-1** | **130** | 300 | 172.664 | | 2.5 | 2.5 | 158.7 | 1510 | 2790 | 72.9 | Figure4 |
| **SJ-TCNB130-3** | **130** | 300 | 172.644 | | 2.5 | 2.5 | 161 | 1480 | 2810 | 72 | Figure4 |
| **SJ-NNUP130** | **130** | 300.02 | 132 | 129 | 3.1 | 2 | 156 | 1090 | 1820 | 53.8 | Figure6 |
| **SJ-NNUP130-2ZL** | **130** | 300.02 | 172.65 | 171.6 | 2.5 | 2.5 | 156 | 1450 | 2430 | 70.1 | Figure2 |
| **SJ-NNUP130-2ZL-1** | **130** | 300.02 | 172.65 | 171.6 | 3.1 | 2 | 156 | 1450 | 2430 | 69.8 | Figure2 |
| **SJ-TCNP130-XRS** | **130** | 300.2 | 170 | 168 | 2.5 | 1.1 | 158.455 | 1300 | 2230 | 68.5 | Figure7 |
| **SJ-NNJ180-2RS** | **180** | 406.42 | 171.04 | | 1.5 | 10*15* | 217 | 1450 | 2770 | 125 | Figure8 |
| **SJ-TCNB180** | **180** | 406.42 | 171.04 | | 1.5 | 4 | 217.3 | 2360 | 4050 | 130 | Figure4 |
| **SJ-TCNB180-1** | **180** | 406.42 | 171.04 | | 1.5 | 4 | 217.3 | 2360 | 4050 | 130 | Figure4 |
| **SJ-TCNB180-PX** | **180** | 406.42 | 171.04 | | 1.5 | 4 | 217.3 | 2360 | 4050 | 130 | Figure4 |

d 180~215 mm

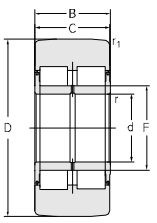


Figure1

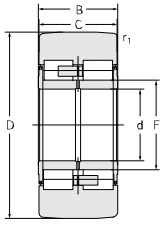


Figure2

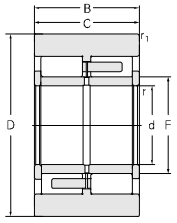


Figure3

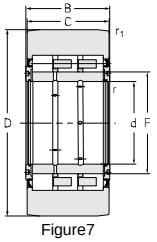


Figure7

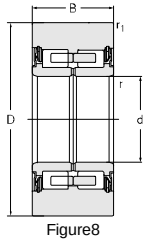


Figure8

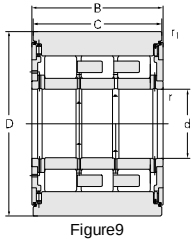


Figure9

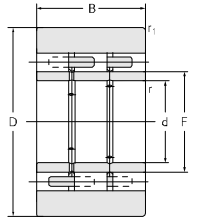


Figure4

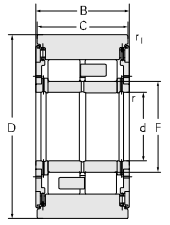


Figure5

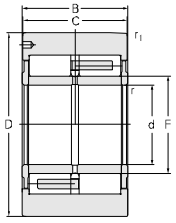


Figure6

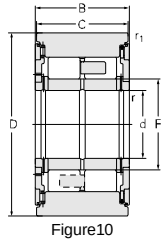


Figure10

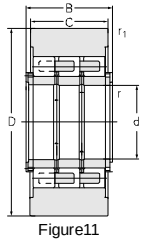


Figure11

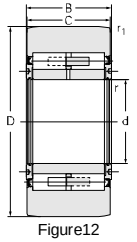


Figure12

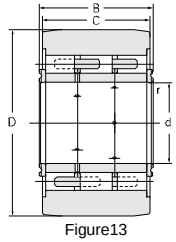
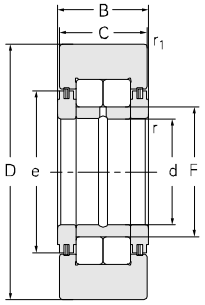
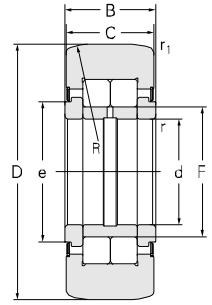


Figure13

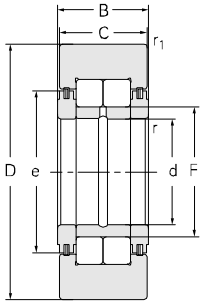
| Designations | Principal dimensions | | | | | | | Basic load ratings | | Weight | Graph |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | d | D | B | C | $r_{1min}$ | $r_{min}$ | F | $C_r$ | $C_{or}$ | | |
| | mm | | | | | | | kN | | kg | |
| **SJ-TCNP180-XRS** | **180** | 406.42 | 182 | 179 | 2.5 | 1.1 | 222 | 1740 | 3200 | 133 | Figure7 |
| **SJ-TCNP180-XRS-2** | **180** | 406.42 | 171 | 169 | 2.5 | 1.1 | 222 | 1700 | 3100 | 124 | Figure7 |
| **SJ-TCNP180-XRS-3** | **180** | 406.42 | 224 | 222 | 2.5 | 1.1 | 222 | 2200 | 4300 | 166 | Figure7 |
| **SJ-TCNB180X2** | **180** | 406.42 | 224 | | 1.5 | 4 | 217.3 | 2640 | 5250 | 171 | Figure4 |
| **SJ-TCNP180-XRS-1** | **180** | 406.6 | 181 | 179 | 2.5 | 1.1 | 222 | 1800 | 3300 | 133 | Figure7 |
| **SJ-TCNP180-2** | **180** | 410 | 240 | 220 | 1.1 | 1.1 | | 2500 | 4950 | 170 | Figure13 |
| **BNPF3697212** | **180** | 485 | 211.7 | 205.7 | 1.1 | 1.1 | 239 | 2740 | 3680 | 230 | Figure5 |
| **BNPF3697344** | **180** | 485 | 344 | 338 | 1.1 | 1.1 | | 4550 | 7050 | 380 | Figure9 |
| **BNPF3697344A** | **180** | 485 | 344 | 338 | 1.1 | 1.1 | 238 | 4700 | 7000 | 385 | Figure5 |
| **BNPF3897212X2** | **190** | 485 | 217.7 | 211.7 | 1.1 | 1.1 | 238 | 2950 | 3850 | 230 | Figure10 |
| **BNPF3897218X2A** | **190** | 485 | 217.5 | 211.1 | 1.1 | 1.1 | 239 | 2740 | 3680 | 230 | Figure5 |
| **BNPF3897350X2** | **190** | 485 | 349.7 | 343.7 | 1.1 | 1.1 | 238 | 4700 | 7000 | 379 | Figure10 |
| **BNPF3897350X2A** | **190** | 485 | 349.5 | 343.5 | 1.1 | 1.1 | | 4550 | 7050 | 378 | Figure9 |
| **BNPF41104240** | **205** | 520 | 240 | 216 | 1.1 | 1*45* | | 3500 | 5350 | 277 | Figure11 |
| **BNPF41104240/C9** | **205** | 520 | 240 | 216 | 1.1 | 1*45* | | 3500 | 5350 | 277 | Figure11 |
| **SJ-NNUP215-XRS** | **215** | 550 | 205 | 200 | 1.1 | 1.1 | | 2600 | 4500 | 293 | Figure12 |

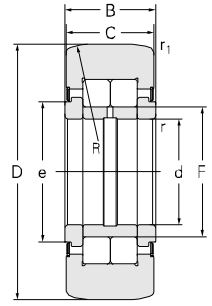
d 50~110 mm



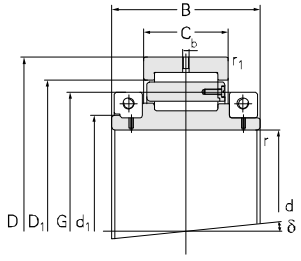



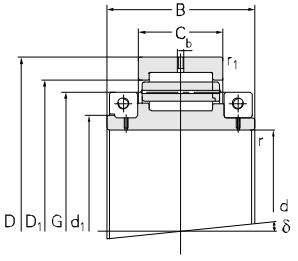

| Designations | Principal dimensions | | | | | | Basic load ratings | | Limit speed ratings | installation size | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | d | D | B | C | $r_{1min}$ | $r_{min}$ | Cr | Cor | Grease | e | F | |
| | mm | | | | | | kN | | r/min | mm | | kg |
| **NNTR50-2ZL** | **50** | 130 | 65 | 63 | 1.5 | 2*45* | 245 | 320 | 1200 | 63 | 60 | 5.09 |
| **NUTR56160** | **56** | 160 | 63 | 60 | 5 | 1.5 | 275 | 380 | 1000 | 82 | 72.3 | 7.87 |
| **NUTR56160/YA7** | **56** | 160 | 63 | 60 | 5 | 3 | 295 | 420 | 1000 | 101 | 77 | 7.69 |
| **NUTR60130** | **60** | 130 | 65 | 62 | 5 | 1.5 | 230 | 385 | 950 | 78 | 74.2 | 4.74 |
| **NNTR60-2ZL** | **60** | 150 | 75 | 73 | 3 | 2*45* | 250 | 410 | 880 | 83 | 76 | 7.86 |
| **NUTR60165X** | **60** | 165 | 65 | 60 | 1.1 | 1.5 | 240 | 390 | 850 | 92.2 | 75.5 | 8.41 |
| **NUTR65150** | **65** | 150 | 54 | 52 | 2 | 2 | 235 | 375 | 850 | 94 | 85.7 | 5.26 |
| **NNTR65-2ZL** | **65** | 160 | 75 | 73 | 3 | 2 | 280 | 460 | 800 | 82 | 78.5 | 8.44 |
| **NNTR70-2ZL** | **70** | 180 | 85 | 83 | 3 | 2*45* | 410 | 610 | 740 | 92 | 86 | 12.9 |
| **NUTR70** | **70** | 190 | 60 | 58 | 2 | 1.5 | 234 | 345 | 700 | 87 | 85.7 | 10.3 |
| **NUTR80170** | **80** | 170 | 62.5 | 58 | 3 | 3 | 350 | 510 | 630 | 125.2 | 98 | 7.55 |
| **NUPTR80R-2ZL** | **80** | 190 | 62 | 60 | 2*45* | 1.5 | 285 | 425 | 600 | 115 | 97 | 7.7 |
| **NUTR616-2RS/C9** | **80** | 190 | 80 | 80 | 1.5 | 1.5 | 240 | 390 | 600 | 105 | 96 | 13.2 |
| **NNTR80-2ZL** | **80** | 200 | 90 | 88 | 4 | 2 | 530 | 835 | 580 | 111 | 102.3 | 16.5 |
| **NNTR80DZ** | **80** | 200 | 90 | 88 | 3 | 1.5*45* | 470 | 770 | 580 | 101 | 94.2 | 16.7 |
| **NUTR616-2RS/C9YAD** | **80** | 215 | 100 | 100 | 1.5 | 1.5 | 240 | 390 | 550 | 105 | 96 | 18 |
| **NNTR90-2Z** | **90** | 220 | 100 | 98 | 1 | 2 | 545 | 880 | 420 | 119 | 108.5 | 22 |
| **NNTR90-2ZL** | **90** | 220 | 100 | 98 | 4 | 2.5 | 630 | 1000 | 420 | 119 | 112.5 | 22.2 |
| **NNTR100R-2ZL/YA2** | **100** | 230 | 93 | 90 | 4 | 2 | 560 | 950 | 380 | 126 | 116 | 16.7 |
| **NNUPTR100R-2ZL1** | **100** | 230 | 93 | 90 | 6 | 3 | 490 | 900 | 380 | 132 | 122.5 | 16.4 |
| **NNTR100** | **100** | 240 | 105 | 103 | 3 | 1.5*45* | 680 | 1210 | 380 | 131 | 122 | 27.6 |
| **NNTR100DZ** | **100** | 240 | 105 | 103 | 3 | 1.5*45* | 680 | 1210 | 380 | 131 | 122 | 27.6 |
| **NNTR100-2Z** | **100** | 300 | 55 | 55 | 0.5 | 1.5 | 230 | 480 | 350 | 116 | 110 | 3.37 |
| **NNTR100WB-2Z** | **100** | 300 | 65 | 65 | 0.5 | 1.5 | 230 | 480 | 350 | 110.15 | 110 | 3.42 |
| **NNTR100-1/C9** | **100** | 300 | 82 | 80 | 1.5 | 1*45* | 710 | 1220 | 350 | 152 | 134 | 36.7 |
| **NNTRP105R-2ZL/S2YA2** | **105** | 280 | 135 | 135 | 2 | 2 | 1040 | 1800 | 320 | 152.4 | 142 | 44.2 |
| **NUTR110 200** | **110** | 200 | 60 | 58 | 4 | 1.5*45* | 500 | 760 | 300 | 160.9 | 126 | 8.93 |

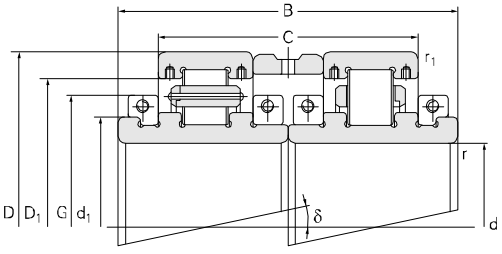



| Designations | Principal dimensions | | | | | | Basic load ratings | | Limit speed ratings | installation size | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | d | D | B | C | $r_{1min}$ | $r_{min}$ | Cr | Cor | Grease | e | F | |
| | mm | | | | | | kN | | r/min | mm | | kg |
| **NNTR110X3-2ZL** | **110** | 240 | 190 | 180 | 4 | 3 | 1260 | 2720 | 260 | 142 | 134 | 49.1 |
| **NNTR110** | **110** | 250 | 100 | 100 | 3 | 1.1*45* | 380 | 695 | 250 | 132 | 124 | 27.3 |
| **NNTR110-2ZL** | **110** | 260 | 115 | 113 | 4 | 2 | 775 | 1350 | 240 | 143 | 133 | 35.6 |
| **NNTR120-2Z** | **120** | 290 | 135 | 133 | 3 | 2 | 880 | 1600 | 260 | 157 | 143 | 50.9 |
| **NUTR130230XS** | **130** | 230 | 120 | 120 | 4 | 3 | 880 | 1550 | 230 | 186.5 | 130 | 23.6 |
| **NUTR130230XS/YAD** | **130** | 230 | 120 | 120 | 4 | 3 | 1050 | 1610 | 230 | 173 | 146 | 23.5 |
| **NNTR130-2ZL** | **130** | 250 | 106 | 103 | 4 | 4 | 800 | 1330 | 240 | 160 | 147 | 26.8 |
| **NNTR130-XRS** | **130** | 275 | 110 | 110 | 2 | 7 | 660 | 1180 | 250 | 170 | 154 | 29.4 |
| **NNTR130-2ZL-1** | **130** | 310 | 146 | 144 | 5 | 3 | 1150 | 1930 | 260 | 165 | 153 | 65 |
| **NNTR140-2ZL** | **140** | 250 | 114 | 114 | 5 | 4 | 610 | 1300 | 220 | 179 | 158 | 27.7 |
| **NUTR140250XS** | **140** | 250 | 115 | 115 | 20*23* | 4 | 755 | 1570 | 220 | 160 | 160 | 27.1 |
| **NNTR150-2ZL** | **150** | 360 | 173 | 171 | 5 | 3.75*45* | 1570 | 3040 | 200 | 196 | 191 | 105 |



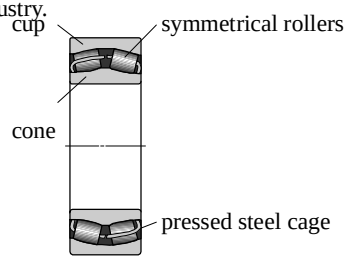




| Designations | Principal dimensions | | | | | | Basic load ratings | | D1 | d1 | G | b | δ | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | d | D | B | C | $r_{1min}$ | $r_{min}$ | Cr | Cor | | | | | | |
| | mm | | | | | | kN | | mm | | | | angle | kg |
| **N640D** | **200** | 368.3 | 156.369 | 90.488 | 4 | 4 | 1060 | 1600 | 312 | 244 | 290 | 8.5 | 6* | 63 |
| **N640D-1** | **200** | 368.3 | 156.369 | 90.488 | 4 | 4 | 1060 | 1600 | | 244 | 290 | 8.5 | 6 | 61.4 |
| **N680D** | **400** | 685.8 | 292 | 166.7 | 3 | 8 | 3340 | 6250 | 596 | 458 | 548 | 12 | 6* | 378 |
| **ND69/500X2D/DR-SY** | **500** | 670 | 450 | 360 | 5 | 5 | 3300 | 8700 | 613 | 543 | 610 | | 6* | 402 |
| **ND6/620D/DR** | **620** | 820 | 380 | 290 | 5 | 12 | 3400 | 9100 | 752 | 671 | 740 | | 6* | 505 |
| **ND6/630D/DR** | **630** | 794 | 380 | 278 | 5 | 10 | 3500 | 9400 | 740 | 676 | 736 | 10 | 6* | 407 |
| **ND6/650D/DR** | **650** | 820 | 380 | 290 | 5 | 17 | 3250 | 9100 | 762 | 700 | 758 | | 6* | 455 |
| **ND6/700/HCRYA8** | **700** | 870 | 380 | 290 | 12 | 12 | 3500 | 10200 | 749 | 811 | 821 | 10 | 6* | 494 |
| **N6/711.2D** | **711.2** | 892.2 | 184.15 | 87.3 | 5 | 7.5 | 1790 | 5600 | 823 | 767.5 | 820 | 8 | 6* | 225 |
| **N6/711.2DF3** | **711.2** | 892.2 | 184.15 | 87.3 | 5 | 7.5 | 1790 | 5600 | 823 | 767.5 | 820 | 8 | 6 | 225 |
| **N6/750D** | **750** | 920 | 185 | 106 | 7.5 | 7.5 | 2400 | 6250 | 864 | 802 | 863 | 8 | 6* | 241 |
| **N6/750DF3** | **750** | 920 | 185 | 106 | 7.5 | 7.5 | 2400 | 6250 | 864 | 802 | 863 | 8 | 6 | 241 |
| **ND6/750DF3/HCR** | **750** | 960 | 380 | 290 | 5 | 15 | 3940 | 10800 | 887 | 806 | 870 | | 6* | 626 |
| **ND6/750DF3/HCR** | **750** | 960 | 380 | 290 | 5 | 15 | 3940 | 10800 | 887 | 806 | 870 | | 6 | 626 |

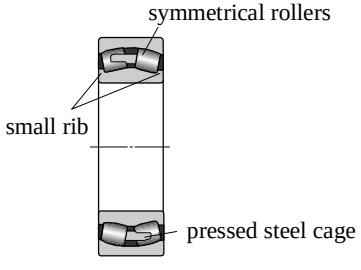
## Product Characteristics:

Two rows spherical rollers are put between the spherical raceways on the outer ring and the two grooves on the inner ring for spherical roller bearings. Since the curve center of outer ring is the same as that of the whole bearing arrangement, these bearings are self-aligned and automatically adjust the bending of the shaft and housing, besides, it can also compensate the concentricity erro caused by this. Except radial load, these bearings can also carry combination of axial and radial load in two directions and posess high load capacity as well as good resistance to vibration and impact.

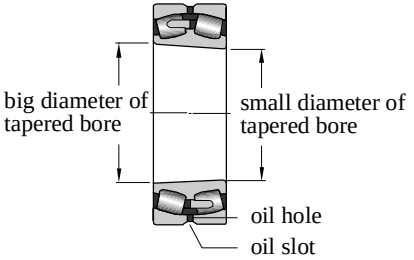
Spherical roller bearings are mainly applied to metallurgic machinery, mining machinery, papermaking, vessel, textile machinery, coal mill, electric power and other kinds of mechanical equipments. They are the bearings that are mostly widely used in machanical industry.




C Type




CA Type



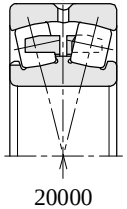

## Product types

ZWZ spherical roller bearings can be divided into the following types:

.Open type spherical roller bearing
.Sealed spherical roller bearing
.Spherical roller bearings used in vibration riddles
.SDB type spherical roller bearing
.Split spherical roller bearings

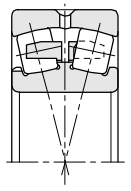
Open type spherical roller bearing contains asymmetrical roller bearing and symmetrical roller bearing. The main difference is the design of inner ring and cage.

Asymmetrical roller bearing belongs to old product that is made up of outer ring, inner ring with center rib and small rib, two-body solid cage and some rollers. Vibration system adopts. For example, there is no structure code after 20000 code. The structure is as below:

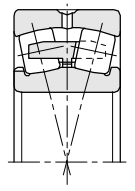


20000

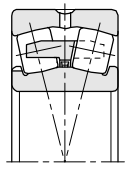
Symmetrical roller bearing contains CA type, ACA type, CB type, C type, CC type and S type.



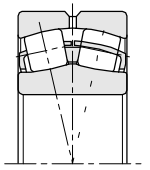
20000 CB
(a)Figure



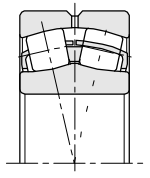
20000 CA
(b)Figure



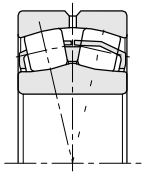
20000 ACA
(c)Figure



20000 C
(d)Figure



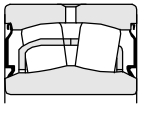
20000 CC
(e)Figure



20000 S
(f)Figure

## Sealed Spherical Roller Bearing

Sealed spherical roller bearing contains CA type with solid cage, sealing on basis of CB type and CC type.



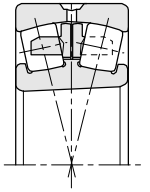
For the bearing device that has special requirements on heavy load, poor working condition and sealing, the spherical roller bearing with the structure of contact-type sealing ring in steel frame on both sides can be provide. Top of sealing ring is installed on outer ring of bearing, rotate with outer ring synchronously and stick bottom lip on raceway of inner ring. This type of sealing ring in steel frame can be resistant to corrosion and to aging. They are common to be applied in elevator tractor which can prevent impurities entering and oil grease lost.

## Vibration screen spherical roller bearings

The new type vibration resistance spherical roller bearings are VB type structure developed on basis of asymmetrical roller bearing type and CB type bearing. Some of them also use CA, CB or asymmetrical roller bearing. Vibrating machine bearings have the same boundary dimension as the basic version, and have fixed center ribs on the inner rings. They can carry axial load; The new design with special structure of cage, double guides by inner and outer diameter can control the guide gap and displacement between the cage, inner and outer rings to prevent vibration and reduce vibration. There are two kinds including cylindrical hole and tapered hole.

VB type structure is developed by ZWZ especially for vibration machinery and they can also be used on universal machinery. Performance: they have heavier carrying load capacity, impact resistance, vibration resistance, small friction, lower temperature rise and longer service life.

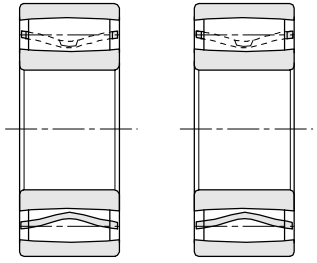
The code name of vibration screen spherical roller bearings is denoted with the suffix VB. The structure is as below:



## SDB Type Spherical Roller Bearing

SDB type spherical roller bearing is a new type of radial roller bearing developed on basis of cylindrical roller bearing and spherical roller bearing. They can self align automatically and get big axial displacement.

Single-row spherical roller bearings are installed with curved symmetrical rollers, with recessed ring raceway that has groove on one side or both sides. The spring lock ring or sealing ring can be installed according to requirements. Bearing has ability to self align and make axial movement. This kind of bearing is widely used in equipments of fan-shaped section in steel plant and textile industry. The main structure is as below:

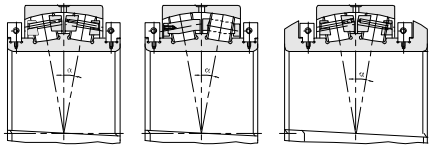


## Split Spherical Roller Bearings

These bearings are mainly used in the applications where it is difficult to touch bearings or separable bearings are used and a big broken down cost caused by plenty of time and human maintenance or changing parts. For example, cranks.

ZWZ can manufacture different structures of split spherical roller bearings according to customer's demands. In order to meet the requirements of mounting, the split inner rings and outer rings are normally adopted. The jamming rings on the two sides of wide inner rings make the mounting easy.

The code name of split spherical roller bearings is denoted with the suffix D.



## Dimension Rang:

ZWZ spherical roller bearing boundary dimensions are listed in the bearings dimensions table.

Bore diameter dimension range: 30 mm- 2000mm

Outer diameter dimension range: 68mm-2700mm

Width range: 20mm-550mm

## Tolerances:

ZWZ manufactures spherical roller bearings with P0 and P6 precision grades. Also ZWZ can manufacture spherical roller bearings with P5 according to customer's demands. All of tolerances values conform to GB307.1 Standard .All of tolerance values are listed in the preface table.

## Radial clearances

ZWZ manufactures spherical roller bearings with C0, C2, C3, C4 and C5 clearances which are all conform to the GB4604 Standard. The C3 group clearances are taken as standard clearance for spherical roller bearings with tapered bores. The radial clearance values are listed in the preface table. These values are applied to bearings without load.

ZWZ can manufacture spherical roller bearings with non standard clearances according to customer's demands. The clearance of spherical roller bearings applied to vibration riddles is C4 group clearance.

Clearance value is shown in Table 1 and Table 2.

Vibrating machine bearing adopt big radial clearance, C3, C4 group or nonstandard clearance between C3-C4.

Vibration riddles spherical roller bearings adopt C4 group clearance.

Radial clearance of SDB type spherical roller bearing is shown in Table 3.

## Cage

Normally, CA type spherical roller bearings use brass, bronze cages or carbon steel solid cages. But C type spherical roller bearings normally use pressed sheet-steel cages. Please contact with ZWZ in advance if you need spherical roller bearings with non-standard cages.



## The equivalent load

### The equivalent dynamic load

when Fa / Fr$\leqslant$ e,

P=Fr + Y1 Fa

When Fa / Fr$>$ e,

Pr = 0.67 Fr + Y2 Fa

The factors e,Y1 and Y2 are listed in the bearing dimension tables.

### The equivalent static load

P0 = Fr + Y0 Fa

The factors Y0 are listed in the bearing dimension tables.

Table 1 Radial clearance of spherical roller bearing with cylindrical bole μm

| Nominal ID d mm | | Clearance | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Groub 2 | | Groub 0 | | Groub 3 | | Groub 4 | | Groub 5 | |
| Over | To | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. |
| 14 | 18 | 10 | 20 | 20 | 35 | 35 | 45 | 45 | 60 | 60 | 75 |
| 18 | 24 | 10 | 20 | 20 | 35 | 35 | 45 | 45 | 60 | 60 | 75 |
| 24 | 30 | 15 | 25 | 25 | 40 | 40 | 55 | 55 | 75 | 75 | 95 |
| 30 | 40 | 15 | 30 | 30 | 45 | 45 | 60 | 60 | 80 | 80 | 100 |
| 40 | 50 | 20 | 35 | 35 | 55 | 55 | 75 | 75 | 100 | 100 | 125 |
| 50 | 65 | 20 | 40 | 40 | 65 | 65 | 90 | 90 | 120 | 120 | 150 |
| 65 | 80 | 30 | 50 | 50 | 80 | 80 | 110 | 110 | 145 | 145 | 180 |
| 80 | 100 | 35 | 60 | 60 | 100 | 100 | 135 | 135 | 180 | 180 | 225 |
| 100 | 120 | 40 | 75 | 75 | 120 | 120 | 160 | 160 | 210 | 210 | 260 |
| 120 | 140 | 50 | 95 | 95 | 145 | 145 | 190 | 190 | 240 | 240 | 300 |
| 140 | 160 | 60 | 110 | 110 | 170 | 170 | 220 | 220 | 280 | 280 | 350 |
| 160 | 180 | 65 | 120 | 120 | 180 | 180 | 240 | 240 | 310 | 310 | 390 |
| 180 | 200 | 70 | 130 | 130 | 200 | 200 | 260 | 260 | 340 | 340 | 430 |
| 200 | 225 | 80 | 140 | 140 | 220 | 220 | 290 | 290 | 380 | 380 | 470 |
| 225 | 250 | 90 | 150 | 150 | 240 | 240 | 320 | 320 | 420 | 420 | 520 |
| 250 | 280 | 100 | 170 | 170 | 260 | 260 | 350 | 350 | 460 | 460 | 570 |
| 280 | 315 | 110 | 190 | 190 | 280 | 280 | 370 | 370 | 500 | 500 | 630 |
| 315 | 355 | 120 | 200 | 200 | 310 | 310 | 410 | 410 | 550 | 550 | 690 |
| 355 | 400 | 130 | 220 | 220 | 340 | 340 | 450 | 450 | 600 | 600 | 750 |
| 400 | 450 | 140 | 240 | 240 | 370 | 370 | 500 | 500 | 660 | 660 | 820 |
| 450 | 500 | 140 | 260 | 260 | 410 | 410 | 550 | 550 | 720 | 720 | 900 |
| 500 | 560 | 150 | 280 | 280 | 440 | 440 | 600 | 600 | 780 | 780 | 1000 |
| 560 | 630 | 170 | 310 | 310 | 480 | 480 | 650 | 650 | 850 | 850 | 1100 |
| 630 | 710 | 190 | 350 | 350 | 530 | 530 | 700 | 700 | 920 | 920 | 1190 |
| 710 | 800 | 210 | 390 | 390 | 580 | 580 | 770 | 770 | 1010 | 1010 | 1300 |
| 800 | 900 | 230 | 430 | 430 | 650 | 650 | 860 | 860 | 1120 | 1120 | 1440 |
| 900 | 1000 | 260 | 480 | 480 | 710 | 710 | 930 | 930 | 1220 | 1220 | 1570 |

Table 2 Radial clearance of spherical roller bearing with tapered bole μm

| Nominal ID d mm | | Clearance | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Groub 2 | | Groub 0 | | Groub 3 | | Groub 4 | | Groub 5 | |
| Over | To | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. |
| 18 | 24 | 15 | 25 | 25 | 35 | 35 | 45 | 45 | 60 | 60 | 75 |
| 24 | 30 | 20 | 30 | 30 | 40 | 40 | 55 | 55 | 75 | 75 | 95 |
| 30 | 40 | 25 | 35 | 35 | 50 | 50 | 65 | 65 | 85 | 85 | 105 |
| 40 | 50 | 30 | 45 | 45 | 60 | 60 | 80 | 80 | 100 | 100 | 130 |
| 50 | 65 | 40 | 55 | 55 | 75 | 75 | 95 | 95 | 120 | 120 | 160 |
| 65 | 80 | 50 | 70 | 70 | 95 | 95 | 120 | 120 | 150 | 150 | 200 |
| 80 | 100 | 55 | 80 | 80 | 110 | 110 | 140 | 140 | 180 | 180 | 230 |
| 100 | 120 | 65 | 100 | 100 | 135 | 135 | 170 | 170 | 220 | 220 | 280 |
| 120 | 140 | 80 | 120 | 120 | 160 | 160 | 200 | 200 | 260 | 260 | 330 |
| 140 | 160 | 90 | 130 | 130 | 180 | 180 | 230 | 230 | 300 | 300 | 380 |
| 160 | 180 | 100 | 140 | 140 | 200 | 200 | 260 | 260 | 340 | 340 | 430 |
| 180 | 200 | 110 | 160 | 160 | 220 | 220 | 290 | 290 | 370 | 370 | 470 |
| 200 | 225 | 120 | 180 | 180 | 250 | 250 | 320 | 320 | 410 | 410 | 520 |
| 225 | 250 | 140 | 200 | 200 | 270 | 270 | 350 | 350 | 450 | 450 | 570 |
| 250 | 280 | 150 | 220 | 220 | 300 | 300 | 390 | 390 | 490 | 490 | 620 |
| 280 | 315 | 170 | 240 | 240 | 330 | 330 | 430 | 430 | 540 | 540 | 680 |
| 315 | 355 | 190 | 270 | 270 | 360 | 360 | 470 | 470 | 590 | 590 | 740 |
| 355 | 400 | 210 | 300 | 300 | 400 | 400 | 520 | 520 | 650 | 650 | 820 |
| 400 | 450 | 230 | 330 | 330 | 440 | 440 | 570 | 570 | 720 | 720 | 910 |
| 450 | 500 | 260 | 370 | 370 | 490 | 490 | 630 | 630 | 790 | 790 | 1000 |
| 500 | 560 | 290 | 410 | 410 | 540 | 540 | 680 | 680 | 870 | 870 | 1100 |
| 560 | 630 | 320 | 460 | 460 | 600 | 600 | 760 | 760 | 980 | 980 | 1230 |
| 630 | 710 | 350 | 510 | 510 | 670 | 670 | 850 | 850 | 1090 | 1090 | 1360 |
| 710 | 800 | 390 | 570 | 570 | 750 | 750 | 960 | 960 | 1220 | 1220 | 1500 |
| 800 | 900 | 440 | 640 | 640 | 840 | 840 | 1070 | 1070 | 1370 | 1370 | 1690 |
| 900 | 1000 | 490 | 710 | 710 | 930 | 930 | 1190 | 1190 | 1520 | 1520 | 1860 |

Table 3 Radial clearance of SDB type spherical roller bearing with cylindrical bole μm

| d mm | | Groub 3 | | Groub 4 | |
|---|---|---|---|---|---|
| Over | To | min | max | min | max |
| 18 | 24 | 39 | 51 | 51 | 65 |
| 24 | 30 | 46 | 60 | 60 | 76 |
| 30 | 40 | 55 | 73 | 73 | 93 |
| 40 | 50 | 65 | 85 | 85 | 109 |
| 50 | 65 | 79 | 104 | 104 | 139 |
| 65 | 80 | 96 | 124 | 124 | 164 |
| 80 | 100 | 120 | 158 | 158 | 206 |
| 100 | 120 | 144 | 186 | 186 | 244 |
| 120 | 140 | 166 | 215 | 215 | 280 |
| 140 | 160 | 195 | 252 | 252 | 321 |
| 160 | 180 | 217 | 280 | 280 | 361 |

| d mm | | Groub 3 | | Groub 4 | |
|---|---|---|---|---|---|
| Over | To | min | max | min | max |
| 180 | 200 | 238 | 307 | 307 | 394 |
| 200 | 225 | 262 | 337 | 337 | 434 |
| 225 | 250 | 282 | 368 | 368 | 478 |
| 250 | 280 | 307 | 407 | 407 | 519 |
| 280 | 315 | 330 | 434 | 434 | 570 |
| 315 | 355 | 360 | 483 | 483 | 620 |
| 355 | 400 | 395 | 528 | 528 | 675 |
| 400 | 450 | 435 | 577 | 577 | 745 |
| 450 | 500 | 475 | 633 | 633 | 811 |
| 500 | 560 | 518 | 688 | 688 | 890 |
| 560 | 630 | 567 | 751 | 751 | 975 |

## Definition of Bearing Code

| | |
|---|---|
| ACA- | Spherical roller bearing, with movable center rib and asymmetric rollers |
| C- | Spherical roller bearing, without rib on inner ring, with movable center rib and installed with symmetric rollers and pressed cage. |
| CA- | CA Spherical roller bearing, without center rib on inner ring, with small rib on both sides and installed with symmetric rollers and solid cage |
| CAB-CA type | Spherical roller bearing, piercing in middle of rollers with support type cage. |
| CABC-CAB type | Spherical roller bearing, with improved roller guiding mode ( roughness of roller surface, roughness of raceway surface, heating treatment changes, etc.), to reduce friction. |
| CAC-CA type | Spherical roller bearing, with improved roller guiding mode ( roughness of roller surface, roughness of raceway surface, heating treatment changes, etc.), to reduce friction. |
| CB- | Continuous casting bearing |
| CC-C type | Spherical roller bearing, with improved roller guiding mode ( roughness of roller surface, roughness of raceway surface, heating treatment changes, etc.), to reduce friction. |
| /C3- | Clearance meets 3 group as specified in standard |
| /C4 - | Clearance meets 4 group as specified in standard |
| /C9- | Bearing clearance is different from current standard |
| /CRA9- | Radial clearance is nonstandard, with requirements on axial clearance |
| D- | Split bearing |

F1- Carbon steel
F3- Nodular cast iron
/P5- Tolerance meets Level 5 as specified in standard
/P6- Tolerance meets Level 6 as specified in standard
/HA- Ring, rolling elements and cage, or only the ring and rolling elements are made of vacuum smelting bearing steel
/HC- Ring and rolling elements or only the ring or only the rolling elements alone is made up of carbon steel (/HC-20Cr 2Ni4A;/HC1-20Cr2Mn2MoA;/HC2-15Mn;/HC3-G20CrMo)
/HCR- Shows to distinguish the same series that rolling elements are made up of carbon steel
/HG- Ring and rolling elements or only the ring is made up of other bearing steel (/HG-5 Gr MnMo;/HG1-55SiMoVA;K/HG2-GCr18Mo;/HG3-42CrMo;/HG4-GCr15SiMn)
K- Bearing with tapered bore, tapered 1:12
K30- Bearing with tapered bore, tapered 1:30
L- Light alloy solid cage. When material of cage changes, express with attached digits.
N- Bearing with snap ring groove on outer ring
NR- Bearing with snap ring groove on outer ring and retainer ring
Q1- Aluminium, fe and mn bronze materials
-2RS- Bearing with RS sealing on both sides
-2RS2- Bearing with steel skeleton rubber fluoride on both sides
S- When ID is less than 65mm, the structure is similar with CC type and outline of the cage is made up of two pieces of broken line.
/S0- After high-temperature tempering to bearing ring, the working temperature can reach 150℃
/S1- After high-temperature tempering to bearing ring, the working temperature can reach 200℃
/S2- After high-temperature tempering to bearing ring, the working temperature can reach 250℃
/S3- After high-temperature tempering to bearing ring, the working temperature can reach 300℃
/S4- After high-temperature tempering to bearing ring, the working temperature can reach 350℃
SDB- Structure code, single-row spherical roller bearing that can self-align and make axial displacement.
TN1- Nylon
V- Full complement rolling elements(without cage)
VB- Vibrating screen bearing
/W20- There are 3 lubrication holes on outer ring of bearing (without oil groove)
/W33- There are an oil groove and 3 lubrication holes on outer ring of bearing]
/W33T- There are 8 lubrication holes on outer ring of bearing
/W33X- There are an oil groove and 6 lubrication holes on outer ring of bearing
X1- Outer diameter is nonstandard
X2- Width (height) is nonstandard
X3- Outer diameter and width (height) are nonstandard (standard inner diameter)



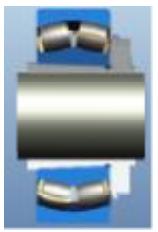
YAB- Structure and technique are required to change at the same time
YAD- The same type of bearing, no less than two changes of the structure at the same time
YA1- Outside surface of bearing outer ring is different from standard design
YA2- Inner bore of bearing inner ring is different from standard design
YA3- End face of bearing ring is different from standard design
YA6- Mounting chamfer of bearing is different from standard design
YA7- Rib or retainer ring of bearing is different from standard design
YA8- Cage structure changes
YB2- Dimension and tolerance of bearing change
/Z- Bearing vibration accelerated speed magnitude extreme value category (Z1- with specified vibration accelerated speed magnitude extreme value; Z2- vibration accelerated speed magnitude extreme value is less than Z1 group; Z3- vibration accelerated speed magnitude extreme value is less than Z2 group)
/V- Bearing vibration speed magnitude extreme value category (V1- with specified vibration speed magnitude extreme value; V2- vibration speed magnitude extreme value is less than V1 group; V3- vibration speed magnitude extreme value is less than V2 group)

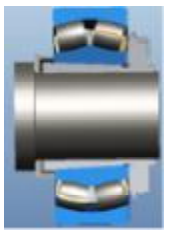
## Adapter Sleeve and Withdrawal Sleeve

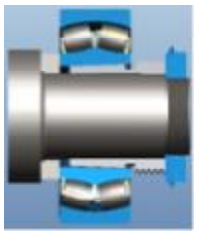
Adapter sleeve and withdrawal sleeve supplied by ZWZ can install optical shaft and stepped shaft into spherical roller bearing with tapered bore easily and rapidly.


Bearing with adapter sleeve


Bearing with withdrawal sleeve


Adapter sleeve is installed on the optical shaft

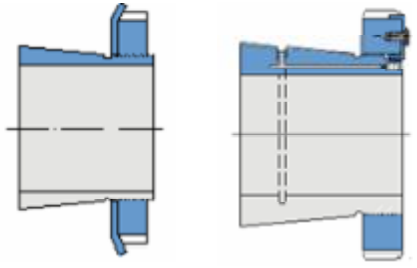

Adapter sleeve is installed on the stepped shaft


Withdrawal sleeve is installed on the stepped shaft

## Adapter Sleeve

### Design

Adapter sleeve is one of the most commonly used bearing accessories which is used to fix the bearing with tapered bore on cylindrical journal including optical shaft and stepped shaft. This kind of accessory is easy to mount and needn't be fixed by other devices.
When using adapter sleeve on the optical shaft, bearing can be fixed anywhere on the shaft.
When used as stepped shaft and cooperating with stepped ring, bearing can be fixed to thegiven place more accurately on the shaft and also relatively easy to dismount.
Adapter sleeve provide by ZWZ has lock nut and necessary locking device shown as figure below. For small adapter sleeve, locking nut is fixed by lock washer. For big adapter sleeve, locking nut is fixed by a locking clasp. There is a slit on the adapter sleeve, the surface taper



is 1:12. For the surface of adapter sleeve with size 40 or less than 40, it is after phosphating. For the adapter sleeve with larger size, adopt undissolved antirusting agent to protect adapter sleeve surface.

Oil injection method can simplify mounting and dismounting of bearing. In order to cooperate with this method, ZWZ can provide the design with an oil path and oil groove that you can choose from. The oil entrance is on one side with screw thread of adapter sleeve; oil groove is on the cone surface of adapter sleeve. After injecting hydraulic oil into oil path and oil groove, it will form a layer of oil film on the matching surface of bearing and adapter sleeve, which can significantly reduce the force needed for installation of bearing. This kind of standard adapter sleeve code is OH...H.

## Common Information and Data

### Dimension

Dimension of adapter sleeve conforms to standard ISO2982-1:1995.

### Tolerance

Tolerance of ZWZ adapter sleeve conforms to standard JB/T7919.

### Screw Thread

For ZWZ adapter sleeve with size 40 or more than 40, metric screw thread tolerance is 6g and conforms to standard I SO9653:1998 standard. For large size adapter sleeve, metric screw thread tolerance is 7e and conforms to standard ISO2903: 1993 standard.

### Requirements of Shaft Tolerance

Because adapter sleeve is installed on shaft to work in concert with bearing, it has larger tolerance range than that is directly installed on cylindrical journal. But geometrical tolerance must keep in very narrow range, for precision of geometrical tolerance will influence rotation precision of bearing directly. Generally, shaft tolerance is h9 according to ISO1101:1983 standard and cylindricity should be IT5/2.

## Withdrawal Sleeve

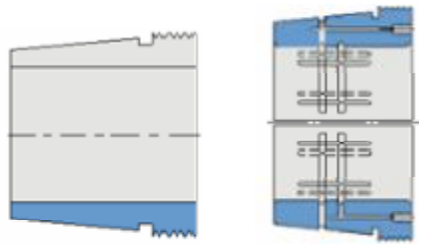
### Design

Withdrawal sleeve is mainly used to fix bearing with tapered bore to cylindrical journal on steeped shaft. Withdrawal sleeve is pressed into shaft shoulder or similar devices between the bearing with tapered bore and shaft, then fixed on the shaft by nut or end plate. For screw thread of shaft end has different dimension according to actual application, lock nut or end plate will not be supplied with withdrawal sleeve and need be ordered separately. Besides, the nuts for dismounting the withdrawal sleeve also need to be ordered separately.

Surface of ZWZ withdrawal sleeve is coated with antirust agent, with a slit and the taper of surface is 1:12.

The nuts for dismounting the withdrawal sleeve also need to be ordered separately.

Oil injection method can simplify mounting and dismounting of bearing. In order to cooperate with this method, ZWZ can provide the design with an oil path and oil groove that you can choose from. There are two oil entrances on one side with screw thread of AOH withdrawal sleeve. There are some oil grooves along the circumferential and axial direction on the cone surface and cylindrical inner surface. After injecting hydraulic oil into oil path and oil groove, it will form a layer of oil film on the matching surface of bearing and withdrawal sleeve as well on the matching surface of shaft and withdrawal sleeve, which can significantly reduce the force needed for installation of bearing.



## Common Information and Data

### Dimension

Dimension of adapter sleeve conforms to standard ISO2982-1:1995.

### Tolerance

Tolerance of ZWZ adapter sleeve conforms to standard JB/T7919.

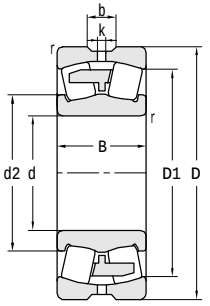
### Screw Thread

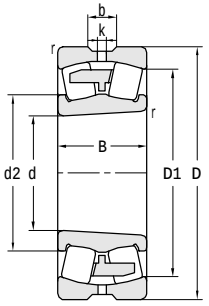
For ZWZ adapter sleeve with size 40 or more than 40, metric screw thread tolerance is 6g and conforms to standard I SO9653:1998 standard. For large size adapter sleeve, metric screw thread tolerance is 7e and conforms to standard ISO2903: 1993 standard.

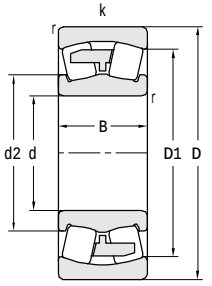
### Requirements of Shaft Tolerance

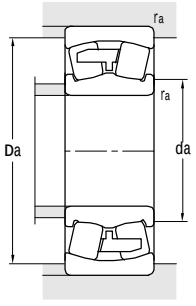
Because adapter sleeve is installed on shaft to work in concert with bearing, it has larger tolerance range than that is directly installed on cylindrical journal. But geometrical tolerance must keep in very narrow range, for precision of geometrical tolerance will influence rotation precision of bearing directly. Generally, shaft tolerance is h9 according to ISO1101:1983 standard and cylindricity should be IT5/2.

d 30~60 mm



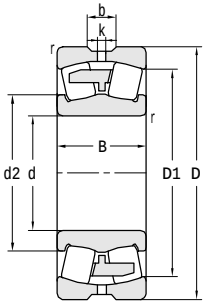



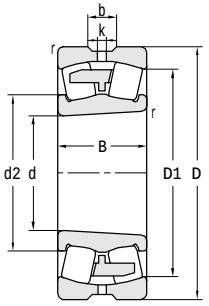



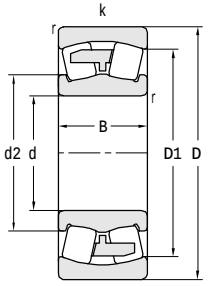



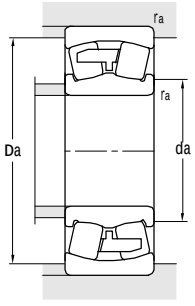

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | |
| mm | | | | kN | | r/min | | | |
| **30** | 68 | 20 | 1 | 60.8 | 57 | 6000 | 7500 | **22206X1CAN** | |
| **35** | 72 | 23 | 1.1 | 72.5 | 81.5 | 6000 | 7500 | **22207CA/W33** | |
| | 82 | 23 | 0.5 | 86 | 92 | 6000 | 7500 | **21307X3CA/CRA9** | |
| **40** | 90 | 33 | 1.5 | 143 | 133 | 4500 | 5600 | **22308CA** | **22308CA/W33** |
| | 90 | 33 | 1.5 | 143 | 133 | 4500 | 5600 | **22308CH/W33** | |
| | 90 | 33 | 1.5 | 143 | 133 | 4500 | 5600 | **22308CAK** | **22308CAK/W33** |
| **45** | 85 | 23 | 1.1 | 96.9 | 95 | 5300 | 6700 | **22209CA** | **22209CA/W33** |
| | 100 | 36 | 1.5 | 174 | 174 | 3800 | 4800 | **22309CA** | **22309CA/W33** |
| | 100 | 36 | 1.5 | 174 | 174 | 3800 | 4800 | **22309CAK** | **22309CAK/W33** |
| **50** | 90 | 23 | 1.1 | 98.8 | 103 | 5000 | 6300 | **22210CA** | **22210CA/W33** |
| | 90 | 23 | 1.1 | 98.8 | 103 | 5000 | 6300 | **22210/W33** | |
| | 90 | 23 | 1.1 | 98.8 | 103 | 5000 | 6300 | **22210CAK** | **22210CAK/W33** |
| | 110 | 27 | 2 | 148 | 158 | 3400 | 4300 | **21310CA/C3** | |
| | 110 | 40 | 2 | 209 | 213 | 3400 | 4300 | **22310CA** | **22310CA/W33** |
| | 110 | 40 | 2 | 209 | 213 | 3400 | 4300 | **22310CA/W33A** | |
| | 110 | 40 | 2 | 209 | 213 | 3400 | 4300 | **22310CAK** | **22310CAK/W33** |
| **55** | 100 | 25 | 1.5 | 119 | 126 | 4500 | 5600 | **22211CA** | **22211CA/W33** |
| | 100 | 25 | 1.5 | 119 | 126 | 4500 | 5600 | **22211CAK** | **22211CAK/W33** |
| | 100 | 25 | 1.5 | 101 | 126 | 4500 | 5600 | **22211/W33** | |
| | 100 | 25 | 1.5 | 101 | 126 | 4500 | 5600 | **22211K/W33** | |
| | 120 | 43 | 2 | 257 | 266 | 3200 | 4000 | **22311CA** | **22311CA/W33** |
| | 120 | 43 | 2 | 257 | 266 | 3200 | 4000 | **22311CA/YB2** | **22311CAF3** |
| | 120 | 43 | 2 | 257 | 266 | 3200 | 4000 | **22311CAK** | **22311CAK/W33** |
| **60** | 110 | 28 | 1.5 | 148 | 158 | 4000 | 5000 | **22212CA** | **22212CA/W33** |
| | 110 | 28 | 1.5 | 148 | 158 | 4000 | 5000 | **22212CAK/W33** | **22212CA-2RS/S0** |
| | 110 | 28 | 1.5 | 121 | 145 | 4000 | 5000 | **22212** | **22212/W33** |
| | 130 | 46 | 2.1 | 225 | 248 | 3000 | 3800 | **22312** | **22312/W33** |
| | 130 | 46 | 2.1 | 225 | 248 | 3000 | 3800 | **22312K** | **22312K/W33** |
| | 130 | 46 | 2.1 | 295 | 318 | 3000 | 3800 | **22312CA** | **22312CA/W33** |
| | 130 | 46 | 2.1 | 295 | 318 | 3000 | 3800 | **22312CA/C9-ZG** | |

| Other dimensions | | | | Contact surface and chamfer dimensions | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d2 | D1 | b | k | da | Da | ra | e | Y1 | Y2 | Y0 | |
| mm | | | | mm | | | mm | | | | kg |
| 41 | 52.3 | | | 37 | 60 | 1 | 0.32 | 2.09 | 3.11 | 2.04 | 0.384 |
| 46 | 60 | 5.5 | 3 | 41 | 65 | 1 | | | | | 0.441 |
| 83 | 69 | | | 42 | 75 | | | | | | 0.652 |
| 56 | 74 | 5.5 | 2.5 | 49 | 81 | 1.5 | 0.39 | 1.73 | 2.58 | 1.69 | 1.02 |
| 49.9 | 74.3 | 5.5 | 3 | 49 | 81 | 1.5 | 0.37 | 1.80 | 2.70 | 1.80 | 1.01 |
| 56 | 74 | 5.5 | 2.5 | 49 | 81 | 1.5 | 0.39 | 1.73 | 2.58 | 1.69 | 0.993 |
| 57.6 | 73 | 5.5 | 2 | 52 | 78 | 1 | 0.28 | 2.40 | 3.50 | 2.50 | 0.629 |
| 63 | 81.4 | 5.5 | 2.5 | 54 | 91 | 1.5 | 0.38 | 1.80 | 2.60 | 1.70 | 1.53 |
| 63 | 81.4 | 5.5 | 2.5 | 54 | 91 | 1.5 | 0.38 | 1.80 | 2.60 | 1.70 | 1.52 |
| 62.2 | 81.6 | 5.5 | 2 | 57 | 83 | 1 | 0.26 | 2.60 | 3.90 | 2.50 | 0.630 |
| 63 | 81.6 | 5.5 | 2 | 57 | 83 | 1 | 0.27 | 2.50 | 3.70 | 2.50 | 0.629 |
| 62.2 | 81.6 | 5.5 | 2 | 57 | 83 | 1 | 0.26 | 2.60 | 3.90 | 2.50 | 0.630 |
| 69 | 92 | | | 60 | 100 | 2 | 0.24 | 2.80 | 4.20 | 2.80 | 1.34 |
| 69 | 90.6 | 5.5 | 2.5 | 60 | 100 | 2 | 0.38 | 1.80 | 2.60 | 1.70 | 2.17 |
| 69 | 90.6 | 5.5 | 2.5 | 60 | 100 | 2 | 0.38 | 1.80 | 2.60 | 1.70 | 2.06 |
| 69 | 90.6 | 5.5 | 2.5 | 60 | 100 | 2 | 0.38 | 1.80 | 2.60 | 1.70 | 2.13 |
| 68.8 | 87.3 | 5.5 | 2 | 64 | 91 | 1.5 | 0.25 | 2.70 | 4.00 | 2.60 | 0.887 |
| 68.8 | 87.3 | 5.5 | 2 | 64 | 91 | 1.5 | 0.25 | 2.70 | 4.00 | 2.60 | 0.879 |
| 70 | 87.3 | 5.5 | 2 | 64 | 91 | 1.5 | 0.26 | 2.60 | 3.90 | 2.50 | 0.742 |
| 70 | 87.3 | 5.5 | 2 | 64 | 91 | 1.5 | 0.26 | 2.60 | 3.90 | 2.50 | 0.724 |
| 75 | 99.5 | 5.5 | 2.5 | 65 | 110 | 2 | 0.37 | 1.80 | 2.70 | 1.80 | 2.60 |
| 75 | 99.5 | | | 65 | 110 | 2 | 0.37 | 1.80 | 2.70 | 1.80 | 2.60 |
| 75 | 99.5 | 5.5 | 2.5 | 65 | 110 | 2 | 0.37 | 1.80 | 2.70 | 1.80 | 2.42 |
| 75.2 | 95 | 5.5 | 2 | 69 | 101 | 1.5 | 0.24 | 2.80 | 4.20 | 2.80 | 1.01 |
| 75.2 | 95 | 5.5 | 2 | 69 | 101 | 1.5 | 0.24 | 2.80 | 4.20 | 2.80 | 0.982 |
| 75.5 | 95 | 5.5 | 2 | 69 | 101 | 1.5 | 0.27 | 2.50 | 3.70 | 2.50 | 1.09 |
| 79 | 108 | 5.5 | 3 | 72 | 118 | 2 | 0.40 | 1.68 | 2.50 | 1.64 | 2.93 |
| 79 | 108 | 5.5 | 3 | 72 | 118 | 2 | 0.40 | 1.68 | 2.50 | 1.64 | 2.86 |
| 81.4 | 108 | 5.5 | 3 | 72 | 118 | 2 | 0.37 | 1.80 | 2.70 | 1.80 | 3.33 |
| 81.4 | 108 | 5.5 | 3 | 72 | 118 | 2 | 0.37 | 1.80 | 2.70 | 1.80 | 3.33 |



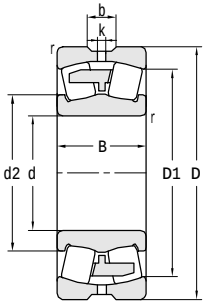



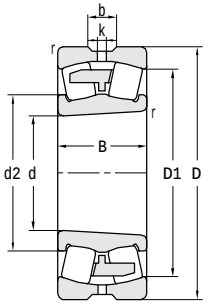



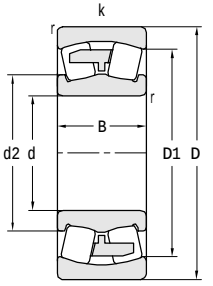

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | |
| mm | | | | kN | | r/min | | | |
| **60** | 130 | 46 | 2.1 | 295 | 318 | 3000 | 3800 | **22312CA/YB2** | **22312CAF3** |
| | 130 | 46 | 2.1 | 295 | 318 | 3000 | 3800 | **22312CAK** | **22312CAK/W33** |
| **65** | 120 | 31 | 1.5 | 183 | 205 | 3800 | 4800 | **22213CA** | **22213CA/W33** |
| | 120 | 31 | 1.5 | 183 | 205 | 3800 | 4800 | **22213CAK** | **22213CAK/W33** |
| | 120 | 31 | 1.5 | 170 | 216 | 3800 | 4800 | **22213S/W33** | |
| | 120 | 31 | 1.5 | 143 | 175 | 3800 | 4800 | **22213/W33** | |
| | 120 | 31 | 1.5 | 143 | 175 | 3800 | 4800 | **22213K/W33** | |
| | 140 | 33 | 2.1 | 224 | 257 | 2800 | 3600 | **21313CA** | |
| | 140 | 48 | 2.1 | 262 | 325 | 2600 | 3400 | **22313CH/W33** | |
| | 140 | 48 | 2.1 | 323 | 342 | 2600 | 3400 | **22313CA** | **22313CA/W33** |
| | 140 | 48 | 2.1 | 323 | 342 | 2600 | 3400 | **22313CAF3** | **22313CAKF3** |
| | 140 | 48 | 2.1 | 323 | 342 | 2600 | 3400 | **22313CAK** | **22313CAK/W33** |
| **70** | 125 | 31 | 1.5 | 162 | 205 | 3600 | 4500 | **22214CA** | **22214CA/W33** |
| | 125 | 31 | 1.5 | 162 | 205 | 3600 | 4500 | **22214CAK** | |
| | 125 | 31 | 1.5 | 159 | 200 | 3600 | 4500 | **22214/W33** | |
| | 150 | 35 | 2.1 | 270 | 309 | 2400 | 3200 | **21314CA** | |
| | 150 | 51 | 2.1 | 380 | 408 | 2200 | 3000 | **22314CA** | **22314CA/W33** |
| | 150 | 51 | 2.1 | 380 | 408 | 2200 | 3000 | **22314CAK** | **22314CAK/W33** |
| | 150 | 51 | 2.1 | 380 | 408 | 2200 | 3000 | **22314CAF3** | **22314CAKF3** |
| **75** | 115 | 40 | 1.1 | 164 | 250 | 2900 | 3500 | **24015CA** | **24015CA/W33** |
| | 130 | 31 | 1.5 | 150 | 192 | 3400 | 4300 | **22215** | |
| | 130 | 31 | 1.5 | 201 | 228 | 3400 | 4300 | **22215CA** | **22215CA/W33** |
| | 130 | 31 | 1.5 | 201 | 228 | 3400 | 4300 | **22215CAK** | |
| | 160 | 55 | 2.1 | 418 | 451 | 2200 | 3000 | **22315CA** | **22315CA/W33** |
| | 160 | 55 | 2.1 | 418 | 451 | 2200 | 3000 | **22315CAF3** | **22315CAF3/W33** |
| | 160 | 55 | 2.1 | 418 | 451 | 2200 | 3000 | **22315CAK** | **22315CAK/W33** |
| **80** | 140 | 33 | 2 | 165 | 225 | 3200 | 4000 | **22216CA** | **22216CA/W33** |
| | 140 | 33 | 2 | 165 | 225 | 3200 | 4000 | **22216CAK** | |
| | 170 | 58 | 2.1 | 380 | 495 | 2000 | 2800 | **22316CA** | **22316CA/W33** |
| | 170 | 58 | 2.1 | 380 | 495 | 2000 | 2800 | **22316CA/C9-ZG** | |
| | 170 | 58 | 2.1 | 380 | 495 | 2000 | 2800 | **22316CA/HAC9W33YA8** | |
| | 170 | 58 | 2.1 | 380 | 495 | 2000 | 2800 | **22316CAF3** | |

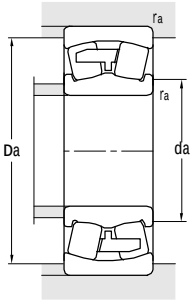
| Other dimensions | | | | Contact surface and chamfer dimensions | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d2 | D1 | b | k | da | Da | ra | e | Y1 | Y2 | Y0 | |
| mm | | | | mm | | | mm | | | | kg |
| 81.4 | 108 | | | 72 | 118 | 2 | 0.37 | 1.80 | 2.70 | 1.80 | 3.33 |
| 81.4 | 108 | 5.5 | 3 | 72 | 118 | 2 | 0.37 | 1.80 | 2.70 | 1.80 | 3.33 |
| 81.5 | 103 | 5.5 | 2.5 | 74 | 111 | 1.5 | 0.25 | 2.70 | 4.00 | 2.50 | 1.56 |
| 81.5 | 103 | 5.5 | 2.5 | 74 | 111 | 1.5 | 0.25 | 2.70 | 4.00 | 2.50 | 1.52 |
| 80 | 106 | 5.5 | 3 | 74 | 111 | 1.5 | 0.25 | 2.70 | 4.00 | 2.50 | 1.57 |
| 82 | 103 | 5.5 | 2.5 | 74 | 111 | 1.5 | 0.27 | 2.50 | 3.70 | 2.50 | 1.57 |
| 82 | 103 | 5.5 | 2.5 | 74 | 111 | 1.5 | 0.27 | 2.50 | 3.70 | 2.50 | 1.54 |
| 87.9 | 119 | | | 77 | 128 | 2 | 0.25 | 2.70 | 4.00 | 2.60 | 2.58 |
| 81.6 | 118 | 8.3 | 4.5 | 77 | 128 | 2 | 0.35 | 1.90 | 2.90 | 1.80 | 4.92 |
| 88.6 | 116 | 5.5 | 3 | 77 | 128 | 2 | 0.35 | 1.90 | 2.90 | 1.80 | 4.92 |
| 88.6 | 116 | | | 77 | 128 | 2 | 0.35 | 1.90 | 2.90 | 1.80 | 4.90 |
| 88.6 | 116 | 5.5 | 3 | 77 | 128 | 2 | 0.35 | 1.90 | 2.90 | 1.80 | 4.90 |
| 86.8 | 109 | 6 | 2.5 | 79 | 116 | 1.5 | 0.24 | 3.00 | 4.60 | 2.80 | 1.83 |
| 86.8 | 109 | | | 79 | 116 | 1.5 | 0.24 | 3.00 | 4.60 | 2.80 | 1.81 |
| 87.2 | 109 | 6 | 2.5 | 79 | 116 | 1.5 | 0.26 | 2.60 | 3.90 | 2.50 | 1.66 |
| 95.4 | 127 | | | 82 | 138 | 2 | 0.25 | 2.70 | 4.00 | 2.60 | 3.02 |
| 95.8 | 125 | 8.3 | 4 | 82 | 138 | 2 | 0.35 | 1.90 | 2.90 | 1.80 | 5.23 |
| 95.8 | 125 | 8.3 | 4 | 82 | 138 | 2 | 0.35 | 1.90 | 2.90 | 1.80 | 5.21 |
| 95.8 | 125 | | | 82 | 138 | 2 | 0.35 | 1.90 | 2.90 | 1.80 | 5.14 |
| 87.5 | 100 | 5.5 | 3 | 82 | 106 | 1 | 0.32 | 2.09 | 3.11 | 2.04 | 1.48 |
| 92 | 114 | | | 84 | 121 | 1.5 | | | | | 1.73 |
| 92 | 114 | 5.5 | 2.5 | 84 | 121 | 1.5 | 0.24 | 3.00 | 4.60 | 2.80 | 1.71 |
| 92 | 114 | | | 84 | 121 | 1.5 | 0.24 | 3.00 | 4.60 | 2.80 | 1.67 |
| 101 | 133 | 8.3 | 4 | 87 | 148 | 2 | 0.35 | 1.90 | 2.90 | 1.80 | 5.44 |
| 101 | 133 | 8.3 | 4 | 87 | 148 | 2 | 0.35 | 1.90 | 2.90 | 1.80 | 5.40 |
| 101 | 133 | 8.3 | 4 | 87 | 148 | 2 | 0.35 | 1.90 | 2.90 | 1.80 | 5.32 |
| 98.9 | 122 | 5.5 | 2.5 | 91 | 129 | 2 | 0.24 | 2.80 | 4.20 | 2.80 | 2.08 |
| 98.9 | 122 | | | 91 | 129 | 2 | 0.24 | 2.80 | 4.20 | 2.80 | 2.03 |
| 109 | 142 | 8.3 | 4 | 92 | 158 | 2 | 0.34 | 1.99 | 2.96 | 1.94 | 7.47 |
| 109 | 142 | 8.3 | 4 | 92 | 158 | 2 | 0.34 | 1.99 | 2.96 | 1.94 | 6.54 |
| 109 | 142 | 8.3 | 4 | 92 | 158 | 2 | 0.34 | 1.99 | 2.96 | 1.94 | 7.36 |
| 109 | 142 | | | 92 | 158 | 2 | 0.34 | 1.99 | 2.96 | 1.94 | 7.34 |

d 80~95 mm



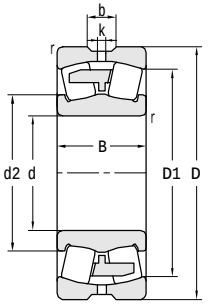



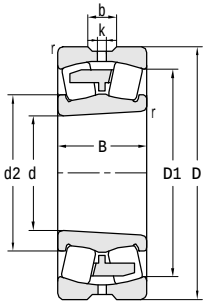



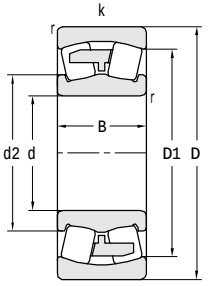



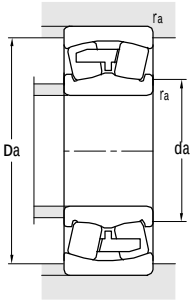

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | |
| mm | | | | kN | | r/min | | | |
| **80** | 170 | 58 | 2.1 | 380 | 495 | 2000 | 2800 | **22316CAK** | |
| **82.6** | 170 | 58 | 2.1 | 380 | 495 | 2000 | 2800 | **206/82.6CA/W33** | |
| **85** | 150 | 36 | 2 | 193 | 254 | 3000 | 3800 | **22217CA** | **22217CA/W33** |
| | 150 | 36 | 2 | 193 | 254 | 3000 | 3800 | **22217CAK** | |
| | 180 | 41 | 3 | 294 | 360 | 2000 | 2800 | **21317CA** | **21317CA/W33** |
| | 180 | 60 | 3 | 391 | 505 | 1900 | 2600 | **22317CA** | **22317CA/W33** |
| | 180 | 60 | 3 | 390 | 505 | 1900 | 2600 | **22317ACA** | |
| | 180 | 60 | 3 | 391 | 505 | 1900 | 2600 | **22317CAF3** | |
| | 180 | 60 | 3 | 391 | 505 | 1900 | 2600 | **22317CAK** | **22317CAK/W33** |
| | 180 | 60 | 3 | 391 | 505 | 1900 | 2600 | **22317CAKF3** | **22317CAKF3/W33** |
| **90** | 140 | 50 | 1.5 | 233 | 390 | 2600 | 3400 | **24018CA** | **24018CA/W33** |
| | 160 | 40 | 2 | 269 | 360 | 2600 | 3400 | **22218CA** | **22218CA/W33** |
| | 160 | 40 | 2 | 269 | 360 | 2600 | 3400 | **22218CAF3** | |
| | 160 | 40 | 2 | 269 | 360 | 2600 | 3400 | **22218CAK** | **22218CAK/W33** |
| | 160 | 52.4 | 2 | 287 | 415 | 2000 | 2800 | **23218** | **23218/W33** |
| | 160 | 52.4 | 2 | 287 | 415 | 2000 | 2800 | **23218K** | **23218K/W33** |
| | 160 | 52.4 | 2 | 287 | 415 | 2000 | 2800 | **23218F3** | |
| | 160 | 52.4 | 2 | 337 | 475 | 1900 | 2600 | **23218CA** | **23218CA/W33** |
| | 160 | 52.4 | 2 | 369 | 480 | 1900 | 2600 | **23218CA/HAC9S0W24** | |
| | 160 | 52.4 | 2 | 337 | 475 | 1900 | 2600 | **23218CAK** | **23218CAK/W33** |
| | 160 | 67 | 2 | 334 | 475 | 1900 | 2600 | **24218X2CA/YB2** | |
| | 190 | 64 | 3 | 580 | 660 | 1800 | 2400 | **22318CA** | **22318CA/W33** |
| | 190 | 64 | 3 | 580 | 660 | 1800 | 2400 | **22318CAF3** | **22318CAKF3** |
| | 190 | 64 | 3 | 580 | 660 | 1800 | 2400 | **22318CAK** | **22318CAK/W33** |
| | 190 | 64 | 3 | 580 | 660 | 1800 | 2400 | **22318ACA** | |
| | 190 | 64 | 3 | 400 | 505 | 1800 | 2400 | **22318** | |
| | 190 | 64 | 3 | 400 | 505 | 1800 | 2400 | **22318K** | **22318K/W33** |
| | 190 | 43 | 3 | 580 | 660 | 2400 | 3200 | **21318CA/W33** | |
| **95** | 170 | 43 | 2.1 | 361 | 428 | 2400 | 3200 | **22219CA** | **22219CA/W33** |
| | 170 | 43 | 2.1 | 361 | 428 | 2400 | 3200 | **22219CAK** | **22219CAK/W33** |
| | 200 | 45 | 3 | 404 | 466 | 2400 | 3200 | **21319CA/W33** | |
| | 200 | 67 | 3 | 637 | 727 | 1800 | 2400 | **22319** | |

| Other dimensions | | | | Contact surface and chamfer dimensions | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d2 | D1 | b | k | da | Da | ra | e | Y1 | Y2 | Y0 | |
| mm | | | | mm | | | mm | | | | kg |
| 109 | 142 | | | 92 | 158 | 2 | 0.34 | 1.99 | 2.96 | 1.94 | 7.40 |
| 109 | 142 | 8.3 | 4 | 92 | 158 | 2 | 0.34 | 1.99 | 2.96 | 1.94 | 6.37 |
| 105 | 132 | 6.5 | 3 | 96 | 139 | 2 | 0.24 | 2.80 | 4.20 | 2.80 | 2.69 |
| 105 | 132 | | | 96 | 139 | 2 | 0.24 | 2.80 | 4.20 | 2.80 | 2.64 |
| 118 | 152 | | | 99 | 166 | 2.5 | 0.24 | 2.80 | 4.20 | 2.80 | 5.42 |
| 115 | 150 | 8.3 | 4 | 99 | 166 | 2.5 | 0.34 | 1.99 | 2.96 | 1.94 | 8.19 |
| 115 | 150 | 8.3 | 4 | 99 | 166 | 2.5 | 0.34 | 1.99 | 2.96 | 1.94 | 8.19 |
| 115 | 150 | | | 99 | 166 | 2.5 | 0.34 | 1.99 | 2.96 | 1.94 | 8.12 |
| 115 | 150 | 8.3 | 4 | 99 | 166 | 2.5 | 0.34 | 1.99 | 2.96 | 1.94 | 8.08 |
| 115 | 150 | 8.3 | 4 | 99 | 166 | 2.5 | 0.34 | 1.99 | 2.96 | 1.94 | 8.01 |
| 106 | 121 | 5.5 | 3 | 100 | 125 | 1.5 | 0.33 | 2.00 | 3.00 | 2.00 | 3.25 |
| 111 | 139 | 8.3 | 2.5 | 101 | 149 | 2 | 0.25 | 2.70 | 4.00 | 2.60 | 3.40 |
| 111 | 139 | | | 101 | 149 | 2 | 0.25 | 2.70 | 4.00 | 2.60 | 3.38 |
| 111 | 139 | 8.3 | 2.5 | 101 | 149 | 2 | 0.25 | 2.70 | 4.00 | 2.60 | 3.28 |
| 111 | 133 | 5.5 | 2.5 | 101 | 149 | 2 | 0.35 | 1.90 | 2.90 | 1.80 | 4.64 |
| 111 | 133 | 5.5 | 2.5 | 101 | 149 | 2 | 0.35 | 1.90 | 2.90 | 1.80 | 4.5 |
| 111 | 133 | | | 101 | 149 | 2 | 0.35 | 1.90 | 2.90 | 1.80 | 4.61 |
| 112 | 136 | 5.5 | 2.5 | 101 | 149 | 2 | 0.25 | 2.70 | 4.00 | 2.60 | 4.82 |
| 112 | 136 | 5.5 | 2.5 | 101 | 149 | 2 | 0.25 | 2.70 | 4.00 | 2.60 | 4.72 |
| 112 | 136 | 5.5 | 2.5 | 101 | 149 | 2 | 0.25 | 2.70 | 4.00 | 2.60 | 4.55 |
| 112 | 136 | | | 101 | 149 | 2 | 0.31 | 2.20 | 3.30 | 2.20 | 5.87 |
| 123 | 159 | 8.3 | 5 | 104 | 176 | 2.5 | 0.34 | 1.99 | 2.96 | 1.94 | 11.5 |
| 123 | 159 | | | 104 | 176 | 2.5 | 0.34 | 1.99 | 2.96 | 1.94 | 11.2 |
| 123 | 159 | 8.3 | 5 | 104 | 176 | 2.5 | 0.34 | 1.99 | 2.96 | 1.94 | 11.1 |
| 123 | 159 | | | 104 | 176 | 2.5 | 0.34 | 1.99 | 2.96 | 1.94 | 9.44 |
| 121 | 159 | | | 104 | 176 | 2.5 | 0.36 | 1.87 | 2.79 | 1.83 | 8.62 |
| 121 | 159 | 8.3 | 5 | 104 | 176 | 2.5 | 0.36 | 1.87 | 2.79 | 1.83 | 8.43 |
| 112 | 150 | 8.3 | 4.5 | 104 | 176 | 2.5 | 0.24 | 2.80 | 4.20 | 2.80 | 5.82 |
| 119 | 148 | 8.3 | 3 | 107 | 158 | 2 | 0.24 | 2.80 | 4.20 | 2.80 | 4.68 |
| 119 | 148 | 8.3 | 3 | 107 | 158 | 2 | 0.24 | 2.80 | 4.20 | 2.80 | 4.48 |
| 112 | 150 | 8.3 | 4.5 | 107 | 158 | 2 | 0.24 | 2.80 | 4.20 | 2.80 | 7.48 |
| 128 | 167 | | | 109 | 186 | 2.5 | | | | | 10.4 |



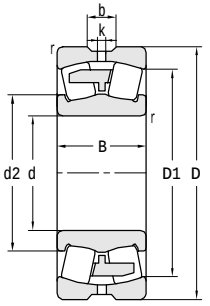



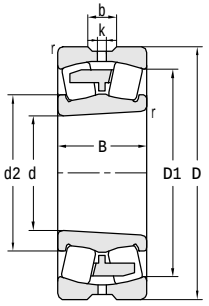



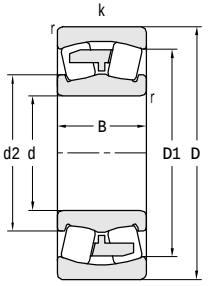

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | |
| mm | | | | kN | | r/min | | | |
| **95** | 200 | 67 | 3 | 637 | 727 | 1800 | 2400 | **22319CA** | **22319CA/W33** |
| | 200 | 67 | 3 | 637 | 727 | 1800 | 2400 | **22319CAF3** | **22319CAK** |
| | 200 | 67 | 3 | 637 | 727 | 1800 | 2400 | **22319CAKF3** | **22319CAKF3/W33** |
| **100** | 150 | 37 | 1.5 | 215 | 400 | 2400 | 3200 | **23020CA** | |
| | 150 | 50 | 1.5 | 271 | 445 | 2400 | 3200 | **24020CA/W33** | |
| | 165 | 52 | 2 | 347 | 510 | 2000 | 2800 | **23120CA** | **23120CA/W33** |
| | 165 | 52 | 2 | 347 | 510 | 2000 | 2800 | **23120CAK/W33** | |
| | 165 | 52 | 2 | 347 | 465 | 2000 | 2800 | **23120K/W33** | |
| | 180 | 46 | 2.1 | 404 | 466 | 2200 | 3000 | **22220** | |
| | 180 | 46 | 2.1 | 404 | 466 | 2200 | 3000 | **22220CA** | **22220CA/W33** |
| | 180 | 46 | 2.1 | 404 | 466 | 2200 | 3000 | **22220CAF3** | **22220CAKF3** |
| | 180 | 46 | 2.1 | 404 | 466 | 2200 | 3000 | **22220CAK** | **22220CAK/W33** |
| | 180 | 60.3 | 2.1 | 400 | 570 | 1700 | 2200 | **23220F1/W33** | |
| | 180 | 60.3 | 2.1 | 451 | 610 | 1700 | 2200 | **23220CA** | **23220CA/W33** |
| | 180 | 60.3 | 2.1 | 451 | 610 | 1700 | 2200 | **23220CAK/W33** | **23220CAKF3/W33** |
| | 215 | 47 | 3 | 385 | 490 | 1700 | 2200 | **21320CA** | |
| | 215 | 73 | 3 | 774 | 903 | 1700 | 2200 | **22320CA** | **22320CA/W33** |
| | 215 | 73 | 3 | 774 | 903 | 1700 | 2200 | **22320CAF3** | **22320CAKF3** |
| | 215 | 73 | 3 | 774 | 903 | 1700 | 2200 | **22320CAK** | **22320CAK/W33** |
| **105** | 175 | 56 | 2 | 402 | 550 | 1900 | 2700 | **23121CA** | **23121CAL** |
| | 175 | 56 | 2 | 402 | 550 | 1900 | 2700 | **23121CA/W33** | |
| **110** | 170 | 45 | 2 | 295 | 460 | 2200 | 3000 | **23022CA** | **23022CA/W33** |
| | 170 | 45 | 2 | 295 | 460 | 2200 | 3000 | **23022CAF3** | **23022CAF3/W33** |
| | 170 | 60 | 2 | 394 | 589 | 2100 | 2800 | **24022CA** | **24022CA/W33** |
| | 170 | 60 | 2 | 394 | 589 | 2100 | 2800 | **24022CA/W33A** | |
| | 180 | 56 | 2 | 409 | 580 | 1900 | 2600 | **23122CA** | **23122CAK/C3W33** |
| | 180 | 56 | 2 | 409 | 580 | 1900 | 2600 | **23122CAF3** | |
| | 180 | 56 | 2 | 409 | 580 | 1900 | 2600 | **23122CAKF3/W33** | |
| | 180 | 82 | 3 | 510 | 870 | 1000 | 1400 | **24122X2TN1/YA6** | |
| | 180 | 69 | 2 | 494 | 750 | 1000 | 1400 | **24122F1/W33** | |
| | 180 | 69 | 2 | 494 | 750 | 1000 | 1400 | **24122CA** | **24122CA/W33** |
| | 200 | 53 | 2.1 | 530 | 610 | 2000 | 2800 | **22222CA** | **22222CA/W33** |
| | 200 | 53 | 2.1 | 530 | 610 | 2000 | 2800 | **22222CAF3** | |

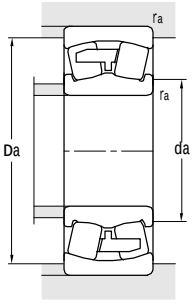
| Other dimensions | | | | Contact surface and chamfer dimensions | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d2 | D1 | b | k | da | Da | ra | e | Y1 | Y2 | Y0 | |
| mm | | | | mm | | | mm | | | | kg |
| 128 | 167 | 8.3 | 5 | 109 | 186 | 2.5 | 0.34 | 1.99 | 2.96 | 1.94 | 10.5 |
| 128 | 167 | | | 109 | 186 | 2.5 | 0.34 | 1.99 | 2.96 | 1.94 | 10.5 |
| 128 | 167 | 8.3 | 5 | 109 | 186 | 2.5 | 0.34 | 1.99 | 2.96 | 1.94 | 10.3 |
| 116 | 135 | | | 110 | 140 | 1.5 | 0.23 | 2.90 | 4.40 | 2.80 | 2.52 |
| 115 | 133 | 5.5 | 3 | 110 | 140 | 1.5 | 0.30 | 2.25 | 3.35 | 2.20 | 3.18 |
| 121 | 143 | 5.5 | 3 | 110 | 155 | 2 | 0.30 | 2.90 | 4.40 | 2.80 | 4.42 |
| 121 | 143 | 5.5 | 3 | 110 | 155 | 2 | 0.30 | 2.90 | 4.40 | 2.80 | 4.26 |
| 121 | 143 | 5.5 | 3 | 110 | 155 | 2 | 0.30 | 2.25 | 3.35 | 2.20 | 4.44 |
| 126 | 156 | | | 112 | 168 | 2 | | | | | 5.24 |
| 124 | 156 | 8.3 | 3 | 112 | 168 | 2 | 0.24 | 2.80 | 4.20 | 2.80 | 5.18 |
| 124 | 156 | | | 112 | 168 | 2 | 0.24 | 2.80 | 4.20 | 2.80 | 5.10 |
| 124 | 156 | 8.3 | 3 | 112 | 168 | 2 | 0.24 | 2.80 | 4.20 | 2.80 | 4.96 |
| 125 | 153 | 9.5 | 4 | 112 | 168 | 2 | | | | | 6.39 |
| 125 | 153 | 9.5 | 4 | 112 | 168 | 2 | 0.33 | 2.00 | 3.00 | 2.00 | 6.52 |
| 125 | 153 | 9.5 | 4 | 112 | 168 | 2 | 0.33 | 2.00 | 3.00 | 2.00 | 6.21 |
| 138 | 179 | | | 114 | 201 | 2.5 | | | | | 8.74 |
| 138 | 179 | 11.1 | 5 | 114 | 201 | 2.5 | 0.35 | 1.90 | 2.90 | 1.80 | 13.8 |
| 138 | 179 | | | 114 | 201 | 2.5 | 0.35 | 1.90 | 2.90 | 1.80 | 13.4 |
| 138 | 179 | 11.1 | 5 | 114 | 201 | 2.5 | 0.35 | 1.90 | 2.90 | 1.80 | 13.8 |
| 127 | 151 | | | 115 | 165 | 2 | 0.31 | 2.20 | 3.30 | 2.20 | 5.48 |
| 127 | 151 | 5.5 | 3 | 115 | 165 | 2 | 0.31 | 2.20 | 3.30 | 2.20 | 5.35 |
| 128 | 150 | 7.5 | 3 | 120 | 160 | 2 | 0.25 | 2.70 | 4.00 | 2.60 | 3.58 |
| 128 | 150 | 7.5 | 3 | 120 | 160 | 2 | 0.25 | 2.70 | 4.00 | 2.60 | 3.54 |
| 128 | 150 | 5.5 | 3 | 120 | 160 | 2 | 0.32 | 2.09 | 3.11 | 2.04 | 4.98 |
| 128 | 150 | 5.5 | 3 | 120 | 160 | 2 | 0.32 | 2.09 | 3.11 | 2.04 | 4.90 |
| 132 | 156 | 5.5 | 3 | 120 | 170 | 2 | 0.30 | 2.25 | 3.35 | 2.20 | 5.73 |
| 132 | 156 | | | 120 | 170 | 2 | 0.30 | 2.25 | 3.35 | 2.20 | 5.70 |
| 132 | 156 | 5.5 | 3 | 120 | 170 | 2 | 0.30 | 2.25 | 3.35 | 2.20 | 5.51 |
| 123 | 148 | | | | | | | | | | 7.56 |
| 131 | 153 | 5.5 | 2.5 | 120 | 170 | 2 | | | | | 6.91 |
| 131 | 153 | 5.5 | 2.5 | 120 | 170 | 2 | 0.35 | 1.90 | 2.90 | 1.80 | 6.92 |
| 139 | 173 | 8.3 | 4 | 122 | 188 | 2 | 0.26 | 2.60 | 3.90 | 2.50 | 7.43 |
| 139 | 173 | | | 122 | 188 | 2 | 0.26 | 2.60 | 3.90 | 2.50 | 7.37 |

d 110~120 mm



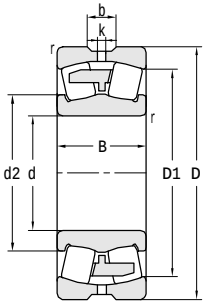



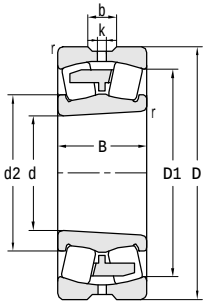



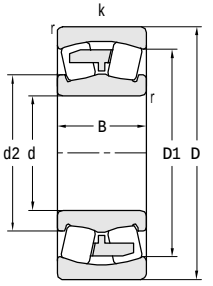

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | |
| mm | | | | kN | | r/min | | | |
| **110** | 200 | 53 | 2.1 | 530 | 610 | 2000 | 2800 | **22222CAK** | **22222CAK/W33** |
| | 200 | 69.8 | 2.1 | 570 | 727 | 1600 | 2000 | **23222CA** | **23222CA/W33** |
| | 200 | 69.8 | 2.1 | 570 | 727 | 1600 | 2000 | **23222CAF3** | **23222CAF3/W33** |
| | 200 | 69.8 | 2.1 | 570 | 727 | 1600 | 2000 | **23222CAK** | **23222CAK/W33** |
| | 200 | 69.8 | 2.1 | 570 | 727 | 1600 | 2000 | **23222CAKF3** | |
| | 200 | 69.8 | 2.1 | 490 | 740 | 1700 | 2200 | **23222/W33** | |
| | 240 | 80 | 3 | 900 | 1060 | 1600 | 2000 | **22322CA** | **22322CA/W33** |
| | 240 | 80 | 3 | 900 | 1060 | 1600 | 2000 | **22322CAF3** | **22322CAKF3** |
| | 240 | 80 | 3 | 900 | 1060 | 1600 | 2000 | **22322CAK** | **22322CAK/W33** |
| | 240 | 50 | 3 | 420 | 490 | 1600 | 2000 | **21322CA/W33** | |
| **120** | 180 | 46 | 2 | 340 | 495 | 2000 | 2800 | **23024CA** | **23024CA/W33** |
| | 180 | 46 | 2 | 340 | 495 | 2000 | 2800 | **23024CAK** | |
| | 180 | 46 | 2 | 340 | 495 | 2000 | 2800 | **23024CAKF3/W33** | |
| | 180 | 46 | 2 | 340 | 495 | 2000 | 2800 | **23024ACA/W33A** | |
| | 180 | 60 | 2 | 410 | 660 | 1600 | 2000 | **24024CA** | **24024CA/W33** |
| | 180 | 60 | 2 | 410 | 660 | 1600 | 2000 | **24024CA/W513** | |
| | 180 | 60 | 2 | 410 | 660 | 1600 | 2000 | **24024F1/W33** | |
| | 200 | 62 | 2 | 490 | 715 | 1800 | 2400 | **23124CA/W33** | **23124CAK/W33** |
| | 200 | 62 | 2 | 430 | 715 | 1900 | 2600 | **23124/W33** | |
| | 200 | 62 | 2 | 430 | 715 | 1900 | 2600 | **23124K** | |
| | 200 | 80 | 2 | 620 | 925 | 1400 | 1800 | **24124CA** | **24124CA/W33** |
| | 200 | 80 | 2 | 620 | 925 | 1400 | 1800 | **24124CAF3** | |
| | 200 | 80 | 2 | 620 | 925 | 1400 | 1800 | **24124CAK30/W33** | |
| | 215 | 58 | 2.1 | 600 | 730 | 1900 | 2600 | **22224CA** | **22224CAF3** |
| | 215 | 58 | 2.1 | 600 | 730 | 1900 | 2600 | **22224CA/W33** | |
| | 215 | 58 | 2.1 | 600 | 730 | 1900 | 2600 | **22224CAK** | **22224CAK/W33** |
| | 215 | 58 | 2.1 | 600 | 730 | 1900 | 2600 | **22224CAKF3** | **22224CAKF3/W33** |
| | 215 | 76 | 2.1 | 660 | 940 | 1500 | 1900 | **23224CA** | **23224CA/W33** |
| | 215 | 76 | 2.1 | 660 | 940 | 1500 | 1900 | **23224CAF3/W33** | |
| | 215 | 76 | 2.1 | 660 | 940 | 1500 | 1900 | **23224CAK/W33** | **23224CAKF3/W33** |
| | 240 | 100 | 2 | 570 | 925 | 1500 | 1900 | **24124X3CA/C9WN33** | |
| | 260 | 86 | 3 | 920 | 1060 | 1400 | 1800 | **22324** | **22324/W33** |
| | 260 | 86 | 3 | 920 | 1060 | 1400 | 1800 | **22324K** | **22324K/W33** |
| | 260 | 86 | 3 | 920 | 1060 | 1400 | 1800 | **22324KF3** | **22324KF3/W33** |
| | 260 | 86 | 3 | 920 | 1060 | 1400 | 1800 | **22324F3** | **22324F3/W33** |

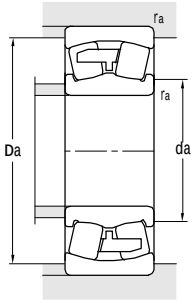
| Other dimensions | | | | Contact surface and chamfer dimensions | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d2 | D1 | b | k | da | Da | ra | e | Y1 | Y2 | Y0 | |
| mm | | | | mm | | | mm | | | | kg |
| 139 | 173 | 8.3 | 4 | 122 | 188 | 2 | 0.26 | 2.60 | 3.90 | 2.50 | 7.25 |
| 138 | 168 | 12 | 5 | 122 | 188 | 2 | 0.34 | 1.99 | 2.96 | 1.94 | 10.1 |
| 138 | 168 | 12 | 5 | 122 | 188 | 2 | 0.34 | 1.99 | 2.96 | 1.94 | 9.79 |
| 138 | 168 | 12 | 5 | 122 | 188 | 2 | 0.34 | 1.99 | 2.96 | 1.94 | 9.83 |
| 138 | 168 | | | 122 | 188 | 2 | 0.34 | 1.99 | 2.96 | 1.94 | 9.77 |
| 139 | 168 | 12 | 5 | 122 | 188 | 2 | 0.35 | 1.90 | 2.90 | 1.80 | 9.54 |
| 151 | 197 | 13.9 | 6 | 122 | 188 | 2.5 | 0.31 | 2.20 | 3.30 | 2.20 | 18.9 |
| 151 | 197 | | | 122 | 188 | 2.5 | 0.31 | 2.20 | 3.30 | 2.20 | 18.7 |
| 151 | 197 | 13.9 | 6 | 122 | 188 | 2.5 | 0.31 | 2.20 | 3.30 | 2.20 | 18.5 |
| 150 | 202 | 7.5 | 3 | | | | | | | | 11.7 |
| 139 | 162 | 5.5 | 3 | 130 | 170 | 2 | 0.23 | 2.90 | 4.40 | 2.80 | 4.44 |
| 139 | 162 | | | 130 | 170 | 2 | 0.23 | 2.90 | 4.40 | 2.80 | 4.42 |
| 139 | 162 | 5.5 | 3 | 130 | 170 | 2 | 0.23 | 2.90 | 4.40 | 2.80 | 4.34 |
| 139 | 162 | 7 | 4 | 130 | 170 | 2 | | | | | 4.39 |
| 139 | 158 | 5.5 | 4 | 130 | 170 | 2 | 0.31 | 2.20 | 3.30 | 2.20 | 5.83 |
| 139 | 158 | 5.5 | 4 | 130 | 170 | 2 | 0.31 | 2.20 | 3.30 | 2.20 | 5.79 |
| 139 | 158 | 5.5 | 4 | 130 | 170 | 2 | | | | | 5.5 |
| 146 | 174 | 5.5 | 3 | 130 | 190 | 2 | 0.30 | 2.30 | 3.40 | 2.20 | 12.2 |
| 146 | 174 | 5.5 | 3 | 130 | 190 | 2 | 0.31 | 2.20 | 3.30 | 2.20 | 7.97 |
| 146 | 174 | 5.5 | 3 | 130 | 190 | 2 | 0.31 | 2.20 | 3.30 | 2.20 | 7.73 |
| 146 | 167 | 5.5 | 3 | 130 | 190 | 2 | 0.30 | 2.30 | 3.40 | 2.20 | 10 |
| 146 | 167 | | | 130 | 190 | 2 | 0.30 | 2.30 | 3.40 | 2.20 | 9.95 |
| 146 | 167 | 5.5 | 3 | 130 | 190 | 2 | 0.30 | 2.30 | 3.40 | 2.20 | 9.88 |
| 149 | 187 | | | 132 | 203 | 2 | 0.26 | 2.60 | 3.90 | 2.50 | 9.87 |
| 149 | 187 | 11.1 | 4 | 132 | 203 | 2 | 0.26 | 2.60 | 3.90 | 2.50 | 9.53 |
| 149 | 187 | 11.1 | 4 | 132 | 203 | 2 | 0.26 | 2.60 | 3.90 | 2.50 | 9.76 |
| 149 | 187 | 11.1 | 4 | 132 | 203 | 2 | 0.26 | 2.60 | 3.90 | 2.50 | 9.68 |
| 150 | 182 | 8.3 | 5 | 132 | 203 | 2 | 0.35 | 1.90 | 2.90 | 1.80 | 12.1 |
| 150 | 182 | 8.3 | 5 | 132 | 203 | 2 | 0.35 | 1.90 | 2.90 | 1.80 | 12.0 |
| 150 | 182 | 8.3 | 5 | 132 | 203 | 2 | 0.35 | 1.90 | 2.90 | 1.80 | 11.9 |
| 146 | 167 | | | 130 | 190 | 2 | 0.38 | 1.80 | 2.60 | 1.70 | 21.3 |
| 157 | 218 | | | 134 | 246 | 2.5 | | | | | 21.7 |
| 157 | 218 | | | 134 | 246 | 2.5 | | | | | 21.3 |
| 157 | 218 | | | 134 | 246 | 2.5 | | | | | 21.1 |
| 157 | 218 | | | 134 | 246 | 2.5 | | | | | 21.2 |

d 120~130 mm



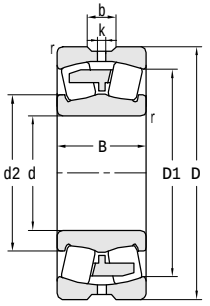



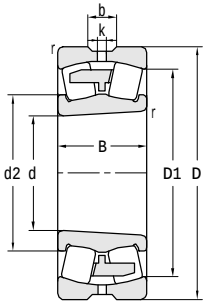



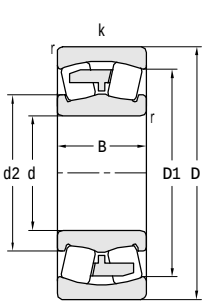



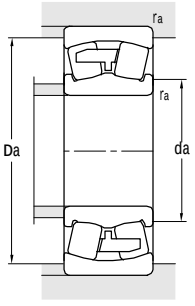

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | |
| mm | | | | kN | | r/min | | | |
| **120** | 260 | 86 | 3 | 920 | 1100 | 1400 | 1800 | **22324CA** | **22324CA/W33** |
| | 260 | 86 | 3 | 920 | 1100 | 1400 | 1800 | **22324CAN/W33** | |
| | 260 | 86 | 3 | 920 | 1100 | 1400 | 1800 | **22324CAF3** | **22324CAK** |
| | 260 | 86 | 3 | 920 | 1100 | 1400 | 1800 | **22324CAKF3** | **22324CAKF3/W33** |
| | 260 | 86 | 3 | 920 | 1100 | 1400 | 1800 | **22324ACA** | |
| **130** | 200 | 52 | 2 | 410 | 580 | 1900 | 2600 | **23026CA** | **23026CA/W33** |
| | 200 | 52 | 2 | 410 | 580 | 1900 | 2600 | **23026CAF3** | **23026CAF3/W33** |
| | 200 | 52 | 2 | 410 | 580 | 1900 | 2600 | **23026CAK** | |
| | 200 | 52 | 2 | 410 | 580 | 1900 | 2600 | **23026CAKF3** | **23026CAKF3/W33** |
| | 200 | 52 | 2 | 370 | 670 | 1900 | 2600 | **23026NR** | |
| | 200 | 69 | 2 | 510 | 810 | 1800 | 2400 | **24026CA/W33** | **24026CA/W513** |
| | 200 | 69 | 2 | 510 | 820 | 1800 | 2400 | **24026F1/W33** | |
| | 210 | 64 | 2 | 530 | 790 | 1700 | 2200 | **23126CA** | **23126CA/W33** |
| | 210 | 64 | 2 | 530 | 790 | 1700 | 2200 | **23126CAKF3/W33** | |
| | 210 | 80 | 2 | 650 | 980 | 1700 | 2200 | **24126CA** | **24126CA/W33** |
| | 210 | 80 | 2 | 650 | 980 | 1700 | 2200 | **24126CAK/W33** | |
| | 210 | 80 | 2 | 650 | 980 | 1700 | 2200 | **24126CAK30/W33** | |
| | 220 | 73 | 3 | 740 | 1000 | 1700 | 2200 | **23226X3CAQ1/HG2P63** | |
| | 230 | 64 | 3 | 700 | 880 | 1800 | 2400 | **22226CA** | **22226CA/W33** |
| | 230 | 64 | 3 | 700 | 880 | 1800 | 2400 | **22226CAK** | **22226CAK/W33** |
| | 230 | 64 | 3 | 700 | 880 | 1800 | 2400 | **22226CAKF3** | |
| | 230 | 80 | 3 | 580 | 910 | 1400 | 1800 | **23226/W33** | |
| | 230 | 80 | 3 | 740 | 1020 | 1300 | 1700 | **23226CA** | **23226CA/W33** |
| | 230 | 80 | 3 | 740 | 1020 | 1300 | 1700 | **23226CAF3** | **23226CAF3/W33** |
| | 230 | 80 | 3 | 740 | 1020 | 1300 | 1700 | **23226CAF3/HAC9SOW20X** | |
| | 230 | 80 | 3 | 740 | 1020 | 1300 | 1700 | **23226CAK** | **23226CAKF3** |
| | 280 | 93 | 4 | 810 | 1250 | 1300 | 1700 | **22326** | **22326/W33** |
| | 280 | 93 | 4 | 810 | 1250 | 1300 | 1700 | **22326K** | **22326K/W33** |
| | 280 | 93 | 4 | 810 | 1250 | 1300 | 1700 | **22326F3** | |
| | 280 | 93 | 4 | 810 | 1250 | 1300 | 1700 | **22326KF3** | |
| | 280 | 93 | 4 | 1060 | 1300 | 1300 | 1700 | **22326CA** | **22326CA/W33** |
| | 280 | 93 | 4 | 1060 | 1300 | 1300 | 1700 | **22326CAF3** | **22326CAF3/W33** |
| | 280 | 93 | 4 | 1060 | 1300 | 1300 | 1700 | **22326CAK** | **22326CAK/W33** |
| | 280 | 93 | 4 | 1060 | 1300 | 1300 | 1700 | **22326ACA** | |
| | 280 | 93 | 4 | 1060 | 1300 | 1300 | 1700 | **22326CAQ1/HA** | |

| Other dimensions | | | | Contact surface and chamfer dimensions | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d2 | D1 | b | k | da | Da | ra | e | Y1 | Y2 | Y0 | |
| mm | | | | mm | | | mm | | | | kg |
| 165 | 215 | 13.9 | 6 | 134 | 246 | 2.5 | 0.34 | 1.99 | 2.96 | 1.94 | 23.3 |
| 165 | 215 | 13.9 | 6 | 134 | 246 | 2.5 | 0.34 | 1.99 | 2.96 | 1.94 | 23.1 |
| 165 | 215 | | | 134 | 246 | 2.5 | 0.34 | 1.99 | 2.96 | 1.94 | 23.1 |
| 165 | 215 | 13.9 | 6 | 134 | 246 | 2.5 | 0.34 | 1.99 | 2.96 | 1.94 | 22.8 |
| 165 | 215 | | | 134 | 246 | 2.5 | 0.34 | 1.99 | 2.96 | 1.94 | 22.8 |
| 153 | 179 | 9.5 | 4 | 140 | 190 | 2 | 0.24 | 2.80 | 4.20 | 2.80 | 7.04 |
| 153 | 179 | 9.5 | 4 | 140 | 190 | 2 | 0.24 | 2.80 | 4.20 | 2.80 | 6.75 |
| 153 | 179 | | | 140 | 190 | 2 | 0.24 | 2.80 | 4.20 | 2.80 | 6.68 |
| 153 | 179 | 9.5 | 4 | 140 | 190 | 2 | 0.24 | 2.80 | 4.20 | 2.80 | 6.57 |
| 153 | 176 | | | 140 | 190 | 2 | | | | | 6.38 |
| 151 | 175 | 5.5 | 3 | 140 | 190 | 2 | 0.32 | 2.09 | 3.11 | 2.04 | 7.76 |
| 151 | 175 | 5.5 | 3 | 140 | 190 | 2 | | | | | 7.72 |
| 156 | 183 | 8.3 | 4 | 140 | 200 | 2 | 0.28 | 2.40 | 3.50 | 2.50 | 10.7 |
| 156 | 183 | 8.3 | 4 | 140 | 200 | 2 | 0.28 | 2.40 | 3.50 | 2.50 | 10.1 |
| 153 | 180 | 8.3 | 4 | 140 | 200 | 2 | 0.35 | 1.90 | 2.90 | 1.80 | 10.6 |
| 153 | 180 | 8.3 | 4 | 140 | 200 | 2 | 0.35 | 1.90 | 2.90 | 1.80 | 10.2 |
| 153 | 180 | 8.3 | 4 | 140 | 200 | 2 | 0.35 | 1.90 | 2.90 | 1.80 | 10.4 |
| 157 | 188 | | | 140 | 210 | 2 | 0.32 | 2.09 | 3.11 | 2.04 | 11.3 |
| 162 | 200 | 10 | 5 | 144 | 216 | 2.5 | 0.27 | 2.50 | 3.70 | 2.50 | 12.4 |
| 162 | 200 | 10 | 5 | 144 | 216 | 2.5 | 0.27 | 2.50 | 3.70 | 2.50 | 12.2 |
| 162 | 200 | | | 144 | 216 | 2.5 | 0.27 | 2.50 | 3.70 | 2.50 | 12.1 |
| 164 | 194 | 12 | 5 | 144 | 216 | 2.5 | 0.34 | 1.99 | 2.96 | 1.94 | 14.9 |
| 161 | 194 | 12 | 5 | 144 | 216 | 2.5 | 0.33 | 2.00 | 3.00 | 2.00 | 15.9 |
| 161 | 194 | 12 | 5 | 144 | 216 | 2.5 | 0.33 | 2.00 | 3.00 | 2.00 | 15.8 |
| 161 | 194 | 12 | 5 | 144 | 216 | 2.5 | 0.33 | 2.00 | 3.00 | 2.00 | 15.8 |
| 161 | 194 | | | 144 | 216 | 2.5 | 0.33 | 2.00 | 3.00 | 2.00 | 15.9 |
| 176 | 235 | 16.7 | 6 | 148 | 262 | 3 | | | | | 27.2 |
| 176 | 235 | 16.7 | 6 | 148 | 262 | 3 | | | | | 26.6 |
| 176 | 235 | | | 148 | 262 | 3 | | | | | 27.1 |
| 176 | 235 | | | 148 | 262 | 3 | | | | | 26.5 |
| 178 | 232 | 16.7 | 6 | 148 | 262 | 3 | 0.34 | 1.99 | 2.96 | 1.94 | 28.9 |
| 178 | 232 | 16.7 | 6 | 148 | 262 | 3 | 0.34 | 1.99 | 2.96 | 1.94 | 28.4 |
| 178 | 232 | 16.7 | 6 | 148 | 262 | 3 | 0.34 | 1.99 | 2.96 | 1.94 | 26.3 |
| 178 | 232 | | | 148 | 262 | 3 | 0.34 | 1.99 | 2.96 | 1.94 | 28.9 |
| 178 | 232 | | | 148 | 262 | 3 | 0.34 | 1.99 | 2.96 | 1.94 | 28.9 |



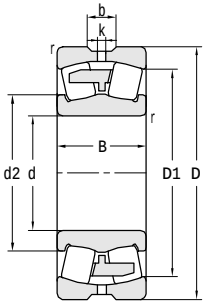



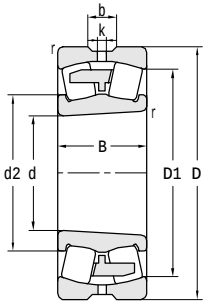



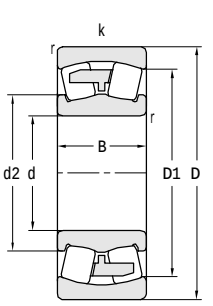



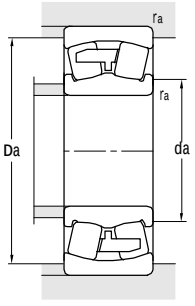

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | |
| mm | | | | kN | | r/min | | | |
| **140** | 210 | 53 | 2 | 440 | 655 | 1800 | 2400 | **23028** | **23028/W33** |
| | 210 | 53 | 2 | 440 | 655 | 1800 | 2400 | **23028K** | **23028K/W33** |
| | 210 | 53 | 2 | 440 | 655 | 1800 | 2400 | **23028F3** | **23028F3/W33** |
| | 210 | 53 | 2 | 440 | 655 | 1800 | 2400 | **23028KF3** | **23028KF3/W33** |
| | 210 | 53 | 2 | 440 | 706 | 1800 | 2400 | **23028CA** | **23028CA/W33** |
| | 210 | 53 | 2 | 440 | 706 | 1800 | 2400 | **23028CAF3** | |
| | 210 | 53 | 2 | 440 | 706 | 1800 | 2400 | **23028CAK** | **23028CAKF3** |
| | 210 | 69 | 2 | 540 | 960 | 1800 | 2400 | **24028CA** | **24028CA/W33** |
| | 210 | 69 | 2 | 540 | 960 | 1800 | 2400 | **24028CAK30/W33** | |
| | 211.5 | 69 | 2 | 540 | 960 | 1800 | 2400 | **24028CAX1/W33** | |
| | 225 | 68 | 2.1 | 550 | 865 | 1600 | 2000 | **23128** | **23128/W33** |
| | 225 | 68 | 2.1 | 550 | 865 | 1600 | 2000 | **23128K** | **23128K/W33** |
| | 225 | 68 | 2.1 | 550 | 865 | 1600 | 2000 | **23128F3** | |
| | 225 | 68 | 2.1 | 550 | 865 | 1600 | 2000 | **23128KF3** | |
| | 225 | 68 | 2.1 | 550 | 865 | 1600 | 2000 | **23128N** | |
| | 225 | 68 | 2.1 | 600 | 935 | 1600 | 2000 | **23128CA** | **23128CA/W33** |
| | 225 | 68 | 2.1 | 600 | 935 | 1600 | 2000 | **23128CAN** | |
| | 225 | 85 | 2.1 | 730 | 1150 | 850 | 1100 | **24128CA** | **24128CA/W33** |
| | 225 | 85 | 2.1 | 730 | 1150 | 850 | 1100 | **24128CAF3** | |
| | 225 | 85 | 2.1 | 730 | 1150 | 850 | 1100 | **24128CAK30/W33** | |
| | 250 | 68 | 3 | 680 | 1000 | 1700 | 2200 | **22228CA** | **22228CA/W33** |
| | 250 | 68 | 3 | 680 | 1000 | 1700 | 2200 | **22228CAF3** | **22228CAF3/W33** |
| | 250 | 68 | 3 | 680 | 1000 | 1700 | 2200 | **22228CAK** | **22228CAK/W33** |
| | 250 | 68 | 3 | 680 | 1000 | 1700 | 2200 | **22228CAKF3/W33** | |
| | 250 | 88 | 3 | 770 | 1095 | 1300 | 1700 | **23228K/W33** | |
| | 250 | 88 | 3 | 910 | 1365 | 1200 | 1600 | **23228CA/W33** | **23228CAF3/W33** |
| | 250 | 88 | 3 | 910 | 1365 | 1200 | 1600 | **23228CAK/W33** | |
| | 300 | 102 | 4 | 1230 | 1950 | 1100 | 1500 | **22328CA** | **22328CA/W33** |
| | 300 | 102 | 4 | 1230 | 1950 | 1100 | 1500 | **22328CAF3** | **22328CAQ1/HA** |
| | 300 | 102 | 4 | 1230 | 1950 | 1100 | 1500 | **22328CAK** | **22328CAK/W33** |
| | 300 | 102 | 4 | 1230 | 1950 | 1100 | 1500 | **22328CAN/W33** | |
| | 300 | 102 | 4 | 1230 | 1950 | 1100 | 1500 | **22328CAQ1/HA** | |
| | 300 | 118 | 4 | 1230 | 1950 | 1100 | 1500 | **23328CA** | |
| **150** | 225 | 56 | 2.1 | 485 | 795 | 1700 | 2200 | **23030CA** | **23030CA/W33** |
| | 225 | 56 | 2.1 | 485 | 795 | 1700 | 2200 | **23030CAK** | |

| Other dimensions | | | | Contact surface and chamfer dimensions | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d2 | D1 | b | k | da | Da | ra | e | Y1 | Y2 | Y0 | |
| mm | | | | mm | | | mm | | | | kg |
| 162 | 187 | 8.3 | 4 | 150 | 200 | 2 | | | | | 6.8 |
| 162 | 187 | 8.3 | 4 | 150 | 200 | 2 | | | | | 6.36 |
| 162 | 187 | 8.3 | 4 | 150 | 200 | 2 | | | | | 6.73 |
| 162 | 187 | 8.3 | 4 | 150 | 200 | 2 | | | | | 6.29 |
| 162 | 188 | 8.3 | 4.5 | 150 | 200 | 2 | 0.23 | 2.90 | 4.40 | 2.80 | 6.70 |
| 162 | 188 | | | 150 | 200 | 2 | 0.23 | 2.90 | 4.40 | 2.80 | 6.68 |
| 162 | 188 | | | 150 | 200 | 2 | 0.23 | 2.90 | 4.40 | 2.80 | 6.50 |
| 162 | 185 | 5.5 | 3 | 150 | 200 | 2 | 0.30 | 2.30 | 3.40 | 2.20 | 8.31 |
| 162 | 185 | 5.5 | 3 | 150 | 200 | 2 | 0.30 | 2.30 | 3.40 | 2.20 | 8.17 |
| 162 | 183 | 5.5 | 3 | 150 | 200 | 2 | 0.30 | 2.30 | 3.40 | 2.20 | 8.58 |
| 166 | 196 | | | 152 | 213 | 2 | | | | | 10.9 |
| 166 | 196 | 8.3 | 5 | 152 | 213 | 2 | | | | | 10.9 |
| 166 | 196 | | | 152 | 213 | 2 | | | | | 10.8 |
| 166 | 196 | | | 152 | 213 | 2 | | | | | 10.7 |
| 166 | 196 | | | 152 | 213 | 2 | | | | | 10.9 |
| 166 | 196 | 8.3 | 5 | 152 | 213 | 2 | 0.29 | 2.30 | 3.50 | 2.40 | 10.9 |
| 166 | 196 | 8.3 | 5 | 152 | 213 | 2 | 0.29 | 2.30 | 3.50 | 2.40 | 10.9 |
| 165 | 192 | 8.3 | 4.5 | 152 | 213 | 2 | 0.37 | 1.80 | 2.70 | 1.80 | 13.5 |
| 165 | 192 | | | 152 | 213 | 2 | 0.37 | 1.80 | 2.70 | 1.80 | 13.5 |
| 165 | 192 | 8.3 | 4.5 | 152 | 213 | 2 | 0.37 | 1.80 | 2.70 | 1.80 | 13.2 |
| 176 | 218 | 11.1 | 5 | 154 | 236 | 2.5 | 0.26 | 2.60 | 3.90 | 2.50 | 16.2 |
| 176 | 218 | 11.1 | 5 | 154 | 236 | 2.5 | 0.26 | 2.60 | 3.90 | 2.50 | 15.6 |
| 176 | 218 | 11.1 | 5 | 154 | 236 | 2.5 | 0.26 | 2.60 | 3.90 | 2.50 | 15.0 |
| 176 | 218 | 11.1 | 5 | 154 | 236 | 2.5 | 0.26 | 2.60 | 3.90 | 2.50 | 14.8 |
| 172 | 215 | 15 | 6 | 154 | 236 | 2.5 | 0.36 | 1.87 | 2.79 | 1.83 | 18.3 |
| 173 | 215 | 15 | 6 | 154 | 236 | 2.5 | 0.33 | 2.00 | 3.00 | 2.00 | 19.7 |
| 173 | 215 | 15 | 6 | 154 | 236 | 2.5 | 0.33 | 2.00 | 3.00 | 2.00 | 19.3 |
| 191 | 249 | 16.7 | 7 | 158 | 282 | 3 | 0.35 | 1.90 | 2.90 | 1.80 | 36.0 |
| 191 | 249 | | | 158 | 282 | 3 | 0.35 | 1.90 | 2.90 | 1.80 | 35.9 |
| 191 | 249 | 16.7 | 7 | 158 | 282 | 3 | 0.35 | 1.90 | 2.90 | 1.80 | 36.2 |
| 191 | 249 | 16.7 | 7 | 158 | 282 | 3 | | | | | 36.0 |
| 191 | 249 | 16.7 | 7 | 158 | 282 | 3 | | | | | 36.2 |
| 190 | 243 | | | 158 | 280 | 3 | 0.40 | 1.69 | 2.51 | 1.65 | 41.7 |
| 174 | 201 | 8.3 | 4.5 | 162 | 213 | 2 | 0.22 | 3.00 | 4.60 | 2.80 | 8.01 |
| 174 | 201 | 8.3 | 4.5 | 162 | 213 | 2 | 0.22 | 3.00 | 4.60 | 2.80 | 7.41 |



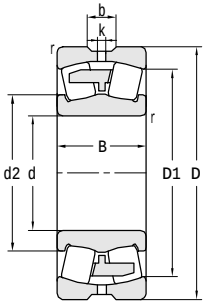



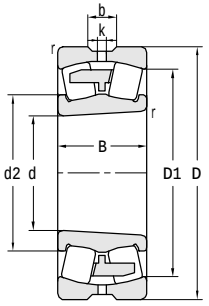



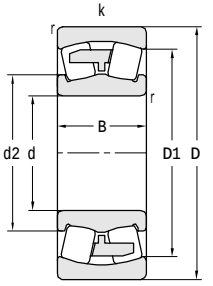



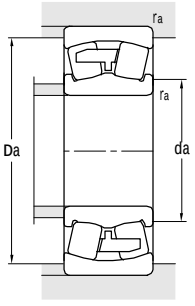

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | |
| mm | | | | kN | | r/min | | | |
| **150** | 225 | 56 | 2.1 | 485 | 795 | 1700 | 2200 | **23030CAF3** | |
| | 225 | 75 | 2.1 | 620 | 1050 | 1300 | 1700 | **24030CA/W33** | **24030CAK30/W33** |
| | 225 | 75 | 2.1 | 620 | 990 | 1300 | 1700 | **24030CA/W33X** | |
| | 250 | 80 | 2.1 | 660 | 625 | 1400 | 1800 | **23130** | **23130/W33** |
| | 250 | 80 | 2.1 | 660 | 625 | 1400 | 1800 | **23130K** | **23130K/W33** |
| | 250 | 80 | 2.1 | 660 | 625 | 1400 | 1800 | **23130F3** | **23130F3/W33** |
| | 250 | 80 | 2.1 | 660 | 625 | 1400 | 1800 | **23130KF3** | |
| | 250 | 80 | 2.1 | 790 | 1140 | 1400 | 1800 | **23130CA** | **23130CA/W33** |
| | 250 | 80 | 2.1 | 790 | 1140 | 1400 | 1800 | **23130CAK** | **23130CAKF3/W33** |
| | 250 | 80 | 2.1 | 790 | 1140 | 1400 | 1800 | **23130CAF3** | **23130CAF3/W33** |
| | 250 | 100 | 2.1 | 970 | 1450 | 800 | 1000 | **24130CA** | **24130CA/W33** |
| | 250 | 100 | 2.1 | 970 | 1450 | 800 | 1000 | **24130CAK30/C3W33** | |
| | 270 | 73 | 3 | 810 | 1050 | 1600 | 2000 | **22230CA** | **22230CA/W33** |
| | 270 | 73 | 3 | 810 | 1050 | 1600 | 2000 | **22230CAF3** | **22230CAK** |
| | 270 | 73 | 3 | 810 | 1050 | 1600 | 2000 | **22230ACA** | |
| | 270 | 96 | 3 | 1030 | 1550 | 1100 | 1500 | **23230CA** | **23230CA/W33** |
| | 270 | 96 | 3 | 1030 | 1550 | 1100 | 1500 | **23230CAK/W33** | |
| | 270 | 96 | 3 | 1030 | 1550 | 1100 | 1500 | **23230CA/HCW33** | |
| | 300 | 118 | 4 | 1780 | 1110 | | | **23328CA** | |
| | 320 | 108 | 4 | 1390 | 1810 | 1000 | 1400 | **22330CA** | **22330CA/W33** |
| | 320 | 108 | 4 | 1390 | 1810 | 1000 | 1400 | **22330CA/HCW33** | |
| | 320 | 108 | 4 | 1390 | 1810 | 1000 | 1400 | **22330CAK** | **22330CAKF3** |
| **160** | 240 | 60 | 2.1 | 415 | 860 | 1700 | 2200 | **23032** | **23032/W33** |
| | 240 | 60 | 2.1 | 415 | 860 | 1700 | 2200 | **23032K** | **23032K/W33** |
| | 240 | 60 | 2.1 | 415 | 860 | 1700 | 2200 | **23032F3** | **23032F3/W33** |
| | 240 | 60 | 2.1 | 415 | 860 | 1700 | 2200 | **23032KF3** | |
| | 240 | 60 | 2.1 | 555 | 875 | 1700 | 2200 | **23032CA** | **23032CA/W33** |
| | 240 | 60 | 2.1 | 555 | 875 | 1700 | 2200 | **23032CAK/W33** | |
| | 240 | 60 | 2.1 | 555 | 875 | 1700 | 2200 | **23032CAF3** | |
| | 240 | 80 | 2.1 | 600 | 1020 | 1100 | 1500 | **24032K/W33** | |
| | 240 | 80 | 2.1 | 710 | 1210 | 1100 | 1500 | **24032CA/W33** | **24032CAF3/W33** |
| | 240 | 80 | 2.1 | 710 | 1210 | 1100 | 1500 | **24032CAK30F3** | **24032CAK30/W33** |
| | 240 | 80 | 2.1 | 710 | 1210 | 1200 | 1600 | **24032K/W33** | |
| | 270 | 86 | 2.1 | 930 | 1300 | 1300 | 1700 | **23132** | **23132/W33** |
| | 270 | 86 | 2.1 | 930 | 1300 | 1300 | 1700 | **23132K** | |

| Other dimensions | | | | Contact surface and chamfer dimensions | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d2 | D1 | b | k | da | Da | ra | e | Y1 | Y2 | Y0 | |
| mm | | | | mm | | | mm | | | | kg |
| 174 | 201 | | | 162 | 213 | 2 | 0.22 | 3.00 | 4.60 | 2.80 | 7.96 |
| 175 | 196 | 5.5 | 3 | 162 | 213 | 2 | 0.31 | 2.20 | 3.30 | 2.20 | 9.39 |
| 175 | 196 | 5.5 | 3 | 162 | 213 | 2 | 0.31 | 2.20 | 3.30 | 2.20 | 9.39 |
| 182 | 216 | 11.1 | 5 | 162 | 238 | 2 | | | | | 15.8 |
| 182 | 216 | 11.1 | 5 | 162 | 238 | 2 | | | | | 16.1 |
| 182 | 216 | 11.1 | 5 | 162 | 238 | 2 | | | | | 15.6 |
| 182 | 216 | 11.1 | 5 | 162 | 238 | 2 | | | | | 15.9 |
| 182 | 216 | 11.1 | 5 | 162 | 238 | 2 | 0.30 | 2.30 | 3.40 | 2.20 | 16.5 |
| 182 | 216 | 11.1 | 5 | 162 | 238 | 2 | 0.30 | 2.30 | 3.40 | 2.20 | 16.4 |
| 182 | 216 | 11.1 | 5 | 162 | 238 | 2 | 0.30 | 2.30 | 3.40 | 2.20 | 16.4 |
| 180 | 208 | 8.3 | 4.5 | 162 | 238 | 2 | 0.37 | 1.80 | 2.70 | 1.80 | 19.2 |
| 180 | 208 | 8.3 | 4.5 | 162 | 238 | 2 | 0.37 | 1.80 | 2.70 | 1.80 | 19.0 |
| 189 | 234 | 12 | 6 | 164 | 256 | 2.5 | 0.26 | 2.60 | 3.90 | 2.50 | 18.7 |
| 189 | 234 | | | 164 | 256 | 2.5 | 0.26 | 2.60 | 3.90 | 2.50 | 18.5 |
| 189 | 234 | | | 164 | 256 | 2.5 | 0.26 | 2.60 | 3.90 | 2.50 | 18.2 |
| 188 | 228 | 11.1 | 6 | 164 | 256 | 2.5 | 0.35 | 1.90 | 2.90 | 1.80 | 26.6 |
| 188 | 228 | 11.1 | 6 | 164 | 256 | 2.5 | 0.35 | 1.90 | 2.90 | 1.80 | 26.3 |
| 188 | 228 | 11.1 | 6 | 164 | 256 | 2.5 | 0.35 | 1.90 | 2.90 | 1.80 | 26.5 |
| 190 | 243 | | | 168 | 275 | 3 | | | | | 41.7 |
| 203 | 265 | 16.7 | 9 | 168 | 302 | 3 | 0.36 | 1.87 | 2.79 | 1.83 | 41.0 |
| 203 | 265 | 16.7 | 9 | 168 | 302 | 3 | 0.36 | 1.87 | 2.79 | 1.83 | 40.6 |
| 203 | 265 | | | 168 | 302 | 3 | 0.36 | 1.87 | 2.79 | 1.83 | 41.1 |
| 185 | 213 | 11.1 | 4 | 172 | 228 | 2 | | | | | 10.2 |
| 185 | 213 | 11.1 | 4 | 172 | 228 | 2 | | | | | 9.89 |
| 185 | 213 | 11.1 | 4 | 172 | 228 | 2 | | | | | 10 |
| 185 | 213 | | | 172 | 228 | 2 | | | | | 9.7 |
| 186 | 216 | 8.3 | 5 | 172 | 228 | 2 | 0.22 | 3.00 | 4.60 | 2.80 | 10.0 |
| 186 | 216 | 8.3 | 5 | 172 | 228 | 2 | 0.22 | 3.00 | 4.60 | 2.80 | 9.5 |
| 186 | 216 | | | 172 | 228 | 2 | 0.22 | 3.00 | 4.60 | 2.80 | 9.97 |
| 183 | 209 | 8.3 | 5 | 172 | 228 | 2 | | | | | 12.1 |
| 183 | 209 | 8.3 | 5 | 172 | 228 | 2 | 0.30 | 2.30 | 3.40 | 2.20 | 13.2 |
| 183 | 209 | 8.3 | 5 | 172 | 228 | 2 | 0.30 | 2.30 | 3.40 | 2.20 | 13.2 |
| 184 | 209 | 8.3 | 5 | 172 | 228 | 2 | 0.32 | 2.09 | 3.11 | 2.04 | 12.1 |
| 188 | 234 | 13.9 | 6 | 172 | 258 | 2 | | | | | 21.2 |
| 188 | 234 | | | 172 | 258 | 2 | | | | | 20.6 |



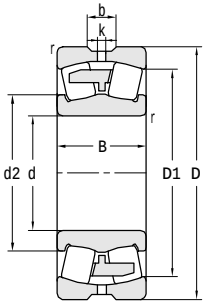



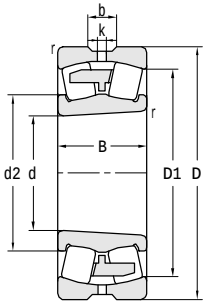



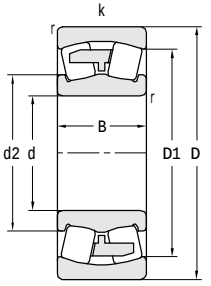



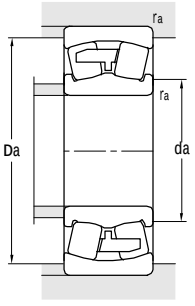

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | |
| mm | | | | kN | | r/min | | | |
| **160** | 270 | 86 | 2.1 | 930 | 1300 | 1300 | 1700 | **23132F3** | **23132F3/W33** |
| | 270 | 86 | 2.1 | 930 | 1300 | 1300 | 1700 | **23132N** | |
| | 270 | 86 | 2.1 | 930 | 1430 | 1300 | 1700 | **23132CA** | **23132CA/W33** |
| | 270 | 86 | 2.1 | 930 | 1430 | 1300 | 1700 | **23132CAK** | |
| | 270 | 86 | 2.1 | 930 | 1430 | 1300 | 1700 | **23132CAF3** | |
| | 270 | 86 | 2.1 | 685 | 1140 | 1400 | 1800 | **23132K** | |
| | 270 | 86 | 2.1 | 930 | 1300 | 1400 | 1800 | **23132CK** | **23132CK/W33** |
| | 270 | 109 | 2.1 | 1120 | 1690 | 700 | 900 | **24132CA/HAC9SOW20X** | |
| | 270 | 109 | 2.1 | 1120 | 1690 | 700 | 900 | **24132CA/W33** | **24132CA/W33X** |
| | 270 | 109 | 2.1 | 1120 | 1690 | 700 | 900 | **24132CAK30/C3W33** | |
| | 290 | 80 | 3 | 950 | 1380 | 1500 | 1900 | **22232CA** | **22232CAF3** |
| | 290 | 80 | 3 | 950 | 1300 | 1500 | 1900 | **22232CAK** | |
| | 290 | 80 | 3 | 950 | 1300 | 1500 | 1900 | **22233ACA** | |
| | 290 | 104 | 3 | 900 | 1600 | 1000 | 1400 | **23232** | |
| | 290 | 104 | 3 | 900 | 1600 | 1000 | 1400 | **23232K** | |
| | 290 | 104 | 3 | 900 | 1600 | 1000 | 1400 | **23232F3** | |
| | 290 | 104 | 3 | 1160 | 1770 | 1000 | 1400 | **23232CA** | **23232CA/W33** |
| | 290 | 104 | 3 | 1160 | 1770 | 1000 | 1400 | **23232CAK** | **232232CAK/W33** |
| | 340 | 114 | 4 | 1200 | 1800 | 950 | 1300 | **22332** | **22332/W33** |
| | 340 | 114 | 4 | 1200 | 1800 | 950 | 1300 | **22332K** | **22332K/W33** |
| | 340 | 114 | 4 | 1200 | 1800 | 950 | 1300 | **22332F3** | |
| | 340 | 114 | 4 | 1200 | 1800 | 950 | 1300 | **22332KF3** | |
| | 340 | 114 | 4 | 1520 | 1860 | 950 | 1300 | **22332CAK** | |
| | 340 | 114 | 4 | 1520 | 2050 | 950 | 1300 | **22332CA** | **22332CA/W33** |
| | 340 | 114 | 4 | 1520 | 2050 | 950 | 1300 | **22332CAF3** | **22332CAF3/W33** |
| | 340 | 114 | 4 | 1520 | 2050 | 950 | 1300 | **22332CAK** | |
| | 340 | 114 | 4 | 1200 | 1800 | 950 | 1300 | **22332Q1/W33** | |
| | 340 | 114 | 4 | 1520 | 2050 | 950 | 1300 | **22332CAKF3/W33** | |
| **170** | 230 | 45 | 2 | 310 | 715 | 1700 | 2200 | **23934CA/W33** | |
| | 260 | 67 | 2.1 | 510 | 1070 | 1600 | 2000 | **23034** | **23034/W33** |
| | 260 | 67 | 2.1 | 510 | 1070 | 1600 | 2000 | **23034K** | **23034K/W33** |
| | 260 | 67 | 2.1 | 510 | 1070 | 1600 | 2000 | **23034/YA2** | |
| | 260 | 67 | 2.1 | 510 | 1070 | 1600 | 2000 | **23034F3** | |
| | 260 | 67 | 2.1 | 510 | 1070 | 1600 | 2000 | **23034KF3** | |
| | 260 | 67 | 2.1 | 670 | 1090 | 1600 | 2000 | **23034CA** | **23034CA/W33** |

| Other dimensions | | | | Contact surface and chamfer dimensions | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d2 | D1 | b | k | da | Da | ra | e | Y1 | Y2 | Y0 | |
| mm | | | | mm | | | mm | | | | kg |
| 188 | 234 | | | 172 | 258 | 2 | | | | | 21 |
| 188 | 234 | | | 172 | 258 | 2 | | | | | 21 |
| 188 | 234 | 13.9 | 6 | 172 | 258 | 2 | 0.30 | 2.30 | 3.40 | 2.20 | 21.9 |
| 188 | 234 | | | 172 | 258 | 2 | 0.30 | 2.30 | 3.40 | 2.20 | 21.7 |
| 195 | 234 | | | 172 | 258 | 2 | 0.30 | 2.30 | 3.40 | 2.20 | 21.9 |
| 193 | 231 | | | 172 | 258 | 2 | 0.34 | 1.99 | 2.96 | 1.94 | 20.6 |
| 193 | 231 | 13.9 | 6 | 172 | 258 | 2 | 0.34 | 1.99 | 2.96 | 1.94 | 21.2 |
| 195 | 225 | 8.3 | 4 | 172 | 258 | 2 | 0.40 | 1.69 | 2.51 | 1.65 | 23.4 |
| 193 | 225 | 8.3 | 4 | 172 | 258 | 2 | 0.40 | 1.69 | 2.51 | 1.65 | 24.6 |
| 193 | 225 | 8.3 | 4 | 172 | 258 | 2 | 0.40 | 1.69 | 2.51 | 1.65 | 24.2 |
| 193 | 249 | | | 174 | 276 | 2.5 | 0.27 | 2.50 | 3.70 | 2.50 | 24.6 |
| 201 | 249 | | | 174 | 276 | 2.5 | 0.27 | 2.50 | 3.70 | 2.50 | 23.8 |
| 201 | 249 | | | 174 | 276 | 2.5 | 0.27 | 2.50 | 3.70 | 2.50 | 24.1 |
| 198 | 244 | | | 174 | 276 | 2.5 | | | | | 36.1 |
| 198 | 244 | | | 174 | 276 | 2.5 | | | | | 34.3 |
| 198 | 244 | | | 174 | 276 | 2.5 | | | | | 35.9 |
| 189 | 244 | 13.9 | 7 | 174 | 276 | 2.5 | 0.35 | 1.90 | 2.90 | 1.80 | 30.2 |
| 200 | 244 | 13.9 | 7 | 174 | 276 | 2.5 | 0.35 | 1.90 | 2.90 | 1.80 | 28.9 |
| 212 | 283 | 16.7 | 7 | 178 | 322 | 3 | | | | | 50.2 |
| 212 | 283 | 16.7 | 7 | 178 | 322 | 3 | | | | | 49.5 |
| 212 | 283 | | | 178 | 322 | 3 | | | | | 49.7 |
| 212 | 283 | | | 178 | 322 | 3 | | | | | 49 |
| 201 | 284 | | | 178 | 322 | 3 | 0.35 | 1.90 | 2.90 | 1.80 | 52.8 |
| 201 | 284 | 16.7 | 7 | 178 | 322 | 3 | 0.35 | 1.90 | 2.90 | 1.80 | 51.6 |
| 216 | 284 | 16.7 | 7 | 178 | 322 | 3 | 0.35 | 1.90 | 2.90 | 1.80 | 51.8 |
| 201 | 284 | 16.7 | 7 | 178 | 322 | 3 | 0.35 | 1.90 | 2.90 | 1.80 | 51.6 |
| 212 | 283 | 16.7 | 7 | 178 | 322 | 3 | | | | | 50.2 |
| 216 | 284 | 16.7 | 7 | 178 | 322 | 3 | 0.35 | 1.90 | 2.90 | 1.80 | 51.8 |
| 189 | 212 | 5.5 | 3 | 182 | 213 | 2 | | | | | 5.45 |
| 200 | 231 | 11.1 | 5 | 182 | 248 | 2 | | | | | 13.7 |
| 200 | 231 | 11.1 | 5 | 182 | 248 | 2 | | | | | 13.3 |
| 200 | 231 | | | 182 | 248 | 2 | | | | | 13.6 |
| 200 | 231 | | | 182 | 248 | 2 | | | | | 13.6 |
| 200 | 231 | | | 182 | 248 | 2 | | | | | 13.2 |
| 198 | 231 | 11.1 | 5 | 182 | 248 | 2 | 0.23 | 2.90 | 4.40 | 2.80 | 14.1 |



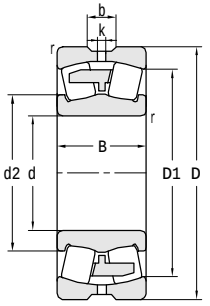



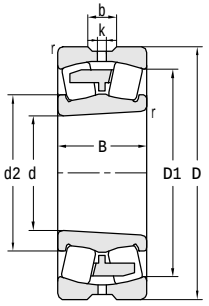



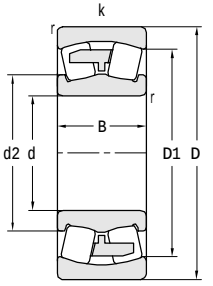

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | |
| mm | | | | kN | | r/min | | | |
| **170** | 260 | 67 | 2.1 | 670 | 1090 | 1600 | 2000 | **23034CAK** | |
| | 260 | 67 | 2.1 | 670 | 1090 | 1600 | 2000 | **23034CAF3** | |
| | 260 | 67 | 2.1 | 670 | 1090 | 1600 | 2000 | **23034CAKF3/W33** | |
| | 260 | 90 | 2.1 | 885 | 1500 | 1000 | 1400 | **24034CA** | **24034CA/W33** |
| | 260 | 90 | 2.1 | 885 | 1500 | 1000 | 1400 | **24034CAK/W33** | |
| | 280 | 88 | 2.1 | 890 | 1450 | 1200 | 1600 | **23134** | **23134/W33** |
| | 280 | 88 | 2.1 | 890 | 1450 | 1200 | 1600 | **23134K** | **23134K/W33** |
| | 280 | 88 | 2.1 | 890 | 1450 | 1200 | 1600 | **23134F3** | |
| | 280 | 88 | 2.1 | 890 | 1450 | 1200 | 1600 | **23134KF3** | |
| | 280 | 88 | 2.1 | 990 | 1530 | 1200 | 1600 | **23134CA** | |
| | 280 | 88 | 2.1 | 990 | 1530 | 1200 | 1600 | **23134CAK** | **23134CAK/W33** |
| | 280 | 109 | 2.1 | 1160 | 1830 | 670 | 850 | **24134CA** | **24134CA/W33** |
| | 280 | 109 | 2.1 | 1160 | 1830 | 670 | 850 | **24134CAK30/W33** | |
| | 280 | 88 | 2.1 | 990 | 1530 | 1200 | 1600 | **23134CAKF3** | |
| | 280 | 109 | 2.1 | 1160 | 1770 | 670 | 850 | **24134CA/W33** | |
| | 280 | 109 | 2.1 | 1160 | 1770 | 670 | 850 | **24134CA** | |
| | 310 | 86 | 4 | 1060 | 1450 | 1300 | 1700 | **22234CA** | **22234CA/W33** |
| | 310 | 86 | 4 | 1060 | 1450 | 1300 | 1700 | **22234CAK** | **22234CAK/W33** |
| | 310 | 86 | 4 | 1060 | 1390 | 1300 | 1700 | **22234K/W33** | |
| | 310 | 110 | 4 | 1330 | 1930 | 950 | 1300 | **23234CA** | **23234CA/W33** |
| | 310 | 110 | 4 | 1330 | 1930 | 950 | 1300 | **23234CAF3/W33** | |
| | 360 | 120 | 4 | 1300 | 2110 | 950 | 1300 | **22334** | **22334/W33** |
| | 360 | 120 | 4 | 1300 | 2110 | 950 | 1300 | **22334K** | **22334K/W33** |
| | 360 | 120 | 4 | 1300 | 2110 | 950 | 1300 | **22334KF3** | |
| | 360 | 120 | 4 | 1300 | 2110 | 950 | 1300 | **22334F3** | |
| | 360 | 120 | 4 | 1670 | 2120 | 950 | 1300 | **22334CA** | **22334CA/W33** |
| | 360 | 120 | 4 | 1670 | 2120 | 950 | 1300 | **22334CA/W33X** | |
| | 360 | 120 | 4 | 1670 | 2120 | 950 | 1300 | **22334ACA** | |
| | 360 | 120 | 4 | 1670 | 2120 | 950 | 1300 | **22334CA/HCEW33** | |
| | 360 | 136 | 4 | 1670 | 2280 | 950 | 1300 | **23334X2/W33** | |
| **180** | 250 | 52 | 2 | 430 | 830 | 1700 | 2200 | **23936CAF3/W33** | **23936CA/W33** |
| | 280 | 74 | 2.1 | 700 | 1320 | 1400 | 1800 | **23036** | **23036/W33** |
| | 280 | 74 | 2.1 | 700 | 1320 | 1400 | 1800 | **23036K** | **23036K/W33** |
| | 280 | 74 | 2.1 | 700 | 1320 | 1400 | 1800 | **23036/YA2** | |
| | 280 | 74 | 2.1 | 700 | 1320 | 1400 | 1800 | **23036F3** | |

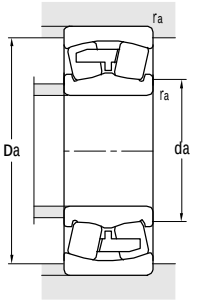
| Other dimensions | | | | Contact surface and chamfer dimensions | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d2 | D1 | b | k | da | Da | ra | e | Y1 | Y2 | Y0 | |
| mm | | | | mm | | | mm | | | | kg |
| 198 | 231 | | | 182 | 248 | 2 | 0.23 | 2.90 | 4.40 | 2.80 | 13.8 |
| 198 | 231 | | | 182 | 248 | 2 | 0.23 | 2.90 | 4.40 | 2.80 | 14.0 |
| 198 | 231 | 11.1 | 5 | 182 | 248 | 2 | 0.23 | 2.90 | 4.40 | 2.80 | 13.5 |
| 198 | 227 | 8.3 | 4 | 182 | 248 | 2 | 0.33 | 2.00 | 3.00 | 2.00 | 17.8 |
| 188 | 226 | 8.3 | 4 | 198 | 249 | 2 | 0.33 | 2.00 | 3.00 | 2.00 | 16.8 |
| 204 | 246 | 13.9 | 6 | 182 | 268 | 2 | | | | | 23 |
| 204 | 246 | 13.9 | 6 | 182 | 268 | 2 | | | | | 21.6 |
| 204 | 246 | | | 182 | 268 | 2 | | | | | 22.6 |
| 204 | 246 | | | 182 | 268 | 2 | | | | | 21.2 |
| 204 | 243 | | | 182 | 268 | 2 | 0.30 | 2.30 | 3.40 | 2.20 | 25.7 |
| 204 | 243 | 13.9 | 6 | 182 | 268 | 2 | 0.30 | 2.30 | 3.40 | 2.20 | 24.3 |
| 203 | 237 | 8.3 | 5 | 182 | 268 | 2 | 0.37 | 1.80 | 2.70 | 1.80 | 25.4 |
| 203 | 237 | 8.3 | 5 | 182 | 268 | 2 | 0.37 | 1.80 | 2.70 | 1.80 | 24.7 |
| 204 | 243 | | | 182 | 268 | 2 | 0.30 | 2.30 | 3.40 | 2.20 | 24.6 |
| 203 | 237 | 8.3 | 5 | 182 | 268 | 2 | 0.37 | 1.80 | 2.70 | 1.80 | 24.8 |
| 203 | 237 | | | 182 | 268 | 2 | 0.37 | 1.80 | 2.70 | 1.80 | 25.4 |
| 215 | 268 | 16.7 | 6 | 188 | 292 | 3 | 0.27 | 2.50 | 3.70 | 2.50 | 26.8 |
| 215 | 268 | 16.7 | 6 | 188 | 292 | 3 | 0.27 | 2.50 | 3.70 | 2.50 | 26.2 |
| 215 | 268 | 16.7 | 6 | 188 | 292 | 3 | 0.27 | 2.50 | 3.70 | 2.50 | 27.8 |
| 214 | 261 | 13.9 | 7 | 188 | 292 | 3 | 0.34 | 1.99 | 2.96 | 1.94 | 38.0 |
| 214 | 261 | 13.9 | 7 | 188 | 292 | 3 | 0.34 | 1.99 | 2.96 | 1.94 | 37.7 |
| 228 | 300 | 16.7 | 7 | 188 | 342 | 3 | | | | | 60.1 |
| 228 | 300 | 16.7 | 7 | 188 | 342 | 3 | | | | | 60.1 |
| 228 | 300 | | | 188 | 342 | 3 | | | | | 59.4 |
| 228 | 300 | | | 188 | 342 | 3 | | | | | 60 |
| 231 | 299 | 16.7 | 7 | 188 | 342 | 3 | 0.34 | 1.99 | 2.96 | 1.94 | 62.6 |
| 231 | 299 | 16.7 | 7 | 188 | 342 | 3 | 0.34 | 1.99 | 2.96 | 1.94 | 62.6 |
| 231 | 299 | | | 188 | 342 | 3 | 0.34 | 1.99 | 2.96 | 1.94 | 61.4 |
| 231 | 299 | 16.7 | 7 | 188 | 342 | 3 | 0.34 | 1.99 | 2.96 | 1.94 | 62.6 |
| 229 | 292 | 22.3 | 12 | 188 | 342 | 3 | | | | | 68.6 |
| 204 | 230 | 9.5 | 4 | 190 | 240 | 2 | 0.18 | 3.80 | 5.60 | 3.60 | 7.4 |
| 214 | 247 | 13.9 | 6 | 192 | 268 | 2 | | | | | 18.1 |
| 214 | 247 | 13.9 | 6 | 192 | 268 | 2 | | | | | 17.6 |
| 214 | 247 | | | 192 | 268 | 2 | | | | | 18 |
| 214 | 247 | | | 192 | 268 | 2 | | | | | 17.6 |

d 180 mm



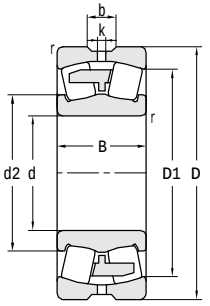



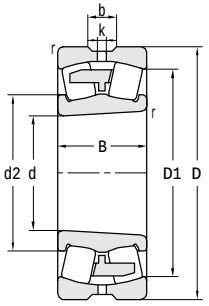



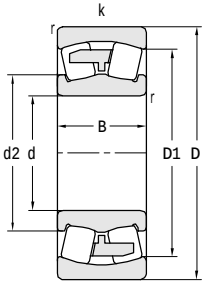

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | |
| mm | | | | kN | | r/min | | | |
| **180** | 280 | 74 | 2.1 | 700 | 1320 | 1400 | 1800 | **23036KF3** | |
| | 280 | 74 | 2.1 | 790 | 1280 | 1400 | 1800 | **23036CA** | **23036CA/W33** |
| | 280 | 74 | 2.1 | 790 | 1280 | 1400 | 1800 | | **23036CAK/W33** |
| | 280 | 74 | 2.1 | 790 | 1280 | 1400 | 1800 | **23036CAF3** | |
| | 280 | 100 | 2.1 | 1030 | 1750 | 950 | 1300 | **24036CA** | **24036CA/W33** |
| | 280 | 100 | 2.1 | 1030 | 1750 | 950 | 1300 | **24036CAF3/W33** | **24036CAK30F3/W33** |
| | 300 | 96 | 3 | 1140 | 1670 | 1100 | 1500 | **23136** | |
| | 300 | 96 | 3 | 1140 | 1670 | 1100 | 1500 | **23136K** | **23136K/W33** |
| | 300 | 96 | 3 | 1140 | 1670 | 1100 | 1500 | **23136F3** | |
| | 300 | 96 | 3 | 1140 | 1670 | 1100 | 1500 | **23136KF3** | **23136KF3/W33** |
| | 300 | 96 | 3 | 1140 | 1800 | 1100 | 1500 | **23136CA** | **23136CA/W33** |
| | 300 | 96 | 3 | 1140 | 1800 | 1100 | 1500 | **23136CAF3** | **23136CAK** |
| | 300 | 96 | 3 | 1140 | 1800 | 1100 | 1500 | **23136CAK** | **23136CAK/W33** |
| | 300 | 96 | 3 | 1140 | 1800 | 1100 | 1500 | **23136CAK30/W33** | |
| | 300 | 96 | 3 | 1140 | 1800 | 1100 | 1500 | **23136CAK/W33** | |
| | 300 | 118 | 3 | 1330 | 2050 | 630 | 800 | **24136CA** | **24136CA/W33** |
| | 300 | 118 | 3 | 1330 | 2050 | 630 | 800 | **24136CA/HCW33YA2** | |
| | 300 | 118 | 3 | 1330 | 2050 | 630 | 800 | **24136CAQ1** | |
| | 320 | 86 | 4 | 1120 | 1550 | 1300 | 1700 | **22236** | **22236K** |
| | 320 | 86 | 4 | 1120 | 1550 | 1300 | 1700 | **22236KF3** | |
| | 320 | 86 | 4 | 1120 | 1550 | 1300 | 1700 | **22236F3** | **22236F3/W33** |
| | 320 | 86 | 4 | 1120 | 1550 | 1300 | 1700 | **22236CA** | **22236CA/W33** |
| | 320 | 86 | 4 | 1120 | 1550 | 1300 | 1700 | **22236CAF3** | **22236CAQ1** |
| | 320 | 86 | 4 | 1120 | 1550 | 1300 | 1700 | **22236CAK** | **22236CAKF3** |
| | 320 | 86 | 4 | 1120 | 1550 | 1300 | 1700 | **22236CAK/W33** | **22236CAK/W33T** |
| | 320 | 112 | 4 | 1290 | 2270 | 900 | 1200 | **23236/W33** | |
| | 320 | 112 | 4 | 1430 | 2130 | 900 | 1200 | **23236CA** | **23236CA/W33** |
| | 320 | 112 | 4 | 1430 | 2130 | 900 | 1200 | **23236CA/HCW33** | **23236CA/HCW33YA2** |
| | 320 | 112 | 4 | 1430 | 2130 | 900 | 1200 | **23236CAF3** | **23236CAF3/W33** |
| | 320 | 112 | 4 | 1430 | 2130 | 900 | 1200 | **23236CAK/W33** | **23236CAKF3/W33** |
| | 380 | 126 | 4 | 1400 | 2300 | 900 | 1200 | **22336** | **22336/W33** |
| | 380 | 126 | 4 | 1400 | 2300 | 900 | 1200 | **22336K** | **22336K/W33** |
| | 380 | 126 | 4 | 1400 | 2300 | 900 | 1200 | **22336F3** | |
| | 380 | 126 | 4 | 1900 | 2400 | 900 | 1200 | **22336CA** | **22336CA/W33** |
| | 380 | 126 | 4 | 1900 | 2400 | 900 | 1200 | **22336CAF3/W33** | |
| | 380 | 126 | 4 | 1900 | 2400 | 900 | 1200 | **22336CAK** | **22336CAK/W33** |

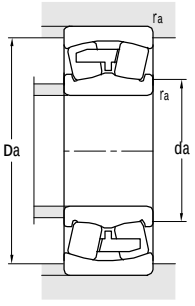
| Other dimensions | | | | Contact surface and chamfer dimensions | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d2 | D1 | b | k | da | Da | ra | e | Y1 | Y2 | Y0 | |
| mm | | | | mm | | | mm | | | | kg |
| 214 | 247 | | | 192 | 268 | 2 | | | | | 17.2 |
| 214 | 247 | 13.9 | 7.5 | 192 | 268 | 2 | 0.25 | 2.70 | 4.00 | 2.60 | 17.7 |
| 214 | 247 | 13.9 | 7.5 | 192 | 268 | 2 | 0.25 | 2.70 | 4.00 | 2.60 | 16.8 |
| 214 | 247 | | | 192 | 268 | 2 | 0.25 | 2.70 | 4.00 | 2.60 | 17.6 |
| 210 | 242 | 8.3 | 4 | 192 | 268 | 2 | 0.33 | 2.00 | 3.00 | 2.00 | 25.7 |
| 210 | 242 | 8.3 | 4 | 192 | 268 | 2 | 0.33 | 2.00 | 3.00 | 2.00 | 25.6 |
| 216 | 259 | | | 194 | 286 | 2.5 | | | | | 28.6 |
| 216 | 259 | 13.9 | 6 | 194 | 286 | 2.5 | | | | | 28.2 |
| 216 | 259 | | | 194 | 286 | 2.5 | | | | | 28.2 |
| 216 | 259 | 13.9 | 6 | 194 | 286 | 2.5 | | | | | 27.8 |
| 216 | 259 | 13.9 | 6 | 194 | 286 | 2.5 | 0.30 | 2.30 | 3.40 | 2.20 | 27.6 |
| 216 | 259 | | | 194 | 286 | 2.5 | 0.30 | 2.30 | 3.40 | 2.20 | 27.0 |
| 216 | 259 | 13.9 | 6 | 194 | 286 | 2.5 | 0.30 | 2.30 | 3.40 | 2.20 | 27.5 |
| 216 | 259 | | | 194 | 286 | 2.5 | | | | | 26.8 |
| 216 | 259 | 13.9 | 6 | 194 | 286 | 2.5 | 0.30 | 2.30 | 3.40 | 2.20 | 26.5 |
| 212 | 252 | 11.1 | 6 | 194 | 286 | 2.5 | 0.37 | 1.80 | 2.70 | 1.80 | 33.0 |
| 212 | 252 | 11.1 | 6 | 194 | 286 | 2.5 | 0.37 | 1.80 | 2.70 | 1.80 | 32.8 |
| 212 | 252 | | | 194 | 286 | 2.5 | 0.37 | 1.80 | 2.70 | 1.80 | 33.0 |
| 224 | 278 | | | 198 | 302 | 3 | | | | | 31.1 |
| 224 | 278 | | | 198 | 302 | 3 | | | | | 30.2 |
| 224 | 278 | | | 198 | 302 | 3 | | | | | 30.8 |
| 224 | 278 | 16.7 | 6 | 198 | 302 | 3 | 0.26 | 2.60 | 3.90 | 2.50 | 29.4 |
| 224 | 278 | | | 198 | 302 | 3 | 0.26 | 2.60 | 3.90 | 2.50 | 29.2 |
| 224 | 278 | | | 198 | 302 | 3 | 0.26 | 2.60 | 3.90 | 2.50 | 29.3 |
| 224 | 278 | 16.7 | 6 | 198 | 302 | 3 | 0.26 | 2.60 | 3.90 | 2.50 | 29.1 |
| 222 | 271 | 13.9 | 7 | 198 | 302 | 3 | | | | | 40 |
| 222 | 271 | | | 198 | 302 | 3 | 0.35 | 1.90 | 2.90 | 1.80 | 38.7 |
| 222 | 271 | 13.9 | 7 | 198 | 302 | 3 | 0.35 | 1.90 | 2.90 | 1.80 | 38.6 |
| 222 | 271 | 13.9 | 7 | 198 | 302 | 3 | 0.35 | 1.90 | 2.90 | 1.80 | 38.5 |
| 222 | 271 | 13.9 | 7 | 198 | 302 | 3 | 0.35 | 1.90 | 2.90 | 1.80 | 38.4 |
| 241 | 317 | 22.3 | 8 | 198 | 362 | 3 | | | | | 70.9 |
| 241 | 317 | 22.3 | 8 | 198 | 362 | 3 | | | | | 69.8 |
| 241 | 317 | | | 198 | 362 | 3 | | | | | 70.5 |
| 242 | 316 | 22.3 | 8 | 198 | 362 | 3 | 0.34 | 1.99 | 2.96 | 1.94 | 72.2 |
| 242 | 316 | 22.3 | 8 | 198 | 362 | 3 | 0.34 | 1.99 | 2.96 | 1.94 | 71.3 |
| 242 | 316 | 22.3 | 8 | 198 | 362 | 3 | 0.34 | 1.99 | 2.96 | 1.94 | 71.3 |

d 190~200 mm



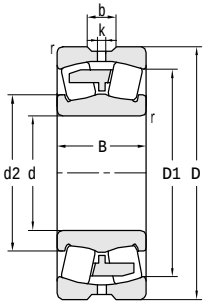



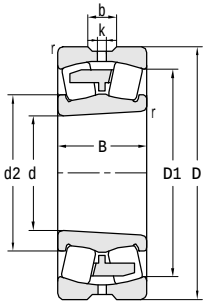



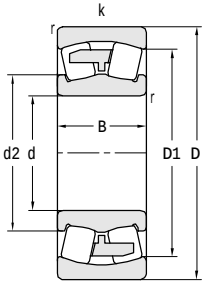



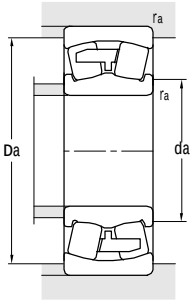

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | |
| mm | | | | kN | | r/min | | | |
| **190** | 260 | 52 | 2 | 440 | 855 | 1600 | 2000 | **23938CA/W33** | |
| | 280 | 67 | 2.5 | 660 | 1210 | | | **20638** | |
| | 290 | 75 | 2.1 | 720 | 1300 | 1300 | 1700 | **23038** | **23038/W33** |
| | 290 | 75 | 2.1 | 720 | 1300 | 1300 | 1700 | **23038K** | **23038K/W33** |
| | 290 | 75 | 2.1 | 720 | 1300 | 1300 | 1700 | **23038F3** | **23038F3/W33** |
| | 290 | 75 | 2.1 | 820 | 1450 | 1300 | 1700 | **23038CA** | **23038CA/W33** |
| | 290 | 75 | 2.1 | 820 | 1450 | 1300 | 1700 | **23038CAF3** | |
| | 290 | 75 | 2.1 | 820 | 1450 | 1300 | 1700 | **23038CAK** | **23038CAK/W33** |
| | 290 | 75 | 2.1 | 820 | 1450 | 1300 | 1700 | **23038CAKF3/W33** | |
| | 290 | 100 | 2.1 | 1060 | 1840 | 950 | 1300 | **24038CA** | **24038CA/W33** |
| | 290 | 100 | 2.1 | 1060 | 1840 | 950 | 1300 | **24038CAF3** | |
| | 290 | 100 | 2.1 | 1060 | 1840 | 950 | 1300 | **24038CA/W33X** | |
| | 320 | 104 | 3 | 1100 | 1880 | 1000 | 1400 | **23138** | |
| | 320 | 104 | 3 | 1100 | 1880 | 1000 | 1400 | **23138K** | **23138K/W33** |
| | 320 | 104 | 3 | 1100 | 1880 | 1000 | 1400 | **23138F3** | |
| | 320 | 104 | 3 | 1100 | 1880 | 1000 | 1400 | **23138KF3** | |
| | 320 | 104 | 3 | 1300 | 1980 | 1000 | 1400 | **23138CA** | **23138CA/W33** |
| | 320 | 104 | 3 | 1300 | 1980 | 1000 | 1400 | **23138CAK/W33** | |
| | 320 | 128 | 3 | 1520 | 2400 | 600 | 750 | **24138CA** | **24138CA/W33** |
| | 320 | 128 | 3 | 1520 | 2400 | 600 | 750 | **24138CAF3** | **24138CAK30/W33** |
| | 320 | 128 | 3 | 1520 | 2400 | 600 | 750 | **24138CA/HCW33** | **24138CA/C9W33** |
| | 320 | 128 | 3 | 1520 | 2400 | 600 | 750 | **24138CAK30F3/W33** | |
| | 340 | 92 | 4 | 1210 | 1620 | 1200 | 1600 | **22238F3** | **22238KF3** |
| | 340 | 92 | 4 | 1210 | 1620 | 1200 | 1600 | **22238CA** | **22238CA/W33** |
| | 340 | 92 | 4 | 1210 | 1620 | 1200 | 1600 | **22238CA/W33** | |
| | 340 | 92 | 4 | 1210 | 1620 | 1200 | 1600 | **22238CAF3** | **22238CAKF3** |
| | 340 | 92 | 4 | 1210 | 1620 | 1200 | 1600 | **22238CAK** | **22238CAK/W33** |
| | 340 | 92 | 4 | 1210 | 1620 | 1200 | 1600 | **22238ACA** | |
| | 340 | 120 | 4 | 1580 | 2400 | 850 | 1100 | **23238CA** | **23238CA/W33** |
| | 340 | 120 | 4 | 1580 | 2400 | 850 | 1100 | **23238CAK/W33** | |
| | 400 | 132 | 5 | 2010 | 2630 | 850 | 1100 | **22338CA** | **22338CA/W33** |
| | 400 | 132 | 5 | 2010 | 2630 | 850 | 1100 | **22338CAF3** | |
| | 400 | 132 | 5 | 2010 | 2630 | 850 | 1100 | **22338ACA** | **22338ACA/W33X** |
| **200** | 280 | 60 | 2.1 | 520 | 1150 | 1600 | 2000 | **23940CAF3/W33** | **23940CA/W33** |
| | 280 | 186 | 1.1 | | | | | **H2344** | |

| Other dimensions | | | | Contact surface and chamfer dimensions | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d2 | D1 | b | k | da | Da | ra | e | Y1 | Y2 | Y0 | |
| mm | | | | mm | | | mm | | | | kg |
| 213 | 238 | 5.5 | 3 | 202 | 248 | 2 | 0.18 | 3.80 | 5.60 | 3.60 | 8.29 |
| 220 | 253 | | | 204 | 264 | 2 | | | | | 14.5 |
| 222 | 259 | 13.9 | 5 | 202 | 278 | 2 | | | | | 19.6 |
| 222 | 259 | 13.9 | 5 | 202 | 278 | 2 | | | | | 19.1 |
| 222 | 259 | 13.9 | 5 | 202 | 278 | 2 | | | | | 19.4 |
| 224 | 259 | 13.9 | 5 | 202 | 278 | 2 | 0.23 | 2.90 | 4.40 | 2.80 | 17.3 |
| 224 | 259 | | | 202 | 278 | 2 | 0.23 | 2.90 | 4.40 | 2.80 | 17.2 |
| 224 | 259 | 13.9 | 5 | 202 | 278 | 2 | 0.23 | 2.90 | 4.40 | 2.80 | 16.8 |
| 224 | 259 | 13.9 | 5 | 202 | 278 | 2 | 0.23 | 2.90 | 4.40 | 2.80 | 16.5 |
| 219 | 252 | 8.3 | 4.5 | 202 | 278 | 2 | 0.31 | 2.20 | 3.30 | 2.20 | 22.9 |
| 219 | 252 | | | 202 | 278 | 2 | 0.31 | 2.20 | 3.30 | 2.20 | 22.8 |
| 219 | 252 | 8.3 | 4.5 | 202 | 278 | 2 | 0.31 | 2.20 | 3.30 | 2.20 | 22.4 |
| 232 | 271 | | | 204 | 306 | 2.5 | | | | | 35.3 |
| 232 | 271 | 13.9 | 7 | 204 | 306 | 2.5 | | | | | 35.3 |
| 232 | 271 | | | 204 | 306 | 2.5 | | | | | 34.9 |
| 232 | 271 | | | 204 | 306 | 2.5 | | | | | 34.9 |
| 232 | 276 | 13.9 | 7 | 204 | 306 | 2.5 | 0.31 | 2.20 | 3.30 | 2.20 | 34.3 |
| 232 | 276 | 13.9 | 7 | 204 | 306 | 2.5 | | | | | 30 |
| 226 | 267 | 11.1 | 6 | 204 | 306 | 2.5 | 0.40 | 1.69 | 2.51 | 1.65 | 41.9 |
| 226 | 267 | 11.1 | 6 | 204 | 306 | 2.5 | 0.40 | 1.69 | 2.51 | 1.65 | 41.8 |
| 226 | 267 | 11.1 | 6 | 204 | 306 | 2.5 | 0.40 | 1.69 | 2.51 | 1.65 | 41.8 |
| 226 | 267 | 11.1 | 6 | 204 | 306 | 2.5 | 0.40 | 1.69 | 2.51 | 1.65 | 41.5 |
| 235 | 293 | | | 208 | 322 | 3 | | | | | 35.6 |
| 235 | 293 | | | 208 | 322 | 3 | 0.26 | 2.60 | 3.90 | 2.50 | 37.4 |
| 235 | 293 | 16.7 | 6 | 208 | 322 | 3 | 0.26 | 2.60 | 3.90 | 2.50 | 37.4 |
| 235 | 293 | | | 208 | 322 | 3 | 0.26 | 2.60 | 3.90 | 2.50 | 37.2 |
| 235 | 293 | 16.7 | 6 | 208 | 322 | 3 | 0.26 | 2.60 | 3.90 | 2.50 | 37.3 |
| 235 | 293 | | | 208 | 322 | 3 | 0.26 | 2.60 | 3.90 | 2.50 | 37.0 |
| 237 | 288 | 16.7 | 7 | 208 | 322 | 3 | 0.35 | 1.90 | 2.90 | 1.80 | 44.8 |
| 237 | 288 | 16.7 | 7 | 208 | 322 | 3 | 0.35 | 1.90 | 2.90 | 1.80 | 43.1 |
| 257 | 334 | 22.3 | 8 | 212 | 378 | 4 | 0.34 | 1.99 | 2.96 | 1.94 | 82.2 |
| 257 | 334 | | | 212 | 378 | 4 | 0.34 | 1.99 | 2.96 | 1.94 | 81.7 |
| 257 | 334 | 22.3 | 12 | 212 | 378 | 4 | 0.34 | 1.99 | 2.96 | 1.94 | 81.0 |
| 226 | 254 | 9.5 | 4 | 212 | 268 | 2 | 0.19 | 3.61 | 5.38 | 3.53 | 12.1 |
| | | | | | | | | | | | 16.8 |



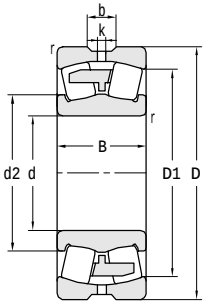



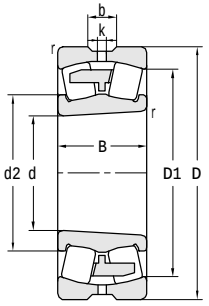



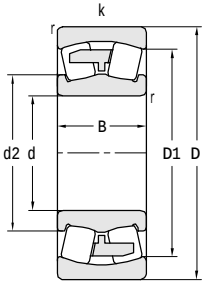

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | |
| mm | | | | kN | | r/min | | | |
| **200** | 310 | 82 | 2.1 | 660 | 1370 | 1200 | 1600 | **23040** | **23040/W33** |
| | 310 | 82 | 2.1 | 660 | 1370 | 1200 | 1600 | **23040K** | **23040K/W33** |
| | 310 | 82 | 2.1 | 660 | 1370 | 1200 | 1600 | **23040F3** | **23040F3/W33** |
| | 310 | 82 | 2.1 | 660 | 1370 | 1200 | 1600 | **23040KF3** | |
| | 310 | 82 | 2.1 | 950 | 1560 | 1200 | 1600 | **23040CA** | **23040CA/W33** |
| | 310 | 82 | 2.1 | 950 | 1560 | 1200 | 1600 | **23040CAK** | **23040CAK/W33** |
| | 310 | 109 | 2.1 | 1230 | 2130 | 900 | 1200 | **24040CA/W33** | **24040CAK30/W33** |
| | 340 | 112 | 3 | 1520 | 2240 | 950 | 1300 | **23140CA** | **23140CA/W33** |
| | 340 | 112 | 3 | 1520 | 2240 | 950 | 1300 | **23140CA/HCW33YA2** | |
| | 340 | 112 | 3 | 1520 | 2240 | 950 | 1300 | **23140CAK** | **23140CAK/W33** |
| | 340 | 140 | 3 | 1710 | 3800 | 5601 | 700 | **24140CA/W33** | |
| | 340 | 140 | 3 | 1710 | 3800 | 5601 | 700 | **24140CAK30F3** | **24140CAK30F3/W33** |
| | 360 | 98 | 4 | 1390 | 1830 | 1100 | 1500 | **22240** | **22240/W33** |
| | 360 | 98 | 4 | 1390 | 1830 | 1100 | 1500 | **22240K** | **22240K/W33** |
| | 360 | 98 | 4 | 1390 | 1830 | 1100 | 1500 | **22240F3** | **22240KF3/W33** |
| | 360 | 98 | 4 | 1390 | 1950 | 1100 | 1500 | **22240CA** | **22240CA/W33** |
| | 360 | 98 | 4 | 1390 | 1950 | 1100 | 1500 | **22240CAF3** | **22240CAKF3** |
| | 360 | 98 | 4 | 1390 | 1950 | 1100 | 1500 | **22240CAK** | **22240CAK/W33** |
| | 360 | 128 | 4 | 1770 | 2570 | 850 | 1100 | **23240CA/W33** | |
| | 360 | 128 | 4 | 1770 | 2570 | 850 | 1100 | **23240CA/HCW33** | |
| | 360 | 128 | 4 | 1770 | 2570 | 850 | 1100 | **23240CAK** | **23240CAK/W33** |
| | 360 | 128 | 4 | 1770 | 2730 | 900 | 1200 | **23240/W33** | |
| | 420 | 138 | 5 | 2200 | 2760 | 850 | 1100 | **22340** | **22340/W33** |
| | 420 | 138 | 5 | 2200 | 2760 | 850 | 1100 | **22340K** | **22340K/W33** |
| | 420 | 138 | 5 | 1620 | 2740 | 850 | 1100 | **22340F3** | **22340F3/W33** |
| | 420 | 138 | 5 | 2200 | 2860 | 850 | 1100 | **22340CA** | **22340CAF3** |
| | 420 | 138 | 5 | 2200 | 2860 | 850 | 1100 | **22340CA/W33** | |
| | 420 | 138 | 5 | 2200 | 2860 | 850 | 1100 | **22340CAK** | **22340CAK/W33** |
| | 420 | 138 | 5 | 2000 | 2860 | 850 | 1100 | **22340CK** | **22340CK/W33** |
| | 420 | 165 | 5 | 2220 | 2860 | 750 | 950 | **23340CAF3** | |
| **220** | 300 | 60 | 2.1 | 520 | 1190 | 1500 | 1900 | **23944CA/W33** | **23944CAF3/C3W33** |
| | 340 | 90 | 3 | 1160 | 1900 | 1100 | 1500 | **23044CA** | **23044CA/W33** |
| | 340 | 90 | 3 | 1160 | 1900 | 1100 | 1500 | **23044CAK** | **23044CAK/W33** |
| | 340 | 90 | 3 | 1160 | 1900 | 1100 | 1500 | **23044CA/YA2** | |
| | 340 | 90 | 3 | 1160 | 1900 | 1100 | 1500 | **23044CAKF3** | |

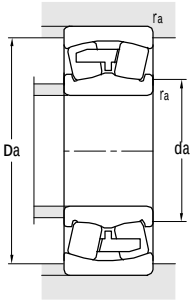
| Other dimensions | | | | Contact surface and chamfer dimensions | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d2 | D1 | b | k | da | Da | ra | e | Y1 | Y2 | Y0 | |
| mm | | | | mm | | | mm | | | | kg |
| 236 | 271 | 13.9 | 6 | 212 | 298 | 2 | | | | | 25 |
| 236 | 271 | 13.9 | 6 | 212 | 298 | 2 | | | | | 24.5 |
| 236 | 271 | 13.9 | 6 | 212 | 298 | 2 | | | | | 24.7 |
| 236 | 271 | | | 212 | 298 | 2 | | | | | 24.2 |
| 237 | 276 | 13.9 | 7.5 | 212 | 298 | 2 | 0.25 | 2.70 | 4.00 | 2.60 | 22.6 |
| 237 | 276 | 13.9 | 7.5 | 212 | 298 | 2 | 0.25 | 2.70 | 4.00 | 2.60 | 22.4 |
| 233 | 268 | 11.1 | 5 | 212 | 298 | 2 | 0.33 | 2.00 | 3.00 | 2.00 | 31.3 |
| 243 | 292 | 16.7 | 7 | 214 | 326 | 2.5 | 0.31 | 2.20 | 3.30 | 2.20 | 43.8 |
| 243 | 292 | 16.7 | 7 | 214 | 326 | 2.5 | 0.31 | 2.20 | 3.30 | 2.20 | 43.5 |
| 243 | 292 | 16.7 | 7 | 214 | 326 | 2.5 | 0.31 | 2.20 | 3.30 | 2.20 | 42.6 |
| 242 | 284 | 11.1 | 6 | 214 | 326 | 2.5 | 0.40 | 1.70 | 2.50 | 1.60 | 51.5 |
| 242 | 283 | 11.1 | 6 | 214 | 326 | 2.5 | 0.40 | 1.70 | 2.50 | 1.60 | 51.3 |
| 248 | 309 | | | 218 | 342 | 3 | | | | | 44.2 |
| 248 | 309 | | | 218 | 342 | 3 | | | | | 43.4 |
| 248 | 309 | | | 218 | 342 | 3 | | | | | 43.8 |
| 250 | 309 | 16.7 | 6 | 218 | 342 | 3 | 0.26 | 2.60 | 3.90 | 2.50 | 44.7 |
| 250 | 309 | 16.7 | 6 | 218 | 342 | 3 | 0.26 | 2.60 | 3.90 | 2.50 | 44.3 |
| 250 | 309 | 16.7 | 6 | 218 | 342 | 3 | 0.26 | 2.60 | 3.90 | 2.50 | 44 |
| 249 | 304 | 16.7 | 8 | 218 | 342 | 3 | 0.35 | 1.90 | 2.90 | 1.80 | 53.4 |
| 249 | 304 | 16.7 | 8 | 218 | 342 | 3 | 0.35 | 1.90 | 2.90 | 1.80 | 53.4 |
| 249 | 304 | 16.7 | 8 | 218 | 342 | 3 | 0.35 | 1.90 | 2.90 | 1.80 | 52 |
| 248 | 304 | 16.7 | 8 | 218 | 342 | 3 | 0.36 | 1.87 | 2.79 | 1.83 | 56.5 |
| 269 | 350 | 22.3 | 8 | 222 | 398 | 4 | | | | | 96 |
| 269 | 350 | 22.3 | 8 | 222 | 398 | 4 | | | | | 94 |
| 269 | 350 | 22.3 | 8 | 222 | 398 | 4 | | | | | 95 |
| 269 | 350 | | | 222 | 398 | 4 | 0.34 | 1.99 | 2.96 | 1.94 | 95.7 |
| 269 | 350 | | | 222 | 398 | 4 | 0.34 | 1.99 | 2.96 | 1.94 | 96.7 |
| 269 | 350 | 22.3 | 8 | 222 | 398 | 4 | 0.34 | 1.99 | 2.96 | 1.94 | 94 |
| 269 | 350 | 22.3 | 8 | 222 | 398 | 4 | 0.34 | 1.99 | 2.96 | 1.94 | 90 |
| 266 | 340 | | | 222 | 398 | 4 | 0.40 | 1.68 | 2.50 | 1.64 | 95.2 |
| 242 | 278 | 8.3 | 4 | 232 | 288 | 2 | 0.18 | 3.80 | 5.60 | 3.60 | 12.9 |
| 260 | 303 | 13.9 | 6 | 234 | 326 | 2.5 | 0.24 | 2.80 | 4.20 | 2.80 | 30.3 |
| 260 | 303 | 13.9 | 6 | 234 | 326 | 2.5 | 0.24 | 2.80 | 4.20 | 2.80 | 31.6 |
| 260 | 303 | | | 234 | 326 | 2.5 | 0.25 | 2.75 | 4.09 | 2.69 | 31.5 |
| 260 | 303 | | | 234 | 326 | 2.5 | 0.24 | 2.80 | 4.20 | 2.80 | 31 |

d 220~240 mm



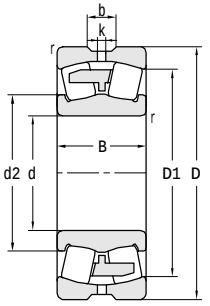



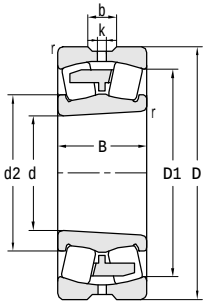



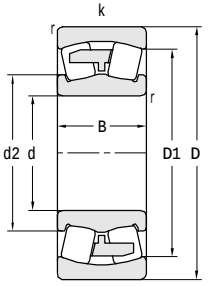



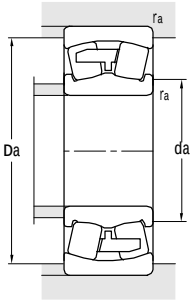

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | |
| mm | | | | kN | | r/min | | | |
| **220** | 340 | 118 | 3 | 1480 | 2500 | 850 | 1100 | **24044CA** | **24044CA/W33** |
| | 340 | 118 | 3 | 1480 | 2500 | 850 | 1100 | **24044CA/W33X** | |
| | 340 | 118 | 3 | 1480 | 2500 | 850 | 1100 | **24044CAN** | |
| | 340 | 118 | 3 | 1480 | 2500 | 850 | 1100 | **24044CAK30/W33** | |
| | 340 | 118 | 3 | 1480 | 2500 | 850 | 1100 | **24044CAF3** | **24044CAF3/W33** |
| | 370 | 120 | 4 | 1500 | 1160 | 900 | 1200 | **23144** | **23144/W33** |
| | 370 | 120 | 4 | 1500 | 1160 | 900 | 1200 | **23144K** | |
| | 370 | 120 | 4 | 1500 | 1160 | 900 | 1200 | **23144F3** | **23144F3/W33** |
| | 370 | 120 | 4 | 1500 | 1160 | 900 | 1200 | **23144KF3/W33** | |
| | 370 | 120 | 4 | 1710 | 2710 | 900 | 1200 | **23144CA** | **23144CA/W33** |
| | 370 | 120 | 4 | 1510 | 2750 | 900 | 1200 | **23144CA/HG2W33** | |
| | 370 | 120 | 4 | 1510 | 2710 | 900 | 1200 | **23144CAK** | **23144CAK/W33** |
| | 370 | 120 | 4 | 1730 | 2710 | 900 | 1200 | **23144CAKF3/W33** | **22244CAK/W33** |
| | 370 | 150 | 4 | 2010 | 3410 | 500 | 630 | **24144CA/W33** | **24144CAK30** |
| | 400 | 108 | 4 | 1670 | 2400 | 950 | 1300 | **22244CA** | **22244CA/W33** |
| | 400 | 108 | 4 | 1670 | 2400 | 950 | 1300 | **22244CA/W33X** | **22244CAF3** |
| | 400 | 108 | 4 | 1670 | 2400 | 950 | 1300 | **22244CAK** | **22244CAK/W33T** |
| | 400 | 144 | 4 | 2240 | 3280 | 750 | 950 | **23244CA/W33** | **23244CAK/W33** |
| | 460 | 145 | 5 | 2570 | 3450 | 980 | 1360 | **22344CA** | **22344CA/W33** |
| | 460 | 145 | 5 | 2570 | 3450 | 980 | 1360 | **22344CAK/W33** | |
| **240** | 320 | 60 | 2.1 | 630 | 1360 | 1300 | 1700 | **23948CA** | **23948CA/W33** |
| | 320 | 60 | 2.1 | 660 | 1450 | 1300 | 1700 | **23948CAF3** | **23948CAF3/W33** |
| | 330 | 60 | 2.1 | 610 | 1280 | 1200 | 1500 | **23948X1CAF3/HA** | |
| | 330 | 190 | 1.1 | | | | | **OH3152H** | |
| | 360 | 92 | 3 | 1230 | 2110 | 1000 | 1400 | **23048** | **23048/W33** |
| | 360 | 92 | 3 | 1230 | 2110 | 1000 | 1400 | **23048Q1/YA2** | |
| | 360 | 92 | 3 | 1230 | 2110 | 1000 | 1400 | **23048K** | **23048K/W33** |
| | 360 | 92 | 3 | 1230 | 2110 | 1000 | 1400 | **23048F3** | **23048F3/W33** |
| | 360 | 92 | 3 | 1230 | 2110 | 1000 | 1400 | **23048KF3** | **23048KF3/W33** |
| | 360 | 92 | 3 | 1230 | 2080 | 1000 | 1400 | **23048CA** | **23048CA/W33** |
| | 360 | 92 | 3 | 1230 | 2080 | 1000 | 1400 | **23048CAQ1/YA2** | |
| | 360 | 92 | 3 | 1230 | 2080 | 1000 | 1400 | **23048CAK** | **23048CAK/W33** |
| | 360 | 92 | 3 | 1230 | 2080 | 1000 | 1400 | **23048CAQ1** | |
| | 360 | 118 | 3 | 1520 | 2800 | 800 | 1000 | **24048CA** | |
| | 360 | 118 | 3 | 1520 | 2800 | 800 | 1000 | **24048CA/W33X** | |

| Other dimensions | | | | Contact surface and chamfer dimensions | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d2 | D1 | b | k | da | Da | ra | e | Y1 | Y2 | Y0 | |
| mm | | | | mm | | | mm | | | | kg |
| 257 | 295 | 11.1 | 5 | 234 | 326 | 2.5 | 0.33 | 2.00 | 3.00 | 2.00 | 39.3 |
| 257 | 295 | 11.1 | 5 | 234 | 326 | 2.5 | 0.33 | 2.00 | 3.00 | 2.00 | 38.9 |
| 257 | 295 | 11.1 | 5 | 234 | 326 | 2.5 | 0.33 | 2.00 | 3.00 | 2.00 | 39.1 |
| 257 | 295 | 11.1 | 5 | 234 | 326 | 2.5 | 0.33 | 2.00 | 3.00 | 2.00 | 38.5 |
| 257 | 295 | 11.1 | 5 | 234 | 326 | 2.5 | 0.33 | 2.00 | 3.00 | 2.00 | 39 |
| 265 | 310 | 16.7 | 7 | 238 | 352 | 3 | | | | | 54.8 |
| 265 | 310 | | | 238 | 352 | 3 | | | | | 53.2 |
| 265 | 310 | 16.7 | 7 | 238 | 352 | 3 | | | | | 54.3 |
| 265 | 310 | 16.7 | 7 | 238 | 352 | 3 | | | | | 52.4 |
| 268 | 320 | 16.7 | 7 | 238 | 352 | 3 | 0.30 | 2.30 | 3.40 | 2.20 | 54.7 |
| 268 | 320 | 16.7 | 7 | 238 | 352 | 3 | 0.30 | 2.30 | 3.40 | 2.20 | 54.6 |
| 268 | 320 | 16.7 | 7 | 238 | 352 | 3 | 0.30 | 2.30 | 3.40 | 2.20 | 53.1 |
| 268 | 320 | 16.7 | 7 | 238 | 352 | 3 | 0.30 | 2.30 | 3.40 | 2.20 | 52.7 |
| 262 | 308 | 11.1 | 6 | 238 | 352 | 3 | 0.40 | 1.70 | 2.50 | 1.60 | 66.4 |
| 275 | 344 | 16.7 | 8 | 238 | 382 | 3 | 0.27 | 2.50 | 3.70 | 2.50 | 63.5 |
| 275 | 344 | 16.7 | 8 | 238 | 382 | 3 | 0.27 | 2.50 | 3.70 | 2.50 | 63 |
| 275 | 344 | | | 238 | 382 | 3 | 0.27 | 2.50 | 3.70 | 2.50 | 63.2 |
| 272.5 | 334 | 16.7 | 8 | 238 | 382 | 3 | 0.36 | 1.89 | 2.81 | 1.85 | 77.3 |
| 293.5 | 384.5 | 22.3 | 12 | 246 | 422 | 4 | 0.32 | 2.09 | 3.11 | 2.04 | 119 |
| 293.5 | 384.5 | 22.3 | 12 | 246 | 422 | 4 | 0.32 | 2.09 | 3.11 | 2.04 | 119 |
| 266 | 295 | 9.5 | 4 | 252 | 308 | 2 | 0.15 | 4.50 | 6.70 | 4.50 | 15.1 |
| 266 | 295 | 9.5 | 4 | 252 | 308 | 2 | 0.15 | 4.50 | 6.70 | 4.50 | 14.9 |
| 266 | 295 | | | 252 | 308 | 2 | 0.15 | 4.50 | 6.70 | 4.50 | 15.8 |
| | | | | | | | | | | | 23.3 |
| 278 | 317 | 13.9 | 6 | 254 | 346 | 2.5 | | | | | 34.9 |
| 278 | 317 | | | 254 | 346 | 2.5 | | | | | 34.8 |
| 278 | 317 | 13.9 | 6 | 254 | 346 | 2.5 | | | | | 33.9 |
| 278 | 317 | 13.9 | 6 | 254 | 346 | 2.5 | | | | | 34.5 |
| 278 | 317 | 13.9 | 6 | 254 | 346 | 2.5 | | | | | 33.5 |
| 278 | 322 | 13.9 | 6 | 254 | 346 | 2.5 | 0.24 | 2.80 | 4.20 | 2.80 | 34.2 |
| 278 | 322 | | | 254 | 346 | 2.5 | 0.24 | 2.80 | 4.20 | 2.80 | 34.2 |
| 278 | 322 | 13.9 | 6 | 254 | 346 | 2.5 | 0.24 | 2.80 | 4.20 | 2.80 | 32.2 |
| 278 | 322 | | | 254 | 346 | 2.5 | 0.24 | 2.80 | 4.20 | 2.80 | 34.2 |
| 278 | 318 | 11.1 | 5 | 254 | 346 | 2.5 | 0.30 | 2.30 | 3.40 | 2.20 | 44.1 |
| 278 | 318 | 11.1 | 5 | 254 | 346 | 2.5 | 0.30 | 2.30 | 3.40 | 2.20 | 43.7 |



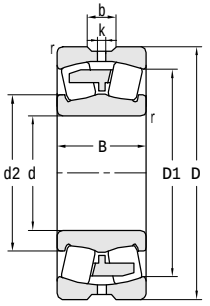



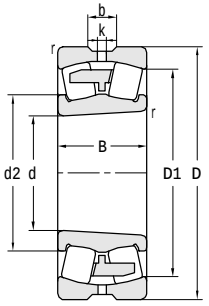



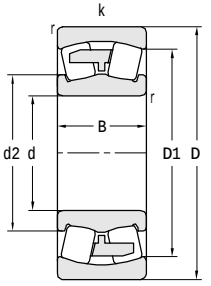



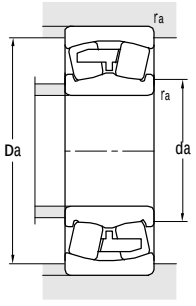

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | |
| mm | | | | kN | | r/min | | | |
| **240** | 360 | 118 | 3 | 1520 | 2800 | 800 | 1000 | **24048CAK30** | **24048CAK30/W33** |
| | 400 | 128 | 4 | 1550 | 2930 | 850 | 1100 | **23148** | **23148/W33** |
| | 400 | 128 | 4 | 1550 | 2930 | 850 | 1100 | **23148K** | **23148K/W33** |
| | 400 | 128 | 4 | 1550 | 2930 | 850 | 1100 | **23148F3** | |
| | 400 | 128 | 4 | 1980 | 3040 | 850 | 1100 | **23148CA** | **23148CA/W33** |
| | 400 | 128 | 4 | 1980 | 3040 | 850 | 1100 | **23148CAK/W33** | |
| | 400 | 160 | 4 | 2280 | 3750 | 480 | 600 | **24148/W33** | |
| | 400 | 160 | 4 | 2280 | 3750 | 480 | 600 | **24148F3/W33** | |
| | 400 | 160 | 4 | 2280 | 3705 | 480 | 600 | **24148CA** | **24148CA/W33** |
| | 400 | 160 | 4 | 2280 | 3705 | 480 | 600 | **24148CAK/W33** | |
| | 400 | 160 | 4 | 2280 | 3705 | 480 | 600 | **24148CAK30/C3W33** | **24148CAK30F3/W33** |
| | 440 | 120 | 4 | 2090 | 3250 | 900 | 1200 | **22248CA** | **22248CA/W33** |
| | 440 | 120 | 4 | 2090 | 3250 | 900 | 1200 | **22248CAK** | **22248CAK/W33** |
| | 440 | 120 | 4 | 2090 | 3250 | 900 | 1200 | **22248CAF3/C9W33** | **22248CAF3/W33** |
| | 440 | 120 | 4 | 2090 | 3250 | 900 | 1200 | **22248K/W33** | |
| | 440 | 160 | 4 | 2950 | 3950 | 670 | 850 | **23248CA/W33** | |
| | 440 | 160 | 4 | 2950 | 3950 | 670 | 850 | **23248CAK/W33** | |
| | 440 | 160 | 4 | 2950 | 3800 | 670 | 850 | **23248CAF3** | |
| | 500 | 155 | 5 | 2950 | 4100 | 650 | 800 | **22348CA** | **22348CA/W33** |
| | 500 | 155 | 5 | 2950 | 4100 | 650 | 800 | **22348CAK** | **22348CAK/W33** |
| **241** | 410 | 128 | 4 | 1860 | 3350 | 1000 | 1400 | **2650CA** | |
| **250** | 350 | 195 | 1.1 | | | | | **OH3156H** | |
| | 360 | 75 | 2.1 | 902 | 1750 | 1100 | 1500 | **23952CA** | **23952CA/W33** |
| | 410 | 128 | 4 | 1860 | 3350 | | | **2650CA** | |
| **260** | 360 | 75 | 2.1 | 835 | 1750 | 1100 | 1500 | **23952CA** | **23952CA/W33** |
| | 360 | 75 | 2.1 | 835 | 1750 | 1100 | 1500 | **23952CAK/W33** | |
| | 400 | 104 | 4 | 1520 | 2550 | 900 | 1200 | **23052CA** | **23052CA/W33** |
| | 400 | 104 | 4 | 1520 | 2550 | 900 | 1200 | **23052CAF3** | |
| | 400 | 104 | 4 | 1520 | 2550 | 900 | 1200 | **23052CAK** | **23052CAK/W33** |
| | 400 | 104 | 4 | 1520 | 2550 | 900 | 1200 | **23052CAKF3** | |
| | 400 | 140 | 4 | 1930 | 3500 | 700 | 900 | **24052CA/W33** | |
| | 400 | 140 | 4 | 1930 | 3800 | 700 | 900 | **24052CA/W33XYA** | |
| | 400 | 140 | 4 | 1930 | 3500 | 700 | 900 | **24052CAF3** | **24052CAF3/W33** |

| Other dimensions | | | | Contact surface and chamfer dimensions | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d2 | D1 | b | k | da | Da | ra | e | Y1 | Y2 | Y0 | |
| mm | | | | mm | | | mm | | | | kg |
| 278 | 318 | 11.1 | 5 | 254 | 346 | 2.5 | 0.30 | 2.30 | 3.40 | 2.20 | 44.1 |
| 290 | 347 | 16.7 | 8 | 258 | 382 | 3 | | | | | 47.5 |
| 290 | 347 | 16.7 | 8 | 258 | 382 | 3 | | | | | 65.6 |
| 290 | 347 | | | 258 | 382 | 3 | | | | | 66.7 |
| 289 | 345 | 16.7 | 8 | 258 | 382 | 3 | 0.31 | 2.21 | 3.29 | 2.16 | 68.2 |
| 289 | 345 | 16.7 | 8 | 258 | 382 | 3 | 0.31 | 2.21 | 3.29 | 2.16 | 66.5 |
| 285 | 336 | 11.1 | 6 | 258 | 382 | 3 | | | | | 81 |
| 285 | 336 | 11.1 | 6 | 258 | 382 | 3 | | | | | 80 |
| 285 | 336 | 11.1 | 6 | 258 | 382 | 3 | 0.40 | 1.70 | 2.50 | 1.60 | 79 |
| 285 | 336 | 11.1 | 6 | 258 | 382 | 3 | 0.40 | 1.70 | 2.50 | 1.60 | 75.6 |
| 285 | 336 | 11.1 | 6 | 258 | 382 | 3 | 0.40 | 1.70 | 2.50 | 1.60 | 77.8 |
| 290 | 383 | 18 | 7 | 258 | 422 | 3 | 0.27 | 2.50 | 3.70 | 2.50 | 85.3 |
| 290 | 383 | 18 | 7 | 258 | 422 | 3 | 0.27 | 2.50 | 3.70 | 2.50 | 82.4 |
| 303 | 379 | 18 | 7 | 258 | 422 | 3 | 0.27 | 2.50 | 3.70 | 2.50 | 85 |
| 305 | 379 | 18 | 7 | 258 | 422 | 3 | 0.27 | 2.50 | 3.70 | 2.50 | 84.1 |
| 292 | 369 | 22.3 | 8 | 258 | 422 | 3 | 0.35 | 1.90 | 2.90 | 1.80 | 102 |
| 292 | 369 | 22.3 | 8 | 258 | 422 | 3 | 0.35 | 1.90 | 2.90 | 1.80 | 102 |
| 292 | 369 | | | 258 | 422 | 3 | 0.35 | 1.90 | 2.90 | 1.80 | 102 |
| 330 | 390 | 22.3 | 12 | 297 | 439 | 4 | 0.32 | 2.09 | 3.11 | 2.04 | 146 |
| 330 | 390 | 22.3 | 12 | 297 | 439 | 4 | 0.32 | 2.09 | 3.11 | 2.04 | 145 |
| 299 | 356 | | | 272 | 382 | 3 | 0.29 | 2.30 | 3.50 | 2.40 | 59.4 |
| | | | | | | | | | | | 25.9 |
| 294 | 328 | 12 | 6 | 272 | 348 | 2 | 0.18 | 3.80 | 5.60 | 3.60 | 21.6 |
| 298 | 356 | | | 271 | 390 | 3 | | | | | 59.4 |
| 287 | 331 | 12 | 6 | 271 | 348 | 2 | 0.18 | 3.80 | 5.60 | 3.60 | 24.4 |
| 287 | 331 | 12 | 6 | 271 | 348 | 2 | 0.18 | 3.80 | 5.60 | 3.60 | 24.2 |
| 306 | 357 | 16.7 | 7 | 278 | 382 | 3 | 0.23 | 2.90 | 4.40 | 2.80 | 49.8 |
| 306 | 357 | | | 278 | 382 | 3 | 0.23 | 2.90 | 4.40 | 2.80 | 49.5 |
| 306 | 357 | 16.7 | 7 | 278 | 382 | 3 | 0.23 | 2.90 | 4.40 | 2.80 | 46.9 |
| 306 | 357 | | | 278 | 382 | 3 | 0.23 | 2.90 | 4.40 | 2.80 | 46.6 |
| 300 | 347 | 11.1 | 6 | 278 | 382 | 3 | 0.33 | 2.00 | 3.00 | 2.00 | 66.7 |
| 300 | 347 | 11.1 | 6 | 278 | 382 | 3 | 0.33 | 2.00 | 3.00 | 2.00 | 67.2 |
| 300 | 347 | 11.1 | 6 | 278 | 382 | 3 | 0.33 | 2.00 | 3.00 | 2.00 | 64.9 |



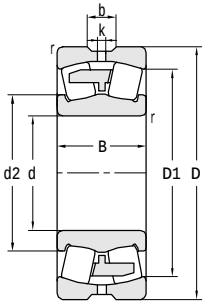



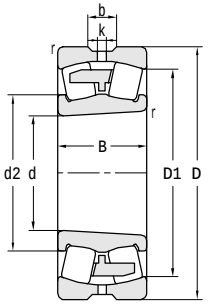



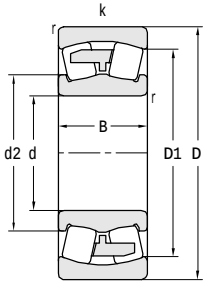

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | Cr | Cor | Grease | Oil | | |
| mm | | | | kN | | r/min | | | |
| **260** | 400 | 140 | 4 | 1930 | 3500 | 700 | 900 | **24052CAK30/W33** | |
| | 440 | 144 | 4 | 2420 | 3700 | 800 | 1000 | **23152** | **23152/W33** |
| | 440 | 144 | 4 | 2420 | 3700 | 800 | 1000 | **23152K** | |
| | 440 | 144 | 4 | 2420 | 3750 | 800 | 1000 | **23152K/HG2YA6** | |
| | 440 | 144 | 4 | 2420 | 3750 | 800 | 1000 | **23152K/HG2YAB** | |
| | 440 | 144 | 4 | 2420 | 3700 | 800 | 1000 | **23152F3** | |
| | 440 | 144 | 4 | 2420 | 3750 | 800 | 1000 | **23152CA** | **23152CA/W33** |
| | 440 | 144 | 4 | 2420 | 3750 | 800 | 1000 | **23152CAK** | **23152CAK/W33** |
| | 440 | 144 | 4 | 2420 | 3750 | 800 | 1000 | **23152CAK/HG2C9YA6W33** | |
| | 440 | 144 | 4 | 2420 | 3750 | 800 | 1000 | **23152CAK30** | **23152CAK30/W33** |
| | 440 | 180 | 4 | 2850 | 4560 | 430 | 530 | **24152CA** | **24152CA/W33** |
| | 440 | 180 | 4 | 2850 | 4560 | 430 | 530 | **24152CA/HAW36** | **24152CAQ1/HAW36** |
| | 440 | 180 | 4 | 2850 | 4560 | 430 | 530 | **24152CAK30/W33** | |
| | 440 | 180 | 4 | 2850 | 4560 | 430 | 530 | **24152CAF3/W33** | |
| | 440 | 180 | 4 | 2420 | 4380 | 430 | 530 | **SX-24152** | |
| | 480 | 130 | 5 | 2520 | 3600 | 850 | 1100 | **22252CA** | **22252CA/W33** |
| | 480 | 130 | 5 | 2520 | 3600 | 850 | 1100 | **22252CAK** | |
| | 480 | 174 | 5 | 2800 | 4600 | 630 | 800 | **23252/HG2W33T** | |
| | 480 | 174 | 5 | 3090 | 4750 | 630 | 800 | **23252CA/W33** | |
| | 480 | 174 | 5 | 3090 | 4750 | 630 | 800 | **23252CA/W33X** | **23252CA/W33T** |
| | 480 | 174 | 5 | 3090 | 4750 | 630 | 800 | **23252CA/W33XB** | |
| | 480 | 174 | 5 | 3090 | 4750 | 630 | 800 | **23252CAF3/W33** | |
| | 480 | 174 | 5 | 3090 | 4750 | 630 | 800 | **23252CAK/W33** | |
| | 480 | 174 | 5 | 3090 | 4750 | 630 | 800 | **23252CAKL/W33** | |
| | 540 | 165 | 6 | 3370 | 4700 | 630 | 800 | **22352** | **22352/W33** |
| | 540 | 165 | 6 | 3370 | 4700 | 630 | 800 | **22352K** | **22352K/W33** |
| | 540 | 165 | 6 | 3370 | 4700 | 630 | 800 | **22352F3** | |
| | 540 | 165 | 6 | 3370 | 4750 | 630 | 800 | **22352CA/W33** | |
| | 540 | 165 | 6 | 3370 | 4750 | 630 | 800 | **22352CAK/W33** | |
| | 540 | 165 | 6 | 3370 | 4750 | 630 | 800 | **22352CAF3** | **22352CAF3/W33** |
| | 540 | 165 | 6 | 3370 | 4750 | 630 | 800 | **22352CAKF3/W33** | |
| **280** | 350 | 52 | 2 | 435 | 1230 | 1200 | 1500 | **23856CA** | **23856CA/W33** |
| | 380 | 75 | 2.1 | 805 | 1850 | 1000 | 1400 | **23956CA** | **23956CA/W33** |
| | 380 | 75 | 2.1 | 805 | 1850 | 1000 | 1400 | **23956CAQ1/W33** | |
| | 420 | 106 | 4 | 1640 | 2810 | 850 | 1100 | **23056** | **23056/W33** |

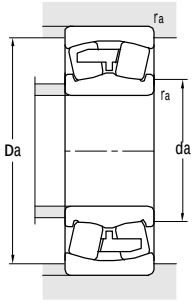
| Other dimensions | | | | Contact surface and chamfer dimensions | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d2 | D1 | b | k | da | Da | ra | e | Y1 | Y2 | Y0 | |
| mm | | | | mm | | | mm | | | | kg |
| 300 | 347 | 11.1 | 6 | 278 | 382 | 3 | 0.33 | 2.00 | 3.00 | 2.00 | 65.2 |
| 318 | 372 | 16.7 | 12 | 278 | 422 | 3 | | | | | 92.1 |
| 318 | 372 | | | 278 | 422 | 3 | | | | | 90.2 |
| 310 | 380 | | | 278 | 422 | 3 | | | | | 94.4 |
| 310 | 380 | | | 278 | 422 | 3 | | | | | 94.4 |
| 318 | 372 | | | 278 | 422 | 3 | | | | | 91.6 |
| 310 | 379 | 16.7 | 9 | 278 | 422 | 3 | 0.31 | 2.20 | 3.30 | 2.20 | 88.9 |
| 310 | 379 | 16.7 | 9 | 278 | 422 | 3 | 0.31 | 2.20 | 3.30 | 2.20 | 88.7 |
| 310 | 379 | 16.7 | 9 | 278 | 422 | 3 | 0.31 | 2.20 | 3.30 | 2.20 | 88.7 |
| 310 | 379 | 16.7 | 9 | 278 | 422 | 3 | 0.31 | 2.20 | 3.30 | 2.20 | 86.7 |
| 312 | 366 | 13.9 | 8 | 278 | 422 | 3 | 0.39 | 1.73 | 2.58 | 1.69 | 115 |
| 312 | 366 | 13.9 | 8 | 278 | 422 | 3 | 0.39 | 1.73 | 2.58 | 1.69 | 114 |
| 312 | 366 | 13.9 | 8 | 278 | 422 | 3 | 0.39 | 1.73 | 2.58 | 1.69 | 112 |
| 312 | 366 | 13.9 | 8 | 278 | 422 | 3 | 0.39 | 1.73 | 2.58 | 1.69 | 113 |
| 312 | 366 | 13.9 | 8 | 278 | 422 | 3 | 0.39 | 1.73 | 2.58 | 1.69 | 114 |
| 330 | 414 | 22.3 | 12 | 282 | 458 | 4 | 0.27 | 2.51 | 3.74 | 2.45 | 106 |
| 330 | 414 | | | 282 | 458 | 4 | 0.27 | 2.51 | 3.74 | 2.45 | 105 |
| 320 | 404 | 27 | 16 | 282 | 458 | 4 | | | | | 138 |
| 320 | 404 | 22.3 | 8 | 282 | 458 | 4 | 0.35 | 1.90 | 2.90 | 1.80 | 141 |
| 320 | 404 | 22.3 | 12 | 282 | 458 | 4 | 0.35 | 1.90 | 2.90 | 1.80 | 141 |
| 320 | 404 | 25 | 15 | 282 | 458 | 4 | 0.35 | 1.90 | 2.90 | 1.80 | 141 |
| 320 | 404 | 22.3 | 8 | 282 | 458 | 4 | 0.35 | 1.90 | 2.90 | 1.80 | 138 |
| 320 | 404 | 22.3 | 8 | 282 | 458 | 4 | 0.35 | 1.90 | 2.90 | 1.80 | 139 |
| 320 | 404 | 22.3 | 8 | 282 | 458 | 4 | 0.35 | 1.90 | 2.90 | 1.80 | 137 |
| 349 | 446 | 24 | 10 | 288 | 512 | 5 | | | | | 191 |
| 349 | 446 | 24 | 10 | 288 | 512 | 5 | | | | | 190 |
| 349 | 446 | | | 288 | 512 | 5 | | | | | 190 |
| 349 | 455 | 22.3 | 8 | 288 | 512 | 5 | 0.31 | 2.20 | 3.30 | 2.20 | 186 |
| 349 | 455 | 22.3 | 8 | 288 | 512 | 5 | 0.31 | 2.20 | 3.30 | 2.20 | 185 |
| 349 | 455 | 22.3 | 8 | 288 | 512 | 5 | 0.31 | 2.20 | 3.30 | 2.20 | 184 |
| 349 | 455 | 22.3 | 8 | 288 | 512 | 5 | 0.31 | 2.20 | 3.30 | 2.20 | 183 |
| 305 | 328 | 8.3 | 4.5 | 278 | 348 | 2 | 0.13 | 5.36 | 7.98 | 5.24 | 11.4 |
| 316 | 346 | 12 | 6 | 292 | 368 | 2 | 0.18 | 3.80 | 5.66 | 3.72 | 25.3 |
| 316 | 346 | 12 | 6 | 292 | 368 | 2 | 0.18 | 3.80 | 5.66 | 3.72 | 25.7 |
| 326 | 371 | 16.7 | 7 | 296 | 400 | 3 | | | | | 54.9 |

d 280~300 mm



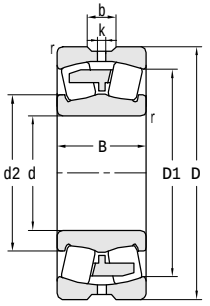



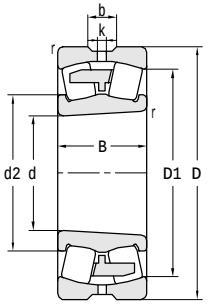



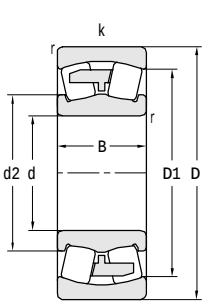

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | |
| mm | | | | kN | | r/min | | | |
| **280** | 420 | 106 | 4 | 1640 | 2810 | 850 | 1100 | **23056K** | **23056K/W33** |
| | 420 | 106 | 4 | 1640 | 2810 | 850 | 1100 | **23056X1K** | |
| | 420 | 106 | 4 | 1640 | 2810 | 850 | 1100 | **23056F3** | **23056F3/W33** |
| | 420 | 106 | 4 | 1640 | 2810 | 850 | 1100 | **23056KF3** | |
| | 420 | 106 | 4 | 1640 | 2850 | 850 | 1100 | **23056CA** | **23056CA/W33** |
| | 420 | 106 | 4 | 1640 | 2850 | 850 | 1100 | **23056CAK** | **23056CAK/W33** |
| | 420 | 140 | 4 | 2050 | 3700 | 670 | 850 | **24056CA/W33** | |
| | 420 | 140 | 4 | 2050 | 3700 | 670 | 850 | **24056CA/W33X** | **24056CA/W33YA2** |
| | 420 | 140 | 4 | 2050 | 3700 | 670 | 850 | **24056CAF3** | **24056CAF3/W33** |
| | 420 | 140 | 4 | 2050 | 3700 | 670 | 850 | **24056CAK30F3** | **24056CAK30F3/W33** |
| | 460 | 146 | 5 | 2520 | 4200 | 800 | 1000 | **23156/W33** | |
| | 460 | 146 | 5 | 2520 | 4150 | 750 | 950 | **23156CA** | **23156CA/W33** |
| | 460 | 146 | 5 | 2520 | 4150 | 750 | 950 | **23156CAF3** | |
| | 460 | 146 | 5 | 2520 | 4150 | 750 | 950 | **23156CAKF3** | |
| | 460 | 146 | 5 | 2520 | 4150 | 750 | 950 | **23156CAK** | **23156CAK/W33** |
| | 460 | 130 | 5 | 2520 | 4150 | 750 | 950 | **23156X2CA** | |
| | 460 | 180 | 5 | 2900 | 4950 | 400 | 500 | **24156CA** | **24156CA/W33** |
| | 460 | 180 | 5 | 2900 | 4950 | 400 | 500 | **24156CAK30/W33** | |
| | 460 | 180 | 5 | 2900 | 4950 | 400 | 500 | **24156CA/HCW33** | |
| | 500 | 130 | 5 | 2570 | 3600 | 800 | 1000 | **22256CA** | **22256CA/W33** |
| | 500 | 130 | 5 | 2570 | 3600 | 800 | 1000 | **22256CAK** | **22256CAK/W33** |
| | 500 | 130 | 5 | 2570 | 3600 | 800 | 1000 | **22256CAF3** | |
| | 500 | 130 | 5 | 2130 | 3300 | 850 | 1100 | **22256/W33** | |
| | 500 | 130 | 5 | 2130 | 3300 | 850 | 1100 | **22256K/W33** | |
| | 500 | 176 | 5 | 3080 | 5100 | 600 | 750 | **23256CA** | **23256CA/W33** |
| | 500 | 176 | 5 | 3080 | 5100 | 600 | 750 | **23256CAF3** | **23256CAF3/W33** |
| | 500 | 176 | 5 | 3080 | 5100 | 600 | 750 | **23256CAK/W33** | |
| | 500 | 176 | 5 | 3080 | 5100 | 600 | 750 | **23256CAKF3/W33** | |
| | 580 | 175 | 6 | 3200 | 5600 | 600 | 750 | **22356** | **22356/W33** |
| | 580 | 175 | 6 | 3800 | 5700 | 600 | 750 | **22356CA** | **22356CA/W33** |
| | 580 | 175 | 6 | 3800 | 5700 | 600 | 750 | **22356CAK/W33** | |
| | 580 | 175 | 6 | 3800 | 5700 | 600 | 750 | **22356CAF3/W33** | |
| **300** | 380 | 60 | 3 | 640 | 1580 | 950 | 1400 | **23860CA/W33** | |
| | 380 | 60 | 3 | 640 | 1580 | 950 | 1400 | **23860CAK/W33** | |

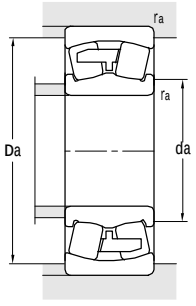
| Other dimensions | | | | Contact surface and chamfer dimensions | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d2 | D1 | b | k | da | Da | ra | e | Y1 | Y2 | Y0 | |
| mm | | | | mm | | | mm | | | | kg |
| 326 | 371 | 16.7 | 7 | 296 | 400 | 3 | | | | | 53.4 |
| 326 | 371 | | | 296 | 400 | 3 | | | | | 57.6 |
| 326 | 371 | 16.7 | 7 | 296 | 400 | 3 | | | | | 54.6 |
| 326 | 371 | | | 296 | 400 | 3 | | | | | 53.1 |
| 323 | 377 | 16.7 | 7 | 298 | 402 | 3 | 0.23 | 2.91 | 4.40 | 2.84 | 56.8 |
| 323 | 377 | 16.7 | 7 | 298 | 402 | 3 | 0.23 | 2.91 | 4.40 | 2.84 | 56.6 |
| 317 | 366 | 11.1 | 6 | 298 | 402 | 3 | 0.31 | 2.20 | 3.30 | 2.20 | 66.8 |
| 317 | 366 | 11.1 | 6 | 298 | 402 | 3 | 0.31 | 2.20 | 3.30 | 2.20 | 68.6 |
| 317 | 366 | 11.1 | 6 | 298 | 402 | 3 | 0.31 | 2.20 | 3.30 | 2.20 | 66.8 |
| 317 | 366 | 11.1 | 6 | 298 | 402 | 3 | 0.31 | 2.20 | 3.30 | 2.20 | 67.2 |
| 337 | 400 | 16.7 | 8 | 302 | 438 | 4 | 0.32 | 2.09 | 3.11 | 2.04 | 99.1 |
| 333 | 400 | 16.7 | 8 | 302 | 438 | 4 | 0.30 | 2.30 | 3.40 | 2.20 | 104 |
| 333 | 400 | | | 302 | 438 | 4 | 0.30 | 2.30 | 3.40 | 2.20 | 103 |
| 333 | 400 | | | 302 | 438 | 4 | 0.30 | 2.30 | 3.40 | 2.20 | 100 |
| 333 | 400 | 16.7 | 8 | 302 | 438 | 4 | 0.30 | 2.30 | 3.40 | 2.20 | 96.9 |
| 332 | 404 | | | 302 | 438 | 4 | 0.27 | 2.50 | 3.72 | 2.45 | 87 |
| 327 | 393 | 13.9 | 8 | 302 | 438 | 4 | 0.40 | 1.70 | 2.50 | 1.60 | 118 |
| 327 | 393 | 13.9 | 8 | 302 | 438 | 4 | 0.40 | 1.70 | 2.50 | 1.60 | 115 |
| 327 | 388 | 13.9 | 8 | 302 | 438 | 4 | 0.40 | 1.70 | 2.50 | 1.60 | 118 |
| 347 | 435 | 22.3 | 8 | 302 | 478 | 4 | 0.26 | 2.60 | 3.90 | 2.50 | 118 |
| 347 | 435 | 22.3 | 8 | 302 | 478 | 4 | 0.26 | 2.60 | 3.90 | 2.50 | 117 |
| 347 | 435 | | | 302 | 478 | 4 | 0.26 | 2.60 | 3.90 | 2.50 | 117 |
| 348 | 435 | 22.3 | 8 | 302 | 478 | 4 | 0.27 | 2.50 | 3.70 | 2.50 | 113 |
| 348 | 435 | 22.3 | 8 | 302 | 478 | 4 | 0.27 | 2.50 | 3.70 | 2.50 | 109 |
| 340 | 424 | 22.3 | 8 | 302 | 478 | 4 | 0.35 | 1.90 | 2.90 | 1.80 | 147 |
| 340 | 424 | 22.3 | 8 | 302 | 478 | 4 | 0.35 | 1.90 | 2.90 | 1.80 | 146 |
| 340 | 424 | 22.3 | 8 | 302 | 478 | 4 | 0.35 | 1.90 | 2.90 | 1.80 | 153 |
| 340 | 424 | 22.3 | 8 | 302 | 478 | 4 | 0.35 | 1.90 | 2.90 | 1.80 | 142 |
| 372 | 485 | 22.3 | 8 | 314 | 552 | 5 | 0.32 | 2.09 | 3.11 | 2.04 | 230 |
| 364 | 485 | 22.3 | 8 | 308 | 552 | 5 | 0.30 | 2.30 | 3.40 | 2.20 | 221 |
| 364 | 485 | 22.3 | 8 | 308 | 552 | 5 | 0.30 | 2.30 | 3.40 | 2.20 | 217 |
| 364 | 485 | 22.3 | 8 | 308 | 552 | 5 | 0.30 | 2.30 | 3.40 | 2.20 | 221 |
| 328 | 357 | 12 | 6 | 310 | 368 | 2 | 0.13 | 5.20 | 7.70 | 5.00 | 16.8 |
| 328 | 357 | 12 | 6 | 310 | 368 | 2 | 0.13 | 5.20 | 7.70 | 5.00 | 17.6 |

d 300 mm



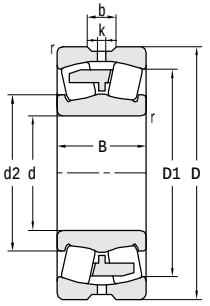



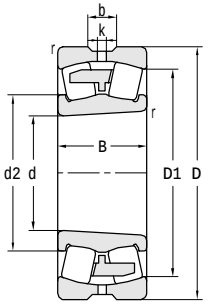



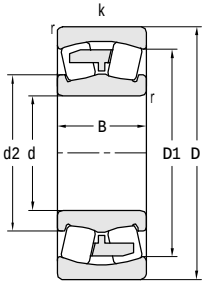

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | |
| mm | | | | kN | | r/min | | | |
| **300** | 420 | 90 | 3 | 1140 | 2500 | 950 | 1300 | **23960CA/W33** | |
| | 420 | 90 | 3 | 1140 | 2500 | 950 | 1300 | **23960CAK** | |
| | 420 | 118 | 3 | 1580 | 3600 | 950 | 1300 | **24960CA/W33** | |
| | 440 | 105 | 4 | 2010 | 3450 | 870 | 1100 | **23060X3CA/W33** | |
| | 460 | 118 | 4 | 1400 | 3200 | 800 | 1000 | **23060** | **23060/W33** |
| | 460 | 118 | 4 | 1400 | 3200 | 800 | 1000 | **23060F3** | **23060F3/W33** |
| | 460 | 118 | 4 | 1400 | 3200 | 800 | 1000 | **23060KF3** | **23060KF3/W33** |
| | 460 | 118 | 4 | 1400 | 3200 | 800 | 1000 | **23060KQ1/W33** | |
| | 460 | 118 | 4 | 2010 | 3450 | 800 | 1000 | **23060CA** | **23060CA/W33** |
| | 460 | 118 | 4 | 2010 | 3450 | 800 | 1000 | **23060CAK** | **23060CAK/W33** |
| | 460 | 118 | 4 | 2010 | 3450 | 800 | 1000 | **23060CAK/C9W33** | |
| | 460 | 118 | 4 | 2010 | 3450 | 800 | 1000 | **23060CAF3/W33** | |
| | 460 | 160 | 4 | 2570 | 4750 | 600 | 750 | **24060CA** | **24060CA/W33** |
| | 500 | 160 | 5 | 3040 | 4850 | 670 | 850 | **23160CA** | **23160CA/W33** |
| | 500 | 160 | 5 | 3040 | 4850 | 670 | 850 | **23160CAF1** | |
| | 500 | 160 | 5 | 3040 | 4850 | 670 | 850 | **23160CA/HCEC9W33** | |
| | 500 | 160 | 5 | 3040 | 4850 | 670 | 850 | **23160CAF3** | **23160CAF3/C9W33** |
| | 500 | 160 | 5 | 3040 | 4850 | 670 | 850 | **23160CAKF3** | |
| | 500 | 160 | 5 | 3040 | 4850 | 670 | 850 | **23160CAK** | **23160CAK/W33** |
| | 500 | 200 | 5 | 3560 | 5990 | 600 | 750 | **24160CA** | **24160CA/W33** |
| | 500 | 200 | 5 | 3560 | 5990 | 600 | 750 | **24160CAK30/W33** | |
| | 540 | 140 | 5 | 2990 | 4300 | 750 | 950 | **22260CA** | **22260CA/W33** |
| | 540 | 140 | 5 | 2990 | 4300 | 750 | 950 | **22260CAF3** | **22260CAF3/W33** |
| | 540 | 140 | 5 | 2990 | 4300 | 750 | 950 | **22260CAKF3** | |
| | 540 | 140 | 5 | 2990 | 4040 | 800 | 1000 | **22260/W33** | |
| | 540 | 140 | 5 | 2990 | 4040 | 800 | 1000 | **22260K/W33** | |
| | 540 | 192 | 5 | 3700 | 5560 | 530 | 670 | **23260CAF1** | **23260CAF3/W33** |
| | 540 | 192 | 5 | 3700 | 5560 | 530 | 670 | **23260CAKF1/W33** | **23260CAK30/W33** |
| | 540 | 192 | 5 | 3150 | 5300 | 530 | 670 | **23260/YA3** | **23260/W33YA3** |
| | 540 | 192 | 5 | 3700 | 5950 | 530 | 670 | **23260CA** | **23260CA/W33** |
| | 540 | 192 | 5 | 3700 | 5950 | 530 | 670 | **23260CAK/W33** | |
| | 540 | 192 | 5 | 3700 | 5950 | 530 | 670 | **23260CA/W33T** | |
| | 540 | 192 | 5 | 3700 | 5950 | 530 | 670 | **23260CAF1** | |
| | 540 | 192 | 5 | 3700 | 5950 | 530 | 670 | **23260CAF3/W33** | |
| | 540 | 192 | 5 | 3700 | 5950 | 530 | 670 | **23260CAK/W33** | |
| | 620 | 185 | 7.5 | 3950 | 6000 | | | **22360CA** | |

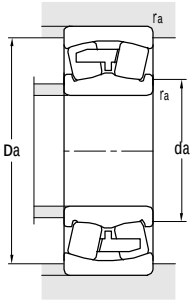
| Other dimensions | | | | Contact surface and chamfer dimensions | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d2 | D1 | b | k | da | Da | ra | e | Y1 | Y2 | Y0 | |
| mm | | | | mm | | | mm | | | | kg |
| 339 | 382 | 15 | 6 | 314 | 406 | 2.5 | 0.19 | 3.60 | 5.30 | 3.60 | 40.1 |
| 339 | 382 | | | 314 | 406 | 2.5 | 0.19 | 3.60 | 5.30 | 3.60 | 39 |
| 339 | 376 | 18 | 7 | | | | | | | | 52.8 |
| 343 | 396 | 16.7 | 9 | 302 | 438 | 3 | 0.21 | 3.16 | 4.71 | 3.09 | 54.7 |
| 351 | 406 | 16.7 | 7 | 322 | 438 | 3 | | | | | 70.4 |
| 351 | 406 | 16.7 | 7 | 322 | 438 | 3 | | | | | 69.8 |
| 351 | 406 | 16.7 | 7 | 322 | 438 | 3 | | | | | 69.5 |
| 351 | 409 | 16.7 | 7 | 318 | 442 | 3 | | | | | 70.3 |
| 351 | 409 | 16.7 | 7 | 318 | 442 | 3 | 0.23 | 2.90 | 4.40 | 2.80 | 75.8 |
| 351 | 409 | 16.7 | 7 | 318 | 442 | 3 | 0.23 | 2.90 | 4.40 | 2.80 | 73.6 |
| 351 | 409 | 16.7 | 7 | 318 | 442 | 3 | 0.23 | 2.90 | 4.40 | 2.80 | 73.4 |
| 351 | 409 | 16.7 | 7 | 318 | 442 | 3 | 0.23 | 2.90 | 4.40 | 2.80 | 74.9 |
| 342 | 399 | 13.9 | 7 | 318 | 442 | 3 | 0.32 | 2.09 | 3.11 | 2.04 | 99 |
| 356 | 433 | 16.7 | 8 | 322 | 478 | 4 | 0.30 | 2.30 | 3.40 | 2.20 | 127 |
| 356 | 433 | 16.7 | 9 | 322 | 478 | 4 | 0.30 | 2.30 | 3.40 | 2.20 | 143 |
| 356 | 433 | 16.7 | 9 | 322 | 478 | 4 | 0.30 | 2.30 | 3.40 | 2.20 | 126 |
| 356 | 433 | 16.7 | 8 | 322 | 478 | 4 | 0.30 | 2.30 | 3.40 | 2.20 | 127 |
| 356 | 433 | 16.7 | | 322 | 478 | 4 | 0.30 | 2.30 | 3.40 | 2.20 | 123 |
| 356 | 433 | 16.7 | 9 | 322 | 478 | 4 | 0.30 | 2.30 | 3.40 | 2.20 | 123 |
| 356 | 420 | 13.9 | 6 | 322 | 478 | 4 | 0.39 | 1.75 | 2.61 | 1.71 | 160 |
| 356 | 420 | 13.9 | 6 | 322 | 478 | 4 | 0.39 | 1.75 | 2.61 | 1.71 | 157 |
| 374 | 467 | | | 322 | 518 | 4 | 0.26 | 2.60 | 3.90 | 2.50 | 138 |
| 374 | 467 | 22.3 | 8 | 322 | 518 | 4 | 0.26 | 2.60 | 3.90 | 2.50 | 136 |
| 374 | 467 | | | 322 | 518 | 4 | 0.26 | 2.60 | 3.90 | 2.50 | 136 |
| 374 | 467 | 22.3 | 8 | 322 | 518 | 4 | 0.27 | 2.50 | 3.70 | 2.50 | 140 |
| 374 | 467 | 22.3 | 8 | 322 | 518 | 4 | 0.27 | 2.50 | 3.70 | 2.50 | 137 |
| 373 | 455 | 22 | 10 | 322 | 518 | 4 | 0.35 | 1.90 | 2.90 | 1.80 | 192 |
| 373 | 455 | 22 | 10 | 322 | 518 | 4 | 0.35 | 1.90 | 2.90 | 1.80 | 190 |
| 373 | 455 | | | 322 | 518 | 4 | 0.35 | 1.90 | 2.90 | 1.80 | 194 |
| 373 | 455 | 22 | 10 | 322 | 518 | 4 | 0.35 | 1.90 | 2.90 | 1.80 | 190 |
| 373 | 455 | 22 | 10 | 322 | 518 | 4 | | | | | 187 |
| 373 | 455 | 22 | 10 | 322 | 518 | 4 | | | | | 193 |
| 373 | 455 | 22 | 10 | 322 | 518 | 4 | | | | | 194 |
| 373 | 455 | 22 | 10 | 322 | 518 | 4 | | | | | 192 |
| 373 | 455 | 22 | 10 | 322 | 518 | 4 | 0.35 | 1.90 | 2.90 | 1.80 | 189 |
| 396 | 523 | | | 335 | 586 | 6 | | | | | 271 |

d 318~340 mm



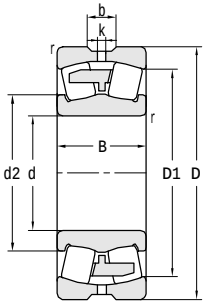



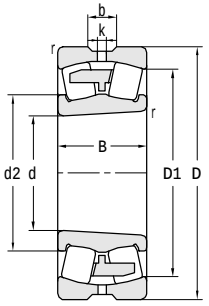



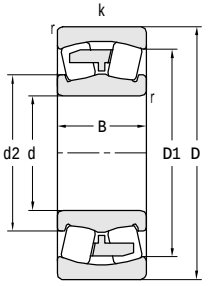

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | |
| mm | | | | kN | | r/min | | | |
| **318** | 620 | 224 | 6 | 4350 | 7600 | | | **206/318/C9** | |
| **320** | 400 | 60 | 2.1 | 670 | 1620 | 920 | 1280 | **23864CA/W33** | |
| | 400 | 60 | 2.1 | 670 | 1620 | 920 | 1280 | **23864CAK/W33** | |
| | 440 | 90 | 3 | 1360 | 2650 | 900 | 1200 | **23964CA** | **23964CA/W33** |
| | 440 | 90 | 3 | 1360 | 2650 | 900 | 1200 | **23964CAK/W33** | |
| | 480 | 121 | 4 | 2130 | 3610 | 800 | 1000 | **23064** | **23064/W33** |
| | 480 | 121 | 4 | 2130 | 3610 | 800 | 1000 | **23064K** | |
| | 480 | 121 | 4 | 2130 | 3610 | 800 | 1000 | **23064F3** | |
| | 480 | 121 | 4 | 2130 | 3610 | 800 | 1000 | **23064/YA2** | |
| | 480 | 121 | 4 | 2130 | 3900 | 800 | 1000 | **23064CA** | **23064CA/W33** |
| | 480 | 121 | 4 | 2130 | 3900 | 800 | 1000 | **23064CAK** | **23064CAK/W33** |
| | 480 | 121 | 4 | 2130 | 3900 | 800 | 1000 | **23064CAF3/W33** | |
| | 480 | 160 | 4 | 2700 | 5100 | 560 | 700 | **24064CA** | **24064CA/W33** |
| | 480 | 160 | 4 | 2700 | 5100 | 560 | 700 | **24064CAF3** | **24064CAF3/W33** |
| | 480 | 160 | 4 | 2700 | 5100 | 560 | 700 | **24064CAK30/W33** | |
| | 540 | 176 | 5 | 2990 | 5350 | 630 | 800 | **23164K/W33** | |
| | 540 | 176 | 5 | 3560 | 5700 | 630 | 800 | **23164CA** | **23164CA/W33** |
| | 540 | 176 | 5 | 3560 | 5700 | 630 | 800 | **23164CAK** | **23164CAK/W33** |
| | 540 | 210 | 5 | 4040 | 6750 | 340 | 430 | **24164CA/W33** | **24164CA/W33T** |
| | 540 | 210 | 5 | 4040 | 6750 | 340 | 430 | **24164CAK30/W33** | |
| | 580 | 150 | 5 | 3420 | 4660 | 670 | 850 | **22264CA** | **22264CA/W33** |
| | 580 | 150 | 5 | 3420 | 4660 | 670 | 850 | **22264CACK** | |
| | 580 | 150 | 5 | 3420 | 4660 | 700 | 900 | **22264/W33** | |
| | 580 | 150 | 5 | 3420 | 4660 | 700 | 900 | **22264K/W33** | |
| | 580 | 208 | 5 | 4180 | 6370 | 500 | 630 | **23264** | **23264/W33** |
| | 580 | 208 | 5 | 4180 | 6820 | 500 | 630 | **23264CA** | **23264CA/W33** |
| | 580 | 208 | 5 | 4180 | 6820 | 500 | 630 | **23264CA/YA1W33** | |
| | 580 | 208 | 5 | 4180 | 6820 | 500 | 630 | **23264CAF3** | **23264CAF3/W33** |
| | 580 | 208 | 5 | 4180 | 6820 | 500 | 630 | **23264CAKF3/W33** | |
| | 580 | 208 | 5 | 4180 | 6820 | 500 | 630 | **23264CAK/W33** | |
| | 670 | 200 | 7.5 | 4530 | 6820 | 450 | 600 | **22364CAK/W33** | |
| **340** | 460 | 90 | 3 | 1390 | 2660 | 900 | 1200 | **23968CA/W33** | |
| | 460 | 90 | 3 | 1390 | 2700 | 900 | 1200 | **23968CAK/W33** | |
| | 460 | 90 | 3 | 1390 | 2660 | 900 | 1200 | **23968CAF3/W33** | |

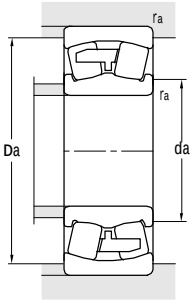
| Other dimensions | | | | Contact surface and chamfer dimensions | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d2 | D1 | b | k | da | Da | ra | e | Y1 | Y2 | Y0 | |
| mm | | | | mm | | | mm | | | | kg |
| 424 | 524 | | | 348 | 578 | 5 | | | | | 320 |
| 346 | 376 | 13.9 | 6 | 332 | 388 | 2 | 0.12 | 5.60 | 8.40 | 5.60 | 20.5 |
| 346 | 376 | 13.9 | 6 | 332 | 388 | 2 | 0.12 | 5.60 | 8.40 | 5.60 | 20.3 |
| 360 | 402 | 15 | 6 | 338 | 426 | 2.5 | 0.18 | 3.80 | 5.60 | 3.60 | 41.8 |
| 360 | 405 | 15 | 6 | 360 | 427 | 2.5 | 0.18 | 3.80 | 5.60 | 3.60 | 40.4 |
| 368 | 431 | 22 | 8 | 338 | 462 | 3 | | | | | 78.5 |
| 368 | 431 | | | | | | | | | | 76.1 |
| 368 | 431 | | | 338 | 462 | 3 | | | | | 77.5 |
| 368 | 431 | | | 338 | 462 | 3 | | | | | 78.9 |
| 368 | 431 | 16.7 | 8 | 338 | 462 | 3 | 0.23 | 2.90 | 4.40 | 2.80 | 84.8 |
| 368 | 431 | 16.7 | 8 | 338 | 462 | 3 | 0.23 | 2.90 | 4.40 | 2.80 | 84.3 |
| 368 | 431 | 16.7 | 8 | 338 | 462 | 3 | 0.23 | 2.90 | 4.40 | 2.80 | 84.7 |
| 368 | 421 | 22 | 8 | 338 | 462 | 3 | 0.32 | 2.09 | 3.11 | 2.04 | 106 |
| 368 | 421 | 22 | 8 | 338 | 462 | 3 | 0.32 | 2.09 | 3.11 | 2.04 | 106 |
| 368 | 421 | 22 | 8 | 338 | 462 | 3 | 0.32 | 2.09 | 3.11 | 2.04 | 103 |
| 387 | 465 | 22.3 | 12 | 342 | 518 | 4 | | | | | 165 |
| 389 | 465 | 22.3 | 8 | 342 | 518 | 4 | 0.31 | 2.20 | 3.30 | 2.20 | 200 |
| 389 | 465 | 22.3 | 8 | 342 | 518 | 4 | 0.31 | 2.20 | 3.30 | 2.20 | 195 |
| 364 | 455 | 17.7 | 9.5 | 342 | 518 | 4 | 0.40 | 1.70 | 2.50 | 1.60 | 206 |
| 364 | 455 | 17.7 | 9.5 | 342 | 518 | 4 | 0.40 | 1.70 | 2.50 | 1.60 | 203 |
| 400 | 502 | 22.3 | 8 | 342 | 558 | 4 | 0.26 | 2.60 | 3.90 | 2.50 | 175 |
| 400 | 502 | | | 342 | 558 | 4 | 0.26 | 2.60 | 3.90 | 2.50 | 172 |
| 400 | 502 | 22.3 | 8 | 342 | 558 | 4 | 0.27 | 2.50 | 3.70 | 2.50 | 177 |
| 400 | 502 | 22.3 | 8 | 342 | 558 | 4 | 0.27 | 2.50 | 3.70 | 2.50 | 173 |
| 400 | 490 | | | 342 | 558 | 4 | 0.35 | 1.90 | 2.90 | 1.80 | 247 |
| 400 | 490 | 22.3 | 10 | 342 | 558 | 4 | 0.35 | 1.90 | 2.90 | 1.80 | 250 |
| 400 | 490 | 22.3 | 10 | 342 | 558 | 4 | 0.35 | 1.90 | 2.90 | 1.80 | 248 |
| 400 | 490 | 22.3 | 10 | 342 | 558 | 4 | 0.35 | 1.90 | 2.90 | 1.80 | 252 |
| 400 | 490 | 22.3 | 10 | 342 | 558 | 4 | 0.35 | 1.90 | 2.90 | 1.80 | 240 |
| 400 | 490 | 22.3 | 10 | 342 | 558 | 4 | 0.35 | 1.9 | 2.9 | 1.8 | 241 |
| 430 | 566 | 22.3 | 12 | 355 | 635 | 6 | | | | | 344 |
| 378 | 423 | 15 | 6 | 354 | 446 | 2.5 | 0.17 | 4.00 | 5.90 | 4.00 | 46 |
| 378 | 423 | 15 | 6 | 354 | 446 | 2.5 | 0.17 | 4.00 | 5.90 | 4.00 | 45.9 |
| 378 | 423 | 15 | 6 | 354 | 446 | 2.5 | 0.17 | 4.00 | 5.90 | 4.00 | 57.3 |

d 340~360 mm



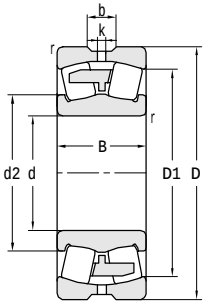



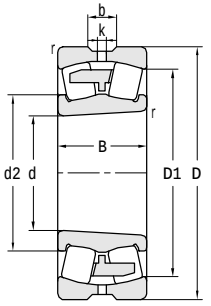



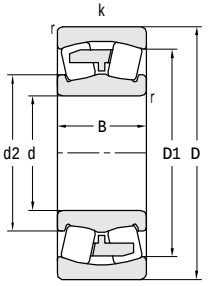

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | |
| mm | | | | kN | | r/min | | | |
| **340** | 520 | 133 | 5 | 2570 | 4400 | 700 | 900 | **23068CA** | **23068CA/W33** |
| | 520 | 133 | 5 | 2570 | 4400 | 700 | 900 | **23068CA/W33YA1** | |
| | 520 | 133 | 5 | 2570 | 4400 | 700 | 900 | **23068CAK** | |
| | 520 | 133 | 5 | 2570 | 4400 | 700 | 900 | **23068CAF3** | **23068CAF3/W33** |
| | 520 | 133 | 5 | 2570 | 4400 | 700 | 900 | **23068CAKF3** | **23068CAKF3/W33** |
| | 520 | 133 | 5 | 2570 | 4400 | 700 | 900 | **23068CAK/W33** | |
| | 520 | 180 | 5 | 3280 | 5890 | 530 | 670 | **24068CA/W33** | **24068CA/C9W33** |
| | 520 | 180 | 5 | 3280 | 5890 | 530 | 670 | **24068CAK/W33** | |
| | 520 | 180 | 5 | 3280 | 5890 | 530 | 670 | **24068CAF1/HA** | **24068CAF1/W33** |
| | 520 | 180 | 5 | 3280 | 5890 | 530 | 670 | **24068CK30/W33** | |
| | 520 | 180 | 5 | 3280 | 5890 | 530 | 670 | **24068CAF3** | **24068CAF3/W33** |
| | 520 | 180 | 5 | 3280 | 5890 | 530 | 670 | **24068CAK30F1** | **24068CAK30F1/W33** |
| | 520 | 180 | 5 | 3280 | 5890 | 530 | 670 | **24068CAK30F3** | **24068CAK30F3/W33** |
| | 580 | 190 | 5 | 4040 | 6460 | 600 | 750 | **23168CA** | **23168CA/W33** |
| | 580 | 190 | 5 | 4040 | 6460 | 600 | 750 | **23168CAK/W33** | |
| | 580 | 190 | 5 | 4040 | 6460 | 600 | 750 | **23168CAF3/W33** | |
| | 580 | 190 | 5 | 4040 | 6460 | 600 | 750 | **23168CAKF3/W33** | |
| | 580 | 243 | 5 | 5040 | 8220 | 320 | 400 | **24168CA/W33** | |
| | 580 | 243 | 5 | 5040 | 8220 | 320 | 400 | **24168CAK30/W33** | |
| | 580 | 243 | 5 | 5040 | 8220 | 320 | 400 | **24168CAK30F3/W33** | |
| | 620 | 224 | 6 | 4350 | 7600 | 430 | 530 | **23268** | |
| | 620 | 224 | 6 | 5000 | 8150 | 500 | 700 | **23268CA** | **23268CA/W33** |
| | 620 | 224 | 6 | 5000 | 8150 | 500 | 700 | **23268CAK** | **23268CAK/W33** |
| **360** | 480 | 90 | 3 | 1390 | 3000 | 850 | 1100 | **23972CA** | **23972CA/W33** |
| | 480 | 90 | 3 | 1330 | 2610 | 850 | 1100 | **23972CAK/W33** | |
| | 540 | 134 | 5 | 2610 | 4800 | 670 | 850 | **23072CA** | **23072CA/W33** |
| | 540 | 134 | 5 | 2610 | 4800 | 670 | 850 | **23072CAK** | |
| | 540 | 134 | 5 | 2610 | 4800 | 670 | 850 | **23072CAF3** | **23072CAF1** |
| | 540 | 134 | 5 | 2610 | 4800 | 670 | 850 | **23072CAKF3/W33** | |
| | 540 | 134 | 5 | 2610 | 4800 | 670 | 850 | **23072CAF3/HAW33** | **23072CAF3/W33** |
| | 540 | 180 | 5 | 3370 | 6220 | 600 | 750 | **24072CA** | **24072CA/W33** |
| | 540 | 180 | 5 | 3370 | 6220 | 600 | 750 | **24072CAK/W33** | |
| | 540 | 180 | 5 | 3370 | 6220 | 600 | 750 | **24072CAK30** | |
| | 600 | 192 | 5 | 3400 | 6200 | 560 | 700 | **23172K/W33** | |
| | 600 | 192 | 5 | 4080 | 6850 | 560 | 700 | **23172CA** | **23172CA/W33** |

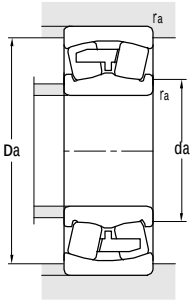
| Other dimensions | | | | Contact surface and chamfer dimensions | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d2 | D1 | b | k | da | Da | ra | e | Y1 | Y2 | Y0 | |
| mm | | | | mm | | | mm | | | | kg |
| 400 | 464 | 22.3 | 8 | 362 | 498 | 4 | 0.24 | 2.80 | 4.20 | 2.80 | 115 |
| 400 | 464 | 22.3 | 8 | 362 | 498 | 4 | 0.24 | 2.80 | 4.20 | 2.80 | 114 |
| 400 | 464 | 22.3 | | 362 | 498 | 4 | 0.24 | 2.80 | 4.20 | 2.80 | 112 |
| 400 | 464 | 22.3 | 8 | 362 | 498 | 4 | 0.24 | 2.80 | 4.20 | 2.80 | 114 |
| 400 | 464 | 22.3 | 8 | 362 | 498 | 4 | 0.24 | 2.80 | 4.20 | 2.80 | 111 |
| 400 | 464 | 22.3 | 8 | 362 | 498 | 4 | 0.24 | 2.80 | 4.20 | 2.80 | 111 |
| 394 | 451 | 16.7 | 8 | 362 | 498 | 4 | 0.33 | 2.00 | 3.00 | 2.00 | 137 |
| 394 | 451 | 16.7 | 8 | 362 | 498 | 4 | 0.33 | 2.00 | 3.00 | 2.00 | 132 |
| 394 | 451 | 16.7 | 8 | 362 | 498 | 4 | 0.33 | 2.00 | 3.00 | 2.00 | 136 |
| 377 | 453 | 16.7 | 9 | 358 | 502 | 4 | 0.33 | 2.00 | 3.00 | 2.00 | 137 |
| 394 | 451 | 16.7 | 8 | 362 | 498 | 4 | 0.33 | 2.00 | 3.00 | 2.00 | 136 |
| 394 | 451 | 16.7 | 8 | 362 | 498 | 4 | 0.33 | 2.00 | 3.00 | 2.00 | 134 |
| 394 | 451 | 16.7 | 8 | 362 | 498 | 4 | 0.33 | 2.00 | 3.00 | 2.00 | 134 |
| 412 | 497 | 22.3 | 8 | 362 | 558 | 4 | 0.31 | 2.20 | 3.30 | 2.20 | 211 |
| 412 | 497 | 22.3 | 8 | 362 | 558 | 4 | 0.31 | 2.20 | 3.30 | 2.20 | 208 |
| 412 | 497 | 22.3 | 8 | 362 | 558 | 4 | 0.31 | 2.20 | 3.30 | 2.20 | 210 |
| 412 | 497 | 22.3 | 8 | 362 | 558 | 4 | 0.31 | 2.20 | 3.30 | 2.20 | 206 |
| 408 | 486 | 22.3 | 10 | 362 | 558 | 4 | 0.4 | 1.7 | 2.5 | 1.6 | 261 |
| 408 | 486 | 22.3 | 10 | 362 | 558 | 4 | 0.40 | 1.70 | 2.50 | 1.60 | 256 |
| 408 | 486 | 22.3 | 10 | 362 | 558 | 4 | 0.40 | 1.70 | 2.50 | 1.60 | 258 |
| 424 | 524 | | | 368 | 592 | 5 | 0.35 | 1.9 | 2.9 | 1.8 | 300 |
| 426 | 528 | | | 368 | 592 | 5 | 0.35 | 1.90 | 2.90 | 1.80 | 299 |
| 426 | 528 | 22.3 | 12 | 368 | 592 | 5 | 0.35 | 1.90 | 2.90 | 1.80 | 290 |
| 403 | 441 | 11.1 | 6 | 374 | 466 | 2.5 | 0.16 | 4.20 | 6.30 | 4.00 | 45.9 |
| 403 | 441 | 11.1 | 6 | 374 | 466 | 2.5 | 0.16 | 4.20 | 6.30 | 4.00 | 46.4 |
| 419 | 486 | 22.3 | 8 | 382 | 518 | 4 | 0.23 | 2.90 | 4.40 | 2.80 | 126 |
| 419 | 486 | | | 382 | 518 | 4 | 0.23 | 2.90 | 4.40 | 2.80 | 125 |
| 419 | 486 | | | 382 | 518 | 4 | 0.23 | 2.90 | 4.40 | 2.80 | 125 |
| 419 | 486 | 22.3 | 8 | 382 | 518 | 4 | 0.23 | 2.90 | 4.40 | 2.80 | 124 |
| 419 | 486 | 22.3 | 8 | 382 | 518 | 4 | 0.23 | 2.90 | 4.40 | 2.80 | 125 |
| 398 | 474 | 16.7 | 8 | 382 | 518 | 4 | 0.31 | 2.2 | 3.3 | 2.2 | 147 |
| 398 | 474 | 16.7 | 8 | 382 | 518 | 4 | 0.31 | 2.20 | 3.30 | 2.20 | 143 |
| 398 | 474 | | | 382 | 518 | 4 | 0.31 | 2.2 | 3.3 | 2.2 | 148 |
| 434 | 518 | 22.3 | 12 | 382 | 578 | 4 | 0.30 | 2.30 | 3.40 | 2.20 | 218 |
| 434 | 518 | 22.3 | 12 | 382 | 578 | 4 | 0.30 | 2.30 | 3.40 | 2.20 | 224 |

d 360~380 mm



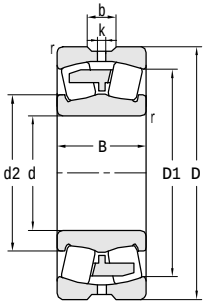



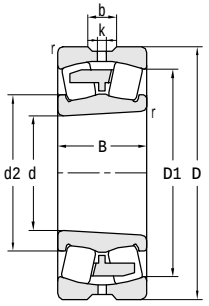



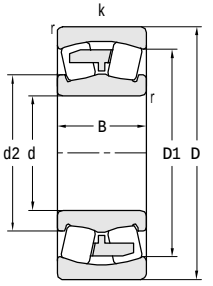

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | |
| mm | | | | kN | | r/min | | | |
| **360** | 600 | 192 | 5 | 4080 | 6850 | 560 | 700 | **23172CAK/W33** | |
| | 600 | 192 | 5 | 4080 | 6850 | 560 | 700 | **23172CAKF1/W33** | |
| | 600 | 243 | 5 | 5320 | 8840 | 300 | 380 | **24172CA** | **24172CA/W33** |
| | 600 | 243 | 5 | 5320 | 8840 | 300 | 380 | **24172CA/W36** | |
| | 600 | 243 | 5 | 5320 | 8840 | 300 | 380 | **24172CAF1** | **24172CAF1/W33** |
| | 600 | 243 | 5 | 5320 | 8840 | 300 | 380 | **24172CAK30/W33** | |
| | 600 | 243 | 5 | 5320 | 8840 | 300 | 380 | **24172CAK30F1/W33** | **24172CAK30F3/W33** |
| | 600 | 243 | 5 | 5320 | 8840 | 300 | 380 | **24172CAQ1/W36** | |
| | 600 | 243 | 5 | 5600 | 8400 | 300 | 380 | **SX-24172** | |
| | 650 | 170 | 6 | 4200 | 6200 | 600 | 800 | **22272CA/W33** | |
| | 650 | 232 | 6 | 5130 | 7880 | 400 | 500 | **23272** | **23272/W33** |
| | 650 | 232 | 6 | 5300 | 9050 | 500 | 700 | **23272CA** | **23272CA/W33** |
| | 650 | 232 | 6 | 5300 | 9050 | 500 | 700 | **23272CAK** | **23272CAK/W33** |
| | 650 | 232 | 6 | 5300 | 9050 | 500 | 700 | **23272CAKF3/W33** | |
| | 750 | 224 | 7.5 | 5650 | 8600 | 400 | 500 | **22372CA** | **22372CA/W33** |
| | 750 | 224 | 7.5 | 5650 | 8600 | 400 | 500 | **22372CAK** | **22372CAK/W33** |
| | 750 | 224 | 7.5 | 5650 | 8600 | 400 | 500 | **22372CAF3** | |
| | 750 | 224 | 7.5 | 5650 | 8600 | 400 | 500 | **22372CAKF3** | |
| **380** | 520 | 106 | 4 | 1860 | 3900 | 800 | 1000 | **23976CA/W33** | |
| | 520 | 106 | 4 | 1860 | 3900 | 800 | 1000 | **23976CAF1/W33** | **23976CAF3/W33** |
| | 560 | 135 | 5 | 2750 | 5000 | 630 | 800 | **23076CA** | **23076CA/W33** |
| | 560 | 135 | 5 | 2750 | 5000 | 630 | 800 | **23076CAK/W33** | |
| | 560 | 135 | 5 | 2750 | 5000 | 630 | 800 | **23076CAF1/W33** | **23076CAF3/W33** |
| | 560 | 135 | 5 | 2750 | 5000 | 630 | 800 | **23076CAKF3** | **23076CAKF3/W33** |
| | 560 | 180 | 5 | 3420 | 6550 | 480 | 600 | **24076CA/W33** | |
| | 560 | 180 | 5 | 3420 | 6550 | 480 | 600 | **24076CAF3** | **24076CAF3/W33** |
| | 560 | 180 | 5 | 3420 | 6550 | 480 | 600 | **24076CAK30F3/W33** | |
| | 620 | 194 | 5 | 4180 | 7300 | 400 | 500 | **23176/W33** | |
| | 620 | 194 | 5 | 4300 | 7750 | 500 | 900 | **23176CA** | **23176CA/W33** |
| | 620 | 194 | 5 | 4300 | 7750 | 500 | 900 | **23176CA/W33T** | |
| | 620 | 194 | 5 | 4300 | 7750 | 500 | 900 | **23176CAK** | **23176CAK/W33** |
| | 620 | 194 | 5 | 4300 | 7750 | 500 | 900 | **23176CAK30/W33** | |
| | 620 | 194 | 5 | 4300 | 7750 | 500 | 900 | **23176CAF3/HAW33** | **23176CAF3/W33** |
| | 620 | 194 | 5 | 4300 | 7750 | 500 | 900 | **23176CAKF3** | **23176CAKF3/W33** |
| | 620 | 194 | 5 | 4300 | 7750 | 500 | 900 | **23176CAK/W33** | |

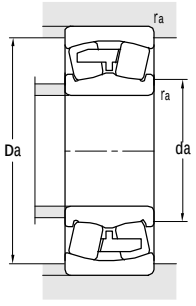
| Other dimensions | | | | Contact surface and chamfer dimensions | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d2 | D1 | b | k | da | Da | ra | e | Y1 | Y2 | Y0 | |
| mm | | | | mm | | | mm | | | | kg |
| 434 | 518 | 22.3 | 12 | 382 | 578 | 4 | 0.30 | 2.30 | 3.40 | 2.20 | 223 |
| 434 | 518 | 22.3 | 12 | 382 | 578 | 4 | 0.30 | 2.30 | 3.40 | 2.20 | 222 |
| 430 | 511 | 20 | 12 | 382 | 578 | 4 | 0.37 | 1.80 | 2.70 | 1.80 | 270 |
| 430 | 511 | 20 | 8 | 382 | 578 | 4 | 0.37 | 1.80 | 2.70 | 1.80 | 270 |
| 430 | 511 | 20 | 12 | 382 | 578 | 4 | 0.37 | 1.80 | 2.70 | 1.80 | 269 |
| 430 | 511 | 20 | 12 | 382 | 578 | 4 | 0.37 | 1.80 | 2.70 | 1.80 | 267 |
| 430 | 511 | 20 | 12 | 382 | 578 | 4 | 0.37 | 1.80 | 2.70 | 1.80 | 268 |
| 430 | 511 | 20 | 12 | 382 | 578 | 4 | 0.37 | 1.80 | 2.70 | 1.80 | 270 |
| 430 | 511 | 20 | 8 | 382 | 578 | 4 | 0.37 | 1.80 | 2.70 | 1.80 | 271 |
| 449 | 563 | 22.3 | 8 | 388 | 622 | 5 | 0.26 | 2.60 | 3.87 | 2.54 | 248 |
| 443 | 547 | | | 388 | 622 | 5 | 0.35 | 1.90 | 2.90 | 1.80 | 341 |
| 443 | 547 | 22.3 | 10 | 388 | 622 | 5 | 0.35 | 1.90 | 2.90 | 1.80 | 332 |
| 443 | 547 | | | 388 | 622 | 5 | 0.35 | 1.90 | 2.90 | 1.80 | 329 |
| 443 | 547 | 22.3 | 10 | 388 | 622 | 5 | 0.35 | 1.90 | 2.90 | 1.80 | 327 |
| 471 | 631 | 22.3 | 12 | 392 | 720 | 6 | 0.31 | 2.21 | 3.29 | 2.16 | 469 |
| 471 | 631 | 22.3 | 12 | 392 | 720 | 6 | 0.31 | 2.21 | 3.29 | 2.16 | 443 |
| 471 | 631 | | | 392 | 720 | 6 | 0.31 | 2.21 | 3.29 | 2.16 | 466 |
| 471 | 631 | | | 392 | 720 | 6 | 0.31 | 2.21 | 3.29 | 2.16 | 441 |
| 426 | 476 | 15 | 10 | 398 | 502 | 3 | 0.17 | 4.00 | 5.90 | 4.00 | 69.9 |
| 426 | 476 | 15 | 10 | 398 | 502 | 3 | 0.17 | 4.00 | 5.90 | 4.00 | 69.5 |
| 441 | 505 | 22.3 | 8 | 402 | 538 | 4 | 0.22 | 3.00 | 4.60 | 2.80 | 125 |
| 441 | 505 | 22.3 | 8 | 402 | 538 | 4 | 0.22 | 3.00 | 4.60 | 2.80 | 122 |
| 441 | 505 | 22.3 | 8 | 402 | 538 | 4 | 0.22 | 3.00 | 4.60 | 2.80 | 129 |
| 441 | 505 | 22.3 | 8 | 402 | 538 | 4 | 0.22 | 3.00 | 4.60 | 2.80 | 125 |
| 435 | 494 | 22 | 10 | 402 | 538 | 4 | 0.3 | 2.3 | 3.4 | 2.2 | 151 |
| 435 | 494 | 22.3 | 8 | 402 | 538 | 4 | 0.30 | 2.30 | 3.40 | 2.20 | 150 |
| 435 | 494 | 22 | 10 | 402 | 538 | 4 | 0.30 | 2.30 | 3.40 | 2.20 | 153 |
| 457 | 540 | 22 | 8 | 402 | 598 | 4 | 0.30 | 2.30 | 3.40 | 2.20 | 237 |
| 457 | 540 | 22 | 8 | 402 | 598 | 4 | 0.3 | 2.3 | 3.4 | 2.2 | 249 |
| 457 | 540 | 27 | 16 | 402 | 598 | 4 | 0.30 | 2.30 | 3.40 | 2.20 | 248 |
| 457 | 540 | 22 | 8 | 402 | 598 | 4 | 0.30 | 2.30 | 3.40 | 2.20 | 242 |
| 457 | 540 | 22 | 8 | 402 | 598 | 4 | 0.30 | 2.30 | 3.40 | 2.20 | 241 |
| 457 | 540 | 22 | 8 | 402 | 598 | 4 | 0.30 | 2.30 | 3.40 | 2.20 | 248 |
| 457 | 540 | 22 | 8 | 402 | 598 | 4 | 0.30 | 2.30 | 3.40 | 2.20 | 241 |
| 457 | 540 | 22 | 8 | 402 | 598 | 4 | 0.30 | 2.30 | 3.40 | 2.20 | 243 |

d 380~420 mm



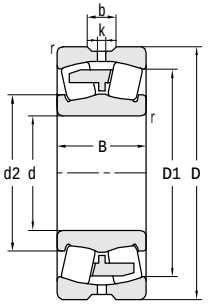



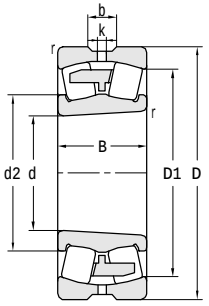



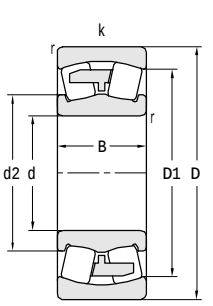

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | |
| mm | | | | kN | | r/min | | | |
| **380** | 620 | 243 | 5 | 5420 | 9310 | 300 | 380 | **24176CA/C9** | **24176CA/W33** |
| | 620 | 243 | 5 | 5420 | 9310 | 300 | 380 | **24176CAK30/W33** | |
| | 680 | 240 | 6 | 5750 | 9300 | 400 | 650 | **23276CA/W33** | |
| | 680 | 240 | 6 | 5750 | 9300 | 400 | 650 | **23276CAKF3/W33** | **23176CAK30/W33** |
| | 780 | 230 | 7.5 | 6000 | 9300 | 350 | 500 | **22376CAF3** | **22376CAF3/W33** |
| **400** | 540 | 106 | 4 | 1900 | 4000 | 750 | 950 | **23980CA/W33** | |
| | 540 | 106 | 4 | 1900 | 4000 | 750 | 950 | **23980CAK/W33** | |
| | 540 | 106 | 4 | 1900 | 4000 | 750 | 950 | **23980CAF1/W33** | **23980CAF3/W33** |
| | 540 | 100 | 4 | 1900 | 4000 | 750 | 950 | **23980X2CAF3/W33** | **23980X2CAF3/W33YA1** |
| | 590 | 142 | 5 | 3090 | 5500 | 630 | 800 | **23080X3CA** | **23080X3CA/W33** |
| | 600 | 148 | 5 | 3090 | 5500 | 600 | 750 | **23080CA** | **23080CA/P5W33** |
| | 600 | 148 | 5 | 3090 | 5500 | 600 | 750 | **23080CAK/W33** | |
| | 600 | 148 | 5 | 3090 | 5500 | 600 | 750 | **23080CAF3** | **23080CAF3/W33** |
| | 600 | 148 | 5 | 3090 | 5500 | 600 | 750 | **23080CAKF3** | **23080CAKF3/W33** |
| | 600 | 200 | 5 | 4090 | 7800 | 450 | 560 | **24080CA/W33** | |
| | 600 | 200 | 5 | 4090 | 7800 | 450 | 560 | **24080CAF3** | **24080CAF3/W33** |
| | 600 | 200 | 5 | 4090 | 7800 | 450 | 560 | **24080CAK30/W33** | |
| | 650 | 200 | 6 | 4160 | 7860 | 380 | 480 | **23180/W33** | |
| | 650 | 200 | 6 | 4550 | 8200 | 500 | 900 | **23180CA** | **23180CA/W33** |
| | 650 | 200 | 6 | 4550 | 8200 | 500 | 900 | **23180CAF3** | **23180CAF3/W33** |
| | 650 | 200 | 6 | 4550 | 8200 | 500 | 900 | **23180CAKF3/W33** | **23180CAK/W33** |
| | 650 | 200 | 6 | 4550 | 8200 | 500 | 900 | **23180CA/HCRW33** | |
| | 670 | 216 | 6 | 4200 | 8540 | 380 | 480 | **23180X3CA/W33** | |
| | 650 | 250 | 6 | 5890 | 10070 | 320 | 400 | **24180CA** | **24180CA/W33** |
| | 650 | 250 | 6 | 5890 | 10070 | 320 | 400 | **24180CAF3** | **24180CAF3/W33** |
| | 650 | 250 | 6 | 5890 | 10070 | 320 | 400 | **24180CAK30/W33** | |
| | 650 | 250 | 6 | 5890 | 10070 | 320 | 400 | **24180CA/HG2W33** | |
| | 720 | 256 | 6 | 6450 | 11000 | 400 | 600 | **23280CA** | **23280CA/W33** |
| | 720 | 256 | 6 | 6450 | 11000 | 400 | 600 | **23280CAF3/W33** | **23280CAF3** |
| | 720 | 256 | 6 | 6450 | 11000 | 400 | 600 | **23280CAKF3/W33** | |
| | 820 | 243 | 7.5 | 7400 | 10300 | 400 | 700 | **22380CA** | **22380CA/W33** |
| | 820 | 243 | 7.5 | 7400 | 10300 | 400 | 700 | **22380CA/HCW33** | **22380CA/W33** |
| **420** | 520 | 75 | 2.1 | 950 | 2630 | 750 | 950 | **23884CAK** | **23884CAK/W33** |
| | 560 | 106 | 4 | 1950 | 4050 | 700 | 900 | **23984ACA/W33** | |

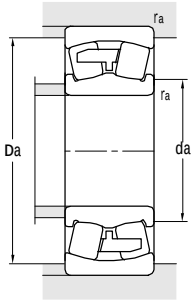
| Other dimensions | | | | Contact surface and chamfer dimensions | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d2 | D1 | b | k | da | Da | ra | e | Y1 | Y2 | Y0 | |
| mm | | | | mm | | | mm | | | | kg |
| 457 | 540 | 16.7 | 9 | 402 | 598 | 4 | 0.30 | 2.30 | 3.40 | 2.20 | 296 |
| 457 | 540 | 16.7 | 9 | 402 | 598 | 4 | 0.30 | 2.30 | 3.40 | 2.20 | 290 |
| 471 | 581 | 22.3 | 12 | 406 | 654 | 5 | 0.35 | 1.90 | 2.90 | 1.80 | 389 |
| 468 | 574 | 22.3 | 10 | 408 | 652 | 5 | 0.35 | 1.90 | 2.90 | 1.80 | 386 |
| 504 | 660 | | | 415 | 740 | 6 | | | | | 518 |
| 445 | 497 | 15 | 10 | 418 | 522 | 3 | 0.17 | 4.00 | 5.90 | 4.00 | 72.9 |
| 445 | 497 | 15 | 10 | 418 | 522 | 3 | 0.17 | 4.00 | 5.90 | 4.00 | 71.3 |
| 445 | 497 | 15 | 10 | 418 | 522 | 3 | 0.17 | 4.00 | 5.90 | 4.00 | 72.4 |
| 445 | 498 | 13.9 | 7.5 | 418 | 522 | 3 | 0.16 | 4.20 | 6.30 | 4.00 | 67.8 |
| 461 | 532 | 22.3 | 12 | 422 | 578 | 4 | 0.21 | 3.14 | 4.68 | 3.07 | 133 |
| 460 | 538 | | | 422 | 578 | 4 | 0.23 | 2.90 | 4.40 | 2.80 | 147 |
| 460 | 538 | 22 | 12 | 422 | 578 | 4 | 0.23 | 2.90 | 4.40 | 2.80 | 141 |
| 460 | 538 | 22 | 12 | 422 | 578 | 4 | 0.23 | 2.90 | 4.40 | 2.80 | 146 |
| 460 | 538 | 22 | 12 | 422 | 578 | 4 | 0.23 | 2.90 | 4.40 | 2.80 | 142 |
| 458 | 524 | 22 | 12 | 422 | 578 | 4 | 0.30 | 2.30 | 3.40 | 2.20 | 203 |
| 458 | 524 | 22 | 12 | 422 | 578 | 4 | 0.30 | 2.30 | 3.40 | 2.20 | 202 |
| 458 | 524 | 22 | 12 | 422 | 578 | 4 | 0.3 | 2.3 | 3.4 | 2.2 | 202 |
| 475 | 568 | 22.3 | 8 | 428 | 622 | 5 | | | | | 210 |
| 480 | 568 | 22.3 | 8 | 428 | 622 | 5 | 0.28 | 2.40 | 3.60 | 2.50 | 273 |
| 480 | 568 | 22.3 | 8 | 428 | 622 | 5 | 0.28 | 2.40 | 3.60 | 2.50 | 271 |
| 480 | 568 | 22.3 | 8 | 428 | 622 | 5 | 0.28 | 2.40 | 3.60 | 2.50 | 264 |
| 480 | 568 | 22.3 | 8 | 428 | 622 | 5 | 0.28 | 2.40 | 3.60 | 2.50 | 272 |
| 480 | 579 | 22.3 | 8 | 428 | 622 | 5 | 0.28 | 2.40 | 3.60 | 2.50 | 293 |
| 476 | 563 | 22.3 | 8 | 428 | 622 | 5 | 0.36 | 1.87 | 2.79 | 1.83 | 326 |
| 476 | 563 | 22.3 | 8 | 428 | 622 | 5 | 0.36 | 1.87 | 2.79 | 1.83 | 323 |
| 476 | 563 | 22.3 | 8 | 428 | 622 | 5 | 0.36 | 1.87 | 2.79 | 1.83 | 320 |
| 476 | 563 | 22.3 | 8 | 428 | 622 | 5 | 0.36 | 1.87 | 2.79 | 1.83 | 325 |
| 499 | 606 | 22 | 10 | 428 | 692 | 5 | 0.35 | 1.90 | 2.90 | 1.80 | 468 |
| 499 | 606 | 22 | 10 | 428 | 692 | 5 | 0.35 | 1.90 | 2.90 | 1.80 | 465 |
| 499 | 606 | 22 | 10 | 428 | 692 | 5 | 0.35 | 1.90 | 2.90 | 1.80 | 452 |
| 520 | 694 | 22.3 | 12 | 442 | 790 | 6 | 0.31 | 2.21 | 3.29 | 2.16 | 623 |
| 520 | 694 | 22.3 | 12 | 442 | 790 | 6 | 0.31 | 2.21 | 3.29 | 2.16 | 623 |
| 454 | 490 | 13.9 | 5 | 430 | 504 | 2 | 0.12 | 5.60 | 8.40 | 5.60 | 34.6 |
| 464 | 517 | 16.7 | 9 | 435 | 545 | 3 | 0.16 | 4.20 | 6.30 | 4.00 | 72.4 |

d 420~460 mm



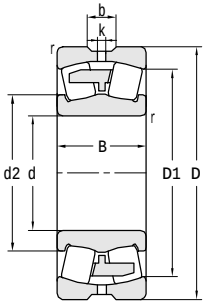



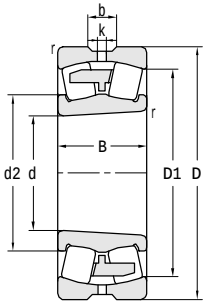



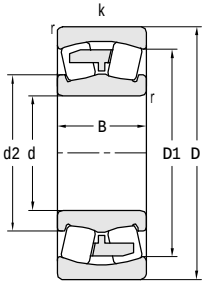

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | |
| mm | | | | kN | | r/min | | | |
| **420** | 560 | 106 | 4 | 1950 | 3950 | 700 | 900 | **23984CA/W33** | |
| | 620 | 150 | 5 | 3300 | 6400 | 500 | 1000 | **23084CA** | **23084CA/W33** |
| | 620 | 150 | 5 | 3300 | 6400 | 500 | 1000 | **23084CAK/W33** | |
| | 620 | 150 | 5 | 3300 | 6400 | 500 | 1000 | **23084CAF3** | **23084CAF3/W33** |
| | 620 | 150 | 5 | 3300 | 6400 | 500 | 1000 | **23084CAKF3** | **23084CAKF3/W33** |
| | 620 | 200 | 5 | 4180 | 8450 | 380 | 480 | **24084CA/W33** | **24084CA/HCW33** |
| | 620 | 200 | 5 | 4180 | 8450 | 380 | 480 | **24084CAF3/W33** | |
| | 620 | 200 | 5 | 4180 | 8450 | 380 | 480 | **24084CAK30F3/W33X** | |
| | 700 | 224 | 6 | 5320 | 9200 | 360 | 450 | **23184CA/W33** | **23184CAF3/W33** |
| | 700 | 224 | 6 | 5320 | 9200 | 360 | 450 | **23184CAK** | **23184CAK/W33** |
| | 700 | 224 | 6 | 5320 | 9200 | 360 | 450 | **23184CAF3** | **23184CAF3/W513** |
| | 700 | 280 | 6 | 7000 | 11950 | 300 | 380 | **24184CA/W33** | |
| | 700 | 280 | 6 | 7000 | 11950 | 300 | 380 | **24184CAK30/W33** | |
| | 700 | 280 | 6 | 7000 | 11950 | 300 | 380 | **24184CA/HCRW33** | |
| | 760 | 272 | 7.5 | 7250 | 11900 | 400 | 550 | **23284CA/W33** | |
| | 760 | 272 | 7.5 | 7250 | 11900 | 400 | 550 | **23284CAK** | **23284CAK/W33** |
| | 760 | 272 | 7.5 | 7250 | 11900 | 400 | 550 | **23284CAF3/C9W33** | |
| **440** | 600 | 118 | 4 | 2413 | 4850 | 450 | 560 | **23988CA/W33** | |
| | 600 | 118 | 4 | 2413 | 4850 | 450 | 560 | **23988CAF3/W33** | |
| | 650 | 157 | 6 | 3550 | 6500 | 500 | 900 | **23088CA** | **23088CA/W33** |
| | 650 | 157 | 6 | 3550 | 6500 | 500 | 900 | **23088CAK/W33** | |
| | 650 | 157 | 6 | 3550 | 6500 | 500 | 900 | **23088CAF3** | **23088CAF3/W33** |
| | 650 | 157 | 6 | 3550 | 6500 | 500 | 900 | **23088CAKF3** | **23088CAKF3/W33** |
| | 650 | 212 | 6 | 4550 | 9100 | 360 | 450 | **24088CA/W33** | |
| | 650 | 212 | 6 | 4550 | 9100 | 360 | 450 | **24088CA/HCW33** | |
| | 650 | 212 | 6 | 4550 | 9100 | 360 | 450 | **24088CAK30F3/W33** | |
| | 720 | 226 | 6 | 5900 | 10000 | 400 | 750 | **23188CA** | **23188CA/W33** |
| | 720 | 226 | 6 | 5900 | 10000 | 400 | 750 | **23188CAK/W33** | |
| | 720 | 280 | 6 | 7120 | 12500 | 300 | 380 | **24188CA/W33** | |
| | 720 | 280 | 6 | 7120 | 12500 | 300 | 380 | **24188CAK30/W33** | |
| | 790 | 280 | 7.5 | 7700 | 12800 | 350 | 500 | **23288CA/W33** | |
| | 790 | 280 | 7.5 | 7700 | 12800 | 350 | 500 | **23288CAK/W33** | |
| **460** | 580 | 118 | 3 | 1700 | 4655 | 450 | 560 | **24892CA** | **24892CA/W33** |
| | 580 | 118 | 3 | 1700 | 4655 | 450 | 560 | **24892CAK30/W33** | |

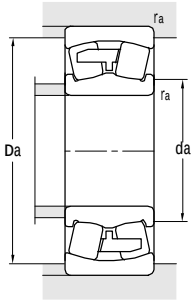
| Other dimensions | | | | Contact surface and chamfer dimensions | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d2 | D1 | b | k | da | Da | ra | e | Y1 | Y2 | Y0 | |
| mm | | | | mm | | | mm | | | | kg |
| 464 | 517 | 16.7 | 9 | 435 | 545 | 3 | 0.16 | 4.20 | 6.30 | 4.00 | 73.6 |
| 484 | 558 | | | 442 | 598 | 4 | 0.22 | 3.00 | 4.60 | 2.80 | 149 |
| 484 | 558 | | | 442 | 598 | 4 | 0.22 | 3.00 | 4.60 | 2.80 | 143 |
| 484 | 558 | 22 | 8 | 442 | 598 | 4 | 0.22 | 3.00 | 4.60 | 2.80 | 148 |
| 484 | 558 | 22 | 8 | 442 | 598 | 4 | 0.22 | 3.00 | 4.60 | 2.80 | 143 |
| 479 | 548 | 22.3 | 12 | 442 | 598 | 4 | 0.30 | 2.30 | 3.40 | 2.20 | 202 |
| 479 | 548 | 22.3 | 12 | 442 | 598 | 4 | 0.30 | 2.30 | 3.40 | 2.20 | 201 |
| 479 | 548 | 22.3 | 12 | 442 | 598 | 4 | 0.30 | 2.30 | 3.40 | 2.20 | 197 |
| 505 | 605 | 22.3 | 12 | 448 | 672 | 5 | 0.30 | 2.30 | 3.40 | 2.20 | 353 |
| 505 | 605 | 22.3 | 12 | 448 | 672 | 5 | 0.30 | 2.30 | 3.40 | 2.20 | 352 |
| 505 | 605 | 22.3 | 12 | 448 | 672 | 5 | 0.30 | 2.30 | 3.40 | 2.20 | 353 |
| 497 | 599 | 22.3 | 12 | 448 | 674 | 5 | 0.38 | 1.80 | 2.60 | 1.70 | 436 |
| 495 | 596 | 22.3 | 12 | 448 | 674 | 5 | 0.38 | 1.80 | 2.60 | 1.70 | 428 |
| 495 | 596 | 22.3 | 12 | 448 | 674 | 5 | 0.38 | 1.80 | 2.60 | 1.70 | 436 |
| 525 | 643 | 22 | 12 | 456 | 724 | 6 | 0.35 | 1.90 | 2.90 | 1.80 | 550 |
| 525 | 643 | 22 | 12 | 456 | 724 | 6 | 0.35 | 1.90 | 2.90 | 1.80 | 551 |
| 525 | 643 | 22 | 12 | 456 | 724 | 6 | 0.35 | 1.90 | 2.90 | 1.80 | 546 |
| 492 | 553 | 16.7 | 8 | 462 | 578 | 3 | 0.17 | 4.00 | 5.90 | 4.00 | 101 |
| 492 | 553 | 16.7 | 8 | 462 | 578 | 3 | 0.17 | 4.00 | 5.90 | 4.00 | 101 |
| 507 | 585 | 22.3 | 8 | 468 | 622 | 5 | 0.22 | 3.00 | 4.60 | 2.80 | 186 |
| 507 | 585 | 22.3 | 8 | 468 | 622 | 5 | 0.22 | 3.00 | 4.60 | 2.80 | 179 |
| 507 | 585 | 22.3 | 8 | 468 | 622 | 5 | 0.22 | 3.00 | 4.60 | 2.80 | 185 |
| 507 | 585 | | | 468 | 622 | 5 | 0.22 | 3.00 | 4.60 | 2.80 | 178 |
| 502 | 569 | 22.3 | 12 | 468 | 626 | 5 | 0.30 | 2.30 | 3.40 | 2.20 | 251 |
| 502 | 569 | 22.3 | 12 | 468 | 626 | 5 | 0.30 | 2.30 | 3.40 | 2.20 | 251 |
| 502 | 569 | 22.3 | 12 | 468 | 626 | 5 | 0.30 | 2.30 | 3.40 | 2.20 | 245 |
| 522 | 626 | | | 468 | 692 | 5 | 0.30 | 2.30 | 3.40 | 2.20 | 375 |
| 522 | 626 | 22.3 | 12 | 468 | 692 | 5 | 0.30 | 2.30 | 3.40 | 2.20 | 372 |
| 517 | 618 | 22.3 | 12 | 468 | 692 | 5 | 0.37 | 1.80 | 2.70 | 1.80 | 436 |
| 517 | 618 | 22.3 | 12 | 468 | 692 | 5 | 0.37 | 1.80 | 2.70 | 1.80 | 455 |
| 548 | 675 | 22.3 | 12 | 472 | 578 | 6 | 0.35 | 1.90 | 2.90 | 1.80 | 611 |
| 548 | 675 | 22.3 | 12 | 472 | 578 | 6 | 0.35 | 1.90 | 2.90 | 1.80 | 578 |
| 504 | 540 | 16.7 | 7 | 472 | 566 | 2.5 | 0.17 | 4.00 | 5.90 | 4.00 | 77 |
| 504 | 540 | 16.7 | 7 | 472 | 566 | 2.5 | 0.17 | 4.00 | 5.90 | 4.00 | 82 |

d 460~480 mm



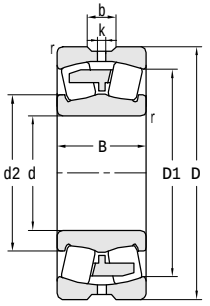



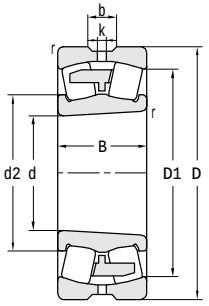



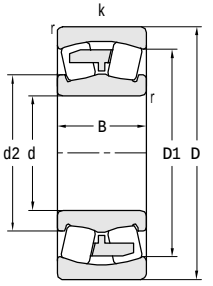

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | |
| mm | | | | kN | | r/min | | | |
| **460** | 620 | 118 | 4 | 2400 | 5000 | 500 | 900 | **23992CA/W33** | |
| | 620 | 110 | 4 | 2370 | 4750 | 430 | 530 | **23992X2CA/W33AYA1** | |
| | 650 | 120 | 4 | 430 | 5150 | 420 | 510 | **23992X3CA** | **23992X3CA/W33** |
| | 680 | 163 | 6 | 3800 | 7140 | 500 | 850 | **23092CA** | **23092CA/W33** |
| | 680 | 163 | 6 | 3800 | 7140 | 500 | 850 | **23092CAF3** | **23092CAF3/W33** |
| | 680 | 163 | 6 | 3800 | 7140 | 500 | 850 | **23092CAKF3** | |
| | 680 | 163 | 6 | 3800 | 7140 | 500 | 850 | **23092CAK** | **23092CAK/W33** |
| | 680 | 218 | 6 | 4900 | 10200 | 340 | 430 | **24092CA/W33** | |
| | 680 | 218 | 6 | 4900 | 10200 | 340 | 430 | **24092CAF3/W33** | |
| | 680 | 218 | 6 | 4900 | 10200 | 340 | 430 | **24092CA/HCRW33** | |
| | 760 | 240 | 7.5 | 6300 | 11100 | 350 | 700 | **23192CA** | **23192CA/W33** |
| | 760 | 240 | 7.5 | 6300 | 11100 | 350 | 700 | **23192CAK/W33** | |
| | 760 | 240 | 7.5 | 6300 | 11100 | 350 | 700 | **23192CAF3** | **23192CAF3/W33** |
| | 760 | 240 | 7.5 | 6300 | 11100 | 350 | 700 | **23192CAKF3/W33** | |
| | 760 | 300 | 7.5 | 7850 | 14400 | 160 | 200 | **24192CA/W33** | |
| | 760 | 300 | 7.5 | 7850 | 14400 | 160 | 200 | **24192CAK30/W33** | |
| | 760 | 300 | 7.5 | 7850 | 14400 | 160 | 200 | **24192CAF3/W33** | |
| | 830 | 296 | 7.5 | 8400 | 13600 | 350 | 500 | **23292CAKF3/W33** | |
| **479** | 790 | 258 | 7.5 | 5300 | 12100 | 300 | 380 | **231/479X2CAKF1/W33XYB2** | |
| **480** | 600 | 90 | 3 | 1350 | 3985 | 500 | 900 | **23896CA** | **23896CA/W33** |
| | 650 | 128 | 5 | 2800 | 5725 | 500 | 900 | **23996CA/W33** | |
| | 650 | 128 | 5 | 2800 | 5725 | 500 | 900 | **23996CAF1/W33** | **23996CAF3/W33** |
| | 650 | 128 | 5 | 2800 | 5725 | 500 | 900 | **23996CAKF1** | **23996CAKF3** |
| | 650 | 128 | 5 | 2800 | 5725 | 500 | 900 | **23996CAKF1/W33** | |
| | 700 | 165 | 6 | 3800 | 6900 | 450 | 850 | **23096CA/W33** | |
| | 700 | 165 | 6 | 3800 | 6900 | 450 | 850 | **23096CAK/W33** | |
| | 700 | 165 | 6 | 3260 | 7530 | 400 | 500 | **23096F3** | **23096F3/W33** |
| | 700 | 218 | 6 | 5000 | 10400 | 340 | 430 | **24096CA/W33** | |
| | 700 | 218 | 6 | 5000 | 10400 | 340 | 430 | **24096CAK30/W33** | |
| | 790 | 248 | 7.5 | 6850 | 12000 | 350 | 700 | **23196CA/W33** | |
| | 790 | 248 | 7.5 | 6850 | 12000 | 350 | 700 | **23196CAF1/W33X** | **23196CAF3/W33X** |
| | 790 | 248 | 7.5 | 6850 | 12000 | 350 | 700 | **23196CAKF1/W33X** | **23196CAKF3/W33X** |
| | 790 | 248 | 7.5 | 6850 | 12000 | 350 | 700 | **23196CAK/W33** | |
| | 790 | 308 | 7.5 | 8550 | 14900 | 240 | 320 | **24196CAF3/W33** | |

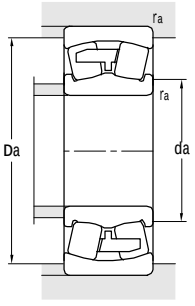
| Other dimensions | | | | Contact surface and chamfer dimensions | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d2 | D1 | b | k | da | Da | ra | e | Y1 | Y2 | Y0 | |
| mm | | | | mm | | | mm | | | | kg |
| 511 | 572 | 16.7 | 9 | 475 | 605 | 3 | 0.16 | 4.20 | 6.30 | 4.00 | 105 |
| 511 | 574 | 16.7 | 9 | 475 | 605 | 3 | 0.16 | 4.20 | 6.30 | 4.00 | 96.8 |
| 520 | 592 | 16.7 | 9 | 480 | 615 | 3 | 0.17 | 4.00 | 5.90 | 4.00 | 132 |
| 531 | 613 | 23.5 | 12 | 488 | 652 | 5 | 0.22 | 3.00 | 4.60 | 2.80 | 229 |
| 531 | 613 | 23.5 | 12 | 488 | 652 | 5 | 0.22 | 3.00 | 4.60 | 2.80 | 227 |
| 531 | 613 | | | 488 | 652 | 5 | 0.22 | 3.00 | 4.60 | 2.80 | 226 |
| 531 | 613 | 23.5 | 12 | 488 | 652 | 5 | 0.22 | 3.00 | 4.60 | 2.80 | 228 |
| 528 | 600 | 24 | 12 | 488 | 652 | 5 | 0.29 | 2.35 | 3.50 | 2.30 | |
| 528 | 600 | 24 | 12 | 488 | 652 | 5 | 0.29 | 2.35 | 3.50 | 2.30 | 304 |
| 528 | 600 | 24 | 12 | 488 | 652 | 5 | 0.29 | 2.35 | 3.50 | 2.30 | 308 |
| 557 | 660 | 22 | 8 | 496 | 724 | 6 | 0.30 | 2.30 | 3.40 | 2.20 | 442 |
| 557 | 660 | 22 | 8 | 496 | 724 | 6 | 0.30 | 2.30 | 3.40 | 2.20 | 437 |
| 557 | 660 | 22 | 8 | 496 | 724 | 6 | 0.30 | 2.30 | 3.40 | 2.20 | 440 |
| 557 | 660 | 22 | 8 | 496 | 724 | 6 | 0.30 | 2.30 | 3.40 | 2.20 | 435 |
| 540 | 639 | 22.3 | 8 | 496 | 724 | 6 | 0.37 | 1.80 | 2.70 | 1.80 | 461 |
| 540 | 639 | 22.3 | 8 | 496 | 724 | 6 | 0.37 | 1.80 | 2.70 | 1.80 | 460 |
| 540 | 639 | 22.3 | 8 | 496 | 724 | 6 | 0.37 | 1.80 | 2.70 | 1.80 | 459 |
| 566 | 698 | 22.3 | 10 | 496 | 794 | 6 | 0.35 | 1.90 | 2.90 | 1.80 | 698 |
| 578 | 683 | 22 | 12 | 516 | 754 | 6 | 0.31 | 2.20 | 3.30 | 2.20 | 497 |
| 523 | 563 | 13.9 | 7.5 | 500 | 580 | 2.5 | 0.13 | 5.36 | 7.98 | 5.24 | 60.4 |
| 532 | 596 | 16.7 | 10 | 502 | 628 | 4 | 0.18 | 3.80 | 5.60 | 3.60 | 126 |
| 532 | 596 | 16.7 | 10 | 502 | 628 | 4 | 0.18 | 3.80 | 5.60 | 3.60 | 125 |
| 532 | 596 | | | 504 | 628 | 4 | 0.18 | 3.80 | 5.60 | 3.60 | 121 |
| 532 | 596 | 16.7 | 10 | 504 | 628 | 4 | 0.18 | 3.80 | 5.60 | 3.60 | 121 |
| 552 | 634 | 22.3 | 12 | 504 | 678 | 5 | 0.21 | 3.20 | 4.80 | 3.20 | 215 |
| 552 | 634 | 22.3 | 12 | 504 | 678 | 5 | 0.21 | 3.20 | 4.80 | 3.20 | 203 |
| 553 | 625 | 22.3 | 12 | 504 | 678 | 5 | 0.23 | 2.90 | 4.40 | 2.80 | 247 |
| 542 | 618 | 22.3 | 12 | 504 | 678 | 5 | 0.28 | 2.40 | 3.60 | 2.50 | 285 |
| 542 | 618 | 22.3 | 12 | 504 | 678 | 5 | 0.28 | 2.40 | 3.60 | 2.50 | 290 |
| 578 | 687 | 22 | 12 | 516 | 754 | 6 | 0.30 | 2.30 | 3.40 | 2.20 | 520 |
| 578 | 687 | 22 | 12 | 516 | 754 | 6 | 0.30 | 2.30 | 3.40 | 2.20 | 516 |
| 578 | 687 | 22 | 12 | 516 | 754 | 6 | 0.30 | 2.30 | 3.40 | 2.20 | 485 |
| 578 | 687 | 22 | 12 | 516 | 754 | 6 | 0.30 | 2.30 | 3.40 | 2.20 | 489 |
| 568 | 673 | 22.3 | 8 | 513 | 759 | 6 | 0.37 | 1.80 | 2.70 | 1.80 | 582 |

d 480~530 mm



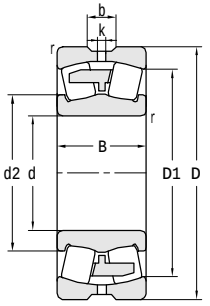



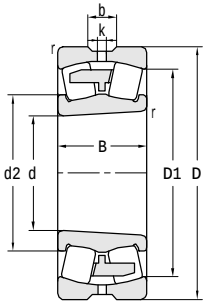



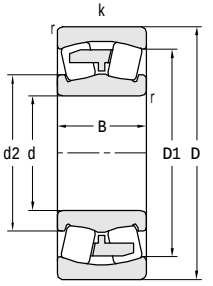

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | |
| mm | | | | kN | | r/min | | | |
| **480** | 790 | 308 | 7.5 | 8550 | 14900 | 240 | 320 | **24196CAK30/W33** | |
| | 790 | 308 | 7.5 | 8550 | 14900 | 240 | 320 | **24196CAK30F3/W33** | |
| | 870 | 310 | 7.5 | 6750 | 15200 | 280 | 360 | **23296/W33** | |
| | 870 | 310 | 7.5 | 6750 | 15200 | 280 | 360 | **23296F3** | |
| | 870 | 310 | 7.5 | 9200 | 15200 | 300 | 450 | **23296CA/W33** | |
| | 870 | 310 | 7.5 | 9200 | 15200 | 300 | 450 | **23296CAK** | **23296CAK/W33** |
| | 870 | 310 | 7.5 | 9200 | 15200 | 300 | 450 | **23296CAF3** | **23296CAF3/W33** |
| | 870 | 310 | 7.5 | 9200 | 15200 | 300 | 450 | **23296CAKF3** | **23296CAKF3/W33** |
| **500** | 620 | 90 | 3 | 1400 | 3800 | 420 | 520 | **238/500CA/W33** | **238/500CA/W20** |
| | 620 | 90 | 3 | 1400 | 3800 | 420 | 520 | **238/500CAK/W33** | |
| | 670 | 128 | 5 | 2800 | 5900 | 450 | 900 | **239/500CA/W33** | |
| | 670 | 128 | 5 | 2800 | 5750 | 450 | 900 | **239/500CAF1** | **239/500CAF1/W33** |
| | 670 | 128 | 5 | 2800 | 5750 | 450 | 900 | **239/500CAF3/W33** | |
| | 670 | 128 | 5 | 2800 | 5750 | 450 | 900 | **239/500CAF1/W33YA1** | **239/500CAF3/W33YA1** |
| | 670 | 128 | 5 | 2800 | 5750 | 450 | 900 | **239/500CAK/W33** | |
| | 720 | 167 | 6 | 4100 | 7700 | 450 | 800 | **230/500CAF3** | **230/500CAF3/W33** |
| | 720 | 167 | 6 | 4100 | 7900 | 450 | 800 | **230/500CA/W33** | |
| | 720 | 167 | 6 | 4100 | 7700 | 450 | 800 | **230/500CAKF3** | **230/500CAKF3/W33** |
| | 720 | 167 | 6 | 4100 | 7700 | 450 | 800 | **230/500CAKF3/W33X** | |
| | 720 | 167 | 6 | 4100 | 7700 | 450 | 800 | **230/500CAF3/HAW33X** | |
| | 720 | 167 | 6 | 4100 | 7700 | 450 | 800 | **230/500CAKF3/HAW33X** | |
| | 720 | 218 | 6 | 5200 | 10450 | 420 | 520 | **240/500CA/W33** | **240/500CA** |
| | 720 | 218 | 6 | 5200 | 10450 | 420 | 520 | **240/500CAK30/W33** | |
| | 720 | 218 | 6 | 5200 | 10450 | 420 | 520 | **240/500CAF3/W33** | |
| | 830 | 264 | 7.5 | 7550 | 13800 | 350 | 650 | **231/500CA/W33** | **231/500CAK/W33** |
| | 830 | 325 | 7.5 | 9300 | 16100 | 300 | 380 | **241/500CAK30/W33** | |
| | 830 | 325 | 7.5 | 9300 | 16100 | 300 | 380 | **241/500CA/W33** | |
| | 920 | 336 | 7.5 | 10500 | 17200 | 300 | 450 | **232/500CAF3/W33** | |
| | 920 | 336 | 7.5 | 10500 | 18600 | 300 | 450 | **232/500CAK/W33** | **232/500CA/W33** |
| **530** | 650 | 90 | 3 | 1800 | 5350 | 400 | 500 | **238/530CAF1/W33** | |
| | 650 | 118 | 3 | 1800 | 5350 | 380 | 480 | **248/530CA/W33** | **248/530CA/W20** |
| | 650 | 118 | 3 | 1800 | 5350 | 380 | 480 | **248/530CAK30/W33** | |
| | 710 | 136 | 5 | 3100 | 6700 | 400 | 800 | **239/530CAF3/W33AYA1** | |
| | 710 | 136 | 5 | 3100 | 7100 | 400 | 800 | **239/530CA/W33** | |

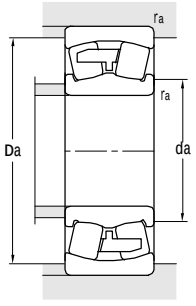
| Other dimensions | | | | Contact surface and chamfer dimensions | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d2 | D1 | b | k | da | Da | ra | e | Y1 | Y2 | Y0 | |
| mm | | | | mm | | | mm | | | | kg |
| 568 | 673 | 22.3 | 8 | 513 | 759 | 6 | 0.37 | 1.80 | 2.70 | 1.80 | 584 |
| 568 | 673 | 22.3 | 8 | 513 | 759 | 6 | 0.37 | 1.80 | 2.70 | 1.80 | 581 |
| 581 | 736 | 22.3 | 12 | 516 | 834 | 6 | 0.35 | 1.90 | 2.90 | 1.80 | 910 |
| 581 | 736 | | | 516 | 834 | 6 | 0.35 | 1.90 | 2.90 | 1.80 | 909 |
| 581 | 732 | 22.3 | 12 | 516 | 834 | 6 | 0.35 | 1.90 | 2.90 | 1.80 | 853 |
| 581 | 732 | | | 516 | 834 | 6 | 0.35 | 1.90 | 2.90 | 1.80 | 859 |
| 581 | 732 | 22.3 | 12 | 516 | 834 | 6 | 0.35 | 1.90 | 2.90 | 1.80 | 858 |
| 581 | 732 | 22.3 | 12 | 516 | 834 | 6 | 0.35 | 1.90 | 2.90 | 1.80 | 848 |
| 542 | 586 | 16.7 | 8 | 512 | 606 | 2.5 | 0.12 | 5.60 | 8.40 | 5.60 | 62 |
| 542 | 586 | 16.7 | 8 | 512 | 606 | 2.5 | 0.12 | 5.60 | 8.40 | 5.60 | 54 |
| 555 | 619 | 22.3 | 12 | 522 | 648 | 4 | 0.17 | 4.00 | 5.90 | 4.00 | 120 |
| 555 | 619 | 22.3 | 12 | 522 | 648 | 4 | 0.17 | 4.00 | 5.90 | 4.00 | 120 |
| 555 | 619 | 22.3 | 12 | 522 | 648 | 4 | 0.17 | 4.00 | 5.90 | 4.00 | 119 |
| 555 | 619 | 22.3 | 12 | 522 | 648 | 4 | 0.17 | 4.00 | 5.90 | 4.00 | 120 |
| 555 | 619 | 22.3 | 12 | 522 | 648 | 4 | 0.17 | 4.00 | 5.90 | 4.00 | 116 |
| 568 | 653 | 22.3 | 12 | 528 | 692 | 5 | 0.21 | 3.20 | 4.80 | 3.20 | 229 |
| 568 | 653 | 22.3 | 12 | 528 | 692 | 5 | 0.21 | 3.20 | 4.80 | 3.20 | 230 |
| 568 | 653 | 22.3 | 12 | 528 | 692 | 5 | 0.21 | 3.20 | 4.80 | 3.20 | 228 |
| 568 | 653 | 22.3 | 8 | 528 | 692 | 5 | 0.21 | 3.20 | 4.80 | 3.20 | 227 |
| 568 | 653 | 22.3 | 8 | 528 | 692 | 5 | 0.21 | 3.20 | 4.80 | 3.20 | 228 |
| 568 | 653 | 22.3 | 8 | 528 | 692 | 5 | 0.21 | 3.20 | 4.80 | 3.20 | 227 |
| 565 | 645 | 22.3 | 12 | 523 | 698 | 5 | 0.26 | 2.60 | 3.90 | 2.50 | 297 |
| 565 | 645 | 22.3 | 12 | 523 | 698 | 5 | 0.26 | 2.60 | 3.90 | 2.50 | 298 |
| 565 | 645 | 22.3 | 12 | 523 | 698 | 5 | 0.26 | 2.60 | 3.90 | 2.50 | 295 |
| 603 | 726 | 22.3 | 12 | 536 | 794 | 6 | 0.30 | 2.30 | 3.40 | 2.20 | 588 |
| 588 | 712 | 22.3 | 12 | 531 | 798 | 6 | 0.37 | 1.80 | 2.70 | 1.80 | 712 |
| 588 | 712 | 22.3 | 12 | 531 | 798 | 6 | 0.37 | 1.80 | 2.70 | 1.80 | 719 |
| 620 | 774 | 22.3 | 12 | 536 | 884 | 6 | 0.35 | 1.90 | 2.90 | 1.80 | 977 |
| 620 | 774 | 22.3 | 12 | 536 | 884 | 6 | 0.35 | 1.90 | 2.90 | 1.80 | 982 |
| 575 | 613 | 22.4 | 12 | 552 | 652 | 2.5 | 0.12 | 5.60 | 8.40 | 5.60 | 64.2 |
| 573 | 612 | 22 | 8 | 543 | 636 | 2.5 | 0.15 | 4.50 | 6.70 | 4.50 | 91 |
| 573 | 612 | 22 | 8 | 543 | 636 | 2.5 | 0.15 | 4.50 | 6.70 | 4.50 | 86 |
| 586 | 658 | 22.3 | 12 | 548 | 690 | 4 | 0.17 | 4.00 | 5.90 | 4.00 | 154 |
| 586 | 658 | 22.3 | 12 | 548 | 690 | 4 | 0.17 | 4.00 | 5.90 | 4.00 | 155 |

d 530~580 mm



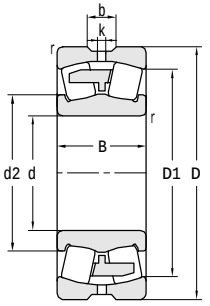



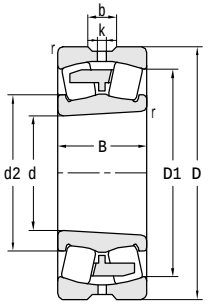



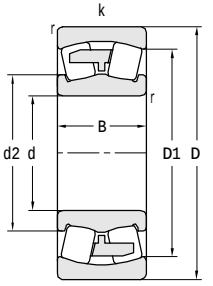



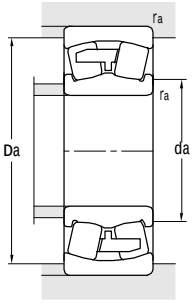

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | |
| mm | | | | kN | | r/min | | | |
| **530** | 710 | 136 | 5 | 3100 | 7100 | 400 | 800 | **239/530CAK/W33** | |
| | 710 | 136 | 5 | 3100 | 7100 | 400 | 800 | **239/530CA/HCRW33** | |
| | 780 | 185 | 6 | 5000 | 10200 | 400 | 700 | **230/530CA** | **230/530CA/W33X** |
| | 780 | 185 | 6 | 5000 | 10200 | 400 | 700 | **230/530CAF3** | **230/530CAF3/W33X** |
| | 780 | 185 | 6 | 5000 | 10200 | 400 | 700 | **230/530CAK/W33** | **230/530CAK** |
| | 780 | 185 | 6 | 5000 | 10200 | 400 | 700 | **230/530CA/HCRW33** | |
| | 780 | 250 | 6 | 6350 | 12700 | 280 | 360 | **240/530CA/W33** | |
| | 780 | 250 | 6 | 6350 | 12700 | 280 | 360 | **240/530CA/HCRW33** | |
| | 780 | 250 | 6 | 6350 | 13200 | 280 | 360 | **240/530CAB/HCRW33** | |
| | 870 | 272 | 7.5 | 8050 | 15300 | 300 | 600 | **231/530CA/W33** | |
| | 870 | 272 | 7.5 | 8050 | 13300 | 300 | 600 | **231/530CAK/W33** | |
| | 870 | 335 | 7.5 | 10000 | 18300 | 190 | 280 | **241/530CA/W33** | |
| | 870 | 335 | 7.5 | 10000 | 18000 | 190 | 280 | **241/530CAK30/W33** | |
| | 980 | 335 | 9.5 | 11000 | 20300 | 250 | 400 | **232/530CAK30/W33** | |
| **560** | 750 | 140 | 5 | 3400 | 7200 | 400 | 800 | **239/560CAF1** | **239/560CAF3** |
| | 750 | 140 | 5 | 3400 | 7200 | 400 | 800 | **239/560CAF3/W33** | **239/560CA/W33** |
| | 820 | 195 | 6 | 5500 | 10500 | 400 | 800 | **230/560CA** | **230/560CAF3** |
| | 820 | 195 | 6 | 5500 | 10500 | 400 | 800 | **230/560CAF3/W33** | **230/560CA/W33** |
| | 820 | 195 | 6 | 5500 | 10500 | 400 | 800 | **230/560CAKF3/W33** | |
| | 820 | 195 | 6 | 5500 | 10500 | 400 | 800 | **230/560CAK/W33** | **230/560CAK30/W33** |
| | 820 | 258 | 6 | 6950 | 13800 | 220 | 300 | **240/560CA/W33** | **240/560X3CA/C3W33-QL** |
| | 820 | 258 | 6 | 6950 | 13800 | 220 | 300 | **240/560CAK30/W33** | |
| | 920 | 280 | 7.5 | 9050 | 15900 | 300 | 550 | **231/560CA/W33** | **231/560CAF3/W33** |
| | 920 | 280 | 7.5 | 9050 | 15700 | 300 | 550 | **231/560CAK/W33** | **231/560CAKF3/W33** |
| | 920 | 280 | 7.5 | 9050 | 15700 | 300 | 550 | **231/560CA/HCRW33** | |
| | 920 | 355 | 7.5 | 9500 | 20100 | 150 | 400 | **241/560CAF3/HCORW33** | |
| | 920 | 355 | 7.5 | 11400 | 20500 | 120 | 160 | **241/560CAF3K30/W33** | **241/560CAF3K30/HCW33** |
| | 920 | 355 | 7.5 | 11400 | 20500 | 120 | 160 | **241/560CA/W33** | **241/560CA/HCW33** |
| | 920 | 355 | 7.5 | 11400 | 20500 | 120 | 160 | **241/560CAK30/W33** | **241/560CAK30/HCW33** |
| | 920 | 355 | 7.5 | 10000 | 20000 | 120 | 160 | **241/560K30/W33** | **241/560/W33YA3** |
| | 1030 | 365 | 9.5 | 11150 | 21000 | 250 | 400 | **232/560CA/W33** | |
| | 1030 | 365 | 9.5 | 11150 | 21000 | 250 | 400 | **232/560CAK/W33** | |
| **580** | 780 | 130 | 5 | 3050 | 6800 | 220 | 300 | **26/580CAKF3/W33** | |
| | 870 | 240 | 6 | 6400 | 1400 | 220 | 300 | **26/580CAKF3/W33-1** | |

| Other dimensions | | | | Contact surface and chamfer dimensions | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d2 | D1 | b | k | da | Da | ra | e | Y1 | Y2 | Y0 | |
| mm | | | | mm | | | mm | | | | kg |
| 586 | 658 | 22.3 | 12 | 548 | 690 | 4 | 0.17 | 4.00 | 5.90 | 4.00 | 150 |
| 586 | 658 | 22.3 | 12 | 548 | 690 | 4 | 0.17 | 4.00 | 5.90 | 4.00 | 155 |
| 614 | 703 | 24 | 12 | 558 | 752 | 5 | 0.22 | 3.00 | 4.60 | 2.80 | 339 |
| 614 | 703 | 24 | 12 | 558 | 752 | 5 | 0.22 | 3.00 | 4.60 | 2.80 | 335 |
| 614 | 703 | 24 | 12 | 558 | 752 | 5 | 0.22 | 3.00 | 4.60 | 2.80 | 329 |
| 614 | 703 | 24 | 12 | 558 | 752 | 5 | 0.22 | 3.00 | 4.60 | 2.80 | 338 |
| 605 | 691 | 22.3 | 12 | 553 | 758 | 5 | 0.29 | 2.30 | 3.50 | 2.40 | 416 |
| 605 | 691 | 22.3 | 12 | 553 | 758 | 5 | 0.29 | 2.30 | 3.50 | 2.40 | 416 |
| 605 | 691 | 24 | 12 | 553 | 758 | 5 | 0.29 | 2.30 | 3.50 | 2.40 | 420 |
| 635 | 762 | 22.3 | 12 | 560 | 837 | 6 | 0.30 | 2.30 | 3.40 | 2.20 | 665 |
| 635 | 762 | 22.3 | 12 | 560 | 837 | 6 | 0.30 | 2.30 | 3.40 | 2.20 | 640 |
| 622 | 748 | 22.3 | 12 | 560 | 837 | 6 | 0.37 | 1.80 | 2.80 | 1.80 | 813 |
| 622 | 748 | 22.3 | 12 | 560 | 837 | 6 | 0.37 | 1.80 | 2.80 | 1.80 | 825 |
| 656 | 818 | 22.3 | 12 | 565 | 932 | 8 | 0.36 | 1.87 | 2.79 | 1.83 | 1200 |
| 621 | 693 | | | 582 | 728 | 4 | 0.16 | 4.20 | 6.30 | 4.00 | 177 |
| 621 | 693 | 22.3 | 12 | 582 | 728 | 4 | 0.16 | 4.20 | 6.30 | 4.00 | 178 |
| 644 | 741 | | | 588 | 792 | 5 | 0.22 | 3.14 | 4.67 | 3.07 | 363 |
| 644 | 741 | 22.3 | 9 | 588 | 792 | 5 | 0.22 | 3.14 | 4.67 | 3.07 | 362 |
| 644 | 741 | 22.3 | 9 | 588 | 792 | 5 | 0.22 | 3.14 | 4.67 | 3.07 | 351 |
| 644 | 741 | 22.3 | 9 | 588 | 792 | 5 | 0.22 | 3.14 | 4.67 | 3.07 | 353 |
| 640 | 721 | 22.3 | 12 | 585 | 798 | 5 | 0.28 | 2.40 | 3.60 | 2.50 | 471 |
| 640 | 721 | 22.3 | 12 | 585 | 798 | 5 | 0.28 | 2.40 | 3.60 | 2.50 | 464 |
| 677 | 803 | 22.3 | 12 | 596 | 884 | 6 | 0.30 | 2.30 | 3.40 | 2.20 | 756 |
| 677 | 803 | 22.3 | 12 | 596 | 884 | 6 | 0.30 | 2.30 | 3.40 | 2.20 | 745 |
| 677 | 8.3 | 22.3 | 12 | 596 | 884 | 6 | 0.30 | 2.30 | 3.40 | 2.20 | 756 |
| 634 | 796 | 22.3 | 12 | 596 | 884 | 6 | 0.37 | 1.80 | 2.80 | 1.80 | 964 |
| 634 | 796 | 22.3 | 12 | 596 | 884 | 6 | 0.37 | 1.80 | 2.80 | 1.80 | 950 |
| 634 | 796 | 22.3 | 12 | 596 | 884 | 6 | 0.37 | 1.80 | 2.80 | 1.80 | 973 |
| 634 | 796 | 22.3 | 12 | 596 | 884 | 6 | 0.37 | 1.80 | 2.80 | 1.80 | 955 |
| 662 | 777 | 22.3 | 12 | 596 | 884 | 6 | 0.37 | 1.80 | 2.80 | 1.80 | 956 |
| 705 | 877 | 22.3 | 12 | 600 | 990 | 8 | 0.35 | 1.90 | 2.90 | 1.80 | 1380 |
| 705 | 877 | 22.3 | 12 | 600 | 990 | 8 | 0.35 | 1.90 | 2.90 | 1.80 | 1340 |
| 646 | 726 | 22.3 | 12 | 611 | 750 | 4 | | | | | 176 |
| 671 | 774 | 22.3 | 12 | 622 | 735 | 5 | | | | | 512 |



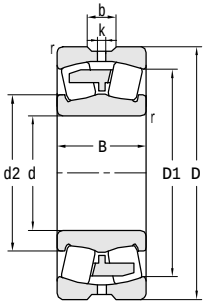



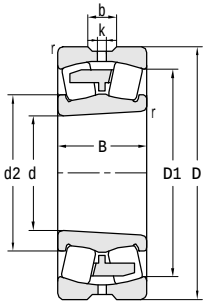



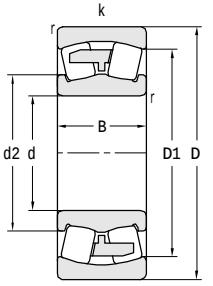

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | |
| mm | | | | kN | | r/min | | | |
| **600** | 800 | 150 | 5 | 3750 | 8400 | 400 | 700 | **239/600CA** | **239/600CA/W33** |
| | 800 | 150 | 5 | 3750 | 8400 | 400 | 700 | **239/600CAK/W33** | |
| | 800 | 200 | 5 | 4250 | 11200 | 320 | 400 | **249/600CAF1/W33** | **249/600CAF3/W33** |
| | 870 | 200 | 6 | 5900 | 11600 | 350 | 650 | **230/600CAF3** | **230/600CAF3/W33** |
| | 870 | 200 | 6 | 5900 | 11600 | 350 | 650 | **230/600CAK** | **230/600CAK/W33** |
| | 870 | 200 | 6 | 5900 | 11600 | 350 | 650 | **230/600CAKF3** | |
| | 870 | 200 | 6 | 5900 | 11600 | 350 | 650 | **230/600CA/W33** | |
| | 870 | 272 | 6 | 8100 | 16500 | 300 | 500 | **240/600CA/W33** | |
| | 870 | 272 | 6 | 8100 | 16500 | 300 | 500 | **240/600CA/HCRW33** | |
| | 870 | 272 | 6 | 8100 | 16500 | 300 | 500 | **240/600/W33** | |
| | 980 | 300 | 7.5 | 10100 | 18800 | 300 | 500 | **231/600CAF3/W33** | |
| | 980 | 375 | 7.5 | 10900 | 22400 | 300 | 500 | **241/600CA** | |
| | 980 | 375 | 7.5 | 10900 | 22400 | 300 | 500 | **241/600CA/HCW33** | **241/600CA/HCRW33** |
| | 980 | 375 | 7.5 | 10900 | 22400 | 300 | 500 | **241/600CAK30/W33** | |
| | 980 | 375 | 7.5 | 10900 | 22400 | 300 | 500 | **241/600CA/W33** | **241/600CAF3/W33X** |
| | 1090 | 388 | 9.5 | 13100 | 25000 | 250 | 350 | **232/600CAKF3/YA2W33** | **232/600CAK/W33** |
| **628** | 920 | 212 | 7.5 | 5600 | 12800 | 260 | 340 | **230/628CAF3/W33** | |
| **630** | 780 | 112 | 4 | 2200 | 6300 | 300 | 400 | **238/630CAF3/W33** | |
| | 820 | 112 | 4 | 2200 | 6300 | 270 | 350 | **238/670CA/W33** | |
| | 820 | 112 | 4 | 2200 | 6300 | 270 | 350 | **238/670CAK/W33** | |
| | 820 | 150 | 4 | 3100 | 9600 | 270 | 350 | **248/670CA/W33** | |
| | 850 | 212 | 7.5 | 4750 | 12200 | 240 | 330 | **249/630X2CAF3/W33** | |
| | 850 | 165 | 6 | 4500 | 9750 | 300 | 600 | **239/630CA** | **239/630CAK/W33** |
| | 850 | 165 | 6 | 4500 | 9750 | 300 | 600 | **239/630CA/W33** | |
| | 920 | 212 | 7.5 | 6500 | 12800 | 300 | 600 | **230/630CA/W33** | |
| | 920 | 212 | 7.5 | 6500 | 12800 | 300 | 600 | **230/630CAF3** | **230/630CAF3/W33** |
| | 920 | 290 | 7.5 | 7350 | 17100 | 220 | 300 | **240/630/W33** | |
| | 1030 | 315 | 7.5 | 10200 | 20200 | 200 | 500 | **231/630CA/W33** | |
| | 1030 | 315 | 7.5 | 10200 | 20200 | 200 | 500 | **231/630CAK/W33** | |
| | 1030 | 400 | 7.5 | 12000 | 25600 | 160 | 210 | **241/630CA/W33** | **241/630CAF3/W33** |
| | 1030 | 400 | 7.5 | 12000 | 25600 | 160 | 210 | **241/630CAF3/HBW33** | |
| | 1030 | 400 | 7.5 | 12000 | 25600 | 160 | 210 | **241/630CAK30/W33** | |
| **670** | 820 | 112 | 4 | 2410 | 6600 | 300 | 600 | **238/670CA/W33** | |

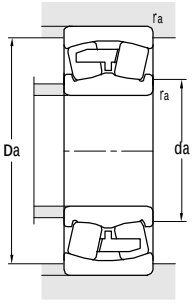
| Other dimensions | | | | Contact surface and chamfer dimensions | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d2 | D1 | b | k | da | Da | ra | e | Y1 | Y2 | Y0 | |
| mm | | | | mm | | | mm | | | | kg |
| 668 | 742 | 22.3 | 12 | 622 | 778 | 4 | 0.17 | 4.00 | 5.90 | 4.00 | 220 |
| 668 | 742 | 22.3 | 12 | 622 | 778 | 4 | 0.17 | 4.00 | 5.90 | 4.00 | 213 |
| 666 | 728 | 22.3 | 12 | 622 | 760 | 4 | 0.22 | 3.00 | 4.60 | 2.80 | 287 |
| 685 | 787 | 22.3 | 9 | 628 | 842 | 5 | 0.22 | 3.00 | 4.60 | 2.80 | 442 |
| 685 | 787 | 22.3 | 9 | 628 | 842 | 5 | 0.22 | 3.00 | 4.60 | 2.80 | 420 |
| 685 | 787 | | | 628 | 842 | 5 | 0.22 | 3.00 | 4.60 | 2.80 | 430 |
| 685 | 787 | 22.3 | 9 | 628 | 842 | 5 | 0.22 | 3.00 | 4.60 | 2.80 | 431 |
| 682 | 770 | 22.3 | 12 | 628 | 850 | 5 | 0.30 | 2.30 | 3.40 | 2.80 | 551 |
| 682 | 770 | 22.3 | 12 | 628 | 850 | 5 | 0.30 | 2.30 | 3.40 | 2.80 | 551 |
| 680 | 770 | 22.3 | 12 | 628 | 850 | 5 | 0.30 | 2.30 | 3.40 | 2.20 | 550 |
| 717 | 855 | 22.3 | 12 | 660 | 996 | 6 | 0.29 | 2.30 | 3.50 | 2.40 | 894 |
| 709 | 827 | 22 | 8 | 636 | 944 | 6 | 0.36 | 1.90 | 2.82 | 1.85 | 1151 |
| 709 | 827 | 22 | 8 | 636 | 944 | 6 | 0.36 | 1.90 | 2.82 | 1.85 | 1150 |
| 709 | 827 | 22 | 8 | 636 | 944 | 6 | 0.36 | 1.90 | 2.82 | 1.85 | 1134 |
| 709 | 827 | 22 | 8 | 636 | 944 | 6 | 0.36 | 1.90 | 2.82 | 1.85 | 1151 |
| 750 | 920 | | | 700 | 1000 | 8 | 0.35 | 1.93 | 2.88 | 1.80 | 1557 |
| 721 | 831 | 22.3 | 9 | 666 | 884 | 6 | 0.21 | 3.20 | 4.80 | 3.20 | 481 |
| 682 | 738 | 16.7 | 9 | 645 | 765 | 3 | 0.12 | 5.60 | 8.40 | 5.60 | 123 |
| 722 | 778 | 16.7 | 9 | 686 | 805 | 3 | 0.11 | 6.10 | 9.10 | 6.30 | 136 |
| 722 | 778 | 16.7 | 9 | 686 | 805 | 3 | 0.11 | 6.10 | 9.10 | 6.30 | 128 |
| 716 | 771 | 16.7 | 9 | 686 | 805 | 3 | 0.16 | 4.20 | 6.30 | 4.00 | 315 |
| 703 | 774 | 22.3 | 12 | | | | | | | | 355 |
| 705 | 786 | 22.3 | 12 | 658 | 822 | 5 | 0.17 | 4.00 | 5.90 | 4.00 | 292 |
| 705 | 786 | 22.3 | 12 | 658 | 822 | 5 | 0.17 | 4.00 | 5.90 | 4.00 | 290 |
| 721 | 831 | 22.3 | 9 | 666 | 884 | 6 | 0.21 | 3.20 | 4.80 | 3.20 | 470 |
| 721 | 831 | 22.3 | 9 | 666 | 884 | 6 | 0.21 | 3.20 | 4.80 | 3.20 | 471 |
| 722 | 815 | 22.3 | 10 | 666 | 884 | 6 | 0.30 | 2.30 | 3.40 | 2.20 | 661 |
| 756 | 918 | 22.3 | 12 | 668 | 996 | 6 | 0.30 | 2.30 | 3.40 | 2.20 | 1040 |
| 756 | 918 | 22.3 | 12 | 668 | 996 | 6 | 0.30 | 2.30 | 3.40 | 2.20 | 1020 |
| 736 | 885 | 22.3 | 12 | 662 | 996 | 6 | 0.37 | 1.80 | 2.70 | 1.80 | 1440 |
| 736 | 885 | 22.3 | 12 | 662 | 996 | 6 | 0.37 | 1.80 | 2.70 | 1.80 | 1330 |
| 736 | 885 | 22.3 | 12 | 662 | 996 | 6 | 0.37 | 1.80 | 2.70 | 1.80 | 1400 |
| 721 | 778 | 16.7 | 9 | 693 | 805 | 3 | | | | | 128 |

d 670~710 mm



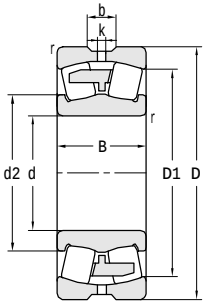



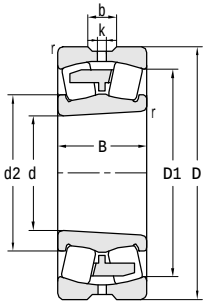



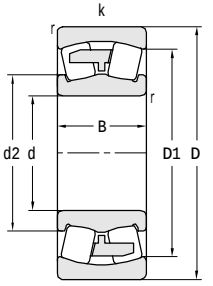

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | |
| mm | | | | kN | | r/min | | | |
| **670** | 900 | 170 | 6 | 4850 | 10600 | 300 | 600 | **239/670CAF3/W33** | **239/670X1CA/W33YA3** |
| | 980 | 230 | 7.5 | 7400 | 14200 | 300 | 500 | **230/670CAF3** | **230/670CAF3/W33** |
| | 980 | 230 | 7.5 | 7400 | 15000 | 300 | 500 | **230/670CAKF3/W33** | |
| | 980 | 230 | 7.5 | 7400 | 14200 | 300 | 500 | **230/670CA/W33** | |
| | 980 | 308 | 7.5 | 9700 | 19900 | 250 | 450 | **240/670CA** | **240/670CA/W33** |
| | 1090 | 336 | 7.5 | 10800 | 22700 | 200 | 450 | **231/670CA/W33** | |
| | 1090 | 336 | 7.5 | 10800 | 21200 | 200 | 450 | **231/670CAK/W33** | |
| | 1090 | 412 | 7.5 | 14000 | 31500 | 150 | 200 | **241/670CA/W33** | **241/670CA/W33YA3** |
| | 1090 | 412 | 7.5 | 14000 | 31500 | 150 | 200 | **241/670CAK30/W33** | |
| | 1220 | 438 | 12 | 15600 | 30500 | 200 | 350 | **232/670CA/W33** | **232/670CA/HCW33** |
| | 1220 | 438 | 12 | 15600 | 30500 | 160 | 350 | **232/670CAK/W33** | |
| **680** | 980 | 160 | 6 | 4900 | 9950 | 300 | 500 | **26/680CAF3/W33** | |
| **690** | 950 | 230 | 7.5 | 5930 | 14270 | 250 | 450 | **206/690CA/W33-1** | |
| | 990 | 180 | 6 | 5500 | 11800 | 220 | 310 | **206/690CAF3/W33** | |
| **700** | 950 | 180 | 6 | 5000 | 11900 | 220 | 300 | **206/700CAF3/W33** | |
| **710** | 870 | 118 | 4 | 2680 | 7500 | 260 | 350 | **238/710CAF3/W33** | |
| | 950 | 180 | 6 | 5400 | 12000 | 300 | 550 | **239/710CAF1/W33** | **239/710CAF3/W33** |
| | 950 | 180 | 6 | 5400 | 12000 | 250 | 310 | **239/710CA/W33** | |
| | 950 | 243 | 6 | 6600 | 15100 | 250 | 450 | **249/710CAF1/W33X** | |
| | 1030 | 200 | 7.5 | 6500 | 14000 | 300 | 500 | **220/710X2CAF3/C9W33** | |
| | 1030 | 200 | 7.5 | 6500 | 14000 | 300 | 500 | **220/710X2CAF3/C9W33** | |
| | 1030 | 236 | 7.5 | 8050 | 16200 | 300 | 500 | **230/710CAF3/W33** | |
| | 1030 | 236 | 7.5 | 8050 | 16200 | 300 | 500 | **230/710CAKF3/W33** | |
| | 1030 | 236 | 7.5 | 8050 | 15700 | 300 | 500 | **230/710/W33** | |
| | 1030 | 315 | 7.5 | 8900 | 21600 | 180 | 250 | **240/710CA/W33** | |
| | 1030 | 315 | 7.5 | 8900 | 21600 | 180 | 250 | **240/710CAK30/W33** | |
| | 1150 | 345 | 9.8 | 11800 | 25200 | 200 | 400 | **231/710CA/W33** | |
| | 1150 | 345 | 9.8 | 11800 | 25200 | 200 | 400 | **231/710CAK/W33** | |
| | 1150 | 438 | 9.5 | 14400 | 30800 | 90 | 120 | **241/710CAF1/W33** | **241/710CAF3/W33** |
| | 1150 | 438 | 9.5 | 14400 | 30800 | 90 | 120 | **241/710CA/W33** | |
| | 1150 | 438 | 9.5 | 14400 | 30800 | 90 | 120 | **241/710CAK/W33** | |
| | 1150 | 438 | 9.5 | 13200 | 31000 | 105 | 140 | **241/710K30/HCW33** | |

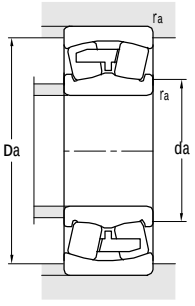
| Other dimensions | | | | Contact surface and chamfer dimensions | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d2 | D1 | b | k | da | Da | ra | e | Y1 | Y2 | Y0 | |
| mm | | | | mm | | | mm | | | | kg |
| 743 | 831 | 22.3 | 12 | 692 | 876 | 5 | 0.17 | 4.00 | 5.90 | 4.00 | 321 |
| 760 | 885 | 22.3 | 12 | 706 | 944 | 6 | 0.22 | 3.00 | 4.60 | 3.20 | 601 |
| 760 | 885 | 22.3 | 12 | 706 | 944 | 6 | 0.22 | 3.00 | 4.60 | 3.20 | 596 |
| 760 | 885 | 22.3 | 12 | 706 | 944 | 6 | 0.22 | 3.00 | 4.60 | 3.20 | 604 |
| 760 | 866 | 22.3 | 12 | 700 | 952 | 6 | 0.28 | 2.40 | 3.60 | 2.50 | 807 |
| 801 | 958 | 22.3 | 12 | 700 | 1056 | 6 | 0.30 | 2.30 | 3.40 | 2.20 | 1256 |
| 801 | 958 | 22.3 | 12 | 700 | 1056 | 6 | 0.30 | 2.30 | 3.40 | 2.20 | 1240 |
| 786 | 934 | 22.3 | 12 | 705 | 1056 | 6 | 0.36 | 1.87 | 2.79 | 1.83 | 1530 |
| 786 | 934 | 22.3 | 12 | 705 | 1056 | 6 | 0.36 | 1.87 | 2.79 | 1.83 | 1507 |
| 832 | 1027 | 22.3 | 12 | 718 | 1170 | 10 | 0.35 | 1.90 | 2.90 | 1.80 | 2320 |
| 832 | 1027 | 22.3 | 12 | 718 | 1170 | 10 | 0.35 | 1.90 | 2.90 | 1.80 | 2250 |
| 774 | 906 | 22.3 | 12 | 708 | 950 | 5 | | | | | 406 |
| 773 | 868 | | 12 | 725 | 915 | 6 | | | | | 489 |
| 780 | 907 | 22.3 | 12 | 705 | 975 | 5 | 0.16 | | | | 461 |
| 780 | 877 | 13.3 | 12 | 715 | 935 | 5 | 0.16 | | | | 378 |
| 761 | 824 | 22.3 | 12 | 725 | 855 | 3 | 0.11 | 6.10 | 9.10 | 6.30 | 156 |
| 787 | 882 | 22.3 | 12 | 733 | 927 | 5 | 0.17 | 4.00 | 5.90 | 4.00 | 364 |
| 787 | 882 | 22.3 | 12 | 733 | 927 | 5 | 0.17 | 4.00 | 5.90 | 4.00 | 367 |
| 791 | 864 | 22.3 | 12 | 733 | 927 | 5 | 0.22 | 3.00 | 4.60 | 2.80 | 500 |
| 802 | 944 | 22.3 | 12 | 746 | 994 | 6 | | | | | 566 |
| 808 | 939 | 22.3 | 12 | | | | | | | | |
| 814 | 939 | 22.3 | 12 | 746 | 994 | 6 | 0.21 | 3.20 | 4.80 | 3.20 | 669 |
| 814 | 939 | 22.3 | 12 | 746 | 994 | 6 | | | | | 649 |
| 814 | 939 | 22.3 | 12 | 746 | 994 | 6 | 0.21 | 3.20 | 4.80 | 3.20 | 580 |
| 806 | 918 | 22.3 | 12 | 738 | 1002 | 6 | 0.27 | 2.50 | 3.70 | 2.50 | 910 |
| 806 | 918 | 22.3 | 12 | 738 | 1002 | 6 | 0.27 | 2.50 | 3.70 | 2.50 | 893 |
| 851 | 1016 | 22.3 | 12 | 750 | 1110 | 8 | 0.28 | 2.40 | 3.60 | 2.50 | 1480 |
| 851 | 1016 | 22.3 | 12 | 750 | 1110 | 8 | 0.28 | 2.40 | 3.60 | 2.50 | 1430 |
| 838 | 982 | 22.3 | 12 | 754 | 1106 | 8 | 0.35 | 1.90 | 2.90 | 1.80 | 1791 |
| 838 | 982 | 22.3 | 12 | 754 | 1106 | 8 | 0.35 | 1.90 | 2.90 | 1.80 | 1801 |
| 838 | 982 | 22.3 | 12 | 754 | 1106 | 8 | 0.35 | 1.90 | 2.90 | 1.80 | 1761 |
| 836 | 974 | 23.5 | 12.5 | 754 | 1106 | 8 | 0.38 | 1.80 | 2.60 | 1.70 | 1800 |

d 710~800 mm



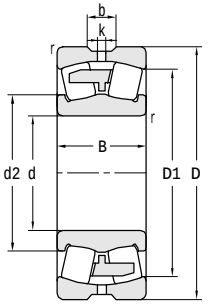



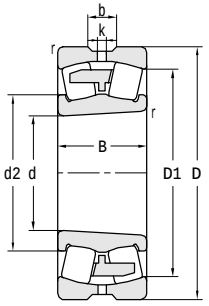



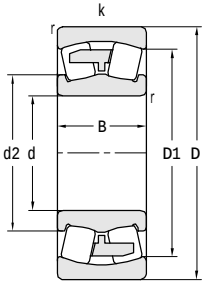

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | |
| mm | | | | kN | | r/min | | | |
| **710** | 1150 | 438 | 9.5 | 14400 | 30800 | 160 | 210 | **241/710CAK30/W33** | **241/710CAK30** |
| | 1280 | 450 | 12 | 17200 | 33400 | 160 | 300 | **232/710CA/W33** | |
| **750** | 920 | 128 | 5 | 3100 | 9000 | 240 | 310 | **238/750CA/W33** | |
| | 920 | 128 | 5 | 2800 | 8100 | 240 | 310 | **238/750CAK/W33** | |
| | 920 | 170 | 5 | 3550 | 11000 | 220 | 300 | **248/750F1** | **248/750F3** |
| | 920 | 170 | 5 | 3650 | 11300 | 220 | 300 | **248/750CA/W33** | |
| | 1000 | 185 | 6 | 5800 | 12800 | 300 | 500 | **239/750CA/W33** | |
| | 1000 | 185 | 6 | 5800 | 13700 | 300 | 500 | **239/750CAK/W33** | |
| | 1000 | 250 | 6 | 7400 | 18500 | 250 | 450 | **249/750CA/W33** | |
| | 1000 | 250 | 6 | 7400 | 17100 | 250 | 450 | **249/750CAK30/W33** | |
| | 1090 | 250 | 7.5 | 9350 | 18000 | 250 | 450 | **230/750CA** | **230/750CAF1/W33XYA7** |
| | 1090 | 250 | 7.5 | 9350 | 18000 | 250 | 450 | **230/750CAF3** | **230/750CAF3/W33** |
| | 1090 | 335 | 7.5 | 9730 | 25000 | 170 | 220 | **240/750CA/W33** | **240/750CA** |
| | 1090 | 335 | 7.5 | 9730 | 25000 | 170 | 220 | **240/750CAK30/W33** | |
| | 1220 | 365 | 9.5 | 13350 | 28100 | 200 | 400 | **231/750CA/W33** | |
| | 1220 | 365 | 9.5 | 13350 | 28100 | 200 | 400 | **231/750CAK/W33** | |
| | 1220 | 475 | 9.5 | 16400 | 37000 | 130 | 170 | **241/750CA/W33** | |
| | 1220 | 475 | 9.5 | 16400 | 37000 | 130 | 170 | **241/750CAK30/W33** | |
| | 1220 | 475 | 9.5 | 16400 | 37000 | | | **241/750CAK30F3/W33** | |
| | 1220 | 475 | 9.5 | 16400 | 37000 | | | **241/750CAK30/HAW33** | |
| | 1360 | 475 | 15 | 19000 | 37500 | 90 | 120 | **232/750CAF1/W33** | **232/750CAF3/W33** |
| | 1360 | 475 | 15 | 19000 | 37500 | 90 | 120 | **232/750CAKF3/W33** | |
| | 1360 | 475 | 15 | 19000 | 37500 | 90 | 120 | **232/750CAK/W33** | |
| | 1360 | 475 | 15 | 19000 | 37500 | | | **232/750CAK30/W33** | |
| **800** | 980 | 180 | 5 | 3900 | 12200 | 250 | 500 | **248/800CA/W33** | |
| | 1060 | 195 | 6 | 6200 | 14200 | 250 | 500 | **239/800CA/W33** | **239/800CAF3/W33** |
| | 1060 | 195 | 6 | 6200 | 14200 | 250 | 500 | **239/800CAK/W33** | |
| | 1060 | 258 | 6 | 7750 | 18700 | 250 | 400 | **249/800CA/W33** | |
| | 1060 | 258 | 6 | 7750 | 18700 | 250 | 400 | **249/800CAK30/W33** | |
| | 1060 | 258 | 6 | 7750 | 19300 | 250 | 400 | **249/800CAF3/C9W33YA3** | |
| | 1150 | 258 | 7.5 | 9700 | 19400 | 250 | 450 | **230/800CA/W33** | **230/800X3CAF3/W33** |
| | 1150 | 345 | 7.5 | 10500 | 27000 | 170 | 220 | **240/800CAF3** | **240/800CAF3/W33** |
| | 1150 | 345 | 7.5 | 10500 | 27000 | 170 | 220 | **240/800CA/W33** | |
| | 1150 | 400 | 7.5 | 12000 | 29900 | 150 | 200 | **240/800X2CA/C3W33-QL** | |

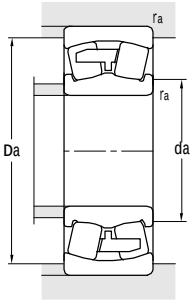
| Other dimensions | | | | Contact surface and chamfer dimensions | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d2 | D1 | b | k | da | Da | ra | e | Y1 | Y2 | Y0 | |
| mm | | | | mm | | | mm | | | | kg |
| 876 | 1096 | 22.3 | 12 | 758 | 1232 | 8 | 0.35 | 1.90 | 2.90 | 1.80 | 1793 |
| 876 | 1096 | 22.3 | 12 | 758 | 1232 | 10 | 0.35 | 1.90 | 2.90 | 1.80 | 2571 |
| 806 | 873 | 22.3 | 12 | 770 | 902 | 4 | 0.11 | 6.10 | 9.10 | 6.30 | 186 |
| 806 | 873 | 22.3 | 12 | 770 | 902 | 4 | 0.11 | 6.10 | 9.10 | 6.30 | 180 |
| 808 | 864 | | | 770 | 902 | 4 | 0.16 | 4.20 | 6.30 | 4.00 | 249 |
| 808 | 864 | 22.3 | 12 | 770 | 902 | 4 | 0.16 | 4.20 | 6.30 | 4.00 | 253 |
| 831 | 930 | 22.3 | 12 | 772 | 976 | 5 | 0.16 | 4.20 | 6.30 | 4.00 | 414 |
| 831 | 930 | 22.3 | 12 | 772 | 976 | 5 | 0.16 | 4.20 | 6.30 | 4.00 | 401 |
| 830 | 916 | 22.3 | 12 | 773 | 976 | 5 | 0.22 | 3.00 | 4.60 | 2.80 | 566 |
| 830 | 916 | 22.3 | 12 | 773 | 976 | 5 | 0.22 | 3.00 | 4.60 | 2.80 | 558 |
| 847 | 987 | 22.3 | 12 | 786 | 1054 | 6 | 0.21 | 3.20 | 4.80 | 3.20 | 789 |
| 847 | 987 | 22.3 | 12 | 786 | 1054 | 6 | 0.21 | 3.20 | 4.80 | 3.20 | 786 |
| 852 | 970 | 22.3 | 12 | 779 | 1062 | 6 | 0.28 | 2.40 | 3.60 | 2.50 | 1070 |
| 852 | 970 | 22.3 | 12 | 779 | 1062 | 6 | 0.28 | 2.40 | 3.60 | 2.50 | 1070 |
| 898 | 1080 | 22.3 | 12 | 798 | 1180 | 8 | 0.28 | 2.40 | 3.60 | 2.50 | 1760 |
| 898 | 1080 | 22.3 | 12 | 798 | 1180 | 8 | 0.28 | 2.40 | 3.60 | 2.50 | 1760 |
| 872 | 1039 | 22.3 | 12 | 792 | 1175 | 8 | 0.35 | 1.90 | 2.90 | 1.80 | 2170 |
| 872 | 1039 | 22.3 | 12 | 792 | 1175 | 8 | 0.35 | 1.90 | 2.90 | 1.80 | 2135 |
| 872 | 1039 | 22.3 | 12 | 792 | 1175 | 8 | 0.35 | 1.90 | 2.90 | 1.80 | 2146 |
| 872 | 1039 | 22.3 | 12 | 792 | 1175 | 8 | | | | | 2160 |
| 930 | 1145 | 22.3 | 12 | 876 | 1536 | 14 | 0.36 | 1.87 | 2.79 | 1.83 | 3100 |
| 930 | 1145 | 22.3 | 12 | 876 | 1536 | 14 | 0.36 | 1.87 | 2.79 | 1.83 | 3012 |
| 930 | 1145 | 22.3 | 12 | 876 | 1536 | 14 | 0.36 | 1.87 | 2.79 | 1.83 | 2975 |
| 930 | 1145 | 22.3 | 12 | 876 | 1536 | 14 | 0.36 | 1.87 | 2.79 | 1.83 | 3028 |
| 860 | 920 | 22.3 | 12 | 820 | 962 | 4 | 0.15 | 4.50 | 6.70 | 4.50 | 330 |
| 883 | 985 | 22.3 | 12 | 823 | 1036 | 5 | 0.16 | 4.20 | 6.30 | 4.00 | 480 |
| 883 | 985 | 22.3 | 12 | 823 | 1036 | 5 | 0.16 | 4.20 | 6.30 | 4.00 | 460 |
| 880 | 971 | 22.3 | 12 | 823 | 1036 | 5 | 0.21 | 3.20 | 4.80 | 3.20 | 648 |
| 880 | 971 | 22.3 | 12 | 823 | 1036 | 5 | 0.21 | 3.20 | 4.80 | 3.20 | 635 |
| 880 | 971 | 22.3 | 12 | 823 | 1036 | 5 | 0.21 | 3.20 | 4.80 | 3.20 | 634 |
| 900 | 1029 | 22.3 | 12 | 836 | 1114 | 6 | 0.20 | 3.40 | 5.00 | 3.20 | 894 |
| 900 | 1029 | 22.3 | 12 | 836 | 1114 | 6 | 0.27 | 2.50 | 3.70 | 2.50 | 1092 |
| 900 | 1029 | 22.3 | 12 | 836 | 1114 | 6 | 0.27 | 2.50 | 3.70 | 2.50 | 1094 |
| 900 | 1029 | 22.3 | 12 | 836 | 1114 | 6 | 0.27 | 2.50 | 3.70 | 2.50 | 1330 |

d 800~900 mm



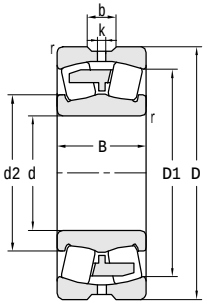



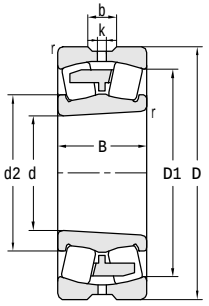



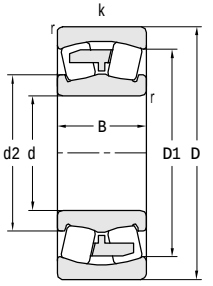

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | |
| mm | | | | kN | | r/min | | | |
| **800** | 1280 | 375 | 9.5 | 14350 | 30550 | 150 | 350 | **231/800CA/W33** | |
| | 1280 | 375 | 9.5 | 14350 | 30550 | 150 | 350 | **231/800CAK/W33** | |
| | 1280 | 475 | 9.5 | 17500 | 38400 | 130 | 170 | **241/800CAF1/W33** | **241/800CAF3/W33** |
| | 1280 | 475 | 9.5 | 17500 | 38400 | 130 | 170 | **241/800CAK30/W33** | |
| | 1420 | 488 | 15 | 19900 | 41000 | 100 | 150 | **232/800CAK30/W33** | |
| | 1420 | 488 | 15 | 19900 | 41000 | 100 | 150 | **232/800CAKF3/W33** | |
| **850** | 1030 | 136 | 5 | 3400 | 10000 | 180 | 250 | **238/850CA/W33** | |
| | 1030 | 136 | 5 | 3400 | 10000 | 180 | 250 | **238/850CAK/W33** | |
| | 1120 | 200 | 6 | 5800 | 15100 | 250 | 450 | **239/850CA/W33** | |
| | 1120 | 200 | 6 | 5800 | 15100 | 250 | 450 | **239/850CAK/W33** | |
| | 1120 | 272 | 6 | 7920 | 22100 | 200 | 350 | **249/850CA/W33** | **249/850CAF3/W33** |
| | 1120 | 272 | 6 | 7920 | 22100 | 200 | 350 | **249/850CAK30/W33** | |
| | 1220 | 272 | 7.5 | 9050 | 22500 | 200 | 400 | **230/850CAF1** | |
| | 1220 | 272 | 7.5 | 9700 | 22500 | 200 | 400 | **230/850CAKF1** | **230/850CAKF3** |
| | 1220 | 272 | 7.5 | 9950 | 23000 | 200 | 400 | **230/850CAF3/W33** | |
| | 1220 | 365 | 7.5 | 12000 | 29900 | 160 | 200 | **240/850CAF1/W33X** | **240/850CAF1/YA1** |
| | 1220 | 365 | 7.5 | 12000 | 29900 | 160 | 200 | **240/850CAF1/W33** | **240/850CAF1** |
| | 1220 | 365 | 7.5 | 12000 | 29900 | 160 | 200 | **240/850CAF3/W33X** | **240/850CAF3/YA1** |
| | 1220 | 365 | 7.5 | 12000 | 29900 | 160 | 200 | **240/850CA/W33** | |
| | 1220 | 365 | 7.5 | 12000 | 29900 | 160 | 200 | **240/850X2CAF3/W33X** | |
| | 1220 | 365 | 7.5 | 12000 | 29900 | 160 | 200 | **240/850CAF3/W33** | **240/850CAF3** |
| | 1360 | 400 | 12 | 15600 | 33450 | 150 | 350 | **231/850CA/W33** | |
| | 1360 | 400 | 12 | 15600 | 33450 | 150 | 350 | **231/850CAK/W33** | |
| | 1360 | 500 | 12 | 19200 | 42700 | 105 | 140 | **241/850CA/W33** | |
| | 1360 | 500 | 12 | 19200 | 42700 | 105 | 140 | **241/850CA30K/W33** | |
| **884** | 1320 | 365 | 7.5 | 12900 | 28900 | 110 | 150 | **240/884/HCC9YA1** | **240/884F3/HCC9YA1** |
| **900** | 1090 | 190 | 5 | 4900 | 15500 | 210 | 375 | **248/900CA/W33** | |
| | 1180 | 206 | 6 | 6250 | 16490 | 200 | 400 | **239/900CAF1/W33** | **239/900CAF3/W33** |
| | 1180 | 206 | 6 | 6250 | 16490 | 200 | 400 | **239/900CA/C3W33-QL** | **239/900CA/W33** |
| | 1180 | 206 | 6 | 6250 | 16490 | 200 | 400 | **239/900CAKF3/W33** | |
| | 1270 | 365 | 7.5 | 11400 | 28400 | 160 | 210 | **240/900X3/HC** | **240/900X3/HCYA3** |
| | 1270 | 365 | 7.5 | 11400 | 28400 | 160 | 210 | **240/900X3/W33** | |
| | 1270 | 365 | 7.5 | 11400 | 28400 | 160 | 210 | **240/900X3/HCC9YA1** | |

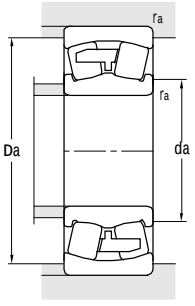
| Other dimensions | | | | Contact surface and chamfer dimensions | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d2 | D1 | b | k | da | Da | ra | e | Y1 | Y2 | Y0 | |
| mm | | | | mm | | | mm | | | | kg |
| 948 | 1140 | 22.3 | 12 | 842 | 1238 | 8 | 0.28 | 2.40 | 3.60 | 2.50 | 1960 |
| 948 | 1140 | 22.3 | 12 | 842 | 1238 | 8 | 0.28 | 2.40 | 3.60 | 2.50 | 1900 |
| 938 | 1102 | 22.3 | 12 | 842 | 1238 | 8 | 0.35 | 1.90 | 2.90 | 1.80 | 2350 |
| 938 | 1102 | 22.3 | 12 | 842 | 1238 | 8 | 0.35 | 1.90 | 2.90 | 1.80 | 2313 |
| 989 | 1198 | 22.3 | 12 | 899 | 1328 | 14 | 0.35 | 2.80 | 1.90 | 1.90 | 3419 |
| 989 | 1198 | 22.3 | 12 | 918 | 1328 | 14 | 0.35 | 2.80 | 1.90 | 1.90 | 3301 |
| 910 | 980 | 22.3 | 12 | 866 | 1012 | 4 | 0.11 | 6.10 | 9.10 | 6.30 | 232 |
| 910 | 980 | 22.3 | 12 | 866 | 1012 | 4 | 0.11 | 6.10 | 9.10 | 6.30 | 236 |
| 938 | 1045 | 22.3 | 12 | 872 | 1097 | 5 | 0.16 | 4.20 | 6.30 | 4.00 | 570 |
| 938 | 1045 | 22.3 | 12 | 872 | 1097 | 5 | 0.16 | 4.20 | 6.30 | 4.00 | 550 |
| 938 | 1028 | 22.3 | 12 | 872 | 1097 | 5 | 0.22 | 3.00 | 4.60 | 2.80 | 750 |
| 938 | 1028 | 22.3 | 12 | 872 | 1097 | 5 | 0.22 | 3.00 | 4.60 | 2.80 | 730 |
| 954 | 1108 | | | 886 | 1184 | 6 | 0.20 | 3.40 | 5.00 | 3.20 | 1074 |
| 954 | 1108 | | | 886 | 1184 | 6 | 0.20 | 3.40 | 5.00 | 3.20 | 1070 |
| 954 | 1108 | 22.3 | 12 | 886 | 1184 | 6 | 0.20 | 3.40 | 5.00 | 3.20 | 1073 |
| 956 | 1086 | 22.3 | 12 | 886 | 1184 | 6 | 0.27 | 2.50 | 3.70 | 2.50 | 1410 |
| 956 | 1086 | 22.3 | 12 | 886 | 1184 | 6 | 0.27 | 2.50 | 3.70 | 2.50 | 1410 |
| 956 | 1086 | 22.3 | 12 | 886 | 1184 | 6 | 0.27 | 2.50 | 3.70 | 2.50 | 1410 |
| 956 | 1086 | 22.3 | 12 | 886 | 1184 | 6 | 0.27 | 2.50 | 3.70 | 2.50 | 1416 |
| 956 | 1086 | 22.3 | 12 | 886 | 1184 | 6 | 0.27 | 2.50 | 3.70 | 2.50 | 1275 |
| 956 | 1086 | 22.3 | 12 | 886 | 1184 | 6 | 0.27 | 2.50 | 3.70 | 2.50 | 1410 |
| 1008 | 1204 | 22.3 | 12 | 898 | 1312 | 10 | 0.28 | 2.40 | 3.60 | 2.50 | 2260 |
| 1008 | 1204 | 22.3 | 12 | 898 | 1312 | 10 | 0.28 | 2.40 | 3.60 | 2.50 | 2180 |
| 986 | 1180 | 22.3 | 12 | 898 | 1312 | 10 | 0.35 | 1.90 | 2.90 | 1.80 | 2750 |
| 986 | 1180 | 22.3 | 12 | 898 | 1312 | 10 | 0.35 | 1.90 | 2.90 | 1.80 | 2720 |
| 1038 | 1184 | 24 | 12 | 936 | 1258 | 6 | 0.28 | 2.40 | 3.60 | 2.50 | 1811 |
| 963 | 1031 | 22.3 | 12 | 918 | 1073 | 4 | 0.14 | 4.80 | 7.20 | 4.50 | 370 |
| 988 | 1096 | 22.3 | 12 | 928 | 1150 | 5 | 0.15 | 4.50 | 6.70 | 4.50 | 611 |
| 988 | 1096 | 22.3 | 12 | 928 | 1150 | 5 | 0.15 | 4.50 | 6.70 | 4.50 | 616 |
| 988 | 1096 | 22.3 | 12 | 928 | 1150 | 5 | 0.15 | 4.50 | 6.70 | 4.50 | 591 |
| 1007 | 1139 | 24 | 12 | 936 | 1236 | 6 | 0.28 | 2.40 | 3.60 | 2.50 | 1434 |
| 1007 | 1139 | 24 | 12 | 936 | 1236 | 6 | 0.28 | 2.40 | 3.60 | 2.50 | 1434 |
| 1007 | 1139 | | 12 | 936 | 1236 | 6 | 0.28 | 2.40 | 3.60 | 2.50 | 1434 |

d 900~1000 mm



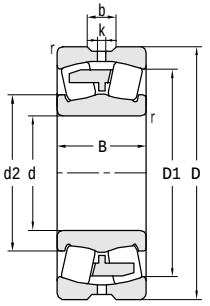



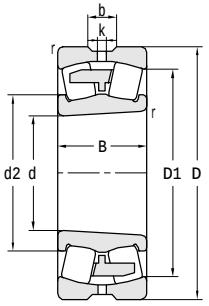



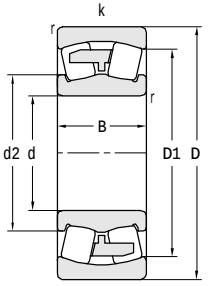

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | kN | | r/min | | |
| **900** | 1280 | 280 | 7.5 | 9800 | 22500 | 200 | 350 | **230/900CA/W33** |
| | 1280 | 280 | 7.5 | 10100 | 23300 | 200 | 350 | **230/900CAF3/W33** |
| | 1280 | 280 | 7.5 | 9600 | 22000 | 200 | 350 | **230/900CAK/W33** |
| | 1280 | 375 | 7.5 | 13300 | 34000 | 140 | 190 | **240/900CA/W33** |
| | 1280 | 375 | 7.5 | 10000 | 28000 | 150 | 190 | **240/900/W33** |
| | 1280 | 480 | 7.5 | 15800 | 40400 | 140 | 170 | **240/900X2CA/C3W33-QL** |
| | 1270 | 365 | 7.5 | 10800 | 26600 | 140 | 170 | **240/900X3/W33** |
| | 1270 | 365 | 7.5 | 9900 | 28400 | 140 | 170 | **240/900X3/HC** |
| | 1270 | 365 | 7.5 | 11800 | 29700 | 140 | 170 | **240/900X3F3/HCR** 240/900X3F3/HCRYA3 |
| | 1270 | 365 | 7.5 | 11800 | 29700 | 140 | 170 | **240/900X3/HCC9YA1** |
| | 1320 | 365 | 7.5 | 10500 | 27600 | 130 | 170 | **240/900X3/HCC9-1** |
| | 1420 | 515 | 12 | 20300 | 46500 | 95 | 140 | **241/900CA/W33** |
| | 1420 | 515 | 12 | 20300 | 46500 | 95 | 140 | **241/900CAK/W33** |
| | 1420 | 515 | 12 | 20300 | 46500 | 95 | 140 | **241/900CAF3/W33** |
| | 1420 | 515 | 12 | 20300 | 46500 | 95 | 140 | **241/900CAK30/W33** 241/900CAK30F3/W33 |
| | 1580 | 515 | 15 | 23600 | 49000 | 90 | 110 | **232/900CAK30/W33** |
| | 1580 | 515 | 15 | 23600 | 49000 | 90 | 110 | **232/900CAK30F3/W33** |
| **950** | 1250 | 224 | 7.5 | 7350 | 19000 | 200 | 400 | **239/950CA/W33** |
| | 1250 | 300 | 7.5 | 8900 | 25200 | 150 | 300 | **249/950CA/W33** |
| | 1250 | 300 | 7.5 | 8900 | 25200 | 150 | 300 | **249/950CAK30/W33** |
| | 1360 | 300 | 7.5 | 11600 | 27650 | 150 | 350 | **230/950CAF3/W33** |
| | 1360 | 412 | 7.5 | 14600 | 39000 | 125 | 160 | **240/950CA/W33** |
| | 1360 | 412 | 7.5 | 14000 | 37000 | 125 | 160 | **240/950CAK30/W33** |
| | 1500 | 438 | 12 | 18500 | 41600 | 90 | 130 | **231/950CA** |
| | 1500 | 545 | 7.5 | 22700 | 52200 | 90 | 120 | **241/950CA/W33** |
| | 1500 | 545 | 7.5 | 22700 | 52200 | 90 | 120 | **241/950CAK30/W33** |
| **1000** | 1220 | 165 | 6 | 4400 | 13600 | 150 | 300 | **238/1000CAKF1A/W20** 238/1000CAKF3A/W20 |
| | 1220 | 165 | 6 | 4580 | 13600 | 150 | 300 | **238/1000CA/C3W33-QL** |
| | 1320 | 315 | 7.5 | 10400 | 29000 | 150 | 300 | **249/1000CA/W33** |
| | 1320 | 315 | 7.5 | 10400 | 29000 | 150 | 300 | **249/1000CAK30/W33** |
| | 1420 | 260 | 7.5 | 10600 | 24000 | 150 | 170 | **220/1000X2CAF3/W33** |
| | 1420 | 308 | 7.5 | 12700 | 30500 | 150 | 175 | **230/1000CAF1/W33** 230/1000CAF3/W33 |
| | 1420 | 412 | 7.5 | 14600 | 40500 | 110 | 150 | **240/1000CAF3/W33** |
| | 1420 | 412 | 7.5 | 15600 | 40000 | 110 | 150 | **240/1000/W33** |

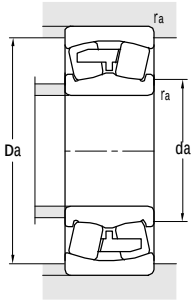
| Other dimensions | | | | Contact surface and chamfer dimensions | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d2 | D1 | b | k | da | Da | ra | e | Y1 | Y2 | Y0 | |
| mm | | | | mm | | | mm | | | | kg |
| 1024 | 1175 | 22.3 | 12 | 928 | 1250 | 6 | 0.20 | 3.40 | 5.00 | 3.20 | 1220 |
| 1024 | 1175 | 22.3 | 12 | 928 | 1250 | 6 | 0.20 | 3.40 | 5.00 | 3.20 | 1168 |
| 1024 | 1175 | 22.3 | 12 | 928 | 1250 | 6 | 0.20 | 3.40 | 5.00 | 3.20 | 1180 |
| 1010 | 1136 | 22.3 | 12 | 936 | 1244 | 6 | 0.26 | 2.60 | 3.90 | 2.50 | 1570 |
| 1008 | 1136 | 24 | 12 | 936 | 1244 | 6 | 0.26 | 2.60 | 3.90 | 2.50 | 1520 |
| 1000 | 1136 | 25 | 25 | 936 | 1244 | 6 | 0.26 | 2.60 | 3.90 | 2.50 | 1976 |
| 1139 | 1007 | 24 | 12 | 850 | 1220 | 6 | | | | | 1440 |
| 1007 | 1139 | 24 | 12 | 850 | 1220 | 6 | | | | | 1434 |
| 1139 | 1007 | 24 | 12 | 850 | 1220 | 6 | | | | | 1434 |
| 1139 | 1007 | 24 | 12 | 850 | 1220 | 6 | | | | | 1434 |
| 1021 | 1184 | 24 | 12 | 940 | 1282 | 6 | 0.26 | 2.60 | 3.90 | 2.50 | 1730 |
| 1042 | 1233 | 22.3 | 12 | 948 | 1372 | 10 | 0.35 | 1.90 | 2.90 | 1.80 | 3060 |
| 1042 | 1233 | 22.3 | 12 | 948 | 1372 | 10 | 0.35 | 1.90 | 2.90 | 1.80 | 3400 |
| 1042 | 1233 | 22.3 | 12 | 948 | 1372 | 10 | 0.35 | 1.90 | 2.90 | 1.80 | 3042 |
| 1042 | 1233 | 22.3 | 12 | 948 | 1372 | 10 | 0.35 | 1.90 | 2.90 | 1.80 | 3360 |
| 1114 | 1354 | | 20 | 960 | 1500 | 14 | | | | | 4360 |
| | 1354 | | 20 | 960 | 1500 | 14 | | | | | |
| 1046 | 1163 | 22.3 | 12 | 978 | 1222 | 6 | 0.15 | 4.50 | 6.70 | 4.50 | 759 |
| 1048 | 1149 | 22.3 | 12 | 978 | 1222 | 6 | 0.21 | 3.20 | 4.80 | 3.20 | 1030 |
| 1048 | 1149 | 22.3 | 12 | 978 | 1222 | 6 | 0.21 | 3.20 | 4.80 | 3.20 | 1000 |
| 1075 | 1234 | 22.3 | 12 | 978 | 1330 | 6 | 0.20 | 3.40 | 5.00 | 3.20 | 1440 |
| 1072 | 1212 | 22.3 | 12 | 978 | 1330 | 6 | 0.27 | 2.50 | 3.70 | 2.50 | 1971 |
| 1072 | 1212 | 22.3 | 12 | 978 | 1330 | 6 | 0.27 | 2.50 | 3.70 | 2.50 | 2000 |
| 1121 | 1319 | | | | | | | | | | 2997 |
| 1104 | 1304 | 22.3 | 12 | 998 | 1452 | 6 | 0.35 | 1.90 | 2.90 | 1.80 | 3600 |
| 1104 | 1304 | 22.3 | 12 | 998 | 1452 | 6 | 0.35 | 1.90 | 2.90 | 1.80 | 3540 |
| 1069 | 1154 | | 9 | 972 | 1260 | 5 | 0.11 | 5.92 | 8.81 | 5.78 | 402 |
| 1069 | 1154 | 22.3 | 12 | 972 | 1260 | 5 | 0.11 | 5.92 | 8.81 | 5.78 | 407 |
| 1108 | 1211 | 22.3 | 12 | 965 | 1291 | 6 | 0.21 | 3.20 | 4.80 | 3.20 | 1188 |
| 1108 | 1211 | 22.3 | 12 | 965 | 1291 | 6 | 0.21 | 3.20 | 4.80 | 3.20 | 1200 |
| 1129 | 1304 | 22.3 | 12 | 965 | 1380 | 6 | | | | | 1332 |
| 1140 | 1303 | 22.3 | 12 | 965 | 1392 | 6 | 0.19 | 3.60 | 5.30 | 3.60 | 1590 |
| 1130 | 1267 | 22.3 | 12 | 965 | 1392 | 6 | 0.26 | 2.60 | 3.90 | 2.50 | 2130 |
| 1127 | 1273 | 22.3 | 12 | 965 | 1385 | 6 | | | | | 2150 |

d 1000~1180 mm



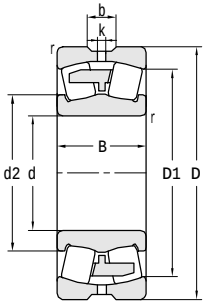



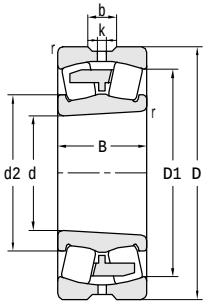



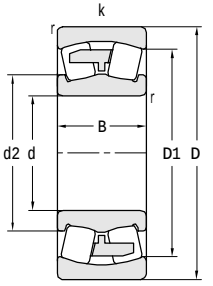



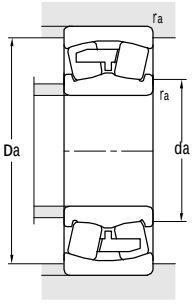

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | kN | | r/min | | |
| **1000** | 1580 | 462 | 12 | 20300 | 45600 | 95 | 130 | **231/1000CA/W33** |
| | 1580 | 462 | 12 | 20300 | 45600 | 95 | 130 | **231/1000CAK/W33** |
| | 1580 | 580 | 12 | 25300 | 58900 | 85 | 110 | **241/1000CA/W33** |
| | 1580 | 580 | 12 | 25300 | 58900 | 85 | 110 | **241/1000CAK30/W33** |
| **1060** | 1280 | 165 | 6 | 4500 | 14200 | 150 | 195 | **238/1060CA/W33** |
| | 1280 | 165 | 6 | 4500 | 14200 | 150 | 195 | **238/1060CAK/W33** |
| | 1280 | 218 | 6 | 5800 | 19000 | 125 | 160 | **248/1060CA/W33** |
| | 1280 | 218 | 6 | 5800 | 19000 | 125 | 160 | **248/1060CAK30/W33** |
| | 1400 | 250 | 7.5 | 9870 | 26300 | 145 | 170 | **239/1060CAF3/W33** |
| | 1400 | 250 | 7.5 | 9000 | 24700 | 145 | 170 | **239/1060CAKF3/W33X** |
| | 1400 | 250 | 7.5 | 9870 | 26300 | 145 | 170 | **239/1060CAKF3/W33** **239/1060CAKF3/C9W33** |
| | 1400 | 260 | 7.5 | 9450 | 25400 | 145 | 170 | **239/1060X2CAF3/W33** |
| | 1400 | 335 | 7.5 | 11150 | 31500 | 145 | 170 | **249/1060CAF3/W33** |
| | 1400 | 335 | 7.5 | 11150 | 31500 | 120 | 150 | **249/1060CA/W33** |
| | 1400 | 335 | 7.5 | 11150 | 31500 | 120 | 150 | **249/1060CAK30/W33** |
| | 1500 | 325 | 9.5 | 13380 | 32300 | 120 | 160 | **230/1060CA/W33** |
| | 1500 | 325 | 9.5 | 13100 | 32300 | 120 | 160 | **230/1060CAK/W33** |
| | 1500 | 438 | 9.5 | 17000 | 44100 | 110 | 150 | **240/1060F3/HCW33** |
| | 1500 | 438 | 9.5 | 17000 | 44100 | 110 | 150 | **240/1060F3/W33** **240/1060F3/W33X** |
| | 1500 | 438 | 9.5 | 17200 | 45000 | 100 | 145 | **240/1060CA/W33** **240/1060CAF1/W33** |
| | 1500 | 530 | 9.5 | 20000 | 52500 | 100 | 145 | **240/1060X2CAF3/W33** |
| | 1500 | 438 | 9.5 | 17200 | 45000 | 100 | 145 | **240/1060CAK30/W33** |
| **1120** | 1360 | 243 | 6 | 6900 | 22800 | 105 | 250 | **248/1120CA/W33** |
| | 1360 | 243 | 6 | 6900 | 22800 | 105 | 250 | **248/1120CAK30/W33** |
| | 1460 | 335 | 7.5 | 12000 | 35200 | 100 | 250 | **249/1120CAF3/W33** |
| | 1580 | 345 | 9.5 | 15000 | 38100 | 100 | 200 | **230/1120CAF3/W33X** |
| | 1580 | 462 | 9.5 | 18100 | 48500 | 100 | 200 | **240/1120CA/W33** |
| | 1580 | 462 | 9.5 | 17800 | 47500 | 100 | 200 | **240/1120CAK30/W33** |
| | 1750 | 630 | 15 | 29500 | 72000 | 70 | 80 | **241/1120K30F3/W33X** |
| **1180** | 1420 | 180 | 6 | 5500 | 17600 | 150 | 190 | **238/1180CAKF1A/W20** |
| | 1420 | 180 | 6 | 5500 | 17600 | 150 | 190 | **238/1180CAF3A/W20** |
| | 1420 | 243 | 6 | 7300 | 25600 | 130 | 160 | **248/1180CA/W33** |

| Other dimensions | | | | Contact surface and chamfer dimensions | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d2 | D1 | b | k | da | Da | ra | e | Y1 | Y2 | Y0 | |
| mm | | | | mm | | | mm | | | | kg |
| 1181 | 1404 | 22.3 | 12 | 965 | 1532 | 10 | 0.28 | 2.40 | 3.50 | 2.50 | 3520 |
| 1181 | 1404 | 22.3 | 12 | 965 | 1532 | 10 | 0.28 | 2.40 | 3.50 | 2.50 | 3410 |
| 1160 | 1372 | 22.3 | 12 | 965 | 1532 | 10 | 0.35 | 1.90 | 2.90 | 1.80 | 4350 |
| 1160 | 1372 | 22.3 | 12 | 965 | 1532 | 10 | 0.35 | 1.90 | 2.90 | 1.80 | 4260 |
| 1134 | 1218 | 22.3 | 12 | 1082 | 1258 | 5 | 0.11 | 6.10 | 9.10 | 6.30 | 440 |
| 1134 | 1218 | 22.3 | 12 | 1082 | 1258 | 5 | 0.11 | 6.10 | 9.10 | 6.30 | 425 |
| 1136 | 1211 | 22.3 | 12 | 1082 | 1258 | 5 | 0.14 | 4.80 | 7.20 | 4.50 | 576 |
| 1136 | 1211 | 22.3 | 12 | 1082 | 1258 | 5 | 0.14 | 4.80 | 7.20 | 4.50 | 565 |
| 1170 | 1304 | 22.3 | 12 | 1090 | 1365 | 6 | 0.16 | 4.20 | 6.30 | 4.00 | 1075 |
| 1170 | 1304 | 22.3 | 12 | 1090 | 1365 | 6 | 0.16 | 4.20 | 6.30 | 4.00 | 1041 |
| 1170 | 1304 | 22.3 | 12 | 1090 | 1365 | 6 | 0.16 | 4.20 | 6.30 | 4.00 | 1041 |
| 1170 | 1300 | 22.3 | 12 | 1090 | 1365 | 6 | | | | | 1111 |
| 1170 | 1304 | 22.3 | 12 | 1090 | 1365 | 6 | 0.16 | 4.20 | 6.30 | 4.00 | 1441 |
| 1164 | 1285 | 22.3 | 12 | 1090 | 1365 | 6 | 0.21 | 3.20 | 4.80 | 3.20 | 1420 |
| 1164 | 1285 | 22.3 | 12 | 1090 | 1365 | 6 | 0.21 | 3.20 | 4.80 | 3.20 | 1390 |
| 1200 | 1377 | 22.3 | 12 | 1093 | 1465 | 8 | 0.19 | 3.60 | 5.30 | 3.60 | 2300 |
| 1200 | 1377 | 22.3 | 12 | 1093 | 1465 | 8 | 0.19 | 3.60 | 5.30 | 3.60 | 2210 |
| 1185 | 1339 | 22.3 | 12 | 1093 | 1465 | 8 | 0.27 | 2.50 | 3.70 | 2.50 | 2500 |
| 1185 | 1339 | 22.3 | 12 | 1093 | 1465 | 8 | 0.27 | 2.50 | 3.70 | 2.50 | 2500 |
| 1190 | 1339 | 22.3 | 12 | 1093 | 1465 | 8 | 0.26 | 2.60 | 3.90 | 2.50 | 2540 |
| 1190 | 1339 | 22.3 | 12 | 1093 | 1465 | 8 | 0.26 | 2.60 | 3.90 | 2.50 | 3010 |
| 1190 | 1339 | 22.3 | 12 | 1093 | 1465 | 8 | 0.26 | 2.60 | 3.90 | 2.50 | 2540 |
| 1198 | 1278 | 22.3 | 12 | 1140 | 1335 | 5 | 0.15 | 4.50 | 6.70 | 4.50 | 740 |
| 1198 | 1278 | 22.3 | 12 | 1140 | 1335 | 5 | 0.15 | 4.50 | 6.70 | 4.50 | 725 |
| 1235 | 1348 | 22.3 | 12 | 1146 | 1431 | 6 | 0.20 | 3.40 | 5.00 | 3.20 | 1500 |
| 1286 | 1443 | 40 | 25 | 1155 | 1545 | 8 | 0.19 | 3.40 | 5.00 | 3.20 | 2210 |
| 1268 | 1421 | 22.3 | 12 | 1155 | 1545 | 8 | 0.26 | 2.60 | 3.90 | 2.50 | 2940 |
| 1268 | 1421 | 22.3 | 12 | 1155 | 1545 | 8 | 0.26 | 2.60 | 3.90 | 2.50 | 2850 |
| 1297 | 1509 | | 16 | | | | | | | | 5610 |
| 1254 | 1349 | | 9 | 1180 | 1450 | 5 | 0.11 | 6.28 | 9.35 | 6.14 | 577 |
| 1254 | 1349 | | 9 | 1180 | 1450 | 5 | 0.11 | 6.28 | 9.35 | 6.14 | 580 |
| 1250 | 1344 | 22.3 | 12 | 1180 | 1450 | 5 | 0.14 | 4.80 | 7.20 | 4.50 | 790 |



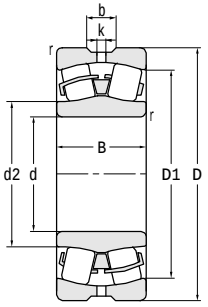



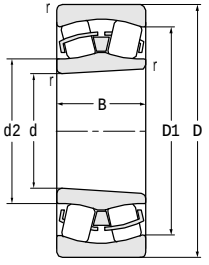



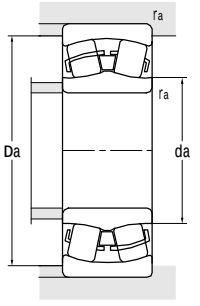

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | |
| mm | | | | kN | | r/min | | | |
| **1180** | 1420 | 243 | 6 | 7300 | 25600 | 130 | 160 | **248/1180CAK30/W33** | |
| | 1540 | 272 | 7.5 | 10750 | 30000 | 110 | 150 | **239/1180CAKF3/W33X** | **239/1180CAKF1/W33X** |
| | 1540 | 272 | 7.5 | 10750 | 30000 | 110 | 150 | **239/1180CAF3/W33X** | **239/1180CAF3/W33** |
| | 1540 | 355 | 7.5 | 13900 | 40000 | 110 | 150 | **249/1180CAF1/W33X** | **249/1180CAF3/W33X** |
| | 1540 | 355 | 7.5 | 13900 | 40000 | 110 | 150 | **249/1180CAK30F3/W33** | |
| | 1660 | 355 | 9.5 | 15000 | 36000 | 110 | 150 | **230/1180CA/HCRW33X** | **230/1180/HCRW33X** |
| | 1660 | 355 | 9.5 | 10700 | 29600 | 110 | 150 | **230/1180CAF3/W33X** | |
| | 1660 | 355 | 9.5 | 10700 | 29600 | 110 | 150 | **230/1180F3/HCRC9W33X** | |
| **1200** | 1500 | 280 | 7.5 | 10100 | 31000 | 130 | 150 | **206/1200CA/W33** | |
| **1250** | 1750 | 375 | 9.5 | 17350 | 43650 | 100 | 120 | **230/1250CA/W33** | |
| | 1750 | 375 | 9.5 | 17350 | 43650 | 100 | 120 | **230/1250CAK/W33** | |
| **1320** | 1600 | 280 | 6 | 9820 | 33500 | 85 | 120 | **248/1320CA/W33** | |
| | 1600 | 280 | 6 | 9300 | 31800 | 85 | 120 | **248/1320CA30/W33** | |
| | 1720 | 400 | 7.5 | 15600 | 46500 | 80 | 110 | **249/1320CA/W33** | **249/1320CAF3/W33** |
| | 1720 | 400 | 7.5 | 16400 | 49000 | 80 | 110 | **249/1320CAF3/HBW33** | **249/1320CAF3/W33** |
| | 1720 | 400 | 7.5 | 15300 | 46500 | 80 | 110 | **249/1320CAK30/W33** | |
| | 1850 | 530 | 12 | 23200 | 63300 | 70 | 85 | **240/1320CAF3/W33T** | |
| **1350** | 1650 | 315 | 7.5 | 11600 | 39500 | 80 | 110 | **206/1350CAF3/W33** | |
| **1400** | 1820 | 425 | 9.5 | 20000 | 58500 | 70 | 85 | **249/1400CAF3/W33** | |
| **1440** | 1760 | 315 | 7.5 | 11500 | 39700 | 70 | 85 | **206/1440F3/W20** | |
| **1500** | 1820 | 315 | 7.5 | 12000 | 42700 | 67 | 83 | **248/1500CA/W33** | |
| | 1820 | 315 | 7.5 | 12000 | 42700 | 67 | 83 | **248/1500CAK30F3/W20** | |
| **1600** | 2100 | 450 | 9.5 | 24500 | 74300 | 60 | 70 | **249/1600X3CA/W33** | |
| **1800** | 2180 | 375 | 9.5 | 16700 | 59800 | 60 | 70 | **248/1800CA/W33** | |
| | 2180 | 375 | 9.5 | 16700 | 59800 | 60 | 70 | **248/1800CAK30/W33** | |
| **2000** | 2700 | 550 | 10 | 38000 | 107000 | 45 | 56 | **206/2000F1/C9W33X** | |

| Other dimensions | | | | Contact surface and chamfer dimensions | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d2 | D1 | b | k | da | Da | ra | e | Y1 | Y2 | Y0 | |
| mm | | | | mm | | | mm | | | | kg |
| 1250 | 1344 | 22.3 | 12 | 1180 | 1450 | 5 | 0.14 | 4.80 | 7.20 | 4.50 | 770 |
| 1296 | 1432 | 24 | 12 | 1216 | 1536 | 6 | 0.16 | 4.20 | 6.30 | 4.00 | 1346 |
| 1296 | 1432 | 24 | 12 | 1216 | 1536 | 6 | 0.16 | 4.20 | 6.30 | 4.00 | 1391 |
| 1290 | 1422 | 22.3 | 12 | 1216 | 1536 | 6 | 0.20 | 3.42 | 5.09 | 3.34 | 1772 |
| 1290 | 1422 | 22.3 | 12 | 1216 | 1536 | 6 | 0.20 | 3.42 | 5.09 | 3.34 | 1742 |
| 1328 | 1509 | 24 | 12 | 1240 | 1600 | 8 | 0.20 | 3.42 | 5.09 | 3.34 | 2476 |
| 1328 | 1509 | 24 | 12 | 1240 | 1600 | 8 | 0.20 | 3.42 | 5.09 | 3.34 | 2460 |
| 1328 | 1509 | 24 | 12 | 1240 | 1600 | 8 | 0.20 | 3.42 | 5.09 | 3.34 | 2460 |
| 1296 | 1406 | 22.3 | 12 | 1236 | 1460 | 6 | | | | | 1150 |
| 1412 | 1610 | 22.3 | 12 | 1285 | 1715 | 8 | 0.19 | 3.60 | 5.30 | 3.60 | 2850 |
| 1412 | 1610 | 22.3 | 12 | 1285 | 1715 | 8 | 0.19 | 3.60 | 5.30 | 3.60 | 2760 |
| 1418 | 1513 | 22.3 | 12 | 1342 | 1578 | 5 | 0.15 | 4.50 | 6.70 | 4.50 | 1175 |
| 1418 | 1513 | 22.3 | 12 | 1342 | 1578 | 5 | 0.15 | 4.50 | 6.70 | 4.50 | 1150 |
| 1446 | 1588 | 24 | 12 | 1350 | 1691 | 6 | 0.21 | 3.20 | 4.80 | 3.20 | 2510 |
| 1446 | 1588 | 24 | 12 | 1350 | 1691 | 6 | 0.21 | 3.20 | 4.80 | 3.20 | 2500 |
| 1446 | 1588 | 24 | 12 | 1350 | 1691 | 6 | 0.21 | 3.20 | 4.80 | 3.20 | 2460 |
| 1485 | 1662 | 40 | 25 | 1390 | 1765 | 11 | 0.25 | 2.70 | 4.00 | 2.60 | 4540 |
| 1450 | 1553 | 22.3 | 12 | 1390 | 1614 | 6 | | | | | 1473 |
| 1528 | 1681 | 22.3 | 12 | 1452 | 1768 | 8 | 0.20 | 3.42 | 5.09 | 3.34 | 2920 |
| 1543 | 1652 | | 12 | 1475 | 1723 | 6 | | | | | 1685 |
| 1608 | 1710 | 24 | 12 | 1528 | 1792 | 6 | 0.15 | 4.50 | 6.70 | 4.50 | 1730 |
| 1608 | 1710 | | 12 | 1528 | 1792 | 6 | 0.15 | 4.50 | 6.70 | 4.50 | 1717 |
| 1755 | 1938 | 22.30 | 12.0 | | | | | | | | 4300 |
| 1935 | 2058 | 24 | 12 | 1832 | 2145 | 8 | 0.15 | 4.50 | 6.70 | 4.50 | 2920 |
| 1935 | 2058 | 24 | 12 | 1832 | 2145 | 8 | 0.15 | 4.50 | 6.70 | 4.50 | 2870 |
| 1540 | 2502 | 52.3 | 25 | 2060 | 2645 | 8 | | | | | 9110 |

d 40~75 mm



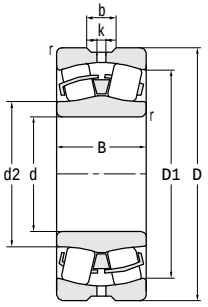



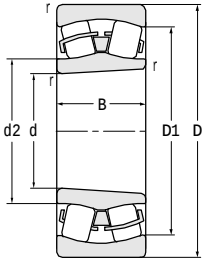



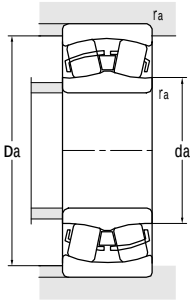

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | |
| mm | | | | kN | | r/min | | | |
| 40 | 80 | 23 | 1.1 | 91.7 | 85.5 | 6000 | 7500 | 22208C | 22208C/W33 |
| | 80 | 23 | 1.1 | 94 | 87 | 6000 | 7500 | 22208CK | 22208CK/W33 |
| | 90 | 33 | 1.5 | 143 | 133 | 4500 | 5600 | 22308C | 22308C/W33 |
| | 90 | 33 | 1.5 | 143 | 133 | 4500 | 5600 | 22308CK | 22308CK/W33 |
| 45 | 100 | 36 | 1.5 | 174 | 174 | 3800 | 4800 | 22309C | 22309CK |
| | 100 | 36 | 1.5 | 174 | 174 | 3800 | 4800 | 22309C/W33 | |
| 50 | 90 | 23 | 1.1 | 98.8 | 103 | 5000 | 6300 | 22210C | |
| | 110 | 40 | 2 | 209 | 213 | 3400 | 4300 | 22310C | 22310C/W33 |
| | 110 | 40 | 2 | 209 | 213 | 3400 | 4300 | 22310CK | 22310CK/W33 |
| 55 | 100 | 25 | 1.5 | 119 | 121 | 4500 | 5600 | 22211C | 22211C/W33 |
| | 100 | 25 | 1.5 | 119 | 120 | 4500 | 5600 | 22211CK/W33 | |
| | 120 | 43 | 2 | 257 | 266 | 3200 | 4000 | 22311C | 22311C/W33 |
| | 120 | 43 | 2 | 257 | 266 | 3200 | 4000 | 22311CK | 22311CK/W33 |
| 60 | 110 | 28 | 1.5 | 148 | 158 | 4300 | 5300 | 22212C | 22212C/W33 |
| | 110 | 28 | 1.5 | 148 | 158 | 4300 | 5300 | 22212CK | 22212CK/W33 |
| | 130 | 31 | 2.1 | 201 | 228 | 3400 | 4300 | 21312C/W33 | |
| | 130 | 46 | 2.1 | 295 | 318 | 2800 | 3600 | 22312C | 22312C/W33 |
| | 130 | 46 | 2.1 | 295 | 318 | 2800 | 3600 | 22312CK | 22312CK/W33 |
| 65 | 120 | 31 | 1.5 | 183 | 205 | 3800 | 4800 | 22213C | 22213C/W33 |
| | 120 | 31 | 1.5 | 183 | 205 | 3800 | 4800 | 22213CK | 22213CK/W33 |
| | 140 | 48 | 2.1 | 323 | 342 | 2600 | 3400 | 22313C | 22313C/YB2 |
| | 140 | 48 | 2.1 | 323 | 342 | 2600 | 3400 | 22313C/W33 | |
| | 140 | 48 | 2.1 | 323 | 342 | 2600 | 3400 | 22313CK | 22313CK/W33 |
| 70 | 125 | 31 | 1.5 | 198 | 217 | 3600 | 4500 | 22214C | 22214C/W33 |
| | 125 | 31 | 1.5 | 198 | 217 | 3600 | 4500 | 22214CK | 22214CK/W33 |
| | 150 | 51 | 2.1 | 380 | 408 | 2200 | 3000 | 22314C | 22314C/W33 |
| | 150 | 51 | 2.1 | 380 | 408 | 2200 | 3000 | 22314CK | 22314CK/W33 |
| 75 | 130 | 31 | 1.5 | 201 | 228 | 3400 | 4300 | 22215C | 22215C/W33 |
| | 130 | 31 | 1.5 | 201 | 228 | 3400 | 4300 | 22215CK | 22215CK/W33 |

| Other dimensions | | | | Contact surface and chamfer dimensions | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d2 | D1 | b | k | da | Da | ra | e | Y1 | Y2 | Y0 | |
| mm | | | | mm | | | mm | | | | kg |
| 50.4 | 68.9 | 5.5 | 2 | 47 | 73 | 1 | 0.28 | 2.40 | 3.50 | 2.50 | 0.523 |
| 50.4 | 68.9 | 5.5 | 2 | 47 | 73 | 1 | 0.28 | 2.40 | 3.50 | 2.50 | 0.521 |
| 56 | 74 | 5.5 | 2.5 | 49 | 81 | 1.5 | 0.38 | 1.80 | 2.70 | 1.80 | 1.04 |
| 56 | 74 | 5.5 | 2.5 | 49 | 81 | 1.5 | 0.38 | 1.80 | 2.70 | 1.80 | 1.02 |
| 57.4 | 81.4 | | | 54 | 91 | 1.5 | 0.26 | 2.60 | 3.90 | 2.50 | 1.56 |
| 57.4 | 81.4 | | | 54 | 91 | 1.5 | 0.26 | 2.60 | 3.90 | 2.50 | 1.51 |
| 62.5 | 81.6 | | | 57 | 83 | 1 | 0.25 | 2.60 | 3.90 | 2.50 | 0.642 |
| 62.9 | 90.6 | 5.5 | 2.5 | 61 | 100 | 2 | 0.38 | 1.80 | 2.70 | 1.80 | 1.96 |
| 62.9 | 90.6 | 5.5 | 2.5 | 61 | 100 | 2 | 0.38 | 1.80 | 2.70 | 1.80 | 1.89 |
| 65.7 | 87.3 | 5.5 | 2 | 62 | 91 | 1.5 | 0.24 | 2.80 | 4.20 | 2.80 | 0.856 |
| 65.7 | 87.3 | 5.5 | 2 | 62 | 91 | 1.5 | 0.24 | 2.80 | 4.20 | 2.80 | 0.844 |
| 69 | 99.5 | 5.5 | 2.5 | 65 | 110 | 2 | 0.37 | 1.90 | 2.90 | 1.80 | 2.37 |
| 69 | 99.5 | 5.5 | 2.5 | 65 | 110 | 2 | 0.37 | 1.90 | 2.90 | 1.80 | 2.32 |
| 75.5 | 95 | 5.5 | 2 | 69 | 101 | 1.5 | 0.24 | 2.80 | 4.20 | 2.80 | 1.11 |
| 75.5 | 95 | 5.5 | 2 | 69 | 101 | 1.5 | 0.24 | 2.80 | 4.20 | 2.80 | 1.11 |
| 87.8 | 115 | 5.5 | 3 | 72 | 118 | 2 | 0.22 | 3.00 | 4.60 | 2.80 | 2.08 |
| 81.4 | 108 | 5.5 | 3 | 72 | 118 | 2 | 0.37 | 1.90 | 2.90 | 1.80 | 3.25 |
| 81.4 | 108 | 5.5 | 3 | 72 | 118 | 2 | 0.37 | 1.90 | 2.90 | 1.80 | 3.21 |
| 81.5 | 103 | 5.5 | 2.5 | 74 | 111 | 1.5 | 0.25 | 2.70 | 4.00 | 2.50 | 1.55 |
| 81.5 | 103 | 5.5 | 2.5 | 74 | 111 | 1.5 | 0.25 | 2.70 | 4.00 | 2.50 | 1.52 |
| 81.4 | 116 | | | 77 | 128 | 2 | 0.35 | 1.90 | 2.90 | 1.80 | 4.97 |
| 88.6 | 116 | 5.5 | 3 | 77 | 128 | 2 | 0.35 | 1.90 | 2.90 | 1.80 | 4.92 |
| 88.6 | 116 | 5.5 | 3 | 77 | 128 | 2 | 0.35 | 1.90 | 2.90 | 1.80 | 4.88 |
| 86.8 | 109 | 6 | 2.5 | 79 | 116 | 1.5 | 0.24 | 3.00 | 4.60 | 2.80 | 1.63 |
| 86.8 | 109 | 6 | 2.5 | 79 | 116 | 1.5 | 0.24 | 3.00 | 4.60 | 2.80 | 1.59 |
| 95.8 | 125 | 8.3 | 4 | 82 | 138 | 2 | 0.35 | 1.90 | 2.90 | 1.80 | 4.48 |
| 95.8 | 125 | 8.3 | 4 | 82 | 138 | 2 | 0.35 | 1.90 | 2.90 | 1.80 | 4.45 |
| 92 | 114 | 5.5 | 2.5 | 84 | 121 | 1.5 | 0.24 | 3.00 | 4.60 | 2.80 | 1.71 |
| 92 | 114 | 5.5 | 2.5 | 84 | 121 | 1.5 | 0.24 | 3.00 | 4.60 | 2.80 | 1.70 |

d 75~100 mm



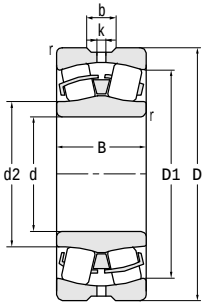



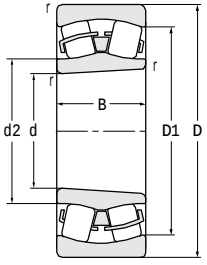



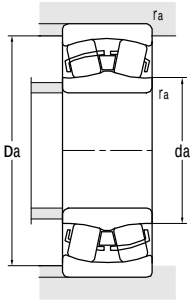

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | |
| mm | | | | kN | | r/min | | | |
| 75 | 160 | 55 | 2.1 | 418 | 451 | 2200 | 3000 | 22315C | 22315C/W33 |
| | 160 | 55 | 2.1 | 418 | 451 | 2200 | 3000 | 22315CK | 22315CK/W33 |
| 80 | 140 | 33 | 2 | 224 | 257 | 3200 | 4000 | 22216C | 22216C/W33 |
| | 140 | 33 | 2 | 224 | 257 | 3200 | 4000 | 22216CK | 22216CK/W33 |
| | 170 | 58 | 2.1 | 466 | 513 | 2000 | 2800 | 22316C | 22316C/W33 |
| | 170 | 58 | 2.1 | 466 | 513 | 2000 | 2800 | 22316CK | 22316CK/W33 |
| 85 | 150 | 36 | 2 | 271 | 309 | 2800 | 3600 | 22217C/W33 | |
| | 150 | 36 | 2 | 271 | 309 | 2800 | 3600 | 22217CK | 22217CK/W33 |
| | 180 | 60 | 3 | 523 | 589 | 1900 | 2600 | 22317C | 22317C/W33 |
| | 180 | 60 | 3 | 523 | 589 | 1900 | 2600 | 22317CK | 22317CK/W33 |
| 90 | 150 | 72 | 2 | 320 | 500 | | | 24118X2C/HG2 | |
| | 160 | 40 | 2 | 309 | 356 | 2600 | 3400 | 22218C | 22218C/W33 |
| | 160 | 40 | 2 | 255 | 356 | 2600 | 3400 | 22218CK | 22218CK/W33 |
| | 160 | 52.4 | 2 | 337 | 480 | 1900 | 2600 | 23218C | |
| | 190 | 64 | 3 | 580 | 660 | 1800 | 2400 | 22318C | 22318C/W33 |
| | 190 | 64 | 3 | 580 | 660 | 1800 | 2400 | 22318CK | 22318CK/W33 |
| 95 | 170 | 43 | 2.1 | 361 | 428 | 2400 | 3200 | 22219C | 22219C/W33 |
| | 170 | 43 | 2.1 | 361 | 428 | 2400 | 3200 | 22219CK | 22219CK/W33 |
| | 200 | 67 | 3 | 637 | 727 | 1800 | 2400 | 22319C | 22319C/W33 |
| | 200 | 67 | 3 | 637 | 727 | 1800 | 2400 | 22319CK | 22319CK/W33 |
| 100 | 150 | 37 | 1.5 | 206 | 325 | 2400 | 3200 | 23020C | 23020C/W33 |
| | 150 | 37 | 1.5 | 206 | 325 | 2400 | 3200 | 23020CK | 23020CK/W33 |
| | 165 | 52 | 2 | 347 | 515 | 2000 | 2800 | 23120C | 23120C/W33 |
| | 165 | 52 | 2 | 347 | 515 | 2000 | 2800 | 23120CK | 23120CK/W33 |
| | 180 | 46 | 2.1 | 404 | 466 | 2200 | 3000 | 22220C | 22220C/W33 |
| | 180 | 46 | 2.1 | 404 | 466 | 2200 | 3000 | 22220CK | 22220CK/W33 |
| | 180 | 60.3 | 2.1 | 451 | 600 | 1700 | 2200 | 23220C | 23220C/W33 |
| | 180 | 60.3 | 2.1 | 365 | 605 | 1700 | 2200 | 23220C/HG2W33 | |
| | 215 | 73 | 3 | 774 | 903 | 1700 | 2200 | 22320C | 22320C/W33 |
| | 215 | 73 | 3 | 774 | 903 | 1700 | 2200 | 22320CK | 22320CK/W33 |

| Other dimensions | | | | Contact surface and chamfer dimensions | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d2 | D1 | b | k | da | Da | ra | e | Y1 | Y2 | Y0 | |
| mm | | | | mm | | | mm | | | | kg |
| 101 | 133 | 8.3 | 4 | 87 | 148 | 2 | 0.35 | 1.90 | 2.90 | 1.80 | 5.39 |
| 101 | 133 | 8.3 | 4 | 87 | 148 | 2 | 0.35 | 1.90 | 2.90 | 1.80 | 5.37 |
| 95.1 | 122 | 5.5 | 2.5 | 91 | 129 | 2 | 0.22 | 3.00 | 4.60 | 2.80 | 2.10 |
| 95.1 | 122 | 5.5 | 2.5 | 91 | 129 | 2 | 0.22 | 3.00 | 4.60 | 2.80 | 2.09 |
| 109 | 142 | 8.3 | 4 | 92 | 158 | 2 | 0.34 | 1.90 | 2.90 | 1.80 | 6.60 |
| 109 | 142 | 8.3 | 4 | 92 | 158 | 2 | 0.34 | 1.90 | 2.90 | 1.80 | 6.56 |
| 105 | 132 | 6.5 | 3 | 96 | 139 | 2 | 0.23 | 3.00 | 4.60 | 2.80 | 2.73 |
| 105 | 132 | 6.5 | 3 | 96 | 139 | 2 | 0.23 | 3.00 | 4.60 | 2.80 | 2.64 |
| 107 | 150 | 8.3 | 4 | 99 | 166 | 2.5 | 0.33 | 2.00 | 3.00 | 2.00 | 7.38 |
| 107 | 150 | 8.3 | 4 | 99 | 166 | 2.5 | 0.33 | 2.00 | 3.00 | 2.00 | 7.23 |
| 101 | 120 | | | 100 | 135 | 2 | | | | | 4.75 |
| 106 | 139 | 8.3 | 2.5 | 101 | 149 | 2 | 0.23 | 2.80 | 4.20 | 2.80 | 4.50 |
| 106 | 139 | 8.3 | 2.5 | 101 | 149 | 2 | 0.23 | 2.80 | 4.20 | 2.80 | 4.35 |
| 106 | 136 | | | 101 | 149 | 2 | 0.31 | 2.20 | 3.30 | 2.20 | 4.66 |
| 113 | 159 | 8.3 | 5 | 104 | 176 | 2.5 | 0.35 | 2.00 | 3.00 | 2.00 | 10.1 |
| 113 | 159 | 8.3 | 5 | 104 | 176 | 2.5 | 0.35 | 2.00 | 3.00 | 2.00 | 9.25 |
| 114 | 148 | 8.3 | 3 | 107 | 158 | 2 | 0.24 | 2.80 | 4.20 | 2.80 | 4.16 |
| 114 | 148 | 8.3 | 3 | 107 | 158 | 2 | 0.24 | 2.80 | 4.20 | 2.80 | 4.07 |
| 128 | 167 | 8.3 | 5 | 109 | 186 | 2.5 | 0.34 | 2.00 | 3.00 | 2.00 | 10.2 |
| 128 | 167 | 8.3 | 5 | 109 | 186 | 2.5 | 0.34 | 2.00 | 3.00 | 2.00 | 10.0 |
| 116 | 135 | 5.5 | 3 | 110 | 140 | 2 | 0.22 | 2.90 | 4.40 | 2.80 | 2.32 |
| 116 | 135 | 5.5 | 3 | 110 | 140 | 2 | 0.22 | 2.90 | 4.40 | 2.80 | 2.28 |
| 121 | 143 | 5.5 | 3 | 110 | 155 | 2 | 0.30 | 2.30 | 3.40 | 2.20 | 4.43 |
| 121 | 143 | 5.5 | 3 | 110 | 155 | 2 | 0.30 | 2.30 | 3.40 | 2.20 | 4.39 |
| 124 | 156 | 8.3 | 3 | 112 | 168 | 2 | 0.24 | 2.80 | 4.20 | 2.80 | 5.30 |
| 124 | 156 | 8.3 | 3 | 112 | 168 | 2 | 0.24 | 2.80 | 4.20 | 2.80 | 5.25 |
| 125 | 153 | 8.3 | 4.5 | 112 | 168 | 2 | 0.33 | 2.00 | 3.00 | 2.00 | 6.65 |
| 117 | 153 | 10 | 4.5 | 112 | 168 | 2 | | | | | 6.9 |
| 138 | 179 | 11.1 | 5 | 114 | 201 | 2.5 | 0.35 | 2.00 | 3.00 | 2.00 | 13.1 |
| 138 | 179 | 11.1 | 5 | 114 | 201 | 2.5 | 0.35 | 2.00 | 3.00 | 2.00 | 12.9 |

d 105~130 mm



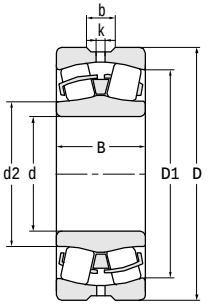



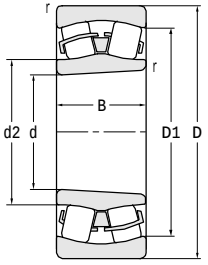



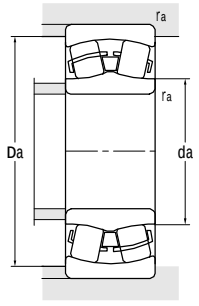

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | |
| mm | | | | kN | | r/min | | | |
| 105 | 175 | 56 | 2 | 365 | 560 | 1900 | 2700 | 23121C | 23121C/W33 |
| | 175 | 56 | 2 | 365 | 560 | 1900 | 2700 | 23121CK | 23121CK/W33 |
| 110 | 170 | 45 | 2 | 295 | 460 | 2200 | 3000 | 23022C | 23022C/W33 |
| | 170 | 45 | 2 | 295 | 460 | 2200 | 3000 | 23022C/W33-2RS2 | |
| | 170 | 45 | 2 | 295 | 460 | 2200 | 3000 | 23022CK | 23022CK/W33 |
| | 180 | 56 | 2 | 409 | 590 | 1900 | 2600 | 23122C | 23122C/W33 |
| | 180 | 56 | 2 | 409 | 590 | 1900 | 2600 | 23122CK | 23122CK/W33 |
| | 180 | 69 | 2 | 494 | 713 | 1000 | 1400 | 24122C/W24 | |
| | 200 | 53 | 2.1 | 530 | 610 | 2000 | 2800 | 22222C | 22222C/W33 |
| | 200 | 53 | 2.1 | 530 | 610 | 2000 | 2800 | 22222CK | 22222CK/W33 |
| | 200 | 69.8 | 2.1 | 570 | 830 | 1600 | 2000 | 23222C | |
| | 240 | 80 | 3 | 761 | 996 | 1600 | 2000 | 22322C | 22322C/W33 |
| | 240 | 80 | 3 | 761 | 996 | 1600 | 2000 | 22322CK | 22322CK/W33 |
| 120 | 180 | 46 | 2 | 340 | 495 | 2000 | 2800 | 23024C | |
| | 180 | 46 | 2 | 340 | 495 | 2000 | 2800 | 23024CK | |
| | 200 | 62 | 2 | 490 | 715 | 1800 | 2400 | 23124C | 23124C/W33 |
| | 200 | 62 | 2 | 490 | 715 | 1800 | 2400 | 23124CK | 23124CK/W33 |
| | 200 | 80 | 2 | 620 | 925 | 1400 | 1800 | 24124C | |
| | 215 | 58 | 2.1 | 600 | 730 | 1900 | 2600 | 22224C | 22224C/W33 |
| | 215 | 58 | 2.1 | 600 | 730 | 1900 | 2600 | 22224CK | |
| | 215 | 58 | 2.1 | 600 | 730 | 1900 | 2600 | 22224C/C9 | |
| | 215 | 58 | 2.1 | 600 | 730 | 1900 | 2600 | 22224CK | 22224CK/W33 |
| | 215 | 76 | 2.1 | 660 | 940 | 1500 | 1900 | 23224C | |
| | 260 | 86 | 3 | 920 | 1120 | 1400 | 1800 | 22324C | 22324C/W33 |
| | 260 | 86 | 3 | 920 | 1120 | 1400 | 1800 | 22324CK | 22324CK/W33 |
| 130 | 200 | 52 | 2 | 410 | 650 | 1900 | 2600 | 23026C | 23026C/W33 |
| | 200 | 52 | 2 | 410 | 650 | 1900 | 2600 | 23026CK | 23026CK/W33 |
| | 210 | 64 | 2 | 530 | 790 | 1700 | 2200 | 23126C | 23126C/W33 |
| | 210 | 64 | 2 | 530 | 790 | 1700 | 2200 | 23126CK | 23126CK/W33 |
| | 210 | 80 | 2 | 650 | 990 | 1700 | 2200 | 24126C/W33 | |
| | 210 | 80 | 2 | 650 | 1000 | 1700 | 2200 | 24126CK30/W33 | |
| | 230 | 64 | 3 | 700 | 880 | 1800 | 2400 | 22226C | 22226C/W33 |
| | 230 | 64 | 3 | 700 | 880 | 1800 | 2400 | 22226CK | 22226CK/W33 |

| Other dimensions | | | | Contact surface and chamfer dimensions | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d2 | D1 | b | k | da | Da | ra | e | Y1 | Y2 | Y0 | |
| mm | | | | mm | | | mm | | | | kg |
| 127 | 151 | 5.5 | 3 | 115 | 165 | 2 | 0.30 | 2.20 | 3.30 | 2.20 | 5.36 |
| 127 | 151 | 5.5 | 3 | 115 | 165 | 2 | 0.30 | 2.20 | 3.30 | 2.20 | 5.19 |
| 128 | 150 | 7.5 | 3 | 120 | 160 | 2 | 0.24 | 2.90 | 4.40 | 2.80 | 3.68 |
| 128 | 150 | 7.5 | 3 | 120 | 160 | 2 | 0.24 | 2.90 | 4.40 | 2.80 | 3.74 |
| 128 | 150 | 7.5 | 3 | 120 | 160 | 2 | 0.24 | 2.90 | 4.40 | 2.80 | 3.57 |
| 132 | 156 | 5.5 | 3 | 120 | 170 | 2 | 0.30 | 2.30 | 3.40 | 2.20 | 5.69 |
| 132 | 156 | 5.5 | 3 | 120 | 170 | 2 | 0.30 | 2.30 | 3.40 | 2.20 | 5.67 |
| 133 | 153 | | 6 | 120 | 170 | 2 | 0.35 | 1.90 | 2.90 | 1.80 | 6.90 |
| 133 | 173 | 8.3 | 4 | 122 | 188 | 2 | 0.26 | 2.70 | 4.00 | 2.50 | 7.32 |
| 133 | 173 | 8.3 | 4 | 122 | 188 | 2 | 0.26 | 2.70 | 4.00 | 2.50 | 7.16 |
| 138 | 168 | | | 122 | 188 | 2 | 0.33 | 2.00 | 3.00 | 2.00 | 9.73 |
| 151 | 197 | 13.9 | 6 | 122 | 188 | 2.5 | 0.34 | 2.20 | 3.30 | 2.20 | 18.2 |
| 151 | 197 | 13.9 | 6 | 122 | 188 | 2.5 | 0.34 | 2.20 | 3.30 | 2.20 | 17.7 |
| 134 | 162 | | | 130 | 170 | 2 | 0.22 | 3.00 | 4.60 | 2.80 | 4.46 |
| 134 | 162 | | | 130 | 170 | 2 | 0.22 | 3.00 | 4.60 | 2.80 | 4.32 |
| 146 | 174 | 5.5 | 3 | 130 | 190 | 2 | 0.29 | 2.40 | 3.60 | 2.50 | 7.97 |
| 146 | 174 | 5.5 | 3 | 130 | 190 | 2 | 0.29 | 2.40 | 3.60 | 2.50 | 7.96 |
| 146 | 167 | | | 130 | 190 | 2 | 0.38 | 1.80 | 2.70 | 1.80 | 10.0 |
| 149 | 187 | 11.1 | 4 | 132 | 203 | 2 | 0.25 | 2.60 | 3.90 | 2.50 | 9.78 |
| 149 | 187 | 11.1 | 4 | 132 | 203 | 2 | 0.25 | 2.60 | 3.90 | 2.50 | 9.75 |
| 149 | 187 | 11.1 | 4 | 132 | 203 | 2 | 0.25 | 2.60 | 3.90 | 2.50 | 9.78 |
| 149 | 187 | 11.1 | 4 | 132 | 203 | 2 | 0.25 | 2.60 | 3.90 | 2.50 | 9.66 |
| 150 | 182 | | | 132 | 203 | 2 | 0.34 | 1.90 | 2.90 | 1.80 | 11.5 |
| 165 | 218 | 13.9 | 6 | 134 | 246 | 2.5 | 0.35 | 1.90 | 2.90 | 1.80 | 23.8 |
| 165 | 218 | 13.9 | 6 | 134 | 246 | 2.5 | 0.35 | 1.90 | 2.90 | 1.80 | 21.9 |
| 153 | 179 | 9.5 | 4 | 140 | 190 | 2 | 0.24 | 2.90 | 4.40 | 2.80 | 6.12 |
| 153 | 179 | 9.5 | 4 | 140 | 190 | 2 | 0.24 | 2.90 | 4.40 | 2.80 | 5.94 |
| 156 | 183 | 8.3 | 4 | 140 | 200 | 2 | 0.28 | 2.40 | 3.50 | 2.50 | 9.66 |
| 156 | 183 | 8.3 | 4 | 140 | 200 | 2 | 0.28 | 2.40 | 3.50 | 2.50 | 9.21 |
| 146 | 178 | 8.3 | 4 | 140 | 200 | 2 | | | | | 10.9 |
| 146 | 178 | 8.3 | 4 | 140 | 200 | 2 | | | | | 10.9 |
| 162 | 200 | 10 | 5 | 144 | 216 | 2.5 | 0.26 | 2.50 | 3.70 | 2.50 | 11.5 |
| 162 | 200 | 10 | 5 | 144 | 216 | 2.5 | 0.26 | 2.50 | 3.70 | 2.50 | 11.3 |

d 30~60 mm



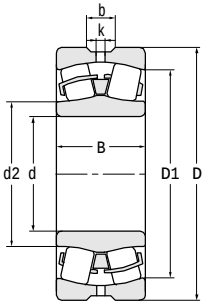



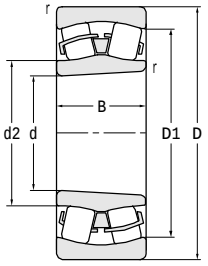



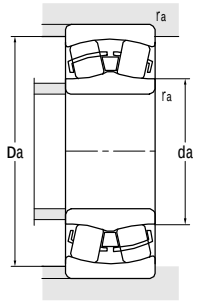

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | Cr | Cor | Grease | Oil | | |
| mm | | | | kN | | r/min | | | |
| 130 | 280 | 93 | 4 | 1060 | 1320 | 1300 | 1700 | 22326C | 22326C/W33 |
| | 280 | 93 | 4 | 1060 | 1320 | 1300 | 1700 | 22326CK | 22326CK/W33 |
| 140 | 210 | 53 | 2 | 440 | 715 | 1800 | 2400 | 23028C | 23028C/W33 |
| | 210 | 53 | 2 | 440 | 715 | 1800 | 2400 | 23028CK | 23028CK/W33 |
| | 225 | 68 | 2.1 | 600 | 935 | 1600 | 2000 | 23128C | 23128C/W33 |
| | 225 | 68 | 2.1 | 600 | 935 | 1600 | 2000 | 23128CK | 23128CK/W33 |
| | 250 | 68 | 3 | 670 | 860 | 1700 | 2200 | 22228C | 22228C/W33 |
| | 250 | 68 | 3 | 670 | 860 | 1700 | 2200 | 22228CK | 22228CK/W33 |
| | 250 | 88 | 3 | 810 | 1300 | 1200 | 1600 | 23228C/W33 | |
| | 300 | 102 | 3.7 | 1230 | 1590 | 1100 | 1500 | 22328C | 22328C/W33 |
| | 300 | 102 | 3.7 | 1230 | 1590 | 1100 | 1500 | 22328CK | 22328CK/W33 |
| 150 | 225 | 56 | 2.1 | 485 | 730 | 1700 | 2200 | 23030C | 23030C/W33 |
| | 225 | 56 | 2.1 | 485 | 730 | 1700 | 2200 | 23030CK | 23030CK/W33 |
| | 250 | 80 | 2.1 | 790 | 1230 | 1400 | 1800 | 23130C | 23130C/W33 |
| | 250 | 80 | 2.1 | 790 | 1230 | 1400 | 1800 | 23130CK | 23130CK/W33 |
| | 250 | 100 | 2.1 | 970 | 1450 | 800 | 1000 | 24130C | |
| | 270 | 73 | 3 | 810 | 1100 | 1600 | 2000 | 22230C | 22230C/W33 |
| | 270 | 96 | 3 | 1030 | 1390 | 1100 | 1500 | 23230C | |
| | 320 | 108 | 4 | 1320 | 1820 | 1000 | 1400 | 22330C | |
| 160 | 240 | 60 | 2.1 | 555 | 875 | 1700 | 2200 | 23032C | 23032C/W33 |
| | 240 | 60 | 2.1 | 555 | 875 | 1700 | 2200 | 23032CK | 23032CK/W33 |
| | 270 | 86 | 2.1 | 930 | 1420 | 1300 | 1700 | 23132C | 23132C/W33 |
| | 270 | 86 | 2.1 | 930 | 1420 | 1300 | 1700 | 23132CK | 23132CK/W33 |
| | 270 | 109 | 2.1 | 1120 | 1690 | 700 | 900 | 24132C/W33 | |
| | 290 | 80 | 3 | 950 | 1280 | 1500 | 1900 | 22232C | 22232C/W33 |
| | 290 | 80 | 3 | 950 | 1280 | 1500 | 1900 | 22232CK | 22232CK/W33 |
| | 290 | 104 | 3 | 1160 | 1760 | 1000 | 1400 | 23232C | 23232C/W33 |
| | 290 | 104 | 3 | 1160 | 1760 | 1000 | 1400 | 23232CK/W33 | |
| | 340 | 114 | 4 | 1520 | 2050 | 950 | 1300 | 22332C | 22332C/W33 |
| | 340 | 114 | 4 | 1520 | 2050 | 950 | 1300 | 22332CK | 22332CK/W33 |
| 170 | 260 | 67 | 2.1 | 670 | 1150 | 1600 | 2000 | 23034C | 23034C/W33 |
| | 260 | 67 | 2.1 | 670 | 1150 | 1600 | 2000 | 23034CK | 23034CK/W33 |

| Other dimensions | | | | Contact surface and chamfer dimensions | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d2 | D1 | b | k | da | Da | ra | e | Y1 | Y2 | Y0 | |
| mm | | | | mm | | | mm | | | | kg |
| 178 | 232 | 16.7 | 6 | 148 | 262 | 3 | 0.34 | 1.90 | 2.90 | 1.80 | 24.9 |
| 178 | 232 | 16.7 | 6 | 148 | 262 | 3 | 0.34 | 1.90 | 2.90 | 1.80 | 24.3 |
| 162 | 188 | 8.3 | 4.5 | 150 | 200 | 2 | 0.22 | 3.00 | 4.60 | 2.80 | 6.37 |
| 162 | 188 | 8.3 | 4.5 | 150 | 200 | 2 | 0.22 | 3.00 | 4.60 | 2.80 | 6.17 |
| 166 | 196 | 8.3 | 5 | 152 | 213 | 2 | 0.28 | 2.40 | 3.60 | 2.50 | 10.8 |
| 166 | 196 | 8.3 | 5 | 152 | 213 | 2 | 0.28 | 2.40 | 3.60 | 2.50 | 10.5 |
| 176 | 218 | 11.1 | 5 | 154 | 236 | 2.5 | 0.26 | 2.60 | 3.90 | 2.50 | 14.5 |
| 176 | 218 | 11.1 | 5 | 154 | 236 | 2.5 | 0.26 | 2.60 | 3.90 | 2.50 | 14.5 |
| 164 | 212 | 11.1 | 6 | 154 | 236 | 2.5 | | | | | 18.1 |
| 191 | 249 | 16.7 | 7 | 158 | 282 | 3 | 0.34 | 1.90 | 2.90 | 1.80 | 35.2 |
| 191 | 249 | 16.7 | 7 | 158 | 282 | 3 | 0.34 | 1.90 | 2.90 | 1.80 | 34.8 |
| 174 | 201 | 8.3 | 4.5 | 162 | 213 | 2 | 0.22 | 3.00 | 4.60 | 2.80 | 7.44 |
| 174 | 201 | 8.3 | 4.5 | 162 | 213 | 2 | 0.22 | 3.00 | 4.60 | 2.80 | 7.42 |
| 173 | 216 | 11.1 | 5 | 162 | 238 | 2 | 0.30 | 2.30 | 3.40 | 2.20 | 16.3 |
| 173 | 216 | 11.1 | 5 | 162 | 238 | 2 | 0.30 | 2.30 | 3.40 | 2.20 | 15.8 |
| 180 | 208 | | | 162 | 238 | 2 | 0.37 | 1.80 | 2.70 | 1.80 | 18.7 |
| 179 | 234 | 12 | 6 | 164 | 256 | 2.5 | 0.26 | 2.60 | 3.90 | 2.50 | 18.6 |
| 177 | 228 | | | 164 | 256 | 2.5 | 0.35 | 1.90 | 2.90 | 1.80 | 25.7 |
| 188 | 270 | | | 168 | 302 | 3 | | | | | 42.5 |
| 180 | 216 | 11.1 | 4 | 172 | 228 | 2 | 0.22 | 3.00 | 4.60 | 2.80 | 8.99 |
| 180 | 216 | 11.1 | 4 | 172 | 228 | 2 | 0.22 | 3.00 | 4.60 | 2.80 | 8.76 |
| 188 | 234 | 13.9 | 6 | 172 | 258 | 2 | 0.30 | 2.30 | 3.40 | 2.20 | 22 |
| 188 | 234 | 13.9 | 6 | 172 | 258 | 2 | 0.30 | 2.30 | 3.40 | 2.20 | 21.4 |
| 193 | 225 | 8.3 | 4 | 172 | 258 | 2 | 0.40 | 1.69 | 2.51 | 1.65 | 24.8 |
| 201 | 249 | 13.9 | 5 | 174 | 276 | 2.5 | 0.27 | 2.50 | 3.70 | 2.50 | 23.2 |
| 201 | 249 | 13.9 | 5 | 174 | 276 | 2.5 | 0.27 | 2.50 | 3.70 | 2.50 | 22.7 |
| 201 | 244 | 13.9 | 7 | | 276 | 2.5 | 0.35 | 1.90 | 2.90 | 1.80 | 29.7 |
| 200 | 244 | 13.9 | 7 | 174 | 276 | 2.5 | 0.35 | 1.90 | 2.90 | 1.80 | 29.0 |
| 189 | 284 | 16.7 | 7 | 178 | 322 | 3 | 0.35 | 1.90 | 2.90 | 1.80 | 51.6 |
| 216 | 284 | 16.7 | 7 | 178 | 322 | 3 | 0.35 | 1.90 | 2.90 | 1.80 | 50.9 |
| 192 | 231 | 11.1 | 5 | 182 | 248 | 2 | 0.23 | 2.90 | 4.40 | 2.80 | 14.3 |
| 192 | 231 | 11.1 | 5 | 182 | 248 | 2 | 0.23 | 2.90 | 4.40 | 2.80 | 13.8 |

d 30~60 mm

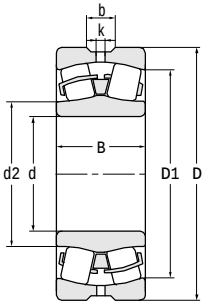


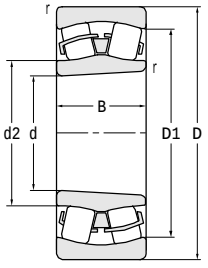



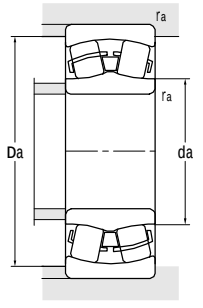




| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | Cr | Cor | Grease | Oil | | |
| mm | | | | kN | | r/min | | | |
| 170 | 280 | 88 | 2.1 | 990 | 1520 | 1200 | 1600 | 23134C | |
| | 280 | 88 | 2.1 | 990 | 1520 | 1200 | 1600 | 23134CK | 23134CK/W33 |
| | 310 | 86 | 4 | 1060 | 1450 | 1300 | 1700 | 22234C | 22234C/W33 |
| | 310 | 86 | 4 | 1060 | 1450 | 1300 | 1700 | 22234CK | 22234CK/W33 |
| | 360 | 120 | 4 | 1670 | 2050 | 950 | 1300 | 22334C | |
| 180 | 280 | 74 | 2.1 | 790 | 1290 | 1400 | 1800 | 23036C | 23036C/W33 |
| | 280 | 74 | 2.1 | 790 | 1290 | 1400 | 1800 | 23036CK | 23036CK/W33 |
| | 300 | 96 | 3 | 1140 | 1720 | 1100 | 1500 | 23136C/W33 | |
| | 320 | 86 | 4 | 1120 | 1550 | 1300 | 1700 | 22236C | 22236C/W33 |
| | 320 | 86 | 4 | 1120 | 1550 | 1300 | 1700 | 22236CK | 22236CK/W33 |
| | 380 | 126 | 4 | 1900 | 2400 | 900 | 1200 | 22336C | 22336C/W33 |
| | 380 | 126 | 4 | 1900 | 2400 | 900 | 1200 | 22336CK | 22336CK/W33 |
| 190 | 290 | 75 | 2.1 | 820 | 1270 | 1300 | 1700 | 23038C | |
| | 320 | 128 | 3 | 1370 | 2330 | 600 | 750 | 24138CK30/W33 | |
| | 340 | 92 | 4 | 1210 | 1700 | 1200 | 1600 | 22238C | 22238C/W33 |
| | 340 | 92 | 4 | 1210 | 1700 | 1200 | 1600 | 22238CK | 22238CK/W33 |
| | 400 | 132 | 5 | 2010 | 2520 | 850 | 1100 | 22338C | |
| | 400 | 132 | 5 | 2010 | 2780 | 850 | 1100 | 22338C | 22338C/W33 |
| | 400 | 132 | 5 | 2010 | 2780 | 850 | 1100 | 22338CK | 22338CK/W33 |
| 200 | 310 | 82 | 2.1 | 950 | 1560 | 1200 | 1600 | 23040C | 23040C/W33 |
| | 310 | 82 | 2.1 | 950 | 1560 | 1200 | 1600 | 23040CK | 23040CK/W33 |
| | 340 | 112 | 3 | 1370 | 2330 | 950 | 1300 | 23140C/W33 | |
| | 360 | 98 | 4 | 1390 | 1950 | 1100 | 1500 | 22240C | 22240K |
| | 420 | 138 | 5 | 2000 | 2870 | 850 | 1100 | 22340C | 22340C/W33 |
| | 420 | 138 | 5 | 2000 | 2870 | 850 | 1100 | 22340CK | 22340CK/W33 |
| 220 | 340 | 90 | 3 | 1058 | 1987 | 1100 | 1500 | 23044C/W33-ZH | |
| 240 | 360 | 92 | 3 | 1130 | 2080 | 1000 | 1400 | 23048C/W33 | |
| | 360 | 118 | 3 | 1420 | 2790 | 800 | 1000 | 24048C/W33 | |
| | 400 | 128 | 4 | 1980 | 3040 | 850 | 1100 | 23148C | 23148C/W33 |
| | 400 | 128 | 4 | 1980 | 3040 | 850 | 1100 | 23148CK | 23148CK/W33 |
| | 440 | 160 | 4 | 2400 | 3950 | 670 | 850 | 23248CK30/W33 | |

| Other dimensions | | | | Contact surface and chamfer dimensions | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d2 | D1 | b | k | da | Da | ra | e | Y1 | Y2 | Y0 | |
| mm | | | | mm | | | mm | | | | kg |
| 204 | 243 | | | 182 | 268 | 2 | 0.30 | 2.30 | 3.40 | 2.20 | 22 |
| 204 | 243 | 8.3 | 5 | 182 | 268 | 2 | 0.30 | 2.30 | 3.40 | 2.20 | 21.3 |
| 215 | 268 | 16.7 | 6 | 188 | 292 | 3 | 0.27 | 2.50 | 3.70 | 2.50 | 29.3 |
| 215 | 268 | 16.7 | 6 | 188 | 292 | 3 | 0.27 | 2.50 | 3.70 | 2.50 | 28.6 |
| 211 | 299 | | | 188 | 342 | 3 | 0.37 | 1.80 | 2.70 | 1.80 | 59.7 |
| 214 | 247 | 13.9 | 7.5 | 192 | 268 | 2 | 0.25 | 2.70 | 4.00 | 2.60 | 17.3 |
| 214 | 247 | 13.9 | 7.5 | 192 | 268 | 2 | 0.25 | 2.70 | 4.00 | 2.60 | 17.1 |
| 216 | 259 | 13.9 | 6 | 194 | 286 | 2.5 | 0.30 | 2.30 | 3.40 | 2.20 | 26.3 |
| 224 | 278 | 16.7 | 6 | 198 | 302 | 3 | 0.26 | 2.60 | 3.90 | 2.50 | 30.1 |
| 224 | 278 | 16.7 | 6 | 198 | 302 | 3 | 0.26 | 2.60 | 3.90 | 2.50 | 29.4 |
| 242 | 316 | 22.3 | 8 | 198 | 362 | 3 | 0.34 | 1.99 | 2.96 | 1.94 | 70.1 |
| 242 | 316 | 22.3 | 8 | 198 | 362 | 3 | 0.34 | 1.99 | 2.96 | 1.94 | 68.8 |
| 215 | 259 | | | 202 | 278 | 2 | 0.23 | 2.90 | 4.40 | 2.80 | 16.9 |
| 211 | 267 | 11.1 | 6 | 204 | 306 | 2.5 | | | | | 40.7 |
| 235 | 293 | 16.7 | 6 | 208 | 322 | 3 | 0.26 | 2.60 | 3.90 | 2.50 | 36.7 |
| 235 | 293 | 16.7 | 6 | 208 | 322 | 3 | 0.26 | 2.60 | 3.90 | 2.50 | 35.9 |
| 238 | 334 | | | 212 | 378 | 4 | 0.34 | 1.99 | 2.96 | 1.94 | 80.8 |
| 257 | 334 | 22.3 | 8 | 212 | 378 | 4 | 0.34 | 1.99 | 2.96 | 1.94 | 82.4 |
| 257 | 334 | 22.3 | 8 | 212 | 378 | 4 | 0.34 | 1.99 | 2.96 | 1.94 | 81.4 |
| 237 | 276 | 13.9 | 7.5 | 212 | 298 | 2 | 0.25 | 2.70 | 4.00 | 2.60 | 24.8 |
| 237 | 276 | 13.9 | 7.5 | 212 | 298 | 2 | 0.25 | 2.70 | 4.00 | 2.60 | 24.6 |
| 230 | 292 | 16.7 | 9 | 214 | 326 | 2.5 | | | | | 42.3 |
| 237 | 309 | | | 218 | 342 | 3 | 0.26 | 2.60 | 3.90 | 2.50 | 43.7 |
| 269 | 350 | 22.3 | 8 | 222 | 398 | 4 | 0.34 | 1.99 | 2.96 | 1.94 | 92.3 |
| 269 | 350 | 22.3 | 8 | 222 | 398 | 4 | 0.34 | 1.99 | 2.96 | 1.94 | 90.3 |
| 252 | 305 | 13.9 | 7.5 | 240 | 320 | 2.5 | | | | | 29.8 |
| 271 | 326 | 13.9 | 7.5 | 260 | 335 | 2.5 | | | | | 33.1 |
| 264 | 316 | 11.1 | 6 | 254 | 346 | 2.5 | | | | | 42.3 |
| 289 | 345 | 16.7 | 8 | 258 | 382 | 3 | 0.31 | 2.21 | 3.29 | 2.16 | 65.9 |
| 289 | 345 | 16.7 | 8 | 258 | 382 | 3 | 0.31 | 2.21 | 3.29 | 2.16 | 63.9 |
| 282 | 369 | 22.3 | 12 | 258 | 422 | 3 | | | | | 107 |



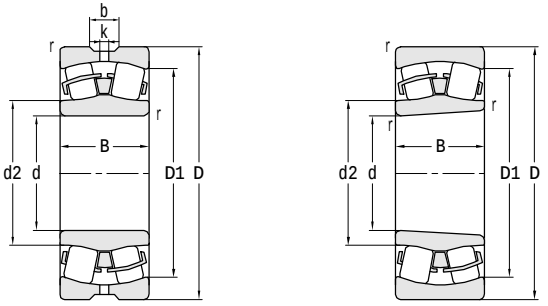




| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | |
| mm | | | | kN | | r/min | | | |
| 240 | 440 | 160 | 4 | 2400 | 3950 | 670 | 850 | 23248CK/W33 | |
| 260 | 400 | 104 | 4 | 1520 | 2560 | 900 | 1200 | 23052C | 23052C/W33 |
| | 400 | 104 | 4 | 1520 | 2560 | 900 | 1200 | 23052CK | 23052CK/W33 |
| | 440 | 144 | 4 | 2250 | 4020 | 800 | 1000 | 23152C/W33 | |
| | 480 | 130 | 5 | 2520 | 3600 | 850 | 1100 | 22252C/W33-ZH | |
| | 540 | 165 | 6 | 3370 | 4650 | 630 | 800 | 22352C/C9W33 | |
| 280 | 420 | 106 | 4 | 1640 | 2940 | 850 | 1100 | 23056C | 23056C/W33 |
| | 420 | 106 | 4 | 1640 | 2940 | 850 | 1100 | 23056CK | 23056CK/W33 |
| | 460 | 146 | 5 | 2230 | 4060 | 750 | 950 | 23156C/W33 | |
| 300 | 460 | 118 | 4 | 1840 | 3440 | 600 | 750 | 23060C/W33-ZH | |
| | 460 | 160 | 4 | 2570 | 4780 | 600 | 750 | 24060C/W33 | |
| | 500 | 200 | 5 | 3560 | 5990 | 600 | 750 | SX-24160C | |
| 320 | 480 | 160 | 4 | 2700 | 5200 | 560 | 700 | 24064C/W33 | |
| | 580 | 208 | 5 | 3950 | 7010 | 500 | 630 | 23264CK/W33 | |
| 340 | 520 | 133 | 5 | 2340 | 4430 | 530 | 670 | 23068C/W33-ZH | |
| | 520 | 180 | 5 | 3280 | 5890 | 530 | 670 | 24068C/W33 | 24068C/W33 |
| | 520 | 180 | 5 | 3280 | 5890 | 530 | 670 | 24068CK30/W33 | |
| | 521 | 181 | 5 | 3280 | 6170 | 530 | 670 | 24068CK30/W33 | |
| 360 | 540 | 134 | 5 | 2610 | 4680 | 670 | 850 | 23072C/W33 | |
| 380 | 560 | 180 | 5 | 3420 | 7000 | 480 | 600 | 24076C/W33 | |

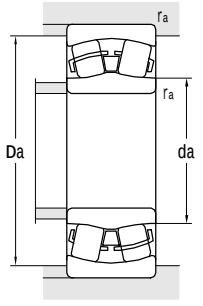
| Other dimensions | | | | Contact surface and chamfer dimensions | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d2 | D1 | b | k | da | Da | ra | e | Y1 | Y2 | Y0 | |
| mm | | | | mm | | | mm | | | | kg |
| 282 | 369 | 22.3 | 12 | 258 | 422 | 3 | | | | | 107 |
| 306 | 357 | 16.7 | 7 | 278 | 382 | 3 | 0.23 | 2.90 | 4.40 | 2.80 | 48 |
| 306 | 357 | 16.7 | 7 | 278 | 382 | 3 | 0.23 | 2.90 | 4.40 | 2.80 | 47.7 |
| 300 | 379 | 16.7 | 9 | 278 | 422 | 3 | | | | | 90.2 |
| 330 | 410 | 22.3 | 12 | 282 | 458 | 4 | | | | | 110 |
| 349 | 455 | 22.3 | 8 | 288 | 512 | 5 | 0.31 | 2.20 | 3.30 | 2.20 | 185 |
| 323 | 377 | 16.7 | 7 | 298 | 402 | 3 | 0.23 | 2.91 | 4.40 | 2.84 | 55.1 |
| 323 | 377 | 16.7 | 7 | 298 | 402 | 3 | 0.23 | 2.91 | 4.40 | 2.84 | 54 |
| 320 | 400 | 16.7 | 9 | 302 | 438 | 4 | | | | | 97.2 |
| 338 | 412 | 16.7 | 9 | 323 | 437 | 3 | | | | | 71.8 |
| 342 | 399 | 13.9 | 7 | 318 | 442 | 3 | 0.32 | 2.09 | 3.11 | 2.04 | 97.3 |
| 356 | 420 | 13.9 | 6 | 322 | 478 | 4 | 0.39 | 1.75 | 2.61 | 1.71 | 161 |
| 354 | 423 | 22 | 8 | 335 | 465 | 3 | 0.32 | 2.09 | 3.11 | 2.04 | 97.9 |
| 379 | 488 | 22.3 | 12 | 342 | 558 | 4 | | | | | 241 |
| 383 | 467 | 22.3 | 12 | 316 | 495 | 4 | | | | | 102 |
| 377 | 453 | 16.7 | 9 | 358 | 502 | 4 | 0.33 | 2.00 | 3.00 | 2.00 | 139 |
| 377 | 453 | 16.7 | 9 | 358 | 502 | 4 | 0.33 | 2.00 | 3.00 | 2.00 | 137 |
| 377 | 453 | 16.7 | 9 | 358 | 502 | 4 | 0.33 | 2.00 | 3.00 | 2.00 | 137 |
| 419 | 486 | 22.3 | 8 | 382 | 518 | 4 | 0.23 | 2.90 | 4.40 | 2.80 | 108 |
| 435 | 494 | 16.7 | 9 | 402 | 538 | 4 | 0.3 | 2.3 | 3.4 | 2.2 | 152 |

d 45~110 mm





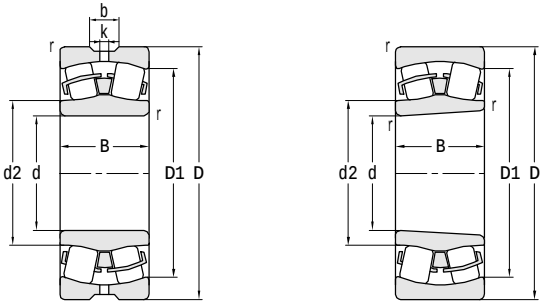





| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | |
| mm | | | | kN | | r/min | | | |
| 45 | 100 | 36 | 1.5 | 130 | 155 | 3700 | 4700 | 22309CC | |
| 50 | 90 | 23 | 1.1 | 80 | 95 | 4800 | 6100 | 22210CC | |
| 55 | 100 | 25 | 1.5 | 95 | 115 | 4400 | 5500 | 22211CC | |
| 60 | 110 | 28 | 1.5 | 115 | 140 | 3900 | 4900 | 22212CC | |
| | 130 | 46 | 205 | 255 | 2.1 | 2900 | 3700 | 22312CC | |
| 65 | 120 | 31 | 1.5 | 170 | 216 | 2800 | 3600 | 22213S/W33 | |
| | 140 | 48 | 2.1 | 235 | 275 | 2500 | 3300 | 22313CC | |
| 70 | 125 | 31 | 1.5 | 135 | 175 | 3500 | 4400 | 22214CC | |
| | 150 | 51 | 2.1 | 285 | 355 | 2300 | 3100 | 22314CC/W33 | |
| 75 | 130 | 1.5 | 31 | 145 | 190 | 3300 | 4200 | 22215CC | |
| | 160 | 55 | 2.1 | 310 | 405 | 2100 | 2900 | 22315CC/W33 | |
| 80 | 140 | 33 | 2 | 160 | 210 | 3100 | 3900 | 22216CC | |
| | 170 | 58 | 2.1 | 325 | 410 | 1900 | 2700 | 22316CC/W33 | |
| 85 | 150 | 36 | 2 | 246 | 325 | 3000 | 3800 | 22217CC/W33 | |
| | 180 | 60 | 3 | 395 | 495 | 1800 | 2500 | 22237CC/W33 | |
| 90 | 160 | 52.4 | 2 | 345 | 440 | 2700 | 3600 | 23218CC/W33 | |
| | 190 | 64 | 3 | 477 | 610 | 1800 | 2400 | 22318CC | 22318CC/W33 |
| 95 | 170 | 43 | 2.1 | 265 | 355 | 2300 | 3100 | 22219CC/W33 | |
| | 200 | 67 | 3 | 485 | 645 | 1700 | 2300 | 22319CC/W33 | |
| 100 | 165 | 52 | 2 | 300 | 450 | 1900 | 2700 | 23120CC/W33 | |
| | 180 | 46 | 2.1 | 290 | 390 | 2100 | 2900 | 22220CC/W33 | |
| | 180 | 60.3 | 2.1 | 460 | 610 | 2300 | 3300 | 23220CC/W33 | |
| | 215 | 73 | 3 | 774 | 903 | 1700 | 2200 | 22320CC/W33 | |
| 110 | 170 | 45 | 2 | 300 | 460 | 3000 | 4100 | 23022CC/W33 | |

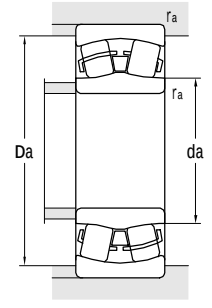
| Other dimensions | | | | Contact surface and chamfer dimensions | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d2 | D1 | b | k | da | Da | ra | e | Y1 | Y2 | Y0 | |
| mm | | | | mm | | | mm | | | | kg |
| 57.6 | 82.5 | - | - | 54 | 91 | 1.5 | 0.37 | 1.80 | 2.70 | 1.80 | 1.35 |
| 60 | 79.2 | | | 57 | 83 | 1 | 0.24 | 2.80 | 4.20 | 2.80 | 0.6 |
| 66 | 88.1 | | | 64 | 91 | 1.5 | 0.24 | 2.80 | 4.20 | 2.80 | 0.82 |
| 72.7 | 96.6 | | | 69 | 101 | 1.5 | 0.24 | 2.8 | 4.20 | 2.80 | 1.1 |
| 74.9 | 109 | | | 72 | 118 | 2 | 0.35 | 1.9 | 2.90 | 1.80 | 2.95 |
| 77 | 106 | 5.5 | 3 | 74 | 111 | 1.5 | 0.24 | 2.80 | 4.20 | 2.80 | 1.57 |
| 82 | 118 | | | 77 | 128 | 2 | 0.35 | 1.90 | 2.90 | 1.80 | 3.55 |
| 84.6 | 111 | | | 79 | 116 | 1.5 | 0.23 | 2.90 | 4.40 | 2.80 | 1.55 |
| 88 | 127 | 8.3 | 4.5 | 82 | 138 | 2 | 0.35 | 1.90 | 2.90 | 1.80 | 4.3 |
| 89.7 | 116 | | | 84 | 121 | 1.5 | 0.22 | 3.00 | 4.60 | 2.80 | 1.65 |
| 94.2 | 134 | 8.3 | 4.5 | 87 | 148 | 2 | 0.35 | 1.90 | 2.90 | 1.80 | 5.25 |
| 95.1 | 124 | | | 90 | 130 | 2 | 0.22 | 3.00 | 4.60 | 2.80 | 2.05 |
| 100 | 144 | 8.3 | 4.5 | 92 | 158 | 2 | 0.35 | 1.90 | 2.90 | 1.80 | 6.2 |
| 101 | 133 | 5.5 | 3 | 96 | 139 | 2 | 0.22 | 3.00 | 4.60 | 2.80 | 2.68 |
| 106 | 154 | 8.3 | 4.5 | 99 | 166 | 2.5 | 0.33 | 2.00 | 3.00 | 2.00 | 7.25 |
| 106 | 137 | 5.5 | 3 | 101 | 149 | 2 | 0.31 | 2.20 | 3.30 | 2.20 | 4.54 |
| 159 | 159 | 11.1 | 6 | 104 | 176 | 2.5 | 0.35 | 1.90 | 2.90 | 1.80 | 8.72 |
| 113 | 149 | 8.3 | 4.5 | 107 | 158 | 2 | 0.24 | 2.80 | 4.20 | 2.80 | 4 |
| 118 | 168 | 11.1 | 6 | 109 | 186 | 2.5 | 0.35 | 1.90 | 2.90 | 1.80 | 10 |
| 115 | 145 | 5.5 | 3 | 110 | 155 | 2 | 0.3 | 2.30 | 3.40 | 2.20 | 4.4 |
| 120 | 157 | 8.3 | 4.5 | 112 | 168 | 2 | 0.24 | 2.80 | 4.20 | 2.80 | 4.85 |
| 117 | 153 | 8.3 | 4.5 | 112 | 168 | 2 | 0.33 | 2.00 | 3.00 | 2.00 | 6.47 |
| 138 | 179 | 11.1 | 5 | 114 | 201 | 2.5 | 0.35 | 1.90 | 2.90 | 1.80 | 13.4 |
| 126 | 151 | 5.5 | 3 | 120 | 160 | 2 | 0.23 | 2.90 | 4.40 | 2.80 | 3.69 |

d 110~170 mm





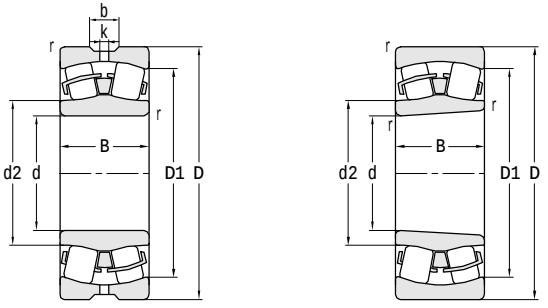





| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | Cr | Cor | Grease | Oil | |
| mm | | | | kN | | r/min | | |
| 110 | 180 | 56 | 2 | 355 | 565 | 1800 | 2500 | 23122CC/W33 |
| | 200 | 53 | 2.1 | 370 | 520 | 1900 | 2700 | 22222CC/W33 |
| | 240 | 80 | 3 | 770 | 1020 | 1600 | 2000 | 22322CC/W33 |
| 120 | 180 | 46 | 2 | 345 | 510 | 3000 | 3900 | 23024CC/W33 |
| | 180 | 60 | 2 | 420 | 670 | 2300 | 3300 | 24024CC/W33 |
| | 200 | 62 | 2 | 400 | 645 | 1700 | 2300 | 23124CC/W33 |
| | 200 | 80 | 2 | 545 | 910 | 850 | 1100 | 24124CC/W33 |
| | 215 | 58 | 2.1 | 510 | 730 | 1900 | 2600 | 22224CC/W33 |
| | 215 | 76 | 2.1 | 560 | 880 | 1400 | 1800 | 23224CC/W33 |
| | 260 | 86 | 3 | 840 | 1100 | 1300 | 1700 | 22324CC/W33 |
| 130 | 210 | 64 | 2 | 450 | 710 | 1600 | 2100 | 23126CC/W33 |
| | 230 | 64 | 3 | 500 | 750 | 1700 | 2300 | 22226CC/W33 |
| | 230 | 80 | 3 | 630 | 1000 | 1200 | 1600 | 23226CC/W33 |
| | 280 | 93 | 4 | 1090 | 1310 | 1750 | 2300 | 22326CC/W33 |
| 140 | 225 | 68 | 2.1 | 495 | 850 | 1500 | 1900 | 23128CC/W33 |
| | 250 | 68 | 3 | 600 | 900 | 1700 | 2200 | 22228CC/W33 |
| | 300 | 102 | 4 | 1100 | 1500 | 1000 | 1400 | 22328CC/W33 |
| 150 | 225 | 56 | 2.1 | 400 | 700 | 1600 | 2100 | 23030CC/W33 |
| | 225 | 75 | 2.1 | 635 | 1080 | 1750 | 2500 | 24030CC/W33 |
| | 250 | 80 | 2.1 | 675 | 1140 | 1300 | 1700 | 23130CC/W33 |
| | 270 | 73 | 3 | 700 | 1000 | 1500 | 1900 | 22230CC/W33 |
| | 270 | 73 | 3 | 810 | 1100 | 1600 | 2000 | 22230CS/W33 |
| | 320 | 108 | 4 | 1200 | 1710 | 900 | 1300 | 22330CC/W33 |
| 160 | 240 | 60 | 2.1 | 470 | 810 | 1600 | 2100 | 23032CC/W33 |
| | 270 | 86 | 2.1 | 790 | 1300 | 1200 | 1600 | 23132CC/W33 |
| | 270 | 109 | 2.1 | 1000 | 1700 | 650 | 850 | 24132CC/W33 |
| | 290 | 80 | 3 | 845 | 1250 | 1400 | 1800 | 22232CC/W33 |
| | 340 | 114 | 4 | 1350 | 1940 | 900 | 1200 | 22332CC/W33 |
| 170 | 260 | 67 | 2.1 | 600 | 1040 | 1500 | 1900 | 23034CC/W33 |

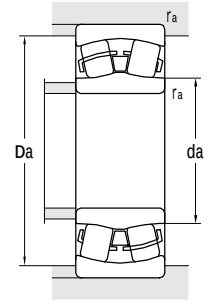
| Other dimensions | | | | Contact surface and chamfer dimensions | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d2 | D1 | b | k | da | Da | ra | e | Y1 | Y2 | Y0 | |
| mm | | | | mm | | | mm | | | | kg |
| 126 | 157 | 8.3 | 4.5 | 120 | 170 | 2 | 0.30 | 2.30 | 3.40 | 2.20 | 5.55 |
| 132 | 173 | 8.3 | 4.5 | 122 | 188 | 2 | 0.25 | 2.70 | 4.00 | 2.50 | 7 |
| 141 | 197 | 13.9 | 7.5 | 122 | 188 | 2.5 | 0.35 | 1.90 | 2.90 | 1.80 | 17.8 |
| 134 | 163 | 5.5 | 3 | 130 | 170 | 2 | 0.22 | 3.00 | 4.60 | 2.80 | 4.08 |
| 132 | 158 | 5.5 | 4 | 130 | 170 | 2 | 0.30 | 2.30 | 3.40 | 2.20 | 5.53 |
| 139 | 173 | 8.3 | 4.5 | 130 | 190 | 2 | 0.28 | 2.40 | 3.60 | 2.50 | 7.8 |
| 135 | 169 | 5.5 | 3 | 130 | 190 | 2 | 0.37 | 1.80 | 2.70 | 1.80 | 10 |
| 143 | 187 | 11.1 | 6 | 132 | 203 | 2 | 0.25 | 2.70 | 4.00 | 2.50 | 9.06 |
| 141 | 183 | 8.3 | 4.5 | 132 | 203 | 2 | 0.35 | 1.90 | 2.90 | 1.80 | 22 |
| 152 | 216 | 13.9 | 7.5 | 134 | 246 | 2.5 | 0.35 | 1.90 | 2.90 | 1.80 | 22 |
| 148 | 184 | 8.3 | 4.5 | 140 | 200 | 2 | 0.28 | 2.40 | 3.60 | 2.50 | 8.55 |
| 153 | 200 | 11.1 | 6 | 144 | 216 | 2.5 | 0.26 | 2.60 | 3.90 | 2.50 | 11 |
| 152 | 196 | 8.3 | 4.5 | 144 | 216 | 2.5 | 0.33 | 2.00 | 3.00 | 2.00 | 14 |
| 157 | 233 | 16.7 | 9 | 148 | 262 | 3 | 0.35 | 1.90 | 2.90 | 1.80 | 28.1 |
| 159 | 196 | 8.3 | 4.5 | 152 | 213 | 2 | 0.28 | 2.40 | 3.60 | 2.50 | 13 |
| 166 | 216 | 11.1 | 6 | 154 | 236 | 2.5 | 0.26 | 2.60 | 3.90 | 2.50 | 14 |
| 175 | 247 | 16.7 | 9 | 158 | 282 | 3 | 0.35 | 1.90 | 2.90 | 1.80 | 34.5 |
| 169 | 203 | 8.3 | 4.5 | 162 | 213 | 2 | 0.22 | 3.00 | 4.60 | 2.80 | 7.95 |
| 164 | 196 | 5.5 | 3 | 162 | 213 | 2 | 0.30 | 2.30 | 3.40 | 2.20 | 10.3 |
| 173 | 216 | 11.1 | 6 | 162 | 238 | 2 | 0.30 | 2.30 | 3.40 | 2.20 | 16 |
| 179 | 234 | 13.9 | 7.5 | 164 | 256 | 2.5 | 0.26 | 2.60 | 3.90 | 2.50 | 18 |
| 179 | 234 | 13.9 | 7.5 | 164 | 256 | 2.5 | 0.25 | 2.60 | 3.90 | 2.50 | 18.4 |
| 189 | 267 | 16.7 | 9 | 168 | 302 | 3 | 0.35 | 1.90 | 2.90 | 1.80 | 41.5 |
| 181 | 217 | 11.1 | 6 | 172 | 228 | 2 | 0.22 | 3.00 | 4.60 | 2.80 | 9.7 |
| 185 | 234 | 13.9 | 7.5 | 172 | 258 | 2 | 0.30 | 2.30 | 3.40 | 2.20 | 20.5 |
| 181 | 228 | 8.3 | 4.5 | 172 | 258 | 2 | 0.4 | 1.70 | 2.50 | 1.60 | 25 |
| 191 | 250 | 13.9 | 7.5 | 174 | 276 | 2.5 | 0.26 | 2.60 | 3.90 | 2.50 | 22.5 |
| 201 | 282 | 16.7 | 9 | 178 | 322 | 3 | 0.35 | 1.90 | 2.90 | 1.80 | 50 |
| 192 | 232 | 11.1 | 6 | 182 | 248 | 2 | 0.23 | 2.90 | 4.40 | 2.80 | 13 |

d 170~300 mm





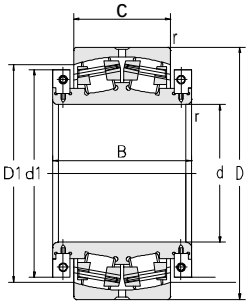


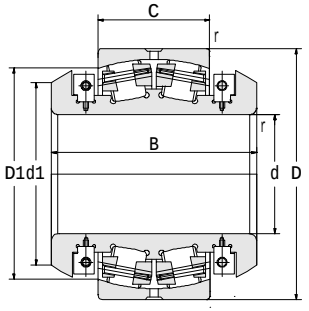



| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | kN | | r/min | | |
| 170 | 280 | 88 | 2.1 | 800 | 1400 | 1100 | 1500 | 23134CC/W33 |
| | 310 | 86 | 4 | 900 | 1410 | 1200 | 1600 | 22234CC/W33 |
| | 360 | 120 | 4 | 1490 | 2100 | 900 | 1200 | 22334CC/W33 |
| 180 | 280 | 74 | 2.1 | 700 | 1220 | 1300 | 1700 | 23036CC/W33 |
| | 300 | 96 | 3 | 1160 | 1760 | 1600 | 2100 | 23136CC/W33 |
| | 320 | 86 | 4 | 980 | 1500 | 1200 | 1600 | 22236CC/W33 |
| | 380 | 126 | 4 | 1680 | 2390 | 850 | 1100 | 22336CC/W33 |
| 190 | 290 | 75 | 2.1 | 700 | 1280 | 1200 | 1600 | 23038CC/W33 |
| | 340 | 92 | 4 | 1100 | 1650 | 1200 | 1500 | 22238CC/W33 |
| | 340 | 120 | 4 | 1390 | 2300 | 800 | 1500 | 23238CC/W33 |
| | 400 | 132 | 5 | 1800 | 2580 | 800 | 1000 | 22338CC/W33 |
| 200 | 360 | 98 | 4 | 1200 | 1880 | 1000 | 1400 | 22240CC/W33 |
| | 420 | 138 | 5 | 1960 | 2800 | 800 | 1000 | 22340CC/W33 |
| 220 | 370 | 150 | 4 | 1800 | 3300 | 450 | 600 | 24144CC/W33 |
| | 400 | 144 | 4 | 2000 | 3350 | 700 | 900 | 23244CC/W33 |
| 240 | 360 | 92 | 3 | 1100 | 2000 | 1000 | 1400 | 23048CC/W33 |
| | 360 | 118 | 3 | 1300 | 2650 | 700 | 900 | 24048CC/W33 |
| | 400 | 128 | 4 | 1700 | 3100 | 790 | 1000 | 23148CC/W33 |
| | 400 | 160 | 4 | 2000 | 3800 | 450 | 650 | 24148CC/W33 |
| 260 | 440 | 144 | 4 | 2470 | 3900 | 1000 | 1400 | 23152CC/W33 |
| 280 | 420 | 140 | 4 | 1800 | 3700 | 600 | 800 | 24056CC/W33 |
| 300 | 420 | 90 | 3 | 1150 | 2440 | 900 | 1200 | 23960CC/W33 |

| Other dimensions | | | | Contact surface and chamfer dimensions | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d2 | D1 | b | k | da | Da | ra | e | Y1 | Y2 | Y0 | |
| mm | | | | mm | | | mm | | | | kg |
| 195 | 244 | 13.9 | 7.5 | 182 | 268 | 2 | 0.30 | 2.30 | 3.40 | 2.20 | 21.5 |
| 204 | 267 | 16.7 | 9 | 188 | 292 | 3 | 0.27 | 2.50 | 3.70 | 2.50 | 28.5 |
| 213 | 300 | 16.7 | 9 | 188 | 342 | 3 | 0.33 | 2.00 | 3.00 | 2.00 | 58.5 |
| 204 | 248 | 13.9 | 7.5 | 192 | 268 | 2 | 0.24 | 2.80 | 4.20 | 2.80 | 17 |
| 207 | 259 | 13.9 | 7.5 | 194 | 286 | 2.5 | 0.30 | 2.30 | 3.40 | 2.20 | 27 |
| 214 | 277 | 16.7 | 9 | 198 | 302 | 3 | 0.26 | 2.60 | 3.90 | 2.50 | 29.5 |
| 224 | 317 | 22.3 | 12 | 198 | 362 | 3 | 0.35 | 1.90 | 2.90 | 1.80 | 69 |
| 216 | 260 | 13.9 | 7.5 | 202 | 278 | 2 | 0.23 | 2.90 | 4.40 | 2.80 | 18 |
| 226 | 294 | 16.7 | 9 | 208 | 322 | 3 | 0.19 | 3.60 | 5.30 | 3.60 | 36.5 |
| 223 | 287 | 16.7 | 9 | 208 | 322 | 3 | 0.35 | 1.90 | 2.90 | 1.80 | 47.5 |
| 237 | 333 | 22.3 | 12 | 212 | 378 | 4 | 0.35 | 1.90 | 2.90 | 1.80 | 80 |
| 238 | 312 | 16.7 | 9 | 218 | 342 | 3 | 0.26 | 2.60 | 3.90 | 2.50 | 43.5 |
| 249 | 351 | 22.3 | 12 | 222 | 398 | 4 | 0.33 | 2.00 | 3.00 | 2.00 | 92.5 |
| 248 | 310 | 11.1 | 6 | 238 | 352 | 3 | 0.4 | 1.70 | 2.50 | 1.60 | 65 |
| 260 | 338 | 16.7 | 9 | 238 | 382 | 3 | 0.35 | 1.90 | 2.90 | 1.80 | 79.5 |
| 271 | 325 | 13.9 | 7.5 | 254 | 346 | 2.5 | 0.23 | 2.90 | 4.40 | 2.80 | 33.5 |
| 265 | 316 | 11.1 | 6 | 254 | 346 | 2.5 | 0.3 | 2.30 | 3.40 | 2.20 | 42.5 |
| 277 | 347 | 16.7 | 9 | 258 | 382 | 3 | 0.3 | 2.30 | 3.40 | 2.20 | 65.5 |
| 271 | 337 | 11.1 | 6 | 258 | 382 | 3 | 0.4 | 1.70 | 2.50 | 1.60 | 80.5 |
| 300 | 379 | 16.7 | 9 | 278 | 422 | 3 | 0.31 | 2.20 | 3.30 | 2.20 | 90.2 |
| 309 | 368 | 11.1 | 6 | 298 | 402 | 3 | 0.31 | 2.20 | 3.30 | 2.20 | 68.5 |
| 333 | 385 | 11.1 | 6 | 314 | 406 | 2.5 | 0.19 | 3.60 | 5.30 | 3.60 | 40.5 |

d 120~800 mm

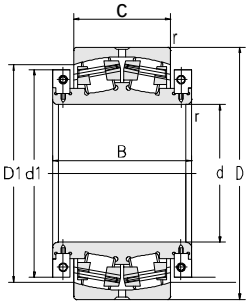


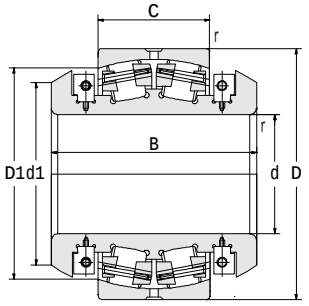




| Principal dimensions | | | | | Basic load ratings | |
|---|---|---|---|---|---|---|
| d | D | B | C | $r_{min}$ | Cr | Cor |
| mm | | | | | kN | |
| 120 | 200 | 80 | 80 | 2 | 540 | 870 |
| 140 | 230 | 53 | 53 | 2 | 350 | 580 |
| 180 | 300 | 74 | 74 | 2.1 | 680 | 1050 |
| 280 | 500 | 176 | 176 | 5 | 2650 | 4400 |
| 300 | 500 | 160 | 160 | 5 | 1660 | 4800 |
| 360 | 540 | 134 | 134 | 5 | 2150 | 4480 |
| 400 | 600 | 148 | 148 | 5 | 2750 | 5800 |
| 420 | 620 | 150 | 150 | 6 | 2750 | 5850 |
| 460 | 700 | 165 | 165 | 6 | 3150 | 6500 |
| 530 | 780 | 185 | 185 | 6 | 3400 | 8100 |
| 560 | 870 | 200 | 200 | 6 | 5020 | 10500 |
| 600 | 980 | 375 | 375 | 7.5 | 10000 | 21500 |
| 630 | 920 | 212 | 212 | 7.5 | 5650 | 12500 |
| 670 | 980 | 230 | 230 | 7.5 | 6400 | 13500 |
| 710 | 950 | 243 | 243 | 6 | 5720 | 15100 |
| | 1030 | 236 | 236 | 7.5 | 6900 | 15500 |
| 750 | 1000 | 250 | 250 | 6 | 6310 | 16800 |
| | 1090 | 250 | 250 | 7.5 | 6810 | 15230 |
| 800 | 1060 | 258 | 258 | 6 | 6850 | 18500 |
| | 1150 | 258 | 258 | 7.5 | 6850 | 15600 |

| Designations | Other dimensions | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|
| | d1 | D1 | e | Y1 | Y2 | Y0 | |
| | mm | | mm | | | | kg |
| 24124D | 165 | 168 | 0.37 | 1.8 | 2.7 | 1.8 | 18.5 |
| 23028D | 181 | 190 | 0.22 | 3 | 4.6 | 2.8 | 15.2 |
| 23136X2D | 221 | 247 | 0.24 | 2.8 | 4.2 | 2.8 | 32 |
| 23256D | 420 | 438 | 0.35 | 1.9 | 2.9 | 1.9 | 178 |
| 23160D | 419 | 434 | 0.3 | 2.3 | 3.4 | 2.2 | 135 |
| 23072D | 477 | 481 | 0.23 | 2.9 | 4.4 | 2.8 | 158 |
| 23080D | 523 | 540 | 0.23 | 2.9 | 4.4 | 2.8 | 210 |
| 23084D | 542 | 561 | 0.22 | 3 | 4.6 | 2.8 | 160 |
| 23092X3D | 605 | 635 | 0.21 | 3.2 | 4.8 | 3.2 | 346 |
| 230/530D | 666 | 704 | 0.21 | 3.2 | 4.8 | 3.2 | 389 |
| 230/560X3D | 734 | 785 | 0.22 | 3 | 4.6 | 2.8 | 585 |
| 241/600D | 812 | 833 | 0.35 | 1.9 | 2.9 | 1.8 | 1370 |
| 230/630D | 799 | 836 | 0.21 | 3.2 | 4.8 | 3.2 | 636 |
| 230/670D | 862 | 890 | 0.21 | 3.2 | 4.8 | 3.2 | 820 |
| 249/710D | 862 | 867 | 0.22 | 3 | 4.6 | 2.8 | 710 |
| 230/710D | 902 | 938 | 0.21 | 3.2 | 4.8 | 3.2 | 895 |
| 249/750D | 901 | 915 | 0.22 | 3 | 4.6 | 2.8 | 716 |
| 230/750D | 931 | 992 | 0.2 | 3.4 | 5 | 3.2 | 961 |
| 249/800D | 957 | 967 | 0.21 | 3.2 | 4.8 | 3.2 | 815 |
| 230/800D | 885 | 1045 | 0.27 | 2.50 | 3.70 | 2.50 | 1087 |

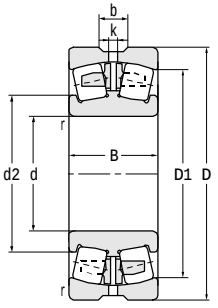
d 800~1250 mm

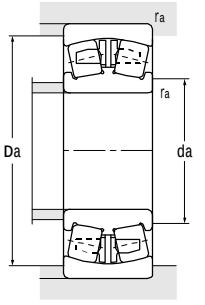



| Principal dimensions | | | | | Basic load ratings | | Designations | Other dimensions | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | C | $r_{min}$ | Cr | Cor | | d1 | D1 | e | Y1 | Y2 | Y0 | |
| mm | | | | | kN | | | mm | | mm | | | | kg |
| 800 | 1150 | 540 | 258 | 7.5 | 6850 | 15600 | 230/800DW | 885 | 1045 | | | | | 1367 |
| | 1150 | 490 | 325 | 7.5 | 12200 | 30500 | 240/800X2D | 1045 | 1075 | 0.27 | 2.5 | 3.7 | 2.5 | 1990 |
| 850 | 1120 | 390 | 272 | 6 | 7350 | 20500 | 249/850D | 1010 | 1027 | 0.22 | 3 | 4.6 | 2.8 | 835 |
| | 1220 | 455 | 365 | 7.5 | 10900 | 25800 | 240/850D | 1030 | 1092 | 0.27 | 2.5 | 3.7 | 2.5 | 1650 |
| | 1220 | 660 | 365 | 7.5 | 10900 | 25800 | 240/850WD | 1030 | 1092 | 0.27 | 2.5 | 3.7 | 2.5 | 1931 |
| | 1220 | 540 | 365 | 7.5 | 10900 | 25800 | 240/850WBD | 1060 | 1092 | 0.27 | 2.5 | 3.7 | 2.5 | 1781 |
| | 1280 | 540 | 375 | 7.5 | 12200 | 30600 | 240/850X3D | 1124 | 1146 | 0.26 | 2.6 | 3.9 | 2.5 | 2380 |
| 884 | 1320 | 478 | 365 | 9.5 | 11000 | 24900 | 240/884D/HC | | | 0.25 | 2.7 | 4 | 2.6 | 2457 |
| 900 | 1180 | 400 | 280 | 6 | 8100 | 22600 | 239/900X2 | 1059 | 1085 | 0.21 | 3.2 | 4.8 | 3.2 | 1120 |
| | 1270 | 478 | 365 | 9.5 | 9800 | 24600 | 240/900X3D | 1118 | 1130 | 0.25 | 2.7 | 4 | 2.6 | 1970 |
| | 1270 | 470 | 365 | 9.5 | 9800 | 24600 | 240/900X3D-2 | 1118 | 1130 | 0.25 | 2.7 | 4 | 2.6 | 1970 |
| | 1270 | 470 | 365 | 9.5 | 9850 | 24600 | 240/900X3D-3 | 1118 | 1130 | 0.25 | 2.7 | 4 | 2.6 | 1880 |
| | 1280 | 498 | 375 | 9.5 | 9800 | 24600 | 240/900X2D/HC | 1118 | 1130 | 0.25 | 2.7 | 4 | 2.6 | 2064 |
| | 1320 | 478 | 365 | 9.5 | 9800 | 24100 | 240/900X3D/HCC9-2 | 1140 | 1178 | 0.24 | 2.8 | 4.2 | 2.8 | 2050 |
| 950 | 1250 | 420 | 300 | 7.5 | 8800 | 25200 | 249/950D | 1132 | 1148 | 0.21 | 3.2 | 4.8 | 3.2 | 1320 |
| | 1360 | 420 | 300 | 7.5 | 9100 | 21000 | 230/950D | 1169 | 1234 | 0.2 | 3.4 | 5 | 3.2 | 1956 |
| | 1360 | 640 | 300 | 7.5 | 9100 | 21000 | 230/950D-1 | 1050 | 1234 | 0.2 | 3.4 | 5 | 3.2 | 2338 |
| 1000 | 1470 | 530 | 345 | 9.5 | 14400 | 35900 | 230/100X3D | 1271 | 1338 | 0.21 | 3.2 | 4.8 | 3.2 | 3030 |
| | 1420 | 556 | 412 | 7.5 | 13300 | 34500 | 240/1000D | 1107 | 1276 | | | | | 2633 |
| 1060 | 1460 | 500 | 335 | 7.5 | 11400 | 33000 | 249/1060X1D | 1331 | 1349 | 0.2 | 3.4 | 5 | 3.2 | 2476 |
| | 1500 | 585 | 438 | 9.5 | 15000 | 40000 | 240/1060D | 1164 | 1349 | 0.2 | 3.4 | 5 | 3.2 | 3083 |
| | 1500 | 611.5 | 438 | 9.5 | 15000 | 40000 | 240/1060D-1 | 1164 | 1349 | 0.2 | 3.4 | 5 | 3.2 | 3089 |
| | 1500 | 575 | 438 | 9.5 | 15000 | 40000 | 240/1060D-2 | 1164 | 1349 | 0.2 | 3.4 | 5 | 3.2 | 3354 |
| 1120 | 1460 | 500 | 335 | 7.5 | 11300 | 33000 | 249/1120D | 1331 | 1349 | 0.2 | 3.4 | 5 | 3.2 | 2100 |
| | 1540 | 525 | 355 | 7.5 | 14200 | 43000 | 240/1120X3D | 1403 | 1419 | 0.2 | 3.4 | 5 | 3.2 | 2920 |
| 1180 | 1540 | 500 | 355 | 7.5 | 10000 | 31500 | 249/1180D | 1394 | 1428 | 0.2 | 3.4 | 5 | 3.2 | 2254 |
| 1250 | 1750 | 560 | 375 | 9.5 | 19500 | 48000 | 230/1250D | 1562 | 1607 | 0.19 | 3.6 | 5.3 | 3.6 | 3850 |

d 80~170 mm

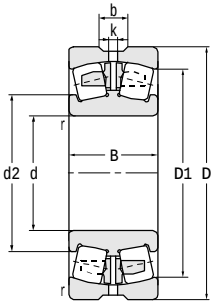


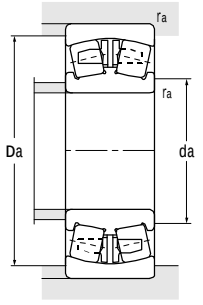




| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | kN | | r/min | | |
| 80 | 170 | 58 | 2.1 | 345 | 495 | 2000 | 2800 | 22316/VBW33 |
| 85 | 180 | 60 | 3 | 355 | 505 | 1900 | 2600 | 22317Q1/VB |
| | 180 | 60 | 3 | 355 | 505 | 1900 | 2600 | 22317Q1/VBW33 |
| 90 | 190 | 64 | 3 | 462 | 625 | 1800 | 2400 | 22318/VBW33 |
| 95 | 200 | 67 | 3 | 485 | 685 | 1800 | 2400 | 22319/VBW33 |
| 100 | 215 | 73 | 3 | 530 | 650 | 1800 | 2400 | 22320Q1/VB |
| | 215 | 73 | 3 | 530 | 650 | 1800 | 2400 | 22320Q1/VBW33 |
| 105 | 175 | 56 | 2 | 402 | 550 | 1900 | 2700 | 22321Q1/VB |
| 110 | 240 | 80 | 3 | 650 | 910 | 1600 | 2000 | 22322Q1/VB |
| | 240 | 80 | 3 | 650 | 910 | 1600 | 2000 | 22322Q1/VBW33 |
| 120 | 260 | 86 | 3 | 840 | 1100 | 1400 | 1800 | 22324Q1/VB |
| | 260 | 86 | 3 | 840 | 1100 | 1400 | 1800 | 22324Q1/VBW33 |
| 130 | 230 | 64 | 3 | 495 | 685 | 1800 | 2400 | 22226KQ1/VBW33 |
| | 280 | 93 | 4 | 840 | 1300 | 1300 | 1700 | 22326/VBHAC9W33 |
| | 280 | 93 | 4 | 840 | 1300 | 1300 | 1700 | 22326/VBW33 |
| 140 | 300 | 102 | 4 | 840 | 1300 | 1200 | 1600 | 22328Q1/VBW33 |
| | 300 | 118 | 4 | 1060 | 1450 | 1100 | 1500 | 23328Q1/VBW33 |
| 150 | 320 | 108 | 4 | 1160 | 1580 | 1100 | 1500 | 22330Q1/VBW33 |
| 160 | 290 | 80 | 3 | 950 | 1230 | 1500 | 1900 | 22232KQ1/VBW33 |
| | 340 | 114 | 4 | 1400 | 2050 | 950 | 1300 | 22332Q1/VBW33 |
| | 340 | 136 | 4 | 1520 | 1860 | 950 | 1300 | 23332Q1/VBW33 |
| 170 | 360 | 120 | 4 | 1500 | 2110 | 1300 | 1700 | 22334Q1/VBW33 |
| | 360 | 136 | 4 | 1880 | 2540 | 800 | 1000 | 23334X2Q1/VBHAC9W33 |

| Other dimensions | | | | Contact surface and chamfer dimensions | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d1 | D1 | b | k | da | Da | ra | e | y1 | y2 | y0 | |
| mm | | | | mm | | | mm | | | | kg |
| 109 | 142 | | | 92 | 158 | 2 | 0.34 | 1.99 | 2.96 | 1.94 | 6.24 |
| 115 | 150 | | | 99 | 166 | 2.5 | 0.34 | 1.99 | 2.96 | 1.94 | 8.19 |
| 115 | 150 | | | 99 | 166 | 2.5 | 0.34 | 1.99 | 2.96 | 1.94 | 7.59 |
| 123 | 159 | 8.3 | 5 | 104 | 176 | 2.5 | 0.34 | 1.99 | 2.96 | 1.94 | 8.49 |
| 128 | 167 | 8.3 | 5 | 109 | 186 | 2.5 | 0.34 | 1.99 | 2.96 | 1.94 | 10.5 |
| 135 | 179 | | | 114 | 201 | 2.3 | 0.37 | 1.80 | 2.70 | 1.80 | 13.5 |
| 135 | 179 | 11.1 | 5 | 114 | 201 | 2.3 | 0.37 | 1.80 | 2.70 | 1.80 | 13.5 |
| 127 | 151 | | | 115 | 165 | 2 | 0.31 | 2.20 | 3.30 | 2.20 | 5.48 |
| 150 | 197 | | | 124 | 226 | 2.5 | 0.37 | 1.80 | 2.70 | 1.80 | 18.9 |
| 150 | 197 | 13.9 | 6 | 124 | 226 | 2.5 | 0.37 | 1.80 | 2.70 | 1.80 | 18.8 |
| 165 | 215 | | | 134 | 246 | 2.5 | 0.35 | 1.90 | 2.90 | 1.80 | 23.3 |
| 165 | 215 | | | 134 | 246 | 2.5 | 0.35 | 1.90 | 2.90 | 1.80 | 23.3 |
| 172 | 210 | 11.1 | 6 | 144 | 216 | 2.5 | 0.30 | 2.50 | 3.70 | 2.50 | 11.2 |
| 178 | 232 | 16.7 | 6 | 148 | 262 | 3 | 0.36 | 1.88 | 2.79 | 1.83 | 28.6 |
| 178 | 232 | 16.7 | 6 | 148 | 262 | 3 | 0.36 | 1.88 | 2.79 | 1.83 | 28.6 |
| 186 | 247 | 16.7 | 9 | 158 | 282 | 3 | 0.37 | 1.80 | 2.70 | 1.80 | 37.0 |
| 210 | 270 | 16.7 | 9 | 158 | 280 | 3 | 0.42 | 1.69 | 2.51 | 1.65 | 41.8 |
| 203 | 265 | 16.7 | 9 | 168 | 302 | 3 | 0.37 | 1.80 | 2.70 | 1.80 | 44.6 |
| 201 | 249 | 13.9 | 5 | 174 | 276 | 2.5 | 0.27 | 2.50 | 3.70 | 2.50 | 22.5 |
| 201 | 284 | 16.7 | 7 | 178 | 322 | 3 | 0.36 | 1.87 | 2.79 | 1.83 | 52.8 |
| 216 | 284 | 22 | 8 | 178 | 322 | 3 | 0.35 | 1.90 | 2.90 | 1.80 | 60.6 |
| 215 | 268 | 16.7 | 6 | 188 | 292 | 3 | 0.27 | 2.50 | 3.70 | 2.50 | 61.7 |
| 226 | 292 | 22.3 | 12 | 188 | 342 | 3 | 0.41 | 1.65 | 2.45 | 1.61 | 69.0 |

d 180~200 mm

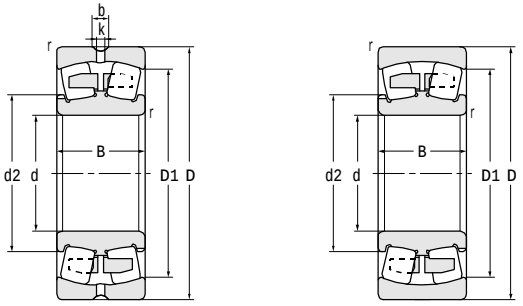


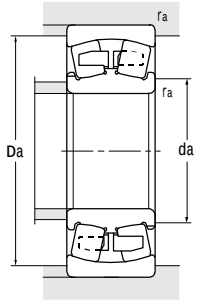




| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | kN | | r/min | | |
| 180 | 380 | 126 | 4 | 1620 | 2400 | 900 | 1200 | 22336Q1/VBW33 |
| 190 | 340 | 120 | 4 | 1420 | 2400 | 850 | 1100 | 23238KQ1/VBW33 |
| | 400 | 132 | 5 | 1800 | 2630 | 850 | 1100 | 22338Q1/VBW33 |
| 200 | 420 | 138 | 5 | 1910 | 2860 | 850 | 1100 | 22340Q1/VBW33 |

| Other dimensions | | | | Contact surface and chamfer dimensions | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d1 | D1 | b | k | da | Da | ra | e | y1 | y2 | y0 | |
| mm | | | | mm | | | mm | | | | kg |
| 242 | 316 | 22.3 | 8 | 198 | 362 | 3 | 0.35 | 1.90 | 2.90 | 1.80 | 71.3 |
| 237 | 288 | 16.7 | 7 | 208 | 322 | 3 | 0.35 | 1.90 | 2.90 | 1.80 | 48 |
| 257 | 334 | 22.3 | 8 | 212 | 378 | 4 | 0.35 | 1.90 | 2.90 | 1.80 | 82.2 |
| 269 | 350 | 22.3 | 8 | 222 | 398 | 4 | 0.35 | 1.90 | 2.90 | 1.80 | 97 |

d 65~160 mm

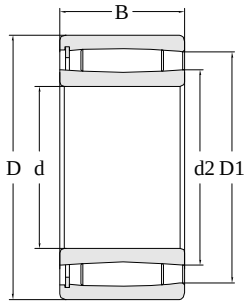


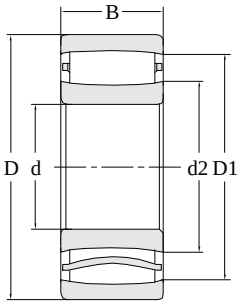



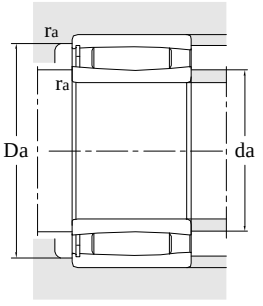

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | kN | | r/min | | |
| 65 | 100 | 35 | 1.1 | 110 | 165 | 3800 | 4800 | 24013CB-2RS/HG2 |
| 75 | 115 | 40 | 1.1 | 158 | 240 | 2900 | 3500 | 24015CB/HG2W33 |
| 90 | 160 | 52.4 | 2 | 300 | 440 | 1900 | 2600 | 23218CB/HG2W33 |
| 95 | 170 | 43 | 2.1 | 275 | 370 | 2400 | 3200 | 22219CB/HG2W33 |
| 100 | 180 | 60.3 | 2.1 | 400 | 570 | 1700 | 2200 | 23220CB/HG2W33 |
| 110 | 180 | 69 | 2 | 410 | 660 | 1000 | 1400 | 24122CB/HG2W33 |
| 120 | 180 | 60 | 2 | 365 | 630 | 1600 | 2000 | 24024CB/HG2W33 |
| | 200 | 62 | 2 | 430 | 650 | 1900 | 2600 | 23124CB/HG2W33 |
| 130 | 200 | 69 | 2 | 470 | 820 | 1800 | 2400 | 24026CB/HG2W33 |
| 140 | 210 | 69 | 2 | 460 | 860 | 1800 | 2400 | 24028CB/HG2W33 |
| 160 | 240 | 80 | 2.1 | 640 | 1180 | 1100 | 1500 | 24032CB/HG2W33 |

| Other dimensions | | | | Contact surface and chamfer dimensions | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d2 | D1 | b | k | da | Da | ra | e | y1 | y2 | y0 | |
| mm | | | | mm | | | mm | | | | kg |
| 75 | 87 | | | 74 | 90 | 1 | | | | | 0.966 |
| 88 | 101 | 5.5 | 3 | 82 | 106 | 1 | | | | | 1.48 |
| 111 | 137 | 5.7 | 3 | 101 | 149 | 2 | | | | | 4.5 |
| 120 | 149 | 8.4 | 4.5 | 107 | 158 | 2 | | | | | 4.29 |
| 125 | 153 | 8.4 | 4.5 | 112 | 168 | 2 | | | | | 6.44 |
| 131 | 154 | 5.5 | 3 | 120 | 170 | 2 | | | | | 6.95 |
| 138 | 158 | 5.5 | 4 | 130 | 170 | 2 | | | | | 553 |
| 146 | 175 | 8.3 | 4.5 | 130 | 190 | 2 | | | | | 7.97 |
| 151 | 174 | 5.5 | 3 | 140 | 190 | 2 | | | | | 7.76 |
| 160 | 184 | 6 | 3 | 150 | 200 | 2 | | | | | 8.51 |
| 184 | 209 | 10 | 4.5 | 172 | 228 | 2 | | | | | 12.9 |

d 75~220 mm



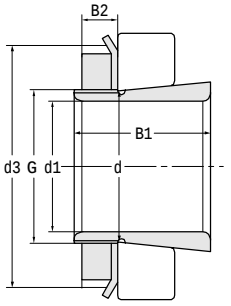



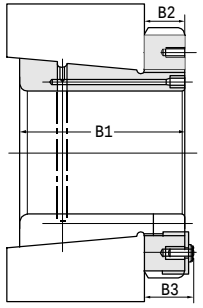



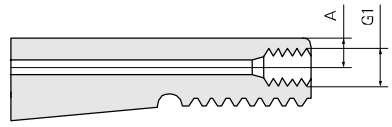

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | Designations |
|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | Cr | Cor | | |
| mm | | | | kN | | r/min | |
| 75 | 105 | 40 | 1 | 204 | 325 | 1900 | SDB5915V/HG2YAD |
| | 105 | 40 | 1 | 204 | 325 | 1900 | SDB5915V/YAD |
| | 105 | 54 | 1 | 200 | 325 | 1600 | SDB6915V-2RS/HG2 |
| | 105 | 54 | 1 | 200 | 325 | 1600 | SDB6915V/HG2C9 |
| 85 | 120 | 46 | 1.1 | 275 | 465 | 1700 | SDB5917V/YAD |
| 90 | 125 | 46 | 1.1 | 200 | 400 | 1600 | SDB5918V/C9 |
| | 125 | 46 | 1.1 | 200 | 400 | 1600 | SDB5918V-2RS/C9 |
| 100 | 150 | 50 | 1.5 | 345 | 530 | 1400 | SDB4020V/HG2W33AYAD |
| | 150 | 67 | 1.5 | 495 | 865 | 1100 | SDB5020V/C9YA7 |
| 120 | 180 | 60 | 2 | 510 | 850 | 1100 | SDB4024V/HG2C9 |
| | 180 | 60 | 2 | 510 | 850 | 1100 | SDB4024V/HG2W33A |
| | 180 | 60 | 2 | 510 | 850 | 1100 | SDB4024V/W33YAD |
| 130 | 200 | 69 | 2 | 700 | 1085 | 850 | SDB4026V/HG2YAD |
| | 200 | 69 | 2 | 700 | 1100 | 850 | SDB4026V/YAD |
| 150 | 225 | 75 | 2.1 | 755 | 1330 | 750 | SDB4030V/C9 |
| 160 | 240 | 80 | 2.1 | 890 | 1460 | 600 | SDB4032V/HG2W33AYAD |
| 220 | 340 | 90 | 3 | 1280 | 2030 | 220 | SDB3044/C9 |

| Other dimensions | | | | Contact surface and chamfer dimensions | | | Calculation coefficient | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| d2 | D1 | b | k | da | Da | ra | k1 | k2 | |
| mm | | | | mm | | | mm | | kg |
| 82 | 96 | | | 81 | 95 | 1 | 0.098 | 0.114 | 1.07 |
| 82 | 96 | | | 81 | 95 | 1 | 0.098 | 0.114 | 1.07 |
| 85 | 94 | | | 81 | 98 | 1 | 0.073 | 0.154 | 1.36 |
| 85 | 94 | | | 81 | 98 | 1 | 0.073 | 0.154 | 1.35 |
| 95 | 110 | | | 91 | 113 | 1 | 0.098 | 0.109 | 1.52 |
| 101 | 113 | | | 98 | 116 | 1 | 0.089 | 0.131 | 1.71 |
| 101 | 113 | | | 98 | 116 | 1 | 0.089 | 0.131 | 1.72 |
| 112 | 135 | 10 | 3 | 110 | 138 | 1.5 | 0.098 | 0.118 | 3.05 |
| 114 | 135 | | | 110 | 138 | 1.5 | 0.112 | 0.094 | 4.23 |
| 139 | 164 | | | 134 | 168 | 2 | 0.107 | 0.103 | 5.48 |
| 139 | 164 | 10 | 3 | 134 | 168 | 2 | 0.107 | 0.103 | 5.45 |
| 139 | 164 | 5.5 | 4 | 134 | 168 | 2 | 0.107 | 0.103 | 5.44 |
| 146 | 181 | | | 142 | 190 | 2 | 0.113 | 0.097 | 7.79 |
| 146 | 181 | | | 142 | 190 | 2 | 0.113 | 0.097 | 8.04 |
| 172 | 204 | | | 165 | 213 | 2 | 0.107 | 0.106 | 10.4 |
| 179 | 217 | 11 | 4 | 175 | 220 | 2 | 0.109 | 0.103 | 12.6 |
| 256 | 311 | | | 240 | 320 | 2.5 | 0.11 | 0.10 | 29.1 |

d 60~200 mm

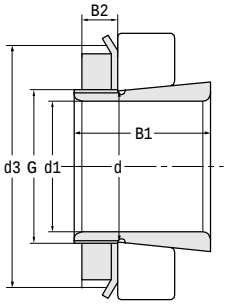


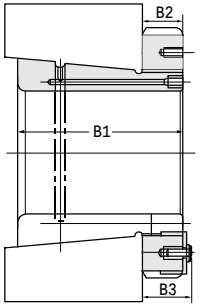



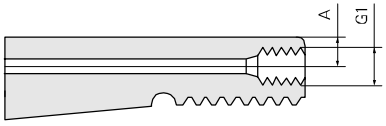




| Principal dimensions | | | | | | | | | Designation Adapter sleeve with lock nut and locking devices. | Lock nut | Locking device | Applicable hydraulic nut | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d1 | d | d3 | B1 | B2 | B3 | G | G1 | A | | | | | |
| mm | | | | | | | | | | | | | kg |
| 60 | 65 | 85 | 65 | 14 | | M65x2 | | | H2313 | KM13 | MB13 | HMV13E | 0.582 |
| 70 | 80 | 105 | 46 | 17 | | M80x2 | | | H216 | KM16 | MB16 | HMV16E | 0.966 |
| | 80 | 105 | 46 | 17 | | M80x2 | | | H316 | KM16 | MB16 | HMV16E | 1.04 |
| 75 | 85 | 110 | 63 | 18 | | M85x2 | | | H317 | KM17 | MB17 | HMV17E | 1.17 |
| 80 | 90 | 120 | 65 | 18 | | M90x2 | | | H318 | KM18 | MB18 | HMV18E | 1.1 |
| 90 | 100 | 130 | 97 | 20 | | M100x2 | | | H2320 | KM20 | MB20 | HMV20E | 2.76 |
| 100 | 110 | 145 | 81 | 21 | | M110x2 | | | H3122 | KM22 | MB22 | HMV22E | 2.33 |
| | 110 | 145 | 105 | 21 | | M110x2 | | | H2322 | KM22 | MB22 | HMV22E | 2.84 |
| 110 | 120 | 145 | 72 | 22 | | M120x2 | | | H3024 | KML24 | MBL24 | HMV24E | 1.95 |
| | 120 | 155 | 88 | 22 | | M120x2 | | | H3124 | KM24 | MB24 | HMV24E | 2.39 |
| 115 | 130 | 165 | 121 | 23 | | M130x2 | | | H2326 | KM26 | MB26 | HMV26E | 4.72 |
| 140 | 160 | 190 | 93 | 28 | | M160x3 | | | H3032 | KML32 | MBL32 | HMV32E | 6.64 |
| | 160 | 210 | 119 | 28 | | M160x3 | | | H3132 | KM32 | MB32 | HMV32E | 7.47 |
| | 160 | 210 | 147 | 28 | | M160x3 | | | H2332 | KM32 | MB32 | HMV32E | 9.2 |
| 150 | 170 | 200 | 101 | 29 | | M170x3 | | | H3034 | KML34 | MBL34 | HMV34E | 6.31 |
| | 170 | 220 | 122 | 29 | | M170x3 | | | H3134 | KM34 | MB34 | HMV34E | 8 |
| 160 | 180 | 210 | 109 | 30 | | M180x3 | | | H3036 | KML36 | MBL36 | HMV36E | 6.73 |
| | 180 | 230 | 131 | 30 | | M180x3 | | | H3136 | KM36 | MB36 | HMV36E | 9.39 |
| 170 | 190 | 220 | 112 | 31 | | M190x3 | | | H3038 | KML38 | MBL38 | HMV38E | 7.62 |
| 180 | 200 | 240 | 120 | 32 | | M200x3 | | | H3040 | KML40 | MBL40 | HMV40E | 9.71 |
| | 200 | 250 | 150 | 32 | | M200x3 | | | H3140 | KM40 | MB40 | HMV40E | 12 |
| 200 | 220 | 260 | 126 | 30 | 41 | Tr220x4 | M6 | 4.2 | H3044 | HML44 | MSL44 | HMV44E | 11.2 |
| | 220 | 280 | 161 | 35 | | Tr220x4 | | | H3144 | HM44 | MS44 | HMV44E | 15.3 |

d 200~380 mm

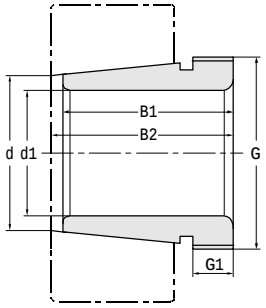


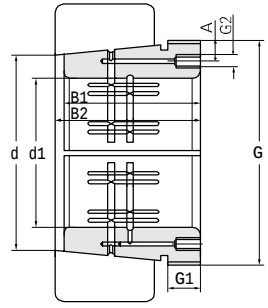




| Principal dimensions | | | | | | | | | Designation Adapter sleeve with lock nut and locking devices. | Lock nut | Locking device | Applicable hydraulic nut | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d1 | d | d3 | B1 | B2 | B3 | G | G1 | A | | | | | |
| mm | | | | | | | | | | | | | kg |
| 200 | 220 | 280 | 161 | 35 | | Tr220x4 | M6 | 4.2 | OH3144XH | HM44 | MB44 | HMV44E | 14.9 |
| | 220 | 280 | 186 | 35 | | Tr220x4 | | | H2344 | HM44 | MB44 | HMV44E | 16.8 |
| 220 | 240 | 300 | 172 | 37 | | Tr240x4 | | | H3148 | HM48 | MB48 | HMV48E | 18.4 |
| | 240 | 300 | 172 | 37 | | Tr240x4 | M6 | 4.2 | OH3148H | HM48 | MB48 | HMV48E | 16 |
| 240 | 260 | 310 | 116 | 34 | 46 | Tr260x4 | M6 | 4.2 | OH3952H | HML52 | MSL48 | HMV52E | 14.8 |
| | 260 | 310 | 145 | 34 | 46 | Tr260x4 | M6 | 4.2 | H3052 | HML52 | MSL48 | HMV52E | 16 |
| | 260 | 330 | 190 | 39 | | Tr260x4 | | | H3152 | HM52 | MB52 | HMV52E | 22.8 |
| | 260 | 330 | 190 | 39 | | Tr260x4 | M6 | 4 | OH3152H | HM52 | MB52 | HMV52E | 23.3 |
| 260 | 280 | 330 | 152 | 38 | 50 | Tr280x4 | M6 | 4.2 | H3056 | HML56 | MSL56 | HMV56E | 18.4 |
| | 280 | 350 | 195 | 38 | 51 | Tr280x4 | M6 | 4.2 | H3156 | KM56 | MS52 | HMV56E | 25.2 |
| | 280 | 350 | 195 | 38 | 41 | Tr280x4 | M6 | 4.2 | OH3156H | HM56X2 | MB56 | HMV56E | 25.9 |
| | 280 | 350 | 224 | 41 | | Tr280x4 | | | H2356 | HM56 | MB56 | HMV56E | 29.6 |
| 280 | 300 | 360 | 168 | 42 | 54 | Tr300x4 | M6 | 4.2 | H3060 | HML60 | MSL60 | HMV60E | 24 |
| | 300 | 380 | 208 | 40 | 53 | Tr300x4 | M6 | 4.2 | OH3160H | HM60 | MS60 | HMV60E | 31.4 |
| 300 | 320 | 380 | 140 | 42 | 55 | Tr320x5 | M6 | 4 | OH3964H | HML64 | MSL64 | HMV64E | 21.4 |
| | 320 | 400 | 226 | 42 | 56 | Tr320x5 | M6 | 4 | OH3164H | HM64 | MS64 | HMV64E | 32.5 |
| | 320 | 400 | 258 | 42 | 56 | Tr320x5 | M6 | 4 | H3264 | HM64 | MS64 | HMV64E | 40.8 |
| 320 | 340 | 440 | 254 | 55 | 72 | Tr340x5 | M6 | 4 | OH3168H | HM68 | MS68 | HMV68E | 52.4 |
| 340 | 360 | 420 | 188 | 45 | 58 | Tr360x5 | M6 | 4 | OH3072H | HML72 | MSL72 | HMV72E | 20.6 |
| | 360 | 460 | 259 | 58 | 75 | Tr360x5 | M6 | 4 | OH3172H | HM72 | MS68 | HMV72E | 57.3 |
| 360 | 380 | 450 | 193 | 48 | 62 | Tr380x5 | M6 | 4 | H3076 | HML76 | MSL76 | HMV76E | 43.5 |
| | 380 | 490 | 264 | 60 | 77 | Tr380x5 | M6 | 4 | H3176 | HM76 | MS76 | HMV76E | 62.9 |
| 380 | 400 | 470 | 210 | 52 | 66 | Tr400x5 | M6 | 4 | H3080 | HML80 | MSL76 | HMV80E | 43.5 |
| | 400 | 520 | 272 | 62 | 82 | Tr400x5 | M6 | 4 | OH3180H | HM80 | MS80 | HMV80E | 65 |

d 95~1010 mm




| Principal dimensions | | | | | | | | Designation Withdrawal sleeve | Applicable nut for withdraw | Applicable hydraulic nut | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d1 | d | B1 | B2 | G | G1 | G2 | A | | | | |
| mm | | | | | | | | | | | kg |
| 95 | 100 | 64 | 68 | M110x2 | 11 | | | AH3120 | KM22 | HMV22E | 0.66 |
| 105 | 110 | 65 | 72 | M120x2 | 11 | | | AH3122 | | | 0.76 |
| 145 | 150 | 96 | 101 | M160x3 | 15 | | | AHX3130 | KM32 | HMV32E | 1.8 |
| 170 | 180 | 105 | 110 | M200x3 | 17 | | | AH2236 | KM40 | | 3.4 |
| | 180 | 116 | 122 | M190x3 | 19 | | | AHX3136 | KM38 | HMV38E | 4.25 |
| 200 | 220 | 130 | 136 | Tr240x4 | 20 | | | AH2244 | | | 9.23 |
| 220 | 240 | 154 | 161 | Tr260x4 | 25 | | | AH3148 | HM3052 | HMV52E | 15.9 |
| | 240 | 189 | 197 | Tr260x4 | 30 | | | AH2348 | HM3052 | HMV52E | 15.9 |
| 320 | 340 | 225 | 234 | Tr360x5 | 33 | | | AHX3168 | HM3172 | HMV72E | 28.1 |
| 340 | 360 | 167 | 176 | Tr380x5 | 30 | G1/4 | 9 | AOH3072 | HM3076 | HMV3076E | 21 |
| | | 269 | 289 | Tr380x5 | 26 | G1/4 | 9 | AOH24172 | HM3176 | HMV3076E | 29.6 |
| 360 | 380 | 170 | 180 | Tr410x5 | 31 | G1/4 | 9.5 | AOH3076 | | | 22.8 |
| 400 | 420 | 186 | 196 | Tr440x5 | 34 | | | AHX3084 | HM3088 | HMV88E | 26.9 |
| 440 | 460 | 202 | 213 | Tr480x5 | 37 | | | AHX3092H | HM3096 | HMV96E | 34 |
| 460 | 480 | 295 | 307 | Tr500x5 | 45 | G1/4 | 9 | AOH3196 | HM31/500 | HMV100E | 60 |
| 510 | 530 | 225 | 235 | Tr560x6 | 54 | | | AHX06/530 | | | 47.8 |
| 540 | 560 | 250 | 261 | Tr600x6 | 54 | | | AH30/560-1 | | | 60.6 |
| 560 | 580 | 180 | 190 | Tr600x6 | 47 | | | AH26/580 | | | 38 |
| | 580 | 300 | 308 | Tr620x6 | 60 | | | AH26/580-1 | | | 86 |
| 1010 | 1060 | 310 | 328 | Tr1095x8 | 50 | G1/4 | 15 | AOH239/1060 | | | 261 |

## Product Characters:

The inner and outer rings of tapered roller bearings have tapered raceway. The tapered rollers are mounted between raceways. If extending the tapered surfaces, the sliding surfaces of cup and the inner ring and the rolling elements converge towards the same single point on the bearing axes. Tapered roller bearings can bear combined loads of radial and axial. The bearing's axial carrying load capacity varies with contact angle. The greater contact angle is, the bigger capacity will be. Tapered roller bearings belong to separable type bearings. The rollers, inner ring and cage consist of cones which can be mounted separately from cup.

These bearings can limit the axial displacement of either shaft or the housing in one direction. When it is given radial loads, the auxiliary axial force can be formed. It is suggested that two of the bearings be put in face- to face or back - to back arrangements in application. The cup and cones should be mounted relatively to their end surfaces.

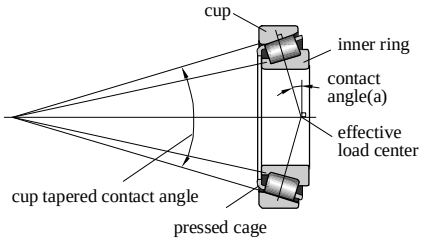
These bearings are mainly used on automobile wheels (both fromer and rear), variable speed devices, differential mechanisms, pinion shafts, machine tool spindles, construction machines, large-sized agricultural machines, gear deceleration devices for railway vehicles, and the small deceleration devices for mill roll necks.

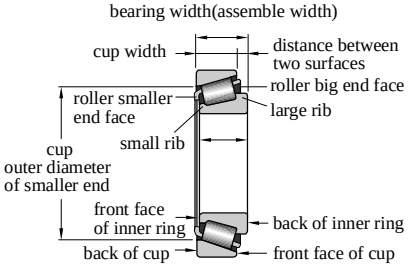
## Product Types:

ZWZ manufacture both metric and inch-sized single-row, double-row and four-row tapered roller bearings.

### · Single - row tapered roller bearings

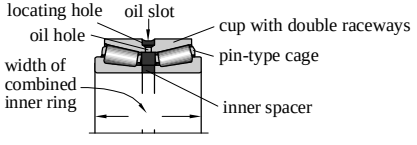
These bearings can only limit the axial displacement of either the shaft or the housing in one direction and can carry axial load in one direction. When given radial load, the axial force formed inside the bearing must be offset. It is suggested that two of the bearings be put in face-to face or back-to back arrangements in application.

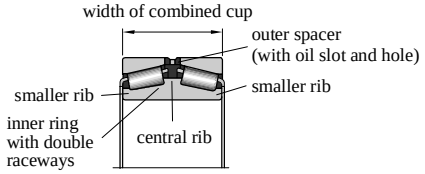



### · Double-row tapered roller bearings

These bearings can carry axial load in two directions when they carry radial load. The axial displacement in two directions of the shaft and housing are limited within the bearings radial clearance range.




### · Four-row tapered roller bearings

The functions and features of these bearings are basically the same as those of the double-row design. However, they can carry heavier load than the double-row tapered roller bearings, but with slightly slower rotation speed. These bearings are mainly applied to heavy machinery such as rolling mills, etc.

### · Multi-sealed double row or four-row tapered roller bearings

ZWZ manufacture double - row and four - row tapered roller bearings with long life, multiple seals. Their seal performance is improved by amending traditional design method of full seal bearings, adopting new type seal structure. Compared to open type bearings, the life of multiple seals double - four row tapered bearings can be increased by 20% to 40%, and the lubricating consumption is decreased by 80%.

Multi-sealed double row or four-row tapered roller bearings are denoted with the suffix XRS.

## Dimension Range

ZWZ tapered roller bearing basic dimensions are listed in the bearings dimensions table,

### Single row tapered roller bearings:

Bore diameter dimension range:
20 mm -1270mm
Outer diameter dimension range:
40mm -1465mm
Width range: 15mm-240mm

### Double row tapered roller bearings:

Bore diameter dimension range:
38 mm- 1560mm
Outer diameter dimension rang:
70mm-1800mm
Width range: 50mm-460mm

### Four-row tapered roller bearings:

Bore diameter dimension range:
130 mm-1600mm
Outer diameter dimension range:
200mm-2000mm
Width range: 150mm- 1150mm

## Tolerance:

ZWZ manufacture metric tapered roller bearings have the normal tolerance class and also with P0, PX, P6, P5, P4, and P2 precision grade. All of tolerances values conform to GB307.1 Standard. The tolerances are listed in the preface tables.

ZWZ manufacture inch-sized tapered roller bearings have the normal tolerance class and also manufacture inch-sized tapered roller bearings with CL2, CL3, CL10 and CL00 tolerances

## Radial clearance:

ZWZ single-row tapered roller bearings have clearance only after being mounted. And the clearance can be determined only when another bearing is located next to it in the opposite direction after adjusting. The radial clearance of double and four-row tapered roller bearing are listed in the preface tables.

## Cage

Normally, tapered roller bearings use pressed basket shaped cages of steel sheet but for

bearings with greater dimensions, machined solid support shaped cages are also used.
1.When the bearings OD≤650mm, pressed steel-sheet cage are used, the suffix of code name does not denote the structure of cage.
2.When the bearings OD＞650mm, steel solid cages are used, the suffix of code name does not denote the structure of cage.

## Allowable Angle Deviation

Usually for tapered roller bearings, there should be no misalignment between the shaft and the housing bore. When there is misalignment, the slope angle should not be greater than 2'.

### Single-row tapered roller bearings

Equivalent dynamic load

When Fa/Fr≤e, P=Fr [KN]
When Fa/Fr > e, P=0.4 Fr+Y Fa [KN]

Single-row tapered roller bearings can be used in pairs (their basic dimensions may be different) and when calculating the equivalent dynamic load, the additional axial force caused by the radial load must be taken into consideration and calculated in. The additional force S of single-row tapered roller bearings can be approximately calculated according to the following formula:

S = Fr / 2 Y

Equivalent static load

Single-row tapered roller bearings

P0 = 0.5Fr + Y0Fa [KN]
If P0 < Fr, P0=Fr [KN]

### Double row and four-row tapered roller bearings

Equivalent dynamic load

When Fa/Fr≤ e, P= 0 Fr + Y1Fa [KN]
When Fa / Fr＞ e, P=0.67Fr + Y2Fa [KN]

Equivalent static load

P0= Fr + Y0 Fa [KN]

Fr and Fa indicate total load acted on single-row, double-row and four-row tapered roller bearings.
The factors e, Y, Y1, Y2, Y0 are listed in the bearing dimension tables.

## Instruction for Code

Prefix code:

F: For inch tapered roller bearings, add "F" in front of bearing series to represent bearing cage
G: For inch tapered roller bearings, represent inner space ring or outer space ring of bearing
Representing way of inner space ring: add"G-"in front of component code of inch bearing series
K: For inch tapered roller bearings, the bearing ring and rolling elements or only the ring is made up of high carbon chromium bearing steel
K1: For inch tapered roller bearings, the bearing ring and rolling elements or only the ring is made by 100CrMo7
K2: For inch tapered roller bearings, the bearing ring and rolling elements or only the ring is made by ZGCr15
R: For inch tapered roller bearings, add"R"in front of bearing series to represent tapered roller



Suffix Code:

A: 1.Tapered roller bearings, contact angle α,diameter of outer ring raceway D1 disagrees with national standard. If there are two or more than two that are different with national standard α and D1 in the same code, representing as A、A1、A2... in sequence.
2.Guided with outer ring
A6: For inch tapered roller bearings, assembly chamfering is not in accordance with TIMKEN, when there are two or more than two that are different with TIMKEN assembly chamfering, then represent as A61、A62...
B: 2.Tapered roller bearing, contact angle increases (increase an angle series)
C: Paired tapered roller bearings, when axial clearance does not conform to ZWZ standard, attach average value of axial clearance after C directly
/CR: Paired tapered roller bearings, when there is requirement for radial clearance, attach average value of radial clearance after CR directly
D: Double-row tapered roller bearings, without inner space ring or outer space ring, inch tapered roller bearing without grinding end face, representing double-raceway inner ring or double-raceway outer ring
/DB: Two tapered roller bearings used for the back to back paired mounting
/DBY: Two single-row tapered roller bearing, for back to back mounting, with inner spacer, without outer spacer
/DF: Two tapered roller bearings used for the face to face paired mounting
D1: Double-row tapered roller bearing, with no inner spacer, grinded end face.
/HA: Ring rolling elements and cage or only the ring and rolling elements are made from vacuum smelted bearing steel.
/HC: Ring and rolling elements or only ring or rolling elements are made from case hardened steel (/HC-20Cr2Ni4A; /HC1-20Cr2Mn2MoA; /HC2-15Mn)
/HCE: If the metric series bearing, indicates rings and rolling elements are choose high quality carburized steel
/HCER: For the metric series bearing, only the roller is are made by high quality carburized steel
/HCG2I: Indicates the outer ring & rolling elements are made by carburized steel, inner ring made by GCr18Mo
/HCI: Indicates the inner ring made by carburized steel
/HCO: Indicates the outer ring made by carburized steel
/HCOI: Indicates only the outer ring & inner ring made by carburized steel
/HCOR: Indicates only the outer ring & rolling element are made by carburized steel
/HCR: To distinguish the bearing with same designations, only the rolling elements are made by carburized steel

Suffix Code:

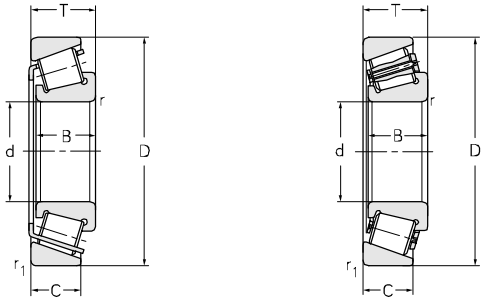
/HE: Ring, rolling elements and cage or only the ring and rolling elements are made by electroslag remelting bearing steel (military first grade steel) ZGCr15
/HG: Made by ZGCr15. Ring and rolling elements or only ring are made by other bearing steel (/HG-5GrMnMo; /HG1-55SiMoVA; /HG2-GCr18Mo; /HG3-42CrMo/ HG4-GCr15SiMn)
/HG2CR: Indicates the bearing ring is made by GCr18Mo, rolling elements is made by carburized steel
/HG2I: If belongs to radial bearing, indicates the inner ring is made by GCr18Mo, outer ring & rolling elements is made by GCr15.
/HG2O: Indicates the bearing outer ring made by GCr18Mo
/HN: Ring and rolling elements are made by heat resistant steel (/HN-GCr4Mo4V; /HN1-Cr14Mo4; /HN2-Cr15Mo4V; /HN3-W18Cr4V)
/HP: Ring and rolling elements are made from beryllium bronze or other anti-magnetic materials. When material is changed, it is indicated by the added digitals
/HQ: Ring and rolling elements are made from the unusual materials (/HQ- plastic; /HQ1-ceramic alloy)
/HU: Ring, rolling elements and cage or only the ring and rolling elements are made from the unhardened stainless steel 1Cr18Ni9Ti
/HV: Ring, rolling elements and cage or only the ring and rolling elements are made from the unhardened stainless steel (/HV-9Cr18; /HV1-9Cr18Mo)
K: Tapered bore bearing, conicity is 1: 12
K30: Tapered bore bearing, conicity is 1: 30
P: Bearing precision grade, the appended digital indicates specific precision grade
R: Bearing with snap rib on outer ring (convex outer ring)
-RS: Bearing with frame system rubber seal ring (contact system)
-RS1: Bearing with frame system rubber seal ring (contact system), the material of seal ring is sulfureted rubber
-RS2: Bearing with frame system rubber seal ring (contact system), the material of seal ring is fluoride rubber
-2RS: Bearing with RS sealed on both sides
-2RS1: Bearing with RS1 sealed on both sides
-2RS2: Bearing with RS2 sealed on both sides
-RZ: Bearing with frame type rubber sealing ring (non-contact type)
-2RZ: Bearing with RZ sealed on both sides
S: Martensite quenching
/SP: Ultra precision grade, dimension tolerance equals to P5, rotating precision equals to P4
/S0: Bearing ring tempered in high temperature, which can reach 150˚C



Suffix Code:

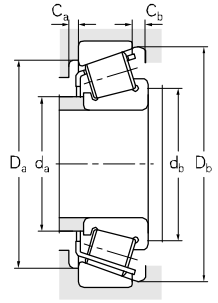
/S1: Bearing ring tempered in high temperature, which can reach 200*
/S2: Bearing ring tempered in high temperature, which can reach 250*
/S3: Bearing ring tempered in high temperature, which can reach 300*
/S4: Bearing ring tempered in high temperature, which can reach 350*
SC: Radial bearing with outer cover
T: When the assemble height dimension of the paired tapered roller bearing not conform to the standard specification, the assemble height dimension will be added directly after T
V: Inch
X1: Non-standard outer diameter
X2: Non-standard width (height)
X3: Non-standard outer diameter, width (height) (standard bore diameter)
X4: Inner diameter select the integer of non-standard bearing, while inner diameter is not integer and have two and more decimal places, indicated by X4 as select integer of the figures
-XRS: Four-row tapered roller bearing, with multi sealed parts. (more than two sealings)
Y: Y Combines with another letter (such as YA, YB) or more digitals to identify the change of the non-series which can not be indicated with the present suffix code
YA: Structure change
YA1: Outside surface of outer ring has changed comparing to standard design
YA2: Bore of inner ring has changed comparing to the standard design
YA3: End face of bearing ring has changed comparing to the standard design
YA4: Raceway of bearing ring has changed comparing to the standard design
YA5: Bearing rolling elements has changed comparing to the standard design
YA6: Bearing mounting chamfer has changed comparing to the standard design
YA7: Bearing rib or flange has changed comparing to the standard design
YA8: Bearing cage structure changed
YA9: Bearing contact angle has changed comparing to the standard design
YA10: Double-row tapered roller bearing, inner spacer with oil groove and oil hole
YAB; Structure and technical specification has changed at the same time
YAD: One type of bearing has two or more changes on structure
YB: Technical specification has changed
YB1; Surface of bearing ring has plated coating
YB2: Bearing dimension and tolerance changed
YB3: Surface roughness of bearing ring changed
YB4: Heat treating specification (e.g. hardness) changed
YB5: Structure and position tolerance have special requirements
YBD: One type of bearing has two or more changes on technical specification
-Z: Bearing with shield on one side
-2Z: Bearing with shields on both sides

d 20~30 mm



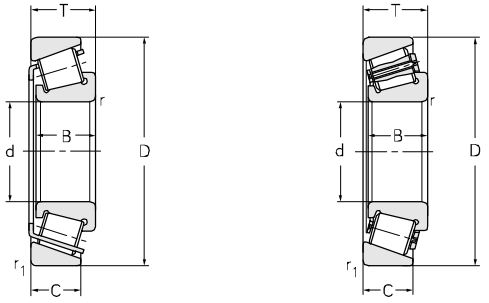






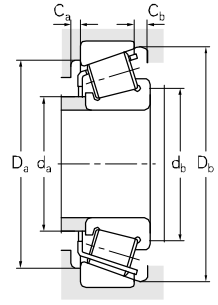

| Principal dimensions | | | | | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | T | B | C | $r_{radial}$ | $r_{axial}$ | $r_{1radial}$ | $r_{1axial}$ | $C_r$ | $C_{or}$ | Grease | Oil |
| mm | | | | | | | | | kN | | r/min | |
| **20** | 42 | 15 | 15 | 12 | 0.6 | 0.6 | 0.6 | 0.6 | 26.3 | 29.9 | 9500 | 12000 |
| | 47 | 19.25 | 18 | 15 | 1 | 1 | 1 | 1 | 27.5 | 31 | 7500 | 10000 |
| | 47 | 15 | 14 | 12 | 1 | 1 | 1 | 1 | 30.5 | 29.7 | 8000 | 11000 |
| | 47 | 15.25 | 14 | 12 | 1 | 1 | 1 | 1 | 30 | 31 | 8000 | 11000 |
| | 52 | 16.25 | 15 | 13 | 1.5 | 1.5 | 1.5 | 1.5 | 38.2 | 32.5 | 8000 | 11000 |
| | 52 | 22.25 | 21 | 18 | 1.5 | 1.5 | 1.5 | 1.5 | 50 | 45 | 7500 | 10000 |
| **25** | 47 | 15 | 15 | 11.5 | 0.6 | 0.6 | 0.6 | 0.6 | 29.3 | 36 | 7500 | 9500 |
| | 47 | 17 | 17 | 14 | 0.6 | 0.6 | 0.6 | 0.6 | 32.5 | 42.5 | 7500 | 9500 |
| | 52 | 22 | 22 | 18 | 1 | 1 | 1 | 1 | 52.9 | 56 | 7500 | 9500 |
| | 52 | 22 | 22 | 18 | 1 | 1 | 1 | 1 | 52.9 | 56 | 7500 | 9500 |
| | 52 | 19.25 | 18 | 16 | 1 | 1 | 1 | 1 | 40.5 | 46 | 7000 | 9500 |
| | 52 | 16.25 | 15 | 13 | 1 | 1 | 1 | 1 | 34.8 | 33.5 | 7500 | 9500 |
| | 52 | 16.25 | 15 | 13 | 1 | 1 | 1 | 1 | 34.8 | 33.5 | 7500 | 9500 |
| | 52 | 16.25 | 15 | 13 | 1 | 1 | 1 | 1 | 34.8 | 33.5 | 7500 | 9500 |
| | 62 | 18.25 | 17 | 13 | 1.5 | 1.5 | 1.5 | 1.5 | 48 | 47 | 9000 | 13000 |
| | 62 | 18.25 | 17 | 15 | 1.5 | 1.5 | 1.5 | 1.5 | 48 | 46.5 | 9000 | 13000 |
| | 62 | 18.25 | 17 | 13 | 1.5 | 1.5 | 1.5 | 1.5 | 42.5 | 46 | 5600 | 7500 |
| | 62 | 25.25 | 24 | 20 | 1.5 | 1.5 | 1.5 | 1.5 | 67 | 72.5 | 9000 | 13000 |
| **28** | 52 | 16 | 16 | 12 | 1 | 1 | 1 | 1 | 35.5 | 39.2 | 7100 | 8900 |
| **30** | 55 | 17 | 17 | 13 | 1 | 1 | 1 | 1 | 36 | 47 | 6700 | 9000 |
| | 62 | 21.25 | 20 | 17 | 1 | 1 | 1 | 1 | 57.3 | 65 | 6300 | 8500 |
| | 62 | 21.25 | 20 | 17 | 1 | 1 | 1 | 1 | 57 | 59.5 | 6300 | 8500 |
| | 62 | 25 | 25 | 19.5 | 1 | 1 | 1 | 1 | 70.5 | 75 | 5600 | 7500 |
| | 72 | 28.75 | 27 | 23 | 1.5 | 1.5 | 1.5 | 1.5 | 86.2 | 84 | 5300 | 7000 |
| | 72 | 20.75 | 19 | 16 | 1.5 | 1.5 | 1.5 | 1.5 | 62.7 | 62.5 | 5600 | 7500 |
| | 72 | 20.75 | 19 | 16 | 1.5 | 1.5 | 1.5 | 1.5 | 62.7 | 62.5 | 5600 | 7500 |
| | 72 | 20.75 | 19 | 14 | 1.5 | 1.5 | 1.5 | 1.5 | 54 | 59.5 | 5600 | 7500 |
| | 72 | 20.75 | 20 | 14 | 1.5 | 1.5 | 1.5 | 1.5 | 54.5 | 59.5 | 5000 | 6700 |

| Designations | Abutment and fillet dimensions | | | | | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $da_{max}$ | $db_{min}$ | $Da_{min}$ | $Da_{max}$ | $Db_{min}$ | $Ca_{min}$ | $Cb_{min}$ | e | Y | Y0 | a | |
| | mm | | | | | | | | | | | kg |
| **32004-DW** | 28 | 28 | 44 | 45 | 48 | 3 | 3.3 | 0.37 | 1.6 | 0.88 | 10 | 0.0987 |
| **32204** | 26 | 24 | 38 | 43 | 44 | 2 | 4.3 | 0.33 | 1.8 | 1 | 12 | 0.158 |
| **30204X2/P6XYB5** | 28 | 24 | 40 | 43 | 44 | 2.5 | 3 | 0.35 | 1.7 | 0.96 | 11 | 0.123 |
| **30204/YA8** | 28 | 24 | 40 | 43 | 45 | 2.5 | 3.3 | 0.35 | 1.7 | 0.96 | 11 | 0.124 |
| **30304** | 28 | 28 | 44 | 45 | 48 | 3 | 3.3 | 0.3 | 2 | 1.1 | 11 | 0.167 |
| **32304** | 26 | 27 | 43 | 45 | 48 | 3 | 4.5 | 0.3 | 2 | 1.1 | 13 | 0.238 |
| **32005-DW** | 34 | 32 | 47 | 55 | 59 | 3 | 5 | 0.43 | 1.39 | 0.77 | 11 | 0.11 |
| **33005** | 31 | 28 | 40 | 44 | 45 | 2 | 3 | 0.29 | 2.1 | 1.14 | 11 | 0.129 |
| **33205** | 30 | 29 | 42 | 48 | 50 | 2 | 4 | 0.35 | 1.7 | 0.94 | 14 | 0.216 |
| **33205-DW** | 30 | 29 | 42 | 48 | 50 | 2 | 4 | 0.35 | 1.7 | 0.94 | 14 | 0.216 |
| **32205** | 31 | 31 | 44 | 48 | 50 | 2 | 3.3 | 0.36 | 1.7 | 0.92 | 13 | 0.199 |
| **30205** | 31 | 31 | 44 | 46 | 49 | 2 | 3.3 | 0.37 | 1.6 | 0.88 | 12 | 0.16 |
| **30205/P6X** | 31 | 31 | 44 | 46 | 49 | 2 | 3.3 | 0.37 | 1.6 | 0.88 | 12 | 0.16 |
| **30205/YA8** | 32 | 29 | 43 | 48 | 49 | 2 | 3.3 | 0.37 | 1.6 | 0.88 | 12 | 0.166 |
| **30305** | 35 | 32 | 54 | 55 | 58 | 3 | 5.3 | 0.3 | 2 | 1.1 | 12 | 0.25 |
| **30305X2** | 35 | 33 | 53 | 55 | 58 | 2 | 3.3 | 0.3 | 2 | 1.1 | 13 | 0.267 |
| **31305** | 34 | 32 | 47 | 55 | 59 | 3 | 5 | 0.83 | 0.72 | 0.4 | 20 | 0.263 |
| **32305-DW** | 31 | 31 | 44 | 48 | 50 | 2 | 3.3 | 0.3 | 2 | 1.1 | 16 | 0.422 |
| **320/28** | 33 | 32 | 44 | 48 | 51 | 2 | 4 | 0.43 | 1.4 | 0.77 | 13 | 0.145 |
| **32006/P6XYB5** | 35 | 36 | 48 | 49 | 52 | 3 | 4 | 0.43 | 1.4 | 0.8 | 13 | 0.171 |
| **32206** | 36 | 36 | 52 | 56 | 58 | 2 | 4.3 | 0.37 | 1.6 | 0.88 | 15 | 0.356 |
| **32206-DZ** | 36 | 36 | 52 | 56 | 58 | 2 | 4.3 | 0.37 | 1.6 | 0.88 | 15 | 0.356 |
| **33206** | 37 | 34 | 51 | 58 | 60 | 2 | 5.5 | 0.34 | 1.8 | 0.97 | 16 | 0.343 |
| **32306** | 38 | 37 | 59 | 65 | 66 | 2 | 6 | 0.31 | 1.9 | 1.05 | 18 | 0.554 |
| **30306/HA** | 40 | 37 | 62 | 65 | 66 | 4 | 6 | 0.31 | 1.9 | 1.05 | 15 | 0.397 |
| **30306/HAP6X** | 40 | 37 | 62 | 65 | 66 | 4 | 6 | 0.31 | 1.9 | 1.05 | 15 | 0.397 |
| **31306** | 38 | 38 | 55 | 65 | 67 | 2 | 6.8 | 0.83 | 0.7 | 0.4 | 34 | 0.489 |
| **31306WB1** | 38 | 38 | 55 | 65 | 67 | 2 | 6.8 | 0.83 | 0.7 | 0.4 | 34 | 0.489 |





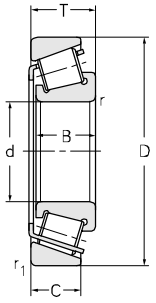


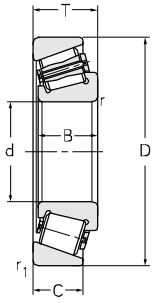


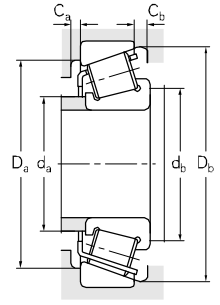

| Principal dimensions | | | | | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | T | B | C | $r_{radial}$ | $r_{axial}$ | $r_{1radial}$ | $r_{1axial}$ | $C_r$ | $C_{or}$ | Grease | Oil |
| mm | | | | | | | | | kN | | r/min | |
| **30** | 72 | 20.75 | 19 | 14 | 1.5 | 1.5 | 1.5 | 1.5 | 54.5 | 59.5 | 5600 | 7500 |
| | 72 | 24 | 23 | 16.5 | 1.5 | 1.5 | 1.5 | 1.5 | 59 | 61 | 5000 | 6700 |
| | 72 | 24 | 23 | 16.5 | 1.5 | 1.5 | 1.5 | 1.5 | 59 | 61 | 5000 | 6700 |
| **35** | 62 | 18 | 18 | 14 | 1 | 1 | 1 | 1 | 42 | 52 | 6000 | 8000 |
| | 62 | 18 | 18 | 14 | 3.3 | 3.3 | 1 | 1 | 48 | 57 | 6000 | 8000 |
| | 65 | 18 | 18 | 14 | 3.5 | 3.5 | 1.2 | 1.2 | 35 | 41 | 5000 | 7000 |
| | 65 | 18 | 18 | 14 | 3.5 | 3.5 | 1.5 | 1.5 | 38.5 | 42 | 5000 | 7000 |
| | 72 | 24.25 | 23 | 19 | 1.5 | 1.5 | 1.5 | 1.5 | 75 | 80 | 5300 | 7000 |
| | 72 | 24.25 | 23 | 19 | 1.5 | 1.5 | 1.5 | 1.5 | 75 | 80 | 5300 | 7000 |
| | 72 | 18.25 | 17 | 15 | 1.5 | 1.5 | 1.5 | 1.5 | 57.3 | 56 | 5300 | 7000 |
| | 72 | 18.25 | 17 | 15 | 1.5 | 1.5 | 1.5 | 1.5 | 57.3 | 56 | 5300 | 7000 |
| | 80 | 18.25 | 17 | 15 | 1.5 | 1.5 | 1.5 | 1.5 | 54.5 | 60 | 5600 | 7500 |
| | 80 | 22.75 | 21 | 15 | 2 | 2 | 1.5 | 1.5 | 70 | 76 | 4500 | 6000 |
| | 80 | 32.75 | 31 | 25 | 2 | 2 | 1.5 | 1.5 | 94.5 | 94 | 4800 | 6300 |
| | 80 | 32.75 | 31 | 25 | 0.3 | 0.3 | 1.5 | 1.5 | 95 | 110 | 4800 | 6300 |
| | 80 | 32.75 | 31 | 25 | 2 | 2 | 1.5 | 1.5 | 94.1 | 110 | 4800 | 6300 |
| | 80 | 32.75 | 31 | 25 | 2 | 2 | 1.5 | 1.5 | 95 | 110 | 4800 | 6300 |
| | 80 | 29.15 | 28.5 | 22 | 2 | 2 | 2 | 2 | 93 | 112 | 4800 | 6300 |
| | 89 | 38 | 38 | 27.5 | 1 | 1 | 1.5 | 1.5 | 111 | 148 | 4800 | 6300 |
| | 89 | 38 | 38 | 27.5 | 1 | 1 | 1.5 | 1.5 | 111 | 148 | 4800 | 6300 |
| **36.512** | 90 | 35.25 | 33 | 27 | 2 | 2 | 1.5 | 1.5 | 114 | 148 | 4800 | 6300 |
| **37** | 92 | 35.3 | 34 | 26 | 0.5 | 0.5 | 1.5 | 1.5 | 121 | 138 | 4600 | 5800 |
| **39.7** | 90 | 25.4 | 22 | 21 | 0.8 | 0.8 | 0.8 | 0.8 | 78.5 | 94.5 | 4500 | 5700 |
| **40** | 73 | 21 | 21 | 15.5 | 1 | 1 | 1 | 1 | 59 | 74.5 | 5300 | 7000 |
| | 75 | 19 | 19 | 14.5 | 1 | 1 | 1 | 1 | 55 | 76 | 5000 | 6700 |
| | 75 | 26 | 26 | 20.5 | 1.5 | 1.5 | 1.5 | 1.5 | 90 | 104 | 5000 | 6700 |

| Designations | Abutment and fillet dimensions | | | | | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $da_{max}$ | $db_{min}$ | $Da_{min}$ | $Da_{max}$ | $Db_{min}$ | $Ca_{min}$ | $Cb_{min}$ | e | Y | Y0 | a | |
| | mm | | | | | | | | | | | kg |
| **31306B/HAP5** | 41 | 38 | 59 | 65 | 68 | 2 | 6.8 | 0.55 | 1.1 | 0.6 | 18 | 0.370 |
| **31306X2A-1-SG** | 39 | 38 | 56 | 65 | 67 | 2 | 7.5 | 0.62 | 0.97 | 0.53 | 21 | 0.455 |
| **31306X2A/HAP5-1** | 39 | 38 | 56 | 65 | 67 | 2 | 7.5 | 0.62 | 1 | 0.53 | 21 | 0.455 |
| **32007** | 40 | 41 | 54 | 56 | 59 | 4 | 4 | 0.45 | 1.3 | 0.73 | 15 | 0.384 |
| **32007/YA6** | 40 | 41 | 54 | 56 | 59 | 4 | 4 | 0.45 | 1.3 | 0.73 | 15 | 0.222 |
| **30607** | 42 | 47 | 55 | 65 | 62 | 2 | 4 | 0.38 | 1.6 | 0.88 | 14 | 0.229 |
| **30607-1** | 39 | 36 | 52 | 58 | 58 | 2 | 4 | 0.33 | 1.8 | 0.99 | 13 | 0.251 |
| **32207** | 42 | 42 | 61 | 65 | 68 | 2 | 5.3 | 0.37 | 1.6 | 0.88 | 17 | 0.452 |
| **32207/YA8** | 42 | 42 | 61 | 65 | 68 | 2 | 5.3 | 0.37 | 1.6 | 0.88 | 17 | 0.465 |
| **30207** | 44 | 42 | 62 | 65 | 67 | 3 | 3.3 | 0.37 | 1.6 | 0.88 | 15 | 0.318 |
| **30207-DZ** | 44 | 42 | 62 | 65 | 67 | 3 | 3.3 | 0.37 | 1.6 | 0.88 | 15 | 0.318 |
| **30207X1** | 47 | 44 | 68 | 73 | 75 | 3 | 5.5 | 0.37 | 1.6 | 0.88 | 17 | 0.43 |
| **31307** | 45 | 44 | 62 | 71 | 76 | 3 | 7.5 | 0.83 | 0.7 | 0.4 | 25 | 0.515 |
| **32307** | 43 | 44 | 66 | 71 | 74 | 4 | 8.5 | 0.31 | 1.9 | 1.05 | 20 | 0.755 |
| **32307A/HAP5** | 45 | 36 | 61 | 73 | 75 | 3 | 7.8 | 0.47 | 1.3 | 0.7 | 23 | 0.768 |
| **32307B** | 45 | 36 | 61 | 73 | 75 | 3 | 7.8 | 0.55 | 1.1 | 0.6 | 25 | 0.789 |
| **32307/HAP6X** | 43 | 44 | 66 | 71 | 74 | 4 | 8.5 | 0.31 | 1.9 | 1.05 | 20 | 0.755 |
| **32307X2A/YAB** | 43 | 44 | 66 | 71 | 74 | 4 | 8.5 | 0.55 | 1.1 | 0.6 | 23 | 0.697 |
| **32307X3A/HAP5** | 47 | 39 | 64 | 82 | 85 | 3 | 11 | 0.62 | 1 | 0.53 | 29 | 1.22 |
| **32307X3A-SG** | 47 | 39 | 64 | 82 | 85 | 3 | 11 | 0.62 | 1 | 0.53 | 29 | 1.22 |
| **323/36X4/YB2** | 48 | 42 | 64 | 84 | 65 | 3 | 8.3 | 0.55 | 1.1 | 0.6 | 28 | 1.18 |
| **306/37** | 48 | 40 | 69 | 87 | 86 | 4 | 9.3 | 0.55 | 1.1 | 0.6 | 27 | 1.19 |
| **306/39X4** | 58 | 43 | 74 | 85 | 85 | 2 | 4.4 | 0.4 | 1.49 | 0.82 | 23 | 0.769 |
| **32008X3** | 47 | 50 | 59 | 64 | 67 | 2 | 3 | 0.43 | 1.4 | 0.76 | 26 | 0.362 |
| **32008R-DZ** | 47 | 50 | 59 | 64 | 67 | 2 | 3 | 0.38 | 1.58 | 0.87 | 15 | 0.299 |
| **33108** | 65 | 47 | 65 | 68 | 71 | 4 | 5.5 | 0.35 | 1.7 | 0.9 | 18 | 0.499 |

d 40~50 mm



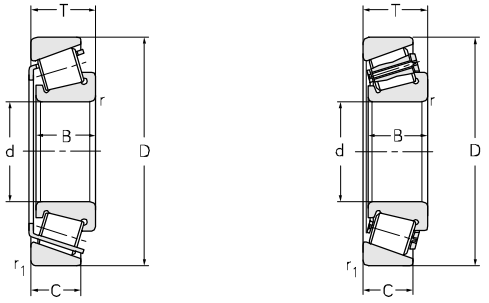




| Principal dimensions | | | | | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | T | B | C | $r_{radial}$ | $r_{axial}$ | $r_{1radial}$ | $r_{1axial}$ | $C_r$ | $C_{or}$ | Grease | Oil |
| mm | | | | | | | | | kN | | r/min | |
| **40** | 80 | 30 | 29 | 23 | 2 | 2 | 2 | 2 | 103 | 120 | 4300 | 5600 |
| | 80 | 19.75 | 18 | 16 | 1.5 | 1.5 | 1.5 | 1.5 | 70 | 73 | 4800 | 6300 |
| | 90 | 25.25 | 23 | 17 | 2 | 2 | 1.5 | 1.5 | 71.5 | 77 | 4000 | 5300 |
| | 80 | 24.75 | 23 | 19 | 1.5 | 1.5 | 1.5 | 1.5 | 83.5 | 93 | 4800 | 6300 |
| | 80 | 24.75 | 23 | 19 | 3 | 3 | 1.5 | 1.5 | 83.5 | 94 | 4800 | 6300 |
| | 90 | 35.25 | 33 | 27 | 2 | 2 | 1.5 | 1.5 | 117 | 140 | 4000 | 5300 |
| | 90 | 35.25 | 33 | 27 | 2 | 2 | 1.5 | 1.5 | 114 | 148 | 4000 | 5300 |
| | 90 | 35.25 | 33 | 27 | 1.8 | 1.8 | 1.8 | 1.8 | 102 | 119 | 4000 | 5300 |
| **42** | 76 | 24 | 27.5 | 19.8 | 2 | 2 | 0.6 | 0.6 | 77.5 | 104 | 5000 | 6300 |
| | 76 | 23.8 | 27.5 | 19.8 | 0.7 | 0.7 | 0.1 | 0.1 | 77.5 | 104 | 5000 | 6300 |
| **45** | 75 | 20 | 20 | 15.5 | 1 | 1 | 1 | 1 | 66.4 | 80 | 4800 | 6300 |
| | 75 | 20 | 20 | 15.5 | 1 | 1 | 1 | 1 | 66.4 | 80 | 4800 | 6300 |
| | 75 | 20 | 20 | 15.5 | 1 | 1 | 1 | 1 | 66.4 | 80 | 4800 | 6300 |
| | 75 | 24 | 24 | 19 | 1 | 1 | 1 | 1 | 75.4 | 104 | 4800 | 6300 |
| | 80 | 26 | 26 | 20.5 | 1.5 | 1.5 | 1.5 | 1.5 | 95.3 | 118 | 4500 | 6000 |
| | 85 | 20.75 | 19 | 16 | 1.5 | 1.5 | 1.5 | 1.5 | 80.3 | 83 | 4500 | 6000 |
| | 85 | 24.75 | 23 | 19 | 1.5 | 1.5 | 1.5 | 1.5 | 90.3 | 105 | 4500 | 6000 |
| | 85 | 24.75 | 23.5 | 20 | 1.5 | 1.5 | 1.5 | 1.5 | 90.3 | 105 | 4500 | 6000 |
| | 100 | 27.25 | 25 | 22 | 2 | 2 | 1.5 | 1.5 | 123 | 120 | 4000 | 5300 |
| | 100 | 32 | 29 | 20.5 | 2 | 2 | 1.5 | 1.5 | 99 | 107 | 4000 | 5300 |
| | 100 | 27.25 | 25 | 18 | 2 | 2 | 1.5 | 1.5 | 105 | 102 | 3600 | 4800 |
| | 100 | 32 | 29 | 20.5 | 2 | 2 | 1.5 | 1.5 | 148 | 163 | 3400 | 4500 |
| | 100 | 38.25 | 36 | 30 | 2 | 2 | 1.5 | 1.5 | 153 | 174 | 3600 | 4800 |
| | 100 | 31.8 | 29 | 20.5 | 2 | 2 | 1.5 | 1.5 | 98 | 108 | 3600 | 4800 |
| **47** | 100 | 42.5 | 43 | 37 | 1.8 | 1.8 | 1.8 | 1.8 | 137 | 190 | 4000 | 5100 |
| **50** | 80 | 20 | 20 | 15.5 | 1 | 1 | 1 | 1 | 67.8 | 88 | 4500 | 6000 |
| | 80 | 20 | 20 | 15.5 | 1 | 1 | 1 | 1 | 67.8 | 88 | 4500 | 6000 |
| | 80 | 22 | 20 | 17.5 | 4 | 4 | 1.5 | 1.5 | 60 | 86 | 4500 | 6000 |
| | 80 | 24 | 24 | 19 | 1 | 1 | 1 | 1 | 77 | 111 | 4500 | 6000 |

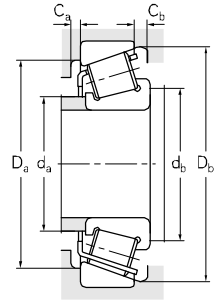
| Designations | Abutment and fillet dimensions | | | | | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $da_{max}$ | $db_{min}$ | $Da_{min}$ | $Da_{max}$ | $Db_{min}$ | $Ca_{min}$ | $Cb_{min}$ | e | Y | Y0 | a | |
| | mm | | | | | | | | | | | kg |
| **33208X2A** | 49 | 49 | 65 | 72 | 77 | 3 | 7 | 0.43 | 1.4 | 0.77 | 21 | 0.669 |
| **30208** | 49 | 47 | 69 | 73 | 75 | 3 | 3.8 | 0.37 | 1.6 | 0.88 | 17 | 0.43 |
| **31308** | 48 | 49 | 71 | 81 | 87 | 4 | 9.5 | 0.83 | 0.7 | 0.4 | 29 | 0.731 |
| **32208** | 48 | 47 | 68 | 73 | 76 | 3 | 5.8 | 0.37 | 1.6 | 0.88 | 18 | 0.561 |
| **32208/YA6** | 48 | 47 | 68 | 73 | 76 | 3 | 5.8 | | | | | 0.561 |
| **32308** | 49 | 49 | 73 | 81 | 83 | 4 | 8.5 | 0.35 | 1.7 | 0.96 | 22 | 1.080 |
| **32308B** | 50 | 49 | 67 | 83 | 85 | 3 | 8.3 | 0.55 | 1.1 | 0.6 | 27 | 1.06 |
| **32308/YA8** | 49 | 49 | 73 | 81 | 83 | 4 | 8.5 | 0.35 | 1.7 | 0.96 | 22 | 1.020 |
| **306/42** | 48 | 48 | 65 | 73 | 73 | 2 | 4 | 0.28 | 2.16 | 1.19 | 16 | 0.479 |
| **306/42/P6XYB2** | 48 | 48 | 65 | 73 | 73 | 2 | 4 | 0.28 | 2.16 | 1.19 | 16 | 0.479 |
| **32009** | 52 | 49 | 65 | 71 | 73 | 3 | 6 | 0.39 | 1.5 | 0.84 | 17 | 0.343 |
| **32009/HA** | 52 | 49 | 65 | 71 | 73 | 3 | 6 | 0.39 | 1.5 | 0.84 | 17 | 0.343 |
| **32009/P6X** | 52 | 49 | 65 | 71 | 73 | 3 | 6 | 0.39 | 1.5 | 0.84 | 17 | 0.343 |
| **33009** | 50 | 48 | 66 | 72 | 72 | 3 | 5 | 0.29 | 2.04 | 1.12 | 16 | 0.414 |
| **33109R** | 52 | 52 | 69 | 73 | 77 | 4 | 5.5 | 0.37 | 1.6 | 0.9 | 19 | 0.538 |
| **30209** | 53 | 52 | 74 | 78 | 80 | 3 | 5 | 0.4 | 1.5 | 0.81 | 18 | 0.464 |
| **32209** | 53 | 52 | 73 | 78 | 81 | 3 | 5.8 | 0.4 | 1.5 | 0.81 | 20 | 0.576 |
| **32209X2A** | 53 | 53 | 69 | 78 | 78 | 3 | 4.8 | 0.4 | 1.5 | 0.83 | 19 | 0.621 |
| **30309** | 59 | 54 | 86 | 91 | 94 | 4 | 8.5 | 0.35 | 1.7 | 0.96 | 21 | 0.987 |
| **30309X2B** | 56 | 54 | 77 | 93 | 95 | 4 | 12 | 0.72 | 0.8 | 0.46 | 30 | 1.08 |
| **31309** | 54 | 54 | 79 | 91 | 96 | 4 | 9.5 | 0.83 | 0.7 | 0.4 | 32 | 0.977 |
| **31309X2** | 55 | 54 | 75 | 93 | 95 | 3 | 12 | 0.81 | 0.7 | 0.41 | 33 | 1.16 |
| **32309** | 56 | 54 | 82 | 91 | 93 | 4 | 8.5 | 0.35 | 1.7 | 0.96 | 25 | 1.44 |
| **32309X2A** | 56 | 54 | 77 | 93 | 95 | 4 | 11 | 0.72 | 0.8 | 0.46 | 30 | 1.14 |
| **306/47** | 55 | 54 | 80 | 93 | 94 | 3 | 5.5 | 0.31 | 1.94 | 1.07 | 27 | 1.66 |
| **32010** | 57 | 54 | 70 | 76 | 78 | 4 | 4.5 | 0.42 | 1.4 | 0.78 | 18 | 0.381 |
| **32010-AAM/P6** | 57 | 54 | 70 | 76 | 78 | 4 | 4.5 | 0.42 | 1.4 | 0.78 | 18 | 0.386 |
| **32010X2A/HAP5-1** | 57 | 64 | 70 | 73 | 78 | 4 | 4.5 | 0.42 | 1.4 | 0.78 | 19 | 0.388 |
| **33010** | 55 | 58 | 70 | 77 | 76 | 4 | 4.5 | 0.32 | 1.9 | 1.04 | 17 | 0.442 |

d 50~55 mm



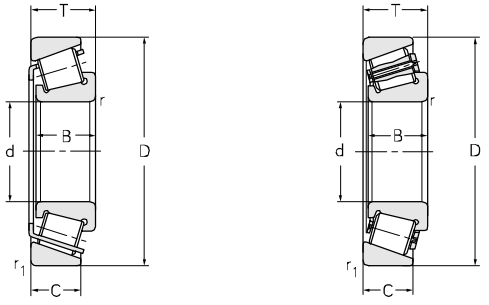






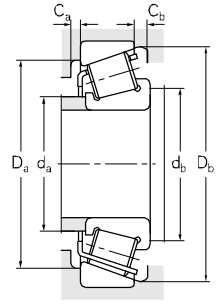

| Principal dimensions | | | | | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | T | B | C | $r_{radial}$ | $r_{axial}$ | $r_{1radial}$ | $r_{1axial}$ | $C_r$ | $C_{or}$ | Grease | Oil |
| mm | | | | | | | | | kN | | r/min | |
| **50** | 82 | 21.5 | 21.5 | 17 | 3 | 3 | 0.5 | 0.5 | 81.6 | 100 | 3200 | 4300 |
| | 83 | 20.5 | 20.5 | 15.5 | 4 | 4 | 1 | 1 | 66 | 91 | 4500 | 6000 |
| | 83 | 20.5 | 20.5 | 15.5 | 4 | 4 | 1 | 1 | 66 | 91 | 4500 | 6000 |
| | 85 | 26 | 26 | 20 | 1.5 | 1.5 | 1.5 | 1.5 | 98.7 | 122 | 4400 | 5500 |
| | 90 | 32 | 32 | 24.5 | 1.5 | 1.5 | 1.5 | 1.5 | 119 | 160 | 3800 | 5000 |
| | 90 | 21.75 | 20 | 17 | 1.5 | 1.5 | 1.5 | 1.5 | 84.9 | 91.5 | 4300 | 5600 |
| | 90 | 23.75 | 20 | 19 | 1.5 | 1.5 | 1.5 | 1.5 | 79.5 | 96.5 | 4200 | 5500 |
| | 90 | 24.75 | 23 | 19 | 1.5 | 1.5 | 1.5 | 1.5 | 94 | 100 | 4300 | 5600 |
| | 90 | 25 | 23 | 19 | 1.3 | 1.3 | 1.3 | 1.3 | 62 | 77 | 4300 | 5600 |
| | 110 | 29.25 | 27 | 23 | 2.5 | 2.5 | 2 | 2 | 141 | 140 | 3600 | 4800 |
| | 110 | 29.25 | 27 | 23 | 2.5 | 2.5 | 2.5 | 2.5 | 141 | 140 | 3600 | 4800 |
| | 110 | 29.25 | 27 | 19 | 2.5 | 2.5 | 2 | 2 | 110 | 124 | 3200 | 4300 |
| | 110 | 42.25 | 40 | 33 | 2.5 | 2.5 | 2 | 2 | 173 | 214 | 3600 | 4800 |
| | 110 | 42.25 | 40 | 33 | 2.3 | 2.3 | 2.3 | 2.3 | 173 | 214 | 3600 | 4800 |
| **50.8** | 100 | 35 | 35 | 29 | 2 | 2 | 2 | 2 | 119 | 171 | 3900 | 4900 |
| **55** | 90 | 27 | 27 | 21 | 1.5 | 1.5 | 1.5 | 1.5 | 108 | 147 | 4000 | 5300 |
| | 90 | 23 | 23 | 17.5 | 1.5 | 1.5 | 1.5 | 1.5 | 92.4 | 116 | 4000 | 5300 |
| | 95 | 30 | 30 | 23 | 2 | 2.5 | 2 | 2.5 | 110 | 163 | 4000 | 5300 |
| | 95 | 30 | 30 | 23 | 1.5 | 1.5 | 1.5 | 1.5 | 100 | 163 | 3800 | 5000 |
| | 100 | 26.75 | 25 | 21 | 2 | 2 | 1.5 | 1.5 | 108 | 133 | 3800 | 5000 |
| | 100 | 26.75 | 25 | 21 | 2 | 2 | 1.5 | 1.5 | 98 | 133 | 3800 | 5000 |
| | 100 | 35 | 35 | 27 | 2 | 2 | 1.5 | 1.5 | 136 | 190 | 3400 | 4500 |
| | 100 | 35 | 35 | 27 | 2 | 2 | 1.5 | 1.5 | 136 | 190 | 3400 | 4500 |
| | 100 | 32 | 31 | 24.5 | 2 | 2 | 2 | 2 | 142 | 174 | 3400 | 4500 |
| | 100 | 22.75 | 21 | 18 | 2 | 2 | 1.5 | 1.5 | 102.8 | 106 | 3800 | 5000 |
| | 100 | 22.75 | 21 | 18 | 2 | 2 | 1.5 | 1.5 | 102.8 | 106 | 4000 | 5300 |
| | 100 | 26.75 | 25 | 21 | 6 | 6 | 1.5 | 1.5 | 108 | 133 | 3800 | 5000 |
| | 120 | 31.5 | 29 | 25 | 2.5 | 2.5 | 2 | 2 | 165 | 163 | 3200 | 4300 |
| | 120 | 31.5 | 29 | 25 | 2.5 | 2.5 | 2 | 2 | 165 | 163 | 3200 | 4300 |

| Designations | Abutment and fillet dimensions | | | | | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $da_{max}$ | $db_{min}$ | $Da_{min}$ | $Da_{max}$ | $Db_{min}$ | $Ca_{min}$ | $Cb_{min}$ | e | Y | Y0 | a | |
| | mm | | | | | | | | | | | kg |
| **30610** | 57 | 62 | 72 | 82 | 79 | 3 | 4.5 | 0.31 | 2 | 1.08 | 16 | 0.331 |
| **32010X3A/HAP5** | 57 | 64 | 73 | 79 | 80 | 4 | 5 | 0.36 | 1.7 | 0.92 | 17 | 0.430 |
| **32010X3A-SG** | 57 | 64 | 73 | 79 | 80 | 4 | 5 | 0.36 | 1.7 | 0.92 | 17 | 0.43 |
| **33110** | 56 | 55 | 72 | 80 | 82 | 4 | 6 | 0.41 | 1.46 | 0.8 | 20 | 0.581 |
| **33210** | 57 | 58 | 75 | 83 | 88 | 3 | 7.5 | 0.41 | 1.5 | 0.8 | 23 | 1.17 |
| **30210** | 58 | 57 | 79 | 83 | 86 | 3 | 5 | 0.42 | 1.4 | 0.79 | 20 | 0.55 |
| **30210X2-HQ** | 57 | 57 | 78 | 83 | 86 | 3 | 5.8 | 0.42 | 1.4 | 0.79 | 21 | 0.576 |
| **32210** | 58 | 57 | 78 | 83 | 85 | 3 | 5.5 | 0.43 | 1.4 | 0.8 | 21 | 0.640 |
| **32210A** | 60 | 59 | 76 | 90 | 86 | 3 | 6 | 0.42 | 1.4 | 0.78 | 21 | 0.612 |
| **30310-1** | 65 | 60 | 95 | 100 | 103 | 4 | 6 | 0.35 | 1.74 | 0.96 | 23 | 1.26 |
| **30310** | 65 | 60 | 95 | 100 | 103 | 4 | 6 | 0.35 | 1.7 | 0.96 | 23 | 1.26 |
| **31310** | 63 | 10 | 86 | 102 | 104 | 3 | 10 | 0.83 | 0.7 | 0.4 | 35 | 1.25 |
| **32310** | 61 | 60 | 90 | 100 | 102 | 5 | 9.5 | 0.35 | 1.7 | 0.96 | 27 | 1.26 |
| **32310/YA6** | 64 | 51 | 89 | 110 | 103 | 4 | 9.3 | 0.35 | 1.7 | 0.96 | 27 | 1.97 |
| **306/50.8** | 61 | 57 | 84 | 94 | 95 | 4 | 6 | 0.3 | 2 | 1.1 | 23 | 1.27 |
| **33011** | 62 | 65 | 78 | 83 | 87 | 4.5 | 5.5 | 0.31 | 1.92 | 1.06 | 19 | 0.839 |
| **32011** | 64 | 63 | 79 | 83 | 88 | 4.5 | 5.5 | 0.41 | 1.5 | 0.81 | 20 | 0.564 |
| **33111** | 64 | 63 | 81 | 88 | 92 | 3 | 7 | 0.37 | 1.6 | 0.88 | 22 | 0.881 |
| **33111/HA** | 64 | 63 | 81 | 88 | 92 | 3 | 7 | 0.37 | 1.6 | 0.88 | 22 | 0.881 |
| **32211** | 62 | 64 | 87 | 91 | 95 | 4 | 5.7 | 0.4 | 1.5 | 0.81 | 22 | 0.878 |
| **32211/HAP6X** | 62 | 64 | 87 | 91 | 95 | 4 | 5.7 | 0.4 | 1.5 | 0.81 | 22 | 0.878 |
| **33211** | 63 | 64 | 85 | 93 | 96 | 6 | 8 | 0.4 | 1.5 | 0.8 | 25 | 1.17 |
| **33211/HAP6X** | 63 | 64 | 85 | 93 | 96 | 6 | 8 | 0.4 | 1.5 | 0.8 | 25 | 1.17 |
| **33211X2A** | 64 | 64 | 85 | 92 | 97 | 4.5 | 7.5 | 0.4 | 1.5 | 0.81 | 24 | 1.01 |
| **30211** | 64 | 64 | 88 | 91 | 95 | 4 | 5 | 0.4 | 1.5 | 0.81 | 21 | 0.713 |
| **30211/YA** | 65 | 64 | 87 | 93 | 95 | 3 | 4.8 | 0.4 | 1.5 | 0.81 | 21 | 0.689 |
| **32211/YA6** | 65 | 74 | 85 | 93 | 95 | 3 | 5.8 | 0.4 | 1.5 | 0.81 | 22 | 0.875 |
| **30311** | 70 | 65 | 104 | 110 | 112 | 4 | 6.5 | 0.35 | 1.7 | 0.96 | 25 | 1.65 |
| **30311R** | 70 | 65 | 104 | 110 | 112 | 4 | 6.5 | 0.35 | 1.7 | 0.96 | 25 | 1.71 |





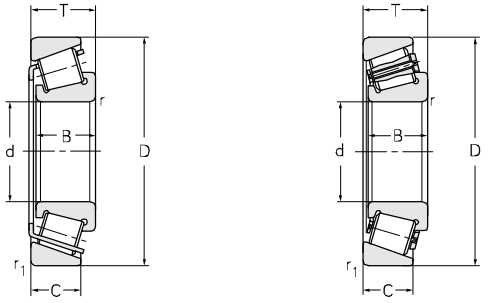





| Principal dimensions | | | | | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | T | B | C | $r_{radial}$ | $r_{axial}$ | $r_{1radial}$ | $r_{1axial}$ | $C_r$ | $C_{or}$ | Grease | Oil |
| mm | | | | | | | | | kN | | r/min | |
| **55** | 120 | 31.5 | 29 | 21 | 2.5 | 2.5 | 2 | 2 | 155 | 166 | 2800 | 3800 |
| | 120 | 31.5 | 29 | 21 | 2.5 | 2.5 | 2 | 2 | 141 | 166 | 2800 | 3800 |
| | 120 | 31.5 | 29 | 21 | 2.5 | 2.5 | 2 | 2 | 135 | 139 | 2800 | 3800 |
| | 120 | 31.5 | 29 | 21 | 2.5 | 2.5 | 2 | 2 | 138 | 162 | 2800 | 3800 |
| | 120 | 45.5 | 43 | 35 | 2.5 | 2.5 | 2 | 2 | 248 | 280 | 3000 | 4000 |
| | 120 | 45.5 | 43 | 35 | 2.5 | 2.5 | 2 | 2 | 240 | 283 | 3000 | 4000 |
| | 120 | 45.5 | 44 | 35 | 2.5 | 2.5 | 2 | 2 | 252 | 286 | 3000 | 4000 |
| | 120 | 45.5 | 43 | 35 | 7 | 7 | 2 | 2 | 248 | 280 | 3000 | 4000 |
| | 120 | 31.5 | 29 | 25 | 2.5 | 2.5 | 2 | 2 | 165 | 163 | 3200 | 4300 |
| | 125 | 37 | 36 | 25 | 3 | 3 | 2 | 2 | 148 | 172 | 2800 | 3800 |
| | 130 | 36.25 | 33 | 22 | 3 | 3 | 2 | 2 | 165 | 175 | 3200 | 4000 |
| **60** | 85 | 17 | 17 | 14 | 1 | 1 | 1 | 1 | 40 | 65 | 3900 | 5100 |
| | 85 | 17 | 17 | 14 | 1 | 1 | 1 | 1 | 40 | 65 | 3900 | 5100 |
| | 85 | 17 | 16 | 14 | 1 | 1 | 1 | 1 | 42.5 | 67.5 | 3900 | 5100 |
| | 95 | 27 | 27 | 21 | 1.5 | 1.5 | 1.5 | 1.5 | 104 | 143 | 3800 | 5000 |
| | 95 | 23 | 23 | 17.5 | 2 | 2.5 | 2 | 2.5 | 93.5 | 122 | 3800 | 5000 |
| | 95 | 27 | 27 | 21 | 1.5 | 1.5 | 1.5 | 1.5 | 104 | 143 | 3800 | 5000 |
| | 110 | 23.75 | 22 | 19 | 2 | 2 | 1.5 | 1.5 | 111 | 114 | 3400 | 4500 |
| | 110 | 29.75 | 28 | 24 | 2 | 2 | 1.5 | 1.5 | 133 | 170 | 3400 | 4500 |
| | 110 | 29.75 | 28 | 24 | 2 | 2 | 1.5 | 1.5 | 133 | 170 | 3400 | 4500 |
| | 110 | 29.75 | 28 | 24 | 2.5 | 2.5 | 2.5 | 2.5 | 133 | 170 | 3400 | 4500 |
| | 110 | 38 | 38 | 29 | 2 | 2 | 1.5 | 1.5 | 168 | 235 | 3000 | 4000 |
| | 115 | 40 | 39 | 33 | 4 | 4 | 3 | 3 | 193 | 204 | 3200 | 4300 |
| | 130 | 33.5 | 31 | 26 | 3 | 3 | 2.5 | 2.5 | 163 | 185 | 3000 | 4000 |
| | 130 | 48.5 | 46 | 37 | 3 | 3 | 2.5 | 2.5 | 229 | 289 | 2600 | 3600 |
| | 130 | 33.5 | 31 | 22 | 3 | 3 | 2.5 | 2.5 | 138 | 155 | 2600 | 3600 |
| | 140 | 42 | 41 | 28 | 3 | 3 | 2.5 | 2.5 | 187 | 225 | 2600 | 3600 |
| | 150 | 51 | 51 | 38 | 4 | 4 | 3 | 3 | 260 | 370 | 2800 | 3500 |
| **65** | 100 | 23 | 23 | 17.5 | 1.5 | 1.5 | 1.5 | 1.5 | 94.8 | 127 | 3400 | 4500 |
| | 100 | 23 | 23 | 17.5 | 1.5 | 1.5 | 1.5 | 1.5 | 94.8 | 127 | 3400 | 4500 |

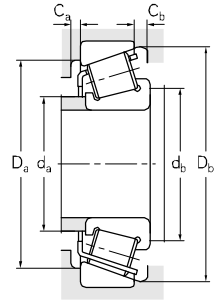
| Designations | Abutment and fillet dimensions | | | | | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $da_{max}$ | $db_{min}$ | $Da_{min}$ | $Da_{max}$ | $Db_{min}$ | $Ca_{min}$ | $Cb_{min}$ | e | Y | Y0 | a | |
| | mm | | | | | | | | | | | kg |
| **31311** | 68 | 65 | 92 | 112 | 112 | 3 | 11 | 0.83 | 0.7 | 0.4 | 38 | 1.78 |
| **31311-SG** | | 65 | 92 | 112 | 112 | 3 | 11 | 0.83 | 0.7 | 0.4 | 38 | 1.78 |
| **31311/YA8** | 68 | 65 | 92 | 112 | 112 | 3 | 11 | 0.83 | 0.7 | 0.4 | 38 | 1.71 |
| **31311/YB4** | 68 | 65 | 92 | 112 | 112 | 3 | 11 | 0.83 | 0.7 | 0.4 | 38 | 1.71 |
| | 68 | | | | | | | | | | | |
| **32311** | | 65 | 99 | 110 | 111 | 5 | 11 | 0.35 | 1.7 | 0.96 | 29 | 2.43 |
| **32311A** | 66 | 65 | 99 | 110 | 111 | 5 | 11 | 0.55 | 1.1 | 0.6 | 230 | 2.51 |
| **32311X2A1** | 66 | 65 | 99 | 112 | 111 | 5 | 10.5 | 0.35 | 1.7 | 0.9 | 29 | 2.43 |
| **32311/YA6** | 68 | 65 | 99 | 110 | 111 | 5 | 11 | 0.35 | 1.7 | 0.96 | 29 | 2.43 |
| **30311X3R** | 66 | 65 | 104 | 110 | 112 | 4 | 6.5 | 0.35 | 1.7 | 0.96 | 25 | 1.84 |
| **30611B** | 70 | 67 | 95 | 117 | 117 | 3 | 12 | 0.73 | 0.8 | 0.45 | 38 | 2.1 |
| **30611** | 69 | 67 | 95 | 117 | 117 | 3 | 12 | 0.83 | 0.73 | 0.4 | 41 | 2.16 |
| | 69 | | | | | | | | | | | |
| **32912** | 65 | 68 | 76 | 81 | 79 | 4 | 3 | 0.38 | 1.6 | 0.87 | 17 | 0.284 |
| **32912/P6-GKN** | 65 | 68 | 76 | 81 | 79 | 4 | 3 | 0.38 | 1.6 | 0.87 | 17 | 0.285 |
| **32912X2A** | 65 | 68 | 76 | 81 | 79 | 4 | 3 | 0.38 | 1.6 | 0.87 | 17 | 0.277 |
| **33012** | 67 | 67 | 85 | 88 | 90 | 5 | 6 | 0.33 | 1.8 | 1 | 20 | 0.688 |
| **32012** | 68 | 68 | 83 | 88 | 92 | 5 | 5.5 | 0.4 | 1.4 | 0.77 | 21 | 0.597 |
| **33012-RS** | 67 | 67 | 85 | 88 | 90 | 5 | 6 | 0.33 | 1.8 | 1 | 20 | 0.727 |
| **30212** | 69 | 69 | 96 | 101 | 103 | 4 | 5 | 0.4 | 1.5 | 0.81 | 23 | 0.923 |
| **32212** | 69 | 68 | 95 | 101 | 104 | 4 | 5.8 | 0.4 | 1.5 | 0.81 | 25 | 1.26 |
| **32212/HAP6X** | 69 | 68 | 95 | 101 | 104 | 4 | 5.8 | 0.4 | 1.5 | 0.81 | 25 | 1.26 |
| **32212X3R/YA6** | 69 | 68 | 95 | 101 | 104 | 4 | 5.8 | 0.4 | 1.48 | 0.81 | 25 | 1.33 |
| **33212** | 69 | 68 | 93 | 103 | 105 | 6 | 9 | 0.4 | 1.5 | 0.8 | 27 | 1.51 |
| **33212X3** | 70 | 71 | 98 | 104 | 109 | 6 | 7 | 0.33 | 1.8 | 1 | 28 | 1.81 |
| **30312** | 76 | 72 | 112 | 118 | 121 | 3.5 | 7.5 | 0.35 | 1.7 | 0.96 | 26 | 1.96 |
| **32312** | 72 | 72 | 107 | 118 | 122 | 6 | 12 | 0.35 | 1.7 | 0.96 | 31 | 2.90 |
| **31312** | 69 | 72 | 103 | 118 | 124 | 5 | 12 | 0.83 | 0.7 | 0.4 | 41 | 1.92 |
| **31312X3** | 78 | 72 | 106 | 131 | 130 | 5 | 14 | 0.73 | 0.8 | 0.45 | 42 | 3.42 |
| **30612** | 77 | 71 | 105 | 140 | 142 | 5 | 13 | 0.76 | 0.79 | 0.43 | 49 | 4.76 |
| **32013** | 72 | 72 | 90 | 93 | 97 | 4 | 5.5 | 0.46 | 1.3 | 0.7 | 22 | 0.612 |
| **32013/P6X** | 72 | 72 | 90 | 93 | 97 | 4 | 5.5 | 0.46 | 1.3 | 0.7 | 22 | 0.612 |

d 65 mm



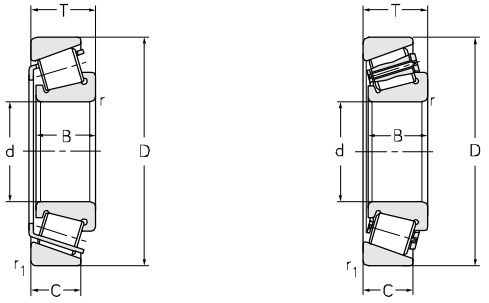






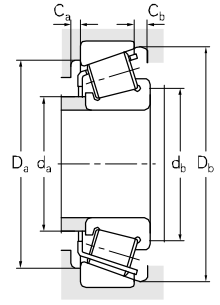

| Principal dimensions | | | | | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | T | B | C | $r_{radial}$ | $r_{axial}$ | $r_{1radial}$ | $r_{1axial}$ | $C_r$ | $C_{or}$ | Grease | Oil |
| mm | | | | | | | | | kN | | r/min | |
| **65** | 100 | 23.3 | 22 | 19 | 1.5 | 1.5 | 1.5 | 1.5 | 81 | 116 | 3400 | 4500 |
| | 100 | 23.3 | 22 | 19 | 1.5 | 1.5 | 1.5 | 1.5 | 73.5 | 116 | 3400 | 4500 |
| | 100 | 27 | 27 | 21 | 1.5 | 1.5 | 1.5 | 1.5 | 108 | 158 | 3400 | 4500 |
| | 110 | 34 | 34 | 26.5 | 1.5 | 1.5 | 1.5 | 1.5 | 157 | 220 | 3200 | 4300 |
| | 110 | 30.5 | 30 | 24 | 3 | 4 | 1.8 | 1.8 | 79 | 166 | 3200 | 4300 |
| | 110 | 34 | 34 | 26.5 | 1.5 | 1.5 | 1.5 | 1.5 | 157 | 220 | 3200 | 4300 |
| | 120 | 41 | 41 | 32 | 2 | 2 | 1.5 | 1.5 | 222 | 282 | 2800 | 3800 |
| | 120 | 41 | 41 | 32 | 2 | 2 | 1.5 | 1.5 | 191 | 270 | 2800 | 3800 |
| | 120 | 41 | 41 | 32 | 2 | 2 | 1.5 | 1.5 | 191 | 270 | 2800 | 3800 |
| | 120 | 32.75 | 31 | 27 | 2 | 2 | 1.5 | 1.5 | 151 | 192 | 3000 | 4000 |
| | 120 | 33 | 31 | 27 | 1.8 | 1.8 | 1.8 | 1.8 | 130 | 163 | 3000 | 4000 |
| | 120 | 24.75 | 23 | 20 | 2 | 2 | 1.5 | 1.5 | 131 | 134 | 3000 | 4000 |
| | 130 | 45 | 43 | 35 | 7 | 7 | 2 | 2 | 223 | 298 | 2800 | 3800 |
| | 130 | 51 | 48 | 39 | 2.5 | 2.5 | 2.5 | 2.5 | 235 | 320 | 2400 | 3400 |
| | 130 | 51 | 48 | 39 | 3 | 3 | 2.5 | 2.5 | 245 | 335 | 2400 | 3400 |
| | 140 | 51 | 48 | 39 | 6 | 6 | 3.5 | 3.5 | 264 | 335 | 2200 | 3200 |
| | 140 | 36 | 33 | 28 | 3 | 3 | 2.5 | 2.5 | 192 | 228 | 2600 | 3600 |
| | 140 | 40 | 37 | 30 | 3 | 3 | 2.5 | 2.5 | 192 | 255 | 2600 | 3600 |
| | 140 | 40 | 39 | 26 | 3 | 3 | 5 | 5 | 202 | 237 | 2600 | 3600 |
| | 140 | 36 | 33 | 28 | 3 | 3 | 6 | 6 | 192 | 228 | 2600 | 3600 |
| | 140 | 36 | 33 | 28 | 6 | 6 | 2.5 | 2.5 | 192 | 228 | 2600 | 3600 |
| | 140 | 36 | 33 | 28 | 6 | 6 | 2.5 | 2.5 | 192 | 228 | 2600 | 3600 |
| | 140 | 36 | 33 | 23 | 3 | 3 | 2.5 | 2.5 | 171 | 198 | 2800 | 3800 |
| | 140 | 36 | 33 | 23 | 3 | 3 | 2.5 | 2.5 | 190 | 193 | 2600 | 3600 |
| | 140 | 36 | 33 | 23 | 3.8 | 5 | 2.5 | 2.5 | 191 | 194 | 2800 | 3800 |
| | 140 | 36 | 33 | 23 | 3 | 3 | 2.5 | 2.5 | 192 | 195 | 2200 | 3200 |
| | 140 | 51 | 48 | 39 | 3 | 3 | 2.5 | 2.5 | 264 | 335 | 2400 | 3400 |
| | 140 | 51 | 48 | 39 | 3 | 3 | 2.5 | 2.5 | 253 | 350 | 2400 | 3400 |
| | 140 | 36 | 33 | 23 | 3 | 3 | 2.5 | 2.5 | 193 | 196 | 2200 | 3200 |

| Designations | Abutment and fillet dimensions | | | | | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $da_{max}$ | $db_{min}$ | $Da_{min}$ | $Da_{max}$ | $Db_{min}$ | $Ca_{min}$ | $Cb_{min}$ | e | Y | Y0 | a | |
| | mm | | | | | | | | | | | kg |
| **32013X2** | 72 | 72 | 90 | 93 | 97 | 4 | 5.5 | 0.35 | 1.7 | 0.94 | 20 | 0.629 |
| **32013X2A** | 72 | 72 | 90 | 93 | 97 | 4 | 5.5 | 0.35 | 1.7 | 0.94 | 20 | 0.629 |
| **33013** | 72 | 73 | 87 | 93 | 97 | 3.5 | 6 | 0.3 | 1.7 | 0.95 | 21 | 0.732 |
| **33113** | 76 | 73 | 94 | 103 | 107 | 3.5 | 7.5 | 0.39 | 1.6 | 0.85 | 26 | 1.30 |
| **33113X2** | 75 | 77 | 93 | 110 | 105 | 3.5 | 6.2 | 0.39 | 1.6 | 0.85 | 25 | 1.17 |
| **33113/YB2** | 76 | 73 | 94 | 103 | 107 | 3.5 | 7.5 | 0.39 | 1.6 | 0.85 | 26 | 1.30 |
| **33213** | 75 | 74 | 102 | 113 | 115 | 6 | 9 | 0.4 | 1.5 | 0.8 | 29 | 2.00 |
| **33213/HA** | 75 | 74 | 102 | 113 | 115 | 6 | 9 | 0.4 | 1.5 | 0.8 | 29 | 2.00 |
| **33213/YB2** | 75 | 74 | 102 | 113 | 115 | 6 | 9 | 0.4 | 1.5 | 0.8 | 29 | 2.00 |
| **32213** | 75 | 74 | 104 | 111 | 115 | 4 | 5.8 | 0.4 | 1.5 | 0.81 | 28 | 1.58 |
| **32213A/YA6** | 75 | 74 | 104 | 111 | 115 | 3.5 | 6 | 0.37 | 1.6 | 0.89 | 26 | 1.50 |
| **30213** | 77 | 74 | 106 | 111 | 114 | 4 | 5 | 0.4 | 1.5 | 0.81 | 24 | 1.14 |
| **30613** | 80 | 66 | 108 | 122 | 122 | 3.5 | 10 | 0.33 | 1.8 | 0.99 | 30 | 2.64 |
| **32313X1** | 79 | 75 | 107 | 121 | 122 | 5 | 12 | 0.33 | 1.8 | 0.99 | 32 | 3.01 |
| **32313X1A** | 80 | 77 | 107 | 121 | 124 | 5 | 12 | 0.35 | 1.7 | 0.93 | 33 | 2.93 |
| **32313/YA6** | 80 | 77 | 107 | 121 | 124 | 5 | 12 | 0.35 | 1.7 | 0.96 | 33 | 3.68 |
| **30313** | 83 | 72 | 120 | 131 | 131 | 3.5 | 8 | 0.35 | 1.7 | 0.96 | 28 | 2.49 |
| **30313X2A** | 83 | 72 | 120 | 131 | 131 | 3.5 | 8 | 0.47 | 1.28 | 0.7 | 34 | 2.84 |
| **30313X2/YA6** | 80 | 77 | 109 | 132 | 133 | 3.5 | 14 | 0.73 | 0.8 | 0.45 | 42 | 2.65 |
| **30313/YA6-1** | 86 | 77 | 120 | 122 | 131 | 5 | 8 | 0.35 | 1.7 | 0.96 | 28 | 2.49 |
| **30313/YA6** | 86 | 84 | 120 | 131 | 131 | 5 | 8 | 0.35 | 1.7 | 0.96 | 28 | 2.49 |
| **30313/YA6-2** | 86 | 84 | 120 | 131 | 131 | 5 | 8 | 0.35 | 1.7 | 0.96 | 28 | 2.49 |
| **31313** | 75 | 77 | 111 | 128 | 134 | 5 | 13 | 0.83 | 0.7 | 0.4 | 44 | 2.46 |
| **31313/YA5** | 84 | 77 | 122 | 128 | 130 | 5 | 8 | 0.35 | 1.7 | 0.9 | 28 | 2.45 |
| **31313/YA6** | 75 | 77 | 111 | 128 | 134 | 5 | 13 | 0.83 | 0.7 | 0.4 | 44 | 2.45 |
| **31313/YB4** | 80 | 77 | 111 | 128 | 132 | 5 | 13 | 0.83 | 0.72 | 0.4 | 42 | 2.46 |
| **32313** | 79 | 77 | 117 | 128 | 131 | 6 | 12 | 0.35 | 1.7 | 0.96 | 33 | 3.68 |
| **32313A** | 80 | 77 | 117 | 128 | 130 | 6 | 12 | 0.35 | 1.7 | 0.9 | 33 | 3.72 |
| **31313-ZQ/P6X** | 80 | 77 | 111 | 128 | 132 | 5 | 13 | 0.83 | 0.72 | 0.4 | 44 | 2.38 |



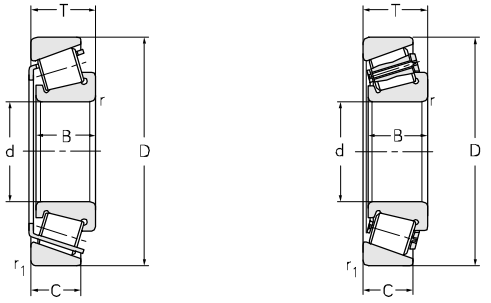






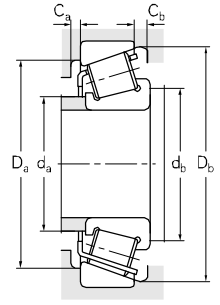

| Principal dimensions | | | | | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | T | B | C | $r_{radial}$ | $r_{axial}$ | $r_{1radial}$ | $r_{1axial}$ | $C_r$ | $C_{or}$ | Grease | Oil |
| mm | | | | | | | | | kN | | r/min | |
| **65** | 150 | 53.5 | 54 | 44.5 | 2.3 | 2.3 | 2.3 | 2.3 | 296 | 390 | 2400 | 3400 |
| | 152 | 48 | 45.5 | 35 | 2.5 | 2.5 | 3 | 3 | 200 | 286 | 2400 | 3400 |
| **70** | 100 | 20 | 20 | 16 | 1 | 1 | 1 | 1 | 70.5 | 114 | 3000 | 4000 |
| | 100 | 20 | 19 | 16 | 1 | 1 | 1 | 1 | 60.5 | 97 | 3000 | 4000 |
| | 110 | 31 | 31 | 25.5 | 1.5 | 1.5 | 1.5 | 1.5 | 128 | 196 | 3000 | 4000 |
| | 110 | 25 | 25 | 19 | 1.5 | 1.5 | 1.5 | 1.5 | 115 | 152 | 3000 | 4000 |
| | 110 | 25 | 25 | 19 | 1.5 | 1.5 | 1.5 | 1.5 | 115 | 152 | 3000 | 4000 |
| | 120 | 33 | 33 | 27 | 2 | 2 | 2 | 2 | 158 | 220 | 3000 | 4000 |
| | 120 | 45 | 42 | 37 | 2.5 | 2.5 | 2.5 | 2.5 | 138 | 198 | 3000 | 4000 |
| | 120 | 45 | 42 | 37 | 2.5 | 2.5 | 2.5 | 2.5 | 138 | 198 | 3000 | 4000 |
| | 125 | 33.25 | 31 | 27 | 2 | 2 | 1.5 | 1.5 | 170 | 227 | 2800 | 3800 |
| | 125 | 33.25 | 31 | 27 | 2.5 | 2.5 | 2.5 | 2.5 | 201 | 248 | 2800 | 3800 |
| | 125 | 26.25 | 24 | 21 | 2 | 2 | 1.5 | 1.5 | 124 | 156 | 3000 | 4000 |
| | 130 | 57 | 56 | 35 | 10.5 | 11 | 1.5 | 1.5 | 250 | 345 | 3000 | 4000 |
| | 130 | 57 | 56 | 35 | SP | SP | 1.5 | 1.5 | 250 | 345 | 3000 | 4000 |
| | 145 | 59 | 59 | 47 | 8.5 | 8.5 | 2.5 | 2.5 | 340 | 495 | 2500 | 3600 |
| | 150 | 54 | 51 | 42 | 6 | 6 | 2.5 | 2.5 | 305 | 395 | 2200 | 3200 |
| | 150 | 54 | 51 | 42 | 3 | 3 | 2.5 | 2.5 | 315 | 400 | 2200 | 3200 |
| | 150 | 54 | 51 | 42 | 6 | 6 | 2.5 | 2.5 | 315 | 410 | 2200 | 3200 |
| | 150 | 54 | 51 | 42 | 6 | 6 | 2.5 | 2.5 | 305 | 395 | 2200 | 3200 |
| | 150 | 38 | 35 | 30 | 3 | 3 | 2.5 | 2.5 | 223 | 262 | 2400 | 3400 |
| | 150 | 38 | 35 | 30 | 3 | 3 | 0.5 | 0.5 | 226 | 267 | 2400 | 3400 |
| | 150 | 41 | 35 | 33 | 3 | 3 | 0.5 | 0.5 | 226 | 267 | 2400 | 3400 |
| | 150 | 38 | 35 | 30 | 8.5 | 8.5 | 2.5 | 2.5 | 226 | 267 | 2400 | 3400 |
| | 150 | 38 | 35 | 25 | 3 | 3 | 2.5 | 2.5 | 214 | 220 | 2400 | 3400 |
| | 150 | 38 | 35 | 25 | 3 | 3 | 2.5 | 2.5 | 214 | 220 | 2000 | 3000 |
| | 150 | 38 | 35 | 25 | 3 | 3 | 2.5 | 2.5 | 214 | 220 | 2000 | 3000 |
| | 150 | 54 | 51 | 42 | 3 | 3 | 2.5 | 2.5 | 300 | 425 | 2200 | 3200 |
| | 150 | 54 | 51 | 42 | 3 | 3 | 2.5 | 2.5 | 305 | 390 | 2200 | 3200 |
| | 150 | 38 | 35 | 25 | 3 | 3 | 2.5 | 2.5 | 214 | 220 | 2000 | 3000 |

| Designations | Abutment and fillet dimensions | | | | | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $da_{max}$ | $db_{min}$ | $Da_{min}$ | $Da_{max}$ | $Db_{min}$ | $Ca_{min}$ | $Cb_{min}$ | e | Y | Y0 | a | |
| | mm | | | | | | | | | | | kg |
| **30613-1** | 86 | 75 | 117 | 150 | 137 | 3.5 | 9 | 0.36 | 1.7 | 0.9 | 37 | 4.43 |
| **31313X3A/P6XYA6** | 75 | 77 | 111 | 128 | 134 | 5 | 13 | 1.05 | 0.57 | 0.31 | 60 | 4.32 |
| **32914** | 76 | 76 | 90 | 96 | 96 | 5 | 4 | 0.32 | 1.9 | 1.05 | 18 | 0.475 |
| **32914X2A** | 77 | 74 | 90 | 96 | 96 | 5 | 4 | 0.36 | 1.7 | 0.92 | 19 | 0.477 |
| **33014** | 77 | 75 | 97 | 105 | 107 | 3 | 5.5 | 0.28 | 2.11 | 1.16 | 22 | 1.09 |
| **32014** | 93 | 78 | 112 | 103 | 125 | 5 | 6 | 0.43 | 1.4 | 0.76 | 26 | 0.972 |
| **32014/YA8** | 93 | 78 | 112 | 103 | 125 | 5 | 6 | 0.43 | 1.4 | 0.76 | 26 | 0.993 |
| **33114X2A/YA6** | 81 | 79 | 104 | 112 | 113 | 5 | 6 | 0.28 | 2.2 | 1.19 | 23 | 1.51 |
| **30614R** | 79 | 80 | 99 | 111 | 115 | 3.5 | 8 | 0.39 | 1.5 | 0.84 | 32 | 1.94 |
| **30614** | 79 | 80 | 99 | 111 | 115 | 3.5 | 8 | 0.39 | 1.5 | 0.84 | 32 | 1.89 |
| **32214** | 79 | 79 | 106 | 118 | 120 | 4 | 6.3 | 0.42 | 1.4 | 0.79 | 29 | 1.66 |
| **32214/YA6** | 81 | 80 | 106 | 116 | 120 | 5 | 6.3 | 0.42 | 1.4 | 0.79 | 29 | 1.66 |
| **30214** | 81 | 69 | 110 | 116 | 118 | 4 | 5.3 | 0.42 | 1.4 | 0.79 | 26 | 1.29 |
| **30214X3/YA6** | 82 | 71 | 109 | 123 | 124 | 5 | 22 | 0.33 | 1.8 | 0.99 | 30 | 2.92 |
| **30214X3/YA6-1** | 82 | 71 | 109 | 123 | 124 | 5 | 22 | 0.33 | 1.8 | 0.99 | 30 | 2.83 |
| **32314X3A** | 78 | 82 | 113 | 130 | 130 | 5 | 13 | 0.44 | 1.4 | 0.4 | 47 | 4.5 |
| **32314/YA6** | 88 | 89 | 123 | 141 | 140 | 5 | 12 | 0.35 | 1.7 | 0.96 | 36 | 4.38 |
| **32314/YA6-1** | 88 | 89 | 123 | 141 | 140 | 5 | 12 | 0.35 | 1.7 | 0.96 | 36 | 4.33 |
| **32314/YA6-2** | 88 | 89 | 123 | 141 | 140 | 5 | 12 | 0.35 | 1.7 | 0.96 | 36 | 4.33 |
| **32314/YA6** | 88 | 89 | 123 | 141 | 140 | 5 | 12 | 0.35 | 1.7 | 0.96 | 36 | 4.38 |
| **30314** | 89 | 82 | 130 | 138 | 141 | 5 | 8 | 0.35 | 1.7 | 0.96 | 30 | 3.08 |
| **30314N** | 89 | 82 | 130 | 138 | 141 | 5 | 8 | 0.35 | 1.74 | 0.96 | 30 | 2.96 |
| **30314X2N/YB2** | 89 | 82 | 130 | 138 | 141 | 5 | 8 | 0.35 | 1.74 | 0.96 | 33 | 3.11 |
| **30314/YA6** | 92 | 71 | 128 | 141 | 140 | 5 | 8 | 0.35 | 1.7 | 0.96 | 30 | 3.08 |
| **31314** | 78 | 82 | 118 | 138 | 140 | 5 | 13 | 0.83 | 0.7 | 0.4 | 47 | 2.87 |
| **31314/HC3** | 85 | 82 | 118 | 138 | 141 | 5 | 13 | 0.83 | 0.72 | 0.4 | 45 | 2.87 |
| **31314/HC4** | 85 | 82 | 118 | 138 | 141 | 5 | 13 | 0.83 | 0.72 | 0.4 | 46 | 2.87 |
| **32314B** | 84 | 82 | 125 | 138 | 141 | 6 | 12 | 0.55 | 1.1 | 0.6 | 45 | 4.54 |
| **32314** | 84 | 82 | 125 | 138 | 141 | 6 | 12 | 0.35 | 1.7 | 0.96 | 36 | 4.38 |
| **31314-SG** | 85 | 82 | 118 | 138 | 141 | 5 | 13 | 0.83 | 0.72 | 0.4 | 46 | 2.87 |





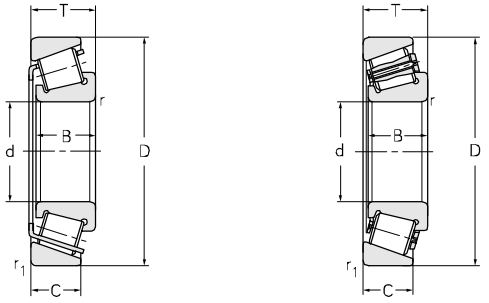





| Principal dimensions | | | | | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | T | B | C | $r_{radial}$ | $r_{axial}$ | $r_{1radial}$ | $r_{1axial}$ | $C_r$ | $C_{or}$ | Grease | Oil |
| mm | | | | | | | | | kN | | r/min | |
| **70** | 165 | 57 | 57 | 40 | 6 | 6 | 3 | 3 | 315 | 410 | 2000 | 3000 |
| | 165 | 57 | 57 | 43 | 4 | 4 | 3 | 3 | 325 | 430 | 2000 | 3000 |
| **75** | 115 | 31 | 31 | 25.5 | 1.5 | 1.5 | 1.5 | 1.5 | 130 | 213 | 3000 | 4000 |
| | 115 | 35 | 35 | 25.5 | 1.5 | 1.5 | 1.5 | 1.5 | 133 | 221 | 3000 | 4000 |
| | 115 | 25 | 25 | 19 | 1.5 | 1.5 | 1.5 | 1.5 | 120 | 163 | 3000 | 4000 |
| | 125 | 37 | 37 | 29 | 2 | 2 | 1.5 | 1.5 | 174 | 275 | 2800 | 3800 |
| | 125 | 37 | 37 | 29 | 4 | 4 | 1.5 | 1.5 | 174 | 275 | 2800 | 3800 |
| | 130 | 41 | 41 | 31 | 2 | 2 | 1.5 | 1.5 | 208 | 300 | 2600 | 3600 |
| | 130 | 27.25 | 25 | 22 | 2 | 2 | 1.5 | 1.5 | 139 | 175 | 2800 | 3800 |
| | 130 | 33.25 | 31 | 27 | 2 | 2 | 1.5 | 1.5 | 185 | 253 | 2600 | 3600 |
| | 130 | 33.25 | 31 | 27 | 1.8 | 1.8 | 1.8 | 1.8 | 185 | 184 | 2600 | 3600 |
| | 130 | 33.5 | 31 | 27 | 1.8 | 1.8 | 1.8 | 1.8 | 139 | 184 | 2600 | 3600 |
| | 130 | 33.25 | 31 | 27 | 3 | 3 | 2.5 | 2.5 | 185 | 253 | 2600 | 3600 |
| | 130 | 33.25 | 31 | 27 | 2 | 2 | 1.5 | 1.5 | 185 | 253 | 2600 | 3600 |
| | 130 | 33.25 | 31 | 27 | 2 | 2 | 1.5 | 1.5 | 185 | 253 | 2600 | 3600 |
| | 135 | 44.5 | 45 | 35 | 2.3 | 2.3 | 2.3 | 2.3 | 193 | 277 | 2600 | 3600 |
| | 135 | 44 | 45 | 35 | 3 | 3 | 2.5 | 2.5 | 200 | 292 | 2600 | 3600 |
| | 135 | 44 | 45 | 35 | 3 | 3 | 2.5 | 2.5 | 200 | 292 | 2600 | 3600 |
| | 150 | 59 | 59 | 47 | 3 | 3 | 2.5 | 2.5 | 355 | 530 | 2200 | 3200 |
| | 150 | 30.5 | 29 | 20 | 3 | 3 | 2.5 | 2.5 | 165 | 202 | 2200 | 3200 |
| | 160 | 40 | 37 | 31 | 3 | 3 | 2.5 | 2.5 | 259 | 285 | 2200 | 3200 |
| | 160 | 40 | 37 | 31 | 3 | 3 | 2.5 | 2.5 | 224 | 256 | 2200 | 3200 |
| | 160 | 40 | 37 | 26 | 3 | 3 | 2.5 | 2.5 | 239 | 245 | 2200 | 3200 |
| | 160 | 40 | 37 | 26 | 3 | 3 | 2.5 | 2.5 | 229 | 276 | 2300 | 3500 |
| | 160 | 40 | 37 | 26 | 3 | 3 | 2.5 | 2.5 | 226 | 270 | 2300 | 3500 |
| | 160 | 58 | 55 | 45 | 3 | 3 | 2.5 | 2.5 | 345 | 455 | 2000 | 3000 |
| | 160 | 58 | 55 | 45 | 3 | 3 | 2.5 | 2.5 | 330 | 450 | 2000 | 3000 |

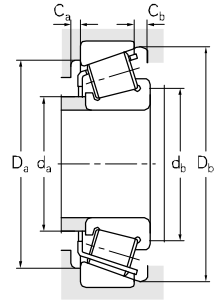
| Designations | Abutment and fillet dimensions | | | | | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $da_{max}$ | $db_{min}$ | $Da_{min}$ | $Da_{max}$ | $Db_{min}$ | $Ca_{min}$ | $Cb_{min}$ | e | Y | Y0 | a | |
| | mm | | | | | | | | | | | kg |
| **30614-1** | 85 | 80 | 121 | 155 | 156 | 4 | 6.3 | 0.7 | 0.86 | 0.47 | 52 | 6.09 |
| **31314X3A/P6XYA6** | 85 | 82 | 118 | 138 | 141 | 5 | 13 | 0.7 | 0.86 | 0.47 | 51 | 5.71 |
| **33015** | 84 | 82 | 104 | 108 | 110 | 6 | 5.5 | 0.3 | 2 | 1.1 | 23 | 1.10 |
| **33015X2-RS2** | 84 | 82 | 104 | 108 | 110 | 6 | 5.5 | 0.3 | 2 | 1.1 | 23 | 1.23 |
| **32015** | 84 | 83 | 100 | 108 | 112 | 6 | 6 | 0.46 | 1.3 | 0.72 | 25 | 0.922 |
| **33115** | 87 | 84 | 107 | 118 | 121 | 4.5 | 8 | 0.4 | 1.5 | 0.83 | 29 | 1.80 |
| **33115/YA6** | 84 | 84 | 109 | 117 | 120 | 6 | 8 | 0.4 | 1.5 | 0.8 | 29 | 1.76 |
| **33215** | 87 | 84 | 109 | 123 | 126 | 4.5 | 10 | 0.43 | 1.4 | 0.77 | 32 | 2.27 |
| **30215** | 85 | 84 | 115 | 121 | 125 | 4.5 | 5.3 | 0.44 | 1.4 | 0.76 | 28 | 1.4 |
| **32215** | 85 | 84 | 114 | 122 | 125 | 4 | 6 | 0.43 | 1.4 | 0.8 | 29 | 1.72 |
| **32215AR/YA6** | 87 | 83 | 110 | 125 | 123 | 4.5 | 6.5 | 0.41 | 1.5 | 0.81 | 29 | 1.83 |
| **32215A/YA6** | 87 | 83 | 110 | 125 | 123 | 4.5 | 6.5 | 0.41 | 1.5 | 0.81 | 29 | 1.74 |
| **32215/YA6** | 86 | 87 | 111 | 121 | 125 | 6 | 6.3 | 0.44 | 1.4 | 0.76 | 30 | 1.76 |
| **32215-ZQ** | 86 | 87 | 111 | 121 | 125 | 6 | 6.3 | 0.44 | 1.38 | 0.76 | 30 | 1.72 |
| **32215-ZQ/P6X** | 86 | 87 | 111 | 121 | 125 | 6 | 6.3 | 0.44 | 1.38 | 0.76 | 30 | 1.72 |
| **33215X2A** | 87 | 85 | 110 | 135 | 128 | 4.5 | 9.5 | 0.4 | 1.5 | 0.82 | 33 | 2.58 |
| **33215X2A-1** | 87 | 87 | 110 | 126 | 128 | 4.5 | 9 | 0.4 | 1.5 | 0.82 | 33 | 2.66 |
| **30615A** | 85 | 83 | 113 | 127 | 128 | 5 | 9 | 0.4 | 1.49 | 0.82 | 34 | 2.66 |
| **32315X3A** | 98 | 87 | 132 | 171 | 168 | 6 | 18.7 | 0.35 | 1.74 | 0.96 | 38 | 4.81 |
| **31315X3** | 93 | 85 | 126 | 146 | 142 | 5 | 13 | 0.64 | 0.94 | 0.52 | 38 | 2.24 |
| **30315** | 95 | 87 | 139 | 148 | 150 | 4.5 | 9 | 0.35 | 1.7 | 0.96 | 32 | 3.71 |
| **30315/YAD** | 96 | 87 | 139 | 148 | 149 | 5 | 9 | 0.35 | 1.7 | 0.9 | 31 | 3.61 |
| **31315** | 86 | 87 | 127 | 148 | 153 | 6 | 14 | 0.83 | 0.7 | 0.4 | 50 | 3.40 |
| **31315/YB2** | 93 | 85 | 126 | 146 | 142 | 5 | 13 | 0.83 | 0.73 | 0.4 | 50 | 3.4 |
| **31315/YB4** | 94 | 88 | 131 | 151 | 150 | 4.5 | 13 | 0.83 | 0.7 | 0.4 | 41 | 3.4 |
| **32315** | 94 | 87 | 131 | 151 | 150 | 4.5 | 13 | 0.35 | 1.7 | 0.96 | 38 | 5.35 |
| **32315B** | 94 | 87 | 131 | 151 | 150 | 4.5 | 13 | 0.55 | 1.1 | 0.6 | 47 | 5.46 |

d 75~80 mm





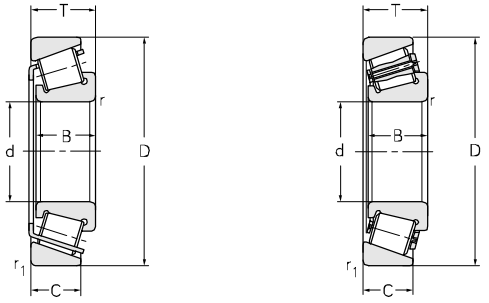





| Principal dimensions | | | | | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | T | B | C | $r_{radial}$ | $r_{axial}$ | $r_{1radial}$ | $r_{1axial}$ | $C_r$ | $C_{or}$ | Grease | Oil |
| mm | | | | | | | | | kN | | r/min | |
| **75** | 180 | 63.65 | 60 | 45 | 3 | 3 | 2.5 | 2.5 | 375 | 490 | 2000 | 3000 |
| | 180 | 63.5 | 60 | 45 | 4 | 4 | 3 | 3 | 370 | 480 | 2000 | 3000 |
| **76** | 141 | 28.25 | 26 | 22 | 0.5 | 0.5 | 2 | 2 | 165 | 209 | 2300 | 2800 |
| **80** | 110 | 20 | 20 | 16 | 1 | 1 | 1 | 1 | 71 | 119 | 2700 | 3700 |
| | 110 | 20 | 19 | 16 | 1 | 1 | 1 | 1 | 63 | 105 | 2700 | 3700 |
| | 125 | 29 | 29 | 22 | 1.5 | 1.5 | 1.5 | 1.5 | 139 | 219 | 2600 | 3600 |
| | 125 | 36 | 36 | 29.5 | 1.5 | 1.5 | 1.5 | 1.5 | 172 | 281 | 2600 | 3600 |
| | 130 | 37 | 37 | 29 | 2 | 2 | 1.5 | 1.5 | 179 | 280 | 2600 | 3600 |
| | 130 | 32 | 31 | 25 | 3.5 | 3.5 | 2 | 2 | 151 | 218 | 2400 | 3400 |
| | 140 | 46 | 46 | 35 | 2.5 | 2.5 | 2 | 2 | 264 | 390 | 2200 | 3200 |
| | 140 | 45 | 45 | 36.5 | 3 | 3 | 2.5 | 2.5 | 230 | 380 | 2200 | 3200 |
| | 140 | 28.25 | 26 | 22 | 2.5 | 2.5 | 2 | 2 | 149 | 183 | 2400 | 3400 |
| | 140 | 29 | 29 | 22 | 0.3 | 0.3 | 2 | 2 | 156 | 204 | 2400 | 3400 |
| | 140 | 35.25 | 33 | 28 | 2.5 | 2.5 | 2 | 2 | 198 | 263 | 2400 | 3400 |
| | 140 | 35.5 | 33 | 28 | 2.3 | 2.3 | 2.3 | 2.3 | 162 | 216 | 2400 | 3400 |
| | 140 | 39.2 | 39.2 | 32 | 2.5 | 2.5 | 2 | 2 | 205 | 360 | 2400 | 3400 |
| | 140 | 35.25 | 33 | 28 | 5.5 | 5.5 | 2 | 2 | 198 | 263 | 2400 | 3400 |
| | 140 | 35.25 | 33 | 28 | 3 | 3 | 2.5 | 2.5 | 180 | 263 | 2400 | 3400 |
| | 140 | 35.25 | 33 | 28 | 4.5 | 4.5 | 2 | 2 | 198 | 263 | 2400 | 3400 |
| | 140 | 35.25 | 33 | 28 | 2.5 | 2.5 | 2 | 2 | 214 | 290 | 2400 | 3400 |
| | 150 | 42 | 38 | 33 | 3 | 3 | 0.3 | 0.3 | 226 | 320 | 2200 | 2700 |
| | 165 | 59 | 59 | 39 | 3 | 3 | 4 | 4 | 300 | 450 | 2200 | 3200 |
| | 165 | 57 | 57 | 43 | 4 | 4 | 3 | 3 | 330 | 500 | 2200 | 3200 |
| | 170 | 61.5 | 58 | 48 | 3 | 3 | 2.5 | 2.5 | 390 | 510 | 1900 | 2800 |
| | 170 | 42.5 | 39 | 33 | 3 | 3 | 2.5 | 2.5 | 273 | 320 | 2000 | 3000 |
| | 170 | 42.5 | 39 | 27 | 3 | 3 | 2.5 | 2.5 | 223 | 260 | 2200 | 3200 |
| | 170 | 42.5 | 39 | 27 | 3 | 3 | 2.5 | 2.5 | 236 | 280 | 2200 | 3200 |
| | 180 | 63.65 | 60 | 45 | 3 | 3 | 2.5 | 2.5 | 370 | 550 | 1800 | 2800 |

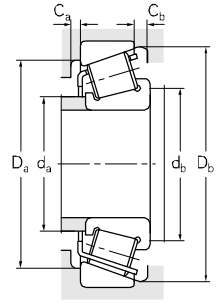
| Designations | Abutment and fillet dimensions | | | | | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $da_{max}$ | $db_{min}$ | $Da_{min}$ | $Da_{max}$ | $Db_{min}$ | $Ca_{min}$ | $Cb_{min}$ | e | Y | Y0 | a | |
| | mm | | | | | | | | | | | kg |
| **32315X3** | 98 | 87 | 132 | 171 | 168 | 6 | 18.7 | 0.7 | 0.86 | 0.47 | 57 | 7.90 |
| **32315X3-1** | 98 | 87 | 132 | 171 | 168 | 6 | 18.7 | 0.7 | 0.86 | 0.47 | 55 | 7.89 |
| **306/76** | 91 | 79 | 122 | 134 | 135 | 4.5 | 6.25 | 0.42 | 1.43 | 0.79 | 28 | 1.83 |
| **32916** | 86 | 88 | 100 | 106 | 106 | 5 | 6 | 0.35 | 1.7 | 0.96 | 38 | 0.548 |
| **32916X2A** | 86 | 88 | 100 | 106 | 106 | 5 | 6 | 0.32 | 1.83 | 1 | 20 | 0.500 |
| **32016** | 90 | 88 | 109 | 118 | 121 | 6 | 7 | 0.42 | 1.4 | 0.78 | 27 | 1.26 |
| **33016** | 90 | 87 | 112 | 117 | 119 | 6 | 6.5 | 0.28 | 2.1 | 1.1 | 26 | 1.62 |
| **33116** | 91 | 81 | 111 | 123 | 127 | 4.5 | 8 | 0.42 | 1.4 | 0.79 | 31 | 2.79 |
| **33116X2A** | 91 | 81 | 113 | 122 | 125 | 4.5 | 7 | 0.38 | 1.6 | 0.88 | 27 | 1.60 |
| **33216** | 90 | 90 | 117 | 132 | 136 | 4.5 | 11 | 0.43 | 1.4 | 0.78 | 35 | 2.89 |
| **33216X2A** | 90 | 90 | 117 | 132 | 136 | 4.5 | 11 | 0.28 | 2.16 | 1.19 | 30 | 2.77 |
| **30216** | 90 | 90 | 124 | 130 | 133 | 4.5 | 6.3 | 0.42 | 1.4 | 0.79 | 29 | 1.56 |
| **30216X2/YA6** | 90 | 90 | 124 | 130 | 133 | 4.5 | 6.3 | 0.42 | 1.43 | 0.79 | 29 | 1.77 |
| **32216** | 89 | 90 | 122 | 130 | 135 | 5 | 7.3 | 0.42 | 1.4 | 0.79 | 32 | 2.19 |
| **32216A/YA6** | 94 | 90 | 119 | 140 | 132 | 4.5 | 7.5 | 0.4 | 1.5 | 0.82 | 31 | 2.13 |
| **32216X2A** | 94 | 90 | 119 | 140 | 132 | 4.5 | 7.5 | 0.41 | 1.47 | 0.81 | 33 | 2.71 |
| **32216/YA6-1** | 91 | 81 | 120 | 132 | 134 | 6 | 7.3 | 0.42 | 1.4 | 0.79 | 32 | 2.19 |
| **32216/YA6-2** | 91 | 81 | 120 | 132 | 134 | 6 | 7.3 | 0.42 | 1.43 | 0.79 | 31 | 2.12 |
| **32216/YA6-3** | 94 | 90 | 119 | 140 | 132 | 4.5 | 7.5 | 0.4 | 1.5 | 0.82 | 31 | 2.13 |
| **32216/YB2** | 94 | 90 | 119 | 140 | 132 | 4.5 | 7.5 | 0.42 | 1.43 | 0.79 | 31 | 2.13 |
| **33216X3AN/YB2** | 90 | 90 | 117 | 132 | 136 | 4.5 | 11 | 0.39 | 1.55 | 0.85 | 35 | 3.17 |
| **32316X3-1** | 92 | 91 | 134 | 158 | 161 | 6 | 16 | 0.83 | 0.7 | 0.4 | 53 | 5.69 |
| **32316X3-2-ZQ/P6X** | 92 | 91 | 134 | 158 | 161 | 6 | 16 | 0.7 | 0.86 | 0.47 | 53 | 5.8 |
| **32316** | 97 | 92 | 142 | 158 | 160 | 4.5 | 14 | 0.35 | 1.7 | 0.96 | 41 | 6.43 |
| **30316** | 102 | 92 | 146 | 158 | 160 | 5 | 9.5 | 0.35 | 1.7 | 0.96 | 34 | 4.32 |
| **31316** | 92 | 91 | 128 | 156 | 156 | 6 | 16 | 0.83 | 0.7 | 0.4 | 53 | 3.65 |
| **31316/YB2** | 92 | 91 | 128 | 156 | 156 | 6 | 16 | 0.83 | 0.73 | 0.4 | 53 | 4.07 |
| **32316X3** | 97 | 92 | 142 | 158 | 160 | 4.5 | 14 | 0.76 | 0.86 | 0.47 | 57 | 7.91 |

d 85~90 mm





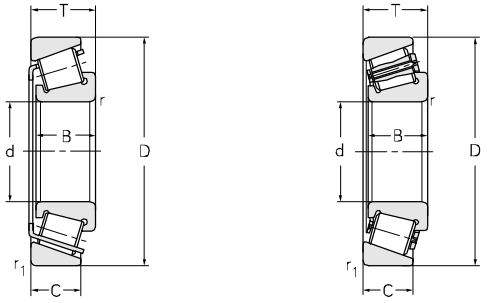





| Principal dimensions | | | | | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | T | B | C | $r_{radial}$ | $r_{axial}$ | $r_{1radial}$ | $r_{1axial}$ | $C_r$ | $C_{or}$ | Grease | Oil |
| mm | | | | | | | | | kN | | r/min | |
| **85** | 120 | 23 | 23 | 18 | 1.5 | 1.5 | 1.5 | 1.5 | 100 | 172 | 2700 | 3300 |
| | 130 | 36 | 36 | 29.5 | 1.5 | 1.5 | 1.5 | 1.5 | 195 | 330 | 2600 | 3600 |
| | 130 | 29 | 29 | 22 | 1.5 | 1.5 | 1.5 | 1.5 | 138 | 220 | 2400 | 3400 |
| | 140 | 41 | 41 | 32 | 2.5 | 2.5 | 2 | 2 | 215 | 354 | 2400 | 3400 |
| | 150 | 49 | 49 | 37 | 2.5 | 2.5 | 2 | 2 | 286 | 236 | 2000 | 3000 |
| | 150 | 49 | 49 | 37 | 7 | 7 | 2 | 2 | 287 | 410 | 2000 | 3000 |
| | 150 | 30.5 | 28 | 24 | 2.5 | 2.5 | 2 | 2 | 175 | 220 | 2400 | 3400 |
| | 150 | 38.5 | 36 | 30 | 2.5 | 2.5 | 2 | 2 | 230 | 315 | 2200 | 3200 |
| | 150 | 38.5 | 36 | 30 | 2.5 | 2.5 | 2 | 2 | 230 | 315 | 2200 | 3200 |
| | 150 | 38.5 | 36 | 30 | 2.5 | 2.5 | 2 | 2 | 232 | 315 | 2200 | 3200 |
| | 180 | 63.5 | 60 | 49 | 4 | 4 | 3 | 3 | 425 | 560 | 1800 | 2600 |
| | 180 | 44.5 | 41 | 34 | 4 | 4 | 3 | 3 | 301 | 365 | 1900 | 2800 |
| | 180 | 44.5 | 41 | 28 | 4 | 4 | 3 | 3 | 254 | 300 | 2000 | 3000 |
| **90** | 140 | 32 | 32 | 24 | 2 | 2 | 1.5 | 1.5 | 165 | 255 | 2200 | 3200 |
| | 140 | 39 | 39 | 32.5 | 2 | 2 | 1.5 | 1.5 | 226 | 370 | 2200 | 3200 |
| | 140 | 32.4 | 30 | 26 | 2 | 2 | 1.5 | 1.5 | 150 | 196 | 2200 | 3200 |
| | 145 | 35 | 32 | 27 | 6.5 | 6.5 | 1.5 | 1.5 | 198 | 305 | 2200 | 3200 |
| | 150 | 45 | 45 | 35 | 2.5 | 2.5 | 2 | 2 | 250 | 390 | 2000 | 3000 |
| | 150 | 38.5 | 36 | 30 | 2.5 | 2.5 | 2 | 2 | 209 | 310 | 2000 | 3000 |
| | 150 | 45 | 45 | 35 | 2.5 | 2.5 | 2 | 2 | 250 | 390 | 2000 | 3000 |
| | 160 | 55 | 55 | 42 | 2.5 | 2.5 | 2 | 2 | 330 | 495 | 2000 | 3000 |
| | 160 | 50 | 46 | 39 | 3 | 3 | 3 | 3 | 235 | 320 | 2000 | 3000 |
| | 160 | 42.5 | 40 | 34 | 2.5 | 2.5 | 2 | 2 | 274 | 280 | 2000 | 3000 |
| | 160 | 42.5 | 40 | 34 | 2.3 | 2.3 | 2.3 | 2.3 | 274 | 280 | 2000 | 3000 |
| | 160 | 42.5 | 40 | 34 | 2.3 | 2.3 | 2.3 | 2.3 | 274 | 280 | 2000 | 3000 |
| | 160 | 42.5 | 40 | 34 | 2.5 | 2.5 | 2 | 2 | 274 | 280 | 2000 | 3000 |
| | 160 | 32.5 | 30 | 26 | 2.5 | 2.5 | 2 | 2 | 222 | 291 | 2000 | 3000 |
| | 160 | 32.5 | 30 | 26 | 5 | 5 | 3 | 3 | 222 | 291 | 2000 | 3000 |
| | 170 | 62 | 59.5 | 49 | 2.5 | 2.5 | 2.5 | 2.5 | 360 | 520 | 2000 | 3000 |

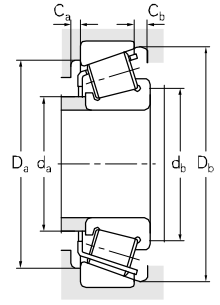
| Designations | Abutment and fillet dimensions | | | | | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $da_{max}$ | $db_{min}$ | $Da_{min}$ | $Da_{max}$ | $Db_{min}$ | $Ca_{min}$ | $Cb_{min}$ | e | Y | Y0 | a | |
| | mm | | | | | | | | | | | kg |
| **32917** | 92 | 90 | | 115 | 117 | 2 | 5 | 0.33 | 1.83 | 1.01 | 21 | 0.776 |
| **33017** | 94 | 92 | | 122 | 125 | 6 | 6.5 | 0.3 | 2 | 1.1 | 26 | 1.70 |
| **32017** | 94 | 93 | | 123 | 126 | 7 | 7 | 0.44 | 1.4 | 0.75 | 28 | 1.33 |
| **33117** | 95 | 95 | | 130 | 135 | 7 | 9 | 0.4 | 1.5 | 0.8 | 32 | 2.43 |
| **33217** | 96 | 95 | | 142 | 145 | 4.5 | 12 | 0.42 | 1.4 | 0.79 | 37 | 3.64 |
| **33217/YA6** | 96 | 95 | | 142 | 145 | 4.5 | 12 | 0.42 | 1.4 | 0.79 | 37 | 3.64 |
| **30217** | 96 | 95 | | 140 | 142 | 5 | 6.5 | 0.42 | 1.4 | 0.79 | 31 | 2.05 |
| **32217** | 95 | 95 | | 140 | 143 | 5 | 8.5 | 0.42 | 1.4 | 0.79 | 34 | 2.70 |
| **32217-SG** | 95 | 95 | | 140 | 143 | 5 | 8.5 | 0.42 | 1.4 | 0.79 | 34 | 2.7 |
| **32217/YA5** | 97 | 95 | | 140 | 142 | 5 | 8.5 | 0.43 | 1.4 | 0.8 | 33 | 2.79 |
| **32317** | 102 | 99 | | 166 | 168 | 4.5 | 15 | 0.35 | 1.7 | 0.96 | 42 | 7.37 |
| **30317** | 107 | 99 | | 166 | 168 | 6 | 11 | 0.35 | 1.7 | 0.96 | 35 | 5.39 |
| **31317** | 96 | 99 | | 166 | 171 | 6 | 17 | 0.83 | 0.7 | 0.4 | 56 | 4.92 |
| **32018** | 100 | 99 | | 133 | 135 | 7 | 8 | 0.42 | 1.4 | 0.78 | 30 | 1.77 |
| **33018** | 100 | 99 | | 132 | 135 | 7 | 6.5 | 0.27 | 2.2 | 1.3 | 27 | 2.24 |
| **32018X2A** | 100 | 99 | | 131 | 134 | 6 | 8 | 0.34 | 1.8 | 0.97 | 23 | 1.71 |
| **32018X3/YA6** | 100 | 99 | | 133 | 135 | 7 | 6.5 | 0.42 | 1.4 | 0.78 | 30 | 2.08 |
| **33118** | 104 | 100 | | 142 | 145 | 4.5 | 10 | 0.4 | 1.5 | 0.83 | 35 | 3.22 |
| **33118X2(TRA181504)** | 103 | 10 | | 142 | 145 | 4.5 | 8.5 | 0.42 | 1.4 | 0.79 | 34 | 2.57 |
| **33118/YB2** | 104 | 100 | | 142 | 145 | 4.5 | 10 | 0.4 | 1.5 | 0.83 | 35 | 3.22 |
| **33218** | 95 | 99 | | 160 | 126 | 7 | 13 | 0.29 | 2.1 | 1.13 | 33 | 4.77 |
| **33218X2A** | 103 | 102 | | 149 | 149 | 4.5 | 11 | 0.34 | 1.8 | 0.97 | 35 | 3.82 |
| **32218** | 101 | 100 | | 150 | 152 | 5 | 8.5 | 0.42 | 1.4 | 0.79 | 37 | 3.61 |
| **32218R/YA6** | 106 | 100 | | 160 | 151 | 4.5 | 9 | 0.39 | 1.6 | 0.85 | 35 | 3.47 |
| **32218/YA6** | 106 | 100 | | 160 | 151 | 4.5 | 9 | 0.39 | 1.6 | 0.85 | 35 | 3.36 |
| **32218/YB2-1** | 106 | 100 | | 160 | 151 | 4.5 | 9 | 0.42 | 1.43 | 0.79 | 37 | 3.48 |
| **30218** | 102 | 100 | | 150 | 151 | 5 | 6.5 | 0.42 | 1.4 | 0.79 | 33 | 2.73 |
| **30218/YA6** | 102 | 100 | | 150 | 151 | 5 | 6.5 | 0.42 | 1.4 | 0.79 | 33 | 2.73 |
| **30618** | 107 | 100 | | 161 | 161 | 4.5 | 13 | 0.36 | 1.7 | 0.92 | 42 | 6.04 |

d 90~100 mm





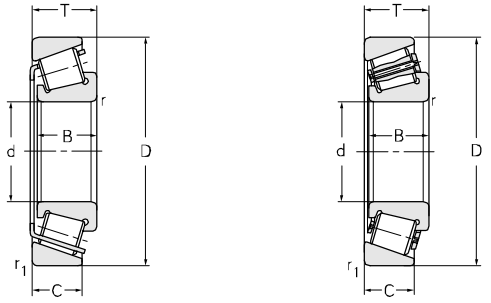





| Principal dimensions | | | | | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | T | B | C | $r_{radial}$ | $r_{axial}$ | $r_{1radial}$ | $r_{1axial}$ | $C_r$ | $C_{or}$ | Grease | Oil |
| mm | | | | | | | | | kN | | r/min | |
| **90** | 190 | 46.5 | 43 | 36 | 4 | 4 | 3 | 3 | 335 | 410 | 1800 | 2600 |
| | 190 | 46.5 | 43 | 30 | 4 | 4 | 3 | 3 | 283 | 340 | 2000 | 3000 |
| | 190 | 67.5 | 64 | 53 | 4 | 4 | 3 | 3 | 485 | 650 | 1700 | 2400 |
| **90.5** | 160 | 42.5 | 40 | 34 | 2.5 | 2.5 | 2 | 2 | 274 | 380 | 2000 | 3000 |
| **95** | 130 | 23 | 22 | 18 | 1.5 | 1.5 | 1.5 | 1.5 | 79.5 | 135 | 2300 | 3300 |
| | 145 | 32 | 32 | 24 | 2 | 2 | 1.5 | 1.5 | 182 | 292 | 2200 | 3200 |
| | 145 | 32.4 | 30 | 26 | 2 | 2 | 1.5 | 1.5 | 161 | 248 | 2200 | 3200 |
| | 145 | 39 | 39 | 32.5 | 2 | 2 | 1.5 | 1.5 | 220 | 368 | 2200 | 3200 |
| | 145 | 39 | 39 | 32.5 | 2 | 2 | 1.5 | 1.5 | 220 | 368 | 2200 | 3200 |
| | 145 | 39 | 40 | 32.5 | 2 | 2 | 1.5 | 1.5 | 220 | 368 | 2200 | 3200 |
| | 160 | 47 | 47 | 38 | 3 | 3 | 3 | 3 | 286 | 460 | 2200 | 3200 |
| | 170 | 45.5 | 43 | 37 | 3 | 3 | 2.5 | 2.5 | 298 | 415 | 1900 | 2800 |
| | 170 | 45.5 | 43 | 37 | 3 | 3 | 2.5 | 2.5 | 300 | 415 | 1900 | 2800 |
| | 170 | 34.5 | 32 | 27 | 3 | 3 | 2.5 | 2.5 | 233 | 300 | 1900 | 2800 |
| | 170 | 47 | 47 | 37 | 3 | 3 | 3 | 3 | 300 | 460 | 1900 | 2800 |
| | 170 | 58 | 58 | 44 | 3 | 3 | 2.5 | 2.5 | 405 | 560 | 1900 | 2800 |
| | 200 | 49.5 | 45 | 38 | 4 | 4 | 3 | 3 | 365 | 445 | 1800 | 2600 |
| | 200 | 49.5 | 45 | 32 | 4 | 4 | 3 | 3 | 305 | 370 | 1900 | 2800 |
| | 200 | 71.5 | 67 | 55 | 4 | 4 | 3 | 3 | 520 | 705 | 1700 | 2400 |
| | 200 | 71.5 | 67 | 55 | 12 | 12 | 3 | 3 | 555 | 765 | 1700 | 2400 |
| **100** | 140 | 25 | 25 | 20 | 1.5 | 1.5 | 1.5 | 1.5 | 116 | 204 | 2400 | 3100 |
| | 150 | 32 | 32 | 24 | 2 | 2 | 1.5 | 1.5 | 190 | 281 | 1600 | 2200 |
| | 165 | 52 | 52 | 40 | 2.5 | 2.5 | 2 | 2 | 301 | 510 | 2200 | 2800 |
| | 180 | 63 | 63 | 48 | 3 | 3 | 2.5 | 2.5 | 430 | 655 | 1700 | 2400 |
| | 180 | 63 | 63 | 48 | 3 | 3 | 2.5 | 2.5 | 450 | 690 | 1700 | 2400 |
| | 180 | 37 | 34 | 29 | 3 | 3 | 2.5 | 2.5 | 262 | 340 | 1900 | 2800 |
| | 180 | 49 | 46 | 39 | 3 | 3 | 2.5 | 2.5 | 345 | 490 | 1800 | 2600 |
| | 215 | 77.5 | 73 | 60 | 4 | 4 | 3 | 3 | 570 | 780 | 1600 | 2200 |
| | 215 | 51.5 | 47 | 39 | 4 | 4 | 3 | 3 | 405 | 495 | 1700 | 2400 |
| | 215 | 56.5 | 51 | 35 | 4 | 4 | 3 | 3 | 430 | 465 | 1600 | 2200 |

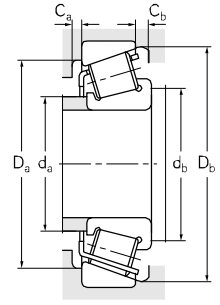
| Designations | Abutment and fillet dimensions | | | | | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $da_{max}$ | $db_{min}$ | $Da_{min}$ | $Da_{max}$ | $Db_{min}$ | $Ca_{min}$ | $Cb_{min}$ | e | Y | Y0 | a | |
| | mm | | | | | | | | | | | kg |
| **30318** | 113 | 104 | 165 | 176 | 178 | 6 | 11 | 0.35 | 1.7 | 0.96 | 37 | 5.76 |
| **31318** | 102 | 104 | 151 | 176 | 181 | 6 | 17 | 0.83 | 0.7 | 0.4 | 59 | 5.53 |
| **32318** | 107 | 104 | 157 | 176 | 178 | 8 | 15 | 0.35 | 1.7 | 0.96 | 45 | 8.97 |
| **32218/YB2** | 101 | 97 | 136 | 153 | 155 | 3 | 8.5 | 0.42 | 1.43 | 0.79 | 37 | 3.48 |
| **32919X2A** | 102 | 103 | 117 | 124 | 126 | 5 | 7 | 0.38 | 1.59 | 0.87 | 25 | 0.786 |
| **32019** | 105 | 104 | 130 | 138 | 139 | 6 | 8 | 0.44 | 1.35 | 0.8 | 31 | 1.87 |
| **32019X2A** | 105 | 104 | 130 | 136 | 140 | 6 | 8 | 0.36 | 1.7 | 0.93 | 33 | 1.80 |
| **33019** | 105 | 104 | 128 | 138 | 140 | 4.5 | 6.5 | 0.28 | 2.2 | 1.19 | 29 | 2.32 |
| **33019-HD** | 105 | 104 | 128 | 138 | 140 | 4.5 | 6.5 | 0.28 | 2.2 | 1.19 | 29 | 2.32 |
| **33019X2/YB2** | 105 | 104 | 128 | 138 | 140 | 4.5 | 6.5 | 0.28 | 2.2 | 1.19 | 29 | 2.25 |
| **30619** | 108 | 107 | 137 | 149 | 153 | 4.5 | 9 | 0.34 | 1.8 | 0.97 | 35 | 3.79 |
| **32219** | 106 | 107 | 145 | 158 | 163 | 5 | 8.5 | 0.42 | 1.4 | 0.79 | 40 | 4.34 |
| **32219N1-WTL** | 106 | 107 | 145 | 158 | 163 | 5 | 8.5 | 0.42 | 1.4 | 0.79 | 40 | 4.18 |
| **30219** | 108 | 107 | 149 | 158 | 160 | 5 | 7.5 | 0.42 | 1.4 | 0.79 | 35 | 3.27 |
| **33020X3A/HA** | 116 | 107 | 146 | 159 | 160 | 7 | 10 | 0.29 | 2.1 | 1.15 | 33 | 4.26 |
| **33219** | 109 | 107 | 141 | 161 | 164 | 7 | 14 | 0.41 | 1.5 | 0.81 | 43 | 5.54 |
| **30319** | 118 | 109 | 172 | 186 | 185 | 6 | 12 | 0.35 | 1.7 | 0.96 | 39 | 6.91 |
| **31319** | 107 | 109 | 157 | 186 | 189 | 6 | 18 | 0.83 | 0.7 | 0.4 | 62 | 6.84 |
| **32319** | 114 | 109 | 166 | 186 | 187 | 8 | 17 | 0.35 | 1.7 | 0.96 | 47 | 10.0 |
| **32319/YA6** | 114 | 109 | 166 | 186 | 187 | 8 | 17 | 0.35 | 1.7 | 0.96 | 47 | 10 |
| **32920** | 108 | 105 | 127 | 134 | 137 | 3 | 5 | 0.33 | 1.82 | 1 | 25 | 1.13 |
| **32020** | 110 | 109 | 131 | 143 | 145 | 4.5 | 8 | 0.46 | 1.3 | 0.72 | 33 | 1.87 |
| **33120** | 111 | 107 | 140 | 158 | 160 | 10 | 12 | 0.41 | 1.48 | 0.81 | 40 | 4.33 |
| **33220** | 112 | 112 | 151 | 168 | 172 | 10 | 15 | 0.4 | 1.5 | 0.8 | 43 | 6.58 |
| **33220/P6XYA8** | 112 | 112 | 151 | 168 | 172 | 10 | 15 | 0.4 | 1.5 | 0.8 | 43 | 6.73 |
| **30220** | 114 | 112 | 157 | 168 | 169 | 5 | 8 | 0.42 | 1.4 | 0.79 | 37 | 3.56 |
| **32220** | 113 | 112 | 154 | 168 | 172 | 5 | 10 | 0.42 | 1.4 | 0.79 | 42 | 5.31 |
| **32320** | 123 | 115 | 177 | 201 | 200 | 8 | 17.5 | 0.35 | 1.7 | 0.9 | 51 | 13.1 |
| **30320** | 127 | 114 | 184 | 201 | 199 | 6 | 13 | 0.35 | 1.7 | 0.96 | 41 | 8.09 |
| **31320** | 121 | 115 | 168 | 201 | 202 | 7 | 21.5 | 0.83 | 0.72 | 0.4 | 65 | 8.78 |

d 105~110 mm



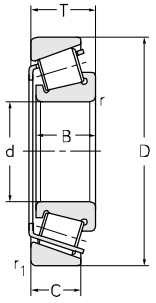


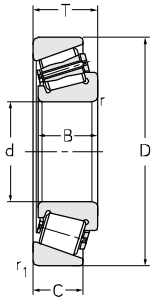


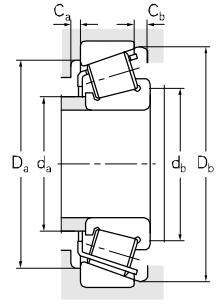



| Principal dimensions | | | | | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | T | B | C | $r_{radial}$ | $r_{axial}$ | $r_{1radial}$ | $r_{1axial}$ | $C_r$ | $C_{or}$ | Grease | Oil |
| mm | | | | | | | | | kN | | r/min | |
| **105** | 160 | 35 | 35 | 26 | 2.5 | 2.5 | 2 | 2 | 199 | 320 | 1900 | 2800 |
| | 160 | 35 | 35 | 26 | 2.5 | 2.5 | 2 | 2 | 206 | 340 | 1900 | 2800 |
| | 160 | 35.4 | 33 | 28 | 2.5 | 2.5 | 2 | 2 | 199 | 320 | 1900 | 2800 |
| | 160 | 43 | 43 | 34 | 2.5 | 2.5 | 2 | 2 | 266 | 405 | 1900 | 2800 |
| | 160 | 43 | 43 | 34 | 5 | 5 | 2 | 2 | 266 | 405 | 1900 | 2800 |
| | 160 | 43 | 43 | 34 | 8 | 8 | 2 | 2 | 266 | 405 | 1900 | 2800 |
| | 160 | 43 | 43 | 34 | 8 | 8 | 2 | 2 | 254 | 430 | 1900 | 2800 |
| | 170 | 56 | 56 | 44 | 3 | 3 | 2.5 | 2.5 | 375 | 605 | 1700 | 2200 |
| | 170 | 38 | 38 | 29 | 2.5 | 2.5 | 2 | 2 | 246 | 405 | 1700 | 2200 |
| | 190 | 39 | 36 | 30 | 3 | 3 | 2.5 | 2.5 | 292 | 365 | 1800 | 2600 |
| | 190 | 68 | 68 | 52 | 3 | 3 | 2.5 | 2.5 | 475 | 730 | 1800 | 2600 |
| | 190 | 53 | 50 | 43 | 3 | 3 | 2.5 | 2.5 | 375 | 605 | 1800 | 2600 |
| | 215 | 78 | 73 | 60 | 3 | 3 | 3 | 3 | 550 | 755 | 1900 | 2800 |
| | 225 | 53.5 | 49 | 41 | 4 | 4 | 3 | 3 | 430 | 530 | 1600 | 2200 |
| | 225 | 81.5 | 77 | 63 | 4 | 4 | 3 | 3 | 660 | 915 | 1500 | 2000 |
| **106** | 160 | 35 | 35 | 26 | 6.4 | 6.4 | 2 | 2 | 206 | 340 | 1900 | 2800 |
| | 160 | 35 | 35 | 26 | 6.4 | 6.4 | 2 | 2 | 206 | 340 | 1900 | 2800 |
| | 160 | 35 | 35 | 26 | 8.5 | 8.5 | 3 | 3 | 200 | 324 | 1900 | 2800 |
| **110** | 150 | 25.4 | 24 | 20 | 1.5 | 1.5 | 1.5 | 1.5 | 120 | 224 | 2000 | 3000 |
| | 170 | 47 | 47 | 37 | 2.5 | 2.5 | 2 | 2 | 300 | 465 | 1800 | 2600 |
| | 170 | 47 | 47 | 37 | 2.5 | 2.5 | 2 | 2 | 305 | 545 | 1800 | 2600 |
| | 170 | 52 | 52 | 42 | 2.5 | 2.5 | 2 | 2 | 310 | 570 | 1800 | 2600 |
| | 170 | 38 | 38 | 29 | 2.5 | 2.5 | 2 | 2 | 228 | 365 | 1800 | 2600 |
| | 170 | 38.4 | 36 | 31 | 2.5 | 2.5 | 2 | 2 | 198 | 297 | 1800 | 2600 |
| | 170 | 38 | 38 | 29 | 2.3 | 2.3 | 2.3 | 2.3 | 228 | 365 | 1800 | 2600 |
| | 170 | 38 | 38 | 29 | 2.5 | 2.5 | 2 | 2 | 228 | 365 | 1800 | 2600 |
| | 180 | 56 | 56 | 43 | 2.5 | 2.5 | 2 | 2 | 364 | 630 | 1800 | 2600 |
| | 190 | 49 | 49 | 39 | 3 | 3 | 3 | 3 | 360 | 560 | 1800 | 2600 |
| | 200 | 56 | 53 | 46 | 3 | 3 | 2.5 | 2.5 | 465 | 695 | 1700 | 2400 |
| | 200 | 56 | 53 | 46 | 3 | 3 | 2.5 | 2.5 | 415 | 600 | 1400 | 1900 |
| | 200 | 41 | 38 | 32 | 3 | 3 | 2.5 | 2.5 | 320 | 430 | 1700 | 2400 |

| Designations | Abutment and fillet dimensions | | | | | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $da_{max}$ | $db_{min}$ | $Da_{min}$ | $Da_{max}$ | $Db_{min}$ | $Ca_{min}$ | $Cb_{min}$ | e | Y | Y0 | a | |
| | mm | | | | | | | | | | | kg |
| **32021** | 116 | 116 | 143 | 150 | 154 | 6 | 9 | 0.44 | 1.35 | 0.8 | 34 | 2.38 |
| **32021-HD** | 116 | 116 | 143 | 150 | 154 | 6 | 9 | 0.44 | 1.35 | 0.74 | 34 | 2.38 |
| **32021X2A** | 116 | 116 | 143 | 150 | 154 | 6 | 9 | 0.36 | 1.69 | 0.93 | 32 | 2.5 |
| **33021** | 117 | 115 | 141 | 152 | 154 | 4.5 | 9 | 0.28 | 2.1 | 1.17 | 31 | 2.98 |
| **33021/YA6** | 117 | 121 | 141 | 152 | 154 | 7 | 9 | 0.28 | 2.1 | 1.17 | 31 | 2.98 |
| **33021/YA6-1** | 117 | 125 | 141 | 152 | 154 | 7 | 9 | 0.28 | 2.1 | 1.17 | 31 | 2.98 |
| **33021/YA6-1-HD** | 117 | 125 | 141 | 152 | 154 | 7 | 9 | 0.28 | 2.1 | 1.17 | 31 | 2.92 |
| **30621** | 125 | 122 | 148 | 162 | 164 | 4.5 | 9 | 0.43 | 1.4 | 0.77 | 35 | 4.71 |
| **32021X3** | 125 | 122 | 148 | 162 | 164 | 4.5 | 9 | 0.43 | 1.4 | 0.77 | 37 | 3.36 |
| **30221** | 125 | 117 | 162 | 181 | 177 | 6 | 9 | 0.42 | 1.4 | 0.79 | 39 | 4.47 |
| **33221** | 129 | 117 | 165 | 194 | 188 | 4.5 | 18 | 0.35 | 1.9 | 1.05 | 49 | 8.02 |
| **32221** | 120 | 117 | 161 | 178 | 180 | 6 | 10 | 0.43 | 1.4 | 0.8 | 44 | 6.26 |
| **32321X3** | 129 | 117 | 175 | 204 | 198 | 4.5 | 18 | 0.31 | 1.9 | 1.05 | 49 | 12.3 |
| **30321** | 133 | 119 | 193 | 211 | 208 | 7 | 13 | 0.35 | 1.7 | 0.96 | 43 | 9.38 |
| **32321** | 128 | 119 | 185 | 211 | 210 | 8 | 19 | 0.35 | 1.7 | 0.96 | 54 | 15.0 |
| **320/106/P6X** | 116 | 116 | 143 | 150 | 154 | 6 | 9 | 0.44 | 1.35 | 0.8 | 34 | 2.32 |
| **320/106/P6XYA6** | 116 | 116 | 143 | 150 | 154 | 6 | 9 | 0.44 | 1.35 | 0.8 | 34 | 2.35 |
| **320/106/YAB** | 116 | 116 | 143 | 150 | 154 | 6 | 9 | 0.44 | 1.35 | 0.74 | 35 | 2.38 |
| **32922X2A** | 120 | 118 | 138 | 143 | 145 | 7 | 5.4 | 0.28 | 2.1 | 1.117 | 23 | 1.18 |
| **33022** | 123 | 120 | 148 | 162 | 162 | 4.5 | 10 | 0.29 | 2.1 | 1.15 | 33 | 3.75 |
| **33022/P6XYA8** | 123 | 120 | 148 | 162 | 162 | 4.5 | 10 | 0.29 | 2.1 | 1.15 | 33 | 3.85 |
| **33022X2** | 123 | 120 | 148 | 162 | 162 | 4.5 | 10 | 0.29 | 2.1 | 1.15 | 33 | 4.27 |
| **32022** | 123 | 121 | 152 | 160 | 163 | 7 | 9 | 0.43 | 1.4 | 0.8 | 36 | 3.03 |
| **32022X2A** | 122 | 120 | 152 | 160 | 163 | 7 | 9 | 0.35 | 1.7 | 0.95 | 33 | 3.10 |
| **32022/YA6** | 123 | 121 | 152 | 160 | 163 | 7 | 9 | 0.43 | 1.4 | 0.8 | 36 | 3.08 |
| **32022/YA8** | 123 | 120 | 148 | 162 | 164 | 4.5 | 9 | 0.43 | 1.4 | 0.77 | 37 | 3.11 |
| **33122** | 121 | 121 | 155 | 170 | 174 | 9 | 13 | 0.43 | 1.4 | 0.8 | 44 | 5.50 |
| **33022X3A/HA** | 125 | 120 | 151 | 172 | 175 | 7 | 13 | 0.42 | 1.4 | 0.79 | 44 | 5.87 |
| **32222** | 124 | 122 | 170 | 188 | 192 | 6 | 10 | 0.42 | 1.4 | 0.79 | 48 | 7.62 |
| **32222/YA8** | 129 | 122 | 167 | 191 | 190 | 4.5 | 10 | 0.42 | 1.4 | 0.79 | 48 | 7.58 |
| **30222** | 132 | 122 | 171 | 191 | 187 | 6 | 9 | 0.42 | 1.4 | 0.79 | 41 | 5.27 |



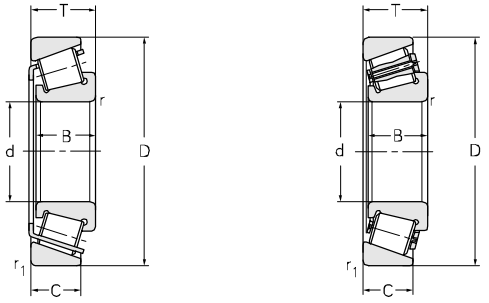




| Principal dimensions | | | | | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | T | B | C | $r_{radial}$ | $r_{axial}$ | $r_{1radial}$ | $r_{1axial}$ | $C_r$ | $C_{or}$ | Grease | Oil |
| mm | | | | | | | | | kN | | r/min | |
| **110** | 240 | 54.5 | 50 | 42 | 4 | 4 | 3 | 3 | 470 | 580 | 1600 | 2200 |
| | 240 | 63 | 57 | 38 | 4 | 4 | 3 | 3 | 470 | 595 | 1600 | 2200 |
| | 240 | 84.5 | 80 | 65 | 4 | 4 | 3 | 3 | 670 | 1030 | 1400 | 1900 |
| **115** | 190 | 49 | 49 | 35 | 2.5 | 2.5 | 2.5 | 2.5 | 282 | 440 | 1600 | 2200 |
| **120** | 165 | 29 | 29 | 23 | 1.5 | 1.5 | 1.5 | 2.5 | 189 | 320 | 1600 | 2200 |
| | 180 | 48 | 48 | 38 | 2.5 | 2.5 | 2 | 2 | 295 | 530 | 1800 | 2600 |
| | 180 | 48 | 48 | 38 | 2.5 | 2.5 | 2 | 2 | 305 | 550 | 1800 | 2600 |
| | 180 | 38 | 38 | 29 | 2.5 | 2.5 | 2 | 2 | 237 | 395 | 1700 | 2400 |
| | 180 | 38 | 38 | 29 | 2.5 | 2.5 | 2 | 2 | 250 | 420 | 1700 | 2400 |
| | 180 | 38.4 | 36 | 31 | 2.5 | 2.5 | 2 | 2 | 230 | 325 | 1700 | 2400 |
| | 180 | 38 | 38 | 29 | 2.5 | 2.5 | 2 | 2 | 250 | 430 | 1700 | 2400 |
| | 200 | 62 | 62 | 48 | 2.5 | 2.5 | 2 | 2 | 440 | 770 | 1700 | 2400 |
| | 215 | 61.5 | 58 | 50 | 3 | 3 | 2.5 | 2.5 | 480 | 720 | 1600 | 2200 |
| | 215 | 43.5 | 40 | 34 | 3 | 3 | 2.5 | 2.5 | 335 | 465 | 1600 | 2200 |
| | 260 | 59.5 | 55 | 46 | 4 | 4 | 3 | 3 | 560 | 710 | 1500 | 2000 |
| | 260 | 68 | 62 | 42 | 4 | 4 | 3 | 3 | 531 | 690 | 1200 | 1700 |
| | 260 | 90.5 | 86 | 69 | 4 | 4 | 3 | 3 | 860 | 1330 | 1300 | 1800 |
| **130** | 180 | 32.5 | 30 | 26 | 2 | 2 | 1.5 | 1.5 | 178 | 350 | 1700 | 2400 |
| | 200 | 55 | 55 | 43 | 2.5 | 2.5 | 2 | 2 | 385 | 690 | 1500 | 2000 |
| | 200 | 45 | 45 | 34 | 2.5 | 2.5 | 2 | 2 | 340 | 580 | 1600 | 2200 |
| | 200 | 45.5 | 42 | 36 | 2.5 | 2.5 | 2 | 2 | 271 | 420 | 1500 | 2000 |
| | 230 | 43.75 | 40 | 34 | 4 | 4 | 3 | 3 | 360 | 480 | 1500 | 2000 |
| | 230 | 55.75 | 52 | 42 | 8 | 8 | 3 | 3 | 495 | 750 | 1400 | 1900 |
| | 230 | 67.75 | 64 | 54 | 4 | 4 | 3 | 3 | 555 | 845 | 1500 | 2000 |
| | 230 | 67.75 | 64 | 54 | 4 | 4 | 3 | 3 | 555 | 845 | 1500 | 2000 |
| | 230 | 67.75 | 64 | 54 | 4 | 4 | 3 | 3 | 555 | 845 | 1500 | 2000 |
| | 280 | 63.75 | 58 | 49 | 5 | 5 | 4 | 4 | 625 | 800 | 1300 | 1800 |
| | 280 | 72 | 66 | 44 | 5 | 5 | 4 | 4 | 620 | 805 | 1300 | 1800 |
| | 280 | 98.75 | 93 | 78 | 3.7 | 3.7 | 3.7 | 3.7 | 795 | 1250 | 1100 | 1600 |

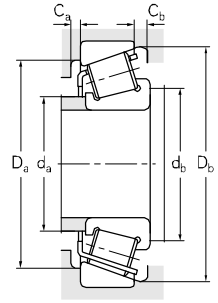
| Designations | Abutment and fillet dimensions | | | | | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $da_{max}$ | $db_{min}$ | $Da_{min}$ | $Da_{max}$ | $Db_{min}$ | $Ca_{min}$ | $Cb_{min}$ | e | Y | Y0 | a | |
| | mm | | | | | | | | | | | kg |
| **30322** | 142 | 124 | 206 | 226 | 222 | 8 | 13 | 0.35 | 1.7 | 0.96 | 45 | 11.1 |
| **31322** | 129 | 124 | 188 | 226 | 226 | 7 | 25 | 0.83 | 0.7 | 0.4 | 75 | 12.5 |
| **32322** | 137 | 125 | 198 | 226 | 222 | 9 | 19.5 | 0.35 | 1.7 | 0.9 | 55 | 17.9 |
| **30623** | 131 | 120 | 160 | 181 | 180 | 4.5 | 14 | 0.44 | 1.4 | 0.74 | 42 | 5.13 |
| **32924** | 131 | 118 | 150 | 158 | 161 | 4.5 | 6 | 0.35 | 1.7 | 0.95 | 29 | 1.79 |
| **33024A** | 132 | 131 | 160 | 170 | 171 | 6 | 10 | 0.3 | 2 | 1.1 | 36 | 4.17 |
| **33024-HD** | 132 | 131 | 160 | 170 | 171 | 6 | 10 | 0.31 | 1.97 | 1.08 | 36 | 4.07 |
| **32024** | 132 | 120 | 157 | 172 | 175 | 4.5 | 9 | 0.46 | 1.3 | 0.72 | 40 | 3.31 |
| **32024-HD** | 132 | 131 | 161 | 170 | 173 | 7 | 9 | 0.46 | 1.3 | 0.7 | 39 | 3.27 |
| **32024X2A** | 131 | 130 | 161 | 170 | 173 | 7 | 9 | 0.37 | 1.6 | 0.89 | 29 | 3.66 |
| **32024/YA5-ZQ/P6X** | 131 | 130 | 161 | 170 | 173 | 7 | 9 | 0.46 | 1.31 | 0.72 | 39 | 3.29 |
| **33124** | 135 | 132 | 177 | 190 | 190 | 6 | 9.5 | 0.44 | 1.4 | 0.76 | 45 | 7.74 |
| **32224** | 134 | 132 | 181 | 203 | 206 | 7 | 12 | 0.44 | 1.4 | 0.76 | 52 | 9.60 |
| **30224** | 139 | 132 | 187 | 203 | 203 | 6 | 9.5 | 0.44 | 1.4 | 0.76 | 45 | 6.32 |
| **30324** | 153 | 135 | 221 | 245 | 237 | 7 | 13.5 | 0.35 | 1.7 | 0.9 | 47 | 14.2 |
| **31324** | 145 | 135 | 203 | 245 | 244 | 9 | 26 | 0.83 | 0.72 | 0.4 | 78 | 15.6 |
| **32324** | 148 | 135 | 213 | 245 | 239 | 9 | 21.5 | 0.35 | 1.7 | 0.9 | 60 | 22.4 |
| **32926X2A** | 142 | 139 | 164 | 173 | 174 | 9 | 6.5 | 0.27 | 2.2 | 1.22 | 28 | 2.31 |
| **33026** | 144 | 138 | 175 | 193 | 194 | 9 | 12 | 0.34 | 1.76 | 0.97 | 42 | 6.04 |
| **32026** | 144 | 142 | 178 | 190 | 192 | 7 | 11 | 0.43 | 1.4 | 0.8 | 42 | 5.06 |
| **32026X2A** | 144 | 140 | 178 | 190 | 192 | 8 | 11 | 0.35 | 1.7 | 0.95 | 39 | 4.66 |
| **30226** | 150 | 144 | 203 | 216 | 219 | 7 | 10 | 0.44 | 1.4 | 0.76 | 47 | 7.02 |
| **30226X2** | 150 | 144 | 203 | 216 | 219 | 7 | 10 | 0.39 | 1.56 | 0.86 | 48 | 9.25 |
| **32226** | 143 | 144 | 193 | 216 | 221 | 7 | 14 | 0.44 | 1.4 | 0.76 | 56 | 11.8 |
| **32226-1** | 146 | 146 | 193 | 216 | 219 | 7 | 13.5 | 0.43 | 1.4 | 0.8 | 56 | 11.6 |
| **32226A** | 146 | 146 | 193 | 216 | 219 | 7 | 13.5 | 0.43 | 1.4 | 0.8 | 56 | 11.7 |
| **30326** | 164 | 150 | 239 | 263 | 255 | 8 | 14.5 | 0.35 | 1.7 | 0.9 | 51 | 17.4 |
| **31326** | 150 | 147 | 218 | 262 | 263 | 9 | 28 | 0.83 | 0.7 | 0.4 | 87 | 18.9 |
| **32326/YA6** | 168 | 144 | 227 | 280 | 258 | 4.5 | 22 | 0.32 | 1.9 | 1.04 | 65 | 26.4 |

d 140~170 mm





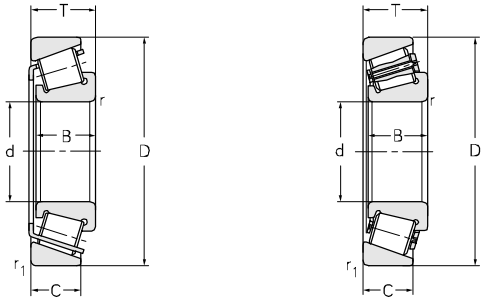





| Principal dimensions | | | | | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | T | B | C | $r_{radial}$ | $r_{axial}$ | $r_{1radial}$ | $r_{1axial}$ | $C_r$ | $C_{or}$ | Grease | Oil |
| mm | | | | | | | | | kN | | r/min | |
| **140** | 190 | 32 | 32 | 25 | 2 | 2 | 1.5 | 1.5 | 206 | 390 | 1600 | 2200 |
| | 190 | 32.5 | 30 | 26 | 2 | 2 | 1.5 | 1.5 | 206 | 390 | 1600 | 2200 |
| | 210 | 45 | 45 | 34 | 2.5 | 2.5 | 2 | 2 | 330 | 560 | 1600 | 2200 |
| | 210 | 45.5 | 42 | 36 | 2.5 | 2.5 | 2 | 2 | 330 | 560 | 1600 | 2200 |
| | 230 | 58 | 57 | 45 | 3 | 3 | 3 | 3 | 400 | 660 | 1600 | 2200 |
| | 230 | 58 | 57 | 45 | 3 | 3 | 3 | 3 | 400 | 660 | 1600 | 2200 |
| | 250 | 45.75 | 42 | 36 | 4 | 4 | 3 | 3 | 405 | 540 | 1400 | 1900 |
| | 250 | 71.75 | 68 | 58 | 4 | 4 | 3 | 3 | 650 | 1000 | 1400 | 1900 |
| | 300 | 107.75 | 102 | 85 | 5 | 5 | 4 | 4 | 1090 | 1630 | 1200 | 1700 |
| | 300 | 67.75 | 62 | 53 | 5 | 5 | 4 | 4 | 740 | 945 | 1200 | 1700 |
| | 300 | 77 | 70 | 47 | 5 | 5 | 4 | 4 | 695 | 900 | 1200 | 1700 |
| | 300 | 90 | 82 | 60 | 3.7 | 3.7 | 3.7 | 3.7 | 660 | 915 | 1200 | 1700 |
| **150** | 210 | 38 | 38 | 30 | 2.5 | 2.5 | 2 | 2 | 270 | 465 | 1500 | 2000 |
| | 210 | 38.5 | 36 | 31 | 2.5 | 2.5 | 2 | 2 | 220 | 385 | 1500 | 2000 |
| | 225 | 48 | 48 | 36 | 3 | 3 | 2.5 | 2.5 | 365 | 635 | 950 | 1400 |
| | 225 | 48.5 | 45 | 38 | 3 | 3 | 2.5 | 2.5 | 365 | 635 | 950 | 1400 |
| | 225 | 48.5 | 45 | 38 | 3 | 3 | 2.5 | 2.5 | 254 | 635 | 950 | 1400 |
| | 270 | 49 | 45 | 38 | 4 | 4 | 3 | 3 | 450 | 605 | 1300 | 1800 |
| | 270 | 77 | 73 | 60 | 4 | 4 | 3 | 3 | 735 | 1140 | 1200 | 1700 |
| | 320 | 114 | 108 | 90 | 5 | 5 | 4 | 4 | 1280 | 1880 | 950 | 1400 |
| | 320 | 72 | 65 | 55 | 5 | 5 | 4 | 4 | 815 | 1050 | 1100 | 1600 |
| **160** | 220 | 38.5 | 36 | 31 | 2.5 | 2.5 | 2 | 2 | 232 | 400 | 1500 | 2000 |
| | 240 | 51 | 51 | 38 | 3 | 3 | 2.5 | 2.5 | 415 | 730 | 1100 | 1600 |
| | 240 | 51.5 | 48 | 41 | 3 | 3 | 2.5 | 2.5 | 415 | 730 | 1100 | 1600 |
| | 290 | 52 | 48 | 40 | 4 | 4 | 3 | 3 | 510 | 695 | 1100 | 1600 |
| | 290 | 84 | 80 | 67 | 4 | 4 | 3 | 3 | 925 | 1490 | 1100 | 1600 |
| | 340 | 88 | 79 | 54 | 3.7 | 3.7 | 3.7 | 3.7 | 825 | 1080 | 1000 | 1500 |
| | 340 | 121 | 114 | 95 | 5 | 5 | 4 | 4 | 1540 | 2230 | 1000 | 1500 |
| **170** | 220 | 27 | 25 | 19.5 | 3 | 3 | 3 | 3 | 166 | 328 | 1600 | 2150 |

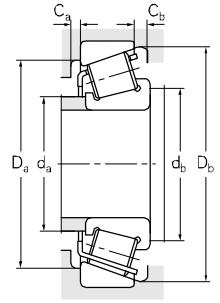
| Designations | Abutment and fillet dimensions | | | | | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $da_{max}$ | $db_{min}$ | $Da_{min}$ | $Da_{max}$ | $Db_{min}$ | $Ca_{min}$ | $Cb_{min}$ | e | Y | Y0 | a | |
| | mm | | | | | | | | | | | kg |
| **32928** | 150 | 150 | 177 | 182 | 184 | 6 | 7 | 0.35 | 1.7 | 0.9 | 33 | 2.55 |
| **32928X2A** | 142 | 149 | 164 | 183 | 174 | 9 | 6.5 | 0.27 | 2.2 | 0.22 | 28 | 2.43 |
| **32028** | 154 | 150 | 183 | 202 | 204 | 4.5 | 11 | 0.46 | 1.3 | 0.72 | 46 | 5.84 |
| **32028X2A** | 153 | 150 | 187 | 201 | 202 | 8 | 11 | 0.37 | 1.6 | 0.89 | 42 | 4.94 |
| **30628** | 182 | 152 | 217 | 219 | 242 | 4.5 | 13 | 0.44 | 1.4 | 0.74 | 56 | 8.97 |
| **30628R** | 182 | 152 | 217 | 219 | 242 | 4.5 | 13 | 0.44 | 1.4 | 0.74 | 56 | 9.2 |
| **30228** | 162 | 154 | 219 | 236 | 234 | 9 | 11 | 0.44 | 1.4 | 0.76 | 50 | 8.8 |
| **32228** | 156 | 154 | 210 | 236 | 240 | 8 | 14 | 0.44 | 1.4 | 0.76 | 61 | 14.7 |
| **32328** | 177 | 156 | 239 | 287 | 276 | 9 | 22.8 | 0.37 | 1.6 | 0.9 | 74 | 35.8 |
| **30328** | 176 | 155 | 255 | 282 | 275 | 9 | 15 | 0.35 | 1.7 | 0.96 | 56 | 21.2 |
| **31328** | 162 | 157 | 235 | 282 | 283 | 9 | 30 | 0.83 | 0.7 | 0.4 | 93 | 23.4 |
| **31328X2A** | 176 | 154 | 228 | 300 | 276 | 4.5 | 30 | 0.73 | 0.8 | 0.45 | 91 | 29.0 |
| **32930** | 161 | 160 | 190 | 202 | 202 | 9 | 7.5 | 0.33 | 1.83 | 1 | 36 | 3.83 |
| **32930X2A** | 165 | 160 | 191 | 202 | 201 | 9 | 7.5 | 0.27 | 2.2 | 1.21 | 33 | 4.56 |
| **32030** | 161 | 160 | 197 | 216 | 217 | 9 | 13 | 0.46 | 1.3 | 0.72 | 49 | 6.40 |
| **32030X2** | 164 | 162 | 200 | 213 | 216 | 8 | 13 | 0.39 | 1.5 | 0.85 | 46 | 6.84 |
| **32030X2A** | 164 | 162 | 200 | 213 | 216 | 8 | 13 | 0.39 | 1.54 | 0.85 | 46 | 6.84 |
| **30230** | 174 | 164 | 234 | 256 | 252 | 9 | 11 | 0.44 | 1.4 | 0.76 | 53 | 11.2 |
| **32230** | 168 | 164 | 223 | 256 | 256 | 4.5 | 17 | 0.44 | 1.4 | 0.76 | 64 | 18.4 |
| **32330** | 190 | 166 | 261 | 307 | 299 | 4.5 | 24 | 0.35 | 1.7 | 0.96 | 77 | 42.2 |
| **30330** | 190 | 165 | 273 | 302 | 294 | 4.5 | 17 | 0.35 | 1.7 | 0.96 | 60 | 25.5 |
| **32932X2A** | 175 | 170 | 203 | 212 | 213 | 9 | 7.5 | 0.27 | 2.2 | 1.23 | 34 | 3.79 |
| **32032** | 174 | 173 | 211 | 231 | 232 | 8 | 13 | 0.46 | 1.3 | 0.72 | 53 | 7.69 |
| **32032X2A-1** | 175 | 172 | 213 | 228 | 231 | 8 | 13 | 0.37 | 1.6 | 0.89 | 47 | 7.67 |
| **30232** | 189 | 174 | 252 | 276 | 271 | 9 | 12 | 0.44 | 1.4 | 0.76 | 57 | 13.4 |
| **32232** | 180 | 174 | 242 | 276 | 276 | 10 | 17 | 0.44 | 1.4 | 0.76 | 70 | 23.3 |
| **31332** | 199 | 161 | 265 | 340 | 315 | 4.5 | 34 | 0.76 | 0.8 | 0.43 | 100 | 29.9 |
| **32332** | 199 | 176 | 274 | 327 | 314 | 4.5 | 26 | 0.35 | 1.7 | 0.96 | 81 | 51.7 |
| **32934X3** | 175 | 171 | 203 | 211 | 212 | 9 | 7.5 | 0.47 | 1.3 | 0.72 | 53 | 2.33 |

d 170~190 mm





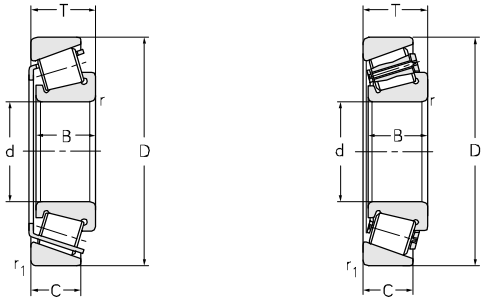





| Principal dimensions | | | | | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | T | B | C | $r_{radial}$ | $r_{axial}$ | $r_{1radial}$ | $r_{1axial}$ | $C_r$ | $C_{or}$ | Grease | Oil |
| mm | | | | | | | | | kN | | r/min | |
| **170** | 230 | 38 | 38 | 30 | 2.5 | 2.5 | 2 | 2 | 280 | 560 | 1400 | 1900 |
| | 230 | 38.5 | 36 | 31 | 2.5 | 2.5 | 2 | 2 | 235 | 415 | 1400 | 1900 |
| | 260 | 57 | 57 | 43 | 3 | 3 | 2.5 | 2.5 | 520 | 870 | 1200 | 1700 |
| | 260 | 57 | 57 | 43 | 1.5 | 1.5 | 1.5 | 1.5 | 520 | 870 | 1600 | 2100 |
| | 260 | 57.5 | 54 | 46 | 3 | 3 | 2.5 | 2.5 | 430 | 750 | 1400 | 1900 |
| | 310 | 91 | 86 | 71 | 5 | 5 | 4 | 4 | 1010 | 1630 | 1000 | 1500 |
| | 360 | 80 | 72 | 62 | 5 | 5 | 4 | 4 | 945 | 1360 | 950 | 1400 |
| | 360 | 128 | 120 | 100 | 3.7 | 3.7 | 3.7 | 3.7 | 1430 | 2120 | 950 | 1400 |
| | 360 | 127 | 120 | 100 | 5 | 5 | 5 | 5 | 1440 | 2140 | 950 | 1400 |
| **180** | 250 | 45 | 45 | 34 | 2.5 | 2.5 | 2 | 2 | 345 | 725 | 1600 | 2500 |
| | 250 | 45 | 42 | 36 | 2.5 | 2.5 | 2 | 2 | 345 | 725 | 1200 | 1700 |
| | 280 | 64 | 64 | 48 | 3 | 3 | 2.5 | 2.5 | 610 | 1070 | 950 | 1400 |
| | 280 | 64.5 | 60 | 52 | 3 | 3 | 2.5 | 2.5 | 610 | 1070 | 950 | 1400 |
| | 280 | 64.5 | 60 | 52 | 3 | 3 | 2.5 | 2.5 | 610 | 1070 | 950 | 1400 |
| | 290 | 65 | 63.5 | 48 | 2.3 | 2.3 | 2.3 | 2.3 | 580 | 1010 | 950 | 1400 |
| | 300 | 73 | 70 | 60 | 3 | 3 | 3 | 3 | 730 | 1210 | 950 | 1400 |
| | 320 | 57 | 52 | 43 | 5 | 5 | 4 | 4 | 590 | 820 | 1000 | 1500 |
| | 320 | 91 | 86 | 71 | 5 | 5 | 4 | 4 | 940 | 1700 | 950 | 1400 |
| | 380 | 83 | 75 | 64 | 5 | 5 | 4 | 4 | 1180 | 1580 | 900 | 1300 |
| | 380 | 98 | 88 | 60 | 5 | 5 | 4 | 4 | 1050 | 1500 | 900 | 1300 |
| **190** | 260 | 45 | 45 | 34 | 2.5 | 2.5 | 2 | 2 | 350 | 670 | 1100 | 1600 |
| | 260 | 45.5 | 42 | 36 | 2.5 | 2.5 | 2 | 2 | 350 | 670 | 1100 | 1600 |
| | 290 | 64 | 64 | 48 | 3 | 3 | 2.5 | 2.5 | 650 | 1180 | 1000 | 1500 |
| | 290 | 64.5 | 60 | 52 | 3 | 3 | 2.5 | 2.5 | 650 | 1180 | 1000 | 1500 |
| | 290 | 51 | 46 | 40 | 3 | 3 | 2.5 | 2.5 | 380 | 610 | 950 | 1400 |
| | 290 | 64.5 | 60 | 52 | 3 | 3 | 2.5 | 2.5 | 650 | 1180 | 1000 | 1500 |
| | 290 | 64.5 | 60 | 52 | 3 | 3 | 2.5 | 2.5 | 650 | 1180 | 1000 | 1500 |
| | 340 | 60 | 55 | 46 | 5 | 5 | 4 | 4 | 680 | 1040 | 950 | 1400 |
| | 400 | 103 | 90 | 62 | 5 | 5 | 4 | 4 | 1180 | 1690 | 810 | 1000 |

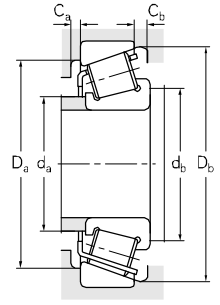
| Designations | Abutment and fillet dimensions | | | | | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $da_{max}$ | $db_{min}$ | $Da_{min}$ | $Da_{max}$ | $Db_{min}$ | $Ca_{min}$ | $Cb_{min}$ | e | Y | Y0 | a | |
| | mm | | | | | | | | | | | kg |
| **32934** | 183 | 182 | 213 | 220 | 222 | 7 | 8 | 0.37 | 1.6 | 0.9 | 42 | 4.51 |
| **32934X2A** | 185 | 180 | 213 | 222 | 224 | 9 | 7.5 | 0.28 | 2.1 | 1.17 | 36 | 3.864 |
| **32034** | 188 | 184 | 230 | 246 | 249 | 10 | 14 | 0.44 | 1.35 | 0.8 | 56 | 10.6 |
| **32034/P4YA6** | 188 | 184 | 230 | 246 | 249 | 10 | 14 | 0.44 | 1.35 | 0.8 | 56 | 10.6 |
| **32034X2A** | 187 | 182 | 230 | 248 | 249 | 10 | 14 | 0.31 | 1.9 | 1.07 | 47 | 10.1 |
| **32234** | 196 | 190 | 259 | 293 | 294 | 10 | 20 | 0.43 | 1.4 | 0.8 | 75 | 30.0 |
| **30334** | 217 | 185 | 304 | 348 | 333 | 10 | 18 | 0.35 | 1.74 | 0.96 | 68 | 35.8 |
| **32334/YA6** | 213 | 184 | 288 | 360 | 332 | 4.5 | 28 | 0.36 | 1.7 | 0.92 | 87 | 63.5 |
| **32334/YA6-1** | 213 | 184 | 288 | 360 | 332 | 4.5 | 28 | 0.36 | 1.7 | 0.92 | 87 | 63.5 |
| **32936** | 194 | 192 | 225 | 240 | 241 | 8 | 11 | 0.48 | 1.25 | 0.7 | 53 | 6.7 |
| **32936X2A** | 194 | 152 | 225 | 240 | 241 | 8 | 11 | 0.48 | 1.25 | 0.7 | 53 | 6.44 |
| **32036** | 199 | 192 | 247 | 268 | 267 | 9 | 16 | 0.42 | 1.4 | 0.8 | 75 | 13.9 |
| **32036X2A** | 199 | 192 | 247 | 268 | 267 | 9 | 16 | 0.28 | 2.2 | 1.19 | 53 | 13.0 |
| **32036X2A/YA8** | 199 | 192 | 247 | 268 | 267 | 9 | 16 | 0.28 | 2.2 | 1.19 | 53 | 13.1 |
| **32036X3A** | 207 | 196 | 247 | 290 | 274 | 4.5 | 17 | 0.44 | 1.4 | 0.75 | 62 | 15.6 |
| **30236X3** | 209 | 198 | 278 | 302 | 300 | 4.5 | 14 | | | | | 19.8 |
| **30236** | 209 | 198 | 278 | 302 | 300 | 4.5 | 14 | 0.45 | 1.3 | 0.73 | 64 | 17.8 |
| **32236** | 204 | 200 | 267 | 303 | 303 | 10 | 20 | 0.44 | 1.35 | 0.8 | 78 | 30.2 |
| **30336** | 207 | 233 | 362 | 324 | 345 | 10 | 19 | 0.36 | 1.7 | 0.92 | 72.4 | 41.4 |
| **31336** | 217 | 220 | 289 | 368 | 355 | 12 | 21 | 0.55 | 0.73 | 0.8 | 120 | 46.4 |
| **32938** | 205 | 202 | 235 | 252 | 251 | 10 | 9.5 | 0.48 | 1.25 | 0.7 | 55 | 6.94 |
| **32938X2A** | 205 | 202 | 235 | 252 | 251 | 10 | 9.5 | 0.38 | 1.6 | 0.86 | 49 | 6.52 |
| **32038** | 210 | 204 | 257 | 276 | 279 | 10 | 16 | 0.44 | 1.35 | 0.8 | 62 | 14.5 |
| **32038X2A** | 209 | 202 | 257 | 278 | 279 | 10 | 13 | 0.37 | 1.6 | 0.89 | 58 | 15.28 |
| **32038X2A-1** | 215 | 202 | 256 | 281 | 272 | 4.5 | 11 | 0.38 | 1.6 | 0.87 | 53 | 10.5 |
| **32038X2A/P4** | 209 | 202 | 257 | 278 | 279 | 10 | 13 | 0.37 | 1.6 | 0.89 | 58 | 15.3 |
| **32038X2A/YA8** | 209 | 202 | 257 | 278 | 279 | 10 | 13 | 0.37 | 1.6 | 0.89 | 58 | 15.28 |
| **30238** | 224 | 210 | 298 | 323 | 318 | 9 | 14 | 0.43 | 1.8 | 0.8 | 63 | 20.6 |
| **31338** | 234 | 203 | 306 | 388 | 375 | 13 | 41 | 0.83 | 0.72 | 0.4 | 126 | 53.3 |

d 200~240 mm





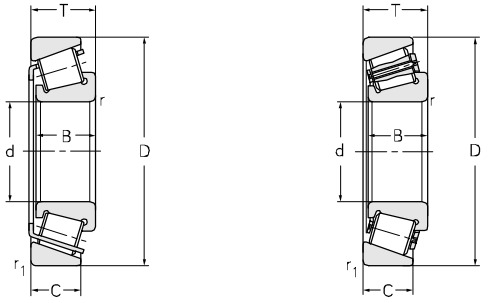





| Principal dimensions | | | | | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | T | B | C | $r_{radial}$ | $r_{axial}$ | $r_{1radial}$ | $r_{1axial}$ | $C_r$ | $C_{or}$ | Grease | Oil |
| mm | | | | | | | | | kN | | r/min | |
| **200** | 280 | 51 | 51 | 39 | 3 | 3 | 2.5 | 2.5 | 455 | 935 | 1000 | 1500 |
| | 280 | 51.5 | 48 | 41 | 3 | 3 | 2.5 | 2.5 | 455 | 935 | 1000 | 1500 |
| | 310 | 70 | 70 | 53 | 3 | 3 | 2.5 | 2.5 | 760 | 1370 | 950 | 1400 |
| | 310 | 70.5 | 66 | 56 | 3 | 3 | 2.5 | 2.5 | 760 | 1370 | 950 | 1400 |
| | 310 | 70 | 66 | 56 | 3 | 3 | 2.5 | 2.5 | 760 | 1370 | 950 | 1400 |
| | 310 | 70 | 66 | 56 | 3 | 3 | 2.5 | 2.5 | 760 | 1370 | 950 | 1400 |
| | 360 | 64 | 58 | 48 | 5 | 5 | 4 | 4 | 780 | 1100 | 900 | 1300 |
| | 360 | 104 | 98 | 82 | 5 | 5 | 4 | 4 | 1350 | 2144 | 900 | 1300 |
| | 420 | 146 | 138 | 115 | 5 | 5 | 5 | 5 | 1820 | 2850 | 800 | 1100 |
| **210** | 285 | 41 | 40 | 33 | 4 | 4 | 3 | 3 | 360 | 710 | 1000 | 1500 |
| **220** | 300 | 51 | 51 | 39 | 3 | 3 | 2.5 | 2.5 | 465 | 960 | 950 | 1400 |
| | 300 | 51.5 | 48 | 41 | 3 | 3 | 2.5 | 2.5 | 465 | 960 | 900 | 1400 |
| | 340 | 76 | 76 | 57 | 4 | 4 | 3 | 3 | 850 | 1520 | 900 | 1300 |
| | 340 | 76 | 76 | 57 | 4 | 4 | 3 | 3 | 850 | 1520 | 900 | 1300 |
| | 340 | 76.5 | 72 | 62 | 4 | 4 | 3 | 3 | 850 | 1520 | 950 | 1400 |
| | 360 | 85 | 82 | 70 | 4 | 4 | 4 | 4 | 1000 | 1800 | 830 | 1050 |
| | 400 | 72 | 65 | 54 | 5 | 5 | 4 | 4 | 975 | 1370 | 900 | 1300 |
| | 400 | 73 | 65 | 54 | 3.7 | 3.7 | 3.7 | 3.7 | 975 | 1370 | 900 | 1300 |
| | 400 | 72 | 65 | 54 | 5 | 5 | 4 | 4 | 993 | 1400 | 850 | 1200 |
| | 400 | 114 | 108 | 90 | 5 | 5 | 4 | 4 | 1650 | 2770 | 900 | 1300 |
| | 460 | 154 | 145 | 122 | 5 | 5 | 5 | 5 | 2130 | 3310 | 710 | 900 |
| **240** | 320 | 51 | 48 | 41 | 3 | 3 | 2.5 | 2.5 | 505 | 1080 | 900 | 1300 |
| | 320 | 51 | 48 | 41 | 3 | 3 | 2.5 | 2.5 | 505 | 1080 | 900 | 1300 |
| | 360 | 76 | 76 | 57 | 4 | 4 | 3 | 3 | 905 | 1660 | 850 | 1200 |
| | 360 | 76 | 76 | 57 | 4 | 4 | 3 | 3 | 905 | 1660 | 850 | 1200 |
| | 360 | 76.5 | 72 | 62 | 4 | 4 | 3 | 3 | 770 | 1400 | 850 | 1200 |
| | 440 | 79 | 72 | 60 | 5 | 5 | 4 | 4 | 1070 | 1550 | 750 | 1000 |
| | 440 | 127 | 120 | 100 | 5 | 5 | 4 | 4 | 1900 | 3300 | 700 | 950 |
| | 440 | 127 | 120 | 100 | 5 | 5 | 4 | 4 | 1900 | 3300 | 750 | 1000 |
| | 500 | 165 | 155 | 132 | 6 | 6 | 5 | 5 | 2360 | 4100 | 670 | 900 |

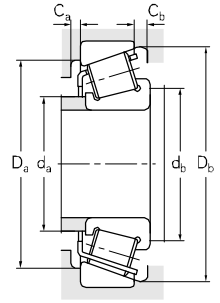
| Designations | Abutment and fillet dimensions | | | | | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $da_{max}$ | $db_{min}$ | $Da_{min}$ | $Da_{max}$ | $Db_{min}$ | $Ca_{min}$ | $Cb_{min}$ | e | Y | Y0 | a | |
| | mm | | | | | | | | | | | kg |
| **32940** | 218 | 215 | 252 | 271 | 270 | 4.5 | 11 | 0.39 | 1.5 | 0.84 | 54 | 9.56 |
| **32940X2A** | 220 | 212 | 251 | 271 | 270 | 4.5 | 11 | 0.39 | 1.5 | 0.84 | 54 | 8.86 |
| **32040** | 222 | 214 | 273 | 296 | 297 | 11 | 17 | 0.43 | 1.4 | 0.8 | 66 | 19.5 |
| **32040X2A** | 221 | 212 | 273 | 298 | 297 | 11 | 17 | 0.39 | 1.5 | 0.84 | 65 | 18.2 |
| **32040X2A/P4YA8** | 221 | 212 | 273 | 298 | 297 | 11 | 17 | 0.39 | 1.53 | 0.84 | 67 | 17.8 |
| **32040X2A/YA8** | 221 | 212 | 273 | 298 | 297 | 11 | 17 | 0.39 | 1.5 | 0.84 | 65 | 17.8 |
| **30240** | 236 | 218 | 315 | 342 | 338 | 9 | 16 | 0.44 | 1.4 | 0.76 | 70 | 25.4 |
| **32240** | 222 | 218 | 302 | 342 | 342 | 11 | 22 | 0.41 | 1.5 | 0.81 | 84 | 42.6 |
| **32340** | 239 | 253 | 398 | 346 | 346 | 11 | 31 | 0.37 | 1.6 | 0.88 | 107 | 90.5 |
| **30642N1-WTL** | 218 | 215 | 252 | 271 | 270 | 4.5 | 11 | 0.32 | 1.9 | 1.04 | 52 | 7.28 |
| **32944** | 234 | 234 | 275 | 286 | 290 | 9 | 12 | 0.43 | 1.4 | 0.8 | 58 | 10.0 |
| **32944X2A** | 310 | 232 | 342 | 291 | 361 | 10 | 11 | 0.39 | 1.5 | 0.84 | 66 | 10.1 |
| **32044** | 244 | 234 | 300 | 325 | 326 | 12 | 19 | 0.43 | 1.4 | 0.8 | 72 | 23.9 |
| **32044/P6-XD** | 244 | 236 | 300 | 325 | 326 | 12 | 19 | 0.43 | 1.4 | 0.8 | 72 | 24.2 |
| **32044X2A** | 243 | 234 | 300 | 326 | 326 | 12 | 19 | 0.35 | 1.7 | 0.95 | 67 | 23.3 |
| **32044X3** | 243 | 234 | 300 | 326 | 326 | 12 | 19 | 0.4 | 1.51 | 0.83 | 77 | 32.9 |
| **30244** | 256 | 220 | 334 | 382 | 382 | 10 | 18 | 0.42 | 1.4 | 0.79 | 77 | 36.8 |
| **30244A/YA6** | 256 | 220 | 334 | 382 | 382 | 10 | 19 | 0.37 | 1.6 | 0.88 | 71 | 37.6 |
| **30244/HC** | 259 | 242 | 348 | 383 | 371 | 10 | 18 | 0.43 | 1.4 | 0.8 | 74 | 36.8 |
| **32244** | 256 | 220 | 334 | 382 | 382 | 10 | 24 | 0.44 | 1.4 | 0.76 | 96 | 62.7 |
| **32344** | 274 | 235 | 372 | 445 | 430 | 13 | 32 | 0.37 | 1.62 | 0.89 | 112 | 114 |
| **32948X2A** | 259 | 252 | 331 | 387 | 309 | 10 | 11 | 0.32 | 1.9 | 1.04 | 52 | 10.8 |
| **32948X2A/P4** | 259 | 252 | 331 | 387 | 309 | 10 | 11 | 0.32 | 1.9 | 1.04 | 52 | 11.1 |
| **32048** | 262 | 256 | 318 | 345 | 346 | 12 | 19 | 0.46 | 1.3 | 0.7 | 78 | 26 |
| **32048/P6-XD** | 262 | 256 | 318 | 345 | 346 | 12 | 19 | 0.46 | 1.3 | 0.7 | 78 | 26 |
| **32048X2A** | 261 | 254 | 318 | 346 | 346 | 12 | 19 | 0.31 | 1.9 | 1.05 | 65 | 23.8 |
| **30248** | 267 | 288 | 422 | 384 | 408 | 11 | 19 | 0.44 | 1.4 | 0.74 | 85 | 46.8 |
| **32248** | 276 | 262 | 365 | 420 | 415 | 14 | 27 | 0.43 | 1.4 | 0.8 | 105 | 82.5 |
| **32248/HC** | 276 | 262 | 365 | 420 | 415 | 14 | 27 | 0.43 | 1.4 | 0.8 | 105 | 82.5 |
| **32348** | 279 | 301 | 478 | 410 | 464 | 12 | 33 | 0.37 | 1.6 | 0.88 | 123 | 147 |

d 254~300 mm





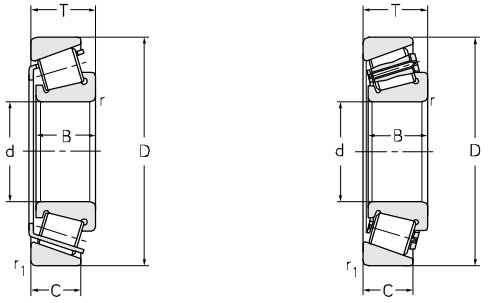





| Principal dimensions | | | | | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | T | B | C | $r_{radial}$ | $r_{axial}$ | $r_{1radial}$ | $r_{1axial}$ | $C_r$ | $C_{or}$ | Grease | Oil |
| mm | | | | | | | | | kN | | r/min | |
| **254** | 422.275 | 86.1 | 79.8 | 66.7 | 4.7 | 4.7 | 2.5 | 2.5 | 1010 | 1760 | 710 | 900 |
| **255** | 560 | 123.05 | 104.8 | 70 | 6 | 6 | 6 | 6 | 1920 | 2690 | 560 | 750 |
| **260** | 360 | 63.5 | 63.5 | 48 | 3 | 3 | 2.5 | 2.5 | 650 | 1270 | 800 | 1100 |
| | 360 | 63.5 | 63.5 | 48 | 3 | 3 | 2.5 | 2.5 | 650 | 1270 | 800 | 1100 |
| | 360 | 64.5 | 60 | 52 | 3 | 3 | 2.5 | 2.5 | 595 | 1250 | 800 | 1100 |
| | 360 | 64.5 | 60 | 53 | 3 | 3 | 2.5 | 2.5 | 630 | 1310 | 800 | 1100 |
| | 400 | 87 | 87 | 65 | 5 | 5 | 4 | 4 | 1100 | 2030 | 800 | 1100 |
| | 400 | 87 | 87 | 65 | 5 | 5 | 4 | 4 | 1100 | 2030 | 800 | 1100 |
| | 400 | 87.7 | 82 | 71 | 5 | 5 | 4 | 4 | 1050 | 1960 | 800 | 1100 |
| | 480 | 89 | 80 | 67 | 6 | 6 | 5 | 5 | 1430 | 2150 | 670 | 900 |
| | 480 | 137 | 130 | 105 | 6 | 6 | 5 | 5 | 2160 | 3650 | 670 | 900 |
| | 480 | 133.5 | 141 | 102.5 | 6 | 6 | 5 | 5 | 2280 | 3750 | 670 | 900 |
| | 540 | 114 | 102 | 85 | 6 | 6 | 6 | 6 | 2015 | 2730 | 670 | 900 |
| **280** | 380 | 63.5 | 63.5 | 48 | 3 | 3 | 2.5 | 2.5 | 720 | 1500 | 800 | 1100 |
| | 380 | 64.5 | 60 | 52 | 3 | 3 | 2.5 | 2.5 | 720 | 1500 | 800 | 1100 |
| | 420 | 87 | 87 | 65 | 5 | 5 | 4 | 4 | 1200 | 2300 | 750 | 1000 |
| | 420 | 87 | 87 | 65 | 5 | 5 | 4 | 4 | 1200 | 2300 | 750 | 1000 |
| | 420 | 87.7 | 82 | 71 | 5 | 5 | 4 | 4 | 1200 | 2300 | 750 | 1000 |
| **285** | 370 | 40 | 40 | 28 | 3 | 3 | 2.5 | 2.5 | 360 | 720 | 730 | 930 |
| **300** | 420 | 74.5 | 72 | 62 | 4 | 4 | 3 | 3 | 710 | 1810 | 700 | 950 |
| | 420 | 76.5 | 72 | 62 | 4 | 4 | 3 | 3 | 880 | 1870 | 700 | 950 |
| | 440 | 73 | 70 | 55 | 4 | 4 | 3 | 3 | 860 | 1460 | 700 | 950 |
| | 460 | 100 | 100 | 74 | 5 | 5 | 4 | 4 | 1460 | 2740 | 670 | 900 |
| | 460 | 100 | 100 | 74 | 5 | 5 | 4 | 4 | 1430 | 2740 | 670 | 900 |
| | 460 | 100.7 | 95 | 77 | 5 | 5 | 4 | 4 | 1310 | 2400 | 700 | 950 |
| | 540 | 96 | 85 | 71 | 6 | 6 | 5 | 5 | 1600 | 2500 | 630 | 760 |
| | 540 | 149 | 140 | 115 | 6 | 6 | 5 | 5 | 2610 | 4450 | 670 | 900 |

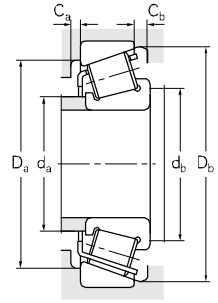
| Designations | Abutment and fillet dimensions | | | | | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $da_{max}$ | $db_{min}$ | $Da_{min}$ | $Da_{max}$ | $Db_{min}$ | $Ca_{min}$ | $Cb_{min}$ | e | Y | Y0 | a | |
| | mm | | | | | | | | | | | kg |
| **306/254** | 293 | 270 | 371 | 413 | 403 | 12 | 19 | 0.36 | 1.65 | 0.9 | 81 | 45.4 |
| **30651** | 329 | 274 | 435 | 542 | 510 | 13 | 53.1 | 0.87 | 0.7 | 0.38 | 171 | 127 |
| **32952** | 286 | 272 | 325 | 351 | 344 | 13 | 13 | 0.41 | 1.48 | 0.81 | 72 | 17.9 |
| **32952/P4** | 286 | 272 | 325 | 351 | 344 | 13 | 13 | 0.3 | 2 | 1.09 | 60 | 17.9 |
| **32952X2A** | 286 | 272 | 325 | 351 | 344 | 13 | 13 | 0.3 | 2 | 1.09 | 60 | 19.2 |
| **32952X2A-1** | 286 | 272 | 325 | 351 | 344 | 13 | 13 | 0.3 | 2 | 1.09 | 60 | 19.1 |
| **32052** | 287 | 282 | 352 | 383 | 383 | 13 | 12 | 0.43 | 1.4 | 0.8 | 84 | 39.8 |
| **32052/HC** | 287 | 282 | 352 | 383 | 383 | 13 | 22 | 0.43 | 1.4 | 0.8 | 84 | 37.5 |
| **32052X2A** | 287 | 278 | 352 | 382 | 383 | 14 | 22 | 0.3 | 2 | 1.11 | 71 | 37.8 |
| **30252** | 293 | 316 | 458 | 421 | 447 | 12 | 22 | 0.44 | 1.4 | 0.74 | 94 | 63.9 |
| **32252** | 305 | 279 | 394 | 465 | 451 | 13 | 32 | 0.43 | 1.4 | 0.77 | 113 | 105 |
| **32252X2/HC** | 302 | 285 | 397 | 465 | 453 | 12 | 30 | 0.43 | 1.4 | 0.77 | 111 | 101 |
| **30352** | 332 | 279 | 449 | 522 | 481 | 10 | 29 | 0.32 | 1.9 | 1.04 | 92 | 113 |
| **32956** | 305 | 292 | 344 | 371 | 364 | 13 | 13 | 0.43 | 1.4 | 0.77 | 100 | 20 |
| **32956X2A** | 305 | 292 | 344 | 371 | 364 | 13 | 13 | 0.32 | 1.9 | 1.03 | 64 | 21.3 |
| **32056** | 305 | 302 | 370 | 400 | 402 | 14 | 22 | 0.46 | 1.3 | 0.7 | 89 | 40.4 |
| **32056/HC** | 305 | 302 | 370 | 400 | 402 | 14 | 22 | 0.46 | 1.3 | 0.7 | 89 | 40.4 |
| **32056X2A** | 305 | 302 | 370 | 400 | 402 | 14 | 22 | 0.46 | 1.3 | 0.7 | 89 | 39.6 |
| **306/285** | 308 | 295 | 344 | 361 | 358 | 10 | 12 | 0.4 | 1.49 | 0.82 | 61 | 10.1 |
| **32960** | 330 | 314 | 379 | 409 | 400 | 13 | 15 | 0.28 | 2.1 | 1.17 | 67 | 30.2 |
| **32960X2A** | 330 | 314 | 379 | 409 | 400 | 13 | 15 | 0.28 | 2.12 | 1.17 | 70 | 30.2 |
| **32960X3B/P5** | 335 | 314 | 398 | 429 | 423 | 13 | 18 | 0.44 | 1.4 | 0.75 | 87 | 34.2 |
| **32060** | 330 | 322 | 404 | 440 | 439 | 15 | 26 | 0.43 | 1.4 | 0.8 | 97 | 56.6 |
| **32060/HC** | 330 | 322 | 404 | 440 | 439 | 15 | 26 | 0.43 | 1.4 | 0.8 | 97 | 56.6 |
| **32060X2A** | 329 | 318 | 404 | 442 | 439 | 15 | 26 | 0.36 | 1.7 | 0.9 | 89 | 57.0 |
| **30260** | 358 | 320 | 458 | 525 | 498 | 15 | 25 | 0.44 | 1.36 | 0.75 | 106 | 84.7 |
| **32260/HCYB2** | | | | | | | | 0.43 | 1.39 | 0.77 | 126 | 138 |

d 320~420 mm



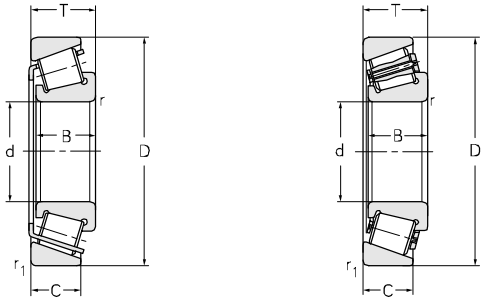






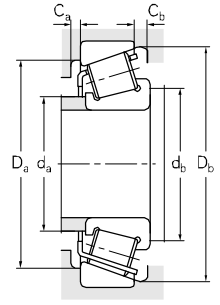

| Principal dimensions | | | | | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | T | B | C | $r_{radial}$ | $r_{axial}$ | $r_{1radial}$ | $r_{1axial}$ | $C_r$ | $C_{or}$ | Grease | Oil |
| mm | | | | | | | | | kN | | r/min | |
| **320** | 440 | 76 | 72 | 62 | 4 | 4 | 3 | 3 | 960 | 1940 | 670 | 900 |
| | 480 | 100 | 100 | 74 | 5 | 5 | 4 | 4 | 1540 | 2940 | 630 | 850 |
| | 480 | 100 | 100 | 74 | 5 | 5 | 4 | 4 | 1550 | 2940 | 630 | 850 |
| | 480 | 95 | 95 | 70 | 5 | 5 | 4 | 4 | 1480 | 2860 | 630 | 850 |
| | 580 | 104 | 92 | 75 | 6 | 6 | 5 | 5 | 1700 | 2560 | 530 | 750 |
| **340** | 460 | 76 | 76 | 57 | 4 | 4 | 3 | 3 | 1000 | 2350 | 500 | 830 |
| | 460 | 76 | 76 | 57 | 4 | 4 | 3 | 3 | 1000 | 2350 | 500 | 830 |
| | 460 | 76 | 72 | 63 | 4 | 4 | 3 | 3 | 920 | 1990 | 500 | 830 |
| | 500 | 100 | 100 | 74 | 5 | 5 | 5 | 5 | 1800 | 3050 | 500 | 630 |
| | 500 | 100 | 100 | 74 | 5 | 5 | 5 | 5 | 1530 | 3050 | 500 | 630 |
| | 520 | 86 | 82 | 64 | 5 | 5 | 4 | 4 | 1200 | 2050 | 500 | 630 |
| **360** | 480 | 76 | 76 | 57 | 4 | 4 | 4 | 4 | 970 | 2220 | 500 | 630 |
| | 530 | 80 | 66 | 59 | 5 | 5 | 5 | 5 | 1030 | 1900 | 500 | 630 |
| | 540 | 86 | 82 | 63.5 | 5 | 5 | 4 | 4 | 1270 | 2200 | 480 | 600 |
| | 650 | 155 | 150 | 110 | 7.5 | 7.5 | 7.5 | 7.5 | 2900 | 5650 | 400 | 500 |
| **380** | 520 | 87 | 82 | 71 | 5 | 5 | 4 | 4 | 1190 | 2670 | 560 | 750 |
| | 620 | 112 | 106 | 92 | 5 | 5 | 5 | 5 | 2170 | 3800 | 400 | 500 |
| **400** | 500 | 60 | 57 | 47 | 4 | 4 | 3 | 3 | 460 | 950 | 400 | 500 |
| | 540 | 70 | 65 | 48 | 4 | 4 | 4 | 4 | 965 | 1930 | 350 | 450 |
| | 540 | 70 | 70 | 53 | 5 | 5 | 4 | 4 | 1040 | 2320 | 350 | 450 |
| | 540 | 87 | 82 | 71 | 5 | 5 | 4 | 4 | 1280 | 2880 | 380 | 480 |
| | 600 | 125 | 118 | 100 | 6 | 6 | 5 | 5 | 2170 | 4550 | 400 | 500 |
| | 750 | 130 | 115 | 77 | 6 | 6 | 6 | 6 | 2660 | 4180 | 320 | 430 |
| **420** | 560 | 70 | 65 | 51 | 4 | 4 | 4 | 4 | 1020 | 2090 | 420 | 560 |
| | 560 | 70 | 65 | 51 | 4 | 4 | 4 | 4 | 1020 | 2090 | 420 | 560 |
| | 560 | 87 | 82 | 72 | 5 | 5 | 4 | 4 | 1170 | 2900 | 420 | 560 |
| | 560 | 70 | 65 | 51 | 4 | 4 | 4 | 4 | 1020 | 2090 | 420 | 560 |
| | 620 | 95 | 90 | 67 | 5 | 5 | 5 | 5 | 1560 | 2930 | 380 | 480 |

| Designations | Abutment and fillet dimensions | | | | | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $da_{max}$ | $db_{min}$ | $Da_{min}$ | $Da_{max}$ | $Db_{min}$ | $Ca_{min}$ | $Cb_{min}$ | e | Y | Y0 | a | |
| | mm | | | | | | | | | | | kg |
| **32964X2A** | 343 | 337 | 402 | 424 | 426 | 13 | 19 | 0.43 | 1.4 | 0.8 | 84 | 32.1 |
| **32064** | 354 | 336 | 419 | 467 | 463 | 13 | 26 | 0.46 | 1.3 | 0.72 | 104 | 62.7 |
| **32064/HC** | 354 | 336 | 419 | 467 | 463 | 13 | 26 | 0.46 | 1.3 | 0.72 | 104 | 62.7 |
| **32064X2** | 354 | 336 | 419 | 467 | 463 | 13 | 26 | 0.46 | 1.3 | 0.72 | 104 | 57.7 |
| **30264** | 353 | 381 | 558 | 503 | 533 | 14 | 29 | 0.44 | 1.4 | 0.74 | 114 | 103 |
| **32968** | 361 | 357 | 421 | 444 | 446 | 14 | 19 | 0.44 | 1.35 | 0.8 | 90 | 36.5 |
| **32968/P4** | 361 | 357 | 421 | 444 | 446 | 14 | 19 | 0.44 | 1.35 | 0.8 | 90 | 31.6 |
| **32968X2A** | 361 | 357 | 421 | 444 | 446 | 14 | 19 | 0.41 | 1.45 | 0.8 | 91 | 31.6 |
| **32068X3/HCYB2** | 371 | 356 | 442 | 484 | 481 | 12 | 26 | 0.4 | 1.49 | 0.82 | 99 | 62.8 |
| **32068X3/YB2** | 371 | 356 | 442 | 484 | 481 | 12 | 26 | 0.4 | 1.49 | 0.82 | 99 | 62.8 |
| **31068X2** | 378 | 367 | 462 | 507 | 483 | 13 | 20 | 0.29 | 2.09 | 1.15 | 78 | 73.9 |
| **32972** | 388 | 374 | 433 | 467 | 468 | 13 | 19 | 0.46 | 1.3 | 0.72 | 97 | 38.5 |
| **30672/P5** | 410 | 376 | 476 | 515 | 502 | 13 | 21 | 0.4 | 1.5 | 0.82 | 95 | 53.2 |
| **31072X2** | 401 | 390 | 482 | 526 | 509 | 13 | 21 | 0.37 | 1.61 | 0.89 | 97 | 73.1 |
| **30672-1** | 410 | 376 | 476 | 515 | 502 | 13 | 21 | 0.6 | 1.01 | 0.55 | 169 | 219 |
| **32976** | 407 | 406 | 502 | 478 | 501 | 16 | 16 | 0.39 | 1.6 | 0.86 | 95 | 50.0 |
| **31176X2** | 431 | 396 | 534 | 604 | 590 | 12 | 20 | 0.46 | 1.3 | 0.72 | 126 | 123 |
| **30680** | 368 | 414 | 406 | 489 | 430 | 13 | 13 | 0.38 | 1.6 | 0.86 | 77 | 25.1 |
| **31980** | 450 | 436 | 500 | 550 | 530 | 8 | 8 | 0.42 | 1.5 | 0.9 | 100 | 39.7 |
| **31980X2** | 450 | 436 | 500 | 550 | 530 | 8 | 8 | 0.42 | 1.5 | 0.9 | 100 | 44 |
| **32980** | 450 | 436 | 500 | 550 | 530 | 8 | 8 | 0.4 | 1.4 | 0.8 | 185 | 54.1 |
| **32080** | 443 | 420 | 527 | 585 | 574 | 14 | 25 | 0.36 | 1.67 | 0.92 | 118 | 118 |
| **30680-1** | 480 | 470 | 617 | 730 | 688 | 15 | 15 | 0.7 | 0.86 | 0.47 | 189 | 222 |
| **31984** | 458 | 436 | 528 | 528 | 549 | 13 | 28 | 0.41 | 1.5 | 0.81 | 106 | 41.7 |
| **31984/HC** | 458 | 436 | 528 | 528 | 549 | 13 | 28 | 0.41 | 1.5 | 0.81 | 106 | 41.8 |
| **32984X2** | 448 | 435 | 507 | 547 | 547 | 10 | 15 | 0.41 | 1.46 | 0.8 | 107 | 56.8 |
| **31984/P4** | 458 | 436 | 528 | 528 | 549 | 13 | 28 | 0.41 | 1.5 | 0.81 | 106 | 41.7 |
| **31084X2** | 470 | 436 | 552 | 605 | 586 | 13 | 28 | 0.41 | 1.5 | 0.8 | 111 | 88.3 |







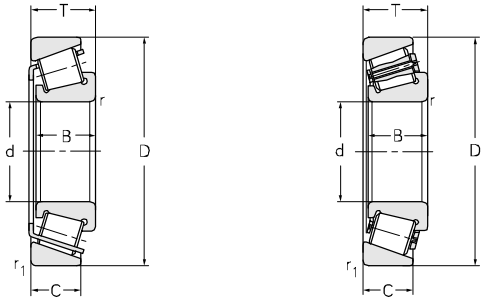



| Principal dimensions | | | | | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | T | B | C | $r_{radial}$ | $r_{axial}$ | $r_{1radial}$ | $r_{1axial}$ | $C_r$ | $C_{or}$ | Grease | Oil |
| mm | | | | | | | | | kN | | r/min | |
| **420** | 620 | 95 | 90 | 67 | 5 | 5 | 5 | 5 | 1560 | 2940 | 380 | 480 |
| | 620 | 125 | 118 | 100 | 6 | 6 | 5 | 5 | 2300 | 5100 | 380 | 480 |
| | 700 | 130 | 122 | 92 | 6 | 6 | 6 | 6 | 2700 | 4990 | 350 | 440 |
| **440** | 620 | 95 | 90 | 67 | 5 | 5 | 5 | 5 | 1400 | 2900 | 360 | 460 |
| | 650 | 130 | 126 | 104 | 6 | 6 | 6 | 6 | 2620 | 5650 | 350 | 450 |
| **460** | 600 | 87 | 82 | 71 | 5 | 5 | 4 | 4 | 1340 | 3150 | 360 | 460 |
| | 600 | 87 | 85 | 63.5 | 4 | 4 | 4 | 4 | 1300 | 3010 | 360 | 460 |
| | 620 | 80 | 74 | 58 | 4 | 4 | 4 | 4 | 1260 | 2570 | 350 | 450 |
| | 680 | 105 | 100 | 78 | 6 | 6 | 6 | 6 | 1990 | 3700 | 330 | 440 |
| **470** | 630 | 80 | 80 | 62 | 5 | 5 | 5 | 5 | 1410 | 3100 | 350 | 450 |
| **530** | 710 | 88 | 82 | 62 | 5 | 5 | 5 | 5 | 1560 | 3150 | 340 | 450 |
| **600** | 720 | 73 | 69 | 56 | 3 | 3 | 3 | 3 | 1230 | 3320 | 340 | 450 |
| | 870 | 124 | 118 | 89 | 6 | 6 | 6 | 6 | 3150 | 6650 | 340 | 450 |
| **610** | 820 | 105 | 95 | 80 | 6 | 6 | 6 | 6 | 1830 | 4200 | 350 | 460 |
| **630** | 850 | 132 | 132 | 95 | 6 | 6 | 6 | 6 | 3080 | 7150 | 360 | 450 |
| | 920 | 134 | 128 | 94 | 7.5 | 7.5 | 7.5 | 7.5 | 3410 | 7100 | 320 | 430 |
| **710** | 950 | 114 | 106 | 80 | 6 | 6 | 6 | 6 | 2860 | 6900 | 260 | 360 |
| | 950 | 130 | 122 | 95 | 6 | 6 | 6 | 6 | 3400 | 7800 | 260 | 360 |
| **710.5** | 950 | 130 | 122 | 95 | 6 | 6 | 6 | 6 | 3400 | 7800 | 260 | 360 |
| **711** | 950 | 114 | 106 | 80 | 6 | 6 | 6 | 6 | 2800 | 6900 | 260 | 360 |
| **760** | 890 | 78 | 75 | 59 | 4.7 | 4.7 | 4.7 | 4.7 | 1360 | 3520 | 250 | 340 |
| **830** | 1080 | 156 | 156 | 118 | 6 | 6 | 6 | 6 | 4600 | 12000 | 230 | 430 |
| | 1100 | 156 | 152 | 118 | 6 | 6 | 6 | 6 | 4600 | 12400 | 230 | 430 |

¥

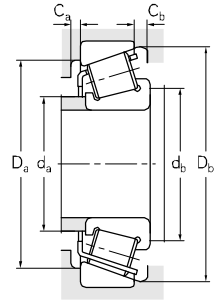
| Designations | Abutment and fillet dimensions | | | | | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $da_{max}$ | $db_{min}$ | $Da_{min}$ | $Da_{max}$ | $Db_{min}$ | $Ca_{min}$ | $Cb_{min}$ | e | Y | Y0 | a | |
| | mm | | | | | | | | | | | kg |
| **31084X2/P5** | 470 | 436 | 552 | 605 | 586 | 13 | 28 | 0.41 | 1.5 | 0.8 | 111 | 88.3 |
| **32084** | 473 | 444 | 572 | 572 | 600 | 13 | 28 | 0.37 | 1.6 | 0.88 | 120 | 125 |
| **31184X2** | 491 | 440 | 607 | 680 | 646 | 13 | 38 | 0.32 | 1.88 | 1.04 | 116 | 175 |
| **32988X3** | 480 | 455 | 555 | 605 | 590 | 10 | 28 | 0.41 | 1.46 | 0.8 | 114 | 81.3 |
| **32088X2** | 485 | 460 | 574 | 630 | 621 | 12 | 26 | 0.36 | 1.67 | 0.92 | 125 | 141 |
| **30692/HC** | 489 | 475 | 546 | 587 | 588 | 12 | 16 | 0.47 | 1.28 | 0.7 | 123 | 59.5 |
| **31992X3/HC** | 499 | 473 | 569 | 607 | 600 | 12 | 22 | 0.4 | 1.49 | 0.82 | 108 | 59.4 |
| **31992X2** | 499 | 473 | 569 | 607 | 600 | 12 | 22 | 0.4 | 1.49 | 0.82 | 108 | 62.3 |
| **31092X2** | 514 | 480 | 613 | 660 | 645 | 10 | 27 | | | | | 117 |
| **30694** | 509 | 485 | 579 | 615 | 605 | 10 | 18 | 0.32 | 1.88 | 1.04 | 94 | 66 |
| **319/530X2** | 573 | 546 | 655 | 695 | 683 | 13 | 26 | 0.39 | 1.5 | 0.84 | 118 | 81.5 |
| **306/600** | 624 | 611 | 679 | 709 | 706 | 10 | 17 | 0.37 | 1.64 | 0.9 | 113 | 53 |
| **310/600X2** | 624 | 611 | 679 | 709 | 706 | 10 | 17 | 0.41 | 1.45 | 0.8 | 155 | 231 |
| **306/610** | 662 | 630 | 741 | 800 | 781 | 13 | 25 | 0.37 | 1.6 | 0.88 | 139 | 139 |
| **329/630** | 675 | 649 | 766 | 832 | 821 | 13 | 37 | 0.46 | 1.3 | 0.72 | 168 | 200 |
| **306/630** | 704 | 631 | 819 | 902 | 867 | 13 | 40 | 0.43 | 1.4 | 0.78 | 166 | 286 |
| **319/710** | 774 | 729 | 864 | 932 | 909 | 13 | 34 | 0.46 | 1.3 | 0.72 | 175 | 210 |
| **319/710X2** | 774 | 729 | 864 | 932 | 909 | 13 | 34 | 0.43 | 1.41 | 0.78 | 177 | 238 |
| **319/710.5** | 774 | 729 | 864 | 932 | 909 | 13 | 34 | 0.43 | 1.41 | 0.78 | 177 | 238 |
| **319/711** | 773 | 731 | 864 | 932 | 909 | 13 | 34 | 0.43 | 1.41 | 0.78 | 61 | 209 |
| **306/760/HC** | 785 | 776 | 393 | 870 | 870 | 13 | 22 | 0.32 | 1.9 | 1.04 | 71 | 78.3 |
| **306/830/HCYB2** | 882 | 851 | 995 | 1080 | 1067 | 13 | 38 | 0.44 | 1.36 | 0.75 | 209 | 360 |
| **306/830/HCR** | 882 | 850 | 995 | 1080 | 1067 | 13 | 38 | 0.44 | 1.36 | 0.75 | 208 | 398 |

d 831~1000 mm





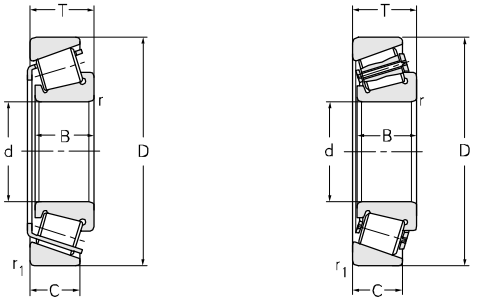





| Principal dimensions | | | | | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | T | B | C | $r_{radial}$ | $r_{axial}$ | $r_{1radial}$ | $r_{1axial}$ | $C_r$ | $C_{or}$ | Grease | Oil |
| mm | | | | | | | | | kN | | r/min | |
| **831** | 1080 | 156 | 156 | 118 | 6 | 6 | 6 | 6 | 4600 | 12000 | 230 | 430 |
| | 1100 | 156 | 152 | 118 | 6 | 6 | 6 | 6 | 4600 | 12400 | 230 | 430 |
| **850** | 1030 | 90 | 88 | 64 | 6 | 6 | 6 | 6 | 2200 | 5900 | 200 | 300 |
| **900** | 1180 | 124 | 122 | 87 | 6 | 6 | 6 | 6 | 3500 | 9000 | 170 | 230 |
| | 1280 | 190 | 170 | 135 | 7.5 | 7.5 | 7.5 | 7.5 | 6430 | 14600 | 170 | 220 |
| **950** | 1250 | 140 | 132 | 100 | 7.5 | 7.5 | 7.5 | 7.5 | 4400 | 10500 | 160 | 220 |
| **1000** | 1420 | 210 | 195 | 150 | 7.5 | 7.5 | 7.5 | 7.5 | 8100 | 18000 | 140 | 210 |

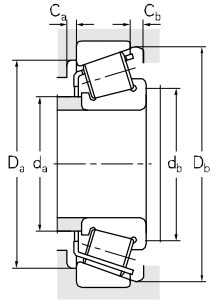
| Designations | Abutment and fillet dimensions | | | | | | | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $da_{max}$ | $db_{min}$ | $Da_{min}$ | $Da_{max}$ | $Db_{min}$ | $Ca_{min}$ | $Cb_{min}$ | e | Y | Y0 | a | |
| | mm | | | | | | | | | | | kg |
| **306/831/HCYB2** | 882 | 851 | 995 | 1080 | 1067 | 13 | 38 | 0.44 | 1.36 | 0.75 | 209 | 359 |
| **306/831/HCR** | 882 | 851 | 995 | 1080 | 1067 | 13 | 38 | 0.44 | 1.36 | 0.75 | 209 | 397 |
| **318/850X2** | 892 | 869 | 968 | 1012 | 1004 | 13 | 26 | 0.44 | 1.4 | 0.75 | 176 | 140 |
| **319/900X2** | 965 | 920 | 1092 | 1160 | 1142 | 13 | 37 | 0.41 | 1.49 | 0.82 | 194 | 327 |
| **306/900/HC** | 990 | 920 | 1142 | 1230 | 1265 | 13 | 55 | 0.44 | 1.4 | 0.74 | 242 | 246 |
| **319/950X2/HCR** | 1023 | 975 | 1158 | 1225 | 1200 | 13 | 40 | 0.33 | 1.82 | 1 | 183 | 416 |
| **306/1000** | 1090 | 1070 | 1265 | 1390 | 1358 | 16 | 20 | 0.46 | 1.3 | 0.72 | 278 | 966 |

d 17.462~28.575 mm







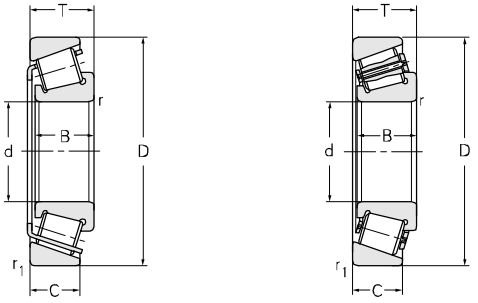



| Principal dimensions | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | | D | | T | | B | | C | | $r_{min}$ | $R_{min}$ |
| mm | in | mm | in | mm | in | mm | in | mm | in | mm | |
| **17.462** | 0.687 | 39.878 | 1.57 | 13.843 | 0.545 | 14.605 | 0.575 | 10.668 | 0.42 | 1.3 | 1.3 |
| | | 39.878 | 1.57 | 13.843 | 0.545 | 14.605 | 0.575 | 10.668 | 0.42 | 1.3 | 1.3 |
| **19.05** | 0.75 | 45.237 | 1.781 | 15.494 | 0.61 | 16.637 | 0.655 | 12.065 | 0.475 | 1.2 | 1.2 |
| | | 49.225 | 1.938 | 18.034 | 0.71 | 19.05 | 0.75 | 14.288 | 0.563 | 1.3 | 1.3 |
| | | 49.225 | 1.938 | 23.02 | 0.906 | 21.539 | 0.848 | 17.462 | 0.687 | 3.5 | 1.5 |
| **20.625** | 0.812 | 49.225 | 1.938 | 23.02 | 0.906 | 21.539 | 0.848 | 17.462 | 0.687 | 1.5 | 1.5 |
| **21.43** | 0.844 | 45.237 | 1.781 | 15.494 | 0.61 | 16.637 | 0.655 | 12.065 | 0.475 | 1.3 | 1.3 |
| | | 50.005 | 1.969 | 17.526 | 0.69 | 18.288 | 0.72 | 13.97 | 0.55 | 1.3 | 1.3 |
| | | 50.005 | 1.969 | 17.526 | 0.69 | 18.288 | 0.72 | 13.97 | 0.55 | 1.3 | 1.3 |
| **21.979** | 0.865 | 45.237 | 1.781 | 15.494 | 0.61 | 16.637 | 0.655 | 12.065 | 0.475 | 1.3 | 1.3 |
| | | 45.974 | 1.81 | 15.494 | 0.61 | 16.637 | 0.655 | 12.065 | 0.475 | 1.3 | 1.3 |
| **22.225** | 0.875 | 50.8 | 2 | 15.011 | 0.591 | 14.26 | 0.561 | 12.7 | 0.5 | 1.5 | 1.5 |
| **25.4** | 1 | 50.8 | 2 | 15.011 | 0.591 | 14.26 | 0.561 | 12.7 | 0.5 | 1.5 | 1.5 |
| | | 56.896 | 2.24 | 19.368 | 0.763 | 19.837 | 0.781 | 15.875 | 0.625 | 1.3 | 0.8 |
| | | 57.15 | 2.25 | 17.462 | 0.687 | 17.462 | 0.687 | 13.495 | 0.531 | 1.5 | 1.3 |
| | | 57.15 | 2.25 | 19.431 | 0.765 | 19.431 | 0.765 | 14.732 | 0.58 | 1.5 | 1.5 |
| | | 62 | 2.441 | 19.05 | 0.75 | 20.638 | 0.813 | 14.288 | 0.563 | 1.3 | 1.5 |
| **26*** | | 57.15 | 2.25 | 17.462 | 0.687 | 17.462 | 0.687 | 13.495 | 0.531 | 1.5 | 3.5 |
| **26.988** | 1.063 | 63.5 | 2.5 | 20.638 | 0.813 | 20.638 | 0.813 | 15.875 | 0.625 | 1.5 | 0.8 |
| **28*** | | 57.15 | 2.25 | 17.462 | 0.687 | 17.462 | 0.687 | 13.495 | 0.531 | 1.5 | 3.5 |
| **28.575** | 1.125 | 57.15 | 2.25 | 19.845 | 0.781 | 19.355 | 0.762 | 15.875 | 0.625 | 1.5 | 0.8 |
| | | 60.325 | 2.375 | 19.845 | 0.781 | 19.355 | 0.762 | 15.875 | 0.625 | 1.3 | 3.5 |
| | | 64.292 | 2.531 | 21.433 | 0.844 | 21.433 | 0.844 | 16.67 | 0.656 | 1.5 | 1.5 |
| | | 66.421 | 2.615 | 23.812 | 0.937 | 25.433 | 1.001 | 19.05 | 0.75 | 1.3 | 1.3 |
| | | 68.262 | 2.687 | 22.225 | 0.875 | 22.225 | 0.875 | 17.462 | 0.687 | 1.5 | 0.8 |
| | | 73.025 | 2.875 | 22.225 | 0.875 | 22.225 | 0.875 | 17.462 | 0.687 | 3.3 | 0.8 |

| Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| $C_r$ | $C_{or}$ | Grease | Oil | | e | Y | Yo | a | |
| kN | | r/min | | | | | | | kg |
| 25.6 | 28 | 9000 | 13000 | **KLM11749/KLM11710** | 0.29 | 2.1 | 1.15 | 9 | 0.0758 |
| 25.6 | 28 | 9000 | 13000 | **LM11749/LM11710** | 0.29 | 2.1 | 1.15 | 9 | 0.0758 |
| 31.5 | 28.9 | 8500 | 12000 | **KLM11949/KLM11910** | 0.3 | 2 | 1.1 | 10 | 0.123 |
| 37.5 | 37 | 8500 | 12000 | **K09067/K09195** | 0.27 | 2.26 | 1.24 | 11 | 0.176 |
| 37.5 | 37 | 8500 | 12000 | **K09074/K09194** | 0.27 | 2.26 | 1.24 | 16 | 0.201 |
| 37.5 | 37 | 8000 | 11000 | **K09081/K09196** | 0.27 | 2.26 | 1.24 | 12 | 0.197 |
| 29.7 | 37 | 8000 | 11000 | **KLM12748/KLM12710/YB2** | 0.31 | 1.96 | 1.08 | 10 | 0.12 |
| 45 | 43.5 | 8000 | 11000 | **K2M12649/K2M12610** | 0.28 | 2.16 | 1.19 | 11 | 0.169 |
| 45 | 43.5 | 8000 | 11000 | **KM12649/KM12610** | 0.28 | 2.16 | 1.19 | 11 | 0.169 |
| 35.5 | 40 | 8000 | 10000 | **KLM12749/KLM12710** | 0.31 | 1.96 | 1.08 | 13 | 0.116 |
| 29.5 | 34 | 8000 | 10000 | **KLM12749/KLM12711** | 0.31 | 1.96 | 1.08 | 13 | 0.118 |
| 30.5 | 33 | 8000 | 10000 | **K07087X/K07210X** | 0.4 | 1.49 | 0.82 | 12 | 0.104 |
| 31.3 | 33 | 7500 | 10000 | **K07100S/K07210X** | 0.4 | 1.5 | 0.82 | 12 | 0.0908 |
| 40 | 43.5 | 7000 | 8800 | **K1780/K1729** | 0.31 | 1.95 | 1.07 | 13 | 0.241 |
| 39.4 | 45.5 | 7500 | 10000 | **K15578/K15520** | 0.35 | 1.73 | 0.95 | 13 | 0.214 |
| 44.6 | 45 | 7500 | 10000 | **KM84548/KM84510** | 0.55 | 1.1 | 0.6 | 16 | 0.237 |
| 47.4 | 57 | 7600 | 9600 | **K15102/K15245** | 0.35 | 1.71 | 0.94 | 13 | 0.298 |
| 38 | 43.5 | 7500 | 10000 | **K15579X/K15520** | 0.35 | 1.73 | 0.95 | 19 | 0.207 |
| 46 | 53 | 7500 | 9000 | **K15106/K15250X** | 0.35 | 1.71 | 0.94 | 15 | 0.316 |
| 38 | 43.5 | 7000 | 9000 | **KJ15585/K15520** | 0.35 | 1.73 | 0.95 | 12 | 0.207 |
| 52.9 | 55 | 7000 | 9000 | **K1985/K1922** | 0.33 | 1.82 | 1 | 14 | 0.209 |
| 39 | 42.5 | 7000 | 9000 | **K1988/K1931** | 0.33 | 1.82 | 1 | 13 | 0.244 |
| 48.5 | 67.5 | 7000 | 9000 | **KM86647/KM86610** | 0.55 | 1.1 | 0.6 | 18 | 0.351 |
| 68.5 | 77 | 7000 | 9000 | **K2689/K2631** | 0.26 | 2.28 | 1.25 | 14 | 0.420 |
| 53.5 | 65 | 7000 | 9000 | **K02474/K02420** | 0.42 | 1.4 | 0.79 | 17 | 0.410 |
| 97 | 140 | 7000 | 9000 | **K02872/K02820** | 0.45 | 1.32 | 0.73 | 19 | 0.825 |

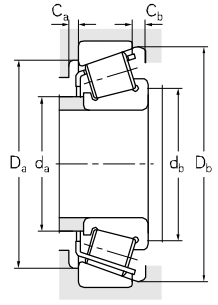
Note: * indicates the maximum value of IDor OD.

d 29.987~34.925 mm







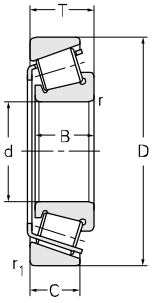


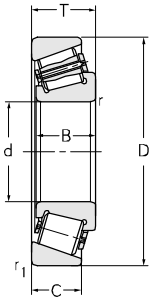

| Principal dimensions | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | | D | | T | | B | | C | | $r_{min}$ | $R_{min}$ |
| mm | in | mm | in | mm | in | mm | in | mm | in | mm | |
| **29.987** | 1.181 | 72 | 2.835 | 19 | 0.748 | 18.923 | 0.745 | 15.875 | 0.625 | 1.5 | 1.5 |
| **30** | 1.181 | 72.085 | 2.838 | 22.385 | 0.881 | 19.202 | 0.756 | 18.415 | 0.725 | 2.3 | 0.8 |
| **30.162** | 1.187 | 62 | 2.441 | 16.002 | 0.63 | 16.566 | 0.652 | 14.288 | 0.563 | 1.5 | 1.5 |
| | | 64.292 | 2.531 | 21.433 | 0.844 | 21.433 | 0.844 | 16.67 | 0.656 | 1.5 | 1.5 |
| | | 68.262 | 2.687 | 22.225 | 0.875 | 22.225 | 0.875 | 17.462 | 0.687 | 1.5 | 2.3 |
| | | 68.262 | 2.687 | 22.225 | 0.875 | 22.225 | 0.875 | 17.462 | 0.687 | 2.3 | 0.8 |
| **31.75** | 1.25 | 59.131 | 2.328 | 15.875 | 0.625 | 16.764 | 0.66 | 11.811 | 0.465 | 1.3 | 3.6 |
| | | 59.131 | 2.328 | 15.875 | 0.625 | 16.764 | 0.66 | 11.811 | 0.465 | 1.3 | 3.6 |
| | | 62 | 2.441 | 18.161 | 0.715 | 19.05 | 0.75 | 14.288 | 0.563 | 1.3 | 4.8 |
| | | 69.85 | 2.75 | 23.812 | 0.937 | 25.357 | 0.998 | 19.05 | 0.75 | 1.3 | 0.8 |
| | | 73.025 | 2.875 | 29.37 | 1.156 | 27.783 | 1.094 | 23.02 | 0.906 | 3.3 | 1.3 |
| **33.338** | 1.313 | 68.262 | 2.687 | 22.225 | 0.875 | 22.225 | 0.875 | 17.462 | 0.687 | 1.5 | 0.8 |
| | | 68.262 | 2.687 | 22.225 | 0.875 | 22.225 | 0.875 | 17.462 | 0.687 | 1.5 | 0.8 |
| | | 76.2 | 3 | 23.812 | 0.937 | 25.654 | 1.01 | 19.05 | 0.75 | 1.5 | 3.3 |
| | | 76.2 | 3 | 29.37 | 1.156 | 28.575 | 1.125 | 23.02 | 0.906 | 3.3 | 0.8 |
| **34.925** | 1.375 | 65.088 | 2.563 | 18.034 | 0.71 | 18.288 | 0.72 | 13.97 | 0.55 | 1.3 | 3.6 |
| | | 65.088 | 2.563 | 18.034 | 0.71 | 18.288 | 0.72 | 13.97 | 0.55 | 1.3 | 3.6 |
| | | 65.088 | 2.563 | 18.034 | 0.71 | 18.288 | 0.72 | 13.97 | 0.55 | 1.3 | 4.7 |
| | | 69.012 | 2.717 | 19.845 | 0.781 | 19.583 | 0.771 | 15.875 | 0.625 | 3.3 | 3.5 |
| | | 69.012 | 2.717 | 19.845 | 0.781 | 19.583 | 0.771 | 15.875 | 0.625 | 3.5 | 0.8 |
| | | 72.233 | 2.844 | 25.4 | 1 | 25.4 | 1 | 19.842 | 0.781 | 2.3 | 2.3 |
| | | 72.233 | 2.844 | 25.4 | 1 | 25.4 | 1 | 19.842 | 0.781 | 2.3 | 2.3 |
| | | 73.025 | 2.875 | 23.812 | 0.937 | 24.608 | 0.969 | 19.05 | 0.75 | 0.8 | 0.5 |
| | | 73.025 | 2.875 | 23.812 | 0.937 | 24.608 | 0.969 | 19.05 | 0.75 | 2.3 | 1.5 |
| | | 73.025 | 2.875 | 23.812 | 0.937 | 24.608 | 0.969 | 19.05 | 0.75 | 0.8 | 1.5 |
| | | 73.025 | 2.875 | 23.812 | 0.937 | 24.608 | 0.969 | 19.05 | 0.75 | 0.8 | 3.5 |
| | | 76.2 | 3 | 29.37 | 1.156 | 28.575 | 1.125 | 23.812 | 0.937 | 3.3 | 1.5 |
| | | 76.2 | 3 | 23.812 | 0.937 | 25.654 | 1.01 | 19.05 | 0.75 | 3.3 | 3.5 |

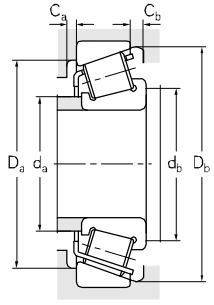
| Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| $C_r$ | $C_{or}$ | Grease | Oil | | e | Y | Yo | a | |
| kN | | r/min | | | | | | | kg |
| 50 | 53 | 7000 | 8500 | **K26118/K26283** | 0.36 | 1.67 | 0.92 | 14 | 0.384 |
| 46 | 55.5 | 7000 | 8500 | **K14118/K14283** | 0.38 | 1.57 | 0.86 | 17 | 0.202 |
| 40 | 43.5 | 7000 | 8500 | **K17119/K17244B** | 0.38 | 1.57 | 0.86 | 14 | 0.228 |
| 54.9 | 61 | 7000 | 8500 | **KM86649/KM86610** | 0.55 | 1.1 | 0.6 | 18 | 0.339 |
| 61.7 | 69.5 | 5600 | 7500 | **KM88043/KM88010** | 0.55 | 1.1 | 0.6 | 19 | 0.411 |
| 61.7 | 69.5 | 5600 | 7500 | **KM88043/KM88012** | 0.55 | 1.1 | 0.6 | 19 | 0.412 |
| 40 | 50 | 6300 | 8500 | **KLM67048A6/KLM67010A6** | 0.41 | 1.46 | 0.8 | 13 | 0.175 |
| 44 | 50 | 6300 | 8500 | **KLM67048/KLM67010** | 0.41 | 1.46 | 0.8 | 13 | 0.175 |
| 56.5 | 62 | 6300 | 8500 | **K15123/K15245** | 0.35 | 1.71 | 0.94 | 13 | 0.242 |
| 71.5 | 85.5 | 6300 | 8500 | **K2580/K2523** | 0.27 | 2.2 | 1.2 | 15 | 0.451 |
| 70.5 | 95 | 6300 | 8500 | **KHM88542/KHM88510** | 0.55 | 1.1 | 0.6 | 23 | 1 |
| 61.7 | 69.5 | 6300 | 7500 | **KM88048/KM88010** | 0.55 | 1.1 | 0.6 | 19 | 0.382 |
| 61.7 | 69.5 | 6300 | 7500 | **KM88048/KM88010-2-GKN** | 0.55 | 1.1 | 0.6 | 19 | 0.382 |
| 90 | 110 | 5600 | 7500 | **K2790/K2720** | 0.3 | 1.98 | 1.09 | 16 | 0.559 |
| 82 | 110 | 5600 | 7500 | **KHM89443/KHM89410** | 0.55 | 1.1 | 0.6 | 24 | 0.774 |
| 52.9 | 60 | 5600 | 7500 | **KLM48548/KLM48510** | 0.38 | 1.59 | 0.88 | 14 | 0.260 |
| 52.9 | 60 | 5600 | 7500 | **KLM48548/KLM48510A6** | 0.38 | 1.59 | 0.88 | 14 | 0.261 |
| 52.9 | 60 | 5600 | 7500 | **LM48548/LM48510** | 0.38 | 1.59 | 0.88 | 14 | 0.26 |
| 52.8 | 67 | 5600 | 7500 | **K14138A/K14274** | 0.38 | 1.57 | 0.86 | 14 | 0.320 |
| 52.8 | 67 | 5600 | 7500 | **K14138A/K14276B** | 0.38 | 1.57 | 0.86 | 15 | 0.333 |
| 76.4 | 90 | 5000 | 7100 | **KHM88649/KHM88610** | 0.55 | 1.1 | 0.6 | 21 | 0.480 |
| 76.4 | 90 | 5000 | 6700 | **KHM88649/KHM88610-HQ** | 0.54 | 1.1 | 0.6 | 20 | 0.473 |
| 71.5 | 85 | 5600 | 7500 | **K25877A6/K25821** | 0.29 | 2.07 | 1.13 | 16 | 0.475 |
| 71.5 | 85 | 5600 | 7500 | **K25877/K25820** | 0.29 | 2.07 | 1.13 | 16 | 0.475 |
| 71.5 | 85 | 5600 | 7500 | **K25877/K25821** | 0.29 | 2.07 | 1.14 | 14 | 0.475 |
| 71.5 | 85 | 5600 | 7500 | **K25878/K25821** | 0.29 | 2.07 | 1.14 | 14 | 0.475 |
| 84.1 | 106 | 5600 | 7500 | **K31594SH/K31520SH** | 0.4 | 1.49 | 0.82 | 21 | 2.13 |
| 90 | 110 | 5600 | 7500 | **K2796/K2720** | 0.3 | 1.98 | 1.09 | 16 | 0.508 |

Note: * indicates the maximum value of IDor OD.

d 34.925~39.688 mm



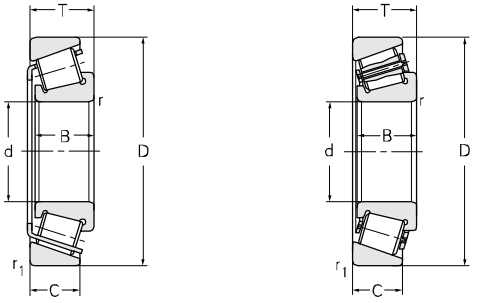



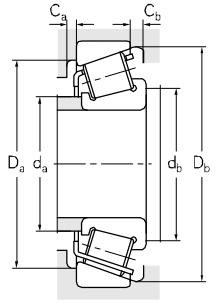




| Principal dimensions | | | | | | | | | | | | Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | | D | | T | | B | | C | | $r_{min}$ | $R_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | e | Y | Yo | a | |
| mm | in | mm | in | mm | in | mm | in | mm | in | mm | | kN | | r/min | | | | | | | kg |
| **34.925** | | 76.2 | 3 | 29.37 | 1.156 | 28.575 | 1.125 | 23.02 | 0.906 | 3.3 | 3.5 | 84.1 | 106 | 5600 | 7500 | **KHM89446/KHM89410** | 0.55 | 1.1 | 0.6 | 24 | 0.670 |
| | | 79.375 | 3.125 | 29.37 | 1.156 | 29.771 | 1.172 | 23.812 | 0.937 | 3.3 | 3.5 | 87.5 | 106 | 5600 | 7500 | **K3478/K3420** | 0.37 | 1.64 | 0.9 | 20 | 0.695 |
| | | 95.25 | 3.75 | 11.115 | 0.438 | 29.9 | 1.177 | 22.225 | 0.875 | 0.8 | 2.3 | 108 | 129 | 5600 | 7500 | **K449/K432B** | 0.28 | 2.11 | 1.16 | 19 | 1.16 |
| **35*** | | 59.131 | 2.328 | 15.875 | 0.625 | 16.764 | 0.66 | 11.938 | 0.47 | 1.3 | 3.5 | 34 | 36 | 5600 | 7000 | **KL68149/KL68110** | 0.42 | 1.44 | 0.79 | 13 | 0.166 |
| | | 59.974 | 2.361 | 15.875 | 0.625 | 16.764 | 0.66 | 11.938 | 0.47 | 1.3 | 3.5 | 34.5 | 24.5 | 5600 | 7000 | **KL68149/KL68111** | 0.42 | 1.44 | 0.79 | 13 | 0.166 |
| | | 62* | | 16.7 | 0.657 | 17 | 0.669 | 13.6 | 0.535 | 1.5 | SP | 41.5 | 53.5 | 5600 | 7500 | **KLM78349/KLM78310A** | 0.44 | 1.4 | 0.74 | 14 | 0.206 |
| | | 62* | | 16.7 | 0.657 | 17 | 0.669 | 13.6 | 0.535 | 1.5 | SP | 41.5 | 53.5 | 5600 | 7500 | **KLM78349SH/KLM78310ASH** | 0.44 | 1.35 | 0.74 | 14 | 0.206 |
| **36.487** | 1.436 | 76.2 | 3 | 23.812 | 0.937 | 25.654 | 1.01 | 19.05 | 0.75 | 3.3 | 1.5 | 90 | 110 | 5000 | 6700 | **K2780/K2720** | 0.3 | 2 | 1.1 | 16 | 0.526 |
| **36.512** | 1.437 | 72.238 | 2.844 | 20.638 | 0.813 | 20.638 | 0.813 | 18.575 | 0.731 | 1.3 | 3.5 | 45 | 61 | 4800 | 6300 | **K16143/K16284** | 0.4 | 1.49 | 0.82 | 17 | 0.362 |
| | | 76.2 | 3 | 29.37 | 1.156 | 28.575 | 1.125 | 23.02 | 0.906 | 3.3 | 0.8 | 88.2 | 106 | 4800 | 6300 | **KHM89448/KHM89410** | 0.55 | 1.1 | 0.6 | 23 | 0.650 |
| | | 76.2 | 3 | 29.37 | 1.156 | 28.575 | 1.125 | 23.02 | 0.906 | 3.3 | 3.5 | 88.2 | 106 | 4800 | 6300 | **KHM89449/KHM89410** | 0.55 | 1.1 | 0.6 | 23 | 0.65 |
| **38** | 1.496 | 63 | 2.48 | 17 | 0.669 | 19 | 0.748 | 13.5 | 0.531 | 1.3 | 1.3 | 36 | 56 | 5800 | 7400 | **KJL69345/KJL69310** | 0.42 | 1.44 | 0.79 | 14 | 0.211 |
| | | 63 | 2.48 | 17 | 0.669 | 17 | 0.669 | 13.5 | 0.531 | 1.3 | 1.3 | 36 | 56 | 5800 | 7400 | **KJL69349/KJL69310** | 0.42 | 1.44 | 0.79 | 14 | 0.205 |
| **38.1** | 1.5 | 65.088 | 2.563 | 18.034 | 0.71 | 18.288 | 0.72 | 13.97 | 0.55 | 1.3 | 2.3 | 49 | 57 | 5000 | 7000 | **KLM29749/KLM29710** | 0.33 | 1.8 | 0.99 | 12 | 0.237 |
| | | 65.088 | 2.563 | 18.034 | 0.71 | 18.288 | 0.72 | 13.97 | 0.55 | 1.1 | 2.3 | 49 | 57 | 5000 | 7000 | **KLM29749/KLM29710-DZ** | 0.33 | 1.8 | 0.99 | 12 | 0.241 |
| | | 65.088 | 2.563 | 19.812 | 0.78 | 18.288 | 0.72 | 15.748 | 0.62 | 1.3 | 2.3 | 49 | 57 | 5000 | 7000 | **KLM29749/KLM29711** | 0.33 | 1.8 | 0.99 | 16 | 0.251 |
| | | 69.012 | 2.717 | 26.195 | 1.031 | 26.195 | 1.031 | 15.083 | 0.594 | 0.8 | 1.5 | 49.5 | 62 | 5000 | 7000 | **K13686/K13620** | 0.4 | 1.49 | 0.82 | 16 | 0.362 |
| | | 72.238 | 2.844 | 20.638 | 0.813 | 20.638 | 0.813 | 15.875 | 0.625 | 1.3 | 3.5 | 54.9 | 60 | 5000 | 7000 | **K16150/K16284** | 0.4 | 1.49 | 0.82 | 17 | 0.345 |
| | | 76.2 | 3 | 23.812 | 0.937 | 25.654 | 1.01 | 19.05 | 0.75 | 3.3 | 3.5 | 90 | 110 | 5000 | 7000 | **K2788/K2720** | 0.3 | 1.98 | 1.09 | 17 | 0.507 |
| | | 79.375 | 3.125 | 29.37 | 1.156 | 29.771 | 1.172 | 23.812 | 0.937 | 3.3 | 3.5 | 102 | 110 | 5000 | 7000 | **K3490/K3420** | 0.37 | 1.64 | 0.9 | 20 | 0.653 |
| | | 88.5 | 3.484 | 26.988 | 1.063 | 29.083 | 1.145 | 22.225 | 0.875 | 1.5 | 3.5 | 100 | 113 | 5000 | 6000 | **K418/K414** | 0.26 | 2.28 | 1.25 | 18 | 0.843 |
| | | 88.5 | 3.484 | 25.4 | 1 | 23.698 | 0.933 | 17.462 | 0.687 | 1.5 | 2.3 | 76 | 86 | 5000 | 6000 | **K44150/K44348** | 0.78 | 0.77 | 0.42 | 28 | 0.718 |
| **39*** | | 72.014 | 2.835 | 21.4 | 0.843 | 20.638 | 0.813 | 16.637 | 0.655 | 0.4 | 3.5 | 49.5 | 61 | 4500 | 6000 | **KJ16154/KJ16285** | 0.4 | 1.49 | 0.82 | 17 | 0.341 |
| **39.688** | 1.563 | 73.025 | 2.875 | 23.812 | 0.937 | 25.654 | 1.01 | 19.05 | 0.75 | 0.8 | 3.5 | 90 | 110 | 4500 | 6000 | **K2789/K2735X** | 0.3 | 1.98 | 1.09 | 16 | 0.413 |
| | | 73.025 | 2.875 | 25.654 | 1.01 | 22.098 | 0.87 | 21.336 | 0.84 | 2.3 | 0.8 | 75 | 86.5 | 4500 | 6000 | **KM201047/KM201011** | 0.33 | 1.79 | 0.99 | 20 | 0.437 |
| | | 76.2 | 3 | 23.812 | 0.937 | 25.654 | 1.01 | 19.05 | 0.75 | 3.3 | 3.5 | 90 | 110 | 4500 | 6000 | **K2789/K2720** | 0.3 | 1.98 | 1.09 | 17 | 0.468 |
| | | 76.2 | 3 | 23.812 | 0.937 | 25.645 | 1.01 | 19.05 | 0.75 | 0.8 | 3.5 | 90 | 110 | 4500 | 6000 | **K2789/K2729** | 0.3 | 1.98 | 1.09 | 16 | 0.507 |
| | | 76.2 | 3 | 23.812 | 0.937 | 25.654 | 1.01 | 19.05 | 0.75 | 0.8 | 3.5 | 90 | 110 | 4500 | 6000 | **K2789SH/K2729SH** | 0.3 | 1.98 | 1.09 | 16 | 0.507 |

Note: * indicates the maximum value of IDor OD.

d 40~44.45 mm



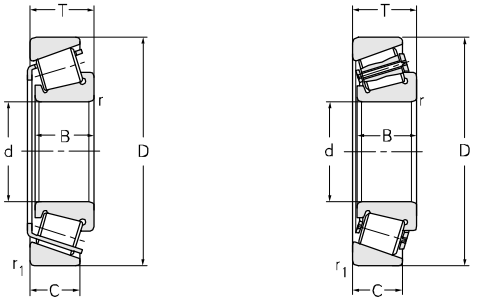




| Principal dimensions | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | | D | | T | | B | | C | | $r_{min}$ | $R_{min}$ |
| mm | in | mm | in | mm | in | mm | in | mm | in | mm | |
| **40** | 1.575 | 90.119 | 3.548 | 23 | 0.906 | 21.962 | 0.865 | 21.808 | 0.859 | 2.3 | 0.8 |
| **40.988** | 1.614 | 68* | | 17.5 | 0.689 | 18 | 0.709 | 13.5 | 0.531 | 0.8 | 3.6 |
| **41*** | | 68* | | 17.5 | 0.689 | 18 | 0.709 | 13.5 | 0.531 | 1.5 | 3.6 |
| **41.275** | 1.625 | 73.025 | 2.875 | 16.667 | 0.656 | 17.462 | 0.687 | 12.7 | 0.5 | 1.5 | 3.5 |
| | | 73.431 | 2.891 | 19.558 | 0.77 | 19.812 | 0.78 | 14.732 | 0.58 | 0.76 | 3.56 |
| | | 73.431 | 2.891 | 19.558 | 0.77 | 19.812 | 0.78 | 14.732 | 0.58 | 0.76 | 3.56 |
| | | 73.431 | 2.891 | 21.43 | 0.844 | 19.812 | 0.78 | 16.604 | 0.654 | 0.8 | 3.5 |
| | | 76.2 | 3 | 18.009 | 0.709 | 17.384 | 0.684 | 14.288 | 0.563 | 1.5 | 1.5 |
| | | 76.2 | 3 | 22.225 | 0.875 | 23.02 | 0.906 | 17.462 | 0.687 | 0.8 | 3.5 |
| | | 80 | 3.15 | 21 | 0.827 | 22.403 | 0.882 | 17.826 | 0.702 | 1.3 | 0.8 |
| | | 80.167 | 3.156 | 29.37 | 1.156 | 30.391 | 1.196 | 23.812 | 0.937 | 3.3 | 0.8 |
| | | 82.55 | 3.25 | 26.543 | 1.045 | 25.654 | 1.01 | 20.193 | 0.795 | 3.3 | 3.5 |
| | | 82.55 | 3.25 | 26.543 | 1.045 | 25.654 | 1.01 | 20.193 | 0.795 | 3.3 | 3.5 |
| | | 82.55 | 3.25 | 26.543 | 1.045 | 25.654 | 1.01 | 20.193 | 0.795 | 3.3 | 3.5 |
| | | 87.312 | 3.437 | 30.162 | 1.187 | 30.866 | 1.215 | 23.812 | 0.937 | 1.5 | 3.3 |
| | | 88.5 | 3.484 | 26.988 | 1.063 | 29.083 | 1.145 | 22.225 | 0.875 | 1.5 | 3.5 |
| | | 88.9 | 3.5 | 30.162 | 1.187 | 29.37 | 1.156 | 23.02 | 0.906 | 3.3 | 3.5 |
| | | 104.775 | 4.125 | 36.512 | 1.437 | 36.512 | 1.437 | 28.575 | 1.125 | 3.3 | 1.5 |
| **42.862** | 1.687 | 82.55 | 3.25 | 26.195 | 1.031 | 26.988 | 1.063 | 20.638 | 0.813 | 3.3 | 3.5 |
| **42.875** | 1.688 | 80 | 3.15 | 21 | 0.827 | 22.403 | 0.882 | 17.826 | 0.702 | 2 | 3.5 |
| | | 82.931 | 3.265 | 26.988 | 1.063 | 25.4 | 1 | 22.225 | 0.875 | 2.3 | 3.5 |
| **43*** | | 80* | | 21.001 | 0.827 | 22.403 | 0.882 | 17.826 | 0.702 | 0.8 | 3.5 |
| **44.45** | 1.75 | 82.931 | 3.265 | 23.812 | 0.937 | 25.4 | 1 | 19.05 | 0.75 | 0.8 | 3.5 |
| | | 82.931 | 3.265 | 23.812 | 0.937 | 25.4 | 1 | 19.05 | 0.75 | 0.8 | 0.5 |
| | | 87.312 | 3.437 | 30.162 | 1.187 | 30.886 | 1.216 | 23.812 | 0.937 | 3.3 | 3.5 |
| | | 87.312 | 3.437 | 30.162 | 1.187 | 30.886 | 1.216 | 23.812 | 0.937 | 3.3 | 3.6 |
| | | 88.9 | 3.5 | 30.162 | 1.187 | 29.37 | 1.156 | 23.02 | 0.906 | 3.3 | 3.5 |

| Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| $C_r$ | $C_{or}$ | Grease | Oil | | e | Y | Yo | a | |
| kN | | r/min | | | | | | | kg |
| 73 | 83.5 | 4500 | 5700 | **K350A/K352** | 0.31 | 1.96 | 1.08 | 18 | 0.715 |
| 49.0 | 66.0 | 4500 | 6000 | **KLM300849/KLM300811-DZ** | 0.35 | 1.72 | 0.95 | 14 | 0.252 |
| 51 | 60 | 4500 | 6000 | **KLM300849/KLM300811** | 0.35 | 1.72 | 0.95 | 14 | 0.241 |
| 52.9 | 56 | 4500 | 6000 | **K18590/K18520** | 0.35 | 1.71 | 0.94 | 14 | 0.282 |
| 67 | 73.5 | 4500 | 6000 | **KLM501349/KLM501310** | 0.4 | 1.5 | 0.83 | 15 | 0.353 |
| 67 | 73.5 | 4500 | 6000 | **KLM501349/KLM501310-2-GKN** | 0.4 | 1.5 | 0.83 | 15 | 0.353 |
| 67 | 73.5 | 4500 | 6000 | **KLM501349/KLM501314** | 0.4 | 1.5 | 0.83 | 17 | 0.360 |
| 50.5 | 61.5 | 4500 | 6000 | **K11162/K11300** | 0.49 | 1.2 | 0.68 | 17 | 0.343 |
| 71 | 83.5 | 4500 | 6000 | **K24780/K24720** | 0.4 | 1.5 | 0.84 | 17 | 0.429 |
| 68.5 | 76 | 4500 | 6000 | **K336/K332** | 0.27 | 2.2 | 1.21 | 15 | 0.453 |
| 97 | 114 | 4500 | 6000 | **K3384/K3320** | 0.27 | 2.2 | 1.21 | 17 | 0.630 |
| 85 | 107 | 4500 | 6000 | **KM802048/KM802011-2-GKN** | 0.55 | 1.1 | 0.6 | 23 | 0.623 |
| 84 | 105 | 4500 | 6000 | **KM802048SH/KM802011SH** | 0.54 | 1.1 | 0.6 | 22 | 0.623 |
| 85 | 107 | 4500 | 6000 | **K1M802048/K1M802011** | 0.55 | 1.1 | 0.6 | 23 | 0.623 |
| 129 | 175 | 4500 | 6000 | **K3585/K3525** | 0.53 | 1.14 | 0.62 | 24 | 0.861 |
| 100 | 113 | 5000 | 6000 | **K419/K414** | 0.26 | 2.28 | 1.25 | 18 | 0.804 |
| 106 | 127 | 4300 | 5600 | **KHM803146/KHM803110** | 0.54 | 1.1 | 0.6 | 26 | 0.915 |
| 146 | 194 | 4300 | 5600 | **K59162/K59412** | 0.4 | 1.49 | 0.82 | 26 | 1.69 |
| 84.5 | 119 | 4500 | 6000 | **K22780/K22720** | 0.4 | 1.49 | 0.82 | 20 | 0.687 |
| 69 | 76 | 4500 | 6000 | **K342S/K332US** | 0.27 | 2.2 | 1.21 | 15 | 0.432 |
| 78 | 101 | 4500 | 6000 | **K25577/K25523** | 0.33 | 1.79 | 0.99 | 19 | 0.646 |
| 69 | 76 | 4500 | 6000 | **K342X/K332B** | 0.27 | 2.2 | 1.21 | 15 | 0.440 |
| 79.3 | 106 | 4500 | 6000 | **K25580/K25520** | 0.33 | 1.79 | 0.99 | 18 | 0.573 |
| 79.3 | 106 | 4500 | 6000 | **K25581/K25520** | 0.33 | 1.79 | 0.99 | 18 | 0.573 |
| 95 | 143 | 4500 | 5600 | **K3578/K3525** | 0.31 | 1.96 | 1.08 | 20 | 0.81 |
| 114 | 120 | 4500 | 5600 | **K3578R/K3525-1** | 0.31 | 1.96 | 1.08 | 20 | 0.772 |
| 106 | 127 | 4500 | 5600 | **KHM803149/KHM803110** | 0.55 | 1.1 | 0.6 | 26 | 0.865 |

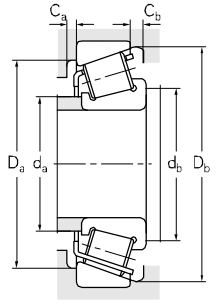
Note: * indicates the maximum value of IDor OD.

d 44.45~45.987 mm







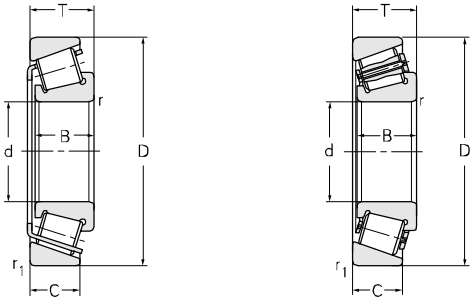



| Principal dimensions | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | | D | | T | | B | | C | | $r_{min}$ | $R_{min}$ |
| mm | in | mm | in | mm | in | mm | in | mm | in | mm | |
| **44.45** | | 90.119 | 3.548 | 23 | 0.906 | 21.692 | 0.854 | 21.808 | 0.859 | 2.3 | 3.5 |
| | | 92.075 | 3.625 | 30.162 | 1.187 | 29.37 | 1.156 | 23.02 | 0.906 | 3.3 | 3.5 |
| | | 93.264 | 3.672 | 30.162 | 1.187 | 30.302 | 1.193 | 23.812 | 0.937 | 3.3 | 3.5 |
| | | 93.264 | 3.672 | 30.162 | 1.187 | 30.302 | 1.193 | 23.812 | 0.937 | 3.3 | 3.5 |
| | | 95.25 | 3.75 | 27.783 | 1.094 | 28.575 | 1.125 | 22.225 | 0.875 | 0.8 | 2 |
| | | 95.25 | 3.75 | 27.783 | 1.094 | 28.575 | 1.125 | 22.225 | 0.875 | 0.8 | 0.8 |
| | | 95.25 | 3.75 | 30.162 | 1.187 | 29.37 | 1.156 | 23.02 | 0.906 | 3.3 | 3.5 |
| | | 95.25 | 3.75 | 30.958 | 1.219 | 28.575 | 1.125 | 22.225 | 0.875 | 0.8 | 3.5 |
| | | 95.25 | 3.75 | 30.958 | 1.219 | 28.575 | 1.125 | 22.225 | 0.875 | 0.8 | 3.5 |
| | | 101.6 | 4 | 34.925 | 1.375 | 36.068 | 1.42 | 26.988 | 1.063 | 3.3 | 3.5 |
| | | 104.775 | 4.125 | 30.162 | 1.187 | 30.958 | 1.219 | 23.812 | 0.937 | 3.3 | 0.8 |
| | | 104.775 | 4.125 | 36.512 | 1.437 | 36.512 | 1.437 | 28.575 | 1.125 | 3.3 | 3.5 |
| | | 104.775 | 4.125 | 36.512 | 1.437 | 36.512 | 1.437 | 28.575 | 1.125 | 3.3 | 3.5 |
| **44.988** | 1.771 | 104.986 | 4.133 | 32.512 | 1.28 | 31.75 | 1.25 | 23.368 | 0.92 | 2.5 | 2.5 |
| **45.23** | 1.781 | 79.985 | 3.149 | 19.842 | 0.781 | 20.638 | 0.813 | 15.08 | 0.594 | 1.3 | 2 |
| | | 84.138 | 3.313 | 30.162 | 1.187 | 30.886 | 1.216 | 23.812 | 0.937 | 3.3 | 3.5 |
| | | 87.312 | 3.437 | 30.162 | 1.187 | 30.886 | 1.216 | 23.812 | 0.937 | 3.3 | 3.5 |
| **45.242** | 1.781 | 73.431 | 2.891 | 19.558 | 0.77 | 19.812 | 0.78 | 15.748 | 0.62 | 0.8 | 3.5 |
| | | 77.788 | 3.063 | 19.842 | 0.781 | 19.842 | 0.781 | 15.08 | 0.594 | 0.8 | 3.5 |
| | | 77.788 | 3.063 | 21.43 | 0.844 | 19.842 | 0.781 | 16.667 | 0.656 | 0.8 | 3.5 |
| **45.618** | 1.796 | 82.931 | 3.265 | 23.812 | 0.937 | 25.4 | 1 | 19.05 | 0.75 | 0.8 | 3.5 |
| | | 82.931 | 3.265 | 26.988 | 1.063 | 25.4 | 1 | 22.225 | 0.875 | 2.3 | 3.5 |
| | | 82.931 | 3.265 | 23.812 | 0.937 | 25.4 | 1 | 19.05 | 0.75 | 0.8 | 3.5 |
| | | 83.058 | 3.27 | 23.876 | 0.94 | 25.4 | 1 | 19.114 | 0.753 | 2 | 3.5 |
| | | 83.058 | 3.27 | 23.876 | 0.94 | 25.4 | 1 | 19.114 | 0.753 | 2 | 3.5 |
| **45.987** | 1.811 | 74.976 | 2.952 | 18 | 0.709 | 18 | 0.709 | 14 | 0.551 | 1.6 | 2.3 |
| | | 75* | | 18 | 0.709 | 18 | 0.709 | 14 | 0.551 | 1.6 | 2.3 |

| Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| $C_r$ | $C_{or}$ | Grease | Oil | | e | Y | Yo | a | |
| kN | | r/min | | | | | | | kg |
| 71.5 | 85 | 4500 | 6000 | **K355X/K352** | 0.31 | 1.96 | 1.08 | 18 | 0.668 |
| 90 | 125 | 4500 | 6000 | **KHM803149/KHM803112** | 0.55 | 1.1 | 0.6 | 26 | 0.953 |
| 103 | 140 | 4500 | 6000 | **K3782/K3720** | 0.34 | 1.77 | 0.98 | 22 | 1.04 |
| 103 | 140 | 4500 | 6000 | **K3782SH/K3720SH** | 0.34 | 1.77 | 0.98 | 22 | 1.04 |
| 110 | 140 | 3800 | 5300 | **K33885A6/K33822** | 0.33 | 1.79 | 0.99 | 24 | 1.31 |
| 110 | 140 | 3800 | 5300 | **K33885/K33822** | 0.33 | 1.79 | 0.99 | 24 | 0.983 |
| 107 | 144 | 3800 | 5300 | **KHM804843/KHM804810-HQ** | 0.55 | 1.1 | 0.6 | 26 | 1.01 |
| 111 | 133 | 4500 | 6000 | **KHM903249/KHM903210** | 0.74 | 0.81 | 0.45 | 32 | 1.00 |
| 101 | 133 | 3600 | 4800 | **KHM903249/KHM903210-2X** | 0.75 | 0.8 | 0.45 | 30 | 1.00 |
| 136 | 168 | 4500 | 6000 | **K527/K522** | 0.29 | 2.1 | 1.16 | 22 | 1.36 |
| 126 | 166 | 4300 | 5600 | **K45280/K45220** | 0.33 | 1.8 | 0.99 | 22 | 1.25 |
| 167 | 204 | 4300 | 5600 | **K59175/K59412** | 0.4 | 1.49 | 0.82 | 26 | 1.63 |
| 127 | 192 | 4300 | 5600 | **KHM807040/KHM807010** | 0.49 | 1.23 | 0.68 | 29 | 1.62 |
| 127 | 164 | 4500 | 6000 | **KHM905843/KHM905810** | 0.78 | 0.77 | 0.42 | 34 | 1.41 |
| 58 | 76 | 4500 | 6000 | **K17887/K17831** | 0.37 | 1.64 | 0.9 | 16 | 0.406 |
| 114 | 120 | 4500 | 6000 | **K3586/K3520-1** | 0.31 | 1.96 | 1.08 | 20 | 0.684 |
| 114 | 120 | 4500 | 6000 | **K3586/K3525-1** | 0.31 | 1.97 | 1.08 | 20 | 0.758 |
| 60.8 | 75 | 4500 | 6000 | **KLM102949/KLM102910** | 0.31 | 1.97 | 1.08 | 14 | 0.318 |
| 60.8 | 69.5 | 4800 | 6300 | **KLM603049/KLM603011** | 0.43 | 1.41 | 0.77 | 17 | 0.363 |
| 51 | 71 | 4800 | 6300 | **KLM603049/KLM603012** | 0.43 | 1.4 | 0.77 | 19 | 0.358 |
| 79.3 | 106 | 4500 | 6000 | **K25590/K25520** | 0.33 | 1.79 | 0.99 | 18 | 0.556 |
| 77 | 100 | 4500 | 6000 | **K25590/K25523** | 0.33 | 1.79 | 0.99 | 18 | 0.589 |
| 79.3 | 106 | 4500 | 5000 | **K25590SH/K25520SH** | 0.33 | 1.79 | 0.99 | 18 | 0.556 |
| 79.3 | 106 | 4500 | 5000 | **K25590/K25522** | 0.33 | 1.79 | 0.99 | 18 | 0.556 |
| 79.3 | 106 | 4500 | 5000 | **K25590SH/K25522SH** | 0.33 | 1.79 | 0.99 | 21 | 0.556 |
| 53 | 75 | 4800 | 6300 | **KLM503349/KLM503310-2-GKN** | 0.4 | 1.49 | 0.82 | 16 | 0.305 |
| 57 | 79.5 | 4800 | 6300 | **KLM503349/KLM503310-DZ** | 0.4 | 1.49 | 0.82 | 16 | 0.305 |

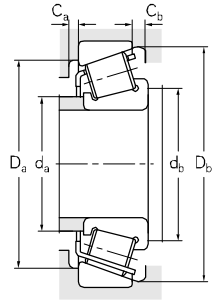
Note: * indicates the maximum value of IDor OD.

d 46.038~50.8 mm







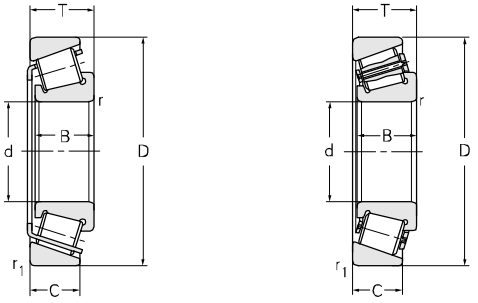



| Principal dimensions | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | | D | | T | | B | | C | | $r_{min}$ | $R_{min}$ |
| mm | in | mm | in | mm | in | mm | in | mm | in | mm | |
| **46.038** | 1.813 | 79.375 | 3.125 | 17.462 | 0.687 | 17.462 | 0.687 | 13.495 | 0.531 | 1.5 | 2.8 |
| | | 85 | 3.346 | 20.638 | 0.813 | 21.692 | 0.854 | 17.462 | 0.687 | 1.3 | 2.3 |
| | | 85 | 3.346 | 20.638 | 0.813 | 21.692 | 0.854 | 17.462 | 0.687 | 1.5 | 2.3 |
| **47.625** | 1.875 | 93.264 | 3.672 | 30.162 | 1.187 | 30.302 | 1.193 | 23.812 | 0.937 | 3.3 | 3.5 |
| | | 95.25 | 3.75 | 30.162 | 1.187 | 29.37 | 1.156 | 23.02 | 0.906 | 3.3 | 3.5 |
| | | 104.775 | 4.125 | 30.162 | 1.187 | 30.958 | 1.219 | 23.812 | 0.937 | 3.3 | 3.5 |
| | | 123.825 | 4.875 | 36.512 | 1.437 | 32.791 | 1.291 | 25.4 | 1 | 3.3 | 3.5 |
| **48.412** | 1.906 | 95.25 | 3.75 | 30.162 | 1.187 | 29.37 | 1.156 | 23.02 | 0.906 | 3.3 | 2.3 |
| **49.212** | 1.937 | 114.3 | 4.5 | 44.45 | 1.75 | 44.45 | 1.75 | 36.068 | 1.42 | 3.3 | 3.5 |
| **49.987** | 1.968 | 92.075 | 3.625 | 24.607 | 0.969 | 25.4 | 1 | 19.845 | 0.781 | 0.8 | 2.3 |
| **50*** | | 83* | | 22 | 0.866 | 22 | 0.866 | 17.5 | 0.689 | 1.5 | 3.5 |
| | | 93.264 | 3.672 | 30.162 | 1.187 | 30.302 | 1.193 | 23.812 | 0.937 | 3.3 | 3.5 |
| | | 105* | | 37 | 1.457 | 36 | 1.417 | 29 | 1.142 | 3 | 2.5 |
| **50** | 1.969 | 90 | 3.543 | 28 | 1.102 | 28 | 1.102 | 23 | 0.906 | 2.5 | 3 |
| | | 105 | 4.134 | 32 | 1.26 | 29 | 1.142 | 22 | 0.866 | 3 | 3 |
| | | 112.712 | 4.437 | 26.967 | 1.062 | 21.996 | 0.866 | 23.812 | 0.937 | 3.3 | 0.8 |
| **50.8** | 2 | 82.55 | 3.25 | 21.59 | 0.85 | 22.225 | 0.875 | 16.51 | 0.65 | 1.3 | 3.5 |
| | | 85 | 3.346 | 17.462 | 0.687 | 17.462 | 0.687 | 13.495 | 0.531 | 1.5 | 3.5 |
| | | 85 | 3.346 | 17.462 | 0.687 | 17.462 | 0.687 | 13.495 | 0.531 | 1.5 | 3.5 |
| | | 88.9 | 3.5 | 20.638 | 0.813 | 22.225 | 0.875 | 16.513 | 0.65 | 1.3 | 3.5 |
| | | 90 | 3.543 | 25 | 0.984 | 22.225 | 0.875 | 20 | 0.787 | 2 | 3.5 |
| | | 92.075 | 3.625 | 24.608 | 0.969 | 25.4 | 1 | 19.845 | 0.781 | 0.8 | 3.5 |
| | | 93.264 | 3.672 | 30.162 | 1.187 | 30.162 | 1.187 | 23.812 | 0.937 | 0.8 | 0.8 |
| | | 93.264 | 3.672 | 30.162 | 1.187 | 30.162 | 1.187 | 23.812 | 0.937 | 3.3 | 3.5 |
| | | 95.25 | 3.75 | 27.783 | 1.094 | 28.575 | 1.125 | 22.225 | 0.875 | 0.8 | 5 |
| | | 95.25 | 3.75 | 27.783 | 1.094 | 28.575 | 1.125 | 22.225 | 0.875 | 0.8 | 3.5 |
| | | 96.838 | 3.813 | 21 | 0.827 | 21.946 | 0.864 | 15.875 | 0.625 | 0.8 | 2.3 |

| Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| $C_r$ | $C_{or}$ | Grease | Oil | | e | Y | Yo | a | |
| kN | | r/min | | | | | | | kg |
| 55.9 | 62 | 4500 | 6000 | **K18690/K18620** | 0.37 | 1.6 | 0.88 | 16 | 0.325 |
| 80 | 81.5 | 4500 | 6000 | **K359S/K354A** | 0.31 | 1.9 | 1.1 | 16 | 0.770 |
| 80 | 81.5 | 4500 | 6000 | **K359S/K354X** | 0.31 | 1.9 | 1.1 | 16 | 0.770 |
| 103 | 140 | 3800 | 5300 | **K3779/K3720** | 0.34 | 1.77 | 0.98 | 21 | 0.921 |
| 107 | 144 | 3800 | 5300 | **KHM804846/KHM804810** | 0.55 | 1.1 | 0.6 | 26 | 0.987 |
| 126 | 166 | 3900 | 4900 | **K45282/K45220** | 0.33 | 1.8 | 0.99 | 22 | 1.29 |
| 142 | 189 | 3000 | 4000 | **K72187C/K72487** | 0.74 | 0.81 | 0.45 | 37 | 2.25 |
| 107 | 144 | 4100 | 5200 | **KHM804848/KHM804810** | 0.55 | 1.1 | 0.6 | 26 | 0.967 |
| 208 | 224 | 3600 | 4600 | **KHH506348/KHH506310-2** | 0.4 | 1.5 | 0.83 | 30 | 2.24 |
| 86 | 119 | 4200 | 5300 | **K28579/K28521** | 0.38 | 1.59 | 0.88 | 20 | 0.702 |
| 71 | 96.5 | 4000 | 5000 | **KJLM704649/KJLM704610** | 0.44 | 1.37 | 0.75 | 20 | 0.474 |
| 113 | 136 | 4000 | 5000 | **K50KW01/K3720** | 0.34 | 1.77 | 0.98 | 23 | 0.928 |
| 140 | 192 | 4000 | 5000 | **KJHM807045/KJHM807012** | 0.49 | 1.23 | 0.68 | 29 | 1.39 |
| 106 | 142 | 4200 | 5300 | **KJM205149/KJM205110** | 0.33 | 1.83 | 1.01 | 20 | 0.758 |
| 111 | 140 | 3800 | 4800 | **KJW5049/KJW5010** | 0.87 | 0.69 | 0.38 | 37 | 1.22 |
| 80 | 105 | 3600 | 4600 | **K396/K3920** | 0.4 | 1.49 | 0.82 | 26 | 1.27 |
| 70.7 | 100 | 4500 | 6000 | **KLM104949/KLM104911** | 0.31 | 1.97 | 1.08 | 16 | 0.417 |
| 50.5 | 66.5 | 4000 | 5000 | **K18790/K18720** | 0.41 | 1.48 | 0.81 | 63 | 0.378 |
| 50 | 60 | 4000 | 5000 | **K18790/K18720B** | 0.41 | 1.48 | 0.81 | 63 | 0.388 |
| 75.5 | 89 | 4000 | 5000 | **K368A/K362A** | 0.32 | 1.88 | 1.03 | 17 | 0.520 |
| 86.2 | 91.5 | 4000 | 5000 | **K368A/K362X** | 0.32 | 1.88 | 1.03 | 17 | 0.601 |
| 86.5 | 119 | 4000 | 5000 | **K28580/K28521** | 0.38 | 1.59 | 0.88 | 18 | 0.701 |
| 124 | 158 | 4000 | 5000 | **K3775/K3730** | 0.34 | 1.77 | 0.98 | 22 | 0.870 |
| 124 | 158 | 4000 | 4500 | **K3780/K3720** | 0.34 | 1.77 | 0.98 | 22 | 0.870 |
| 110 | 140 | 4000 | 4500 | **K33889A6/K33822** | 0.33 | 1.79 | 0.99 | 24 | 1.2 |
| 110 | 140 | 4000 | 4500 | **K33889/K33822** | 0.33 | 1.79 | 0.99 | 24 | 0.877 |
| 84 | 108 | 4000 | 5000 | **K385A/K382A** | 0.35 | 1.69 | 0.93 | 18 | 0.678 |

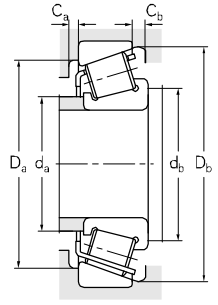
Note: * indicates the maximum value of IDor OD.

d 50.8~54.488 mm





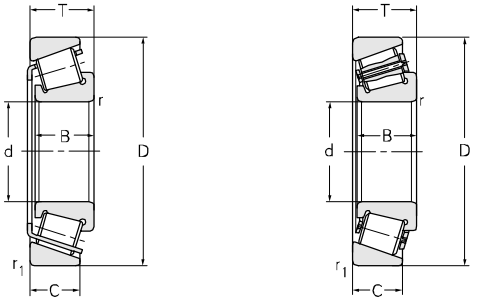





| Principal dimensions | | | | | | | | | | | | Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | | D | | T | | B | | C | | $r_{min}$ | $R_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | e | Y | Yo | a | |
| mm | in | mm | in | mm | in | mm | in | mm | in | mm | | kN | | r/min | | | | | | | kg |
| **50.8** | | 101.6 | 4 | 31.75 | 1.25 | 31.75 | 1.25 | 25.4 | 1 | 0.8 | 3.5 | 120 | 151 | 4000 | 4500 | **K49585/K49522** | 0.4 | 1.5 | 0.82 | 23 | 1.13 |
| | | 104.775 | 4.125 | 36.512 | 1.437 | 36.512 | 1.437 | 28.575 | 1.125 | 3.3 | 3.5 | 140 | 192 | 3500 | 4500 | **KHM807046/KHM807010** | 0.49 | 1.23 | 0.68 | 29 | 1.48 |
| | | 104.775 | 4.125 | 36.512 | 1.437 | 36.512 | 1.437 | 28.575 | 1.125 | 3.3 | 3.5 | 140 | 192 | 3500 | 4500 | **KHM807046/KHM807010-2** | 0.49 | 1.23 | 0.68 | 29 | 1.48 |
| | | 104.775 | 4.125 | 36.512 | 1.437 | 36.512 | 1.437 | 28.575 | 1.125 | 3.3 | 3.5 | 146 | 194 | 3500 | 4500 | **K59200/K59412** | 0.4 | 1.49 | 0.82 | 26 | 1.49 |
| | | 104.775 | 4.125 | 30.162 | 1.187 | 30.958 | 1.219 | 23.812 | 0.937 | 3.3 | 6.4 | 127 | 166 | 3500 | 4500 | **K45284/K45220** | 0.33 | 1.8 | 0.99 | 22 | 1.23 |
| | | 104.775 | 4.125 | 30.162 | 1.187 | 30.958 | 1.219 | 23.812 | 0.937 | 3.3 | 0.8 | 127 | 166 | 3500 | 4500 | **K45285ASH/K45220SH** | 0.33 | 1.8 | 0.99 | 22 | 1.23 |
| | | 104.775 | 4.125 | 30.162 | 1.187 | 30.958 | 1.219 | 23.812 | 0.937 | 0.8 | 2.3 | 115 | 166 | 3500 | 4500 | **K45285/K45221** | 0.33 | 1.8 | 0.99 | 22 | 1.23 |
| | | 107.95 | 4.25 | 32.558 | 1.282 | 29.317 | 1.154 | 27 | 1.063 | 0.8 | 0.8 | 110 | 143 | 3700 | 4700 | **K455/K452** | 0.34 | 1.79 | 0.98 | 26 | 1.38 |
| | | 107.95 | 4.25 | 27.795 | 1.094 | 29.317 | 1.154 | 27 | 1.063 | 0.8 | 0.8 | 110 | 143 | 3500 | 4500 | **K455/K453** | 0.34 | 1.79 | 0.98 | 21 | 1.30 |
| | | 107.95 | 4.25 | 27.783 | 1.094 | 29.317 | 1.154 | 22.225 | 0.875 | 0.8 | 0.8 | 110 | 143 | 3500 | 4500 | **K455/K453A** | 0.34 | 1.79 | 0.98 | 21 | 1.24 |
| | | 107.95 | 4.25 | 27.782 | 1.094 | 29.317 | 1.154 | 22.225 | 0.875 | 0.8 | 3.5 | 110 | 143 | 3500 | 4500 | **K455S/K453B-3** | 0.34 | 1.79 | 0.98 | 21 | 1.3 |
| | | 107.95 | 4.25 | 36.512 | 1.437 | 36.957 | 1.455 | 28.575 | 1.125 | 3.3 | 3.5 | 153 | 190 | 3700 | 4700 | **K537/K532X** | 0.3 | 2.02 | 1.11 | 24 | 1.54 |
| | | 112.712 | 4.437 | 33.338 | 1.313 | 30.048 | 1.183 | 26.988 | 1.063 | 3.3 | 3.5 | 115 | 170 | 3600 | 4500 | **K3975/K3926** | 0.4 | 1.49 | 0.82 | 29 | 1.62 |
| | | 123.825 | 4.875 | 36.512 | 1.437 | 32.791 | 1.291 | 25.4 | 1 | 3.3 | 3.5 | 142 | 189 | 2800 | 4000 | **K72200C/K72487** | 0.74 | 0.81 | 0.45 | 38 | 2.13 |
| | | 123.825 | 4.875 | 36.512 | 1.437 | 32.791 | 1.291 | 25.4 | 1 | 3.3 | 3.5 | 142 | 189 | 2800 | 4000 | **K72200C/K72487-3** | 0.74 | 0.81 | 0.45 | 38 | 2.13 |
| **51.75** | 2.037 | 104.775 | 4.125 | 30.162 | 1.187 | 29.317 | 1.154 | 24.605 | 0.969 | 3.3 | 2.3 | 100 | 145 | 3500 | 4500 | **K462/K453X** | 0.34 | 1.79 | 0.98 | 25 | 1.05 |
| **52.388** | 2.063 | 92.075 | 3.625 | 24.608 | 0.969 | 25.4 | 1 | 19.845 | 0.781 | 0.8 | 3.5 | 86.5 | 119 | 3500 | 4000 | **K28584A6/K28521** | 0.38 | 1.59 | 0.88 | 18 | 0.678 |
| | | 92.075 | 3.625 | 24.608 | 0.969 | 25.4 | 1 | 19.845 | 0.781 | 0.8 | 3.5 | 86.5 | 119 | 3500 | 4000 | **K28584/K28521** | 0.38 | 1.59 | 0.88 | 18 | 0.678 |
| **53.975** | 2.125 | 88.9 | 3.5 | 19.05 | 0.75 | 19.05 | 0.75 | 13.492 | 0.531 | 2 | 2.3 | 65.7 | 78 | 4100 | 5200 | **KLM806649/KLM806610-2-AAM** | 0.55 | 1.1 | 0.6 | 21 | 0.431 |
| | | 100 | 3.937 | 21 | 0.827 | 21.946 | 0.864 | 17.862 | 0.703 | 2 | 0.8 | 82.5 | 103 | 3000 | 4000 | **K389A/K383A** | 0.35 | 1.69 | 0.93 | 19 | 0.692 |
| | | 104.775 | 4.125 | 36.512 | 1.437 | 36.512 | 1.437 | 28.575 | 1.125 | 3.3 | 3.5 | 127 | 192 | 3000 | 4000 | **KHM807049/KHM807010** | 0.49 | 1.23 | 0.68 | 29 | 1.41 |
| | | 107.95 | 4.25 | 36.512 | 1.437 | 36.957 | 1.455 | 28.575 | 1.125 | 0.5 | 3.5 | 153 | 190 | 3000 | 4000 | **K539/K532XA6** | 0.3 | 2.02 | 1.11 | 23 | 1.47 |
| | | 123.825 | 4.875 | 36.512 | 1.437 | 32.791 | 1.291 | 25.4 | 1 | 3.3 | 3.6 | 156 | 190 | 2800 | 4000 | **K72212CA6/K72487-2** | 0.74 | 0.81 | 0.45 | 38 | 2.12 |
| | | 123.825 | 4.875 | 36.512 | 1.437 | 32.791 | 1.291 | 25.4 | 1 | 3.3 | 3.5 | 142 | 189 | 2800 | 4000 | **K72212C/K72487** | 0.74 | 0.81 | 0.45 | 38 | 2.12 |
| | | 130.175 | 5.125 | 36.512 | 1.437 | 33.338 | 1.313 | 23.812 | 0.937 | 3.3 | 3.5 | 153 | 168 | 3000 | 4000 | **KHM911242SH/KHM911210SH** | 0.81 | 0.74 | 0.41 | 41 | 2.24 |
| **54.488** | 2.145 | 104.775 | 4.125 | 36.512 | 1.437 | 36.512 | 1.437 | 28.575 | 1.125 | 3.3 | 3.5 | 140 | 192 | 3000 | 4000 | **KHM807048/KHM807010** | 0.49 | 1.23 | 0.68 | 29 | 1.39 |
| | | 104.775 | 4.125 | 36.512 | 1.437 | 36.512 | 1.437 | 28.575 | 1.125 | 3.3 | 3.5 | 146 | 204 | 3000 | 4000 | **KHM807048YB2/KHM807010** | 0.49 | 1.23 | 0.68 | 29 | 1.39 |

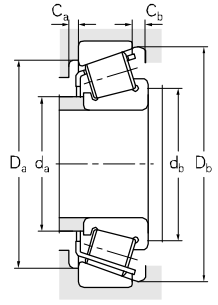
Note: * indicates the maximum value of IDor OD.

d 55~60.325 mm





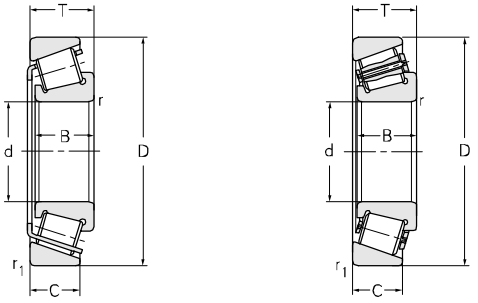





| Principal dimensions | | | | | | | | | | | | Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | | D | | T | | B | | C | | $r_{min}$ | $R_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | e | Y | Yo | a | |
| mm | in | mm | in | mm | in | mm | in | mm | in | mm | | kN | | r/min | | | | | | | kg |
| **55** | 2.165 | 90 | 3.543 | 23 | 0.906 | 23 | 0.906 | 18.5 | 0.728 | 0.5 | 1.5 | 81 | 114 | 4100 | 5100 | KJLM506849SH/KJLM506810SH/YB2-3 | 0.4 | 1.5 | 0.8 | 20 | 0.553 |
| | | 120 | 4.724 | 29.002 | 1.142 | 29.007 | 1.142 | 23.444 | 0.923 | 3.3 | 0.8 | 135 | 188 | 3400 | 4300 | **K475/K472A** | 0.38 | 1.56 | 0.86 | 25 | 1.64 |
| **55*** | | 90* | | 23 | 0.906 | 23 | 0.906 | 18.5 | 0.728 | 0.5 | 1.5 | 78 | 113 | 3000 | 4000 | **KJLM506849/KJLM506810** | 0.4 | 1.5 | 0.82 | 20 | 0.568 |
| | | 90* | | 23 | 0.906 | 23 | 0.906 | 18.5 | 0.728 | 0.5 | 1.5 | 78 | 113 | 3000 | 4000 | **KJLM506849/KJLM506810-2** | 0.4 | 1.5 | 0.82 | 20 | 0.568 |
| | | 90 | 3.5433 | 23 | 0.906 | 23 | 0.906 | 18.5 | 0.728 | 0.5 | 1.5 | 81 | 114 | 4000 | 5300 | KJLM506849SH/KJLM506810SH-3 | 0.4 | 1.5 | 0.8 | 20 | 0.553 |
| | | 95* | | 29 | 1.142 | 29 | 1.142 | 23.5 | 0.925 | 2.5 | 1.5 | 77 | 152 | 3000 | 4000 | **KJM207049/KJM207010** | 0.33 | 1.8 | 0.99 | 21 | 0.831 |
| | | 110* | | 39 | 1.535 | 39 | 1.535 | 32 | 1.26 | 2.5 | 3 | 164 | 203 | 3000 | 4000 | **KJH307749/KJH307710** | 0.35 | 1.69 | 0.93 | 26 | 1.69 |
| **55.562** | 2.187 | 97.63 | 3.844 | 24.608 | 0.969 | 24.608 | 0.969 | 19.446 | 0.766 | 0.8 | 3.5 | 89.5 | 129 | 3000 | 4000 | **K28680/K28622** | 0.4 | 1.49 | 0.82 | 21 | 0.760 |
| **56*** | | 95 | 3.7402 | 29 | 1.142 | 29 | 1.142 | 23.5 | 0.925 | 2.5 | 1.5 | 110 | 152 | 3000 | 4000 | KJM207049/KJM207010-3 | 0.33 | 1.8 | 0.99 | 21 | 0.831 |
| **57.15** | 2.25 | 96.838 | 3.813 | 21 | 0.827 | 21.946 | 0.864 | 15.875 | 0.625 | 0.8 | 3.5 | 82.5 | 103 | 3000 | 4000 | **K387A/K382A** | 0.35 | 1.7 | 0.9 | 21 | 0.581 |
| | | 96.838 | 3.813 | 21 | 0.827 | 21.946 | 0.864 | 15.875 | 0.625 | 0.8 | 5 | 75 | 103 | 3000 | 4000 | **K387AS/K382A** | 0.35 | 1.7 | 0.9 | 21 | 0.573 |
| | | 97.63 | 3.844 | 24.608 | 0.969 | 24.608 | 0.969 | 19.446 | 0.766 | 0.8 | 3.5 | 94.5 | 138 | 3000 | 4000 | **K28682/K28622** | 0.4 | 1.49 | 0.82 | 21 | 0.74 |
| | | 104.775 | 4.125 | 30.162 | 1.187 | 29.317 | 1.154 | 24.605 | 0.969 | 3.3 | 2.3 | 119 | 160 | 3600 | 4600 | **K462A/K453X** | 0.34 | 1.79 | 0.98 | 24 | 1.06 |
| | | 104.775 | 4.125 | 32.545 | 1.281 | 29.317 | 1.154 | 26.988 | 1.063 | 3.3 | 3.5 | 119 | 160 | 3600 | 4600 | **K469/K453E** | 0.34 | 1.79 | 0.98 | 26 | 1.14 |
| | | 104.775 | 4.125 | 30.162 | 1.187 | 29.317 | 1.154 | 24.605 | 0.969 | 3.3 | 3.5 | 119 | 160 | 3600 | 4600 | **K469/K453X** | 0.34 | 1.79 | 0.98 | 26 | 1.07 |
| | | 112.712 | 4.437 | 26.967 | 1.062 | 21.996 | 0.866 | 23.812 | 0.937 | 3.3 | 2.3 | 92.5 | 125 | 3500 | 4400 | **K390/K3920** | 0.4 | 1.49 | 0.82 | 26 | 1.14 |
| | | 123.825 | 4.875 | 38.1 | 1.5 | 36.678 | 1.444 | 30.162 | 1.187 | 3.3 | 3.5 | 161 | 223 | 3200 | 4100 | **K555S/K552A** | 0.35 | 1.73 | 0.95 | 29 | 2.04 |
| | | 140.03 | 5.513 | 36.512 | 1.437 | 33.236 | 1.309 | 23.52 | 0.926 | 2.3 | 3.5 | 155 | 185 | 3000 | 4000 | **K78225C/K78551** | 0.87 | 0.69 | 0.38 | 45 | 2.53 |
| **59.987** | 2.362 | 146.05 | 5.75 | 41.275 | 1.625 | 39.688 | 1.563 | 25.4 | 1 | 3.3 | 3.5 | 206 | 240 | 3000 | 4000 | **KH913840/KH913810** | 0.78 | 0.77 | 0.42 | 45 | 3.28 |
| | | 146.05 | 5.75 | 41.275 | 1.625 | 39.688 | 1.563 | 25.4 | 1 | 3.3 | 3.5 | 206 | 240 | 3000 | 4000 | **KH913840/KH913810-3** | 0.78 | 0.77 | 0.42 | 45 | 3.28 |
| | | 130.175 | 5.125 | 36.513 | 1.438 | 30.924 | 1.217 | 23.812 | 0.937 | 3.3 | 3.5 | 145 | 168 | 3000 | 4000 | KHM911244SH1/KHM911210SH1 | 0.82 | 0.73 | 0.4 | 44 | 2.11 |
| **60*** | | 112.712 | 4.4375 | 30.162 | 1.187 | 30.048 | 1.183 | 23.812 | 0.937 | 3.3 | 3.5 | 115 | 170 | 3000 | 4000 | **K3977/K3920** | 0.4 | 1.49 | 0.82 | 25 | 1.30 |
| | | 135 | 5.3147 | 33.45 | 1.317 | 30.95 | 1.219 | 22 | 0.866 | 3.5 | 3.5 | 137 | 175 | 3000 | 4000 | **KHM911244B/KHM911216B** | 0.82 | 0.73 | 0.4 | 41 | 2.06 |
| **60** | 2.362 | 120 | 4.724 | 29.795 | 1.173 | 29.007 | 1.142 | 24.237 | 0.954 | 2 | 2 | 135 | 188 | 3300 | 4100 | **K476/K472** | 0.38 | 1.56 | 0.86 | 26 | 1.54 |
| | | 125 | 4.921 | 37 | 1.457 | 33.5 | 1.319 | 26 | 1.024 | 3 | 3 | 150 | 194 | 3200 | 4000 | **KJW6049/KJW6010** | 0.82 | 0.73 | 0.4 | 42 | 2 |
| **60.325** | 2.375 | 100 | 3.937 | 25.4 | 1 | 25.4 | 1 | 19.845 | 0.781 | 3.3 | 3.5 | 95 | 75.5 | 3000 | 4000 | **K28985/K28921** | 0.43 | 1.41 | 0.77 | 24 | 0.812 |

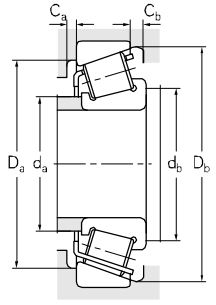
Note: * indicates the maximum value of IDor OD.

d 60.325~63.5 mm





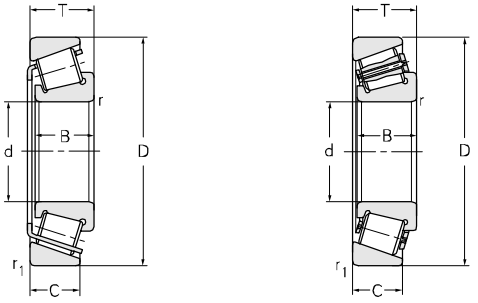





| Principal dimensions | | | | | | | | | | | | Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | | D | | T | | B | | C | | $r_{min}$ | $R_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | e | Y | Yo | a | |
| mm | in | mm | in | mm | in | mm | in | mm | in | mm | | kN | | r/min | | | | | | | kg |
| **60.325** | | 101.6 | 4 | 25.4 | 1 | 25.4 | 1 | 19.845 | 0.781 | 3.3 | 3.5 | 95 | 75.7 | 3000 | 4000 | **K28985/K28920** | 0.43 | 1.41 | 0.77 | 24 | 0.851 |
| | | 122.238 | 4.813 | 38.1 | 1.5 | 38.354 | 1.51 | 29.718 | 1.17 | 3.3 | 8 | 233 | 154 | 3000 | 4000 | **KHM212044/KHM212011** | 0.34 | 1.78 | 0.98 | 31 | 2.08 |
| | | 122.238 | 4.813 | 38.1 | 1.5 | 38.354 | 1.51 | 29.718 | 1.17 | 3.3 | 8 | 233 | 154 | 3000 | 4000 | **KHM212044/KHM212011-3** | 0.34 | 1.78 | 0.98 | 31 | 2.08 |
| | | 122.238 | 4.813 | 43.658 | 1.719 | 43.764 | 1.723 | 36.512 | 1.437 | 3.3 | 3.5 | 220 | 315 | 3000 | 4000 | **K5583/K5535** | 0.36 | 1.67 | 0.92 | 31 | 2.39 |
| | | 122.238 | 4.813 | 43.658 | 1.719 | 43.764 | 1.723 | 36.512 | 1.437 | 3.3 | 3.5 | 220 | 315 | 3000 | 4000 | **K5583/K5535-2** | 0.36 | 1.67 | 0.92 | 31 | 2.39 |
| | | 123.825 | 4.875 | 38.1 | 1.5 | 36.678 | 1.444 | 30.162 | 1.187 | 3.3 | 2.3 | 162 | 223 | 3000 | 4000 | **K558/K552A** | 0.35 | 1.73 | 0.95 | 31 | 2.09 |
| | | 127 | 5 | 44.45 | 1.75 | 44.45 | 1.75 | 34.925 | 1.375 | 3.3 | 3.5 | 211 | 274 | 3000 | 4000 | **K65237/K65500** | 0.49 | 1.2 | 0.68 | 35 | 2.65 |
| | | 136.525 | 5.375 | 46.038 | 1.813 | 46.038 | 1.813 | 36.512 | 1.437 | 3.3 | 3.5 | 249 | 405 | 3000 | 4000 | **KH715332/KH715311** | 0.47 | 1.27 | 0.7 | 37 | 3.47 |
| **61.912** | 2.437 | 112.712 | 4.437 | 26.967 | 1.062 | 21.996 | 0.866 | 23.812 | 0.937 | 3.3 | 0.8 | 91 | 105 | 3000 | 4000 | **K392/K3920** | 0.4 | 1.49 | 0.82 | 27 | 1.06 |
| | | 127 | 5 | 36.512 | 1.437 | 36.512 | 1.437 | 26.988 | 1.063 | 3.3 | 3.5 | 166 | 234 | 2600 | 3400 | **KHM813843/KHM813810** | 0.5 | 1.2 | 0.66 | 37 | 2.16 |
| | | 136.525 | 5.375 | 46.038 | 1.813 | 46.038 | 1.813 | 36.512 | 1.437 | 3.3 | 3.5 | 249 | 405 | 2600 | 3400 | **KH715334/KH715311** | 0.47 | 1.3 | 0.7 | 37 | 3.41 |
| **63.5** | 2.5 | 94.458 | 3.719 | 19.05 | 0.75 | 19.05 | 0.75 | 15.083 | 0.594 | 1.5 | 1.5 | 62 | 105 | 3000 | 4000 | **KL610549/KL610510** | 0.42 | 1.4 | 0.78 | 20 | 0.453 |
| | | 104.775 | 4.125 | 21.433 | 0.844 | 22 | 0.866 | 15.875 | 0.625 | 2.0 | 2.0 | 92.5 | 119 | 3000 | 4000 | **K39250/K39412** | 0.39 | 1.6 | 0.86 | 20 | 0.711 |
| | | 107.95 | 4.25 | 25.4 | 1 | 25.4 | 1 | 19.05 | 0.75 | 0.8 | 3.5 | 92.5 | 141 | 3000 | 4000 | **K29585/K29522** | 0.46 | 1.31 | 0.72 | 24 | 0.914 |
| | | 107.95 | 4.25 | 25.4 | 1 | 25.4 | 1 | 19.05 | 0.75 | 3.3 | 1.5 | 92.5 | 141 | 3000 | 4000 | **K29586/K29520** | 0.46 | 1.31 | 0.72 | 18 | 0.914 |
| | | 107.95 | 4.25 | 25.4 | 1 | 25.4 | 1 | 19.05 | 0.75 | 0.8 | 1.5 | 92.5 | 141 | 3000 | 4000 | **K29586/K29522** | 0.46 | 1.31 | 0.72 | 24 | 0.914 |
| | | 110 | 4.331 | 22 | 0.866 | 21.996 | 0.866 | 18.824 | 0.741 | 1.3 | 3.5 | 90 | 117 | 3000 | 4000 | **K395/K394A** | 0.4 | 1.5 | 0.82 | 21 | 0.853 |
| | | 110 | 4.331 | 25.4 | 1 | 25.4 | 1 | 19.05 | 0.75 | 1.3 | 3.5 | 92.5 | 141 | 3000 | 4000 | **K29585/K29521** | 0.46 | 1.31 | 0.72 | 24 | 0.965 |
| | | 112.712 | 4.437 | 30.162 | 1.187 | 30.048 | 1.183 | 23.812 | 0.937 | 3.3 | 3.5 | 121 | 183 | 2900 | 3900 | **K3982/K3920** | 0.4 | 1.49 | 0.82 | 24 | 1.22 |
| | | 112.712 | 4.437 | 30.162 | 1.187 | 30.162 | 1.187 | 23.812 | 0.937 | 3.3 | 3.5 | 121 | 183 | 2900 | 3900 | **K39585/K39520** | 0.35 | 1.7 | 0.93 | 24 | 1.27 |
| | | 112.712 | 4.437 | 30.162 | 1.187 | 30.162 | 1.187 | 23.812 | 0.937 | 3.3 | 3.5 | 121 | 183 | 2900 | 3900 | **K39585/K39520/HE1** | 0.35 | 1.7 | 0.93 | 24 | 1.27 |
| | | 122.238 | 4.813 | 38.1 | 1.5 | 38.354 | 1.51 | 29.718 | 1.17 | 1.5 | 7 | 173 | 250 | 2900 | 3900 | **KHM212047/KHM212010** | 0.34 | 1.78 | 0.98 | 27 | 1.9 |
| | | 122.238 | 4.813 | 38.1 | 1.5 | 38.354 | 1.51 | 29.718 | 1.17 | 3.3 | 7 | 190 | 250 | 2900 | 3900 | **KHM212047/KHM212011** | 0.34 | 1.78 | 0.98 | 24 | 1.90 |
| | | 123.825 | 4.875 | 38.1 | 1.5 | 36.678 | 1.444 | 30.162 | 1.187 | 3.3 | 3.5 | 162 | 223 | 2900 | 3900 | **K559/K552A** | 0.35 | 1.73 | 0.95 | 29 | 1.99 |
| | | 127 | 5 | 36.512 | 1.437 | 36.17 | 1.424 | 28.575 | 1.125 | 3.3 | 3.5 | 163 | 237 | 2900 | 3900 | **K565/K563** | 0.36 | 1.65 | 0.91 | 29 | 2.09 |
| | | 127 | 5 | 36.512 | 1.437 | 36.512 | 1.437 | 26.988 | 1.063 | 3.3 | 3.5 | 166 | 234 | 2900 | 3900 | **KHM813842/KHM813810** | 0.5 | 1.2 | 0.66 | 32 | 2.12 |
| | | 130.175 | 5.125 | 41.275 | 1.625 | 41.275 | 1.625 | 31.75 | 1.25 | 3.3 | 3.5 | 199 | 271 | 2800 | 3800 | **K639/K633** | 0.36 | 1.66 | 0.91 | 30 | 2.52 |

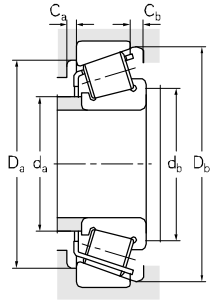
Note: * indicates the maximum value of IDor OD.

d 63.5~69.85 mm







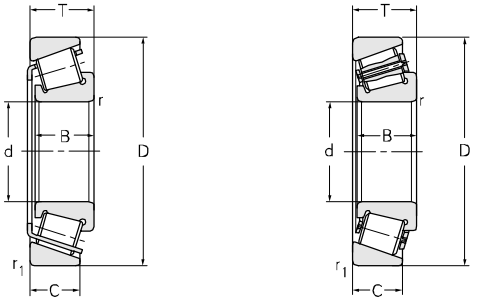



| Principal dimensions | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | | D | | T | | B | | C | | $r_{min}$ | $R_{min}$ |
| mm | in | mm | in | mm | in | mm | in | mm | in | mm | |
| **63.5** | | 136.525 | 5.375 | 41.275 | 1.625 | 41.275 | 1.625 | 31.75 | 1.25 | 3.3 | 3.5 |
| | | 136.525 | 5.375 | 41.275 | 1.625 | 41.275 | 1.625 | 31.75 | 1.25 | 3.3 | 3.5 |
| **65.088** | 2.563 | 135.755 | 5.345 | 53.975 | 2.125 | 56.007 | 2.205 | 44.45 | 1.75 | 3.3 | 3.5 |
| **66.675** | 2.625 | 107.95 | 4.25 | 25.4 | 1 | 25.4 | 1 | 19.05 | 0.75 | 0.8 | 3.5 |
| | | 107.95 | 4.25 | 25.4 | 1 | 25.4 | 1 | 19.05 | 0.75 | 0.8 | 3.5 |
| | | 110 | 4.331 | 22 | 0.866 | 21.996 | 0.866 | 18.824 | 0.741 | 1.3 | 0.8 |
| | | 110 | 4.331 | 22 | 0.866 | 21.996 | 0.866 | 18.824 | 0.741 | 1.3 | 0.8 |
| | | 110 | 4.331 | 22 | 0.866 | 21.996 | 0.866 | 18.824 | 0.741 | 1.3 | 3.5 |
| | | 112.712 | 4.437 | 26.967 | 1.062 | 21.996 | 0.866 | 23.812 | 0.937 | 3.3 | 0.8 |
| | | 112.712 | 4.437 | 30.162 | 1.187 | 30.162 | 1.187 | 23.812 | 0.937 | 3.3 | 3.5 |
| | | 112.712 | 4.437 | 30.162 | 1.187 | 30.162 | 1.187 | 23.812 | 0.937 | 3.3 | 3.5 |
| | | 117.475 | 4.625 | 30.162 | 1.187 | 30.162 | 1.187 | 23.812 | 0.937 | 3.3 | 3.5 |
| | | 122.238 | 4.813 | 38.1 | 1.5 | 38.354 | 1.51 | 29.718 | 1.17 | SP | SP |
| | | 122.238 | 4.813 | 38.1 | 1.5 | 38.354 | 1.51 | 29.718 | 1.17 | 1.5 | 3.5 |
| | | 122.238 | 4.813 | 38.1 | 1.5 | 38.354 | 1.51 | 29.718 | 1.17 | 3.3 | 3.6 |
| | | 122.238 | 4.813 | 38.1 | 1.5 | 38.354 | 1.51 | 29.718 | 1.17 | 3.3 | 3.5 |
| | | 122.238 | 4.813 | 38.1 | 1.5 | 38.354 | 1.51 | 29.718 | 1.17 | 3.3 | 3.5 |
| | | 122.238 | 4.813 | 38.1 | 1.5 | 38.354 | 1.51 | 29.718 | 1.17 | 3.3 | 3.5 |
| | | 127 | 5 | 36.512 | 1.437 | 36.512 | 1.437 | 26.988 | 1.063 | 3.3 | 3.5 |
| | | 136.525 | 5.375 | 41.275 | 1.625 | 41.275 | 1.625 | 31.75 | 1.25 | 3.3 | 3.5 |
| | | 135.755 | 5.345 | 53.975 | 2.125 | 56.007 | 2.205 | 44.45 | 1.75 | 3.3 | 4.3 |
| | | 136.525 | 5.375 | 46.038 | 1.813 | 46.038 | 1.813 | 36.512 | 1.437 | 3.3 | 3.5 |
| | | 136.525 | 5.375 | 46.038 | 1.813 | 46.038 | 1.813 | 36.512 | 1.437 | 3.3 | 3.5 |
| **68.262** | 2.687 | 136.525 | 5.375 | 41.275 | 1.625 | 41.275 | 1.625 | 31.75 | 1.25 | 3.3 | 3.5 |
| | | 136.525 | 5.375 | 41.275 | 1.625 | 41.275 | 1.625 | 31.75 | 1.25 | 3.3 | 3.5 |
| | | 136.525 | 5.375 | 46.038 | 1.813 | 46.038 | 1.813 | 36.512 | 1.437 | 3.3 | 3.5 |
| | | 161.925 | 6.375 | 49.212 | 1.937 | 46.038 | 1.813 | 31.75 | 1.25 | 3.3 | 3.5 |
| **69.85** | 2.75 | 112.712 | 4.437 | 25.4 | 1 | 25.4 | 1 | 19.05 | 0.75 | 3.3 | 1.5 |
| | | 117.475 | 4.625 | 30.162 | 1.187 | 30.162 | 1.187 | 23.812 | 0.937 | 3.3 | 3.5 |

| Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| $C_r$ | $C_{or}$ | Grease | Oil | | e | Y | Yo | a | |
| kN | | r/min | | | | | | | kg |
| 264 | 340 | 2800 | 3800 | **KH414235A6/KH414210B2** | 0.36 | 1.66 | 0.91 | 30 | 2.96 |
| 264 | 340 | 2800 | 3800 | **KH414235/KH414210** | 0.36 | 1.66 | 0.91 | 30 | 3.03 |
| 280 | 400 | 2600 | 3400 | **K6379/K6320** | 0.32 | 1.88 | 1.02 | 36 | 3.63 |
| 92.5 | 141 | 2800 | 3800 | **K29590A6/K29522** | 0.46 | 1.31 | 0.72 | 24 | 0.853 |
| 92.5 | 141 | 2800 | 3800 | **K29590/K29522** | 0.46 | 1.31 | 0.72 | 18 | 0.853 |
| 90 | 117 | 2800 | 3800 | **K395A/K394A** | 0.4 | 1.49 | 0.82 | 21 | 0.797 |
| 90 | 117 | 2800 | 3800 | **K395A/K394A-3** | 0.4 | 1.49 | 0.82 | 21 | 0.797 |
| 90 | 117 | 2800 | 3800 | **K395S/K394A** | 0.4 | 1.49 | 0.82 | 21 | 0.397 |
| 90 | 117 | 2800 | 3800 | **K395A/K3920** | 0.4 | 1.49 | 0.82 | 26 | 0.981 |
| 121 | 183 | 2800 | 3800 | **K39590/K39520** | 0.35 | 1.7 | 0.93 | 24 | 1.23 |
| 141 | 201 | 2800 | 3800 | **K39590SH/K39520SH** | 0.35 | 1.7 | 0.93 | 24 | 1.23 |
| 123 | 180 | 2800 | 3800 | **K33262/K33462** | 0.44 | 1.38 | 0.76 | 28 | 1.37 |
| 233 | 154 | 2600 | 3400 | **KHM212049A6/KHM212010A6** | 0.34 | 1.78 | 0.98 | 27 | 1.90 |
| 233 | 154 | 2800 | 3800 | **KHM212049/KHM212010** | 0.34 | 1.78 | 0.98 | 27 | 1.90 |
| 233 | 154 | 2800 | 3800 | **KHM212049/KHM212011** | 0.34 | 1.78 | 0.98 | 24 | 1.90 |
| 233 | 154 | 2600 | 3400 | **KHM212049/KHM212011-3** | 0.34 | 1.78 | 0.98 | 27 | 1.90 |
| 190 | 250 | 2600 | 3400 | **KHM212049/KHM212011-HEND** | 0.34 | 1.78 | 0.98 | 27 | 1.91 |
| 190 | 250 | 2600 | 3400 | **KHM212049/KHM212011-NA** | 0.34 | 1.78 | 0.98 | 27 | 1.92 |
| 179 | 256 | 2800 | 3800 | **KHM813844/KHM813810** | 0.5 | 1.2 | 0.66 | 33 | 2.01 |
| 199 | 271 | 2600 | 3400 | **K641/K632** | 0.36 | 1.66 | 0.91 | 30 | 2.74 |
| 280 | 400 | 2600 | 3400 | **K6386/K6320** | 0.32 | 1.85 | 1.02 | 36 | 3.56 |
| 249 | 405 | 2600 | 3400 | **KH715341/KH715311** | 0.47 | 1.3 | 0.7 | 37 | 3.24 |
| 238 | 380 | 2600 | 3400 | **KH715341/KH715311-3** | 0.47 | 1.3 | 0.7 | 37 | 3.24 |
| 199 | 271 | 2600 | 3400 | **K642/K632** | 0.36 | 1.66 | 0.91 | 30 | 2.69 |
| 220 | 340 | 2600 | 3400 | **KH414245/KH414210** | 0.36 | 1.67 | 0.92 | 30 | 2.7 |
| 238 | 380 | 2600 | 3400 | **KH715343/KH715311** | 0.47 | 1.3 | 0.7 | 37 | 3.18 |
| 248 | 490 | 2800 | 3800 | **K9278/K9220** | 0.71 | 0.85 | 0.47 | 56 | 4.58 |
| 112 | 156 | 2600 | 3600 | **K29675/K29620** | 0.49 | 1.23 | 0.68 | 26 | 0.952 |
| 107 | 180 | 2600 | 3600 | **K33275/K33462** | 0.44 | 1.38 | 0.76 | 28 | 1.28 |

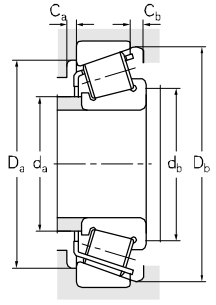
Note: * indicates the maximum value of IDor OD.

d 69.85~75.987 mm





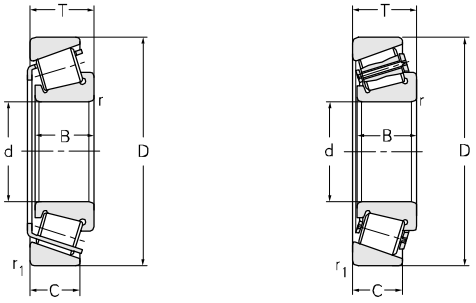





| Principal dimensions | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | | D | | T | | B | | C | | $r_{min}$ | $R_{min}$ |
| mm | in | mm | in | mm | in | mm | in | mm | in | mm | |
| **69.85** | | 120 | 4.724 | 32.545 | 1.281 | 32.545 | 1.281 | 26.195 | 1.031 | 3.3 | 3.5 |
| | | 120 | 4.724 | 29.795 | 1.173 | 29.007 | 1.142 | 24.237 | 0.954 | 2 | 3.5 |
| | | 127 | 5 | 36.512 | 1.437 | 36.17 | 1.424 | 28.575 | 1.125 | 3.3 | 3.5 |
| | | 130.175 | 5.125 | 41.275 | 1.625 | 41.275 | 1.625 | 31.75 | 1.25 | 3.3 | 3.5 |
| | | 146.05 | 5.75 | 41.275 | 1.625 | 39.688 | 1.563 | 25.4 | 1 | 3.3 | 3.6 |
| | | 146.05 | 5.75 | 41.275 | 1.625 | 39.688 | 1.563 | 25.4 | 1 | 3.3 | 3.5 |
| | | 146.05 | 5.75 | 41.275 | 1.625 | 39.688 | 1.563 | 25.4 | 1 | 3.3 | 3.5 |
| | | 149.225 | 5.875 | 41.275 | 1.625 | 41.275 | 1.625 | 31.75 | 1.25 | 3.3 | 3.5 |
| | | 150.089 | 5.909 | 44.45 | 1.75 | 46.672 | 1.837 | 36.512 | 1.437 | 3.3 | 3.5 |
| **70** | 2.756 | 130 | 5.118 | 43 | 1.693 | 42 | 1.654 | 35 | 1.378 | 2.5 | 7 |
| **70*** | | 110* | | 26 | 1.024 | 25 | 0.984 | 20.5 | 0.807 | 2.5 | 1 |
| | | 120 | 4.7244 | 29.795 | 1.173 | 29.007 | 1.142 | 24.237 | 0.954 | 2 | 2 |
| **71.438** | 2.813 | 117.475 | 4.625 | 30.162 | 1.187 | 30.162 | 1.187 | 23.812 | 0.937 | 3.3 | 3.5 |
| | | 120 | 4.724 | 32.545 | 1.281 | 32.545 | 1.281 | 26.195 | 1.031 | 3.3 | 3.5 |
| | | 136.525 | 5.375 | 41.275 | 1.625 | 41.275 | 1.625 | 31.75 | 1.25 | 3.3 | 3.5 |
| | | 136.525 | 5.375 | 41.275 | 1.625 | 41.275 | 1.625 | 31.75 | 1.25 | 3.3 | 6.4 |
| **73.025** | 2.875 | 112.712 | 4.437 | 25.4 | 1 | 25.4 | 1 | 19.05 | 0.75 | 3.3 | 3.5 |
| | | 117.475 | 4.625 | 30.162 | 1.187 | 30.162 | 1.187 | 23.812 | 0.937 | 3.3 | 3.5 |
| | | 127 | 5 | 36.512 | 1.437 | 36.17 | 1.424 | 28.575 | 1.125 | 3.3 | 3.5 |
| | | 139.992 | 5.511 | 36.512 | 1.437 | 36.098 | 1.421 | 28.575 | 1.125 | 3.3 | 3.5 |
| | | 150.089 | 5.909 | 44.45 | 1.75 | 46.672 | 1.837 | 36.512 | 1.437 | 3.3 | 3.5 |
| **73.817** | 2.906 | 127 | 5 | 36.512 | 1.437 | 36.17 | 1.424 | 28.575 | 1.125 | 3.3 | 0.8 |
| **75** | 2.953 | 145 | 5.709 | 51 | 2.008 | 51 | 2.008 | 42 | 1.654 | 2.5 | 3 |
| **75*** | | 115* | | 25 | 0.984 | 25 | 0.984 | 19 | 0.748 | 2.5 | 3 |
| | | 120* | | 31 | 1.22 | 29.5 | 1.161 | 25 | 0.984 | 2.5 | 3 |
| **75.987** | 2.992 | 131.976 | 5.196 | 39 | 1.535 | 39 | 1.535 | 32 | 1.26 | 3.5 | 7 |

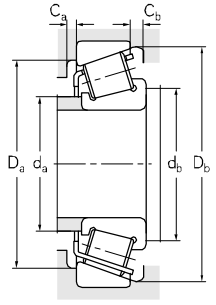
| Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| $C_r$ | $C_{or}$ | Grease | Oil | | e | Y | Yo | a | |
| kN | | r/min | | | | | | | kg |
| 157 | 229 | 3000 | 4000 | **K47487/K47420** | 0.35 | 1.7 | 0.9 | 25 | 1.50 |
| 129 | 186 | 2800 | 3800 | **K482/K472** | 0.38 | 1.56 | 0.86 | 26 | 1.32 |
| 172 | 255 | 2600 | 3600 | **K566/K563** | 0.36 | 1.65 | 0.91 | 29 | 1.91 |
| 199 | 271 | 2600 | 3600 | **K643/K633** | 0.36 | 1.66 | 0.91 | 29 | 2.30 |
| 204 | 240 | 2600 | 3600 | **KH913849A6/KH913810-2** | 0.78 | 0.77 | 0.42 | 45 | 2.97 |
| 206 | 240 | 2600 | 3600 | **KH913849/KH913810** | 0.78 | 0.77 | 0.42 | 45 | 2.97 |
| 206 | 240 | 2600 | 3600 | **KH913849/KH913810-3** | 0.78 | 0.77 | 0.42 | 45 | 2.97 |
| 215 | 315 | 2600 | 3600 | **K655/K652A** | 0.41 | 1.47 | 0.81 | 33 | 3.54 |
| 265 | 365 | 2600 | 3600 | **K745A/K742** | 0.33 | 1.84 | 1.01 | 31 | 3.74 |
| 225 | 325 | 2900 | 3700 | **KJF7049A/KJF7010** | 0.33 | 1.8 | 0.99 | 30 | 2.5 |
| 102 | 156 | 3000 | 4000 | **KJLM813049/KJLM813010** | 0.49 | 1.23 | 0.68 | 26 | 0.894 |
| 135 | 188 | 3000 | 4000 | **K484/K472** | 0.38 | 1.6 | 0.86 | 25 | 1.32 |
| 121 | 190 | 2600 | 3600 | **K33281/K33462** | 0.44 | 1.38 | 0.76 | 28 | 1.24 |
| 157 | 229 | 2600 | 3600 | **K47490/K47420** | 0.36 | 1.66 | 0.92 | 26 | 1.46 |
| 242 | 300 | 2600 | 3600 | **KH414249/KH414210** | 0.36 | 1.66 | 0.92 | 31 | 2.59 |
| 220 | 290 | 2600 | 3600 | **K645/K632** | 0.36 | 1.66 | 0.91 | 33 | 2.55 |
| 112 | 156 | 2600 | 3600 | **K29685/K29620** | 0.49 | 1.23 | 0.68 | 25 | 0.878 |
| 121 | 190 | 2600 | 3600 | **K33287/K33462** | 0.44 | 1.38 | 0.76 | 28 | 1.21 |
| 172 | 255 | 2900 | 3700 | **K567/K563** | 0.36 | 1.65 | 0.91 | 29 | 1.8 |
| 170 | 320 | 2800 | 3500 | **K576/K572** | 0.4 | 1.49 | 0.82 | 32 | 2.54 |
| 264 | 365 | 2400 | 3400 | **K744/K742** | 0.33 | 1.84 | 1.01 | 31 | 3.74 |
| 172 | 255 | 2900 | 3700 | **K568/K563** | 0.36 | 1.65 | 0.91 | 29 | 1.78 |
| 303 | 435 | 2700 | 3400 | **KJH415647/KJH415610** | 0.36 | 1.66 | 0.91 | 37 | 3.89 |
| 105 | 152 | 2600 | 3600 | **KJLM714149/KJLM714110** | 0.46 | 1.3 | 0.72 | 25 | 8.58 |
| 128 | 204 | 2600 | 3600 | **KJM714249/KJM714210** | 0.44 | 1.35 | 0.74 | 28 | 1.28 |
| 203 | 305 | 2600 | 3600 | **KHM215249/KHM215210** | 0.33 | 1.84 | 1.01 | 28 | 2.14 |

Note: * indicates the maximum value of IDor OD.





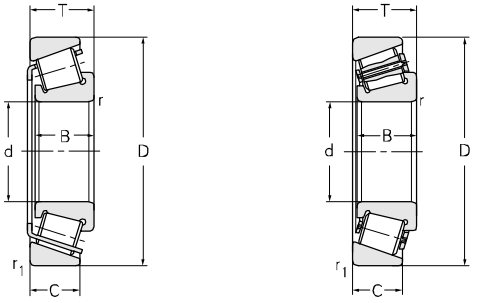


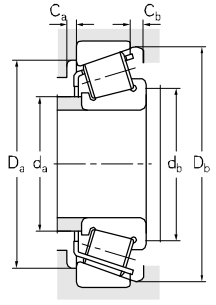



| Principal dimensions | | | | | | | | | | | | Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | | D | | T | | B | | C | | $r_{min}$ | $R_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | e | Y | Yo | a | |
| mm | in | mm | in | mm | in | mm | in | mm | in | mm | | kN | | r/min | | | | | | | kg |
| **76.2** | 3 | 125.412 | 4.937 | 25.4 | 1 | 25.4 | 1 | 19.845 | 0.781 | 1.5 | 3.5 | 91 | 160 | 2600 | 3600 | **K27684/K27620** | 0.45 | 1.32 | 0.73 | 29 | 1.25 |
| | | 127 | 5 | 30.162 | 1.187 | 31 | 1.22 | 22.225 | 0.875 | 3.3 | 3.5 | 184 | 220 | 2600 | 3600 | **K42687/K42620** | 0.42 | 1.43 | 0.79 | 27 | 1.44 |
| | | 127 | 5 | 30.162 | 1.187 | 31 | 1.22 | 22.225 | 0.875 | 3.3 | 6.4 | 184 | 220 | 2600 | 3600 | **K42688/K42620** | 0.42 | 1.43 | 0.79 | 27 | 1.44 |
| | | 133.35 | 5.25 | 33.338 | 1.313 | 33.338 | 1.313 | 26.195 | 1.031 | 3.3 | 3.5 | 162 | 260 | 2400 | 3400 | **K47679/K47620** | 0.38 | 1.57 | 0.86 | 65 | 1.97 |
| | | 135.733 | 5.344 | 44.45 | 1.75 | 46.1 | 1.815 | 34.925 | 1.375 | 3.3 | 3.5 | 215 | 340 | 2600 | 3600 | **K5760/K5735** | 0.41 | 1.5 | 0.81 | 33 | 2.73 |
| | | 136.525 | 5.375 | 30.162 | 1.187 | 29.769 | 1.172 | 22.225 | 0.875 | 3.175 | 3.5 | 134 | 198 | 2400 | 3400 | **K495A/K493** | 0.44 | 1.35 | 0.74 | 29 | 1.82 |
| | | 139.992 | 5.511 | 36.512 | 1.437 | 36.098 | 1.421 | 28.575 | 1.125 | 3.302 | 3.5 | 187 | 290 | 2400 | 3400 | **K575/K572** | 0.4 | 1.49 | 0.82 | 32 | 2.44 |
| | | 139.992 | 5.511 | 36.512 | 1.437 | 36.098 | 1.421 | 28.575 | 1.125 | 3.5 | 3.5 | 187 | 290 | 2400 | 3400 | **K575/K572A6** | 0.4 | 1.49 | 0.82 | 32 | 2.44 |
| | | 150.089 | 5.909 | 44.45 | 1.75 | 46.672 | 1.837 | 36.512 | 1.437 | 3.3 | 3.5 | 264 | 365 | 2400 | 3400 | **K748S/K742** | 0.33 | 1.84 | 1.01 | 33 | 3.62 |
| | | 150.089 | 5.909 | 44.45 | 1.75 | 46.672 | 1.837 | 36.512 | 1.437 | 3.3 | 3.5 | 264 | 365 | 2400 | 3400 | **K748S/K742-3** | 0.33 | 1.84 | 1.01 | 33 | 3.62 |
| | | 161.925 | 6.375 | 47.625 | 1.875 | 48.26 | 1.9 | 38.1 | 1.5 | 3.3 | 3.5 | 273 | 390 | 2400 | 3400 | **K755/K752** | 0.34 | 1.76 | 0.97 | 40 | 4.85 |
| | | 161.925 | 6.375 | 53.975 | 2.125 | 55.1 | 2.169 | 42.862 | 1.687 | 3.3 | 3.5 | 315 | 475 | 2400 | 3400 | **K6576/K6535** | 0.4 | 1.49 | 0.82 | 41 | 5.46 |
| | | 171.45 | 6.75 | 49.212 | 1.937 | 46.038 | 1.813 | 31.75 | 1.25 | 3.3 | 3.6 | 282 | 350 | 2000 | 2800 | **K9380A6/K9321-2** | 0.76 | 0.79 | 0.43 | 55 | 5.17 |
| | | 171.45 | 6.75 | 49.212 | 1.937 | 46.038 | 1.813 | 31.75 | 1.25 | 3.3 | 3.5 | 267 | 325 | 2000 | 2800 | **K9380/K9321** | 0.76 | 0.79 | 0.43 | 54 | 5.20 |
| | | 171.45 | 6.75 | 49.212 | 1.937 | 46.038 | 1.813 | 31.75 | 1.25 | 3.3 | 3.5 | 282 | 350 | 2000 | 2800 | **K9380/K9321-3** | 0.76 | 0.79 | 0.43 | 54 | 5.20 |
| | | 171.45 | 6.75 | 49.212 | 1.937 | 46.038 | 1.813 | 31.75 | 1.25 | 3.3 | 3.5 | 282 | 350 | 2000 | 2800 | **K9380/K9321/YB4** | 0.76 | 0.79 | 0.43 | 54 | 5.17 |
| | | 180.975 | 7.125 | 53.975 | 2.125 | 53.183 | 2.094 | 35.72 | 1.406 | 3.3 | 3.5 | 207 | 210 | 2000 | 2800 | **KH917840/KH917810** | 0.73 | 0.82 | 0.45 | 63 | 6.56 |
| | | 180.975 | 7.125 | 53.975 | 2.125 | 53.183 | 2.094 | 35.72 | 1.406 | 3.3 | 3.5 | 320 | 400 | 2000 | 2800 | **KH917840/KH917810/YA8-3** | 0.73 | 0.82 | 0.45 | 63 | 6.66 |
| **77.788** | 3.063 | 117.475 | 4.625 | 25.4 | 1 | 25.4 | 1 | 19.05 | 0.75 | 3.3 | 3.5 | 114 | 163 | 3000 | 3800 | **KLM814849/KLM814810** | 0.51 | 1.18 | 0.65 | 28 | 0.979 |
| | | 121.442 | 4.781 | 24.608 | 0.969 | 23.012 | 0.906 | 17.462 | 0.687 | 2 | 3.5 | 84 | 131 | 3000 | 3700 | **K34306/K34478** | 0.45 | 1.33 | 0.73 | 26 | 0.934 |
| | | 135.733 | 5.344 | 44.45 | 1.75 | 46.1 | 1.815 | 34.925 | 1.375 | 3.3 | 3.5 | 215 | 340 | 2600 | 3600 | **K5795/K5735** | 0.41 | 1.5 | 0.81 | 33 | 2.73 |
| **77.8** | 3.063 | 288.925 | 11.375 | 63.5 | 2.5 | 63.5 | 2.5 | 47.625 | 1.875 | 3.3 | 7 | 575 | 1010 | 1600 | 2000 | **K94700/K94113** | 0.47 | 1.28 | 0.71 | 62 | 15.5 |
| **79.375** | 3.125 | 146.05 | 5.75 | 41.275 | 1.625 | 41.275 | 1.625 | 31.75 | 1.25 | 3.3 | 3.5 | 225 | 320 | 2600 | 3300 | **K661/K653/YB4** | 0.41 | 1.47 | 0.81 | 33 | 3.01 |
| **80*** | | 130* | | 35 | 1.378 | 34 | 1.339 | 28.5 | 1.122 | 2.5 | 3 | 175 | 280 | 2400 | 3400 | **KJM515649/KJM515610** | 0.41 | 1.48 | 0.81 | 30 | 1.82 |
| | | 130 | | 35 | 1.378 | 34 | 1.339 | 28.5 | 1.122 | 2.5 | 3 | 175 | 280 | 2400 | 3400 | **KJM515649/KJM515610-BZ** | 0.41 | 1.48 | 0.81 | 30 | 1.82 |
| **80.962** | 3.187 | 136.525 | 5.375 | 30.162 | 1.187 | 29.769 | 1.172 | 22.225 | 0.875 | 3.175 | 3.503 | 134 | 198 | 2400 | 3400 | **K496/K493** | 0.44 | 1.35 | 0.74 | 29 | 1.75 |
| | | 150.089 | 5.909 | 44.45 | 1.75 | 46.672 | 1.837 | 36.512 | 1.437 | 3.3 | 5 | 270 | 365 | 2500 | 3200 | **K740/K742** | 0.33 | 1.84 | 1.01 | 32 | 3.31 |

Note: * indicates the maximum value of IDor OD.

d 82.55~85.725 mm



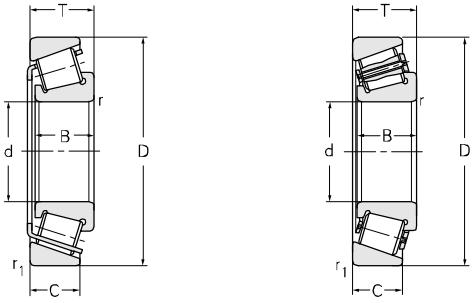




| Principal dimensions | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | | D | | T | | B | | C | | $r_{min}$ | $R_{min}$ |
| mm | in | mm | in | mm | in | mm | in | mm | in | mm | |
| **82.55** | 3.25 | 125.412 | 4.937 | 25.4 | 1 | 25.4 | 1 | 19.845 | 0.781 | 1.5 | 3.5 |
| | | 125.412 | 4.937 | 25.4 | 1 | 25.4 | 1 | 19.845 | 0.781 | 1.5 | 3.5 |
| | | 133.35 | 5.25 | 33.338 | 1.313 | 33.338 | 1.313 | 26.195 | 1.031 | 3.3 | 3.5 |
| | | 133.35 | 5.25 | 33.338 | 1.313 | 33.338 | 1.313 | 26.195 | 1.031 | 3.3 | 6.8 |
| | | 133.35 | 5.25 | 39.688 | 1.563 | 39.688 | 1.563 | 32.545 | 1.281 | 3.3 | 3.5 |
| | | 139.7 | 5.5 | 36.512 | 1.437 | 36.098 | 1.421 | 28.575 | 1.125 | 3.3 | 3.556 |
| | | 139.992 | 5.511 | 36.512 | 1.437 | 36.098 | 1.421 | 28.575 | 1.125 | 3.302 | 3.556 |
| | | 139.992 | 5.511 | 36.512 | 1.437 | 36.098 | 1.421 | 28.575 | 1.125 | 3.556 | 3.556 |
| | | 139.992 | 5.511 | 36.512 | 1.437 | 36.098 | 1.421 | 28.575 | 1.125 | 3.3 | 6.8 |
| | | 146.05 | 5.75 | 41.275 | 1.625 | 41.275 | 1.625 | 31.75 | 1.25 | 3.505 | 0.254 |
| | | 146.05 | 5.75 | 41.275 | 1.625 | 41.275 | 1.625 | 31.75 | 1.25 | 3.3 | 3.5 |
| | | 150 | 5.906 | 44.45 | 1.75 | 46.672 | 1.837 | 36.512 | 1.437 | 3.3 | 3.5 |
| | | 168.275 | 6.625 | 53.975 | 2.125 | 56.363 | 2.219 | 41.275 | 1.625 | 3.3 | 3.5 |
| | | 180.975 | 7.125 | 53.975 | 2.125 | 53.183 | 2.094 | 35.72 | 1.406 | 3.3 | 3.3 |
| **83.345** | 3.281 | 125.412 | 4.937 | 25.4 | 1 | 25.4 | 1 | 19.845 | 0.781 | 1.5 | 3.5 |
| **84.138** | 3.313 | 133.35 | 5.25 | 30.162 | 1.187 | 29.769 | 1.172 | 22.225 | 0.875 | 3.3 | 3.5 |
| **84.976** | 3.346 | 125.412 | 4.937 | 25.4 | 1 | 25.4 | 1 | 19.845 | 0.781 | 1.5 | 5 |
| **85.026** | 3.347 | 150.089 | 5.909 | 44.45 | 1.75 | 46.672 | 1.837 | 36.512 | 1.437 | 3.3 | 3.5 |
| | | 150.089 | 5.909 | 44.45 | 1.75 | 46.672 | 1.837 | 36.512 | 1.437 | 3.3 | 3.5 |
| | | 150.089 | 5.909 | 44.45 | 1.75 | 46.672 | 1.837 | 36.512 | 1.437 | 3.3 | 5 |
| **85.725** | 3.375 | 133.35 | 5.25 | 30.162 | 1.187 | 29.769 | 1.172 | 22.225 | 0.875 | 3.3 | 3.556 |
| | | 136.525 | 5.375 | 30.163 | 1.188 | 29.769 | 1.172 | 22.225 | 0.875 | 3.175 | 3.556 |
| | | 142.138 | 5.596 | 42.862 | 1.687 | 42.862 | 1.687 | 34.133 | 1.344 | 3 | 4.8 |
| | | 146.05 | 5.75 | 41.275 | 1.625 | 41.275 | 1.625 | 31.75 | 1.25 | 3.175 | 6.4 |
| | | 146.05 | 5.75 | 41.275 | 1.625 | 41.275 | 1.625 | 31.75 | 1.25 | 3.3 | 3.5 |
| | | 147.638 | 5.813 | 35.717 | 1.406 | 36.322 | 1.43 | 26.192 | 1.031 | 0.8 | 3.5 |
| | | 152.4 | 6 | 39.688 | 1.563 | 36.322 | 1.43 | 30.162 | 1.187 | 3.175 | 3.5 |

| Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| $C_r$ | $C_{or}$ | Grease | Oil | | e | Y | Yo | a | |
| kN | | r/min | | | | | | | kg |
| 109 | 177 | 2400 | 3400 | **K27687/K27620-AK** | 0.45 | 1.32 | 0.73 | 27 | 1.06 |
| 115 | 151 | 2400 | 3400 | **K27687SH/K27620SH** | 0.45 | 1.32 | 0.73 | 27 | 1.1 |
| 142 | 218 | 2400 | 3400 | **K47686/K47620** | 0.4 | 1.48 | 0.82 | 28 | 1.80 |
| 142 | 218 | 2400 | 3400 | **K47687/K47620** | 0.4 | 1.48 | 0.82 | 28 | 1.74 |
| 186 | 310 | 2400 | 3400 | **KHM516449/KHM516410** | 0.4 | 1.48 | 0.82 | 32 | 2.12 |
| 187 | 290 | 2400 | 3400 | **K580/K572X** | 0.4 | 1.48 | 0.82 | 31 | 2.21 |
| 217 | 275 | 2400 | 3400 | **K580/K572** | 0.4 | 1.49 | 0.82 | 31 | 2.21 |
| 217 | 275 | 2400 | 3400 | **K580/K572A6** | 0.4 | 1.49 | 0.82 | 31 | |
| 184 | 277 | 2400 | 3400 | **K582/K572** | 0.4 | 1.48 | 0.82 | 31 | 2.19 |
| 265 | 360 | 2400 | 3400 | **K663/K653** | 0.41 | 1.47 | 0.81 | 36 | 2.87 |
| 215 | 315 | 2400 | 3400 | **663/653** | 0.41 | 1.47 | 0.81 | 33 | 2.87 |
| 264 | 365 | 2400 | 3400 | **K749A/K742A** | 0.33 | 1.84 | 1.01 | 38 | 3.33 |
| 405 | 466 | 2300 | 2900 | **K842/K832** | 0.3 | 2 | 1.1 | 35 | 5.36 |
| 207 | 210 | 2000 | 3000 | **KH917849/KH917810** | 0.73 | 0.82 | 0.45 | 50 | 6.25 |
| 100 | 160 | 2400 | 3400 | **K27690/K27620** | 0.42 | 1.44 | 0.79 | 26 | 1.08 |
| 134 | 198 | 2400 | 3400 | **K498/K492A** | 0.44 | 1.35 | 0.74 | 29 | 1.47 |
| 100 | 160 | 2400 | 3400 | **K27695/K27620** | 0.45 | 1.32 | 0.73 | 31 | 1.01 |
| 264 | 365 | 2400 | 3400 | **K749/K742** | 0.33 | 1.84 | 1.01 | 31 | 3.22 |
| 265 | 365 | 2200 | 3200 | **K749/K742-3** | 0.33 | 1.8 | 1 | 32 | 3.22 |
| 264 | 365 | 2400 | 3400 | **K749S/K742** | 0.33 | 1.84 | 1.01 | 33 | 3.20 |
| 134 | 198 | 2200 | 3200 | **K497/K492A** | 0.44 | 1.35 | 0.74 | 23 | 1.47 |
| 134 | 198 | 2400 | 3400 | **K497/K493** | 0.44 | 1.35 | 0.74 | 29 | 1.60 |
| 220 | 345 | 2200 | 3200 | **KHM617049/KHM617010** | 0.43 | 1.4 | 0.76 | 35 | 2.63 |
| 217 | 315 | 2200 | 3200 | **K665A/K653** | 0.41 | 1.47 | 0.81 | 33 | 2.74 |
| 217 | 315 | 2200 | 3200 | **K665/K653A6** | 0.4 | 1.5 | 0.8 | 33 | 2.74 |
| 197 | 310 | 2200 | 3200 | **K596/K592XE** | 0.44 | 1.36 | 0.75 | 33 | 2.46 |
| 315 | 167 | 2000 | 3400 | **K596/K592A** | 0.44 | 1.36 | 0.75 | 39 | 2.92 |

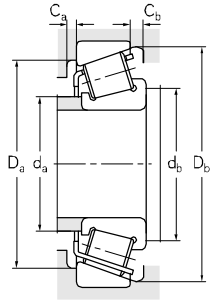
Note: * indicates the maximum value of IDor OD.

d 88.9~95.25 mm







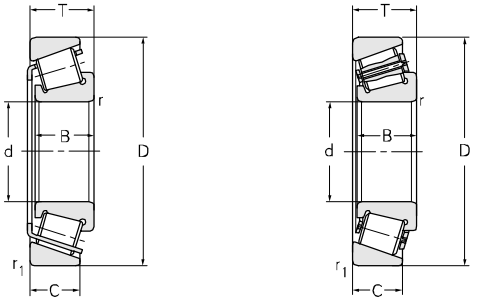



| Principal dimensions | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | | D | | T | | B | | C | | $r_{min}$ | $R_{min}$ |
| mm | in | mm | in | mm | in | mm | in | mm | in | mm | |
| **88.9** | 3.5 | 118.618 | 4.67 | 39.688 | 1.563 | 39.688 | 1.563 | 30.162 | 1.187 | 3.556 | 6.35 |
| | | 152.4 | 6 | 39.688 | 1.563 | 39.688 | 1.563 | 30.162 | 1.187 | SP | SP |
| | | 152.4 | 6 | 39.688 | 1.563 | 36.322 | 1.43 | 30.162 | 1.187 | 3.175 | 6.4 |
| | | 152.4 | 6 | 39.688 | 1.563 | 36.322 | 1.43 | 30.162 | 1.187 | 3.3 | 3.5 |
| | | 152.4 | 6 | 39.688 | 1.563 | 39.688 | 1.563 | 30.162 | 1.187 | SP | SP |
| | | 161.925 | 6.375 | 47.625 | 1.875 | 48.26 | 1.9 | 38.1 | 1.5 | 3.3 | 3.5 |
| | | 161.925 | 6.375 | 47.625 | 1.875 | 48.26 | 1.9 | 39.675 | 1.562 | 3.3 | 3.5 |
| | | 161.925 | 6.375 | 53.975 | 2.125 | 55.1 | 2.169 | 42.862 | 1.687 | 3.3 | 3.5 |
| | | 168.275 | 6.625 | 41.275 | 1.625 | 41.275 | 1.625 | 30.162 | 1.187 | 3.3 | 3.5 |
| | | 190.5 | 7.5 | 57.15 | 2.25 | 57.531 | 2.265 | 44.45 | 1.75 | 3.3 | 8 |
| | | 190.5 | 7.5 | 57.15 | 2.25 | 57.531 | 2.265 | 44.45 | 1.75 | 3.3 | 8 |
| | | 190.5 | 7.5 | 57.15 | 2.25 | 57.531 | 2.265 | 46.038 | 1.813 | 3.3 | 8 |
| **89.975** | 3.542 | 146.975 | 5.786 | 40 | 1.575 | 40 | 1.575 | 32.5 | 1.28 | 3.5 | 7 |
| **90** | 3.543 | 147 | 5.787 | 40 | 1.575 | 40 | 1.575 | 32.5 | 1.28 | 3.5 | 5.8 |
| **90*** | | 145* | | 35 | 1.378 | 34 | 1.339 | 27 | 1.063 | 2.5 | 6 |
| | | 147* | | 40 | 1.575 | 40 | 1.575 | 32.5 | 1.28 | SP | SP |
| | | 147* | | 40 | 1.575 | 40 | 1.575 | 32.5 | 1.28 | 3.5 | 7 |
| | | 147* | | 40 | 1.575 | 40 | 1.575 | 32.5 | 1.28 | 5.8 | 3.5 |
| **92.075** | 3.625 | 146.05 | 5.75 | 33.338 | 1.313 | 34.925 | 1.375 | 26.195 | 1.031 | 3.3 | 3.5 |
| | | 152.4 | 6 | 39.688 | 1.563 | 36.322 | 1.43 | 30.162 | 1.187 | 3.302 | 6.35 |
| | | 152.4 | 6 | 39.688 | 1.563 | 36.322 | 1.43 | 30.162 | 1.187 | 3.3 | 3.5 |
| | | 180.975 | 7.125 | 47.625 | 1.875 | 48.006 | 1.89 | 38.1 | 1.5 | 3.3 | 3.5 |
| **95** | 3.74 | 135 | 5.315 | 20 | 0.787 | 20 | 0.787 | 14 | 0.551 | 2.5 | 5 |
| **95*** | | 150* | | 35 | 1.378 | 34 | 1.339 | 27 | 1.063 | 2.5 | 3 |
| **95.25** | 3.75 | 147.638 | 5.813 | 35.717 | 1.406 | 36.322 | 1.43 | 26.192 | 1.031 | 0.8 | 5 |
| | | 152.4 | 6 | 39.688 | 1.563 | 36.322 | 1.43 | 30.162 | 1.187 | 3.302 | 5.08 |
| | | 152.4 | 6 | 39.688 | 1.563 | 36.322 | 1.43 | 30.162 | 1.187 | 3.3 | 3.5 |
| | | 152.4 | 6 | 39.688 | 1.563 | 36.322 | 1.43 | 30.162 | 1.187 | 3.3 | 8 |

| Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| $C_r$ | $C_{or}$ | Grease | Oil | | e | Y | Yo | a | |
| kN | | r/min | | | | | | | kg |
| 286 | 350 | 2000 | 3000 | **KHM518445/KHM518410** | 0.4 | 1.49 | 0.82 | 33 | 2.86 |
| 255 | 370 | 1800 | 2700 | **KHM518445/KHM518410-HEND** | 0.4 | 1.49 | 0.82 | 34 | 2.86 |
| 190 | 305 | 1800 | 2700 | **K593A/K592A** | 0.44 | 1.36 | 0.75 | 39 | 2.80 |
| 207 | 169 | 1800 | 2700 | **K593/K592A** | 0.44 | 1.36 | 0.75 | 39 | 2.63 |
| 255 | 370 | 1800 | 2700 | **KHM518445A6/KHM518410A6** | 0.4 | 1.49 | 0.82 | 34 | 2.86 |
| 375 | 390 | 2400 | 3400 | **K759/K752** | 0.34 | 1.76 | 0.97 | 35 | 4.26 |
| 305 | 410 | 2400 | 3400 | **K759/K752BX2** | 0.34 | 1.76 | 0.97 | 35 | 4.4 |
| 315 | 475 | 2400 | 3400 | **K6580/K6535** | 0.4 | 1.49 | 0.82 | 41 | 4.73 |
| 205 | 350 | 1800 | 2700 | **K679/K672** | 0.47 | 1.28 | 0.7 | 38 | 4.03 |
| 380 | 555 | 2400 | 3400 | **855/854B** | 0.33 | 1.79 | 0.99 | 40 | 7.71 |
| 380 | 555 | 1900 | 2600 | **K855/K854** | 0.33 | 1.8 | 0.99 | 42 | 7.69 |
| 445 | 610 | 1700 | 2400 | **KHH221434/KHH221410** | 0.33 | 1.79 | 0.99 | 24 | 7.87 |
| 229 | 345 | 2400 | 3100 | **KHM218248/KHM218210-HEND** | 0.33 | 1.8 | 0.99 | 31 | 2.51 |
| 230 | 370 | 2400 | 3100 | **KHM218248SH/KHM218210SH/YB2** | 0.33 | 1.8 | 0.99 | 31 | 2.57 |
| 189 | 315 | 2200 | 3200 | **KJM718149A/KJM718110** | 0.44 | 1.36 | 0.75 | 33 | 2.17 |
| 215 | 345 | 2200 | 3200 | **KHM218248A6/KHM218210A6** | 0.33 | 1.8 | 0.99 | 31 | 2.51 |
| 216 | 345 | 2200 | 3200 | **KHM218248/KHM218210** | 0.33 | 1.8 | 0.99 | 31 | 2.51 |
| 253 | 370 | 2200 | 3200 | **KHM218248SH/KHM218210SH** | 0.33 | 1.8 | 0.99 | 31 | 2.58 |
| 160 | 295 | 1900 | 2800 | **K47890/K47820** | 0.45 | 1.34 | 0.74 | 32 | 2.08 |
| 232 | 315 | 1900 | 2800 | **598A/592A** | 0.44 | 1.36 | 0.75 | 34 | 2.67 |
| 232 | 315 | 1900 | 2800 | **K598/K592A** | 0.44 | 1.36 | 0.75 | 34 | 2.66 |
| 288 | 435 | 1900 | 2800 | **K778/K772** | 0.39 | 1.56 | 0.86 | 44 | 5.55 |
| 86.5 | 151 | 1900 | 2800 | **KJL819349/KJL819310** | 0.58 | 1.04 | 0.57 | 31 | 0.82 |
| 187 | 290 | 1900 | 2800 | **KJM719149/KJM719113** | 0.44 | 1.4 | 0.75 | 33 | 2.23 |
| 228 | 310 | 1900 | 2800 | **594A/592XE** | 0.44 | 1.39 | 0.75 | 34 | 2.13 |
| 228 | 310 | 1900 | 2800 | **K594A/K592A** | 0.44 | 1.36 | 0.75 | 34 | 2.54 |
| 207 | 169 | 1900 | 2800 | **K594/K592A** | 0.44 | 1.36 | 0.75 | 34 | 2.54 |
| 207 | 169 | 1900 | 2800 | **K594R/K592A** | 0.44 | 1.36 | 0.75 | 34 | 2.52 |

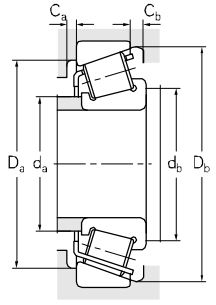
Note: * indicates the maximum value of IDor OD.

d 95.25~104.775 mm





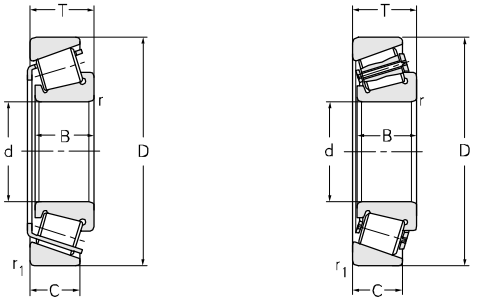





| Principal dimensions | | | | | | | | | | | | Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | | D | | T | | B | | C | | $r_{min}$ | $R_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | e | Y | Yo | a | |
| mm | in | mm | in | mm | in | mm | in | mm | in | mm | | kN | | r/min | | | | | | | kg |
| **95.25** | | 168.275 | 6.625 | 41.275 | 1.625 | 41.275 | 1.625 | 30.162 | 1.187 | 3.3 | 3.5 | 228 | 365 | 1900 | 2800 | **K683/K672** | 0.48 | 1.25 | 0.7 | 38 | 3.75 |
| | | 190.5 | 7.5 | 57.15 | 2.25 | 57.531 | 2.265 | 46.038 | 1.813 | 3.3 | 8 | 465 | 610 | 1800 | 2700 | **KHH221440/KHH221410** | 0.33 | 1.79 | 0.99 | 42 | 7.5 |
| **96.838** | 3.813 | 148.43 | 5.844 | 28.575 | 1.125 | 28.971 | 1.141 | 21.433 | 0.844 | 3 | 3.5 | 146 | 230 | 1900 | 2800 | **K42381/K42584** | 0.49 | 1.22 | 0.67 | 32 | 1.68 |
| | | 149.225 | 5.875 | 31.75 | 1.25 | 28.971 | 1.141 | 24.608 | 0.969 | 3.3 | 3.5 | 145 | 230 | 1900 | 2800 | **K42381/K42587B-3** | 0.49 | 1.22 | 0.67 | 36 | 1.89 |
| | | 188.912 | 7.437 | 50.8 | 2 | 46.038 | 1.813 | 31.75 | 1.25 | 3.3 | 3.5 | 270 | 345 | 1900 | 2800 | **K90381/K90744** | 0.87 | 0.69 | 0.38 | 62 | 5.63 |
| | | 188.912 | 7.437 | 50.8 | 2 | 46.038 | 1.813 | 31.75 | 1.25 | 3.3 | 3.5 | 270 | 345 | 1900 | 2800 | **K90381/K90744-3** | 0.87 | 0.69 | 0.38 | 62 | 5.63 |
| | | 188.912 | 7.437 | 50.8 | 2 | 46.038 | 1.813 | 31.75 | 1.25 | 3.3 | 3.5 | 278 | 360 | 1900 | 2800 | **K90381/K90744/YA8-3** | 0.87 | 0.69 | 0.38 | 62 | 5.72 |
| **99.974** | 3.936 | 156.975 | 6.18 | 42 | 1.654 | 42 | 1.654 | 34 | 1.339 | 3.5 | 8 | 253 | 400 | 1900 | 2800 | **KHM220149/KHM220110** | 0.33 | 1.84 | 1.01 | 42 | 2.89 |
| **99.975** | 3.936 | 212.725 | 8.375 | 66.675 | 2.625 | 66.675 | 2.625 | 53.975 | 2.125 | 3.3 | 3.5 | 600 | 830 | 1900 | 2800 | **KHH224334/KHH224310** | 0.33 | 1.84 | 1.01 | 54 | 11.2 |
| **101.6** | 4 | 136.525 | 5.375 | 21.433 | 0.844 | 21.433 | 0.844 | 16.67 | 0.656 | 1.5 | 1.5 | 90 | 165 | 2200 | 3000 | **KL420449/KL420410** | 0.37 | 1.63 | 0.9 | 24 | 0.846 |
| | | 157.162 | 6.187 | 36.512 | 1.437 | 36.116 | 1.422 | 26.195 | 1.031 | 3.3 | 3.5 | 193 | 315 | 2000 | 2800 | **K52400/K52618** | 0.47 | 1.3 | 0.69 | 36 | 2.48 |
| | | 168.275 | 6.625 | 41.275 | 1.625 | 41.275 | 1.625 | 30.162 | 1.187 | 3.3 | 3.5 | 228 | 365 | 2000 | 2800 | **K687/K672** | 0.47 | 1.28 | 0.7 | 38 | 3.43 |
| | | 180.975 | 7.125 | 47.625 | 1.875 | 48.006 | 1.89 | 38.1 | 1.5 | 3.3 | 3.5 | 290 | 435 | 2000 | 2600 | **K780/K772** | 0.39 | 1.6 | 0.83 | 39 | 5.00 |
| | | 190.5 | 7.5 | 57.15 | 2.25 | 57.531 | 2.265 | 44.45 | 1.75 | 3.3 | 8 | 380 | 555 | 1900 | 2600 | **K861/K854** | 0.33 | 1.8 | 0.99 | 42 | 6.80 |
| | | 190.5 | 7.5 | 57.15 | 2.25 | 57.531 | 2.265 | 44.45 | 1.75 | 3.3 | 8 | 380 | 555 | 1900 | 2600 | **K861/K854-2** | 0.33 | 1.8 | 0.99 | 42 | 6.80 |
| | | 190.5 | 7.5 | 57.15 | 2.25 | 57.531 | 2.265 | 44.45 | 1.75 | 3.3 | 8 | 380 | 555 | 1900 | 2600 | **K861/K854-3** | 0.33 | 1.8 | 0.99 | 42 | 6.80 |
| | | 190.5 | 7.5 | 57.15 | 2.25 | 57.531 | 2.265 | 46.038 | 1.813 | 3.3 | 8 | 445 | 610 | 1800 | 2600 | **KHH221449/KHH221410** | 0.33 | 1.79 | 0.99 | 24 | 7.87 |
| | | 190.5 | 7.5 | 57.15 | 2.25 | 57.531 | 2.265 | 46.038 | 1.813 | 3.3 | 8 | 465 | 645 | 1800 | 2600 | **KHH221449/KHH221410-3** | 0.33 | 1.79 | 0.99 | 24 | 7.87 |
| | | 212.725 | 8.375 | 66.675 | 2.625 | 66.675 | 2.625 | 53.975 | 2.125 | 3.3 | 7 | 655 | 900 | 1800 | 2600 | **KHH224335/KHH224310** | 0.33 | 1.84 | 1.01 | 48 | 11.1 |
| | | 212.725 | 8.375 | 66.675 | 2.625 | 66.675 | 2.625 | 53.975 | 2.125 | 3.3 | 7 | 655 | 900 | 1800 | 2600 | **KHH224335/KHH224310-3** | 0.33 | 1.84 | 1.01 | 48 | 11.1 |
| | | 212.725 | 8.375 | 66.675 | 2.625 | 66.675 | 2.625 | 53.975 | 2.125 | 3.3 | 7 | 450 | 675 | 1800 | 2600 | **K941/K932** | 0.33 | 1.84 | 1.01 | 48 | 11.0 |
| | | 212.725 | 8.375 | 66.675 | 2.625 | 66.675 | 2.625 | 53.975 | 2.125 | 3.3 | 7 | 450 | 675 | 1800 | 2600 | **K941/K932-3** | 0.33 | 1.84 | 1.01 | 48 | 11.1 |
| | | 212.725 | 8.375 | 66.675 | 2.625 | 66.675 | 2.625 | 53.975 | 2.125 | 3.3 | 7 | 595 | 900 | 1700 | 2200 | **HH224335/HH224310-DG** | 0.33 | 1.84 | 1.01 | 47 | 11.1 |
| | | 214.312 | 8.437 | 55.562 | 2.187 | 52.388 | 2.063 | 39.688 | 1.563 | 3.3 | 3.5 | 375 | 590 | 1800 | 2600 | **KH924033/KH924010** | 0.67 | 0.89 | 0.49 | 62 | 9.15 |
| | | 250.825 | 9.875 | 76.2 | 3 | 73.025 | 2.875 | 50.8 | 2 | 6.4 | 6.4 | 550 | 695 | 1400 | 1900 | **KHH923649/KHH923610** | 0.71 | 0.85 | 0.47 | 74 | 17.6 |
| | | 250.825 | 9.875 | 76.2 | 3 | 73.025 | 2.875 | 50.8 | 2 | 3.3 | 6.4 | 550 | 695 | 1400 | 1900 | **KHH923649/KHH923611** | 0.71 | 0.85 | 0.47 | 74 | 17.6 |
| **104.775** | 4.125 | 180.975 | 7.125 | 47.625 | 1.875 | 48.006 | 1.89 | 38.1 | 1.5 | 3.3 | 3.5 | 288 | 435 | 2000 | 2600 | **K782/K772** | 0.39 | 1.56 | 0.86 | 39 | 4.81 |
| | | 180.975 | 7.125 | 47.625 | 1.875 | 48.006 | 1.89 | 38.1 | 1.5 | 3.3 | 6.4 | 288 | 435 | 2000 | 2600 | **K786/K772** | 0.39 | 1.56 | 0.86 | 39 | 4.79 |
| | | 180.975 | 7.125 | 47.625 | 1.875 | 48.006 | 1.89 | 38.1 | 1.5 | 3.3 | 7 | 288 | 435 | 2000 | 2600 | **K787/K772** | 0.39 | 1.6 | 0.86 | 39 | 4.78 |

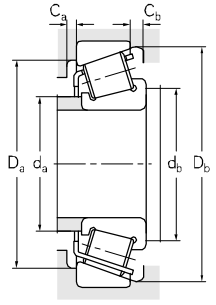
Note: * indicates the maximum value of IDor OD.

d 107.95~120.65 mm







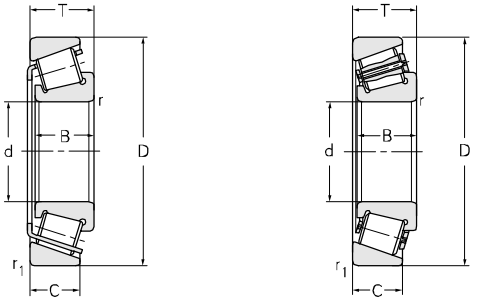



| Principal dimensions | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | | D | | T | | B | | C | | $r_{min}$ | $R_{min}$ |
| mm | in | mm | in | mm | in | mm | in | mm | in | mm | |
| **107.95** | 4.25 | 146.05 | 5.75 | 21.433 | 0.844 | 21.433 | 0.844 | 16.67 | 0.656 | 1.5 | 1.5 |
| | | 158.75 | 6.25 | 23.02 | 0.906 | 21.438 | 0.844 | 15.875 | 0.625 | 3.3 | 3.5 |
| | | 165.1 | 6.5 | 36.512 | 1.437 | 36.512 | 1.437 | 26.988 | 1.063 | 3.3 | 3.5 |
| **109.538** | 4.313 | 158.75 | 6.25 | 23.02 | 0.906 | 21.438 | 0.844 | 15.875 | 0.625 | 3.3 | 5 |
| | | 158.75 | 6.25 | 23.02 | 0.906 | 21.438 | 0.844 | 15.875 | 0.625 | 3.3 | 3.5 |
| **100*** | | 145* | | 24 | 0.945 | 22.5 | 0.886 | 17.5 | 0.689 | 5 | 3 |
| | | 157* | | 42 | 1.654 | 42 | 1.654 | 34 | 1.339 | SP | SP |
| **110*** | | 165* | | 35 | 1.378 | 35 | 1.378 | 26.5 | 1.043 | 2.5 | 3 |
| | | 165* | | 35 | 1.378 | 35 | 1.378 | 26.5 | 1.043 | 3 | 2.5 |
| | | 180* | | 47 | 1.85 | 46 | 1.811 | 38 | 1.496 | 2.5 | 3 |
| | | 180* | | 47 | 1.85 | 46 | 1.811 | 38 | 1.496 | 2.5 | 3 |
| | | 180 | 7.087 | 47 | 1.85 | 46 | 1.811 | 38 | 1.496 | 2.5 | 3 |
| **111.125** | 4.375 | 214.312 | 8.437 | 55.562 | 2.187 | 52.388 | 2.063 | 39.688 | 1.563 | 3.3 | 3.5 |
| **114.3** | 4.5 | 177.8 | 7 | 41.275 | 1.625 | 41.275 | 1.625 | 30.162 | 1.187 | 3.3 | 3.5 |
| | | 190.5 | 7.5 | 47.625 | 1.875 | 49.212 | 1.937 | 34.925 | 1.375 | 3.3 | 3.5 |
| | | 212.725 | 8.375 | 66.675 | 2.625 | 66.675 | 2.625 | 53.957 | 2.124 | 3.3 | 7 |
| | | 228.6 | 9 | 53.975 | 2.125 | 49.428 | 1.946 | 38.1 | 1.5 | 3.3 | 3.5 |
| **114.976** | 4.527 | 180.975 | 7.125 | 41.275 | 1.625 | 41.275 | 1.625 | 30.162 | 1.187 | 3.3 | 9 |
| **117.8** | 4.638 | 247.65 | 9.75 | 47.625 | 1.875 | 47.625 | 1.875 | 38.1 | 1.5 | 3.3 | 10.5 |
| **120*** | | 170* | | 27 | 1.063 | 25 | 0.984 | 19.5 | 0.768 | 3 | 3 |
| **120.65** | 4.75 | 174.625 | 6.875 | 35.72 | 1.406 | 36.512 | 1.437 | 27.783 | 1.094 | 1.5 | 3.5 |
| | | 182.562 | 7.187 | 39.688 | 1.563 | 38.1 | 1.5 | 33.338 | 1.313 | 3.3 | 3.5 |
| | | 206.375 | 8.125 | 47.625 | 1.875 | 47.625 | 1.875 | 34.925 | 1.375 | 3.3 | 3.3 |
| | | 254 | 10 | 77.78 | 3.062 | 82.55 | 3.25 | 61.912 | 2.437 | 6.4 | 9.7 |
| | | 273.05 | 10.75 | 82.55 | 3.25 | 82.55 | 3.25 | 53.975 | 2.125 | 6.4 | 6.4 |
| | | 273.05 | 10.75 | 82.55 | 3.25 | 82.55 | 3.25 | 53.975 | 2.125 | 6.4 | 6.4 |

| Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| $C_r$ | $C_{or}$ | Grease | Oil | | e | Y | Yo | a | |
| kN | | r/min | | | | | | | kg |
| 106 | 180 | 1900 | 2800 | **KL521949/KL521910** | 0.39 | 1.54 | 0.85 | 26 | 0.993 |
| 107 | 174 | 1900 | 2800 | **K37425/K37625** | 0.61 | 0.99 | 0.54 | 39 | 1.36 |
| 198 | 330 | 1900 | 2800 | **K56425/K56650** | 0.5 | 1.2 | 0.7 | 38 | 2.67 |
| 107 | 174 | 1900 | 2800 | **K37431A/K37625** | 0.61 | 0.99 | 0.54 | 39 | 1.32 |
| 107 | 174 | 1900 | 2800 | **K37431/K37625** | 0.61 | 0.99 | 0.54 | 39 | 1.33 |
| 116 | 171 | 1900 | 2800 | **KJP10049A/KJP10010** | 0.47 | 1.27 | 0.7 | 30 | 1.13 |
| 253 | 400 | 1900 | 2800 | **KHM220149A6/KHM220110A6** | 0.33 | 1.8 | 0.99 | 33 | 2.89 |
| 195 | 320 | 1900 | 2800 | **KJM822049/KJM822010** | 0.5 | 1.21 | 0.66 | 39 | 2.63 |
| 211 | 360 | 1900 | 2800 | **KM822049/KM822010** | 0.5 | 1.2 | 0.66 | 38 | 2.63 |
| 320 | 510 | 1900 | 2800 | **KJHM522649/KJHM522610** | 0.41 | 1.48 | 0.81 | 40 | 4.56 |
| 320 | 510 | 1900 | 2800 | **KJHM522649/KJHM522610-2** | 0.41 | 1.48 | 0.81 | 40 | 4.56 |
| 320 | 510 | 1900 | 2800 | **KRJHM522649/JHM522610** | 0.41 | 1.48 | 0.81 | 40 | 4.56 |
| 375 | 590 | 1700 | 2300 | **H924045/H924010-DG** | 0.67 | 1.01 | 0.67 | 65 | 8.49 |
| 250 | 400 | 1900 | 2800 | **K64450/K64700** | 0.52 | 1.23 | 0.64 | 43 | 3.50 |
| 305 | 480 | 1900 | 2800 | **K71450/K71750** | 0.41 | 1.48 | 0.81 | 41 | 5.26 |
| 450 | 675 | 1700 | 2400 | **K938/K932** | 0.33 | 1.8 | 1 | 47 | 9.95 |
| 400 | 590 | 1500 | 2200 | **KHM926740/KHM926710-3** | 0.74 | 0.81 | 0.45 | 68 | 9.78 |
| 250 | 400 | 1900 | 2800 | **K64452A/K64713** | 0.52 | 1.15 | 0.63 | 43 | 3.72 |
| 420 | 520 | 1600 | 2300 | **K67791/K67720** | 0.44 | 1.36 | 0.75 | 52 | 6.82 |
| 155 | 243 | 1900 | 2800 | **KJP12049/KJP12010** | 0.47 | 1.3 | 0.69 | 35 | 1.75 |
| 210 | 365 | 1700 | 2400 | **KM224749/KM224710** | 0.33 | 1.8 | 0.99 | 32 | 2.66 |
| 228 | 430 | 1700 | 2400 | **K48282/K48220** | 0.3 | 2 | 1.1 | 34 | 3.56 |
| 330 | 550 | 1600 | 2200 | **K795/K792** | 0.46 | 1.3 | 0.72 | 46 | 6.28 |
| 730 | 1060 | 1500 | 2000 | **KHH228340/KHH228310-3** | 0.32 | 1.9 | 1 | 31 | 18.2 |
| 810 | 940 | 2200 | 3200 | **KHH926749/KHH926710** | 0.63 | 0.95 | 0.52 | 76 | 22.1 |
| 810 | 940 | 2200 | 3200 | **KHH926749/KHH926710-3** | 0.63 | 0.95 | 0.52 | 76 | 22.1 |

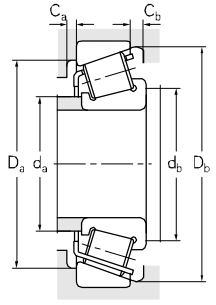
Note: * indicates the maximum value of IDor OD.

d 123.825~146.05 mm







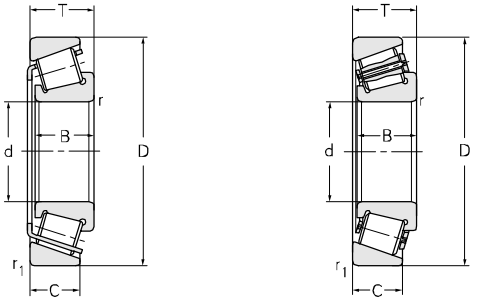



| Principal dimensions | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | | D | | T | | B | | C | | $r_{min}$ | $R_{min}$ |
| mm | in | mm | in | mm | in | mm | in | mm | in | mm | |
| **123.825** | 4.875 | 254 | 10 | 77.788 | 3.063 | 82.55 | 3.25 | 61.912 | 2.437 | 6.4 | 9.7 |
| **127** | 5 | 182.562 | 7.187 | 39.688 | 1.563 | 38.1 | 1.5 | 33.338 | 1.313 | 3.3 | 3.5 |
| | | 182.562 | 7.187 | 39.688 | 1.563 | 38.1 | 1.5 | 33.338 | 1.313 | 3.3 | 3.5 |
| | | 228.6 | 9 | 53.975 | 2.125 | 49.428 | 1.946 | 38.1 | 1.5 | 3.3 | 3.5 |
| | | 228.6 | 9 | 53.975 | 2.125 | 49.428 | 1.946 | 38.1 | 1.5 | 3.3 | 3.5 |
| | | 234.95 | 9.25 | 63.5 | 2.5 | 63.5 | 2.5 | 49.212 | 1.937 | 3.3 | 6.4 |
| | | 254 | 10 | 77.788 | 3.063 | 82.55 | 3.25 | 61.912 | 2.437 | 6.4 | 9.7 |
| | | 304.8 | 12 | 88.9 | 3.5 | 82.55 | 3.25 | 57.15 | 2.25 | 6.4 | 6.4 |
| **128.588** | 5.063 | 206.375 | 8.125 | 47.625 | 1.875 | 47.625 | 1.875 | 34.925 | 1.375 | 3.3 | 3.3 |
| **130.175** | 5.125 | 196.85 | 7.75 | 46.038 | 1.813 | 46.038 | 1.813 | 38.1 | 1.5 | 3.3 | 3.5 |
| **133.35** | 5.25 | 190.5 | 7.5 | 39.688 | 1.563 | 39.688 | 1.563 | 33.338 | 1.313 | 3.3 | 3.5 |
| | | 196.85 | 7.75 | 46.038 | 1.813 | 46.038 | 1.813 | 38.1 | 1.5 | 3.3 | 3.5 |
| | | 196.85 | 7.75 | 46.038 | 1.813 | 46.038 | 1.813 | 38.1 | 1.5 | 3.3 | 3.5 |
| | | 234.95 | 9.25 | 63.5 | 2.5 | 63.5 | 2.5 | 49.212 | 1.937 | 3.3 | 9.7 |
| | | 234.95 | 9.25 | 63.5 | 2.5 | 63.5 | 2.5 | 49.212 | 1.937 | 3.3 | 9.7 |
| **139.7** | 5.5 | 228.6 | 9 | 57.15 | 2.25 | 57.15 | 2.25 | 44.45 | 1.75 | 3.3 | 3.5 |
| | | 236.538 | 9.313 | 57.15 | 2.25 | 56.642 | 2.23 | 44.45 | 1.75 | 3.3 | 3.5 |
| | | 254 | 10 | 66.675 | 2.625 | 66.675 | 2.625 | 47.625 | 1.875 | 3.3 | 7 |
| | | 295.275 | 11.625 | 82.55 | 3.25 | 87.312 | 3.437 | 57.15 | 2.25 | 6.4 | 9.7 |
| **142.875** | 5.625 | 200.025 | 7.875 | 41.275 | 1.625 | 39.688 | 1.563 | 34.13 | 1.344 | 3.3 | 7.9 |
| | | 241.3 | 9.5 | 57.15 | 2.25 | 56.642 | 2.23 | 44.45 | 1.75 | 3.3 | 8 |
| | | 241.3 | 9.5 | 57.15 | 2.25 | 56.642 | 2.23 | 44.45 | 1.75 | 3.3 | 8 |
| **146.05** | 5.75 | 193.675 | 7.625 | 28.575 | 1.125 | 28.575 | 1.125 | 23.02 | 0.906 | 1.5 | 1.5 |
| | | 193.675 | 7.625 | 28.575 | 1.125 | 28.575 | 1.125 | 23.02 | 0.906 | 1.5 | 1.5 |
| | | 236.538 | 9.313 | 57.15 | 2.25 | 56.642 | 2.23 | 44.45 | 1.75 | 3.3 | 3.5 |
| | | 304.8 | 12 | 88.9 | 3.5 | 82.55 | 3.25 | 57.15 | 2.25 | 6.4 | 6.4 |
| | | 304.8 | 12 | 88.9 | 3.5 | 82.55 | 3.25 | 57.15 | 2.25 | 6.4 | 6.4 |

| Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| $C_r$ | $C_{or}$ | Grease | Oil | | e | Y | Yo | a | |
| kN | | r/min | | | | | | | kg |
| 730 | 1060 | 1500 | 2000 | **KHH228344/KHH228310** | 0.32 | 1.87 | 1.03 | 54 | 18.6 |
| 240 | 430 | 1700 | 2400 | **48290/48220** | 0.3 | 2 | 1.1 | 34 | 3.20 |
| 228 | 430 | 1700 | 2400 | **K48290/K48220** | 0.3 | 2 | 1.1 | 34 | 3.20 |
| 400 | 590 | 1700 | 2400 | **KHM926747/KHM926710** | 0.74 | 0.81 | 0.45 | 68 | 8.88 |
| 400 | 590 | 1700 | 2400 | **KHM926747/KHM926710-3** | 0.74 | 0.81 | 0.45 | 68 | 8.88 |
| 515 | 810 | 1700 | 2400 | **K95500/K95925** | 0.37 | 1.62 | 0.89 | 51 | 11.6 |
| 730 | 1060 | 1500 | 2200 | **KHH228349/KHH228310** | 0.32 | 1.87 | 1.03 | 54 | 18.2 |
| 875 | 1210 | 1400 | 2000 | **KHH932132/KHH932110/YA8-3** | 0.73 | 0.82 | 0.45 | 93 | 27.7 |
| 330 | 550 | 1600 | 2200 | **K799/K792** | 0.46 | 1.3 | 0.72 | 46 | 5.70 |
| 330 | 590 | 1600 | 2200 | **67389/67322** | 0.34 | 1.74 | 0.96 | 40 | 4.96 |
| 247 | 455 | 1600 | 2200 | **K48385/K48320** | 0.32 | 1.88 | 1.04 | 35 | 3.52 |
| 330 | 590 | 1600 | 2200 | **67390/67322-BZ** | 0.35 | 1.7 | 0.9 | 39 | 4.71 |
| 330 | 590 | 1600 | 2200 | **67390/67322-BZ** | 0.35 | 1.7 | 0.9 | 39 | 4.71 |
| 515 | 810 | 1500 | 2000 | **95525/95925** | 0.37 | 1.62 | 0.89 | 51 | 11.1 |
| 515 | 810 | 1500 | 2000 | **K95525/K95925** | 0.37 | 1.62 | 0.89 | 51 | 11.1 |
| 370 | 680 | 1400 | 1900 | **K898/K892** | 0.42 | 1.43 | 0.79 | 50 | 8.85 |
| 510 | 810 | 1400 | 1900 | **KHM231132/KHM231110** | 0.31 | 1.9 | 1.1 | 45 | 10.1 |
| 715 | 1100 | 1400 | 1900 | **K99550/K99100** | 0.41 | 1.47 | 0.81 | 54 | 14.0 |
| 820 | 1100 | 1200 | 1700 | **KHH231649/KHH231615-2** | 0.32 | 1.88 | 1.04 | 55 | 24.7 |
| 250 | 515 | 1600 | 2000 | **K48684/K48620** | 0.34 | 1.78 | 0.98 | 37 | 3.88 |
| 420 | 730 | 1400 | 1800 | **82562A/82950-DANA** | 0.44 | 1.36 | 0.75 | 54 | 10.4 |
| 420 | 730 | 1400 | 1800 | **82562A/82950/HCOI-DANA** | 0.44 | 1.36 | 0.75 | 54 | 10.4 |
| 186 | 370 | 1600 | 2200 | **K36690/K36620B** | 0.37 | 1.6 | 0.9 | 34 | 2.22 |
| 186 | 370 | 1600 | 2200 | **K36690/K36620B** | 0.37 | 1.6 | 0.9 | 34 | 2.22 |
| 406 | 700 | 1300 | 1900 | **K82576/K82931** | 0.44 | 1.36 | 0.75 | 52 | 9.56 |
| 835 | 1140 | 1100 | 1600 | **KHH932145/KHH932110** | 0.73 | 0.82 | 0.45 | 105 | 28.3 |
| 875 | 1210 | 1100 | 1600 | **KHH932145/KHH932110/YA8** | 0.73 | 0.82 | 0.45 | 93 | 27.7 |

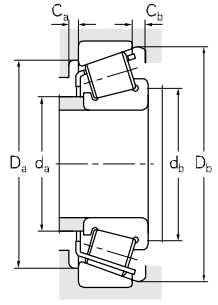
Note: * indicates the maximum value of IDor OD.

d 152.4~180 mm





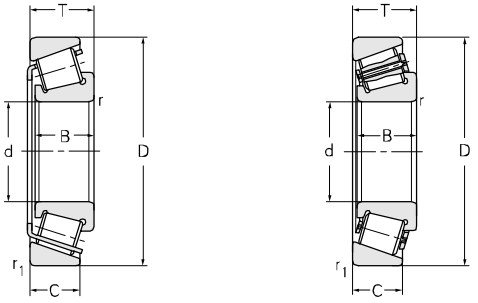


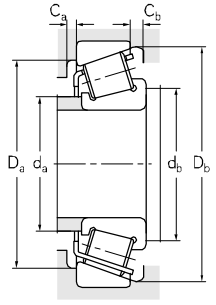



| Principal dimensions | | | | | | | | | | | | Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | | D | | T | | B | | C | | $r_{min}$ | $R_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | e | Y | Yo | a | |
| mm | in | mm | in | mm | in | mm | in | mm | in | mm | | kN | | r/min | | | | | | | kg |
| **152.4** | 6 | 222.25 | 8.75 | 46.83 | 1.844 | 46.83 | 1.844 | 34.925 | 1.375 | 1.5 | 3.5 | 368 | 630 | 1100 | 1600 | **KM231649/KM231610** | 0.33 | 1.8 | 0.99 | 28 | 5.76 |
| | | 222.25 | 8.75 | 46.83 | 1.844 | 46.83 | 1.844 | 34.925 | 1.375 | 1.5 | 3.5 | 368 | 630 | 1100 | 1600 | **M231649/M231610** | 0.33 | 1.8 | 0.99 | 41 | 5.76 |
| | | 254 | 10 | 66.675 | 2.625 | 66.675 | 2.625 | 47.625 | 1.875 | 3.3 | 7 | 595 | 930 | 1100 | 1600 | **K99600/K99100** | 0.41 | 1.5 | 0.81 | 55 | 12.5 |
| | | 268.288 | 10.563 | 74.612 | 2.937 | 74.612 | 2.937 | 57.15 | 2.25 | 6.4 | 6.4 | 670 | 1070 | 1200 | 1700 | **EE107060/107105** | 0.39 | 1.55 | 0.85 | 58 | 16.8 |
| | | 268.288 | 10.563 | 74.612 | 2.937 | 74.612 | 2.937 | 57.15 | 2.25 | 6.4 | 6.4 | 670 | 1070 | 1200 | 1700 | **KEE107060/K107105** | 0.39 | 1.55 | 0.85 | 58 | 16.8 |
| | | 307.975 | 12.125 | 88.9 | 3.5 | 93.662 | 3.687 | 66.675 | 2.625 | 6.8 | 9.7 | 1190 | 1350 | 1100 | 1600 | **KHH234048/KHH234010** | 0.33 | 1.84 | 1.01 | 63 | 30.9 |
| **155.575** | 6.125 | 330.2 | 13 | 85.725 | 3.375 | 79.375 | 3.125 | 53.975 | 2.125 | 6.4 | 6.4 | 825 | 1140 | 1100 | 1600 | **KH936340/KH936310** | 0.81 | 0.74 | 0.41 | 106 | 31.6 |
| **158.75** | 6.25 | 225.425 | 8.875 | 41.275 | 1.625 | 39.688 | 1.563 | 33.338 | 1.313 | 3.3 | 3.5 | 261 | 440 | 1100 | 1600 | **K46780/K46720** | 0.38 | 1.57 | 0.86 | 44 | 5.24 |
| **165.1** | 6.5 | 225.425 | 8.875 | 41.275 | 1.625 | 39.688 | 1.563 | 33.338 | 1.313 | 3.3 | 3.5 | 260 | 565 | 1100 | 1600 | **46790/46720** | 0.38 | 1.57 | 0.86 | 43 | 4.64 |
| | | 225.425 | 8.875 | 41.275 | 1.625 | 39.688 | 1.563 | 33.338 | 1.313 | 3.3 | 3.5 | 261 | 565 | 1100 | 1600 | **K46790/K46720** | 0.38 | 1.57 | 0.86 | 44 | 4.64 |
| | | 247.65 | 9.75 | 47.625 | 1.875 | 47.625 | 1.875 | 38.1 | 1.5 | 3.3 | 3.5 | 415 | 520 | 1000 | 1400 | **K67780/K67720** | 0.44 | 1.36 | 0.75 | 52 | 8.16 |
| | | 288.925 | 11.375 | 63.5 | 2.5 | 63.5 | 2.5 | 47.625 | 1.875 | 7 | 3.3 | 625 | 670 | 1100 | 1600 | **KHM237535/KHM237510** | 0.32 | 1.88 | 1.04 | 52 | 16.8 |
| **170*** | | 240* | | 46 | 1.811 | 44.5 | 1.752 | 37 | 1.457 | 2.5 | 3 | 355 | 675 | 1000 | 1400 | **JM734449/JM734410** | 0.44 | 1.37 | 0.75 | 49 | 6.28 |
| **171.45** | 6.75 | 260.35 | 10.25 | 66.675 | 2.625 | 66.675 | 2.625 | 52.388 | 2.063 | 3.3 | 3.5 | 550 | 1070 | 1000 | 1400 | **KHM535349/KHM535310** | 0.4 | 1.6 | 0.83 | 64 | 12.3 |
| **174.625** | 6.875 | 288.925 | 11.375 | 63.5 | 2.5 | 63.5 | 2.5 | 47.625 | 1.875 | 3.3 | 7 | 570 | 670 | 1000 | 1400 | **HM237542/HM237510** | 0.32 | 1.88 | 1.04 | 53 | 15.6 |
| | | 288.925 | 11.375 | 63.5 | 2.5 | 63.5 | 2.5 | 47.625 | 1.875 | 3.3 | 7 | 815 | 850 | 1000 | 1400 | **KHM237542/KHM237510** | 0.33 | 1.84 | 1.01 | 54 | 16.9 |
| **177.8** | 7 | 227.012 | 8.937 | 30.162 | 1.187 | 30.162 | 1.187 | 23.02 | 0.906 | 1.5 | 1.5 | 180 | 410 | 1000 | 1400 | **K36990/K36920** | 0.44 | 1.36 | 0.75 | 43 | 3.06 |
| | | 247.65 | 9.75 | 47.625 | 1.875 | 47.625 | 1.875 | 38.1 | 1.5 | 3.3 | 3.5 | 415 | 520 | 1000 | 1400 | **K67790/K67720** | 0.44 | 1.36 | 0.75 | 52 | 7.12 |
| | | 260.35 | 10.25 | 53.975 | 2.125 | 53.975 | 2.125 | 41.275 | 1.625 | 3.3 | 3.5 | 430 | 840 | 1000 | 1400 | **KM236849/KM236810** | 0.33 | 1.8 | 0.99 | 47 | 9.08 |
| | | 260.35 | 10.25 | 53.975 | 2.125 | 53.975 | 2.125 | 41.275 | 1.625 | 3.3 | 3.5 | 450 | 830 | 1000 | 1400 | **KM236849/KM236810/YAD-3** | 0.33 | 1.8 | 0.99 | 47 | 9.24 |
| | | 260.35 | 10.25 | 53.975 | 2.125 | 53.975 | 2.125 | 41.275 | 1.625 | 3.3 | 3.5 | 430 | 840 | 1000 | 1400 | **M236849/M236810** | 0.33 | 1.8 | 0.99 | 47 | 9.08 |
| | | 288.925 | 11.375 | 63.5 | 2.5 | 63.5 | 2.5 | 47.625 | 1.875 | 3.3 | 7 | 815 | 850 | 900 | 1300 | **KHM237545/KHM237510** | 0.33 | 1.84 | 1.01 | 54 | 16.7 |
| | | 319.964 | 12.597 | 88.9 | 3.5 | 85.725 | 3.375 | 65.088 | 2.563 | 4.8 | 3.5 | 930 | 1420 | 1000 | 1400 | **KH239640/KH239610** | 0.32 | 1.88 | 1.04 | 65 | 28.2 |
| | | 428.628 | 16.875 | 106.362 | 4.187 | 95.25 | 3.75 | 61.912 | 2.437 | 6.4 | 6.4 | 1320 | 1840 | 900 | 1000 | **KEE350701/K351687** | 0.76 | 0.82 | 0.43 | 121 | 68.1 |
| **180*** | | 250* | | 47 | 1.85 | 45 | 1.772 | 37 | 1.457 | 3 | 2.5 | 400 | 780 | 900 | 1000 | **JM736149/JM736110** | 0.48 | 1.25 | 0.69 | 56 | 6.80 |
| | | 250 | 9.843 | 47 | 1.85 | 45 | 1.772 | 37 | 1.457 | 3 | 2.5 | 365 | 780 | 900 | 1000 | **JM736149/JM736110-BZ** | 0.48 | 1.25 | 0.69 | 56 | 6.80 |

Note: * indicates the maximum value of IDor OD.

d 184.15~220.662 mm

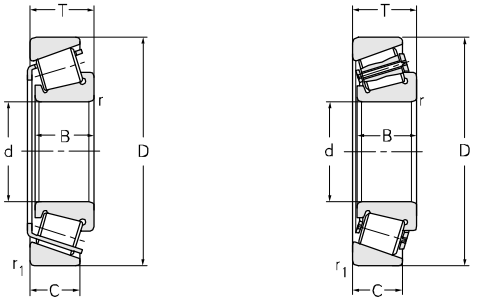



| Principal dimensions | | | | | | | | | | | | Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | | D | | T | | B | | C | | $r_{min}$ | $R_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | e | Y | Yo | a | |
| mm | in | mm | in | mm | in | mm | in | mm | in | mm | | kN | | r/min | | | | | | | kg |
| **184.15** | 7.25 | 280 | 11.024 | 46.525 | 1.832 | 46.833 | 1.844 | 36 | 1.417 | 3.3 | 3.5 | 360 | 760 | 900 | 1000 | **K67883/K67830** | 0.48 | 1.26 | 0.69 | 58 | 10.1 |
| **187.325** | 7.375 | 269.875 | 10.625 | 55.562 | 2.187 | 55.562 | 2.187 | 42.862 | 1.687 | 3.3 | 3.5 | 425 | 860 | 900 | 1000 | **KM238849/KM238810** | 0.33 | 1.81 | 1 | 49 | 9.63 |
| | | 320.675 | 12.625 | 88.9 | 3.5 | 85.725 | 3.375 | 65.088 | 2.563 | 4.8 | 5.5 | 930 | 1420 | 800 | 900 | **KH239649/KH239612** | 0.32 | 2.11 | 2.06 | 56 | 26.7 |
| **190.5** | 7.5 | 266.7 | 10.5 | 47.625 | 1.875 | 46.833 | 1.844 | 38.1 | 1.5 | 3.3 | 3.5 | 345 | 725 | 1100 | 1500 | **K67885/K67820** | 0.48 | 1.3 | 0.69 | 58 | 8.04 |
| | | 336.55 | 13.25 | 98.425 | 3.875 | 95.25 | 3.75 | 73.025 | 2.875 | 6.4 | 6.4 | 965 | 1720 | 1000 | 1200 | **KHH840249/KHH840210** | 0.58 | 1.04 | 0.57 | 93 | 35.8 |
| | | 365.049 | 14.372 | 92.075 | 3.625 | 88.897 | 3.5 | 63.5 | 2.5 | 3.3 | 6.4 | 990 | 1460 | 900 | 1000 | **KEE420751/K421437** | 0.4 | 1.6 | 0.83 | 79 | 39.3 |
| | | 428.625 | 16.875 | 106.362 | 4.187 | 95.25 | 3.75 | 61.912 | 2.437 | 6.4 | 6.4 | 1440 | 1840 | 800 | 900 | **EE350750/351687/YB2** | 0.76 | 0.79 | 0.44 | 121 | 64.6 |
| **196.85** | 7.75 | 241.3 | 9.5 | 23.812 | 0.937 | 23.017 | 0.906 | 17.462 | 0.687 | 1.5 | 1.5 | 160 | 330 | 1200 | 1700 | **KLL639249/KLL639210** | 0.43 | 1.4 | 0.8 | 41 | 2.10 |
| | | 241.3 | 9.5 | 23.812 | 0.937 | 23.017 | 0.906 | 17.462 | 0.687 | 1.5 | 1.5 | 160 | 330 | 1200 | 1700 | **KLL639249/KLL639210/P6XYB2** | 0.43 | 1.4 | 0.8 | 42 | 2.1 |
| | | 254 | 10 | 28.575 | 1.125 | 27.783 | 1.094 | 21.433 | 0.844 | 1.5 | 1.5 | 251 | 460 | 1100 | 1600 | **L540049/L540010/HCOIP6X** | 0.4 | 1.51 | 0.83 | 43 | 3.48 |
| | | 254 | 10 | 28.575 | 1.125 | 27.783 | 1.094 | 21.433 | 0.844 | 1.5 | 1.5 | 251 | 460 | 1100 | 1600 | **L540049/L540010/P6X** | 0.4 | 1.51 | 0.83 | 43 | 3.48 |
| | | 257.175 | 10.125 | 39.688 | 1.563 | 39.688 | 1.563 | 30.162 | 1.187 | 3.3 | 3.5 | 275 | 635 | 1100 | 1600 | **KLM739749/KLM739710** | 0.44 | 1.35 | 0.8 | 50 | 5.20 |
| | | 266.7 | 10.5 | 39.688 | 1.563 | 39.688 | 1.563 | 30.162 | 1.187 | 3.3 | 3.5 | 275 | 635 | 1100 | 1600 | **KLM739749/KLM739719** | 0.44 | 1.35 | 0.8 | 50 | 6.14 |
| | | 317.5 | 12.5 | 63.5 | 2.5 | 63.5 | 2.5 | 46.038 | 1.813 | 3.3 | 4.3 | 605 | 1130 | 850 | 1200 | **K93775/K93125** | 0.52 | 1.15 | 0.63 | 73 | 18.8 |
| **198.5** | 7.815 | 257.175 | 10.125 | 39.688 | 1.563 | 39.688 | 1.563 | 30.162 | 1.187 | 3.3 | 3.5 | 275 | 635 | 1100 | 1600 | **JKLM739749AX/JKLM739710** | 0.45 | 1.34 | 0.74 | 51 | 5.08 |
| **200*** | | 300* | | 65 | 2.559 | 62 | 2.441 | 51 | 2.008 | 2.5 | 3.5 | 615 | 1240 | 850 | 1200 | **JHM840449/JHM840410** | 0.52 | 1.15 | 0.63 | 72 | 15.5 |
| **200.025** | 7.875 | 393.7 | 15.5 | 111.125 | 4.375 | 111.125 | 4.375 | 84.138 | 3.313 | 6.4 | 6.4 | 1470 | 2300 | 800 | 1000 | **KHH144642/KHH144614-3** | 0.3 | 2 | 1.1 | 77 | 59 |
| **203.2** | 8 | 292.1 | 11.5 | 57.945 | 2.281 | 57.945 | 2.281 | 46.038 | 1.813 | 3.3 | 3.5 | 525 | 1060 | 850 | 1200 | **KM241547/KM241510** | 0.33 | 1.8 | 0.99 | 53 | 12.6 |
| **209.55** | 8.25 | 317.5 | 12.5 | 63.5 | 2.5 | 63.5 | 2.5 | 46.038 | 1.813 | 3.3 | 4.3 | 605 | 1130 | 850 | 1200 | **93825/93125** | 0.52 | 1.15 | 0.63 | 73 | 16.6 |
| | | 317.5 | 12.5 | 63.5 | 2.5 | 63.5 | 2.5 | 46.038 | 1.813 | 3.3 | 4.3 | 605 | 1130 | 850 | 1200 | **K93825/K93125** | 0.52 | 1.15 | 0.63 | 73 | 16.6 |
| **215.9** | 8.5 | 285.75 | 11.25 | 46.038 | 1.813 | 46.038 | 1.813 | 34.925 | 1.375 | 3.3 | 3.6 | 370 | 780 | 850 | 1200 | **KLM742749/KLM742710-WTL** | 0.48 | 1.25 | 0.69 | 61 | 7.66 |
| **219.969** | 8.66 | 290.01 | 11.418 | 31.75 | 1.25 | 31.75 | 1.25 | 22.225 | 0.875 | 3.3 | 3.5 | 261 | 495 | 850 | 1200 | **K543086/K543114** | 0.39 | 1.55 | 0.85 | 47 | 5.08 |
| **220.662** | 8.687 | 314.325 | 12.375 | 61.912 | 2.437 | 61.912 | 2.437 | 49.212 | 1.937 | 3.3 | 6.4 | 620 | 1220 | 1000 | 1500 | **KM244249/KM244210** | 0.33 | 1.88 | 0.99 | 58 | 14.9 |

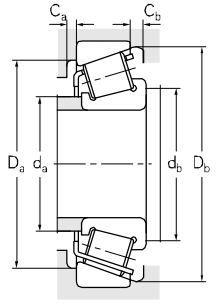
Note: * indicates the maximum value of IDor OD.

d 228.397~260.35 mm







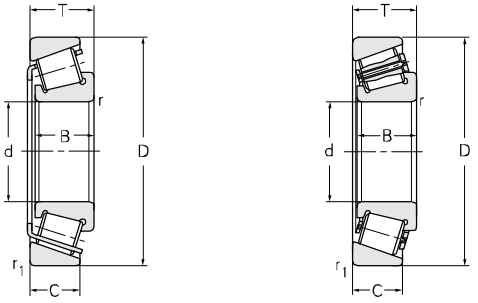


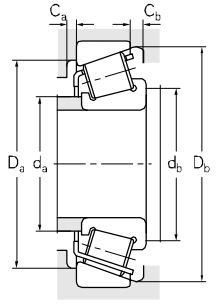

| Principal dimensions | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | | D | | T | | B | | C | | $r_{min}$ | $R_{min}$ |
| mm | in | mm | in | mm | in | mm | in | mm | in | mm | |
| **228.397** | 8.992 | 431.8 | 17 | 92.075 | 3.625 | 85.725 | 3.375 | 49.212 | 1.937 | 6.4 | 6.4 |
| **228.6** | 9 | 355.6 | 14 | 69.85 | 2.75 | 69.85 | 2.75 | 49.212 | 1.937 | 1.5 | 6.8 |
| | | 355.6 | 14 | 68.262 | 2.687 | 66.675 | 2.625 | 47.625 | 1.875 | 3.3 | 7 |
| | | 358.775 | 14.125 | 71.438 | 2.813 | 71.438 | 2.813 | 53.975 | 2.125 | 3.3 | 3.5 |
| | | 488.95 | 19.25 | 123.825 | 4.875 | 111.125 | 4.375 | 73.025 | 2.875 | 6.4 | 6.4 |
| | | 488.95 | 19.25 | 123.825 | 4.875 | 111.125 | 4.375 | 73.025 | 2.875 | 6.4 | 6.4 |
| **231.775** | 9.125 | 336.55 | 13.25 | 65.088 | 2.563 | 65.088 | 2.563 | 50.8 | 2 | 3.3 | 6.4 |
| **234.95** | 9.25 | 314.325 | 12.375 | 49.212 | 1.937 | 49.212 | 1.937 | 36.512 | 1.437 | 3.3 | 3.5 |
| | | 384.175 | 15.125 | 112.712 | 4.437 | 112.712 | 4.437 | 90.488 | 3.563 | 6.4 | 6.4 |
| **237.33** | 9.344 | 336.55 | 13.25 | 65.088 | 2.563 | 65.088 | 2.563 | 50.8 | 2 | 3.3 | 6.4 |
| **241.3** | 9.5 | 327.025 | 12.875 | 52.388 | 2.063 | 52.388 | 2.063 | 36.512 | 1.437 | 3.3 | 6.4 |
| | | 444.5 | 17.5 | 101.6 | 4 | 100.012 | 3.937 | 76.2 | 3 | 4.8 | 6.4 |
| **247.65** | 9.75 | 304.8 | 12 | 22.225 | 0.875 | 22.225 | 0.875 | 15.875 | 0.625 | 1.5 | 1.5 |
| | | 406.4 | 16 | 115.888 | 4.563 | 117.475 | 4.625 | 93.662 | 3.687 | 6.4 | 6.4 |
| **254** | 10 | 324.975 | 12.794 | 39 | 1.535 | 41.5 | 1.634 | 28 | 1.102 | 3.3 | 1.5 |
| | | 324.975 | 12.794 | 39 | 1.535 | 41.5 | 1.634 | 28 | 1.102 | 3.3 | 1.5 |
| **254*** | | 324.975* | | 39 | 1.535 | 41.5 | 1.634 | 28 | 1.102 | 3.3 | 1.5 |
| | | 533.4 | 21 | 133.35 | 5.25 | 120.65 | 4.75 | 77.788 | 3.063 | 6.4 | 6.4 |
| **255.6** | 10.063 | 342.9 | 13.5 | 57.15 | 2.25 | 63.5 | 2.5 | 44.45 | 1.75 | 3.3 | 1.5 |
| | | 342.9 | 13.5 | 57.15 | 2.25 | 63.5 | 2.5 | 44.45 | 1.75 | 3.3 | 1.5 |
| **257.175** | 10.125 | 342.9 | 13.5 | 57.15 | 2.25 | 57.15 | 2.25 | 44.45 | 1.75 | 3.3 | 6.4 |
| | | 358.775 | 14.125 | 71.438 | 2.813 | 76.2 | 3 | 53.975 | 2.125 | 3.3 | 1.5 |
| | | 358.775 | 14.125 | 71.438 | 2.813 | 76.2 | 3 | 53.975 | 2.125 | 3.3 | 1.5 |
| **260.35** | 10.25 | 422.275 | 16.625 | 86.121 | 3.391 | 79.771 | 3.141 | 66.675 | 2.625 | 3.3 | 6.8 |

| Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| $C_r$ | $C_{or}$ | Grease | Oil | | e | Y | Yo | a | |
| kN | | r/min | | | | | | | kg |
| 1080 | 1600 | 850 | 1150 | **KEE113089/K113170** | 0.88 | 0.77 | 0.75 | 116 | 51.9 |
| 840 | 1280 | 850 | 1150 | **EE130902/131400** | 0.33 | 1.82 | 1 | 60 | 23.5 |
| 650 | 1290 | 950 | 1300 | **K96900/K96140-3** | 0.59 | 1.02 | 0.56 | 86 | 23.8 |
| 750 | 1500 | 950 | 1300 | **KM249732/KM249710-1** | 0.33 | 1.8 | 0.99 | 65 | 27.2 |
| 1820 | 2490 | 750 | 1000 | **HH949549/HH949510** | 0.94 | 0.64 | 0.35 | 174 | 101 |
| 1800 | 2400 | 750 | 1000 | **HH949549/HH949510/YAD-3** | 0.94 | 0.64 | 0.35 | 174 | 102 |
| 640 | 1360 | 850 | 1200 | **KM246942/KM246910** | 0.33 | 1.8 | 0.99 | 61 | 18.5 |
| 485 | 980 | 850 | 1200 | **LM545849/LM545810/HCOI** | 0.4 | 1.51 | 0.83 | 57 | 10 |
| 1360 | 2540 | 750 | 1000 | **KH247549/KH247510** | 0.33 | 1.88 | 0.99 | 84 | 50.0 |
| 640 | 1360 | 850 | 1200 | **KM246949/KM246910** | 0.33 | 1.8 | 0.99 | 61 | 17.5 |
| 470 | 950 | 900 | 1200 | **K8578/K8520** | 0.41 | 1.5 | 0.81 | 60 | 11.3 |
| 1340 | 2000 | 750 | 1000 | **KEE923095/K923175** | 0.34 | 1.78 | 0.98 | 83 | 65.9 |
| 155 | 370 | 750 | 1000 | **K28880YB2/K28820YB2** | 0.32 | 1.87 | 1.03 | 39 | 3.29 |
| 1690 | 3200 | 750 | 1000 | **HH249949/HH249910** | 0.33 | 1.8 | 0.99 | 87 | 58.0 |
| 315 | 800 | 850 | 1200 | **1-7009** | 0.56 | 1.07 | 0.59 | 71 | 8.06 |
| 315 | 800 | 850 | 1200 | **JL848849/JL848811/YB2** | 0.56 | 1.07 | 0.59 | 71 | 8.06 |
| 365 | 800 | 850 | 1200 | **L848849SH/L848810SH** | 0.56 | 1.07 | 0.59 | 71 | 8.06 |
| 365 | 800 | 850 | 1200 | **HH953749/HH953710** | 0.94 | 0.64 | 0.35 | 179 | 129 |
| 582 | 1220 | 850 | 1200 | **KM349547/KM349510** | 0.35 | 1.73 | 0.95 | 59 | 16.1 |
| 582 | 1220 | 850 | 1200 | **M349547SH/M349510SH** | 0.35 | 1.73 | 0.95 | 59 | 14.4 |
| 725 | 880 | 850 | 1200 | **KM349549/KM349510** | 0.35 | 1.73 | 0.95 | 80 | 14.0 |
| 825 | 1760 | 850 | 1200 | **KM249747/KM249710** | 0.33 | 1.8 | 0.99 | 64 | 21.7 |
| 825 | 1760 | 850 | 1200 | **M249747/M249710/YAD** | 0.33 | 1.8 | 0.99 | 64 | 21.7 |
| 1100 | 1800 | 900 | 1300 | **HM252348/HM252310** | 0.33 | 1.8 | 0.99 | 78 | 42.8 |

Note: * indicates the maximum value of IDor OD.

d 266.7~406.4 mm



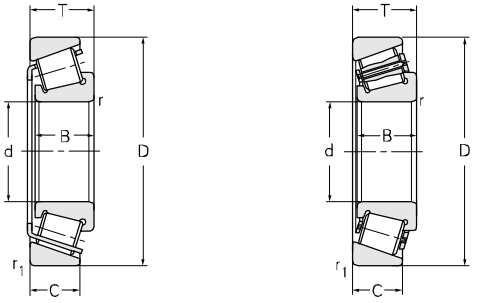




| Principal dimensions | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | | D | | T | | B | | C | | $r_{min}$ | $R_{min}$ |
| mm | in | mm | in | mm | in | mm | in | mm | in | mm | |
| **266.7** | 10.5 | 325.438 | 12.813 | 28.575 | 1.125 | 28.575 | 1.125 | 25.4 | 1 | 1.5 | 1.5 |
| | | 355.6 | 14 | 57.15 | 2.25 | 57.15 | 2.25 | 44.45 | 1.75 | 3.3 | 3.5 |
| | | 444.5 | 17.5 | 120.65 | 4.75 | 117.475 | 4.625 | 88.9 | 3.5 | 6.4 | 6.4 |
| **274.574** | 10.81 | 406.413 | 16.001 | 76.2 | 3 | 76.2 | 3 | 60.325 | 2.375 | 4.3 | 3 |
| | | 457.2 | 18 | 76.556 | 3.014 | 76.2 | 3 | 57.15 | 2.25 | 4.3 | 3 |
| **288.925** | 11.375 | 406.4 | 16 | 77.788 | 3.063 | 77.788 | 3.063 | 60.325 | 2.375 | 3.3 | 6.4 |
| | | 406.4 | 16 | 77.788 | 3.063 | 77.788 | 3.063 | 60.325 | 2.375 | 3.3 | 6.4 |
| **304.8** | 12 | 393.7 | 15.5 | 50.8 | 2 | 50.8 | 2 | 38.1 | 1.5 | 3.3 | 6.4 |
| | | 406.4 | 16 | 63.5 | 2.5 | 63.5 | 2.5 | 47.625 | 1.875 | 3.3 | 6.4 |
| | | 495.3 | 19.5 | 95.25 | 3.75 | 92.075 | 3.625 | 69.85 | 2.75 | 6.4 | 16 |
| **317.5** | 12.5 | 447.675 | 17.625 | 85.725 | 3.375 | 85.725 | 3.375 | 68.262 | 2.687 | 3.3 | 3.5 |
| **330.2** | 13 | 415.925 | 16.375 | 47.625 | 1.875 | 47.625 | 1.875 | 34.925 | 1.375 | 3.3 | 3.5 |
| **342.9** | 13.5 | 450.85 | 17.75 | 66.673 | 2.625 | 66.675 | 2.625 | 52.388 | 2.063 | 3.5 | 8.5 |
| **371.5** | 14.626 | 622.3 | 24.5 | 147.638 | 5.813 | 131.762 | 5.187 | 82.55 | 3.25 | 12.7 | 14.3 |
| **377.825** | 14.875 | 522.288 | 20.563 | 85.725 | 3.375 | 84.138 | 3.313 | 61.912 | 2.437 | 3.3 | 6.4 |
| **381** | 15 | 522.288 | 20.563 | 85.725 | 3.375 | 84.138 | 3.313 | 61.912 | 2.437 | 3.3 | 6.4 |
| | | 546.1 | 21.5 | 104.775 | 4.125 | 104.775 | 4.125 | 82.55 | 3.25 | 6.4 | 6.4 |
| **384.175** | 15.125 | 546.100 | 21.5 | 104.775 | 4.125 | 104.775 | 4.125 | 82.550 | 3.25 | 6.4 | 6.4 |
| **385.762** | 15.187 | 514.35 | 20.25 | 82.55 | 3.25 | 82.55 | 3.25 | 63.5 | 2.5 | 3.3 | 6.4 |
| **396.875** | 15.625 | 546.1 | 21.5 | 76.2 | 3 | 61.12 | 2.406 | 55.562 | 2.187 | 6.4 | 6.4 |
| **406.4** | 16 | 508 | 20 | 61.912 | 2.437 | 61.912 | 2.437 | 47.625 | 1.875 | 3.3 | 3.3 |
| | | 546.1 | 21.5 | 76.2 | 3 | 61.12 | 2.406 | 55.562 | 2.187 | 6.4 | 6.4 |

| Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| $C_r$ | $C_{or}$ | Grease | Oil | | e | Y | Yo | a | |
| kN | | r/min | | | | | | | kg |
| 207 | 501 | 850 | 1200 | **K38885/K38820** | 0.37 | 1.64 | 0.9 | 48 | 4.78 |
| 715 | 800 | 850 | 1200 | **KLM451349/KLM451310** | 0.36 | 1.67 | 0.92 | 62 | 15.1 |
| 1610 | 3050 | 670 | 900 | **KH852849/KH852810** | 0.58 | 1.04 | 0.57 | 121 | 73.1 |
| 1000 | 1790 | 670 | 900 | **306/274X4-1** | 0.37 | 1.62 | 0.89 | | 31.8 |
| 1170 | 1880 | 670 | 900 | **306/274X4** | | | | | 46.5 |
| 1250 | 1900 | 670 | 900 | **M255449/M255410** | 0.34 | 1.78 | 0.98 | 72 | 30.5 |
| 1000 | 2050 | 670 | 900 | **M255449/M255410/HE** | 0.34 | 1.78 | 0.98 | 72 | 30.7 |
| 580 | 1210 | 670 | 900 | **KL357049/KL357010** | 0.36 | 1.68 | 0.92 | 64 | 14.6 |
| 740 | 1580 | 600 | 750 | **KLM757049/KLM757010** | 0.44 | 1.38 | 0.76 | 79 | 21.2 |
| 1330 | 2480 | 500 | 700 | **EE724120/724195** | 0.4 | 1.49 | 0.82 | 97 | 67.1 |
| 960 | 2330 | 670 | 900 | **HM259048/HM259010** | 0.33 | 1.8 | 0.99 | 80 | 41.3 |
| 475 | 1140 | 670 | 900 | **KL860049/KL860010** | 0.5 | 1.2 | 0.7 | 83 | 14.3 |
| 770 | 1750 | 630 | 850 | **KLM361649/KLM361610** | 0.33 | 1.8 | 1 | 78 | 26.5 |
| 2300 | 3600 | 420 | 580 | **H961649/H961610** | 0.94 | 0.64 | 0.35 | 210 | 180 |
| 1170 | 2580 | 670 | 900 | **KLM565946/KLM565910** | 0.38 | 1.56 | 0.86 | 93 | 51.9 |
| 1170 | 2580 | 650 | 870 | **KLM565949/KLM565910** | 0.38 | 1.56 | 0.86 | 93 | 51.2 |
| 1860 | 4100 | 560 | 750 | **KHM266446/KHM266410** | 0.33 | 1.8 | 1 | 96 | 77.7 |
| 1850 | 4150 | 530 | 700 | **HM266449/HM266410** | 0.33 | 1.8 | 1 | 96 | 77.6 |
| 1420 | 2790 | 630 | 850 | **LM665949/LM665910** | 0.42 | 1.43 | 0.79 | 100 | 47.4 |
| 840 | 1830 | 630 | 850 | **KEE234156/K234215** | 0.48 | 1.26 | 0.69 | 114 | 44.6 |
| 900 | 1920 | 630 | 850 | **L467549/L467510** | 0.37 | 1.63 | 0.9 | 82 | 27.1 |
| 840 | 1830 | 630 | 850 | **KEE234160/K234215** | 0.48 | 1.26 | 0.69 | 107 | 41.8 |

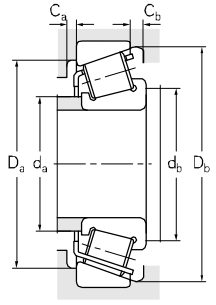
Note: * indicates the maximum value of IDor OD.

d 415.925~930 mm







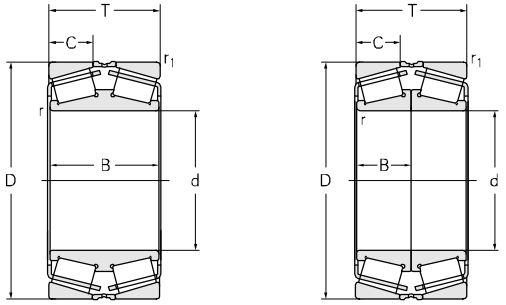



| Principal dimensions | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | | D | | T | | B | | C | | $r_{min}$ | $R_{min}$ |
| mm | in | mm | in | mm | in | mm | in | mm | in | mm | |
| **415.925** | 16.375 | 590.55 | 23.25 | 114.3 | 4.5 | 114.3 | 4.5 | 88.9 | 3.5 | 6.4 | 6.4 |
| **431.800** | 17 | 571.5 | 22.5 | 74.612 | 2.937 | 74.612 | 2.937 | 52.388 | 2.063 | 3.3 | 3.3 |
| **447.625** | 17.623 | 635 | 25 | 120.650 | 4.75 | 120.650 | 4.75 | 95.250 | 3.75 | 6.4 | 6.4 |
| **457.2** | 18 | 573.088 | 22.563 | 74.612 | 2.937 | 74.612 | 2.937 | 57.150 | 2.25 | 6.4 | 6.4 |
| | | 596.9 | 23.5 | 76.2 | 3 | 73.025 | 2.875 | 53.975 | 2.125 | 3.3 | 9.7 |
| | | 596.9 | 23.5 | 76.2 | 3 | 73.025 | 2.875 | 53.975 | 2.125 | 3.3 | 9.7 |
| **482.6** | 19 | 634.873 | 24.995 | 80.962 | 3.187 | 80.962 | 3.187 | 63.5 | 2.5 | 3.3 | 6.4 |
| **498.475** | 19.625 | 634.873 | 24.995 | 80.962 | 3.187 | 80.962 | 3.187 | 63.5 | 2.5 | 3.3 | 6.4 |
| **501.65** | 19.75 | 711.2 | 28 | 136.525 | 5.375 | 136.525 | 5.375 | 106.363 | 4.188 | 6.4 | 6.4 |
| **549.275** | 21.625 | 692.15 | 27.25 | 80.962 | 3.187 | 80.962 | 3.187 | 61.912 | 2.437 | 6.4 | 6.4 |
| **607.72** | 23.926 | 787.4 | 31 | 93.662 | 3.687 | 93.662 | 3.687 | 69.85 | 2.75 | 6.4 | 6.4 |
| | | 787.4 | 31 | 93.662 | 3.687 | 93.662 | 3.687 | 69.85 | 2.75 | 6.4 | 6.4 |
| **609.6** | 24 | 787.4 | 31 | 93.662 | 3.687 | 93.662 | 3.687 | 69.85 | 2.75 | 6.4 | 6.4 |
| | | 787.4 | 31 | 93.662 | 3.687 | 93.662 | 3.687 | 69.85 | 2.75 | 6.4 | 6.4 |
| **660.4** | 26 | 812.8 | 32 | 95.25 | 3.75 | 95.25 | 3.75 | 73.025 | 2.875 | 6.4 | 6.4 |
| **760** | 29.921 | 889 | 35 | 88.9 | 3.5 | 88.9 | 3.5 | 72 | 2.835 | 3.3 | 3.3 |
| **760*** | | 889 | 35 | 88.9 | 3.5 | 88.9 | 3.5 | 72 | 2.835 | 4 | 4 |
| **762** | 30 | 889 | 35 | 88.9 | 3.5 | 88.9 | 3.5 | 72 | 2.835 | 4 | 4 |
| | | 889 | 35 | 88.9 | 3.5 | 88.9 | 3.5 | 72 | 2.835 | 3.3 | 3.3 |
| **928*** | | 1060* | | 92 | 3.622 | 90 | 3.543 | 76 | 2.992 | 3.3 | 3.3 |
| **930*** | | 1060* | | 92 | 3.622 | 90 | 3.543 | 76 | 2.992 | 3.3 | 3.3 |

| Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| $C_r$ | $C_{or}$ | Grease | Oil | | e | Y | Yo | a | |
| kN | | r/min | | | | | | | kg |
| 1810 | 4030 | 480 | 650 | **M268749/M268710** | 0.33 | 1.8 | 0.99 | 104 | 96.6 |
| 965 | 2080 | 500 | 670 | **KLM869448/KLM869410-3-SJ** | 0.44 | 1.35 | 0.8 | 111 | 47.2 |
| 2300 | 5450 | 430 | 560 | **M270749/M270710** | 0.33 | 1.8 | 1 | 111 | 121 |
| 1030 | 2690 | 480 | 630 | **KL570649/KL570610-3-SJ** | 0.4 | 1.5 | 0.8 | 101 | 41.9 |
| 1200 | 2500 | 450 | 600 | **EE244180/244235** | 0.4 | 1.5 | 0.8 | 102 | 50.8 |
| 1200 | 2500 | 450 | 600 | **KEE244180/K244235** | 0.4 | 1.5 | 0.8 | 102 | 50.8 |
| 1340 | 2950 | 630 | 850 | **KEE243190/K243250** | 0.34 | 1.76 | 0.97 | 100 | 66.2 |
| 1340 | 2950 | 420 | 580 | **EE243196/243250/HE** | 0.35 | 1.7 | 0.9 | 98 | 58.3 |
| 2760 | 6110 | 400 | 530 | **M274149/M274110** | 0.35 | 1.7 | 0.9 | 102 | 163 |
| 1350 | 3470 | 560 | 750 | **KL476549/KL476510** | 0.37 | 1.6 | 0.9 | 113 | 69.0 |
| 2200 | 2800 | 340 | 450 | **EE649239/649310** | 0.38 | 1.58 | 0.87 | 124 | 108 |
| 2120 | 5250 | 340 | 450 | **KEE649239/K649310** | 0.37 | 1.61 | 0.89 | 127 | 113 |
| 2120 | 5250 | 340 | 450 | **EE649240/649310** | 0.38 | 1.58 | 0.87 | 124 | 108 |
| 2080 | 5250 | 340 | 450 | **KEE649240/K649310** | 0.37 | 1.6 | 0.9 | 125 | 112 |
| 1800 | 4950 | 300 | 400 | **KL281147/KL281110** | 0.33 | 1.82 | 1 | 122 | 101 |
| 2270 | 6050 | 300 | 400 | **L183448/L183410/HCE-2-XD** | 0.32 | 1.88 | 1.04 | 127 | 92.5 |
| 2200 | 3200 | 260 | 360 | **L183448/L183410** | 0.32 | 1.88 | 1.04 | 127 | 93.5 |
| 2200 | 3200 | 260 | 360 | **L183449/L183410** | 0.32 | 1.88 | 1.04 | 127 | 91.9 |
| 2270 | 6050 | 260 | 360 | **L183449/L183410/HCE-2-XD** | 0.32 | 1.88 | 1.04 | 127 | 90.9 |
| 2120 | 7450 | 190 | 280 | **JL286948H/JL286910** | 0.33 | 1.8 | 1 | 152 | 117 |
| 2120 | 7450 | 190 | 280 | **JL286949H/JL286910** | 0.33 | 1.8 | 1 | 152 | 115 |

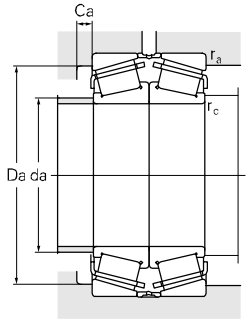
Note: * indicates the maximum value of IDor OD.

d 55~120 mm



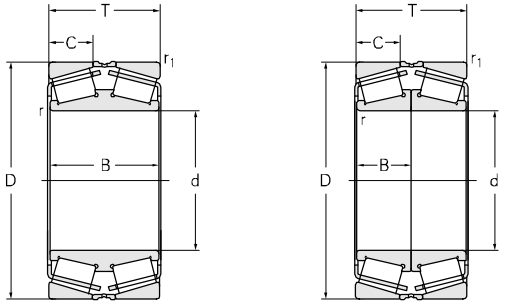






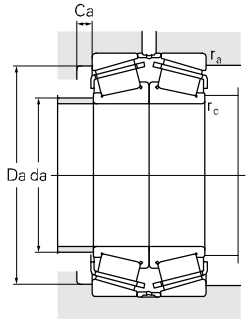

| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | T | B | C | $r_{min}$ | $r_{1min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | e | Y1 | Y2 | Yo | |
| mm | | | | | | | kN | | r/min | | | | | | | kg |
| **55** | 90 | 54 | 27 | 21 | 0.5 | 1.5 | 174 | 292 | 3300 | 4400 | **33011/DF** | 0.31 | 2.16 | 3.22 | 2.12 | 1.73 |
| **60** | 130 | 67 | 67 | 22 | 1 | 2.5 | 261 | 350 | 1900 | 2800 | **31312/C9DF** | 0.83 | 0.81 | 1.2 | 0.8 | 4.05 |
| **70** | 110 | 55.5 | 55.5 | 19 | 0.5 | 1.5 | 178 | 324 | 2300 | 3000 | **32014/P5DFYA8** | 0.43 | 1.55 | 2.31 | 1.52 | 2.18 |
| **75** | 130 | 55 | 50 | 22 | 0.5 | 1.5 | 214 | 350 | 2000 | 2600 | **30215/DFP69YB2** | 0.44 | 1.55 | 2.31 | 1.52 | 3 |
| | 130 | 51.5 | 50 | 22 | 2 | 2.3 | 265 | 400 | 2000 | 2600 | **370215/C9YAB-QC** | 0.44 | 1.55 | 2.31 | 1.52 | 2.95 |
| | 130 | 54.5 | 50 | 22 | 2 | 2.3 | 265 | 400 | 2000 | 2600 | **370215/C91YAB-QC** | 0.44 | 1.55 | 2.31 | 1.52 | 2.95 |
| | 130 | 54.5 | 50 | 22 | 2 | 2.3 | 308 | 400 | 2000 | 2600 | **370215/P6XC9YAB** | 0.44 | 1.55 | 2.31 | 1.52 | 2.95 |
| **80** | 140 | 56.5 | 26 | 22 | 0.7 | 2 | 280 | 410 | 2100 | 2800 | **30216/DF-1** | 0.42 | 1.61 | 2.39 | 1.57 | 3.28 |
| | 140 | 56.75 | 52 | 22 | 0.7 | 2 | 228 | 356 | 2100 | 2800 | **30216/DF** | 0.42 | 1.61 | 2.39 | 1.57 | 3.28 |
| | 125 | 58 | 58 | 22 | 0.5 | 1.5 | 238 | 430 | 2100 | 2600 | **32016/DF** | 0.42 | 1.6 | 2.38 | 1.56 | 2.61 |
| | 110 | 50 | 20 | 50 | 0.5 | 1 | 132 | 240 | 2200 | 2800 | **32916/P5DF** | 0.35 | 1.92 | 2.86 | 1.88 | 1.28 |
| | 140 | 56.75 | 52 | 22 | 1 | 3 | 310 | 470 | 2100 | 2800 | **370216/C9YAB-QC** | 0.42 | 1.61 | 2.39 | 1.57 | 3.71 |
| | 140 | 56.75 | 52 | 22 | 1 | 3 | 310 | 470 | 2100 | 2800 | **370216/P6XYAB** | 0.42 | 1.61 | 2.39 | 1.57 | 3.71 |
| | 140 | 56.75 | 52 | 22 | 1 | 3 | 310 | 470 | 2100 | 2800 | **370216/YAB-QC** | 0.42 | 1.61 | 2.39 | 1.57 | 3.71 |
| **85** | 130 | 72 | 72 | 29.5 | 0.6 | 1.5 | 309 | 610 | 2000 | 2500 | **33017/C9DF** | 0.29 | 2.32 | 3.45 | 2.26 | 3.49 |
| **90** | 190 | 93 | 86 | 30 | 1 | 3 | 530 | 760 | 1400 | 1900 | **31318/DF** | 0.83 | 0.82 | 1.22 | 0.8 | 11.7 |
| | 140 | 78 | 78 | 32.5 | 0.3 | 1.5 | 381 | 735 | 1800 | 2300 | **33018/C9DF** | 0.27 | 2.51 | 3.74 | 2.45 | 4.58 |
| **100** | 180 | 74 | 68 | 29 | 0.8 | 2.5 | 450 | 710 | 1500 | 1900 | **370220/C9YAB-QC** | 0.42 | 1.61 | 2.39 | 1.57 | 7.89 |
| | 180 | 74 | 68 | 29 | 0.8 | 2.5 | 450 | 710 | 1500 | 1900 | **370220/P6XYAB** | 0.42 | 1.61 | 2.39 | 1.57 | 7.89 |
| | 180 | 74 | 68 | 29 | 0.8 | 2.5 | 450 | 710 | 1500 | 1900 | **370220/YAB-QC** | 0.42 | 1.61 | 2.39 | 1.57 | 7.89 |
| | 150 | 66 | 66 | 27 | 2*30* | 1.5 | 294 | 560 | 1800 | 2300 | **370620/YAD** | 0.32 | 2.04 | 3.03 | 1.99 | 4.04 |
| **110** | 220 | 76 | 76 | 38 | 0.8 | 2.5 | 395 | 615 | 1500 | 2000 | **30622/DF** | 0.42 | 1.61 | 2.39 | 1.57 | 10.3 |
| | 200 | 112 | 112 | 46 | 0.8 | 2.5 | 700 | 1350 | 1400 | 1700 | **32222/DF** | 0.42 | 1.61 | 2.39 | 1.57 | 15.1 |
| | 170 | 94 | 94 | 37 | 0.5 | 2 | 470 | 930 | 1300 | 1800 | **33022/C9DF** | 0.29 | 2.35 | 3.5 | 2.3 | 7.79 |
| | 170 | 66 | 70 | 27 | 1.5 | 2 | 350 | 690 | 1300 | 1800 | **370622** | 0.32 | 2.11 | 3.14 | 2.06 | 5.66 |
| **120** | 215 | 87 | 80 | 34 | 0.8 | 2.5 | 570 | 890 | 1400 | 1900 | **30224/DF** | 0.44 | 1.55 | 2.31 | 1.52 | 13.4 |
| | 260 | 136 | 136 | 42 | 1 | 3 | 916 | 1380 | 950 | 1400 | **31324/DF** | 0.83 | 0.81 | 1.2 | 0.8 | 33.5 |

d 130~190 mm



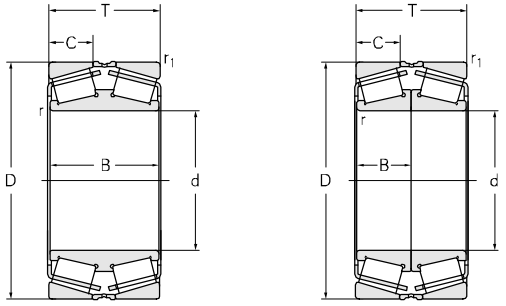






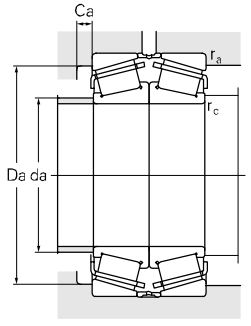

| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | T | B | C | $r_{min}$ | $r_{1min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | e | Y1 | Y2 | Yo | |
| mm | | | | | | | kN | | r/min | | | | | | | kg |
| **130** | 200 | 90 | 90 | 34 | 0.6 | 2 | 600 | 1210 | 1300 | 1800 | **32026/DF** | 0.43 | 1.55 | 2.31 | 1.52 | 10.5 |
| | 230 | 135.5 | 135.5 | 54 | 1 | 3 | 933 | 1650 | 1100 | 1500 | **32226/DF** | 0.44 | 1.53 | 2.28 | 1.5 | 23.7 |
| | 280 | 144 | 132 | 44 | 1.3 | 4 | 1100 | 1680 | 1100 | 1500 | **31326/DF** | 0.55 | 0.82 | 1.22 | 0.8 | 40.9 |
| **140** | 210 | 90 | 90 | 34 | 0.6 | 2 | 550 | 1120 | 1200 | 1700 | **32028/DF** | 0.46 | 1.47 | 2.18 | 1.43 | 11.8 |
| | 240 | 100 | 100 | 40 | 1.5 | 3 | 950 | 1450 | 1000 | 1300 | **370628X3/GW/HCYB2** | 0.39 | 1.74 | 2.59 | 1.7 | 18.8 |
| | 270 | 120 | 120 | 41 | 3 | 3 | 1100 | 1600 | 970 | 1200 | **370628D/HCYA3/W283** | 0.7 | 0.97 | 1.44 | 0.94 | 29.5 |
| | 300 | 154 | 70 | 47 | 1.3 | 4 | 1210 | 1842 | 900 | 1300 | **31328/DF** | 0.83 | 0.818 | 1.22 | 0.8 | 50.3 |
| | 300 | 154 | 70 | 47 | 1.3 | 4 | 1200 | 1840 | 850 | 1200 | **31328/DFC235** | 0.83 | 0.81 | 1.2 | 0.8 | 50.3 |
| **150** | 210 | 76 | 38 | 30 | 0.5 | 2 | 455 | 920 | 1200 | 1500 | **32930/DF** | 0.33 | 2.06 | 3.06 | 2.01 | 7.99 |
| | 225 | 96 | 96 | 36 | 0.6 | 2.5 | 625 | 1270 | 1200 | 1500 | **32030/DF** | 0.46 | 1.47 | 2.18 | 1.43 | 12.9 |
| | 225 | 97 | 90 | 38 | 1.1 | 2.5 | 450 | 930 | 1200 | 1500 | **32030X2A/DF** | 0.37 | 1.83 | 2.72 | 1.79 | 14.1 |
| | 270 | 154 | 146 | 60 | 1 | 3 | 1210 | 2450 | 900 | 1300 | **32230/C3DF** | 0.44 | 1.55 | 2.31 | 1.52 | 38.4 |
| **160** | 240 | 102 | 102 | 38 | 0.8 | 2.5 | 722 | 1450 | 1000 | 1500 | **32032/DFC425** | 0.46 | 1.47 | 2.19 | 1.44 | 15.8 |
| | 240 | 102 | 102 | 41 | 0.9 | 2.5 | 722 | 1420 | 1000 | 1500 | **32032X1A/DF** | 0.37 | 1.83 | 2.72 | 1.79 | 15.7 |
| | 240 | 102 | 102 | 41 | 0.9 | 2.5 | 722 | 1420 | 1000 | 1500 | **32032X2A/DFC150** | 0.37 | 1.83 | 2.72 | 1.79 | 15.7 |
| | 240 | 76 | 76 | 29 | 1.5 | 3 | 485 | 910 | 1100 | 1400 | **370632** | 0.47 | 1.43 | 2.12 | 1.4 | 11.4 |
| | 290 | 168 | 160 | 67 | 1 | 3 | 1480 | 2970 | 900 | 1300 | **32232/DF** | 0.44 | 1.55 | 2.31 | 1.52 | 48.1 |
| | 343 | 160 | 160 | 53.975 | 3.3 | 3.3 | 1520 | 2290 | 740 | 950 | **370632D/HC/W281** | 0.81 | 0.83 | 1.23 | 0.81 | 65.3 |
| **170** | 230 | 76 | 38 | 30 | 0.6 | 2 | 480 | 1120 | 1000 | 1400 | **32934/P6DF-XD** | 0.38 | 1.76 | 2.62 | 1.72 | 9.31 |
| | 230 | 76 | 38 | 30 | 0.6 | 2 | 485 | 1120 | 1000 | 1400 | **32934/P59DF** | 0.38 | 1.76 | 2.62 | 1.72 | 9.31 |
| | 230 | 65 | 65 | 27 | 0.7 | 2 | 450 | 945 | 1000 | 1400 | **370634** | 0.29 | 2.36 | 3.51 | 2.31 | 6.79 |
| | 260 | 114 | 114 | 43 | 1.3 | 2.5 | 890 | 1740 | 850 | 1400 | **32034/DF** | 0.44 | 1.52 | 2.26 | 1.49 | 21.9 |
| | 295 | 100 | 100 | 35 | 2.5 | 4 | 860 | 1360 | 950 | 1300 | **370634-1/C9** | 0.87 | 0.78 | 1.16 | 0.76 | 27.8 |
| | 295 | 100 | 100 | 35 | 2.5 | 4 | 860 | 1360 | 950 | 1300 | **370634-1D** | 0.87 | 0.78 | 1.16 | 0.76 | 26.7 |
| | 310 | 182 | 172 | 71 | 1.3 | 4 | 1685 | 3250 | 850 | 1200 | **32234/HCDF** | 0.44 | 1.55 | 2.31 | 1.52 | 61.9 |
| **180** | 250 | 90 | 90 | 34 | 0.6 | 2 | 590 | 1430 | 950 | 1400 | **32936/DF** | 0.48 | 1.4 | 2.1 | 1.4 | 13.5 |
| | 250 | 90 | 90 | 36 | 0.7 | 2 | 500 | 1060 | 950 | 1400 | **32936X2A-1/DF** | 0.48 | 1.4 | 2.1 | 1.4 | 12.7 |
| | 280 | 128 | 128 | 48 | 1 | 2.5 | 1080 | 2170 | 900 | 1300 | **32036/DFC425** | 0.42 | 1.6 | 2.38 | 1.56 | 28.9 |
| | 330 | 190 | 190 | 76 | 1.5 | 5 | 1800 | 3700 | 820 | 1040 | **370636D/HCYA3** | 0.58 | 1.16 | 1.72 | 1.13 | 71.6 |
| **190** | 290 | 128 | 128 | 48 | 1 | 2.5 | 1090 | 2280 | 850 | 1200 | **32038/DFC395** | 0.44 | 1.53 | 2.27 | 1.49 | 30.1 |

d 190~280 mm



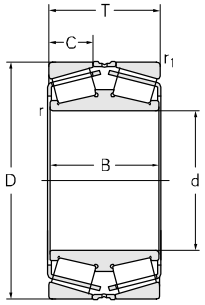


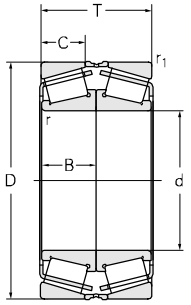


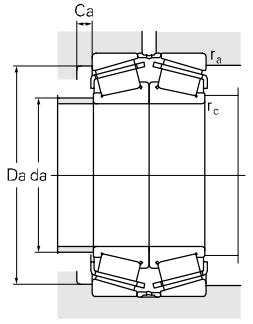



| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | T | B | C | $r_{min}$ | $r_{1min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | e | Y1 | Y2 | Yo | |
| mm | | | | | | | kN | | r/min | | | | | | | kg |
| **190** | 290 | 100 | 100 | 39 | 2.5 | 2.5 | 815 | 1670 | 850 | 1200 | **372038X2A** | 0.4 | 1.68 | 2.5 | 1.64 | 23.8 |
| **200** | 310 | 140 | 70 | 53 | 0.8 | 2.5 | 1270 | 2620 | 840 | 1100 | **32040/DF** | 0.43 | 1.57 | 2.34 | 1.53 | 40.2 |
| | 310 | 140 | 140 | 53 | 0.8 | 2.5 | 1260 | 2620 | 840 | 1100 | **32040/DFC275YB2** | 0.43 | 1.6 | 2.3 | 1.6 | 40.2 |
| | 310 | 140 | 70 | 53 | 0.8 | 2.5 | 1270 | 2620 | 840 | 1100 | **32040/DFC485** | 0.43 | 1.57 | 2.34 | 1.53 | 40.2 |
| | 310 | 140 | 140 | 53 | 0.8 | 2.5 | 1260 | 2620 | 840 | 1100 | **32040/HCDF** | 0.43 | 1.6 | 2.3 | 1.6 | 40.2 |
| **203.2** | 292.1 | 107.95 | 107.95 | 46.038 | 3 | 3.3 | 850 | 2000 | 840 | 1100 | **3706/203.2/C9YA3** | 0.33 | 2.03 | 3.02 | 1.98 | 24.3 |
| **210** | 300 | 100 | 100 | 38 | 2 | 3 | 760 | 1780 | 820 | 1000 | **370642-FM** | 0.58 | 1.17 | 1.75 | 1.15 | 23.2 |
| | 365 | 170 | 170 | 68 | 4 | 4 | 1850 | 3600 | 730 | 930 | **370642/HC** | 0.42 | 1.61 | 2.4 | 1.58 | 76.1 |
| **220** | 340 | 152 | 152 | 57 | 1.1 | 3 | 1510 | 3100 | 750 | 1000 | **32044/DFC525** | 0.43 | 1.57 | 2.34 | 1.53 | 49.5 |
| | 360 | 120 | 120 | 39 | 3 | 4 | 1000 | 2000 | 750 | 1000 | **370644/C9** | 0.87 | 0.78 | 1.16 | 0.76 | 47.5 |
| | 360 | 120 | 120 | 39 | 3 | 4 | 1000 | 2000 | 750 | 1000 | **370644D** | 0.87 | 0.78 | 1.16 | 0.76 | 44.4 |
| **230** | 350 | 92 | 92 | 33 | 3 | 4 | 795 | 1640 | 680 | 870 | **370646/HG2** | 0.55 | 1.24 | 1.84 | 1.21 | 31.9 |
| **240** | 360 | 152 | 76 | 57 | 1 | 3 | 1820 | 3300 | 690 | 920 | **32048/DF** | 0.46 | 1.47 | 2.19 | 1.44 | 54.0 |
| | 360 | 152 | 76 | 57 | 1 | 3 | 1820 | 3300 | 690 | 920 | **32048/HCDF** | 0.46 | 1.5 | 2.2 | 1.4 | 53.9 |
| | 440 | 254 | 254 | 100 | 1.3 | 4 | 1870 | 3550 | 680 | 930 | **32248/DF** | 0.43 | 1.6 | 2.3 | 1.6 | 169 |
| **259.5** | 481 | 250 | 250 | 98 | 2.5 | 5 | 3630 | 7100 | 580 | 770 | **3706/259.5** | 0.45 | 1.5 | 2.23 | 1.47 | 214 |
| | 481 | 250 | 250 | 250 | 2 | 5 | 3450 | 7050 | 580 | 770 | **3706/259.5-1/HCC9** | 0.49 | 1.38 | 2.06 | 1.35 | 211 |
| **260** | 400 | 174 | 174 | 65 | 1.3 | 4 | 1940 | 4100 | 630 | 840 | **32052/DF** | 0.43 | 1.55 | 2.31 | 1.52 | 82.6 |
| | 480 | 274 | 260 | 105 | 1.3 | 5 | 3800 | 7600 | 460 | 590 | **32252/DF** | 0.43 | 1.57 | 2.34 | 1.53 | 218 |
| | 420 | 170 | 170 | 70 | 5 | 5 | 1790 | 4050 | 630 | 840 | **370652D** | 0.48 | 1.41 | 2.09 | 1.37 | 88.4 |
| | 420 | 170 | 170 | 70 | 5 | 5 | 1970 | 4050 | 630 | 840 | **370652D/HC** | 0.48 | 1.41 | 2.09 | 1.37 | 88.4 |
| **280** | 420 | 174 | 87 | 65 | 1.3 | 4 | 2050 | 4600 | 600 | 800 | **32056/DFC660** | 0.46 | 1.5 | 2.2 | 1.4 | 84.0 |
| | 380 | 129 | 120 | 52 | 0.9 | 2.5 | 1100 | 2770 | 620 | 820 | **32956X2A/DF** | 0.32 | 2.1 | 3.13 | 2.05 | 44.1 |
| | 389.5 | 92 | 92 | 30 | 4 | 4 | 870 | 1880 | 600 | 800 | **370656** | 0.82 | 0.82 | 1.22 | 0.8 | 33.3 |
| | 389.5 | 92 | 92 | 30 | 4 | 4 | 1028 | 2222 | 600 | 800 | **370656/HC** | 0.82 | 0.82 | 1.22 | 0.8 | 33.3 |
| | 389.5 | 92 | 92 | 30 | 4 | 4 | 870 | 1450 | 600 | 800 | **370656/YAD** | 0.82 | 0.82 | 1.22 | 0.8 | 30.8 |

d 290~305.1 mm

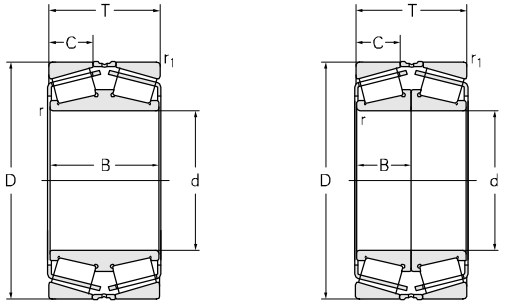


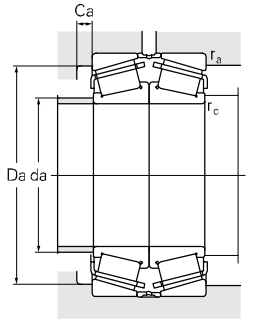

| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | T | B | C | $r_{min}$ | $r_{1min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | e | Y1 | Y2 | Yo | |
| mm | | | | | | | kN | | r/min | | | | | | | kg |
| **290** | 450 | 180 | 180 | 65 | 3 | 4 | 2150 | 4300 | 560 | 750 | **370658D/HCEYAT** | 0.87 | 0.78 | 1.16 | 0.76 | 103 |
| **295.3** | 557 | 170 | 180 | 44 | 5 | 5 | 3150 | 3750 | 360 | 460 | **370660-RS/HCC9-1** | 0.81 | 0.83 | 1.23 | 0.81 | 194 |
| **300** | 420 | 152 | 152 | 57 | 1.3 | 3 | 1754 | 3600 | 600 | 800 | **32960/DFC695** | 0.39 | 1.71 | 2.54 | 1.67 | 62.9 |
| | 440 | 105 | 105 | | 4 | 4 | 980 | 2050 | 560 | 740 | **370660D/HCYAD** | 0.88 | 0.77 | 1.15 | 0.8 | 55.5 |
| | 440 | 104.749 | 105 | 35 | 4 | 4 | 980 | 2050 | 560 | 740 | **370660D/HCYAD-1** | 0.88 | 0.77 | 1.15 | 0.8 | 55.4 |
| | 440 | 105 | 105 | 35 | 4 | 4 | 1020 | 2300 | 560 | 740 | **370660D/HCYAD-2** | 0.88 | 0.77 | 1.15 | 0.8 | 56.0 |
| | 440 | 105 | 105 | 35 | 4 | 4 | 1020 | 2300 | 560 | 740 | **370660D/HCYAT** | 0.88 | 0.77 | 1.15 | 0.8 | 56.3 |
| | 440 | 105 | 105 | 35 | 4 | 4 | 925 | 2030 | 560 | 740 | **370660D/YAD** | 0.88 | 0.77 | 1.15 | 0.8 | 55.5 |
| | 560 | 170 | 170 | 50 | 5 | 5 | 3520 | 3800 | 500 | 660 | **370660/HCC9** | 0.81 | 0.823 | 1.23 | 0.81 | 197 |
| | 560 | 170 | 170 | 50 | 5 | 5 | 3520 | 3800 | 500 | 660 | **370660/HC** | 0.81 | 0.823 | 1.23 | 0.81 | 197 |
| | 560 | 170 | 170 | | 5 | 5 | 3150 | 3750 | 500 | 660 | **370660-RS/HCC9** | 0.81 | 0.823 | 1.23 | 0.81 | 189 |
| | 440 | 105 | 105 | 35 | 4 | 4 | 925 | 2030 | 560 | 740 | **370660/YA3** | 0.88 | 0.77 | 1.15 | 0.8 | 58.8 |
| | 460 | 105 | 105 | 35 | 4 | 2 | 925 | 2030 | 560 | 740 | **370660/YAD** | 0.88 | 0.77 | 1.15 | 0.8 | 62.2 |
| | 500 | 200 | 200 | 70 | 5 | 5 | 2550 | 5200 | 390 | 490 | **371160X2** | 0.7 | 0.97 | 1.44 | 0.94 | 153 |
| | 420 | 152 | 152 | 53 | 3 | 3 | 1754 | 3600 | 600 | 800 | **372960/HCYAD** | 0.67 | 1 | 1.5 | 1 | 64.4 |
| | 423 | 152 | 152 | 53 | 3 | 3 | 1630 | 3300 | 600 | 800 | **372960X1/HCYAD** | 0.67 | 1.01 | 1.5 | 0.99 | 65.8 |
| **305** | 500 | 200 | 200 | 63.5 | 4.3 | 6 | 3100 | 4850 | 530 | 710 | **370661D/HCEYADT** | 0.88 | 0.77 | 1.15 | 0.8 | 144 |
| | 500 | 200 | 200 | 63.5 | 4.3 | 6 | 3100 | 4850 | 530 | 710 | **370661D/HCYADT-1** | 0.88 | 0.77 | 1.15 | 0.75 | 144 |
| | 500 | 200 | 200 | 63.5 | 4.3 | 6 | 3100 | 4850 | 530 | 710 | **370661D/YADT** | 0.88 | 0.77 | 1.15 | 0.75 | 144 |
| **305.03** | 499.948 | 200.025 | 200.025 | 63.5 | 3.3 | 6.4 | 2630 | 4850 | 530 | 710 | **3706/305X4D/HCEYAD-1** | 0.88 | 0.77 | 1.15 | 0.75 | 143 |
| | 499.948 | 200.025 | 200.025 | 63.5 | 3.3 | 6.4 | 2630 | 4850 | 530 | 710 | **3706/305X4D/HCEYAD-1/W281** | 0.88 | 0.77 | 1.15 | 0.8 | 143 |
| | 499.948 | 200.025 | 200.025 | 63.5 | 3.3 | 6.4 | 2630 | 4850 | 530 | 710 | **3706/305X4D/HCEYADT** | 0.88 | 0.77 | 1.15 | 0.75 | 144 |
| | 499.948 | 200.025 | 200.025 | 63.5 | 3.3 | 4 | 2630 | 4850 | 530 | 710 | **3706/305X4D/HCEYADT-1** | 0.88 | 0.77 | 1.15 | 0.8 | 144 |
| **305.034** | 499.948 | 200.025 | 200.025 | 63.5 | 3.3 | 6.5 | 2630 | 4850 | 530 | 710 | **3706/305X4D/HCEYAD** | 0.88 | 0.77 | 1.15 | 0.75 | 143 |
| **305.07** | 500 | 200 | 200 | 70 | 6.4 | 4.8 | 1870 | 3550 | 530 | 710 | **3706/305X4** | 0.79 | 0.854 | 1.27 | 0.835 | 122 |
| | 500 | 200 | 200 | 67 | 6.4 | 4.8 | 2350 | 5020 | 530 | 710 | **3706/305X4D/HCYA3-1** | 0.88 | 0.77 | 1.15 | 0.8 | 155 |
| | 500 | 200 | 200 | 67 | 6.4 | 4.8 | 2350 | 5020 | 530 | 710 | **3706/305X4D/HCYA3-2** | 0.88 | 0.77 | 1.15 | 0.8 | 155 |
| | 500 | 200 | 200 | 67 | 3 | 5 | 2400 | 5100 | 530 | 710 | **3706/305X4/HCC9YAB** | 0.88 | 0.77 | 1.15 | 0.8 | 163 |
| **305.1** | 500 | 200 | 200 | 70 | 6.4 | 4.8 | 1870 | 3550 | 450 | 620 | **3706/305.1D/HCYAB** | 0.79 | 0.85 | 1.27 | 0.83 | 115 |

d 305.2~390 mm



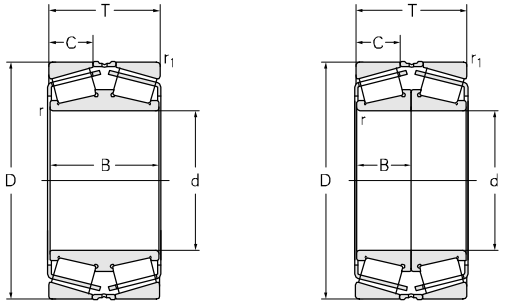






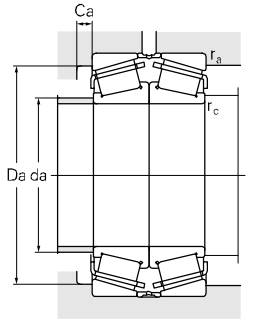

| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | T | B | C | $r_{min}$ | $r_{1min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | e | Y1 | Y2 | Yo | |
| mm | | | | | | | kN | | r/min | | | | | | | kg |
| **305.2** | 500 | 200 | 70 | 200 | 6.4 | 4.8 | 1870 | 3550 | 530 | 710 | **3706/305.2D** | 0.79 | 0.854 | 1.27 | 0.835 | 115 |
| **320** | 480 | 200 | 74 | 200 | 1.3 | 4 | 2587 | 6200 | 530 | 700 | **32064/DF** | 0.46 | 1.47 | 2.19 | 1.44 | 130 |
| | 440 | 152 | 57 | 152 | 1.5 | 3 | 1720 | 4370 | 410 | 520 | **32964/DFC725** | 0.42 | 1.62 | 2.42 | 1.59 | 69.5 |
| | 620 | 282 | 85 | 250 | 2.5 | 5 | 4100 | 7700 | 400 | 550 | **370664/HCC9** | 0.73 | 0.92 | 1.37 | 0.9 | 353 |
| | 620 | 280 | 115 | 280 | 3 | 5 | 5300 | 10600 | 400 | 550 | **370664X2** | 0.43 | 1.57 | 2.43 | 1.53 | 408 |
| | 620 | 280 | 115 | 280 | 3 | 5 | 5300 | 10600 | 400 | 550 | **370664X2/HC** | 0.43 | 1.57 | 2.43 | 1.53 | 408 |
| | 620 | 280 | 115 | 280 | 6 | 5 | 5300 | 10600 | 400 | 550 | **370664X2/HCC9YA6** | 0.43 | 1.57 | 2.43 | 1.53 | 408 |
| | 620 | 280 | 85 | 250 | 4 | 5 | 4100 | 7700 | 400 | 550 | **370664/YAB** | 0.73 | 0.92 | 1.38 | 0.9 | 350 |
| | 459.5 | 140 | 57 | 140 | 3 | 2 | 1550 | 3750 | 410 | 520 | **375964X3** | 0.41 | 1.66 | 2.47 | 1.63 | 79.2 |
| **330** | 520 | 180 | 70 | 180 | 3 | 3 | 2250 | 5050 | 360 | 460 | **370666D/HCEYAB** | 0.87 | 0.78 | 1.16 | 0.76 | 142 |
| | 540 | 186 | 73 | 186 | 5 | 5 | 3700 | 6250 | 350 | 450 | **370666/HCC9YA3-1** | 0.33 | 2.03 | 3.02 | 1.98 | 174 |
| | 540 | 176 | 62 | 176 | 5 | 5 | 2450 | 5100 | 430 | 570 | **370666/HCC9YAB** | 0.87 | 0.77 | 1.15 | 0.8 | 173 |
| **339** | 600.5 | 264 | 100 | 264 | 3 | 6 | 4800 | 9700 | 500 | 660 | **306/339/HCC9DFYAB** | 0.43 | 1.57 | 2.43 | 3.06 | 324 |
| **340** | 580 | 243 | 94 | 243 | 4 | 4 | 4150 | 8500 | 370 | 500 | **370668/HC** | | | | | 271 |
| **360** | 680 | 330 | 110 | 300 | 5 | 6 | 5960 | 11800 | 380 | 500 | **30672/DFYAB** | 0.6 | 1.15 | 1.7 | 1.1 | 506 |
| | 680 | 330 | 110 | 300 | 6 | 6 | 6540 | 10800 | 380 | 500 | **30672/HCDFYAB** | 0.62 | 1.1 | 1.63 | 1.07 | 503 |
| | 560 | 160 | | 160 | 3 | 5 | 2350 | 4640 | 380 | 500 | **370672** | 0.72 | 0.94 | 1.4 | 0.9 | 141 |
| | 680 | 330 | | 300 | 4 | 7.5 | 6300 | 12000 | 320 | 400 | **370672/HC** | 0.6 | 1.1 | 1.7 | 1.1 | 526 |
| | 560 | 160 | 55 | 160 | 3 | 5 | 2300 | 4800 | 380 | 500 | **370672/HCYA3-1** | 0.72 | 0.94 | 1.4 | 0.9 | 133 |
| | 680 | 330 | 128 | 300 | 2.5 | 7.5 | 6300 | 12000 | 380 | 500 | **370672/HCYAD** | 0.6 | 1.1 | 1.7 | 1.1 | 523 |
| **379** | 681.5 | 307 | 115 | 307 | 5 | 6 | 5700 | 11500 | 530 | 710 | **306/379/DF** | 0.43 | 1.57 | 2.34 | 3.14 | 492 |
| **380** | 570 | 180 | 70 | 180 | 2 | 5 | 2910 | 6150 | 410 | 540 | **371076X3D/HCEYAB** | 0.87 | 0.78 | 1.16 | 0.76 | 162 |
| | 570 | 180 | 70 | 180 | 2 | 5 | 2910 | 6150 | 410 | 540 | **371076X3D/HCYAD** | 0.87 | 0.78 | 1.16 | 0.76 | 162 |
| | 570 | 180 | 65 | 180 | 2 | 4 | 2600 | 5850 | 410 | 540 | **371076X3/HCEC9YB2** | 0.87 | 0.78 | 1.16 | 0.76 | 165 |
| | 520 | 145 | 56 | 145 | 4 | 4 | 2050 | 4950 | 340 | 440 | **371976** | 0.38 | 1.77 | 2.64 | 1.73 | 89.2 |
| **385** | 530 | 180 | 65 | 180 | 2 | 4 | 2220 | 5700 | 330 | 420 | **3706/385** | 0.38 | 1.77 | 2.64 | 1.73 | 116 |
| **390** | 570 | 200 | 69 | 200 | 5 | 5 | 2800 | 7000 | 380 | 500 | **370678** | 0.83 | 0.81 | 1.2 | 0.8 | 166 |

d 390~431.902 mm



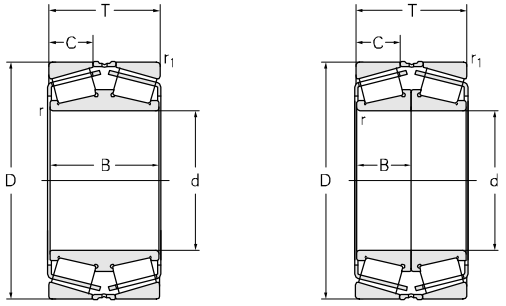






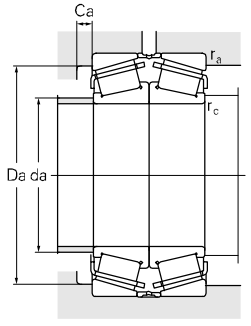

| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | T | B | C | $r_{min}$ | $r_{1min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | e | Y1 | Y2 | Yo | |
| mm | | | | | | | kN | | r/min | | | | | | | kg |
| **390** | 568 | 180 | 180 | 63 | 3 | 5 | 2280 | 5420 | 380 | 500 | **370678/HC-1** | 0.83 | 0.81 | 1.21 | 0.79 | 153 |
| | 567.5 | 180 | 180 | 70 | 3 | 5 | 2610 | 6520 | 380 | 500 | **370678/HCYA3** | 0.73 | 0.92 | 1.37 | 0.9 | 157 |
| **400** | 650 | 240 | 240 | 77 | 6 | 6 | 3550 | 7300 | 360 | 480 | **370680D/HCEYAD** | 0.87 | 0.78 | 1.16 | 0.76 | 279 |
| | 650 | 240 | 240 | 80 | 6 | 6 | 3400 | 8400 | 360 | 480 | **370680D/HCEYAD-1** | 0.87 | 0.78 | 1.16 | 0.76 | 299 |
| | 650 | 240 | 240 | 77 | 6 | 6 | 3550 | 7300 | 360 | 480 | **370680D/HCEYAD-2** | 0.87 | 0.78 | 1.16 | 0.76 | 279 |
| | 650 | 240 | 240 | 80 | 6.4 | 6.4 | 3450 | 8200 | 360 | 480 | **370680D/HCEYAT** | 0.88 | 0.77 | 0.15 | 0.8 | 290 |
| | 650 | 240 | 240 | 80 | 6 | 6 | 3400 | 8400 | 360 | 480 | **370680D/HCYA3** | 0.87 | 0.78 | 1.16 | 0.76 | 299 |
| | 650 | 240 | 240 | 80 | SP | 6 | 3400 | 8400 | 360 | 480 | **370680D/HCYA36** | 0.87 | 0.78 | 1.16 | 0.76 | 299 |
| | 650 | 240 | 240 | 77 | 6 | 6 | 3550 | 7300 | 360 | 480 | **370680D/HCYA38** | 0.87 | 0.78 | 1.16 | 0.76 | 279 |
| | 560 | 240 | 240 | 77 | 6 | 6 | 4170 | 7300 | 360 | 480 | **370680D/HCYAD** | 0.88 | 0.77 | 0.15 | 0.8 | 279 |
| | 560 | 240 | 240 | 80 | 6 | 6 | 3400 | 8400 | 360 | 480 | **370680D/HCYADT** | 0.88 | 0.77 | 0.15 | 0.8 | 300 |
| | 560 | 240 | 240 | 77 | 6 | 6 | 3740 | 8400 | 360 | 480 | **370680D/YAD** | 0.87 | 0.78 | 1.16 | 0.76 | 279 |
| | 780 | 380 | 380 | 135 | 5 | 6 | 7300 | 14800 | 330 | 450 | **370680/HCC9-3** | 0.7 | 0.96 | 1.44 | 0.94 | 854 |
| | 650 | 240 | 240 | 80 | 6 | 6 | 3400 | 8400 | 360 | 480 | **370680/HCYAB** | 0.87 | 0.78 | 1.16 | 0.76 | 313 |
| | 650 | 200 | 200 | 60 | 6 | 6 | 2900 | 6250 | 360 | 480 | **370680X2-2/HCC9YAB** | 1.05 | 0.64 | 0.96 | 0.63 | 264 |
| | 650 | 200 | 200 | 68.25 | 6 | 6 | 3400 | 6500 | 360 | 480 | **370680X2D/HCYAB** | 0.87 | 0.78 | 1.16 | 0.76 | 252 |
| | 780 | 380 | 380 | 155 | 7.5 | 7.5 | 10000 | 17300 | 330 | 450 | **370680X3/HCYAD** | 0.38 | 1.78 | 2.65 | 1.74 | 883 |
| | 780 | 380 | 380 | 135 | 5 | 6 | 7300 | 14800 | 330 | 450 | **370680X3/YAB** | 0.7 | 0.96 | 1.44 | 0.94 | 856 |
| | 600 | 189 | 190 | 63 | 5 | 4 | 2680 | 5500 | 410 | 540 | **371080X2** | 0.38 | 1.78 | 2.65 | 1.74 | 174 |
| **406.4** | 762 | 330 | 330 | 116.5 | 3.3 | 6.4 | 6000 | 13100 | 330 | 450 | **3706/406.4D/HC-JG** | 0.75 | 0.9 | 1.34 | 0.88 | 659 |
| | 762 | 330 | 330 | 116.5 | 3.3 | 6.4 | 6000 | 13100 | 330 | 450 | **3706/406.4/HCYAD** | 0.75 | 0.9 | 1.34 | 0.88 | 660 |
| **410** | 580 | 160 | 160 | 55 | 7 | 4 | 2060 | 5080 | 360 | 480 | **370682/HCYA3** | 0.87 | 0.78 | 1.16 | 0.76 | 133 |
| **420** | 740 | 330 | 330 | 135 | 3 | 6 | 6500 | 16000 | 350 | 450 | **370684/HC** | 0.32 | 2.12 | 3.15 | 2.07 | 642 |
| | 700 | 224 | 224 | 86 | 6 | 6 | 4540 | 9480 | 360 | 480 | **373184** | 0.32 | 2.12 | 3.15 | 2.07 | 382 |
| | 700 | 224 | 224 | 86 | 6 | 5 | 4900 | 9550 | 360 | 480 | **373184/HCC9** | 0.32 | 2.12 | 3.15 | 2.07 | 382 |
| **431.902** | 685.698 | 254 | 254 | 106 | 3.3 | 6.4 | 4500 | 10700 | 280 | 380 | **3706/431X4** | 0.33 | 2 | 3 | 2 | 358 |
| | 685.698 | 253.873 | 253.873 | 106 | 3.5 | 8 | 5010 | 11000 | 280 | 380 | **3706/431X4/HC** | 0.33 | 2.03 | 3.02 | 1.98 | 358 |

d 431.902~510.13 mm



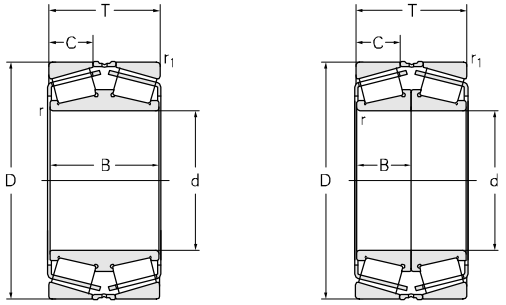






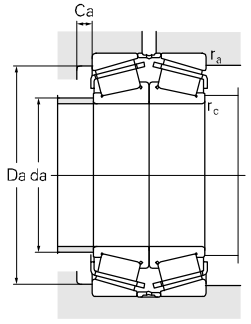

| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | T | B | C | $r_{min}$ | $r_{1min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | e | Y1 | Y2 | Yo | |
| mm | | | | | | | kN | | r/min | | | | | | | kg |
| **431.902** | 685.698 | 254 | 254 | 106 | 3.3 | 6.4 | 5010 | 11000 | 280 | 380 | **3706/431X4/HCEC9YAD** | 0.33 | 2 | 3 | 2 | 358 |
| **440** | 820 | 360 | 360 | 135 | 4 | 7.5 | 6100 | 11000 | 320 | 420 | **370688/HC** | 0.58 | 1.17 | 1.75 | 1.15 | 892 |
| **460** | 860 | 420 | 210 | 155 | 7.5 | 7.5 | 9490 | 20300 | 300 | 400 | **30692-1/HCDF** | 0.57 | 1.2 | 1.8 | 1.1 | 1110 |
| | 860 | 420 | 380 | 162 | 6 | 5 | 10600 | 20600 | 300 | 400 | **370692-1/HCYA6** | 0.68 | 0.99 | 1.48 | 0.97 | 1130 |
| | 860 | 420 | 380 | 162 | 6 | 5 | 10600 | 20600 | 300 | 400 | **370692-1/YA6** | 0.68 | 0.99 | 1.48 | 0.97 | 1130 |
| | 860 | 420 | 380 | 162 | 2.5 | 5 | 10600 | 20600 | 300 | 400 | **370692/HC-1** | 0.68 | 0.99 | 1.48 | 0.97 | 1130 |
| | 950 | 480 | 450 | 180 | 6 | 5 | 11600 | 24800 | 300 | 400 | **370692/HCC9YAD** | 0.68 | 0.99 | 1.48 | 0.97 | 1668 |
| | 680 | 230 | 230 | 85 | 4 | 4 | 3910 | 9400 | 360 | 480 | **371092** | 0.61 | 1.11 | 1.66 | 1.09 | 293 |
| **465** | 845 | 410 | 410 | 155 | 7.5 | 7.5 | 9200 | 19600 | 220 | 300 | **30693/DF** | 0.42 | 1.62 | 2.42 | 1.59 | 1021 |
| **480** | 950 | 500 | 500 | 185 | 9 | 9 | 13600 | 25000 | 250 | 320 | **370696/HCC9YB2-2** | 0.7 | 0.96 | 1.44 | 0.94 | 1720 |
| | 950 | 480 | 450 | 180 | 4 | 7.5 | 11900 | 25100 | 250 | 320 | **370696/HCEYB2-1** | 0.73 | 0.92 | 1.38 | 0.9 | 1640 |
| | 950 | 480 | 450 | 180 | 4 | 7.5 | 11900 | 25100 | 250 | 320 | **370696/HCEYB2-1** | 0.73 | 0.92 | 1.38 | 0.9 | 1640 |
| | 950 | 440 | 440 | 160 | 9.5 | 9.5 | 11900 | 22100 | 250 | 320 | **370696X2/HCC9YB2** | 0.58 | 1.17 | 1.75 | 1.15 | 1467 |
| | 950 | 430 | 400 | 160 | 5 | 7.5 | 11700 | 22100 | 250 | 320 | **370696X2/HCEC9** | 0.58 | 1.16 | 1.73 | 1.14 | 1431 |
| | 950 | 440 | 400 | 165 | 5 | 7.5 | 11700 | 22100 | 250 | 320 | **370696X2/HCEC9-1** | 0.58 | 1.16 | 1.73 | 1.14 | 1453 |
| | 950 | 480 | 450 | 180 | 4 | 7.5 | 11200 | 25100 | 250 | 320 | **370696/YB2** | 0.73 | 0.92 | 1.37 | 0.9 | 1640 |
| **482.6** | 733.425 | 199.263 | 200 | 65 | 3.3 | 4 | 4050 | 7400 | 250 | 320 | **3706/482.6/HC** | 0.78 | 0.86 | 1.29 | 0.84 | 285 |
| **500** | 720 | 218 | 185 | 80 | 6 | 6 | 3000 | 7400 | 220 | 280 | **3706/500-1/C9** | 0.7 | 0.97 | 1.44 | 0.94 | 288 |
| **501.65** | 711.2 | 250.825 | 250.825 | 106.363 | 3.2 | 6.4 | 4950 | 13400 | 220 | 280 | **3706/500/HC** | 0.35 | 1.92 | 2.86 | 1.88 | 323 |
| **509.948** | 733.425 | 200.025 | 200.025 | 68 | 3.3 | 4.8 | 3850 | 8400 | 330 | 430 | **3706/509X4D/HCYAT** | 0.87 | 0.78 | 1.16 | 0.76 | 265 |
| **509.998** | 733.5 | 200.02 | 200.02 | 68 | 3.3 | 4.8 | 3830 | 8320 | 330 | 430 | **3706/509X4D/HCYA3** | 0.87 | 0.78 | 1.16 | 0.76 | 265 |
| **510** | 800 | 350 | 350 | 121 | 7.5 | 7.5 | 8400 | 17600 | 330 | 430 | **306/510/HCC9DF** | 0.47 | 1.44 | 2.14 | 2.8 | 914 |
| | 733.5 | 200 | 200 | 68 | 3.3 | 3.3 | 3830 | 8320 | 330 | 430 | **3706/510D/HCYAB** | 0.87 | 0.78 | 1.16 | 0.76 | 265 |
| **510.13** | 800 | 285 | 285 | 100 | 5 | 10 | 4950 | 12500 | 330 | 430 | **3706/510X4D/HCYA3** | 0.88 | 0.76 | 1.34 | 0.75 | 532 |
| | 800 | 285 | 285 | 100 | 5 | 8 | 5440 | 12500 | 330 | 430 | **332171** | 0.89 | 0.763 | 1.14 | 0.746 | 532 |

d 530~690 mm



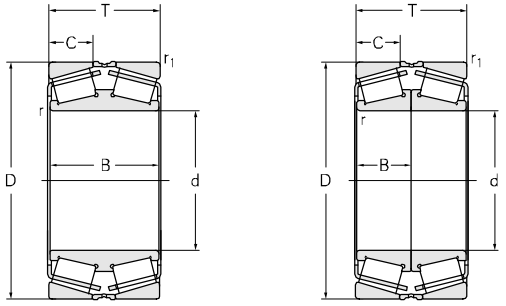






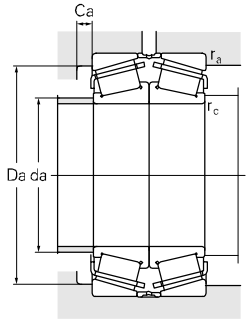

| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | T | B | C | $r_{min}$ | $r_{1min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | e | Y1 | Y2 | Yo | |
| mm | | | | | | | kN | | r/min | | | | | | | kg |
| **530** | 730 | 250 | 250 | 104 | 6 | 6 | 5060 | 13400 | 320 | 420 | **3706/530** | 0.34 | 2 | 2.97 | 1.95 | 323 |
| | 730 | 250 | 250 | 104 | 6 | 6 | 5150 | 13700 | 320 | 420 | **3706/530/HC-1** | 0.34 | 2 | 2.97 | 1.95 | 318 |
| | 730 | 250 | 250 | 104 | 6 | 6 | 5050 | 13400 | 320 | 420 | **3706/530/HC** | 0.34 | 2 | 2.97 | 1.95 | 323 |
| | 710 | 190 | 190 | 65 | 5 | 5 | 2660 | 7650 | 320 | 430 | **3719/530** | 0.73 | 0.92 | 1.37 | 0.9 | 212 |
| **540** | 860 | 256 | 256 | 92 | 7.5 | 7.5 | 5400 | 12400 | 320 | 420 | **3706/540/HC** | 0.7 | 0.97 | 1.44 | 0.94 | 581 |
| **560** | 1000 | 450 | 450 | 190 | 9.5 | 6 | 15200 | 30300 | 160 | 210 | **3706/560/HC** | 0.42 | 1.59 | 2.37 | 1.55 | 1620 |
| **570** | 750 | 240 | 240 | 100 | 6 | 6 | 3850 | 11800 | 310 | 410 | **3706/570/HC** | 0.5 | 1.36 | 2.02 | 1.33 | 287 |
| **580** | 990 | 390 | 390 | 145 | 7.5 | 7.5 | 10600 | 24000 | 290 | 380 | **306/580/HCC9DFYB2** | 0.31 | 2.2 | 3.3 | 2.4 | 1297 |
| | 830 | 280 | 280 | 115 | 3 | 6 | 6250 | 16400 | 290 | 380 | **3706/580/HCEC9YB2** | 0.31 | 2.2 | 3.3 | 2.2 | 546 |
| **600** | 870 | 270 | 270 | 98 | 6 | 6 | 5670 | 14300 | 280 | 380 | **3710/600** | 0.61 | 1.11 | 1.66 | 1.09 | 726 |
| | 800 | 190 | 190 | 68 | 5 | 4 | 3470 | 9200 | 290 | 390 | **3719/600X2** | 0.61 | 1.11 | 1.66 | 1.09 | 270 |
| **600.5** | 819 | 172 | 172 | 66 | 2 | 2 | 3920 | 8900 | 280 | 380 | **3706/600.5/HCYA6** | 0.61 | 1.11 | 1.66 | 1.09 | 265 |
| **620** | 1030 | 370 | 370 | 148 | 15 | 10 | 12600 | 23600 | 300 | 390 | **3706/620/HCC9** | 0.32 | 2.12 | 3.15 | 2.07 | 1265 |
| **630** | 1030 | 400 | 400 | 143 | 3.3 | 6.4 | 10100 | 23400 | 300 | 390 | **3706/630** | 0.75 | 0.9 | 1.34 | 0.88 | 1330 |
| | 1030 | 400 | 400 | 143 | 3.3 | 6.4 | 10100 | 23400 | 300 | 390 | **3706/630/HCR** | 0.75 | 0.9 | 1.34 | 0.88 | 1330 |
| **635** | 939.8 | 304.8 | 305.105 | 110 | 3.3 | 6.4 | 5800 | 17000 | 280 | 380 | **3706/635D/HC** | 0.83 | 0.818 | 1.22 | 0.8 | 697 |
| | 939.8 | 305 | 305 | 107.95 | 3.3*7.5 | 6.4 | 5800 | 17000 | 280 | 380 | **3706/635D/HCER-1** | | | | | 731 |
| | 939.8 | 304.8 | 304.8 | 110 | 3.3 | 6.4 | 5800 | 17000 | 280 | 380 | **3706/635/HC** | 0.83 | 0.818 | 1.22 | 0.8 | 721 |
| | 940 | 305 | 305 | 107.95 | 3.3 | 6.4 | 5800 | 17000 | 280 | 380 | **3706/635/HC-1** | 0.88 | 0.77 | 1.14 | 0.75 | 762 |
| | 939.8 | 304.8 | 304.8 | 110 | 3.3 | 6.4 | 5400 | 9400 | 280 | 380 | **3706/635/HCC9** | 0.83 | 0.82 | 1.22 | 0.8 | 721 |
| **670** | 980 | 230 | 230 | 78 | 7.5 | 9.5 | 6000 | 13000 | 250 | 340 | **3706/670/HCC9YA3** | 0.7 | 0.97 | 1.44 | 0.94 | 576 |
| **685.8** | 939.8 | 227.81 | 234.8 | 80 | 3.3 | 6.4 | 4550 | 12200 | 220 | 310 | **3706/685.8D/HCYAB** | 0.87 | 0.78 | 1.16 | 0.76 | 444 |
| | 939.8 | 228.6 | 234.95 | 82.55 | 6.4 | 6.4 | 4550 | 12200 | 220 | 310 | **3706/685.8D/HCYADT** | 0.87 | 0.78 | 1.16 | 0.76 | 447 |
| **690** | 980 | 355 | 355 | 152 | 6.5 | 6.5 | 9380 | 25900 | 210 | 280 | **3706/690/HCC9YB2** | 0.35 | 1.95 | 2.9 | 1.91 | 880 |

d 690~900 mm



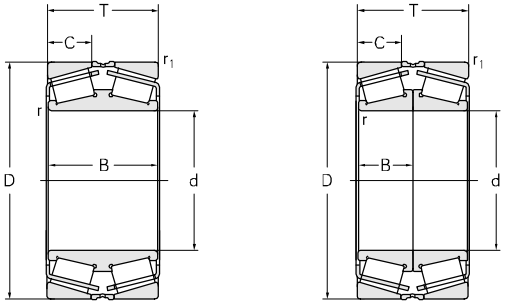






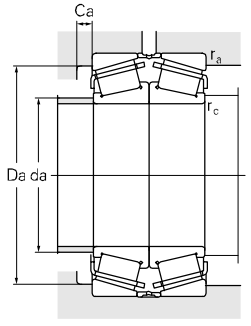

| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | T | B | C | $r_{min}$ | $r_{1min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | e | Y1 | Y2 | Yo | |
| mm | | | | | | | kN | | r/min | | | | | | | kg |
| **690** | 980 | 355 | 355 | 152 | 6.5 | 6.5 | 9380 | 25900 | 210 | 280 | **3706/690/HCC91YB2** | 0.35 | 1.95 | 2.9 | 1.91 | 880 |
| | 980 | 355 | 355 | 152 | 6 | 6.5 | 9380 | 25900 | 210 | 280 | **3706/690/HCEC9YB2** | 0.35 | 1.95 | 2.9 | 1.91 | 880 |
| **710** | 900 | 197 | 197 | 79 | 3 | 6 | 4750 | 13700 | 250 | 320 | **3706/710/HCC9** | 0.35 | 1.9 | 2.9 | 1.8 | 314 |
| **724** | 915 | 187 | 187 | 70 | 5 | 5 | 3450 | 11600 | 250 | 320 | **3706/724/HC** | 0.38 | 1.77 | 2.64 | 1.73 | 293 |
| **800** | 1100 | 300 | 300 | 112 | 1.5 | 6 | 6980 | 20700 | 210 | 270 | **3706/800D** | 0.79 | 0.85 | 1.25 | 0.8 | 853 |
| | 1100 | 300 | 300 | 112 | 1.5 | 6 | 7000 | 20700 | 210 | 270 | **3706/800/HCC9** | 0.79 | 0.85 | 1.25 | 0.8 | 862 |
| | 1100 | 300 | 300 | 112 | 1.5 | 6 | 7000 | 20700 | 210 | 270 | **3706/800/HC-JG** | 0.79 | 0.85 | 1.25 | 0.8 | 862 |
| **900** | 1220 | 300 | 300 | 108 | 3.3 | 12.7 | 9100 | 23000 | 200 | 250 | **3706/900/HCYA6** | 0.81 | 0.83 | 1.23 | 0.81 | 997 |

d 34.925~190.5 mm







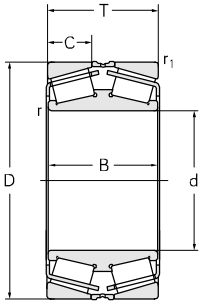


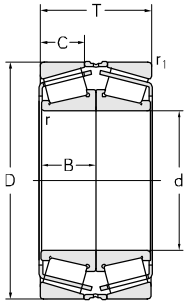

| Principal dimensions | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | | D | | T | | B | | C | | $r_{1min1}$ | $r_{min}$ |
| mm | in | mm | in | mm | in | mm | in | mm | in | mm | |
| **34.925** | 1.375 | 65.088 | 2.563 | 36.068 | 1.42 | 36.068 | 1.42 | 13.97 | 0.55 | 1.3 | 0.7 |
| **63.5** | 2.5 | 112.712 | 4.437 | 60.452 | 2.38 | 60.452 | 2.38 | 23.812 | 0.937 | 3.3 | 0.6 |
| **72.072** | 2.837 | 120 | 4.724 | 69.04 | 2.718 | 67.539 | 2.659 | 24.237 | 0.954 | 2 | 0.8 |
| **76.2** | 3 | 171.45 | 6.75 | 98.424 | 3.875 | 98.424 | 3.875 | 31.75 | 1.25 | 3.3 | 0.8 |
| **85** | 3.346 | 130 | 5.118 | 60 | 2.362 | 29 | 1.142 | 24 | 0.945 | 2.5 | 0.6 |
| **85.136** | 3.352 | 139.992 | 5.511 | 80.962 | 3.187 | 80.134 | 3.155 | 28.575 | 1.125 | 3.3 | 0.8 |
| **90*** | | 147 | | 80 | 3.15 | 40 | 1.575 | 32.5 | 1.28 | 3.5 | 0.5 |
| **100.211** | 3.945 | 168.275 | 6.625 | 95.25 | 3.75 | 95.25 | 3.75 | 30.162 | 1.187 | 3.3 | 0.8 |
| **101.6** | 4 | 214.312 | 8.437 | 111.124 | 4.375 | 52.388 | 2.063 | 39.688 | 1.563 | 3.3 | 0.7 |
| **127** | 5 | 182.562 | 7.187 | 72.6 | 2.858 | 72.6 | 2.858 | 33.338 | 1.313 | 3.3 | 1.5 |
| **133.35** | 5.25 | 196.85<br>196.85 | 7.75<br>7.75 | 92.075<br>92.075 | 3.625<br>3.625 | 92.075<br>92.075 | 3.625<br>3.625 | 38.1<br>38.1 | 1.5<br>1.5 | 3.3<br>3.3 | 1.5<br>1.5 |
| **136.525** | 5.375 | 215.9 | 8.5 | 123.825 | 4.875 | 123.825 | 4.875 | 34.925 | 1.375 | 3.3 | 1.5 |
| **139.7** | 5.5 | 200.025 | 7.875 | 77.788 | 3.063 | 75.408 | 2.969 | 34.13 | 1.344 | 3.3 | 0.8 |
| **147.638** | 5.813 | 241.3 | 9.5 | 133.35 | 5.25 | 132.334 | 5.21 | 44.45 | 1.75 | 3.3 | 1.5 |
| **152.4** | 6 | 298.45 | 11.75 | 107.95 | 4.25 | 111.125 | 4.375 | 44.45 | 1.75 | 3.3 | 3.3 |
| **161** | 6.339 | 231.775 | 9.125 | 84.138 | 3.313 | 90.488 | 3.563 | 34.925 | 1.375 | 3.3 | 1.5 |
| **180.975** | 7.125 | 288.925 | 11.375 | 158.75 | 6.25 | 158.75 | 6.25 | 47.625 | 1.875 | 3.3 | 1.5 |
| **190.5** | 7.5 | 266.7 | 10.5 | 90.488 | 3.563 | 89.695 | 3.531 | 38.1 | 1.5 | 3.3 | 1.5 |

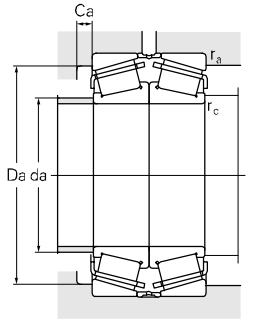
| Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| $C_r$ | $C_{or}$ | Grease | Oil | | e | Y | Yo | a | |
| kN | | r/min | | | | | | | kg |
| 80 | 120 | 4400 | 5500 | **KLM48548/KLM48510-2/C9DF** | 0.38 | 1.79 | 2.67 | 1.75 | 0.546 |
| 198 | 345 | 2400 | 3100 | **K3982/K3920YA4-2/C9DF** | 0.4 | 1.68 | 2.5 | 1.64 | 2.57 |
| 232 | 380 | 3100 | 4000 | **K487TD/K472/YA10** | 0.38 | 1.78 | 2.64 | 1.74 | 2.84 |
| 480 | 700 | 1700 | 2200 | **K9380/K9321-2/DF** | 0.76 | 0.88 | 1.31 | 0.86 | 10.3 |
| 250 | 460 | 2000 | 2700 | **KJM716649/KJM716610/DFYA8** | 0.44 | 1.53 | 2.28 | 1.5 | 2.89 |
| 300 | 520 | 1900 | 2500 | **K579TD/K572** | 0.4 | 1.67 | 2.49 | 1.63 | 4.8 |
| 410 | 690 | 1800 | 2400 | **KHM218248/KHM218210/C9DF** | 0.33 | 2.03 | 3.02 | 1.98 | 5.19 |
| 370 | 700 | 1800 | 2400 | **K688TD/K672** | 0.47 | 1.43 | 2.14 | 1.4 | 8.29 |
| 700 | 1170 | 1500 | 2000 | **KH924033/KH924010/DF** | 0.67 | 1.01 | 1.5 | 0.99 | 18.3 |
| 375 | 815 | 1200 | 1500 | **K48290DW/K48220** | 0.31 | 2.21 | 3.29 | 2.16 | 6.38 |
| 590 | 1250 | 1200 | 1500 | **K67390D/K67322** | 0.34 | 1.96 | 2.92 | 1.92 | 9.68 |
| 590 | 1250 | 1200 | 1500 | **K67390TD/K67322** | 0.34 | 1.96 | 2.92 | 1.92 | 9.66 |
| 550 | 1020 | 1200 | 1500 | **K74539TD/K74850** | 0.32 | 2.12 | 3.15 | 2.07 | 9.9 |
| 475 | 955 | 1200 | 1500 | **K48680D/K48620** | 0.34 | 2.01 | 2.99 | 1.96 | 8.18 |
| 700 | 1400 | 1200 | 1500 | **K82581TD/K82950** | 0.44 | 1.52 | 2.27 | 1.49 | 32.6 |
| 990 | 1720 | 940 | 1300 | **KEE517060D/K517117** | 0.33 | 2.05 | 3.05 | 2 | 35.7 |
| 590 | 1230 | 1000 | 1300 | **KM333546TD/KM333510** | 0.33 | 2.03 | 3.02 | 1.98 | 13.2 |
| 985 | 2020 | 940 | 1300 | **K94713TD/K94113** | 0.47 | 1.44 | 2.15 | 1.41 | 39.8 |
| 615 | 1520 | 940 | 1300 | **K67885DW/K67820** | 0.48 | 1.41 | 2.11 | 1.38 | 15.9 |

Note: * indicates the maximum value of IDor OD.

d 203.2~304.8 mm



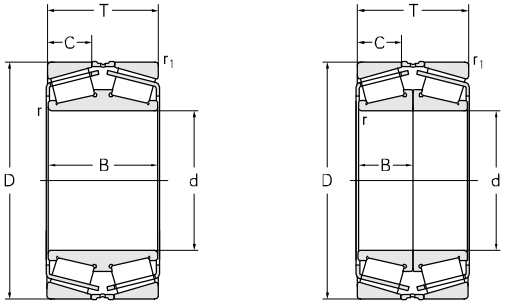




| Principal dimensions | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | | D | | T | | B | | C | | $r_{1min1}$ | $r_{min}$ |
| mm | in | mm | in | mm | in | mm | in | mm | in | mm | |
| **203.2** | 8 | 317.5 | 12.5 | 133.35 | 5.25 | 133.35 | 5.25 | 46.038 | 1.813 | 3.3 | 6.4 |
| **220.662** | 8.687 | 314.325 | 12.375 | 115.886 | 4.562 | 115.888 | 4.563 | 49.213 | 1.938 | 3.3 | 1.5 |
| | | 314.325 | 12.375 | 115.886 | 4.562 | 115.888 | 4.563 | 49.213 | 1.938 | 3.3 | 1.5 |
| **231.775** | 9.125 | 317.5 | 12.5 | 95.25 | 3.75 | 52.388 | 2.063 | 36.512 | 1.437 | 3.3 | 0.8 |
| **247.65** | 9.75 | 406.4 | 16 | 215.9 | 8.5 | 219.075 | 8.625 | 93.662 | 3.687 | 6.4 | 3.3 |
| **254** | 10 | 438.15 | 17.25 | 165.1 | 6.5 | 165 | 6.496 | 63.5 | 2.5 | 6.4 | 3.3 |
| | | 444.5 | 17.5 | 133.35 | 5.25 | 133.35 | 5.25 | 50.8 | 2 | 6.4 | 3.3 |
| **260.35** | 10.25 | 406.4 | 16 | 155.575 | 6.125 | 152.4 | 6 | 66.675 | 2.625 | 6.4 | 3.3 |
| | | 444.5 | 17.5 | 196.85 | 7.75 | 196.85 | 7.75 | 73.025 | 2.875 | 6.4 | 5 |
| **269.875** | 10.625 | 381 | 15 | 136.525 | 5.375 | 136.525 | 5.375 | 57.15 | 2.25 | 3.3 | 3.3 |
| **279.4** | 11 | 457.2 | 18 | 244.475 | 9.625 | 244.475 | 9.625 | 106.362 | 4.187 | 6.4 | 1.5 |
| **279.578** | 11.007 | 380.898 | 14.996 | 117.475 | 4.625 | 117.475 | 4.625 | 49.212 | 1.937 | 3.3 | 1.5 |
| | | 380.898 | 14.996 | 117.475 | 4.625 | 117.475 | 4.625 | 49.212 | 1.937 | 3.3 | 1.5 |
| **288.925** | 11.375 | 406.4 | 16 | 144.462 | 5.687 | 144.462 | 5.687 | 60.325 | 2.375 | 3.3 | 1.5 |
| | | 406.4 | 16 | 144.462 | 5.687 | 144.462 | 5.687 | 60.325 | 2.375 | 3.3 | 3.3 |
| **300** | 11.811 | 479.5 | 18.878 | 180 | 7.087 | 180 | 7.087 | 64 | 2.52 | 4.0 | 2.5 |
| | | 479.5 | 18.878 | 180 | 7.087 | 180 | 7.087 | 64 | 2.52 | 4 | 2.5 |
| | | 479.5 | 18.878 | 180 | 7.087 | 180 | 7.087 | 64 | 2.52 | 4 | 2.5 |
| **300.038** | 11.813 | 422.275 | 16.625 | 150.812 | 5.937 | 150.812 | 5.937 | 63.5 | 2.5 | 3.3 | 3.3 |
| | | 422.275 | 16.625 | 150.812 | 5.937 | 150.812 | 5.937 | 63.5 | 2.5 | 3.3 | 3.3 |
| **303.212** | 11.937 | 495.3 | 19.5 | 263.525 | 10.375 | 263.525 | 10.375 | 114.3 | 4.5 | 6.4 | 3.3 |
| **304.8** | 12 | 501.65 | 19.75 | 161.922 | 6.375 | 161.925 | 6.375 | 61.117 | 2.406 | 6.4 | 3.3 |

| Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| $C_r$ | $C_{or}$ | Grease | Oil | | e | Y | Yo | a | |
| kN | | r/min | | | | | | | kg |
| 1040 | 2270 | 720 | 910 | **K93801D/K93125** | 0.52 | 1.29 | 1.92 | 1.26 | 38.8 |
| 1010 | 2350 | 760 | 1000 | **KM244249DW/KM244210/YB2** | 0.33 | 2.03 | 3.02 | 1.98 | 28.6 |
| 1010 | 2350 | 760 | 1000 | **M244249DW/M244210/YB2** | 0.33 | 2.03 | 3.02 | 1.98 | 29.3 |
| 835 | 1850 | 760 | 1000 | **KLM245848/KLM245810/DF** | 0.33 | 2.03 | 3.02 | 1.98 | 22.8 |
| 2900 | 6400 | 760 | 1000 | **KHH249949D/KHH249910** | 0.33 | 2.03 | 3.15 | 1.98 | 114 |
| 2200 | 3900 | 580 | 770 | **EE738101DW/738172** | 0.35 | 1.92 | 2.86 | 1.88 | 104 |
| 2070 | 3600 | 580 | 770 | **EE822101D/822175** | 0.33 | 2.06 | 3.06 | 2.01 | 88 |
| 1620 | 3520 | 670 | 900 | **EE324103D/324160** | 0.33 | 2.03 | 3.02 | 1.98 | 79.9 |
| 2560 | 5050 | 670 | 900 | **EE823103D/823175A6/YB2** | 0.55 | 1.23 | 1.83 | 1.2 | 126 |
| 1600 | 3700 | 540 | 700 | **M252349D/M252310-1/C9** | 0.33 | 2.03 | 3.02 | 1.98 | 51.5 |
| 3850 | 7400 | 600 | 800 | **HH255149D/HH255110** | 0.33 | 2.03 | 3.02 | 1.98 | 164 |
| 1130 | 2830 | 650 | 900 | **KLM654644D/KLM654610** | 0.43 | 1.57 | 2.34 | 1.53 | 39.2 |
| 1130 | 2830 | 650 | 900 | **LM654644D/LM654610/C9** | 0.43 | 1.57 | 2.34 | 1.53 | 39.2 |
| 1790 | 4200 | 580 | 770 | **KM255449TD/KM255410** | 0.34 | 2 | 2.98 | 1.96 | 61.66 |
| 1720 | 4150 | 580 | 770 | **M255449D/M255410** | 0.34 | 2 | 2.98 | 1.96 | 63.3 |
| 2550 | 4800 | 480 | 650 | **JHM957540D/JHM957519/HCEC9YA3-2** | 0.73 | 0.92 | 1.38 | 0.9 | 127 |
| 2550 | 4800 | 480 | 650 | **JHM957540DW/JHM957519W/HCE-2** | 0.73 | 0.92 | 1.38 | 0.9 | 119 |
| 2550 | 4800 | 480 | 650 | **JHM957540DW/JHM957519W** | 0.73 | 0.92 | 1.38 | 0.9 | 119 |
| 1770 | 4050 | 580 | 770 | **HM256849D/HM256810** | 0.34 | 2 | 2.98 | 1.96 | 56.4 |
| 1770 | 4050 | 580 | 770 | **HM256849D/HM256810-3** | 0.34 | 2 | 2.98 | 1.96 | 56.4 |
| 3900 | 8850 | 460 | 600 | **KHH258249TD/KHH258210** | 0.33 | 2 | 3 | 2 | 215 |
| 2800 | 4700 | 500 | 700 | **HM258949D/HM258910** | 0.33 | 2 | 3 | 2 | 129 |

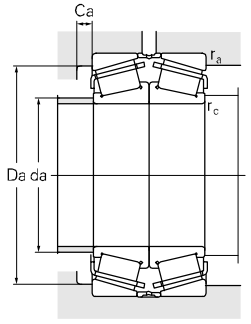
Note: * indicates the maximum value of IDor OD.

d 305.034~393.7 mm





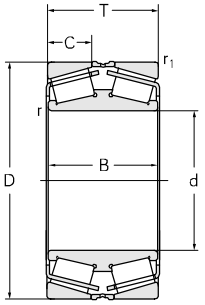


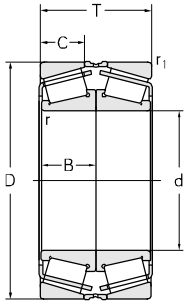


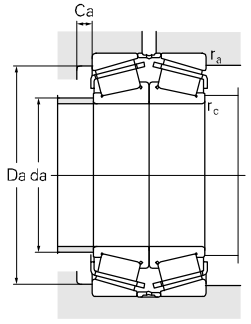

| Principal dimensions | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | | D | | T | | B | | C | | $r_{1min1}$ | $r_{min}$ |
| mm | in | mm | in | mm | in | mm | in | mm | in | mm | |
| **305.034** | 12.009 | 499.948 | 19.683 | 200.025 | 7.875 | 200.025 | 7.875 | 63.5 | 2.5 | 6.4 | 3.3 |
| | | 499.948 | 19.683 | 200.025 | 7.875 | 200.025 | 7.875 | 63.5 | 2.5 | 6.4 | 3.3 |
| **317.5** | | 422.275 | 16.625 | 128.587 | 5.062 | 128.588 | 5.063 | 53.975 | 2.125 | 3.3 | 1.5 |
| | 12.5 | 447.675 | 17.625 | 158.75 | 6.25 | 158.75 | 6.25 | 158.75 | 6.25 | 3.3 | 3.3 |
| **333.375** | 13.125 | 469.9 | 18.5 | 166.688 | 6.563 | 166.688 | 6.563 | 71.438 | 2.813 | 3.3 | 3.3 |
| | | 469.9 | 18.5 | 166.688 | 6.563 | 166.688 | 6.563 | 71.438 | 2.813 | 3.3 | 3.3 |
| | | 469.9 | 18.5 | 166.688 | 6.563 | 166.688 | 6.563 | 71.438 | 2.813 | 3.3 | 3.3 |
| | | 469.9 | 18.5 | 166.688 | 6.563 | 166.688 | 6.563 | 71.438 | 2.813 | 3.3 | 3.3 |
| | | 469.9 | 18.5 | 166.688 | 6.563 | 166.688 | 6.563 | 71.438 | 2.813 | 3.3 | 3.3 |
| | | 469.9 | 18.5 | 166.688 | 6.563 | 166.688 | 6.563 | 71.438 | 2.813 | 3.3 | 3.3 |
| **346.075** | 13.625 | 488.95 | 19.25 | 174.625 | 6.875 | 174.625 | 6.875 | 74.612 | 2.937 | 3.3 | 3.3 |
| | | 488.95 | 19.25 | 174.625 | 6.875 | 174.625 | 6.875 | 74.612 | 2.937 | 3.3 | 3.3 |
| | | 488.95 | 19.25 | 174.625 | 6.875 | 174.625 | 6.875 | 74.612 | 2.937 | 3.3 | 3.3 |
| | | 488.95 | 19.25 | 174.625 | 6.875 | 174.625 | 6.875 | 74.612 | 2.937 | 3.3 | 3.3 |
| **368.3** | 14.5 | 523.875 | 20.625 | 185.738 | 7.313 | 185.738 | 7.313 | 79.375 | 3.125 | 6.4 | 3.3 |
| **374.65** | 14.75 | 501.65 | 19.75 | 130.175 | 5.125 | 120.65 | 4.75 | 50.8 | 2 | 3.3 | 1.5 |
| **380** | 14.961 | 567.5 | 22.343 | 180 | 7.087 | 180 | 7.087 | 70 | 2.756 | 4 | 2 |
| **384.175** | 15.125 | 546.1 | 21.5 | 193.675 | 7.625 | 193.675 | 7.625 | 82.55 | 3.25 | 6.4 | 3.3 |
| | | 546.1 | 21.5 | 193.675 | 7.625 | 193.675 | 7.625 | 82.55 | 3.25 | 6.4 | 0.8 |
| | | 546.1 | 21.5 | 193.675 | 7.625 | 193.675 | 7.625 | 82.55 | 3.25 | 6.4 | 3.3 |
| | | 546.1 | 21.5 | 193.675 | 7.625 | 193.675 | 7.625 | 82.55 | 3.25 | 6.4 | 3.3 |
| **390*** | | 570* | | 180 | 7.087 | 180 | 7.087 | 63 | 2.48 | 4 | 1.5 |
| **390** | 15.354 | 567.5 | 22.343 | 180 | 7.087 | 180 | 7.087 | 70 | 2.756 | 4 | 2 |
| | | 567.5 | 22.343 | 180 | 7.087 | 180 | 7.087 | 70 | 2.756 | 4 | 2 |
| | | 567.5 | 22.343 | 181 | 7.126 | 181 | 7.126 | 71 | 2.795 | 4 | 2 |
| **393.7** | 15.5 | 546.1 | 21.5 | 138.112 | 5.437 | 138.112 | 5.437 | 53.975 | 2.125 | 6.4 | 1.5 |

| Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| $C_r$ | $C_{or}$ | Grease | Oil | | e | Y | Yo | a | |
| kN | | r/min | | | | | | | kg |
| 2870 | 5000 | 400 | 500 | **HM959741DW/HM959710** | 0.88 | 0.77 | 1.15 | 0.75 | 149 |
| 2430 | 5000 | 460 | 600 | **KHM959741DW/KHM959710** | 0.88 | 0.77 | 1.15 | 0.75 | 149 |
| 1420 | 3650 | 490 | 650 | **LM258648DW/LM258610/YB2** | 0.32 | 2.11 | 3.15 | 2.07 | 49.7 |
| 1810 | 4150 | 490 | 650 | **HM259049D/HM259010** | 0.33 | 2.03 | 3.02 | 1.98 | 80.7 |
| 2470 | 5900 | 480 | 630 | **HM261049D/HM261010** | 0.33 | 2 | 3 | 2 | 91.5 |
| 2470 | 5900 | 480 | 630 | **HM261049D/HM261010-2** | 0.33 | 2 | 3 | 2 | 92.8 |
| 2470 | 5900 | 480 | 630 | **HM261049D/HM261010/YA2** | 0.33 | 2 | 3 | 2 | 92.7 |
| 2470 | 5900 | 480 | 630 | **HM261049D/HM261010/YA2/W281** | 0.33 | 2 | 3 | 2 | 92.7 |
| 2470 | 5900 | 480 | 630 | **HM261049DW/HM261010** | 0.33 | 2 | 3 | 2 | 92.8 |
| 2470 | 5900 | 480 | 630 | **KHM261049D/KHM261010** | 0.33 | 2 | 3 | 2 | 91.5 |
| 2400 | 5800 | 480 | 630 | **HM262749D/HM262710** | 0.34 | 1.99 | 2.96 | 1.95 | 97.8 |
| 2400 | 5800 | 480 | 630 | **HM262749TD/HM262710/YA10** | 0.34 | 1.99 | 2.96 | 1.95 | 100 |
| 2400 | 5800 | 480 | 630 | **KHM262749D/KHM262710** | 0.33 | 2 | 3 | 2 | 97.8 |
| 2400 | 5800 | 480 | 630 | **KHM262749TD/KHM262710** | 0.33 | 2 | 3 | 2 | 97.8 |
| 3000 | 6200 | 410 | 540 | **HM265049DW/HM265010/C9** | 0.33 | 2 | 3 | 2 | 128 |
| 1600 | 4000 | 460 | 600 | **KLM765149DW/KLM765110** | 0.47 | 1.44 | 2.14 | 1.4 | 69.4 |
| 2450 | 6220 | 460 | 600 | **JM966741DW/JM966711W/ZP** | 0.73 | 0.92 | 1.37 | 0.9 | 155 |
| 3200 | 8200 | 410 | 540 | **HM266449D/HM266410** | 0.33 | 2.04 | 3.02 | 1.98 | 152 |
| 2910 | 8200 | 410 | 540 | **HM266449D/HM266410/YAD** | 0.33 | 2.03 | 3.02 | 1.98 | 147 |
| 3200 | 8200 | 410 | 540 | **HM266449DW/HM266410** | 0.33 | 2.04 | 3.02 | 1.98 | 151 |
| 3200 | 8200 | 410 | 540 | **HM266449TD/HM266410** | 0.33 | 2.04 | 3.02 | 1.98 | 151 |
| 2190 | 5230 | 400 | 520 | **KJM966748DW/KJM966710** | 0.83 | 0.8 | 1.2 | 0.8 | 158 |
| 2450 | 6220 | 400 | 520 | **JM966748D/JM966711/HCEC9YA3-2** | 0.73 | 0.92 | 1.38 | 0.9 | 150 |
| 2450 | 6220 | 400 | 520 | **JM966748DWA/JM966711W/HCE-2** | 0.73 | 0.92 | 1.38 | 0.9 | 147 |
| 2450 | 6220 | 400 | 520 | **JM966748DWA/JM966711W** | 0.73 | 0.92 | 1.38 | 0.9 | 147 |
| 2150 | 4650 | 410 | 540 | **LM767745D/LM767710/YB2** | 0.47 | 1.42 | 2.12 | 1.39 | 100 |

Note: * indicates the maximum value of IDor OD.



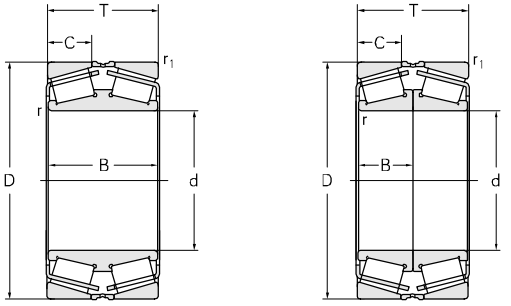



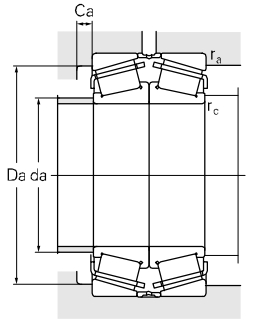

| Principal dimensions | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | | D | | T | | B | | C | | $r_{1min1}$ | $r_{min}$ |
| mm | in | mm | in | mm | in | mm | in | mm | in | mm | |
| **406.4** | 16 | 590.55 | 23.25 | 193.674 | 7.625 | 193.675 | 7.625 | 80.692 | 3.177 | 6.4 | 3.3 |
| **409.575** | 16.125 | 546.1 | 21.5 | 161.925 | 6.375 | 161.925 | 6.375 | 66.675 | 2.625 | 6.4 | 1.5 |
| | | 546.1 | 21.5 | 161.925 | 6.375 | 161.925 | 6.375 | 66.675 | 2.625 | 6.4 | 1.5 |
| | | 546.1 | 21.5 | 161.925 | 6.375 | 161.925 | 6.375 | 66.675 | 2.625 | 6.4 | 1.5 |
| | | 546.1 | 21.5 | 161.925 | 6.375 | 161.925 | 6.375 | 66.675 | 2.625 | 6.4 | 1.5 |
| | | 546.1 | 21.5 | 161.925 | 6.375 | 161.925 | 6.375 | 66.675 | 2.625 | 6.4 | 1.5 |
| **415.925** | 16.375 | 590.55 | 23.25 | 209.55 | 8.25 | 209.55 | 8.25 | 88.9 | 3.5 | 6.4 | 3.3 |
| | | 590.55 | 23.25 | 209.55 | 8.25 | 209.55 | 8.25 | 88.9 | 3.5 | 6.4 | 3.3 |
| | | 590.55 | 23.25 | 209.55 | 8.25 | 209.55 | 8.25 | 88.9 | 3.5 | 6.4 | 3.3 |
| | | 590.55 | 23.25 | 209.55 | 8.25 | 209.55 | 8.25 | 88.9 | 3.5 | 6.4 | 3.3 |
| | | 590.55 | 23.25 | 209.55 | 8.25 | 209.55 | 8.25 | 88.9 | 3.5 | 6.4 | 3.3 |
| | | 590.55 | 23.25 | 209.55 | 8.25 | 209.55 | 8.25 | 88.9 | 3.5 | 6.4 | 3.3 |
| **431.902** | 17.004 | 685.698 | 26.996 | 330.2 | 13 | 330.2 | 13 | 142.875 | 5.625 | 6.4 | 6.4 |
| **447.675** | 17.625 | 635 | 25 | 223.838 | 8.813 | 223.838 | 8.813 | 95.25 | 3.75 | 6.4 | 3.3 |
| | | 635 | 25 | 223.838 | 8.813 | 223.838 | 8.813 | 95.25 | 3.75 | 6.4 | 3.3 |
| | | 635 | 25 | 223.838 | 8.813 | 223.838 | 8.813 | 95.25 | 3.75 | 6.4 | 3.3 |
| | | 635 | 25 | 223.838 | 8.813 | 223.838 | 8.813 | 95.25 | 3.75 | 6.4 | 3.3 |
| **449.948** | 17.714 | 594.949 | 23.423 | 178 | 7.008 | 178 | 7.008 | 75 | 2.953 | 6 | 3 |
| **479.425** | 18.875 | 679.45 | 26.75 | 238.125 | 9.375 | 238.125 | 9.375 | 101.6 | 4 | 6.4 | 3.3*7.5 |
| | | 679.45 | 26.75 | 238.125 | 9.375 | 238.125 | 9.375 | 101.6 | 4 | 6.4 | 3.3 |
| **501.65** | 19.75 | 711.2 | 28 | 250.825 | 9.875 | 250.825 | 9.875 | 106.363 | 4.188 | 6.4 | 3.2 |
| **505.181** | 19.889 | 838.2 | 33 | 266.7 | 10.5 | 104.775 | 4.125 | 104.775 | 4.125 | 9.7 | 6.4 |
| **508** | 20 | 695.325 | 27.375 | 200.025 | 7.875 | 200.025 | 7.875 | 80.962 | 3.187 | 6.4 | 3.3 |
| | 20 | 762 | 30 | 219.075 | 8.625 | 219.075 | 8.625 | 85.725 | 3.375 | 6.4 | 6.4 |
| **519.112** | 20.437 | 736.6 | 29 | 258.762 | 10.187 | 258.762 | 10.187 | 111.125 | 4.375 | 6.4 | 3.3 |

| Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| $C_r$ | $C_{or}$ | Grease | Oil | | e | Y | Yo | a | |
| kN | | r/min | | | | | | | kg |
| 3600 | 7100 | 410 | 540 | **EE833161XD/833232/YB2** | 0.33 | 2.03 | 3.02 | 1.98 | 186 |
| 2800 | 6550 | 410 | 540 | **KM667947D/KM667910** | 0.43 | 1.6 | 2.3 | 1.6 | 104 |
| 2800 | 8500 | 410 | 540 | **M667947D/M667910** | 0.43 | 1.6 | 2.3 | 1.6 | 104 |
| 2800 | 6550 | 410 | 540 | **M667947D/M667910-2** | 0.43 | 1.6 | 2.3 | 1.6 | 104 |
| 2800 | 6550 | 410 | 540 | **M667947D/M667910/YA2** | 0.43 | 1.6 | 2.3 | 1.6 | 104 |
| 2800 | 6550 | 410 | 540 | **M667947D/M667910/YA2/W281** | 0.43 | 1.6 | 2.3 | 1.6 | 104 |
| 3900 | 9600 | 410 | 540 | **M268749DGW/M268710/HEC9YAD** | 0.33 | 2 | 3 | 2 | 192 |
| 3960 | 8400 | 410 | 540 | **M268749D/M268710-3** | 0.33 | 2.03 | 3.02 | 1.98 | 183 |
| 4500 | 6600 | 410 | 540 | **M268749DWH/M268710S-3/C9** | 0.33 | 2.03 | 3.02 | 1.98 | 182 |
| 3960 | 8400 | 410 | 540 | **M268749DW/M268710** | 0.33 | 2.03 | 3.02 | 1.98 | 179 |
| 4500 | 6600 | 410 | 540 | **M268749DW/M268710-1/C9** | 0.33 | 2.03 | 3.02 | 1.98 | 182 |
| 3400 | 9000 | 410 | 540 | **M268749TD/M268710S/YA10** | 0.33 | 2 | 3 | 2 | 195 |
| 7100 | 16000 | 360 | 480 | **EE650171D/650270/C9YA6** | 0.32 | 2.12 | 3.15 | 2.07 | 488 |
| 3900 | 10300 | 360 | 480 | **KM270749D/KM270710** | 0.33 | 2 | 3 | 2 | 232 |
| 3900 | 10300 | 360 | 480 | **M270749ADW/M270710** | 0.33 | 2.03 | 3.02 | 1.98 | 232 |
| 3900 | 10300 | 360 | 480 | **M270749ADW/M270710/ZP** | 0.33 | 2.03 | 3.02 | 1.98 | 232 |
| 4650 | 10300 | 360 | 480 | **M270749TD/M270710/C9YB2** | 0.33 | 2.03 | 3.02 | 1.98 | 235 |
| 2860 | 7850 | 360 | 480 | **M270449DW/M270410** | 0.33 | 2.03 | 3.02 | 1.98 | 147 |
| 4500 | 11900 | 320 | 440 | **KJM272749DA6/KJM272710/YA3-3** | 0.33 | 2.03 | 3.02 | 1.98 | 276 |
| 4500 | 11900 | 320 | 440 | **M272749TD/M272710-3** | 0.33 | 2.03 | 3.02 | 1.98 | 282 |
| 4500 | 13400 | 280 | 360 | **M274149DGW/M274110/HEC9YAB** | 0.35 | 1.92 | 2.86 | 1.88 | 326 |
| 5800 | 12000 | 280 | 360 | **EE426198D/426330/C9** | 0.48 | 1.4 | 2.1 | 1.4 | 590 |
| 3700 | 9550 | 290 | 380 | **LM274049DW/LM274010** | 0.33 | 2 | 3 | 2 | 225 |
| 4650 | 10200 | 290 | 380 | **KEE531201D/K531300** | 0.38 | 1.78 | 2.09 | 1.74 | 347 |
| 5200 | 13300 | 280 | 350 | **M275349D/M275310** | 0.33 | 2.03 | 3.02 | 1.98 | 352 |

Note: * indicates the maximum value of IDor OD.

d 519.112~857.25 mm



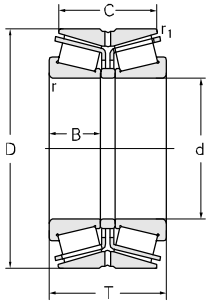



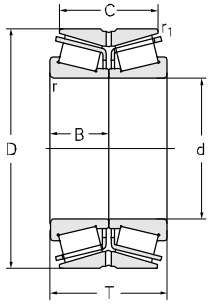

| Principal dimensions | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | | D | | T | | B | | C | | $r_{1min1}$ | $r_{min}$ |
| mm | in | mm | in | mm | in | mm | in | mm | in | mm | |
| **519.112** | | 736.6 | 29 | 258.762 | 10.187 | 258.762 | 10.187 | 111.125 | 4.375 | 6.4 | 3.3 |
| | | 736.6 | 29 | 258.762 | 10.187 | 258.762 | 10.187 | 111.125 | 4.375 | 6.4 | 3.3 |
| **536.575** | 21.125 | 761.873 | 29.995 | 269.875 | 10.625 | 269.875 | 10.625 | 114.3 | 4.5 | 6.4 | 3.3 |
| | | 761.873 | 29.995 | 269.875 | 10.625 | 269.875 | 10.625 | 114.3 | 4.5 | 6.4 | 3.3 |
| **571.5** | 22.5 | 812.8 | 32 | 285.75 | 11.25 | 285.75 | 11.25 | 120.65 | 4.75 | 6.4 | 3.3 |
| | | 812.8 | 32 | 285.75 | 11.25 | 285.75 | 11.25 | 120.65 | 4.75 | 6.4 | 3.3 |
| **857.25** | 33.75 | 1092.2 | 43 | 241.3 | 9.5 | 241.3 | 9.5 | 76.2 | 3 | 6.4 | 6.4 |

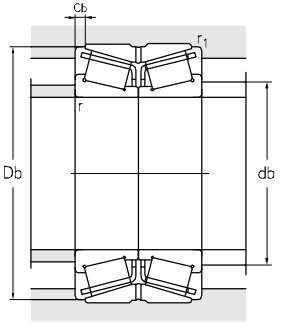
| Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| $C_r$ | $C_{or}$ | Grease | Oil | | e | Y | Yo | a | |
| kN | | r/min | | | | | | | kg |
| 5200 | 13300 | 280 | 350 | **M275349D/M275310-3/C9** | 0.33 | 2.03 | 3.02 | 1.98 | 352 |
| 5200 | 13300 | 280 | 350 | **M275349D/M275310/W281** | 0.33 | 2.03 | 3.02 | 1.98 | 352 |
| 5650 | 16000 | 280 | 350 | **M276449DW/M276410** | 0.33 | 2 | 3 | 2 | 400 |
| 4500 | 15000 | 280 | 350 | **M276449DW/M276410/HCRG2** | 0.33 | 2.03 | 3.02 | 1.98 | 400 |
| 6700 | 18000 | 260 | 330 | **KM278749DGW/KM278710** | 0.33 | 2.03 | 3.02 | 1.98 | 524 |
| 7700 | 18000 | 260 | 330 | **M278749DW/M278710** | 0.33 | 2 | 3 | 2 | 524 |
| 4710 | 13100 | 200 | 280 | **EE157337/157430/DF** | 0.45 | 1.5 | 2.24 | 1.47 | 499 |

Note: * indicates the maximum value of IDor OD.

d 40~70 mm

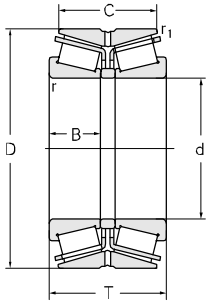


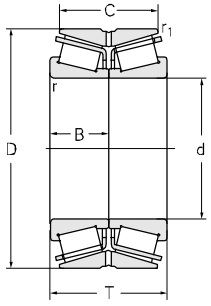



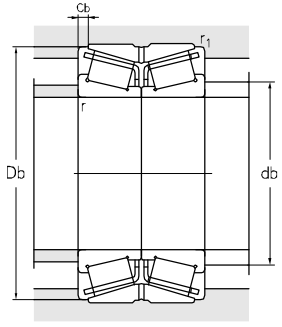




| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | T | B | C | $r_{min}$ | $r_{1min}$ | Cr | Cor | Grease | Oil | | e | Y1 | Y2 | Yo | |
| mm | | | | | | | kN | | r/min | | | | | | | kg |
| **40** | 70 | 70 | 19 | 64 | 1 | 0.3 | 93.5 | 152 | 3600 | 4800 | **350608/YWG** | 0.38 | 1.78 | 2.65 | 1.74 | 0.985 |
| | 70 | 70 | 19 | 64 | 1 | 0.3 | 93.5 | 152 | 3600 | 4800 | **350608/YWG** | 0.38 | 1.78 | 2.65 | 1.74 | 0.985 |
| | 73 | 55 | 27.5 | 55 | 4.2 | 0.8 | 90 | 162 | 3600 | 4800 | **352208X1D1TN1-2RS** | 0.4 | 1.69 | 2.52 | 1.65 | 1.04 |
| | 80 | 45 | 22.5 | 44 | 2.5 | 1.5*15* | 127 | 175 | 3600 | 4800 | **352208X2D1TN1** | 0.37 | 1.82 | 2.71 | 1.78 | 1.04 |
| **45** | 88 | 55 | 27.5 | 55 | 5.5 | 0.4 | 157 | 213 | 3500 | 4600 | **352209X1D1TN1-2RS** | 0.4 | 1.69 | 2.52 | 1.65 | 1.49 |
| **50** | 90 | 84 | 32 | 69 | 1.5 | 0.5 | 200 | 320 | 3400 | 4500 | **33210/C9DBY** | 0.41 | 1.65 | 2.45 | 1.61 | 1.75 |
| | 90 | 49 | 20 | 39 | 1.8 | 0.5 | 111 | 140 | 3400 | 4500 | **350210X2** | 0.42 | 1.61 | 2.39 | 1.57 | 1.24 |
| | 90 | 55 | 23 | 43.5 | 1.5 | 0.6 | 320 | 220 | 3400 | 4500 | **352210** | 0.42 | 1.61 | 2.39 | 1.57 | 1.39 |
| | 90 | 55 | 23 | 45 | 1.3 | 0.5 | 115 | 192 | 3400 | 4500 | **352210X2** | 0.42 | 1.6 | 2.39 | 1.57 | 1.34 |
| **55** | 90 | 56 | 56 | 17.5 | 3 | 2 | 130 | 243 | 3300 | 4400 | **32011/DBY** | 0.41 | 1.65 | 2.45 | 1.61 | 1.19 |
| | 90 | 52 | 26 | 41 | 1.5 | 0.6 | 160 | 245 | 3300 | 4400 | **352011X2D1** | 0.41 | 1.66 | 2.47 | 1.62 | 1.23 |
| | 90 | 60 | 30 | 60 | 3.5 | 0.3 | 143 | 279 | 3300 | 4400 | **352011X2D1TN1-2RS** | 0.39 | 1.72 | 2.56 | 1.68 | 1.59 |
| | 100 | 52 | 21 | 42 | 2 | 0.5 | 165 | 230 | 3300 | 4400 | **350211X2/C9** | 0.4 | 1.67 | 2.48 | 1.63 | 1.60 |
| | 100 | 52 | 21 | 42 | 2 | 0.5 | 165 | 230 | 3300 | 4400 | **350211X2/C9** | 0.4 | 1.67 | 2.48 | 1.63 | 1.60 |
| | 100 | 56 | 25 | 42.5 | 2.5 | 0.5 | 186 | 268 | 3300 | 4400 | **352211X2/YA6** | 0.4 | 1.67 | 2.48 | 1.63 | 1.87 |
| | 100 | 56 | 25 | 42.5 | 2.5 | 0.5 | 186 | 268 | 3300 | 4400 | **352211X2/YA6** | 0.4 | 1.67 | 2.48 | 1.63 | 1.87 |
| **60** | 110 | 52 | 22 | 42.5 | 2 | 0.5 | 181 | 251 | 2000 | 3000 | **350212X2/C9** | 0.4 | 1.69 | 2.51 | 1.65 | 2.01 |
| | 110 | 52 | 22 | 42.5 | 2 | 0.5 | 181 | 251 | 2000 | 3000 | **350212X2/C9** | 0.4 | 1.69 | 2.51 | 1.65 | 2.01 |
| **63.5** | 110 | 68.255 | 24 | 61.903 | 1.5 | 0.5 | 174 | 290 | 2400 | 3100 | **3506/63.5R/C9** | 0.47 | 1.43 | 2.12 | 0.7 | 2.49 |
| **65** | 100 | 57.5 | 57.5 | 17.5 | 1.5 | 0.5 | 142 | 256 | 3400 | 4500 | **32013T57.5/C9DBY** | 0.46 | 1.47 | 2.18 | 1.43 | 1.29 |
| **69.85** | 126 | 72 | 27.5 | 58.5 | 1.5 | 0.3 | 170 | 281 | 3000 | 4150 | **350614X4DR-2** | 0.58 | 1.16 | 1.73 | 1.13 | 2.93 |
| | 126 | 72 | 27.5 | 58.5 | 1.5 | 0.3 | 170 | 281 | 3000 | 4150 | **350614X4DR-2** | 0.58 | 1.16 | 1.73 | 1.13 | 2.93 |
| | 126 | 64 | 27.5 | 54 | 2.5 | 0.4 | 170 | 281 | 3000 | 4150 | **350614X4DR** | 0.58 | 1.18 | 1.76 | 1.16 | 2.59 |
| | 126 | 64 | 27.5 | 54 | 2.5 | 0.4 | 170 | 281 | 3000 | 4150 | **350614X4DR** | 0.58 | 1.18 | 1.76 | 1.16 | 2.59 |
| **70** | 125 | 71.5 | 71.5 | 27 | 2 | 0.5 | 296 | 460 | 2400 | 3200 | **32214T71.5/C9DBY** | 0.42 | 1.61 | 2.39 | 1.57 | 3.41 |
| | 125 | 74 | 31 | 61.5 | 2 | 0.6 | 310 | 495 | 2400 | 3200 | **352214** | 0.42 | 1.61 | 2.39 | 1.57 | 3.66 |

d 70~90 mm

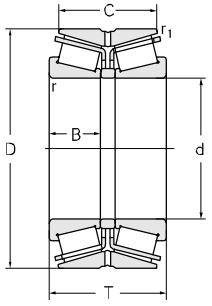


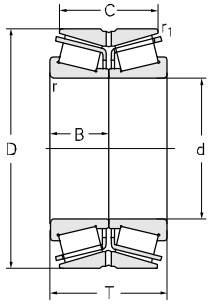



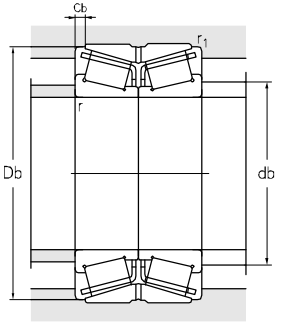




| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | T | B | C | $r_{min}$ | $r_{1min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | e | Y1 | Y2 | Yo | |
| mm | | | | | | | kN | | r/min | | | | | | | kg |
| **70** | 125 | 75 | 31 | 62 | 2 | 0.6 | 310 | 495 | 2400 | 3200 | **352214X2** | 0.42 | 1.61 | 2.39 | 1.57 | 3.66 |
| | 126 | 71.5 | 27.5 | 58.3 | 1.5 | 0.3 | 170 | 281 | 2400 | 3200 | **350614X4DR-1** | 0.58 | 1.18 | 1.76 | 1.16 | 2.93 |
| | 126 | 71.5 | 27.5 | 58.3 | 1.5 | 0.3 | 170 | 281 | 2400 | 3200 | **350614X4DR-1** | 0.58 | 1.18 | 1.76 | 1.16 | 2.93 |
| | 150 | 83 | 35 | 57 | 3 | 1 | 330 | 450 | | | **351314** | 0.83 | 0.82 | 1.22 | 0.8 | 6.25 |
| **71.6** | 115 | 74.2 | 29.5 | 65.3 | 1.5 | 0.3 | 195 | 380 | 2300 | 2900 | **3506/71.6R/C9** | 0.48 | 1.41 | 2.09 | 0.69 | 2.9 |
| **75** | 115 | 58 | 25 | 46 | 1.5 | 0.6 | 178 | 325 | 2400 | 3200 | **352015** | 0.46 | 1.47 | 2.19 | 1.44 | 2.04 |
| | 130 | 74.5 | 31 | 62 | 1.8 | 0.3 | 300 | 480 | 2300 | 3000 | **352215X2** | 0.44 | 1.55 | 2.31 | 1.52 | 3.81 |
| **76** | 125.4 | 62.5 | 29 | 65.3 | 1.5 | 0.3 | 203 | 400 | 2300 | 3000 | **3506/76DR** | 0.3 | 2.25 | 3.43 | 2.2 | 2.93 |
| | 125.4 | 56.63 | 29 | 59.43 | 1.5 | 0.3 | 203 | 400 | 2300 | 3000 | **3506/76X2DR** | 0.3 | 2.25 | 3.43 | 2.2 | 2.72 |
| **80** | 125 | 66 | 29 | 52 | 1.5 | 0.6 | 238 | 430 | 2200 | 3000 | **352016** | 0.42 | 1.61 | 2.39 | 1.57 | 2.76 |
| | 129.4 | 74.2 | 28.5 | 65.3 | 1.5 | 0.3 | 205 | 420 | 2200 | 3000 | **350616R/C9YA10** | 0.42 | 1.61 | 2.39 | 1.57 | 3.10 |
| | 129.4 | 74.2 | 28.5 | 65.3 | 1.5 | 0.3 | 205 | 420 | 2200 | 3000 | **350616R/C9YA10** | 0.42 | 1.61 | 2.39 | 1.57 | 3.10 |
| | 140 | 80 | 33 | 65 | 2.3 | 0.7 | 340 | 530 | 2100 | 2800 | **352216X2** | 0.4 | 1.68 | 2.5 | 1.64 | 4.97 |
| | 140 | 78 | 33 | 63.5 | 2.5 | 0.6 | 340 | 530 | 2100 | 2800 | **352216/YA10** | 0.42 | 1.61 | 2.39 | 1.57 | 4.6 |
| | 110 | 46 | 20 | 38 | 1.5 | 0.3 | 120 | 240 | 2200 | 3000 | **352916X3/P5** | 0.35 | 1.92 | 2.86 | 1.88 | 1.12 |
| | 170 | 94 | 39 | 63 | 3 | 1 | 405 | 560 | 2000 | 2600 | **351316** | 0.4 | 1.68 | 2.5 | 1.64 | 9.11 |
| **85** | 150 | 106 | 49 | 82 | 2.5 | 0.5 | 490 | 825 | 2000 | 2700 | **33217/DB** | 0.42 | 1.61 | 2.39 | 1.57 | 7.58 |
| | 150 | 86 | 36 | 69 | 2.5 | 0.6 | 390 | 620 | 2000 | 2700 | **352217** | 0.42 | 1.61 | 2.39 | 1.57 | 5.94 |
| | 150 | 84 | 36 | 66 | 2.5 | 0.5 | 360 | 630 | 2000 | 2700 | **352217X2** | 0.42 | 1.61 | 2.39 | 1.57 | 5.59 |
| | 150 | 82 | 36 | 65 | 2.5 | 0.6 | 320 | 590 | 2000 | 2700 | **352217X2-1** | 0.42 | 1.61 | 2.39 | 1.57 | 5.52 |
| | 150 | 85 | 36.5 | 66 | 2.5 | 0.5 | 390 | 620 | 2000 | 2700 | **352217X2-2** | 0.42 | 1.61 | 2.39 | 1.57 | 5.96 |
| | 180 | 99 | 41 | 66 | 4 | 1 | 560 | 680 | 1900 | 2600 | **351317** | 0.83 | 0.82 | 1.22 | 0.8 | 11.1 |
| | 180 | 99 | 41 | 66 | 4 | 1 | 510 | 680 | 1900 | 2600 | **351317/YA10** | 0.83 | 0.82 | 1.22 | 0.8 | 11 |
| **90** | 155 | 85 | 37.547 | 63.5 | 3.5 | 0.5 | 330 | 590 | 2000 | 2700 | **350618/YA10** | 0.44 | 1.55 | 2.31 | 1.52 | 6.12 |
| | 155 | 85 | 37.547 | 63.5 | 3.5 | 0.5 | 330 | 590 | 2000 | 2700 | **350618/YA10** | 0.44 | 1.55 | 2.31 | 1.52 | 6.12 |
| | 160 | 94 | 40 | 78 | 2.5 | 0.6 | 440 | 525 | 1900 | 2500 | **352218X2** | 0.42 | 1.61 | 2.39 | 1.57 | 7.80 |
| | 160 | 96 | 40.8 | 78 | 2.5 | 0.6 | 440 | 525 | 1900 | 2500 | **352218X2-1** | 0.42 | 1.61 | 2.39 | 1.57 | 7.83 |
| | 190 | 103 | 43 | 70 | 4 | 1 | 530 | 760 | 1700 | 2200 | **351318** | 0.83 | 0.82 | 1.22 | 0.8 | 12.3 |

d 95~110 mm

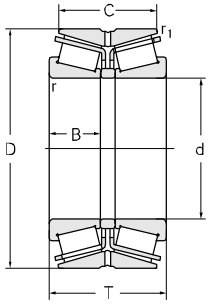


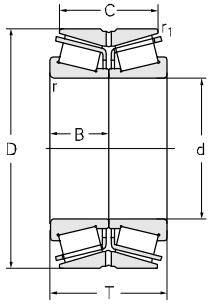



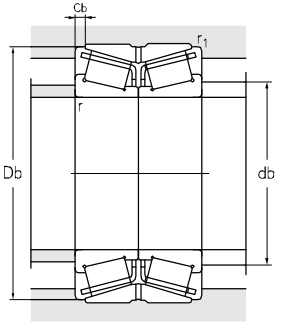




| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | T | B | C | $r_{min}$ | $r_{1min}$ | Cr | Cor | Grease | Oil | | e | Y1 | Y2 | Yo | |
| mm | | | | | | | kN | | r/min | | | | | | | kg |
| **95** | 170 | 110 | 43 | 93 | 3 | 1 | 535 | 885 | 1900 | 2500 | **32219T110/DBC335** | 0.42 | 1.61 | 2.39 | 1.57 | 9.84 |
| **100** | 140 | 57 | 25 | 47 | 1.5 | 0.5 | 159 | 335 | 1500 | 2000 | **352920X3/P5** | 0.33 | 2.05 | 3.05 | 2 | 1.95 |
| | 150 | 73 | 32 | 57 | 2 | 0.6 | 295 | 560 | 1500 | 2000 | **352020** | 0.46 | 1.47 | 2.19 | 1.44 | 4.14 |
| | 165 | 112 | 52 | 88 | 2.5 | 0.5 | 470 | 1010 | 1500 | 2000 | **350620/S1YA10** | 0.41 | 1.66 | 2.47 | 1.63 | 8.31 |
| | 165 | 112 | 52 | 88 | 2.5 | 0.5 | 470 | 1010 | 1500 | 2000 | **350620/S1YA10** | 0.41 | 1.66 | 2.47 | 1.63 | 8.31 |
| | 175 | 80 | 36 | 60 | 2.3 | 0.5 | 364 | 634 | 1500 | 2000 | **350620DRTN1** | 0.39 | 1.72 | 2.56 | 1.68 | 5.09 |
| | 180 | 108 | 46 | 88 | 3 | 0.8 | 635 | 1070 | 1500 | 2000 | **32220/DB** | 0.42 | 1.61 | 2.39 | 1.57 | 11.1 |
| | 180 | 83 | 34 | 67 | 3 | 1 | 405 | 690 | 1500 | 2000 | **352220X2** | 0.42 | 1.61 | 2.39 | 1.57 | 6.51 |
| | 180 | 111 | 46 | 92 | 3 | 0.8 | 670 | 840 | 1700 | 2200 | **352220X2-1** | 0.42 | 1.61 | 2.39 | 1.57 | 11.6 |
| | 190 | 125 | 62.5 | 100 | 3 | 1.3 | 630 | 1050 | 1500 | 2000 | **350620D1** | 0.36 | 1.85 | 2.76 | 1.81 | 14.9 |
| | 190 | 125 | 62.5 | 100 | 3 | 1.3 | 630 | 1050 | 1500 | 2000 | **350620D1** | 0.36 | 1.85 | 2.76 | 1.81 | 14.9 |
| | 215 | 280 | 73 | 245 | 4 | 0.8 | 1110 | 1815 | 1500 | 2000 | **32320T280/DB** | 0.35 | 1.96 | 2.91 | 1.91 | 40.7 |
| | 225 | 124 | 51 | 81 | 4 | 1 | 700 | 1040 | 1500 | 2000 | **351320X1** | 0.83 | 0.82 | 1.22 | 0.8 | 21.4 |
| **105** | 160 | 95 | 43 | 77 | 2.5 | 0.5 | 410 | 800 | 1600 | 2100 | **33021/DB** | 0.28 | 2.39 | 3.56 | 2.34 | 6.22 |
| | 190 | 117 | 50 | 96 | 3 | 0.8 | 675 | 1150 | 1600 | 2100 | **352221X2** | 0.42 | 1.61 | 2.39 | 1.57 | 13.7 |
| | 190 | 118 | 50 | 96 | 3 | 0.8 | 670 | 1210 | 1600 | 2100 | **352221X2-1** | 0.42 | 1.61 | 2.39 | 1.57 | 13.8 |
| **110** | 150 | 80 | 24 | 70 | 1.5 | 0.5 | 180 | 360 | 1300 | 1800 | **32922X2A/P4ADB** | 0.28 | 2.39 | 3.56 | 2.34 | 3.34 |
| | 150 | 80 | 30 | 63 | 0.8 | 0.3 | 198 | 430 | 1300 | 1800 | **350622** | 0.37 | 1.82 | 2.72 | 1.78 | 3.61 |
| | 150 | 80 | 30 | 63 | 0.8 | 0.3 | 198 | 430 | 1300 | 1800 | **350622** | 0.37 | 1.82 | 2.72 | 1.78 | 3.61 |
| | 170 | 86 | 38 | 68 | 2.5 | 0.6 | 395 | 740 | 1300 | 1800 | **352022** | 0.43 | 1.57 | 2.34 | 1.53 | 6.65 |
| | 200 | 122.36 | 53 | 102.36 | 3 | 0.6 | 700 | 1350 | 1500 | 2000 | **32222/DB** | 0.42 | 1.61 | 2.39 | 1.57 | 15.7 |
| | 200 | 92 | 38 | 74 | 3 | 0.8 | 560 | 875 | 1500 | 2000 | **350222X2** | 0.42 | 1.61 | 2.39 | 1.57 | 8.21 |
| | 200 | 92 | 46 | 74 | 3 | 3 | 555 | 910 | 1500 | 2000 | **350222X2D1/HG2** | 0.35 | 1.95 | 2.9 | 1.91 | 11.7 |
| | 200 | 92 | 38 | 74 | 3 | 0.8 | 560 | 875 | 1500 | 2000 | **350222X2** | 0.42 | 1.61 | 2.39 | 1.57 | 8.21 |
| | 200 | 92 | 46 | 74 | 3 | 3 | 555 | 910 | 1500 | 2000 | **350222X2D1/HG2** | 0.35 | 1.95 | 2.9 | 1.91 | 11.7 |
| | 200 | 124 | 53 | 102 | 3 | 0.6 | 680 | 1150 | 1500 | 2000 | **352222X2** | 0.42 | 1.61 | 2.39 | 1.57 | 16.5 |
| | 200 | 90 | 38 | 72 | 3 | 0.8 | 550 | 850 | 1500 | 2000 | **352222X2-1** | 0.45 | 1.51 | 2.25 | 1.48 | 11.1 |
| | 200 | 125 | 53.5 | 102 | 3 | 0.6 | 770 | 1350 | 1500 | 2000 | **352222X2-2** | 0.37 | 1.8 | 2.7 | 1.8 | 16.2 |
| | 200 | 122 | 53 | 102 | 3 | 1 | 765 | 1300 | 1500 | 2000 | **352222X2-3/C9** | 0.42 | 1.61 | 2.39 | 1.57 | 16 |

d 115~140 mm

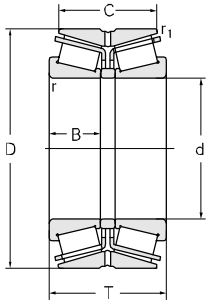


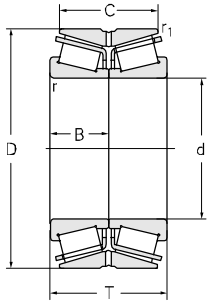



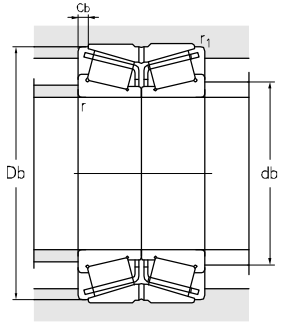




| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | T | B | C | $r_{min}$ | $r_{1min}$ | Cr | Cor | Grease | Oil | | e | Y1 | Y2 | Yo | |
| mm | | | | | | | kN | | r/min | | | | | | | kg |
| **115** | 230 | 116 | 49.5 | 84 | 3 | 2.5 | 685 | 1100 | 1300 | 1700 | **350623** | 0.72 | 0.94 | 1.4 | 0.9 | 20.2 |
| **120** | 180 | 88 | 38 | 70 | 2.5 | 0.6 | 405 | 785 | 1500 | 2000 | **352024** | 0.46 | 1.47 | 2.19 | 1.44 | 7.31 |
| | 180 | 88 | 88 | 70 | 2.5 | 0.5 | 430 | 840 | 1500 | 2000 | **32024T88/DBYAB** | 0.46 | 1.47 | 2.19 | 1.44 | 7.23 |
| | 215 | 133 | 40 | 114 | 3 | 0.8 | 635 | 1030 | 1400 | 1900 | **30224T133/DB** | 0.44 | 1.55 | 2.31 | 1.52 | 17.7 |
| | 215 | 132 | 58 | 109 | 3 | 1 | 770 | 1390 | 1400 | 1900 | **352224** | 0.41 | 1.64 | 2.44 | 1.6 | 19.2 |
| | 215 | 132 | 58 | 106 | 3 | 1 | 770 | 1390 | 1400 | 1900 | **352224X2** | 0.41 | 1.64 | 2.44 | 1.6 | 19.1 |
| | 215 | 97 | 41 | 78 | 3 | 1 | 525 | 935 | 1400 | 1900 | **352224X2-1** | 0.42 | 1.61 | 2.39 | 1.57 | 14.1 |
| | 215 | 132 | 58 | 106 | 2.5 | 0.9 | 770 | 1390 | 1400 | 1900 | **352224X2D** | 0.41 | 1.64 | 2.44 | 1.6 | 19.6 |
| | 215 | 129 | 58 | 106 | 3 | 0.6 | 885 | 1570 | 1400 | 1900 | **32224T129/DBYAB** | 0.44 | 1.55 | 2.31 | 1.52 | 19.3 |
| | 280 | 185 | 83.5 | 155 | 5 | 1.5 | 1410 | 2250 | 1100 | 1500 | **350624-1** | 0.39 | 1.74 | 2.59 | 1.7 | 54.5 |
| **130** | 180 | 70 | 30 | 56 | 2 | 0.5 | 280 | 565 | 1400 | 1900 | **352926X2** | 0.27 | 2.49 | 3.71 | 2.43 | 4.87 |
| | 200 | 95 | 42 | 75 | 2.5 | 0.7 | 485 | 870 | 1300 | 1800 | **352026X2** | 0.35 | 1.94 | 2.88 | 1.89 | 9.72 |
| | 210 | 80 | 35 | 64 | 2.5 | 0.6 | 455 | 810 | 1200 | 1600 | **352126X2-1** | 0.39 | 1.55 | 2.59 | 1.7 | 9.81 |
| | 214 | 115.6 | 48 | 98 | 2.3 | 0.7 | 605 | 1070 | 1300 | 1700 | **352126X2/C9** | 0.32 | 2.13 | 3.17 | 2.08 | 15.7 |
| | 230 | 145 | 64 | 117.5 | 4 | 1 | 890 | 1760 | 1300 | 1700 | **352226/C3** | | | | | 24.0 |
| | 230 | 149 | 64 | 120 | 4 | 0.8 | 980 | 1760 | 1300 | 1700 | **352226X2** | 0.44 | 1.55 | 2.31 | 1.52 | 27.4 |
| | 230 | 149 | 69 | 120 | 4 | 0.8 | 870 | 1660 | 1200 | 1650 | **352226X2-RS/HCRC9** | 0.43 | 1.55 | 2.31 | 1.52 | 26.1 |
| | 235 | 145 | 72.5 | 115 | 2.3 | 1.3 | 885 | 1560 | 1300 | 1700 | **350626D1** | 0.39 | 1.74 | 2.59 | 1.7 | 24.7 |
| | 280 | 164 | 66 | 108 | 5 | 1.3 | 1100 | 1680 | 1000 | 1300 | **31326T164/DB** | 0.83 | 0.82 | 1.22 | 0.8 | 43.2 |
| **140** | 210 | 100 | 100 | 78 | 2.5 | 0.5 | 580 | 1170 | 1200 | 1700 | **32028T100/DBYB2** | 0.46 | 1.47 | 2.18 | 1.43 | 12.4 |
| | 210 | 102 | 102 | 80 | 2.5 | 0.5 | 580 | 1170 | 1200 | 1700 | **32028T102/DB** | 0.46 | 1.47 | 2.18 | 1.43 | 12.5 |
| | 210 | 104 | 45 | 82 | 2.5 | 0.6 | 580 | 1170 | 1200 | 1700 | **352028** | 0.35 | 1.94 | 2.88 | 1.89 | 11.9 |
| | 210 | 104 | 45 | 82 | 2.5 | 0.6 | 658 | 1170 | 1200 | 1700 | **352028/HC** | 0.35 | 1.94 | 2.88 | 1.89 | 12.1 |
| | 210 | 95 | 42 | 75 | 2.5 | 0.6 | 500 | 950 | 1200 | 1700 | **352028X2** | 0.35 | 1.94 | 2.88 | 1.89 | 8.36 |
| | 225 | 100 | 45 | 80 | 2.3 | 0.7 | 440 | 900 | 1200 | 1700 | **350628DR** | 0.37 | 1.8 | 2.69 | 1.76 | 13 |
| | 225 | 100 | 45 | 80 | 2.3 | 0.7 | 440 | 900 | 1200 | 1700 | **350628DR** | 0.38 | 1.8 | 2.69 | 1.76 | 13 |
| | 225 | 115 | 50 | 90 | 2.5 | 1 | 640 | 1180 | 1200 | 1700 | **352128** | 0.34 | 2 | 2.98 | 1.96 | 15.5 |
| | 240 | 132 | 57 | 106 | 4 | 1.5 | 825 | 1660 | 1200 | 1700 | **352228X3** | 0.44 | 1.54 | 2.29 | 1.5 | 24.7 |

d 140~160 mm

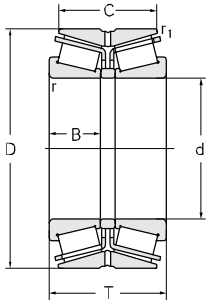


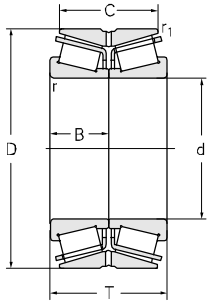



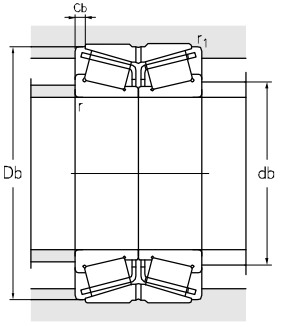




| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | T | B | C | $r_{min}$ | $r_{1min}$ | Cr | Cor | Grease | Oil | | e | Y1 | Y2 | Yo | |
| mm | | | | | | | kN | | r/min | | | | | | | kg |
| **140** | 250 | 156.5 | 68 | 129 | 4 | 1 | 1150 | 2080 | 1200 | 1600 | **32228T156.5/DB** | 0.44 | 1.55 | 2.31 | 1.52 | 31.1 |
| | 250 | 158 | 68 | 130.5 | 4 | 1 | 1040 | 2080 | 1200 | 1600 | **32228T158/DB** | 0.44 | 1.55 | 2.31 | 1.52 | 31 |
| | 250 | 157 | 68 | 128 | 4 | 1 | 1140 | 2080 | 1200 | 1600 | **352228X2** | 0.44 | 1.55 | 2.31 | 1.52 | 31.7 |
| | 250 | 106 | 42 | 86.5 | 4 | 1 | 635 | 1030 | 1200 | 1600 | **30228T106/DB** | 0.44 | 1.55 | 2.31 | 1.52 | 19.8 |
| | 300 | 168 | 70 | 108 | 5 | 1.1 | 1280 | 1970 | 1000 | 1200 | **351328** | 0.83 | 0.82 | 1.22 | 0.8 | 51.2 |
| **150** | 210 | 80 | 36 | 62 | 2.5 | 0.7 | 385 | 795 | 1200 | 1500 | **352930X2** | 0.27 | 2.48 | 3.69 | 2.42 | 9.32 |
| | 210 | 80 | 36 | 62 | 2.5 | 0.7 | 385 | 795 | 1200 | 1500 | **352930X2D** | 0.27 | 2.48 | 2.69 | 2.42 | 9.12 |
| | 225 | 79 | 36 | 62 | 2.5 | 0.7 | 385 | 795 | 1200 | 1500 | **352930X3** | 0.27 | 2.48 | 3.69 | 2.42 | 11.8 |
| | 225 | 112 | 45 | 88 | 3 | 1 | 1100 | 1690 | 1200 | 1500 | **350630** | 0.39 | 1.73 | 2.58 | 1.69 | 14.1 |
| | 225 | 112 | 45 | 88 | 3 | 1 | 780 | 1500 | 1200 | 1500 | **350630/YB2** | 0.39 | 1.73 | 2.58 | 1.69 | 14.1 |
| | 225 | 112 | 45 | 88 | 3 | 1 | 780 | 1500 | 1200 | 1500 | **350630/YB2** | 0.39 | 1.73 | 2.58 | 1.69 | 14.1 |
| | 250 | 138 | 60 | 112 | 2.5 | 1 | 865 | 1560 | 1100 | 1500 | **352130** | 0.25 | 2.74 | 4.08 | 2.68 | 25.8 |
| | 250 | 80 | 34 | 71 | 3 | 1 | 510 | 860 | 1200 | 1500 | **352130X2** | 0.4 | 1.7 | 2.53 | 1.66 | 15 |
| | 255 | 145 | 72.5 | 110 | 3 | 1.3 | 960 | 1840 | 1100 | 1500 | **350630D1** | 0.44 | 1.55 | 2.31 | 1.52 | 28.3 |
| | 255 | 145 | 72.5 | 110 | 3 | 1.3 | 960 | 1840 | 1100 | 1500 | **350630D1** | 0.44 | 1.55 | 2.31 | 1.52 | 28.3 |
| | 270 | 109 | 45 | 87 | 4 | 1 | 710 | 678 | 1100 | 1500 | **350630-1** | 0.44 | 1.55 | 2.31 | 1.52 | 24.5 |
| | 270 | 109 | 45 | 87 | 4 | 1 | 710 | 678 | 1100 | 1500 | **350630-1** | 0.44 | 1.55 | 2.31 | 1.52 | 24.5 |
| | 270 | 169 | 73 | 138 | 4 | 1 | 1270 | 2330 | 1100 | 1500 | **352230X2** | 0.44 | 1.55 | 2.31 | 1.52 | 39.4 |
| | 270 | 164 | 73 | 130 | 4 | 1 | 1300 | 2350 | 1100 | 1500 | **352230** | 0.44 | 1.55 | 2.31 | 1.52 | 38.8 |
| | 270 | 169 | 73 | 138 | 4 | 1 | 1270 | 2330 | 1100 | 1500 | **352230X2** | 0.44 | 1.55 | 2.31 | 1.52 | 39.4 |
| | 270 | 172 | 74.5 | 138 | 4 | 1 | 1330 | 2460 | 1100 | 1500 | **352230X2-1** | 0.44 | 1.55 | 2.31 | 1.52 | 39.8 |
| **159** | 270 | 150 | 70 | 120 | 2.5 | 1 | 960 | 1720 | 1100 | 1500 | **3521/159X2/C3** | 0.36 | 1.86 | 2.76 | 1.81 | 28.4 |
| **159.8** | 270 | 140 | 65 | 120 | 2.5 | 1 | 970 | 1930 | 1000 | 1400 | **3506/159.8** | 0.32 | 2.12 | 3.15 | 2.07 | 31.8 |
| **160** | 160 | 240 | 112 | 51 | 86 | 3 | 715 | 1450 | 1100 | 1500 | **32032T112/DBC345** | 0.46 | 1.47 | 2.19 | 1.44 | 16.0 |
| | 220 | 104 | 38 | 88 | 2.5 | 0.7 | 450 | 1050 | 1100 | 1500 | **32932/C9DBY** | 0.35 | 1.93 | 2.87 | 1.89 | 8.28 |
| | 220 | 90 | 38 | 74 | 2.5 | 0.7 | 450 | 1050 | 1100 | 1500 | **32932/P4ADB** | 0.35 | 1.95 | 2.9 | 1.91 | 8.52 |
| | 220 | 82 | 36 | 65 | 2.5 | 0.7 | 415 | 860 | 1100 | 1500 | **352932X2** | 0.27 | 2.51 | 3.74 | 2.45 | 8.15 |
| | 240 | 115 | 48 | 90 | 3 | 0.9 | 745 | 1330 | 1100 | 1400 | **352032X2** | 0.35 | 1.94 | 2.88 | 1.89 | 16.5 |
| | 240 | 114 | 51 | 84 | 3 | 0.6 | 715 | 1450 | 1100 | 1500 | **352032X2-1** | 0.46 | 1.47 | 2.19 | 1.44 | 16.7 |

d 160~180 mm

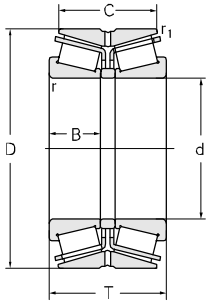


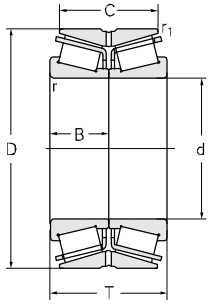



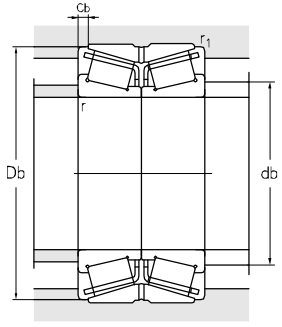




| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | T | B | C | $r_{min}$ | $r_{1min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | e | Y1 | Y2 | Yo | |
| mm | | | | | | | kN | | r/min | | | | | | | kg |
| **160** | 270 | 140 | 70 | 110 | 2.5 | 0.9 | 1720 | 2610 | 1000 | 1400 | **350632D1** | 0.36 | 1.86 | 2.76 | 1.81 | 26.7 |
| | 270 | 140 | 70 | 110 | 2.5 | 0.9 | 1720 | 2610 | 1000 | 1400 | **350632D1** | 0.36 | 1.86 | 2.76 | 1.81 | 26.7 |
| | 270 | 150 | 70 | 120 | 2.5 | 1 | 965 | 1720 | 1000 | 1400 | **352132X2** | 0.36 | 1.86 | 2.76 | 1.81 | 28.3 |
| | 270 | 140 | 65 | 120 | 2.5 | 1 | 970 | 1930 | 1000 | 1400 | **352132X2/HA** | 0.32 | 2.12 | 3.15 | 2.07 | 31.8 |
| | 270 | 150 | 70 | 120 | 2.5 | 1 | 965 | 1720 | 1000 | 1400 | **352132X2/YB4** | 0.36 | 1.86 | 2.76 | 1.81 | 28.3 |
| | 290 | 178 | 80 | 67 | 4 | 1 | 1580 | 2970 | 920 | 1200 | **32232/DBC3** | 0.44 | 1.55 | 2.31 | 1.52 | 48.6 |
| | 290 | 210 | 80 | 67 | 4 | 1 | 1580 | 2970 | 920 | 1200 | **32232/DBC3YA10** | 0.44 | 1.55 | 2.31 | 1.52 | 53.5 |
| | 290 | 179 | 80 | 67 | 4 | 1 | 1440 | 2970 | 920 | 1200 | **32232T179/DBC230** | 0.44 | 1.55 | 2.31 | 1.52 | 48.9 |
| | 290 | 178 | 80 | 144 | 4 | 1 | 1580 | 2970 | 920 | 1200 | **352232** | 0.44 | 1.55 | 2.31 | 1.52 | 49.1 |
| | 290 | 178 | 80 | 178 | 4 | 1.1 | 1310 | 2420 | 920 | 1200 | **352232-2Z** | 0.4 | 1.7 | 2.53 | 1.66 | 51.6 |
| | 290 | 180 | 80 | 140 | 3 | 1.1 | 1320 | 2420 | 920 | 1200 | **352232X2/YA6** | 0.4 | 1.7 | 2.53 | 1.66 | 46.2 |
| **165** | 290 | 150 | 70 | 125 | 3 | 1.3 | 1210 | 2300 | 920 | 1200 | **350633/HCC9** | 0.31 | 2.2 | 3.27 | 2.15 | 41.1 |
| **170** | 230 | 82 | 36 | 65 | 2.5 | 0.7 | 420 | 890 | 1000 | 1400 | **352934X2** | 0.28 | 2.39 | 3.56 | 2.34 | 8.11 |
| | 260 | 120 | 54 | 95 | 3 | 0.9 | 755 | 1550 | 1000 | 1300 | **352034X2** | 0.31 | 2.18 | 3.24 | 2.13 | 20.4 |
| | 260 | 120 | 54 | 95 | 3 | 0.9 | 755 | 1550 | 1000 | 1300 | **352034X2D** | 0.31 | 2.18 | 3.24 | 2.13 | 20.0 |
| | 280 | 150 | 66 | 130 | 2.5 | 1 | 1080 | 2130 | 950 | 1300 | **352134-1** | 0.33 | 2.02 | 3 | 1.97 | 36.3 |
| | 280 | 150 | 66 | 120 | 2.5 | 1 | 1070 | 2000 | 950 | 1300 | **352134** | 0.38 | 1.78 | 2.65 | 1.74 | 35.6 |
| **180** | 250 | 95 | 42 | 74 | 2.5 | 0.7 | 460 | 1060 | 1000 | 1300 | **352936X2** | 0.37 | 1.84 | 2.74 | 1.8 | 13.3 |
| | 250 | 95 | 47.5 | 74 | 2.5 | 0.7 | 520 | 1300 | 1000 | 1300 | **352936X2BD1** | 0.48 | 1.41 | 2.09 | 1.37 | 13.8 |
| | 259.5 | 70 | 35 | 70 | 2.5 | 1 | 440 | 850 | 1000 | 1300 | **350636D1-1** | 0.72 | 0.94 | 1.4 | 0.92 | 11.3 |
| | 260 | 102 | 45 | 36 | 2.5 | 0.7 | 605 | 1450 | 940 | 1300 | **32938X2/DB** | 0.38 | 1.76 | 2.62 | 1.72 | 14.4 |
| | 270 | 109.538 | 47 | 84.138 | 2.5 | 0.6 | 770 | 1560 | 940 | 1300 | **352936X3** | 0.37 | 1.8 | 2.69 | 1.76 | 19.2 |
| | 280 | 150 | 63.5 | 52 | 3 | 1 | 940 | 1810 | 940 | 1300 | **32036X2AT150/DBC150** | 0.28 | 2.43 | 3.61 | 2.37 | 29.4 |
| | 280 | 142 | 64 | 110 | 3 | 1 | 1070 | 2220 | 940 | 1300 | **352036** | 0.42 | 1.61 | 2.39 | 1.57 | 29.8 |
| | 280 | 134 | 60 | 108 | 3 | 0.9 | 940 | 1810 | 940 | 1300 | **352036X2** | 0.28 | 2.43 | 3.61 | 2.37 | 27.9 |
| | 280 | 130.25 | 60 | 108 | 3 | 0.9 | 940 | 1810 | 940 | 1300 | **352036X2-1** | 0.28 | 2.43 | 3.61 | 2.37 | 27.3 |
| | 285 | 108 | 54 | 79.4 | 2.5 | 2.3 | 730 | 1190 | 940 | 1300 | **350636D1** | 0.35 | 1.95 | 2.9 | 1.91 | 23.2 |
| | 300 | 164 | 72 | 134 | 3 | 1 | 1200 | 2350 | 890 | 1200 | **352136** | 0.26 | 2.46 | 3.93 | 2.58 | 39.9 |
| | 300 | 120 | 53.5 | 96 | 4 | 1.5 | 915 | 1680 | 900 | 1200 | **352136X2/YA6** | 0.35 | 1.95 | 2.9 | 1.91 | 32.4 |
| | 320 | 196 | 86 | 156 | 5 | 1.3 | 1630 | 3450 | 890 | 1200 | **32236T196/C3DB** | 0.45 | 1.5 | 2.23 | 1.47 | 67.5 |

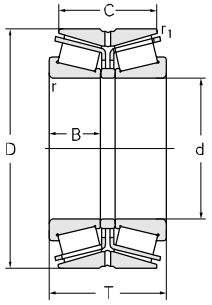
d 180~200 mm

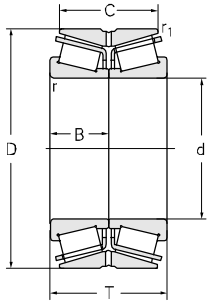


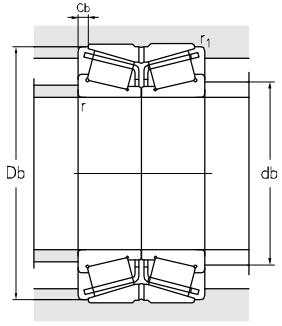




| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | T | B | C | $r_{min}$ | $r_{1min}$ | Cr | Cor | Grease | Oil | | e | Y1 | Y2 | Yo | |
| mm | | | | | | | kN | | r/min | | | | | | | kg |
| **180** | 320 | 190 | 86 | 145 | 3.7 | 1.3 | 1530 | 2750 | 890 | 1200 | **352236X2/YA6** | 0.36 | 1.85 | 2.76 | 1.81 | 52.4 |
| | 320 | 192 | 86 | 152 | 5 | 1.1 | 1530 | 2750 | 890 | 1200 | **352236/YA6** | 0.36 | 1.85 | 2.76 | 1.81 | 60.0 |
| | 340 | 180 | 83 | 140 | 5 | 1.1 | 1700 | 2860 | 840 | 1100 | **350636** | 0.35 | 1.96 | 2.91 | 1.91 | 71.9 |
| | 340 | 180 | 83 | 140 | 5 | 2 | 1620 | 3100 | 840 | 1100 | **350636-1** | 0.35 | 1.96 | 2.91 | 1.91 | 71.2 |
| **190** | 260 | 95 | 42 | 75 | 2.5 | 0.7 | 605 | 1450 | 940 | 1300 | **352938X2** | 0.38 | 1.76 | 2.62 | 1.72 | 13.3 |
| | 290 | 146 | 64 | 48 | 3 | 1 | 1100 | 2250 | 890 | 1200 | **32038T146/DBC220** | 0.44 | 1.53 | 2.27 | 1.49 | 31.6 |
| | 290 | 134 | 60 | 104 | 3 | 0.9 | 930 | 1860 | 890 | 1200 | **352038X2** | 0.37 | 1.83 | 2.72 | 1.79 | 28.8 |
| | 320 | 170 | 76 | 130 | 3 | 1 | 1320 | 2400 | 840 | 1100 | **352138X2** | 0.31 | 2.15 | 3.2 | 2.1 | 52.0 |
| | 320 | 172 | 77 | 134 | 3 | 1 | 1520 | 2700 | 840 | 1100 | **352138X2-1/HC** | 0.31 | 2.15 | 3.2 | 2.1 | 53.2 |
| | 320 | 172 | 77 | 134 | 3 | 1 | 1520 | 2700 | 840 | 1100 | **352138X2-1/HCE** | 0.31 | 2.15 | 3.2 | 2.1 | 53.2 |
| | 340 | 204 | 92 | 160 | 5 | 1.5 | 1830 | 3790 | 800 | 1000 | **352238/YAD** | 0.44 | 1.53 | 2.28 | 1.5 | 75.0 |
| **200** | 280 | 116 | 51 | 92 | 3 | 1 | 750 | 1770 | 900 | 1200 | **352940** | 0.39 | 1.72 | 2.56 | 1.68 | 21.0 |
| | 280 | 110 | 48 | 85 | 3 | 0.9 | 670 | 1530 | 900 | 1200 | **352940X2** | 0.39 | 1.72 | 2.56 | 1.68 | 18.1 |
| | 280 | 116 | 51.5 | 85 | 3 | 1 | 670 | 1530 | 900 | 1200 | **352940X2-1** | 0.39 | 1.72 | 2.56 | 1.68 | 18.9 |
| | 280 | 117 | 55 | 97 | 3 | 0.6 | 670 | 1530 | 900 | 1200 | **352940X2-2** | 0.39 | 1.72 | 2.56 | 1.68 | 20.7 |
| | 280 | 110 | 48.5 | 85 | 3 | 1 | 670 | 1530 | 900 | 1200 | **352940X2-3** | 0.39 | 1.72 | 2.56 | 1.68 | 18.2 |
| | 280 | 105 | 48 | 85 | 3 | 1 | 685 | 1570 | 900 | 1200 | **352940X2-4** | 0.39 | 1.72 | 2.56 | 1.68 | 17.8 |
| | 280 | 112 | 51 | 88 | 3 | 0.5 | 785 | 1870 | 900 | 1200 | **352940X2-5/C9** | 0.39 | 1.71 | 2.54 | 1.67 | 20.6 |
| | 280 | 112 | 51 | 88 | 3 | 0.9 | 785 | 1870 | 900 | 1200 | **32940T112/DB** | 0.39 | 1.71 | 2.54 | 1.67 | 20.4 |
| | 310 | 154 | 70 | 120 | 3 | 1 | 1260 | 2620 | 840 | 1100 | **352040** | 0.43 | 1.57 | 2.34 | 1.53 | 41.9 |
| | 310 | 151 | 66 | 120 | 3 | 1 | 995 | 2080 | 840 | 1100 | **352040X2** | 0.39 | 1.72 | 2.56 | 1.68 | 38.3 |
| | 310 | 151 | 66 | 118 | 3 | 1 | 995 | 2080 | 840 | 1100 | **352040X2-1** | 0.39 | 1.72 | 2.56 | 1.68 | 38.9 |
| | 310 | 151 | 66 | 123 | 3 | 1 | 995 | 2080 | 840 | 1100 | **352040X2-2** | 0.39 | 1.72 | 2.56 | 1.68 | 38.6 |
| | 310 | 155 | 66 | 56 | 3 | 0.8 | 995 | 2080 | 840 | 1100 | **32040X2/DB** | 0.39 | 1.72 | 2.56 | 1.68 | 38.9 |
| | 310 | 156 | 66 | 128 | 3 | 1 | 995 | 2080 | 840 | 1100 | **32040X2T156/DB** | 0.39 | 1.72 | 2.56 | 1.68 | 38.9 |
| | 320 | 110 | 48.5 | 85 | 3 | 1 | 890 | 1560 | 820 | 1100 | **352940X3/YA10** | 0.42 | 1.6 | 2.38 | 1.57 | 30.3 |
| | 340 | 112 | 50.5 | 100 | 3 | 1.5 | 1070 | 1850 | 800 | 1100 | **350640** | 0.25 | 2.7 | 4.02 | 2.64 | 40.0 |
| | 340 | 112 | 50.5 | 100 | 3 | 1.5 | 1070 | 1850 | 800 | 1100 | **350640/C9YA10** | 0.25 | 2.74 | 4.08 | 2.68 | 40.0 |
| | 340 | 184 | 82 | 150 | 3 | 1 | 1810 | 3400 | 800 | 1100 | **352140** | 0.25 | 2.74 | 4.08 | 2.68 | 63.8 |
| | 360 | 218 | 174 | 98 | 5 | 1.1 | 2350 | 4350 | 800 | 1100 | **352240/HCYA10** | 0.41 | 1.66 | 2.47 | 1.62 | 93.3 |
| | 360 | 218 | 174 | 98 | 5 | 1.1 | 2350 | 4350 | 800 | 1100 | **352240/YA10** | 0.41 | 1.66 | 2.47 | 1.62 | 93.3 |

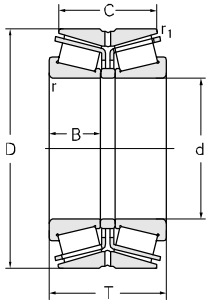


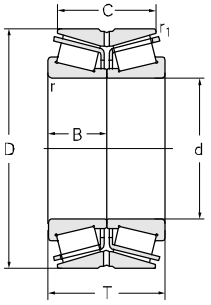



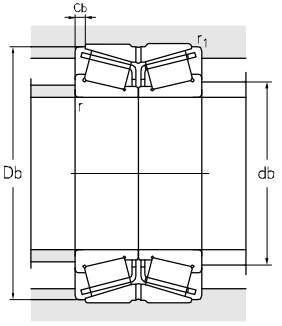




| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | T | B | C | $r_{min}$ | $r_{1min}$ | Cr | Cor | Grease | Oil | | e | Y1 | Y2 | Yo | |
| mm | | | | | | | kN | | r/min | | | | | | | kg |
| **205** | 320 | 150 | 75 | 110 | 3.7 | 1.3 | 805 | 1610 | 940 | 1100 | **351041X2D1** | 0.39 | 1.72 | 2.56 | 1.68 | 40.2 |
| **220** | 300 | 110 | 48 | 88 | 3 | 0.8 | 705 | 1720 | 810 | 1100 | **352944X2** | 0.31 | 2.18 | 3.24 | 2.13 | 21.2 |
| | 300 | 109 | 47.5 | 88 | 3 | 0.9 | 730 | 1825 | 810 | 1100 | **352944X2-1** | 0.31 | 2.18 | 3.24 | 2.13 | 20.8 |
| | 300 | 110 | 48 | 88 | 3 | 0.9 | 730 | 1720 | 810 | 1100 | **352944X2-SMJ** | 0.31 | 2.18 | 3.24 | 2.13 | 21.8 |
| | 340 | 166 | 76 | 128 | 4 | 1 | 1500 | 3064 | 750 | 1000 | **32044T166/DBC340** | 0.43 | 1.57 | 2.34 | 1.53 | 51.3 |
| | 340 | 168 | 168 | 130 | 4 | 1 | 1500 | 3064 | 750 | 1000 | **32044T168/DB** | 0.43 | 1.6 | 2.3 | 1.6 | 50.8 |
| | 340 | 164 | 72 | 130 | 4 | 1.1 | 1370 | 2730 | 760 | 1000 | **352044X2** | 0.35 | 1.95 | 2.9 | 1.91 | 47.7 |
| | 340 | 165 | 72 | 130 | 4 | 1.5 | 1530 | 2980 | 760 | 1000 | **352044X2-1** | 0.35 | 1.95 | 2.9 | 1.91 | 47.9 |
| | 340 | 113 | 56.5 | 90 | 4 | 1.5 | 990 | 1980 | 750 | 1000 | **352044X2D1/YAB** | 0.36 | 1.88 | 2.79 | 1.83 | 34.5 |
| | 370 | 195 | 88 | 150 | 4 | 1.3 | 1680 | 3200 | 760 | 1000 | **352144** | 0.37 | 1.83 | 2.72 | 1.79 | 76.3 |
| | 370 | 120 | 50 | 107 | 5 | 1.5 | 1130 | 1910 | 760 | 1000 | **350644** | 0.37 | 1.83 | 2.72 | 1.79 | 46.9 |
| **225** | 360 | 146.5 | 73.25 | 111 | 3 | 1.1 | 1280 | 2290 | 760 | 1000 | **350645D1** | 0.36 | 1.87 | 2.79 | 1.83 | 48.2 |
| **228.6** | 488.92 | 345 | 150 | 220 | 5 | 1.5 | 3320 | 5890 | 710 | 900 | **3506/228X4** | 0.87 | 0.78 | 1.16 | 0.76 | 286 |
| **230** | 355 | 145 | 72.5 | 110 | 6 | 2.3 | 1180 | 2310 | 760 | 1000 | **350646D1** | 0.36 | 1.87 | 2.79 | 1.83 | |
| **240** | 320 | 104 | 48 | 82 | 3 | 1 | 675 | 1550 | 760 | 1000 | **352948X2** | 0.32 | 2.12 | 3.15 | 2.07 | 23.6 |
| | 320 | 110 | 48 | 87 | 3 | 1 | 665 | 1590 | 760 | 1000 | **352948X2-1** | 0.32 | 2.12 | 3.15 | 2.07 | 23.2 |
| | 320 | 110 | 48 | 87 | 3 | 0.9 | 665 | 1590 | 760 | 1000 | **352948X2-1/YA1W** | 0.32 | 2.12 | 3.15 | 2.07 | 23.0 |
| | 320 | 109 | 48 | 90 | 3 | 1 | 675 | 1550 | 760 | 1000 | **352948X2-2** | 0.32 | 2.12 | 3.15 | 2.07 | 23.5 |
| | 320 | 105 | 48.5 | 82 | 3 | 1 | 675 | 1550 | 760 | 1000 | **352948X2-3** | 0.32 | 2.12 | 3.15 | 2.07 | 22.4 |
| | 320 | 119 | 119 | 39 | 3 | 0.8 | 875 | 2090 | 760 | 1000 | **32948T119/C9DBY** | 0.46 | 1.47 | 2.18 | 1.43 | 15.2 |
| | 320 | 120 | 48 | 100 | 3 | 0.8 | 675 | 1590 | 760 | 1000 | **32948X2AT120/C3DB** | 0.32 | 2.12 | 3.15 | 2.07 | 24.5 |
| | 360 | 172 | 76 | 134 | 4 | 1 | 1330 | 3150 | 690 | 920 | **32048T172/C3DB** | 0.46 | 1.47 | 2.19 | 1.44 | 56.9 |
| | 360 | 171 | 72 | 62 | 4 | 1.1 | 1350 | 2900 | 690 | 920 | **32048X2AT171/DBCR275** | 0.31 | 2.15 | 3.2 | 2.1 | 52.7 |
| | 360 | 170 | 72 | 143 | 4 | 1.1 | 1350 | 2900 | 690 | 920 | **32048X2T170/DB** | 0.31 | 2.15 | 3.2 | 2.1 | 55.5 |
| | 360 | 165 | 72 | 130 | 4 | 1.1 | 1460 | 2890 | 690 | 920 | **352048X2** | 0.31 | 2.15 | 3.2 | 2.1 | 52.8 |
| | 360 | 165 | 72 | 130 | 4 | 1.1 | 1400 | 3050 | 690 | 920 | **352048X2/HC-XRBL** | 0.31 | 2.15 | 3.2 | 2.1 | 53.2 |

d 240~280 mm

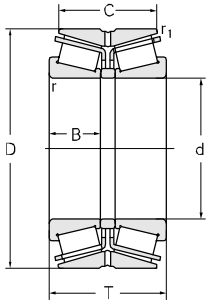


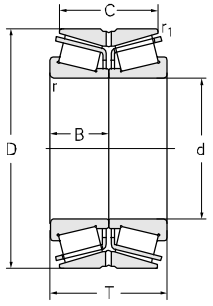



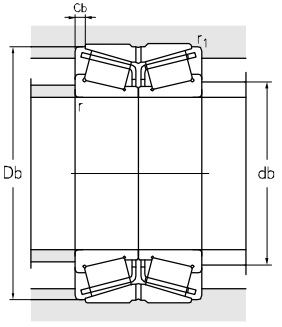




| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | T | B | C | $r_{min}$ | $r_{1min}$ | Cr | Cor | Grease | Oil | | e | Y1 | Y2 | Yo | |
| mm | | | | | | | kN | | r/min | | | | | | | kg |
| **240** | 400 | 128 | 59 | 114 | 5 | 1.5 | 1240 | 2270 | 720 | 1000 | **350648** | 0.43 | 1.55 | 2.31 | 1.52 | 60 |
| | 400 | 160 | 71 | 128 | 5 | 1.5 | 1670 | 3200 | 720 | 1000 | **350648/HC-1** | 0.39 | 1.74 | 2.59 | 1.7 | 81.2 |
| | 400 | 210 | 95 | 163 | 3.7 | 1.3 | 2060 | 4050 | 630 | 840 | **352148** | 0.31 | 2.18 | 3.24 | 2.13 | 98.1 |
| | 400 | 210 | 95 | 168 | 4 | 1 | 1870 | 4050 | 630 | 840 | **352148X2** | 0.31 | 2.18 | 3.24 | 2.13 | 98.5 |
| | 420 | 205 | 205 | 69.5 | 5 | 1.3 | 2550 | 4100 | 700 | 950 | **30648/HCC9DBY** | 0.44 | 1.53 | 2.28 | 1.5 | 105 |
| | 440 | 270 | 120 | 216 | 5 | 1.3 | 3200 | 6300 | 680 | 930 | **32248/HCC9DBYAB** | 0.44 | 1.53 | 2.28 | 1.5 | 168 |
| | 440 | 294 | 120 | 240 | 5 | 1.3 | 3300 | 6500 | 680 | 930 | **32248/HCDB** | 0.44 | 1.55 | 2.31 | 1.52 | 184 |
| **242** | 406 | 206 | 92 | 162 | 4 | 1 | 2680 | 5000 | 670 | 900 | **306/242/HCC9/DB** | 0.43 | 1.57 | 2.34 | 0.77 | 101 |
| | 406 | 206 | 97 | 162 | 6.4 | 1.5 | 2900 | 5000 | 670 | 900 | **306/242/HCEDBYB2** | 0.33 | 2.03 | 3.02 | 0.99 | 98 |
| **260** | 360 | 147 | 60 | 124 | 3 | 0.9 | 1080 | 2620 | 670 | 900 | **32952X2AT147/C3DB** | 0.3 | 2.23 | 3.32 | 2.18 | 43 |
| | 360 | 141 | 63.5 | 110 | 3 | 1 | 1120 | 2550 | 670 | 900 | **352952** | 0.41 | 1.66 | 2.47 | 1.62 | 39.0 |
| | 360 | 134 | 60 | 108 | 3 | 0.9 | 1010 | 2500 | 670 | 900 | **352952X2** | 0.3 | 2.23 | 3.32 | 2.18 | 39.7 |
| | 360 | 133 | 60 | 109 | 3 | 1.1 | 1010 | 2500 | 670 | 900 | **352952X2-1** | 0.3 | 2.23 | 3.32 | 2.18 | 39.8 |
| | 360 | 134 | 60 | 108 | 3 | 1 | 1300 | 2600 | 670 | 900 | **352952X2-2/HC** | 0.3 | 2.23 | 3.32 | 2.18 | 37.5 |
| | 360 | 134 | 60 | 108 | 3 | 1 | 1000 | 2600 | 670 | 900 | **352952X2-2/YB2** | 0.41 | 1.66 | 2.47 | 1.62 | 37.5 |
| | 360 | 92 | 40 | 62 | 3 | 1 | 630 | 1370 | 700 | 950 | **352952X2-3** | 0.7 | 0.96 | 1.44 | 0.94 | 25.5 |
| | 360 | 134 | 60.5 | 108 | 3 | 1 | 1040 | 2550 | 670 | 900 | **352952X2-3/YB2** | 0.29 | 2.23 | 3.32 | 2.18 | 38.3 |
| | 400 | 186 | 82 | 146 | 5 | 1.3 | 1750 | 3750 | 630 | 840 | **352052X2** | 0.29 | 2.31 | 3.45 | 2.26 | 79.3 |
| | 400 | 150 | 75 | 110 | 4.7 | 1.1 | 1400 | 2630 | 630 | 840 | **352052X2-1** | 0.29 | 2.31 | 3.45 | 2.26 | 60.3 |
| | 400 | 130 | 57 | 104 | 5 | 1.5 | 1250 | 2590 | 630 | 840 | **352052X2-2/C3** | 0.29 | 2.31 | 3.45 | 2.26 | 53.9 |
| | 400 | 155 | 72 | 108 | 9.5 | 1.6 | 1400 | 2630 | 630 | 840 | **352052X2-3** | 0.35 | 1.95 | 2.99 | 1.91 | 62.2 |
| | 400 | 186 | 82 | 146 | 5 | 1.5 | 1850 | 4100 | 630 | 840 | **352052X2/HCYAD-XRBL** | 0.43 | 1.57 | 2.34 | 1.53 | 80.7 |
| | 430 | 180 | 90 | 130 | 7.5 | 2.3 | 1560 | 2990 | 630 | 840 | **350652D1** | 0.35 | 1.95 | 2.9 | 1.91 | 87.9 |
| | 440 | 225 | 100 | 180 | 4 | 2.3 | 2410 | 4750 | 580 | 770 | **352152X2/YA6** | 0.24 | 2.84 | 4.23 | 2.78 | 124 |
| | 480 | 284 | 130 | 220 | 6 | 1.5 | 3800 | 7600 | 580 | 700 | **352252** | 0.43 | 1.57 | 2.34 | 1.53 | 216 |
| | 480 | 282 | 282 | 102.5 | 6.4 | 1.6 | 3700 | 7300 | 520 | 680 | **32252X2/DBYB2** | 0.43 | 1.6 | 2.3 | 1.6 | 210 |
| | 480 | 282 | 282 | 102.5 | 6.4 | 1.6 | 4500 | 7700 | 520 | 680 | **32252X2/HCDBYB2** | 0.33 | 2.05 | 3.05 | 2 | 208 |
| **280** | 380 | 140 | 60 | 50 | 3 | 0.9 | 1100 | 2770 | 620 | 820 | **32956X2A/P4DB** | 0.32 | 2.1 | 3.13 | 2.05 | 46.3 |
| | 380 | 134 | 60 | 108 | 3 | 0.9 | 1030 | 2650 | 620 | 820 | **352956X2** | 0.32 | 2.1 | 3.13 | 2.05 | 44.0 |
| | 380 | 134 | 60 | 108 | 3 | 1 | 1030 | 2650 | 620 | 820 | **352956X2/P5** | 0.32 | 2.1 | 3.13 | 2.05 | 44.0 |
| | 380 | 141 | 63.5 | 110 | 3 | 1 | 1250 | 3100 | 620 | 820 | **352956/YA10** | 0.43 | 1.6 | 2.3 | 1.6 | 43.2 |

d 280~300 mm

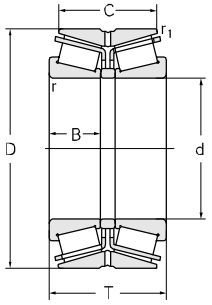


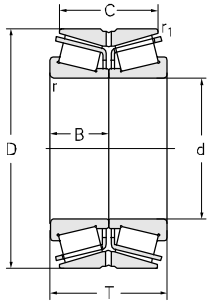



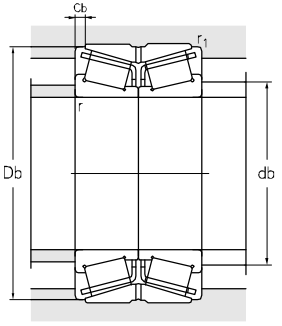




| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | T | B | C | $r_{min}$ | $r_{1min}$ | Cr | Cor | Grease | Oil | | e | Y1 | Y2 | Yo | |
| mm | | | | | | | kN | | r/min | | | | | | | kg |
| **280** | 420 | 186 | 82 | 146 | 5 | 1.3 | 1890 | 4000 | 580 | 770 | **352056X2** | 0.37 | 1.83 | 2.72 | 1.79 | 81.5 |
| | 420 | 188 | 83 | 154 | 5 | 1.3 | 1890 | 4000 | 580 | 770 | **352056X2-1** | 0.37 | 1.83 | 2.72 | 1.79 | 82.7 |
| | 420 | 189 | 83.5 | 154 | 5 | 1.3 | 1960 | 4200 | 580 | 770 | **352056X2-2** | 0.35 | 1.95 | 2.99 | 1.91 | 82.9 |
| | 420 | 196 | 87 | 152 | 4 | 1.1 | 2000 | 4400 | 580 | 770 | **32056/DB** | 0.46 | 1.47 | 2.19 | 1.44 | 88.8 |
| | 460 | 185 | 82 | 140 | 5 | 1.5 | 2130 | 4050 | 580 | 770 | **351156** | 0.33 | 2.05 | 3.05 | 2 | 114 |
| | 460 | 146 | 65 | 130 | 6 | 2 | 1810 | 3300 | 580 | 770 | **351156X2/YA6** | 0.4 | 1.68 | 2.5 | 1.64 | 88.8 |
| | 470 | 250 | | 180 | 6.4 | 1.5 | 3430 | 6300 | 500 | 650 | **350656** | 0.46 | 1.5 | 2.2 | 1.4 | 156 |
| **300** | 400 | 140 | 62 | 100 | 5 | 1.5 | 1450 | 3000 | 560 | 740 | **350660/C9** | 0.88 | 0.77 | 1.15 | 0.8 | 63.2 |
| | 400 | 140 | 62 | 100 | 5 | 1.5 | 1450 | 3000 | 560 | 740 | **350660/C9** | 0.88 | 0.77 | 1.15 | 0.8 | 63.2 |
| | 420 | 175 | 72 | 147 | 4 | 1.1 | 1510 | 3620 | 580 | 770 | **32960X2AT175/C3DB** | 0.28 | 2.39 | 3.56 | 2.34 | 67.6 |
| | 420 | 160 | 72 | 128 | 4 | 1 | 1510 | 3620 | 580 | 770 | **352960X2A** | 0.28 | 2.39 | 3.56 | 2.34 | 60.8 |
| | 420 | 159 | 71.5 | 128 | 4 | 1.1 | 1820 | 3610 | 580 | 770 | **352960X2A-1/HCE** | 0.28 | 2.39 | 3.56 | 2.34 | 63.6 |
| | 420 | 159 | 71.5 | 128 | 4 | 1.1 | 1820 | 3610 | 580 | 770 | **352960X2A-1/HCYA10** | 0.28 | 2.39 | 3.56 | 2.34 | 63.5 |
| | 420 | 160 | 72 | 128 | 4 | 1 | 1510 | 3620 | 580 | 770 | **352960X2A/P5** | 0.28 | 2.39 | 3.56 | 2.34 | 60.8 |
| | 420 | 160 | 72 | 128 | 4 | 1 | 1510 | 3620 | 580 | 770 | **352960X2A/P6** | 0.28 | 2.39 | 3.56 | 2.34 | 60.9 |
| | 420 | 160 | 72 | 128 | 4 | 1.1 | 1900 | 4100 | 580 | 770 | **352960X2/HCR-1** | 0.28 | 2.39 | 3.56 | 2.34 | 63.9 |
| | 420 | 160 | 72 | 128 | 4 | 1.1 | 1670 | 3614 | 580 | 770 | **352960X2/P6** | 0.28 | 2.39 | 3.56 | 2.34 | 60.8 |
| | 460 | 210 | 95 | 165 | 5 | 1.3 | 2240 | 4800 | 560 | 740 | **352060X2** | 0.36 | 1.85 | 2.76 | 1.81 | 118 |
| | 460 | 210 | 95 | 165 | 5 | 1.3 | 2240 | 4800 | 560 | 740 | **352060X2/HC** | 0.36 | 1.85 | 2.76 | 1.81 | 118 |
| | 460 | 210 | 95 | 165 | 5 | 1.3 | 2850 | 5300 | 560 | 740 | **352060X2/HC-XRBL** | 0.36 | 1.85 | 2.76 | 1.81 | 117 |
| | 500 | 200 | 90 | 160 | 6 | 3 | 2300 | 4450 | 530 | 710 | **351160X2** | 0.32 | 2.12 | 3.15 | 2.07 | 142 |
| | 500 | 203 | 91 | 152 | 5 | 1.5 | 3000 | 4950 | 530 | 710 | **351160X2-1/HCE** | 0.4 | 1.68 | 2.5 | 1.64 | 148 |
| | 500 | 203 | 91 | 152 | 5 | 1.5 | 3000 | 4950 | 530 | 710 | **351160X2-1/HC-XRBL** | 0.4 | 1.68 | 2.5 | 1.64 | 146 |
| | 500 | 203 | 91 | 152 | 5 | 1.5 | 2850 | 5050 | 530 | 710 | **351160X2-1/HC-XRBL-1** | 0.4 | 1.68 | 2.5 | 1.64 | 140 |
| | 500 | 205 | 90 | 152 | 5 | 1.5 | 2400 | 4450 | 530 | 710 | **351160** | 0.32 | 2.12 | 3.15 | 2.077 | 141 |
| | 500 | 205 | 90 | 152 | 5 | 1.5 | 2400 | 4450 | 530 | 710 | **351160/HAC3** | 0.32 | 2.12 | 3.15 | 2.077 | 141 |
| | 500 | 205 | 90 | 152 | 6 | 2.5 | 2400 | 4450 | 530 | 710 | **351160/HCYAD** | 0.32 | 2.12 | 3.15 | 2.07 | 141 |
| | 500 | 205 | 90 | 152 | 6 | 2.5 | 2400 | 4450 | 530 | 710 | **351160/YA6** | 0.32 | 2.12 | 3.15 | 2.07 | 141 |
| **320** | 440 | 195 | 72 | 62 | 4 | 1 | 1650 | 3900 | 530 | 710 | **32964X2AT195/DBCR375** | 0.31 | 2.15 | 3.21 | 2.11 | 77.5 |
| | 440 | 195 | 195 | | 4 | 1 | 1650 | 3900 | 530 | 710 | **32964X2T195/DB** | 0.31 | 2.15 | 3.21 | 2.11 | 77.7 |

d 320~380 mm

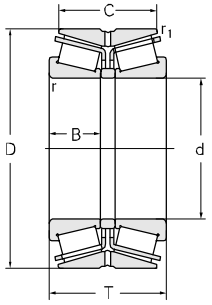


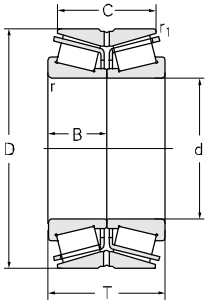



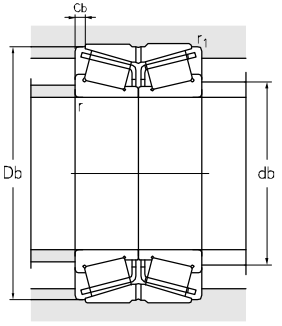




| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | T | B | C | $r_{min}$ | $r_{1min}$ | Cr | Cor | Grease | Oil | | e | Y1 | Y2 | Yo | |
| mm | | | | | | | kN | | r/min | | | | | | | kg |
| **320** | 440 | 160 | 72 | 128 | 4 | 1 | 1650 | 3900 | 530 | 710 | **352964X2** | 0.31 | 2.15 | 3.21 | 2.11 | 67.4 |
| | 440 | 160 | 72 | 128 | 4 | 1 | 1650 | 3900 | 530 | 710 | **352964X2-1** | 0.31 | 2.15 | 3.21 | 2.11 | 67.4 |
| | 480 | 151 | 66.5 | 121 | 5 | 1.5 | 1870 | 3550 | 530 | 710 | **350664** | 0.32 | 2.08 | 3.1 | 2.04 | 88.9 |
| | 480 | 151 | 66.5 | 121 | 5 | 1.5 | 2090 | 3500 | 530 | 710 | **350664/HCE** | 0.32 | 2.08 | 3.1 | 2.04 | 88.9 |
| | 480 | 151 | 66.5 | 121 | 5 | 1.5 | 1870 | 3550 | 530 | 710 | **350664** | 0.32 | 2.08 | 3.1 | 2.04 | 88.9 |
| | 480 | 151 | 66.5 | 121 | 5 | 1.5 | 1870 | 3550 | 530 | 710 | **350664/HCE** | 0.32 | 2.08 | 3.1 | 2.04 | 88.9 |
| | 480 | 220 | 100 | 186 | 5 | 1.1 | 2540 | 5750 | 530 | 710 | **352064** | 0.46 | 1.47 | 2.19 | 1.44 | 134 |
| | 480 | 210 | 95 | 160 | 5 | 1.1 | 2310 | 5750 | 530 | 710 | **352064X2** | 0.46 | 1.47 | 2.19 | 1.44 | 124 |
| | 480 | 215 | 100 | 163 | 5 | 1.1 | 2500 | 5700 | 530 | 710 | **352064X2-1** | 0.46 | 1.47 | 2.19 | 1.44 | 129 |
| | 540 | 225 | 100 | 160 | 5 | 1.5 | 3100 | 5700 | 510 | 660 | **351164** | 0.4 | 1.68 | 2.5 | 1.64 | 181 |
| | 540 | 225 | 100 | 160 | 5 | 1.5 | 3100 | 5700 | 510 | 660 | **351164** | 0.4 | 1.68 | 2.5 | 1.64 | 181 |
| **340** | 460 | 164 | 164 | 63 | 4 | 1 | 1500 | 4050 | 500 | 660 | **32968X2A/P5DB** | 0.41 | 1.65 | 2.45 | 1.61 | 70.1 |
| | 460 | 166 | 75 | 128 | 4 | 1.1 | 1540 | 4050 | 500 | 660 | **352968** | 0.31 | 2.15 | 3.2 | 2.1 | 72.3 |
| | 460 | 160 | 72 | 128 | 4 | 1.1 | 1540 | 4050 | 500 | 660 | **352968X2** | 0.31 | 2.15 | 3.2 | 2.1 | 71.0 |
| | 460 | 160 | 72 | 128 | 4 | 1.5 | 1600 | 4000 | 500 | 660 | **352968X2A/HG2** | 0.4 | 1.68 | 2.5 | 1.64 | 70.5 |
| | 520 | 180 | 82 | 135 | 5 | 1.5 | 2060 | 4100 | 480 | 640 | **351068** | 0.29 | 2.35 | 3.5 | 2.3 | 127 |
| | 520 | 165 | 82.5 | 133 | 6 | 2 | 2550 | 4600 | 480 | 640 | **351068X2D1/HC** | 0.39 | 1.73 | 2.58 | 1.69 | 117 |
| | 580 | 242 | 106 | 170 | 5 | 1.5 | 3100 | 6000 | 460 | 620 | **351168** | 0.42 | 1.6 | 2.38 | 1.56 | 235 |
| | 580 | 238 | 107 | 190 | 6 | 2 | 3350 | 6600 | 370 | 500 | **351168X2** | 0.4 | 1.68 | 2.5 | 1.64 | 237 |
| **360** | 480 | 160 | 72 | 128 | 4 | 1 | 1640 | 2240 | 510 | 680 | **352972X2** | 0.33 | 2.05 | 3.05 | 2 | 74.7 |
| | 540 | 185 | 82 | 140 | 5 | 1.5 | 2880 | 6300 | 460 | 620 | **351072** | 0.37 | 1.82 | 2.7 | 1.78 | 120 |
| | 540 | 185 | 82 | 140 | 5 | 1.5 | 2880 | 6300 | 460 | 620 | **351072/HCE-CB** | 0.37 | 1.82 | 2.7 | 1.78 | 120 |
| | 540 | 169 | 70 | 134 | 6 | 2 | 2180 | 4400 | 460 | 620 | **351072X2** | 0.37 | 1.82 | 2.7 | 1.78 | 122 |
| | 600 | 242 | 106 | 170 | 5 | 1.5 | 3410 | 6800 | 400 | 520 | **351172** | 0.44 | 0.54 | 2.3 | 1.51 | 221 |
| | 600 | 242 | 106 | 170 | 5 | 1.5 | 3410 | 6800 | 400 | 520 | **351172/HC** | 0.44 | 0.54 | 2.3 | 1.51 | 221 |
| **380** | 520 | 145 | 65 | 105 | 4 | 1.1 | 1660 | 3800 | 530 | 710 | **351976** | 0.38 | 1.77 | 2.64 | 1.73 | 78.8 |
| | 520 | 149 | 65 | 112 | 4 | 1.1 | 1660 | 3800 | 530 | 710 | **351976X2** | 0.38 | 1.77 | 2.64 | 1.73 | 82.4 |
| | 560 | 190 | 82 | 140 | 5 | 1.5 | 2880 | 6300 | 410 | 540 | **351076** | 0.39 | 1.75 | 2.61 | 1.71 | 137 |

d 380~460 mm

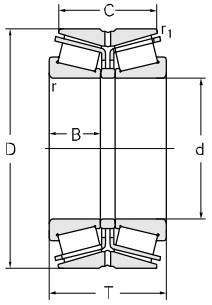


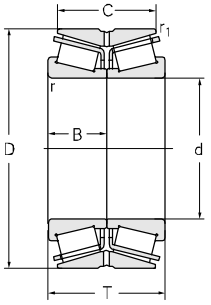



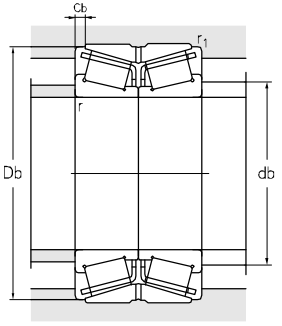




| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | T | B | C | $r_{min}$ | $r_{1min}$ | Cr | Cor | Grease | Oil | | e | Y1 | Y2 | Yo | |
| mm | | | | | | | kN | | r/min | | | | | | | kg |
| **380** | 560 | 190 | 82 | 140 | 5 | 1.5 | 2880 | 6300 | 410 | 540 | **351076/HCERP6XHC9** | 0.39 | 1.75 | 2.61 | 1.71 | 137 |
| | 620 | 242 | 106 | 170 | 5 | 1.5 | 3410 | 6850 | 410 | 540 | **351176** | 0.46 | 1.47 | 2.18 | 1.43 | 250 |
| **400** | 540 | 150 | 65 | 105 | 4 | 1.1 | 1650 | 3850 | 530 | 710 | **351980/HC** | 0.45 | 1.5 | 2.23 | 1.47 | 84.5 |
| | 540 | 150 | 65 | 105 | 4 | 1.1 | 1650 | 3850 | 530 | 710 | **351980/P5** | 0.45 | 1.5 | 2.23 | 1.47 | 84.6 |
| | 540 | 145 | 65 | 100 | 4 | 1.1 | 1650 | 3850 | 530 | 710 | **351980X2/P5** | 0.45 | 1.5 | 2.23 | 1.47 | 82.5 |
| | 600 | 206 | 90 | 150 | 5 | 1.5 | 2890 | 6300 | 410 | 540 | **351080/HAC3** | 0.38 | 1.78 | 2.65 | 1.74 | 179 |
| | 600 | 206 | 90 | 150 | 6 | 2 | 2890 | 6300 | 410 | 540 | **351080/HCYAD** | 0.38 | 1.78 | 2.65 | 1.74 | 179 |
| | 600 | 185 | 80 | 148 | 6 | 2 | 2700 | 5850 | 410 | 540 | **351080X2-2/C9** | 0.37 | 1.82 | 2.72 | 1.78 | 169 |
| | 600 | 206 | 90 | 150 | 5 | 1.5 | 2890 | 6300 | 410 | 540 | **351080/HAC3** | 0.38 | 1.78 | 2.65 | 1.74 | 179 |
| | 600 | 206 | 90 | 150 | 6 | 2 | 2890 | 6300 | 410 | 540 | **351080/HCYAD** | 0.38 | 1.78 | 2.65 | 1.74 | 179 |
| | 600 | 230 | 100 | 178 | 5 | 1.5 | 3350 | 7600 | 410 | 540 | **351080X2** | 0.37 | 1.82 | 2.72 | 1.78 | 203 |
| | 600 | 185 | 80 | 148 | 6 | 2 | 2700 | 5850 | 410 | 540 | **351080X2-1** | 0.37 | 1.82 | 2.72 | 1.78 | 168 |
| | 650 | 255 | 112 | 180 | 6 | 2.5 | 3630 | 7400 | 360 | 480 | **351180** | 0.41 | 1.66 | 2.47 | 1.63 | 279 |
| **420** | 560 | 145 | 65 | 105 | 4 | 1.1 | 1880 | 4450 | 360 | 480 | **351984** | 0.38 | 1.77 | 2.64 | 1.73 | 87.0 |
| | 620 | 206 | 90 | 150 | 5 | 1.5 | 2670 | 5880 | 360 | 480 | **351084** | 0.41 | 1.64 | 2.44 | 1.6 | 191 |
| | 620 | 206 | 90 | 150 | 5 | 1.5 | 2670 | 5880 | 360 | 480 | **351084/HC** | 0.41 | 1.64 | 2.44 | 1.6 | 191 |
| | 620 | 188 | 86 | 150 | 6 | 2 | 2840 | 6210 | 360 | 480 | **351084X2-1/HC** | 0.39 | 1.74 | 2.59 | 1.7 | 178 |
| | 620 | 190 | 95 | 125 | 5 | 1 | 2620 | 5300 | 360 | 480 | **351084X2D1** | 0.41 | 1.63 | 2.43 | 1.6 | 166 |
| | 700 | 275 | 122 | 200 | 6 | 2.5 | 4430 | 9150 | 360 | 480 | **351184J** | 0.32 | 2.12 | 3.15 | 2.07 | 376 |
| **440** | 600 | 170 | 74 | 125 | 4 | 1.1 | 2300 | 5300 | 400 | 520 | **351988** | 0.39 | 1.73 | 2.58 | 1.69 | 123 |
| | 600 | 170 | 74 | 125 | 4 | 1.1 | 2300 | 5300 | 400 | 520 | **351988/HG2** | 0.39 | 1.73 | 2.58 | 1.69 | 123 |
| | 650 | 212 | 94 | 152 | 6 | 2.5 | 3150 | 6900 | 360 | 480 | **351088** | 0.44 | 1.52 | 2.26 | 1.49 | 212 |
| | 720 | 275 | 122 | 190 | 6 | 2.5 | 4950 | 10400 | 360 | 480 | **351188** | 0.46 | 1.48 | 2.2 | 1.44 | 404 |
| | 720 | 283 | 131.5 | 226 | 6 | 2.5 | 5200 | 11000 | 360 | 480 | **351188X2/HCYB2** | 0.39 | 1.74 | 2.59 | 1.7 | 426 |
| **460** | 620 | 174 | 74 | 130 | 4 | 1 | 1960 | 5150 | 400 | 520 | **351992** | 0.4 | 1.69 | 2.51 | 1.65 | 134 |
| | 620 | 174 | 74 | 130 | 4 | 1.1 | 1960 | 5150 | 400 | 520 | **351992/HC** | 0.4 | 1.69 | 2.51 | 1.65 | 134 |
| | 680 | 230 | 100 | 175 | 6 | 2.5 | 3410 | 7450 | 360 | 480 | **351092** | 0.31 | 2.18 | 3.24 | 2.13 | 253 |
| | 680 | 204 | 94 | 163 | 3 | 3 | 3400 | 7650 | 360 | 480 | **351092X2/HCP5YA6** | 0.4 | 1.68 | 2.5 | 1.64 | 236 |

d 460~560 mm

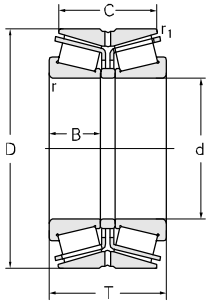


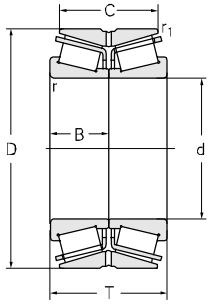



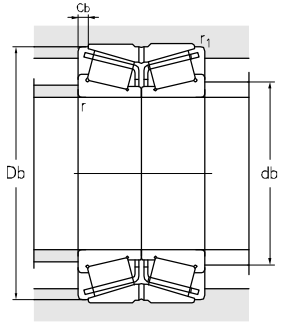




| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | T | B | C | $r_{min}$ | $r_{1min}$ | Cr | Cor | Grease | Oil | | e | Y1 | Y2 | Yo | |
| mm | | | | | | | kN | | r/min | | | | | | | kg |
| **460** | 760 | 300 | 135 | 240 | 7.5 | 4 | 5150 | 11900 | 350 | 440 | **350692/C9** | 0.45 | 1.5 | 2.23 | 1.47 | 516 |
| | 760 | 300 | 135 | 240 | 7.5 | 4 | 5900 | 12700 | 350 | 440 | **350692/HCYA8** | 0.45 | 1.5 | 2.23 | 1.47 | 539 |
| **480** | 650 | 180 | 78 | 130 | 5 | 1.5 | 2150 | 5150 | 360 | 480 | **351996** | 0.42 | 1.61 | 2.4 | 1.58 | 159 |
| | 650 | 180 | 78 | 130 | 5 | 1.5 | 2150 | 5150 | 360 | 480 | **351996/HC** | 0.42 | 1.61 | 2.4 | 1.58 | 159 |
| | 700 | 240 | 100 | 180 | 6 | 2.5 | 3100 | 8200 | 250 | 320 | **351096** | 0.41 | 1.66 | 2.47 | 1.62 | 272 |
| | 700 | 206 | 93 | 165 | 6 | 3 | 3100 | 6700 | 250 | 320 | **351096X2-1/HC** | 0.37 | 1.83 | 2.72 | 1.78 | 232 |
| | 700 | 275 | 122 | 200 | 6 | 3 | 4150 | 9500 | 250 | 320 | **351096X2/HCC9** | 0.36 | 1.87 | 2.79 | 1.83 | 309 |
| | 720 | 236 | 100 | 180 | 6 | 2.5 | 4200 | 8300 | 250 | 320 | **351096X3/HC-TS** | 0.32 | 2.11 | 3.14 | 2.06 | 303 |
| | 790 | 310 | 136 | 224 | 7.5 | 3 | 6200 | 13300 | 250 | 320 | **351196** | 0.39 | 1.73 | 2.58 | 1.69 | 540 |
| **500** | 670 | 180 | 78 | 130 | 5 | 1.5 | 1340 | 6200 | 350 | 460 | **3519/500** | 0.43 | 1.55 | 2.31 | 1.52 | 158 |
| | 670 | 180 | 78 | 130 | 5 | 1.5 | 1470 | 6200 | 350 | 460 | **3519/500/HC** | 0.43 | 1.55 | 2.31 | 1.52 | 158 |
| | 670 | 180 | 78 | 130 | 5 | 1.5 | 2360 | 6700 | 350 | 460 | **3519/500/HCYA5** | 0.43 | 1.55 | 2.31 | 1.52 | 156 |
| | 720 | 236 | 100 | 180 | 6 | 2.5 | 3580 | 8150 | 410 | 540 | **3510/500** | 0.32 | 2.08 | 3.1 | 2.04 | 276 |
| | 720 | 236 | 118 | 180 | 6 | 2.5 | 3750 | 8500 | 410 | 540 | **3510/500D** | 0.32 | 2.08 | 3.1 | 2.04 | 276 |
| | 720 | 236 | 100 | 180 | 6 | 2.5 | 4200 | 8300 | 410 | 540 | **3510/500/HCE** | 0.32 | 2.08 | 3.1 | 2.04 | 274 |
| | 720 | 209 | 94 | 167 | 6 | 3 | 3250 | 7700 | 410 | 540 | **3510/500X2** | 0.37 | 1.83 | 2.72 | 1.78 | 256 |
| **530** | 710 | 190 | 82 | 136 | 5 | 1.5 | 2670 | 6300 | 320 | 420 | **3519/530** | 0.39 | 1.73 | 2.57 | 1.69 | 176 |
| | 710 | 190 | 82 | 136 | 6 | 2.5 | 2670 | 6300 | 320 | 420 | **3519/530/YA6** | 0.39 | 1.73 | 2.57 | 1.69 | 176 |
| | 780 | 255 | 112 | 180 | 6 | 2.5 | 4350 | 9850 | 320 | 420 | **3510/530** | 0.34 | 2 | 2.97 | 1.95 | 371 |
| | 780 | 255 | 112 | 180 | 6 | 2.5 | 4350 | 9850 | 320 | 420 | **3510/530/HCR** | 0.34 | 2 | 2.97 | 1.95 | 371 |
| | 780 | 231 | 106.5 | 185 | 3 | 3 | 4650 | 10700 | 320 | 420 | **3510/530X2/HCP5YA6** | 0.37 | 1.82 | 2.71 | 1.78 | 356 |
| **539.75** | 635 | 120.65 | 50.8 | 95.25 | 6.4 | 1.5 | 1190 | 4000 | 360 | 460 | **3506/539X4/HC** | 0.41 | 1.64 | 2.45 | 1.6 | 62.2 |
| **560** | 735 | 225 | 100 | 180 | 6.4 | 1.5 | 3500 | 9700 | 330 | 420 | **3506/560/HC** | 0.35 | 1.95 | 2.9 | 1.9 | 235 |
| | 750 | 213 | 85 | 156 | 5 | 1.5 | 3410 | 8500 | 310 | 410 | **3519/560** | 0.43 | 1.57 | 2.34 | 1.53 | 232 |
| | 750 | 213 | 85 | 156 | 5 | 1.5 | 3780 | 8500 | 310 | 410 | **3519/560/HC** | 0.43 | 1.57 | 2.34 | 1.53 | 232 |
| | 750 | 213 | 85 | 156 | 5 | 1.5 | 3780 | 8500 | 310 | 410 | **3519/560/HCCNH** | 0.43 | 1.57 | 2.34 | 1.53 | 232 |
| | 820 | 260 | 115 | 185 | 6 | 2.5 | 2920 | 5700 | 310 | 410 | **3510/560** | 0.4 | 1.7 | 2.54 | 1.67 | 434 |
| | 820 | 260 | 115 | 185 | 6 | 2.5 | 5000 | 11500 | 310 | 410 | **3510/560/HC** | 0.4 | 1.7 | 2.54 | 1.67 | 449 |
| | 820 | 340 | 155 | 270 | 8 | 2.5 | 6200 | 17200 | 310 | 410 | **3510/560X2/YA6** | 0.32 | 2.14 | 3.18 | 2.09 | 741 |

d 600~950 mm



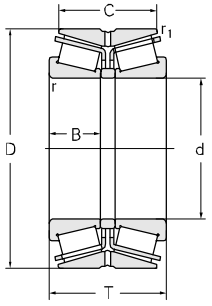



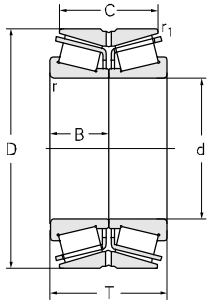



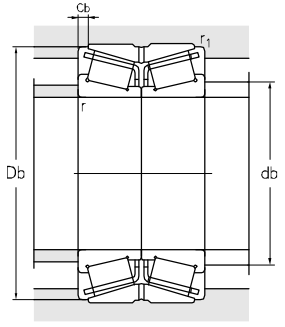

| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|---|---|
| d | D | T | B | C | $r_{min}$ | $r_{1min}$ | Cr | Cor | Grease | Oil |
| mm | | | | | | | kN | | r/min | |
| **600** | 800 | 205 | 90 | 156 | 5 | 1.5 | 3410 | 9050 | 290 | 390 |
| | 800 | 205 | 90 | 156 | 5 | 1.5 | 3450 | 9600 | 290 | 390 |
| | 800 | 208 | 90 | 160 | 6 | 2.5 | 3400 | 9050 | 290 | 390 |
| | 870 | 270 | 118 | 198 | 6 | 2.5 | 5390 | 12700 | 280 | 380 |
| | 870 | 270 | 118 | 198 | 6 | 2.5 | 5390 | 12700 | 280 | 380 |
| | 870 | 250 | 110 | 200 | 3 | 3 | 5250 | 12400 | 280 | 380 |
| **630** | 920 | 265 | 114.5 | 212 | 7.5 | 4 | 7000 | 14000 | 270 | 350 |
| **670** | 900 | 240 | 103 | 180 | 6 | 2.5 | 4200 | 11200 | 260 | 350 |
| | 980 | 310 | 136 | 215 | 7.5 | 3 | 6300 | 15100 | 260 | 330 |
| **710** | 950 | 240 | 106 | 175 | 6 | 2.5 | 4730 | 13200 | 250 | 320 |
| **720** | 915 | 190 | 83 | 140 | 6 | 2.5 | 3000 | 10000 | 260 | 330 |
| **750** | 1000 | 264 | 112 | 194 | 6 | 2.5 | 5340 | 15600 | 230 | 310 |
| | 1000 | 264 | 112 | 194 | 6 | 2.5 | 4900 | 15100 | 230 | 310 |
| | 1000 | 264 | 112 | 194 | 6 | 2.5 | 5400 | 15100 | 230 | 310 |
| | 1000 | 255 | 112 | 190 | 6 | 2.5 | 5390 | 15100 | 230 | 310 |
| | 1000 | 255 | 112 | 190 | 6 | 2.5 | 5390 | 15100 | 230 | 310 |
| | 1000 | 255 | 112 | 190 | 6 | 2.5 | 5390 | 15100 | 230 | 310 |
| **800** | 1060 | 270 | 115 | 204 | 6 | 2.5 | 6870 | 15200 | 220 | 300 |
| | 1060 | 270 | 115 | 204 | 6 | 2.5 | 6250 | 15200 | 220 | 300 |
| | 1060 | 270 | 115 | 204 | 6 | 2.5 | 6250 | 15200 | 220 | 300 |
| **850** | 1120 | 268 | 118 | 188 | 6 | 2.5 | 6850 | 18700 | 210 | 270 |
| | 1120 | 268 | 118 | 190 | 6 | 2.5 | 6250 | 18700 | 210 | 270 |
| | 1220 | 272 | 116 | 239 | 7.5 | 4 | 7600 | 17700 | 200 | 260 |
| **900** | 1180 | 275 | 122 | 205 | 6 | 2.5 | 7640 | 21300 | 200 | 260 |
| **950** | 1250 | 300 | 132 | 220 | 7.5 | 3 | 7870 | 22500 | 180 | 240 |
| | 1280 | 280 | 120 | 246 | 7.5 | 4 | 8300 | 22200 | 170 | 220 |

| Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|
| | e | Y1 | Y2 | Yo | |
| | | | | | kg |
| **3519/600** | 0.33 | 2.05 | 3.05 | 2 | 247 |
| **3519/600/YAD** | 0.33 | 2.05 | 3.05 | 2 | 264 |
| **3519/600X2** | 0.33 | 2.05 | 3.05 | 2 | 252 |
| **3510/600** | 0.41 | 1.63 | 2.43 | 1.6 | 517 |
| **3510/600/HCR** | 0.41 | 1.63 | 2.43 | 1.6 | 517 |
| **3510/600X2/HC** | 0.39 | 1.73 | 2.57 | 1.69 | 454 |
| **3510/630X2/HC** | 0.36 | 1.87 | 2.79 | 1.83 | 570 |
| **3519/670** | 0.44 | 1.53 | 2.28 | 1.5 | 378 |
| **3510/670** | 0.37 | 1.83 | 2.73 | 1.79 | 714 |
| **3519/710** | 0.46 | 1.47 | 2.19 | 1.44 | 445 |
| **3506/720** | 0.38 | 1.75 | 2.61 | 1.72 | 284 |
| **3519/750** | 0.45 | 1.5 | 2.24 | 1.47 | 546 |
| **3519/750/HC** | 0.45 | 1.5 | 2.24 | 1.47 | 546 |
| **3519/750-JG** | 0.45 | 1.5 | 2.24 | 1.47 | 542 |
| **3519/750X2** | 0.45 | 1.5 | 2.24 | 1.47 | 535 |
| **3519/750X2/HC** | 0.45 | 1.5 | 2.24 | 1.47 | 535 |
| **3519/750X2/HCYA10** | 0.45 | 1.5 | 2.24 | 1.47 | 535 |
| **3519/800** | 0.35 | 1.93 | 2.87 | 1.88 | 606 |
| **3519/800/HC** | 0.35 | 1.93 | 2.87 | 1.88 | 607 |
| **3519/800/HCR** | 0.35 | 1.93 | 2.87 | 1.88 | 607 |
| **3519/850** | 0.46 | 1.46 | 2.18 | 1.43 | 645 |
| **3519/850X2** | 0.46 | 1.46 | 2.18 | 1.43 | 647 |
| **3510/850X2/HCYA6** | 0.37 | 1.83 | 2.72 | 1.79 | 1000 |
| **3519/900** | 0.37 | 1.8 | 2.69 | 1.76 | 763 |
| **3519/950** | 0.33 | 2.05 | 3.05 | 2 | 897 |
| **3506/950** | 0.4 | 1.68 | 2.5 | 1.64 | 974 |

d 1092.2~1600 mm



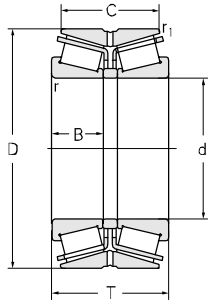



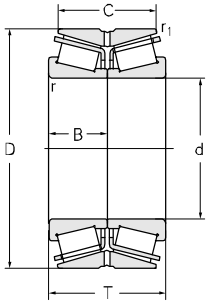



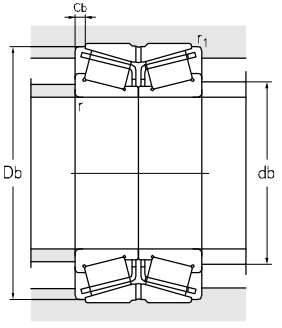

| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|---|---|
| d | D | T | B | C | $r_{min}$ | $r_{1min}$ | $C_r$ | $C_{or}$ | Grease | Oil |
| mm | | | | | | | kN | | r/min | |
| **1092.2** | 1320.8 | 200 | 87.5 | 145 | 6.4 | 3.5 | 5050 | 16900 | 170 | 220 |
| **1120** | 1460 | 335 | 158 | 250 | 7.5 | 3 | 9900 | 29500 | 160 | 210 |
| **1180** | 1600 | 390 | 170 | 250 | 7.5 | 4 | 10500 | 33700 | 150 | 190 |
| **1250** | 1500 | 250 | 112 | 190 | 6 | 1.5 | 7150 | 24200 | 100 | 140 |
| **1370** | 1605 | 210 | 96 | 150 | 7.5 | 4 | 5150 | 20700 | 60 | 75 |
| **1450** | 1770 | 290 | 115 | 170 | 9.5 | 5 | 7780 | 25800 | 80 | 120 |
| **1600** | 1850 | 200 | 90 | 150 | 6 | 6 | 5610 | 20700 | 50 | 65 |

| Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|
| | e | Y1 | Y2 | Yo | |
| | | | | | kg |
| **3506/1092X4/HC** | 0.57 | 1.18 | 1.76 | 1.16 | 514 |
| **3519/1120** | 0.35 | 1.93 | 2.87 | 1.88 | 1350 |
| **3506/1180** | 0.7 | 0.97 | 1.44 | 0.94 | 2100 |
| **3506/1250/YA1** | 0.35 | 1.9 | 2.9 | 1.8 | 795 |
| **3506/1370** | 0.4 | 1.68 | 2.5 | 1.64 | 673 |
| **3506/1450/HC** | 0.87 | 0.78 | 1.16 | 0.76 | 1317 |
| **3506/1600/C9** | 0.32 | 2.12 | 3.15 | 2.08 | 800 |

d 34.925~101.6 mm



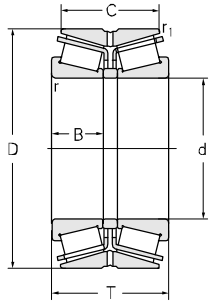



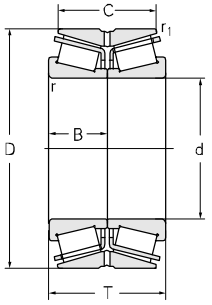



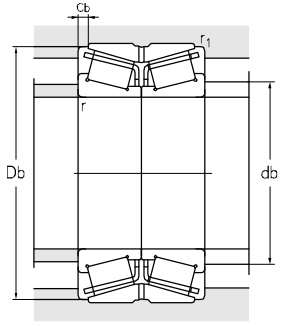

| Principal dimensions | | | | | | | | | | | | Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | | D | | T | | B | | C | | $r_{1min1}$ | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | e | Y | Yo | a | |
| mm | in | mm | in | mm | in | mm | in | mm | in | mm | | kN | | r/min | | | | | | | kg |
| **34.925** | 1.375 | 65.088 | 2.563 | 39.624 | 1.56 | 18.288 | 0.72 | 31.496 | 1.24 | 0.3 | 4.7 | 80.5 | 126 | 4300 | 5500 | **KLM48548/KLM48510/DB** | 0.38 | 1.79 | 2.67 | 1.75 | 0.562 |
| **38.1** | 1.5 | 80.035 | 3.151 | 57.15 | 2.25 | 23.698 | 0.933 | 44.958 | 1.77 | 0.8 | 0.8 | 131 | 194 | 4800 | 6400 | **K27880/K27820D** | 0.56 | 1.2 | 1.79 | 1.18 | 1.33 |
| **40** | 1.575 | 80.035 | 3.151 | 46.04 | 1.813 | 20.94 | 0.824 | 34.925 | 1.375 | 0.8 | 1.5 | 98.5 | 134 | 4800 | 6400 | **K28158/K28318D** | 0.4 | 1.68 | 2.5 | 1.64 | 0.931 |
| **50.8** | 2 | 82.55 | 3.25 | 51.766 | 2.038 | 25.883 | 1.019 | 41.606 | 1.638 | 0.5 | 3.5 | 110 | 180 | 3200 | 4100 | **KLM104949E/KLM104911/DB** | 0.31 | 2.21 | 3.29 | 2.16 | 0.956 |
| **52.388** | 2.063 | 112.712 | 4.437 | 65.088 | 2.563 | 26.909 | 1.059 | 46.038 | 1.813 | 1.5 | 3.5 | 168 | 238 | 3600 | 4800 | **K55206/K55444D** | 0.88 | 0.76 | 1.14 | 0.75 | 2.87 |
| **55** | 2.165 | 90 | 3.543 | 52 | 2.047 | 26 | 1.024 | 43 | 1.693 | 0.3 | 3.5 | 140 | 240 | 3000 | 3800 | **KJLM506848E/KJLM506810/DB** | 0.41 | 1.66 | 2.47 | 1.62 | 1.24 |
| **57.15** | 2.25 | 107.95 | 4.25 | 65.09 | 2.563 | 29.317 | 1.154 | 53.975 | 2.125 | 0.8 | 2.3 | 211 | 292 | 3500 | 4700 | **K462/K452D** | 0.32 | 2.09 | 3.11 | 2.04 | 2.3 |
| **63.5** | 2.5 | 110 | 4.331 | 60.33 | 2.375 | 21.996 | 0.866 | 18.824 | 0.741 | 0.5 | 1.5 | 156 | 242 | 3200 | 4300 | **K390A/K394A+K390A/K394AB/DB** | 0.4 | 1.68 | 2.5 | 1.64 | 2.22 |
| | | 114.673 | 4.515 | 68.255 | 2.687 | 21.996 | 0.866 | 61.903 | 2.437 | 0.5 | 1.5 | 156 | 242 | 3200 | 4300 | **K390A/K394A+K390A/K394AB/HA1DB** | 0.4 | 1.68 | 2.5 | 1.64 | 2.22 |
| | | 114.673 | 4.515 | 68.255 | 2.687 | 21.996 | 0.866 | 61.903 | 2.437 | 0.5 | 1.5 | 156 | 242 | 3200 | 4300 | **K390A/K394ABD/HA1** | 0.4 | 1.68 | 2.5 | 1.64 | 2.44 |
| **69.85** | 2.75 | 116.586 | 4.59 | 76.327 | 3.005 | 25.4 | 1 | 63.627 | 2.505 | 0.3 | 1.5 | 165 | 310 | 3200 | 4300 | **K29675/K29620+K29675/K29620B/DB** | 0.49 | 1.38 | 2.06 | 1.35 | 2.63 |
| | | 146.05 | 5.75 | 91.516 | 3.603 | 39.688 | 1.563 | 59.766 | 2.353 | 1 | 3.5 | 335 | 515 | 3000 | 3500 | **KH913849/KH913810D** | 0.78 | 0.86 | 1.28 | 0.84 | 4.93 |
| | | 146.05 | 5.75 | 91.516 | 3.603 | 39.688 | 1.563 | 59.766 | 2.353 | 1 | 3.5 | 370 | 515 | 3000 | 3500 | **KH913849/KH913810/DB** | 0.78 | 0.86 | 1.28 | 0.84 | 4.86 |
| **76.2** | 3 | 155.575 | 6.125 | 101.6 | 4 | 46.672 | 1.837 | 85.725 | 3.375 | 1.5 | 3.5 | 450 | 730 | 1900 | 2500 | **K748S/K742D** | 0.33 | 2.08 | 3.09 | 2.03 | 8 |
| | | 161.925 | 6.375 | 105.562 | 4.156 | 46.038 | 1.813 | 70.637 | 2.781 | 0.8 | 3.5 | 425 | 580 | 1900 | 2500 | **K9285/K9220D** | 0.71 | 0.95 | 1.42 | 0.93 | 9.22 |
| **92.075** | 3.625 | 152.4 | 6 | 82.55 | 3.25 | 36.322 | 1.43 | 63.5 | 2.5 | 0.8 | 3.5 | 380 | 585 | 1900 | 2500 | **598/592D/C9** | 0.44 | 1.52 | 2.27 | 2.98 | 5.59 |
| **95.25** | 3.75 | 149.225 | 5.875 | 66.672 | 2.625 | 28.971 | 1.141 | 52.388 | 2.063 | 0.8 | 3.5 | 260 | 490 | 1900 | 2500 | **42376/42587D/C9** | 0.49 | 1.37 | 2.04 | 1.34 | 4.05 |
| **96.838** | 3.813 | 188.912 | 7.437 | 107.95 | 4.25 | 46.038 | 1.813 | 69.85 | 2.75 | 1 | 3.5 | 245 | 345 | 1600 | 2200 | **K90381/K90744D** | 0.87 | 0.78 | 1.16 | 0.76 | 12.2 |
| | | 188.912 | 7.437 | 107.95 | 4.25 | 46.038 | 1.813 | 69.85 | 2.75 | 1 | 3.5 | 270 | 345 | 1600 | 2200 | **K90381/K90744/DB** | 0.87 | 0.78 | 1.16 | 0.76 | 12.2 |
| **98.425** | 3.875 | 161.925 | 6.375 | 82.547 | 3.25 | 36.116 | 1.422 | 61.912 | 2.437 | 0.8 | 3.5 | 340 | 650 | 1800 | 2400 | **K52387/K52637D** | 0.47 | 1.42 | 2.12 | 1.39 | 6.35 |
| **101.6** | 4 | 168.275 | 6.625 | 92.075 | 3.625 | 1.625 | 0.064 | 69.85 | 2.75 | 0.8 | 3.5 | 370 | 700 | 1800 | 2400 | **K687/K672D** | 0.47 | 1.43 | 2.14 | 1.4 | 7.43 |
| | | 200.025 | 7.875 | 115.888 | 4.563 | 49.212 | 1.937 | 80.216 | 3.158 | 2.3 | 3.5 | 600 | 940 | 1600 | 2200 | **K98400/K98789D** | 0.63 | 1.07 | 1.59 | 1.04 | 13 |

Note: * indicates the maximum value of IDor OD.

d 110~149.225 mm



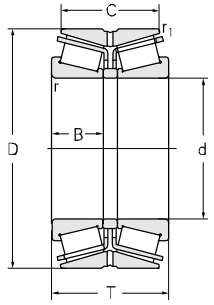



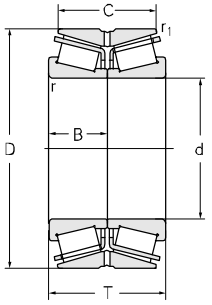



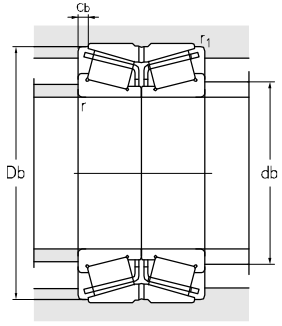

| Principal dimensions | | | | | | | | | | | | Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | | D | | T | | B | | C | | $r_{1min1}$ | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | e | Y | Yo | a | |
| mm | in | mm | in | mm | in | mm | in | mm | in | mm | | kN | | r/min | | | | | | | kg |
| **110** | 4.331 | 180 | 7.087 | 103 | 4.055 | 103 | 4.055 | 85 | 3.346 | 0.6 | 3 | 545 | 1020 | 1600 | 2200 | **KJHM522649/KJHM522610T103/DB** | 0.4 | 1.69 | 2.51 | 1.65 | 9.81 |
| **111.125** | 4.375 | 214.312 | 8.437 | 115.888 | 4.563 | 52.388 | 2.063 | 84.138 | 3.313 | 1.5 | 3.5 | 670 | 1100 | 1500 | 2000 | **KH924045/KH924010D** | 0.67 | 1 | 1.49 | 0.98 | 17.7 |
| **114.3** | 4.5 | 177.8 | 7 | 92.075 | 3.625 | 41.275 | 1.625 | 69.85 | 2.75 | 0.8 | 3.5 | 445 | 675 | 1600 | 2100 | **64450/64700D/C9** | 0.52 | 1.29 | 1.92 | 1.26 | 8.01 |
| | | 177.8 | 7 | 92.075 | 3.625 | 41.275 | 1.625 | 69.85 | 2.75 | 0.8 | 3.5 | 405 | 675 | 1600 | 2100 | **K64450/K64700D** | 0.52 | 1.29 | 1.92 | 1.26 | 8.01 |
| | | 190.5 | 7.5 | 106.365 | 4.188 | 49.212 | 1.937 | 80.962 | 3.187 | 1.5 | 3.5 | 525 | 965 | 1600 | 2100 | **K71450/K71751D** | 0.42 | 1.62 | 2.42 | 1.59 | 11.3 |
| | | 190.5 | 7.5 | 106.365 | 4.188 | 49.212 | 1.937 | 80.962 | 3.187 | 1.5 | 3.5 | 525 | 965 | 1600 | 2100 | **K71450/K71751DC** | 0.42 | 1.62 | 2.42 | 1.59 | 11.3 |
| | | 212.725 | 8.375 | 142.875 | 5.625 | 66.675 | 2.625 | 117.475 | 4.625 | 1.5 | 7 | 810 | 1390 | 1500 | 2000 | **938/932CD** | 0.33 | 2 | 3 | 4 | 20.8 |
| | | 212.725 | 8.375 | 142.875 | 5.625 | 66.675 | 2.625 | 117.475 | 4.625 | 1.5 | 7 | 810 | 1390 | 1500 | 2000 | **K938/K932CD** | 0.33 | 2 | 3 | 2 | 20.8 |
| | | 279.4 | 11 | 185.24 | 7.293 | 82.55 | 3.25 | 128.09 | 5.043 | 1.5 | 6.4 | 1350 | 2000 | 1000 | 1300 | **KHH926744/KHH926716/DB** | 0.63 | 1.07 | 1.6 | 1.05 | 51.9 |
| **120.65** | 4.75 | 174.625 | 6.875 | 77.787 | 3.062 | 36.512 | 1.437 | 61.912 | 2.437 | 0.8 | 3.5 | 360 | 730 | 1500 | 1800 | **KM224749/KM224710D** | 0.33 | 2 | 3 | 2 | 11.3 |
| | | 234.95 | 9.25 | 142.875 | 5.625 | 63.5 | 2.5 | 114.3 | 4.5 | 1.5 | 6.4 | 885 | 1620 | 1300 | 1600 | **K95475/K95927CD/YA10** | 0.37 | 1.83 | 2.72 | 1.79 | 26.5 |
| **124.943** | 4.919 | 234.95 | 9.25 | 142.875 | 5.625 | 63.5 | 2.5 | 114.3 | 4.5 | 1.5 | 6.4 | 885 | 1620 | 1300 | 1600 | **K95491/K95927D** | 0.37 | 1.83 | 2.72 | 1.79 | 26.9 |
| **127** | 5 | 182.562 | 7.187 | 93.66 | 3.687 | 46.896 | 1.846 | 73.025 | 2.875 | 0.8 | 3.5 | 460 | 860 | 1200 | 1500 | **NA48290SW/48220D/C9** | 0.31 | 2.21 | 3.29 | 2.16 | 7.26 |
| | | 182.562 | 7.187 | 93.66 | 3.687 | 46.896 | 1.846 | 73.025 | 2.875 | 0.8 | 3.5 | 465 | 895 | 1200 | 1500 | **NA48290SWSH/48220D/C9** | 0.31 | 2.21 | 3.29 | 2.16 | 7.34 |
| | | 182.562 | 7.187 | 93.66 | 3.687 | 46.896 | 1.846 | 73.025 | 2.875 | 0.8 | 3.5 | 465 | 895 | 1200 | 1500 | **NA48290SWSH/48220D/C9YB3** | 0.31 | 2.21 | 3.29 | 2.16 | 7.34 |
| **127.792** | 5.031 | 288.6 | 11.362 | 115.888 | 4.563 | 49.428 | 1.946 | 84.138 | 3.313 | 2.3 | 3.5 | 790 | 1350 | 1200 | 1500 | **KHM926749/KHM926710D** | 0.74 | 0.92 | 1.36 | 0.9 | 18.8 |
| **133.35** | 5.25 | 215.9 | 8.5 | 106.362 | 4.187 | 47.625 | 1.875 | 80.962 | 3.187 | 1.5 | 3.5 | 550 | 1090 | 1200 | 1500 | **74525/74851CD** | 0.32 | 2.12 | 3.15 | 2.07 | 13.7 |
| **136.525** | 5.375 | 228.6 | 9 | 123.825 | 4.875 | 57.15 | 2.25 | 98.425 | 3.875 | 1.5 | 3.5 | 705 | 1350 | 1200 | 1500 | **K896/K892D** | 0.42 | 1.61 | 2.39 | 1.57 | 19.9 |
| **139.7** | 5.5 | 215.9 | 8.5 | 106.362 | 4.187 | 47.181 | 1.858 | 80.962 | 3.187 | 1.5 | 3.5 | 550 | 1020 | 1200 | 1600 | **K74550/K74851CD** | 0.32 | 2.12 | 3.15 | 2.07 | 9.94 |
| | | 215.9 | 8.5 | 106.362 | 4.187 | 47.181 | 1.858 | 80.962 | 3.187 | 1.5 | 3.5 | 550 | 1020 | 1200 | 1600 | **K74550/K74851D** | 0.32 | 2.12 | 3.15 | 2.07 | 9.91 |
| | | 236.538 | 9.313 | 131.763 | 5.188 | 56.642 | 2.23 | 106.363 | 4.188 | 1.6 | 3.6 | 700 | 1400 | 1200 | 1500 | **K82550/K82932D** | 0.44 | 1.52 | 2.27 | 1.49 | 23.4 |
| | | 244.475 | 9.625 | 107.95 | 4.25 | 53.975 | 2.125 | 79.375 | 3.125 | 1.5 | 3.5 | 610 | 1100 | 1200 | 1500 | **NA81550/81963D/C9** | 0.35 | 2.07 | 3.08 | 2.02 | 19.3 |
| **142.875** | 5.625 | 200.025 | 7.875 | 87.315 | 3.438 | 39.688 | 1.563 | 73.025 | 2.875 | 0.8 | 3.5 | 430 | 1030 | 1200 | 1600 | **K48685/K48620D** | 0.34 | 2.01 | 2.99 | 1.96 | 8.15 |
| | | 236.538 | 9.313 | 131.763 | 5.188 | 56.642 | 2.23 | 106.363 | 4.188 | 1.6 | 3.6 | 700 | 1400 | 1100 | 1400 | **K82562/K82932D** | 0.44 | 1.52 | 2.27 | 1.49 | 23.3 |
| **149.225** | 5.875 | 236.538 | 9.313 | 131.762 | 5.187 | 56.642 | 2.23 | 106.362 | 4.187 | 1.5 | 3.5 | 815 | 1540 | 1100 | 1400 | **HM231149/HM231111CD** | 0.32 | 2.12 | 3.15 | 2.07 | 20.1 |

Note: * indicates the maximum value of IDor OD.

d 152.4~180 mm



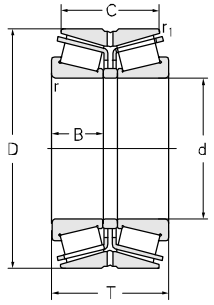



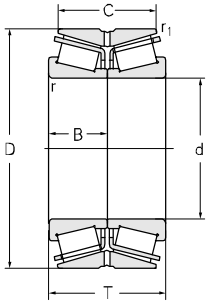

| Principal dimensions | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | | D | | T | | B | | C | | $r_{1min1}$ | $r_{min}$ |
| mm | in | mm | in | mm | in | mm | in | mm | in | mm | |
| **152.4** | 6 | 254 | 10 | 142.875 | 5.625 | 66.675 | 2.625 | 111.125 | 4.375 | 1.5 | 7 |
| | | 268.288 | 10.563 | 160.338 | 6.313 | 74.612 | 2.937 | 125.412 | 4.937 | 1.5 | 6.4 |
| **158.75** | 6.25 | 225.425 | 8.875 | 85.725 | 3.375 | 39.688 | 1.563 | 69.85 | 2.75 | 0.8 | 3.5 |
| **160.325** | 6.312 | 288.925 | 11.375 | 142.875 | 5.625 | 63.5 | 2.5 | 111.125 | 4.375 | 1.5 | 7 |
| **165.1** | 6.5 | 225.425 | 8.875 | 104.78 | 4.125 | 39.688 | 1.563 | 88.906 | 3.5 | 0.8 | 3.5 |
| | | 247.65 | 9.75 | 103.188 | 4.063 | 47.625 | 1.875 | 84.138 | 3.313 | 0.8 | 3.5 |
| | | 254 | 10 | 101.6 | 4 | 46.038 | 1.813 | 76.2 | 3 | 1.5 | 4.8 |
| | | 288.925 | 11.375 | 142.875 | 5.625 | 63.5 | 2.5 | 111.125 | 4.375 | 1.5 | 7 |
| | | 288.925 | 11.375 | 142.875 | 5.625 | 71.438 | 2.813 | 111.125 | 4.375 | 1.5 | 3.5 |
| **168.275** | 6.625 | 330.2 | 13 | 184.15 | 7.25 | 79.375 | 3.125 | 120.65 | 4.75 | 6.4 | 1.5 |
| **171.45** | 6.75 | 288.925 | 11.375 | 142.875 | 5.625 | 63.5 | 2.5 | 111.125 | 4.375 | 1.5 | 7 |
| **174.625** | 6.875 | 247.65 | 9.75 | 103.188 | 4.063 | 47.625 | 1.875 | 84.138 | 3.313 | 0.8 | 3.5 |
| | | 247.65 | 9.75 | 103.188 | 4.063 | 47.625 | 1.875 | 84.138 | 3.313 | 0.8 | 3.5 |
| **177.8** | 7 | 269.875 | 10.625 | 119.062 | 4.687 | 55.562 | 2.187 | 93.662 | 3.687 | 1.5 | 3.5 |
| | | 269.875 | 10.625 | 119.062 | 4.687 | 55.562 | 2.187 | 93.662 | 3.687 | 1.5 | 3.5 |
| | | 269.875 | 10.625 | 119.062 | 4.687 | 55.562 | 2.187 | 93.662 | 3.687 | 1.5 | 3.5 |
| | | 282.575 | 11.125 | 107.95 | 4.25 | 54.166 | 2.133 | 79.375 | 3.125 | 1.5 | 3.5 |
| | | 288.925 | 11.375 | 142.875 | 5.625 | 63.5 | 2.5 | 111.125 | 4.375 | 1.5 | 7 |
| | | 288.925 | 11.375 | 142.875 | 5.625 | 63.5 | 2.5 | 111.125 | 4.375 | 1.5 | 7 |
| | | 288.925 | 11.375 | 142.875 | 5.625 | 63.5 | 2.5 | 111.125 | 4.375 | 1.5 | 7 |
| | | 288.925 | 11.375 | 142.875 | 5.625 | 63.5 | 2.5 | 111.125 | 4.375 | 1.5 | 7 |
| | | 288.925 | 11.375 | 142.875 | 5.625 | 63.5 | 2.5 | 111.125 | 4.375 | 1.5 | 7 |
| | | 320.675 | 12.625 | 185.738 | 7.313 | 85.725 | 3.375 | 138.112 | 5.437 | 1.5 | 3.5 |
| | | 320.675 | 12.625 | 185.738 | 7.313 | 85.725 | 3.375 | 138.112 | 5.437 | 1.5 | 3.5 |
| | | 320.675 | 12.625 | 185.738 | 7.313 | 85.725 | 3.375 | 138.112 | 5.437 | 1.5 | 3.5 |
| **180** | 7.087 | 250 | 9.843 | 103 | 4.055 | 45 | 1.772 | 83 | 3.268 | 1 | 3 |

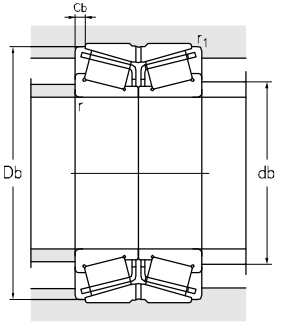
| Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| $C_r$ | $C_{or}$ | Grease | Oil | | e | Y | Yo | a | |
| kN | | r/min | | | | | | | kg |
| 1110 | 1850 | 940 | 1300 | **K99600/K99102CD** | 0.41 | 1.66 | 2.47 | 1.62 | 26.9 |
| 1380 | 2280 | 940 | 1300 | **KEE107060/K107105D-3/C9** | 0.39 | 1.74 | 2.59 | 1.7 | 36 |
| 460 | 1200 | 1000 | 1300 | **K46780/K46720CD** | 0.38 | 1.76 | 2.62 | 1.72 | 10.9 |
| 1080 | 1940 | 860 | 1100 | **KHM237532/KHM237510CD** | 0.32 | 2.12 | 3.15 | 2.07 | 37.2 |
| 455 | 1170 | 1000 | 1300 | **K46790/K46720/DB** | 0.38 | 1.76 | 2.62 | 1.72 | 10.8 |
| 710 | 1500 | 1000 | 1200 | **K67780/K67720D-3/C9** | 0.44 | 1.54 | 2.29 | 1.5 | 17.5 |
| 680 | 1300 | 950 | 1200 | **M235145/M235113D** | 0.32 | 2.12 | 3.15 | 2.07 | 16.9 |
| 1080 | 1940 | 1000 | 1200 | **KHM237535/KHM237510CD** | 0.32 | 2.11 | 3.14 | 2.06 | 36.5 |
| 1080 | 1940 | 1000 | 1200 | **KHM237536NA/KHM237510CD** | 0.32 | 2.11 | 3.14 | 2.06 | 36.5 |
| 1500 | 2370 | 840 | 1100 | **KH936349/KH936310D** | 0.81 | 0.8 | 1.2 | 0.8 | 63.4 |
| 985 | 2020 | 840 | 1100 | **K94675/K94114D** | 0.47 | 1.44 | 2.15 | 1.41 | 36.1 |
| 710 | 1500 | 940 | 1300 | **K67787/K67720CD** | 0.44 | 1.52 | 2.27 | 1.49 | 15.5 |
| 710 | 1500 | 940 | 1300 | **K67787/K67720D** | 0.44 | 1.52 | 2.27 | 1.49 | 15.5 |
| 725 | 1720 | 940 | 1300 | **KM238840/KM238810CD/YA10** | 0.33 | 2.03 | 3.02 | 1.98 | 21.4 |
| 795 | 1720 | 940 | 1300 | **KM238840/KM238810D** | 0.33 | 2.03 | 3.02 | 1.98 | 22 |
| 725 | 1720 | 940 | 1300 | **M238840/M238810CD/YA10** | 0.33 | 2.04 | 3.03 | 1.99 | 21.4 |
| 700 | 1450 | 940 | 1300 | **KNA87700SW/K87112D** | 0.41 | 1.66 | 2.47 | 1.62 | 24 |
| 1080 | 1940 | 940 | 1300 | **HM237545/HM237510CD** | 0.33 | 2.07 | 3.09 | 2.03 | 32.7 |
| 1080 | 1940 | 940 | 1300 | **HM237545X2/HM237510CDX2** | 0.33 | 2.07 | 3.09 | 2.03 | 32.7 |
| 1080 | 1940 | 940 | 1300 | **HM237545X2/HM237510CDX2/C9** | 0.33 | 2.07 | 3.09 | 2.03 | 32.7 |
| 1010 | 2020 | 940 | 1300 | **K94700/K94114CD** | 0.47 | 1.44 | 2.15 | 1.41 | 34 |
| 1080 | 1940 | 940 | 1300 | **KHM237545/KHM237510CD/YA1** | 0.32 | 2.11 | 3.14 | 2.06 | 32.9 |
| 1170 | 2170 | 940 | 1300 | **KHM237545/KHM237510D** | 0.33 | 2.07 | 3.09 | 2.03 | 36.2 |
| 1400 | 2760 | 840 | 1100 | **KEE222070/K222127CD** | 0.4 | 1.68 | 2.50 | 1.64 | 61.5 |
| 1400 | 2760 | 840 | 1100 | **KEE222070/K222127D** | 0.4 | 1.68 | 2.5 | 1.64 | 61.5 |
| 1590 | 2830 | 840 | 1100 | **KH239640/KH239612D** | 0.32 | 2.12 | 3.15 | 2.07 | 58.9 |
| 655 | 1490 | 900 | 1100 | **KJM736149/KJM736110/DB** | 0.48 | 1.41 | 2.09 | 1.37 | 14.3 |

Note: * indicates the maximum value of IDor OD.

d 187.325~228.46 mm



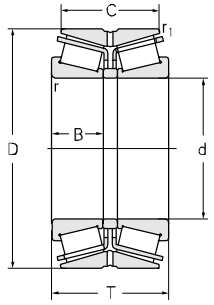



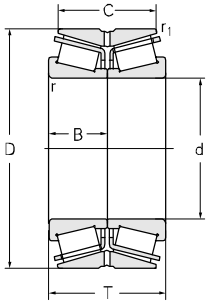

| Principal dimensions | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | | D | | T | | B | | C | | $r_{1min1}$ | $r_{min}$ |
| mm | in | mm | in | mm | in | mm | in | mm | in | mm | |
| **187.325** | 7.375 | 269.875 | 10.625 | 119.062 | 4.687 | 55.562 | 2.187 | 93.662 | 3.687 | 1.5 | 3.5 |
| | | 269.875 | 10.625 | 119.062 | 4.687 | 55.562 | 2.187 | 93.662 | 3.687 | 1.5 | 3.5 |
| | | 269.875 | 10.625 | 119.062 | 4.687 | 55.562 | 2.187 | 93.662 | 3.687 | 1.5 | 3.5 |
| | | 320.675 | 12.625 | 185.738 | 7.313 | 85.725 | 3.375 | 138.112 | 5.437 | 1.5 | 5.5 |
| **190** | 7.48 | 260 | 10.236 | 102 | 4.016 | 44 | 1.732 | 83 | 3.268 | 1 | 8 |
| **190.5** | 7.5 | 266.7 | 10.5 | 109.538 | 4.313 | 54.961 | 2.164 | 84.138 | 3.313 | 0.8 | 3.5 |
| | | 368.3 | 14.5 | 193.675 | 7.625 | 88.897 | 3.5 | 136.525 | 5.375 | 1.5 | 6.4 |
| **200.025** | 7.875 | 317.5 | 12.5 | 146.05 | 5.75 | 63.5 | 2.5 | 111.125 | 4.375 | 1.5 | 4.3 |
| | | 317.5 | 12.5 | 146.05 | 5.75 | 63.5 | 2.5 | 111.125 | 4.375 | 1.5 | 4.3 |
| | | 317.5 | 12.5 | 146.05 | 5.75 | 63.5 | 2.5 | 111.125 | 4.375 | 1.5 | 4.3 |
| | | 384.175 | 15.125 | 238.125 | 9.375 | 112.712 | 4.437 | 193.675 | 7.625 | 1.5 | 6.4 |
| | | 384.175 | 15.125 | 238.125 | 9.375 | 112.712 | 4.437 | 193.675 | 7.625 | 1.5 | 6.4 |
| **203.2** | 8 | 276.225 | 10.875 | 95.25 | 3.75 | 47.625 | 1.875 | 73.025 | 2.875 | 0.8 | 3.5 |
| | | 276.225 | 10.875 | 95.25 | 3.75 | 47.816 | 1.883 | 73.025 | 2.875 | 0.8 | 3.5 |
| | | 276.225 | 10.875 | 95.25 | 3.75 | 47.816 | 1.883 | 73.025 | 2.875 | 0.8 | 3.5 |
| | | 276.225 | 10.875 | 95.25 | 3.75 | 47.816 | 1.883 | 73.025 | 2.875 | 0.8 | 3.5 |
| | | 292.1 | 11.5 | 125.415 | 4.938 | 57.945 | 2.281 | 101.6 | 4 | 1.5 | 3.5 |
| | | 317.5 | 12.5 | 146.05 | 5.75 | 63.5 | 2.5 | 111.125 | 4.375 | 1.5 | 4.3 |
| | | 317.5 | 12.5 | 146.05 | 5.75 | 73.216 | 2.883 | 111.125 | 4.375 | 1.5 | 5.5 |
| | | 368.3 | 14.5 | 193.675 | 7.625 | 88.897 | 3.5 | 136.525 | 5.375 | 1.5 | 3.3 |
| | | 368.3 | 14.5 | 193.675 | 7.625 | 88.897 | 3.5 | 136.525 | 5.375 | 1.5 | 3.3 |
| **206.375** | 8.125 | 336.55 | 13.25 | 211.138 | 8.313 | 100.012 | 3.937 | 169.862 | 6.687 | 1.5 | 3.3 |
| **212.725** | 8.375 | 285.75 | 11.25 | 98.425 | 3.875 | 46.038 | 1.813 | 76.2 | 3 | 0.8 | 3.5 |
| **220.662** | 8.687 | 314.325 | 12.375 | 131.762 | 5.187 | 61.912 | 2.437 | 106.362 | 4.187 | 1.5 | 6.4 |
| | | 314.325 | 12.375 | 131.762 | 5.187 | 61.912 | 2.437 | 106.362 | 4.187 | 1.5 | 6.4 |
| | | 314.325 | 12.375 | 131.762 | 5.187 | 61.912 | 2.437 | 106.362 | 4.187 | 1.5 | 6.4 |
| | | 314.325 | 12.375 | 131.762 | 5.187 | 61.912 | 2.437 | 106.362 | 4.187 | 1.5 | 6.4 |
| **228.46** | 8.994 | 431.8 | 17 | 196.85 | 7.75 | 85.725 | 3.375 | 111.125 | 4.375 | 3.3 | 6.4 |

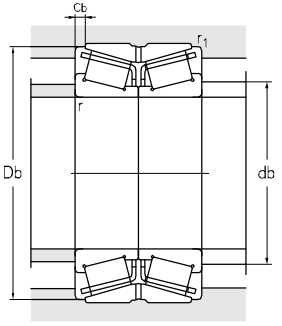
| Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| $C_r$ | $C_{or}$ | Grease | Oil | | e | Y | Yo | a | |
| kN | | r/min | | | | | | | kg |
| 795 | 1720 | 940 | 1300 | **KM238849/KM238810DC** | 0.33 | 2.04 | 3.03 | 1.99 | 19.3 |
| 985 | 1810 | 940 | 1300 | **M238849/M238810CD-2/C9** | 0.33 | 2.04 | 3.03 | 1.99 | 19.3 |
| 985 | 1810 | 940 | 1300 | **M238849/M238810DC** | 0.33 | 2.04 | 3.03 | 1.99 | 19.3 |
| 1590 | 2830 | 850 | 1100 | **KH239649/KH239612CD** | 0.32 | 2.12 | 3.15 | 2.07 | 55.4 |
| 630 | 1460 | 860 | 1100 | **KJM738249A/KJM738210/DB** | 0.48 | 1.41 | 2.11 | 1.38 | 14.1 |
| 615 | 1520 | 940 | 1300 | **KNA67885SW/K67820D** | 0.48 | 1.41 | 2.11 | 1.38 | 15.3 |
| 1680 | 2900 | 700 | 950 | **KEE420751/K421451CD** | 0.4 | 1.68 | 2.50 | 1.64 | 84 |
| 1035 | 2270 | 840 | 1100 | **93787/93127D** | 0.52 | 1.29 | 1.92 | 1.26 | 40.8 |
| 1035 | 2270 | 840 | 1100 | **K93787/93127CD** | 0.52 | 1.29 | 1.92 | 1.26 | 40.6 |
| 1035 | 2270 | 840 | 1100 | **K93787/K93127D** | 0.52 | 1.29 | 1.92 | 1.26 | 40.8 |
| 2320 | 5080 | 690 | 920 | **KH247535/KH247510CD** | 0.33 | 2.03 | 3.02 | 1.98 | 112 |
| 2320 | 5080 | 690 | 920 | **KH247535/KH247510CD-3** | 0.33 | 2.03 | 3.02 | 1.98 | 112 |
| 635 | 1440 | 780 | 990 | **LM241149NW/LM241110D/C9** | 0.32 | 2.12 | 3.15 | 2.07 | 15.4 |
| 580 | 1350 | 780 | 990 | **LM241149NW/LM241110D/C9YAB** | 0.32 | 2.12 | 3.15 | 2.07 | 15 |
| 610 | 1440 | 940 | 1300 | **KLM241149NW/KLM241110D** | 0.32 | 2.12 | 3.15 | 2.07 | 15.3 |
| 640 | 1350 | 840 | 1100 | **KLM241149NWSH/KLM241110DSH** | 0.32 | 2.1 | 3.12 | 2.05 | 15 |
| 990 | 2120 | 760 | 960 | **M241547/M241510CD** | 0.33 | 2.03 | 3.02 | 1.98 | 26.6 |
| 1035 | 2270 | 840 | 1100 | **K93800/K93127D** | 0.52 | 1.29 | 1.92 | 1.26 | 39.8 |
| 1030 | 2270 | 840 | 1100 | **KNA93800SW/K93127D** | 0.52 | 1.28 | 1.92 | 1.26 | 39.6 |
| 1680 | 2900 | 840 | 1100 | **EE420801/421451CD** | 0.4 | 1.69 | 2.52 | 1.65 | 78.8 |
| 1530 | 2900 | 840 | 1100 | **KEE420801/K421451CD** | 0.4 | 1.69 | 2.52 | 1.65 | 78.8 |
| 1980 | 4170 | 670 | 900 | **H242649/H242610CD-3** | 0.34 | 2 | 2.98 | 1.96 | 67.9 |
| 630 | 1630 | 670 | 900 | **KLM742745/KLM742710CD** | 0.48 | 1.41 | 2.09 | 1.38 | 16.9 |
| 1050 | 2450 | 760 | 1000 | **KM244249/KM244210CD-2-JG** | 0.33 | 2.03 | 3.02 | 1.98 | 30.5 |
| 1050 | 2450 | 760 | 1000 | **KM244249/KM244210D** | 0.33 | 2.03 | 3.02 | 1.98 | 30.5 |
| 1050 | 2450 | 760 | 1000 | **KM244249/KM244210D-3** | 0.33 | 2.03 | 3.02 | 1.98 | 31.2 |
| 1050 | 2300 | 760 | 1000 | **M244249/M244210CD** | 0.33 | 2.03 | 3.02 | 1.98 | 30.5 |
| 1850 | 3200 | 600 | 800 | **KEE113091/K113171D-2-JG** | 0.88 | 0.77 | 1.14 | 0.75 | 111 |

Note: * indicates the maximum value of IDor OD.

d 228.6~260.35 mm



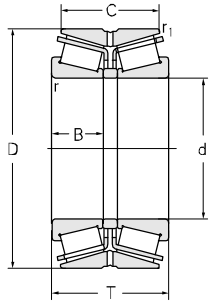



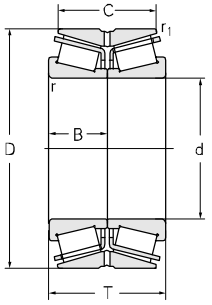



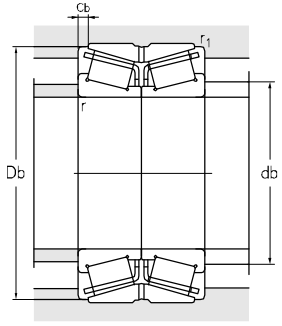

| Principal dimensions | | | | | | | | | | | | Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | | D | | T | | B | | C | | $r_{1min1}$ | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | e | Y | Yo | a | |
| mm | in | mm | in | mm | in | mm | in | mm | in | mm | | kN | | r/min | | | | | | | kg |
| **228.6** | 9 | 327.025 | 12.875 | 114.3 | 4.5 | 52.388 | 2.063 | 82.55 | 3.25 | 1.5 | 6.4 | 790 | 1830 | 760 | 1000 | **K8573/K8520CD** | 0.41 | 1.66 | 2.47 | 1.62 | 28.9 |
| | | 355.6 | 14 | 152.4 | 6 | 69.85 | 2.75 | 111.125 | 4.375 | 1.5 | 6.8 | 1200 | 2500 | 760 | 1000 | **KEE130902/K131401CD** | 0.33 | 2.03 | 3.02 | 1.98 | 50.2 |
| | | 355.6 | 14 | 152.4 | 6 | 69.85 | 2.75 | 114.3 | 4.5 | 1.5 | 6.4 | 1300 | 2700 | 760 | 1000 | **KHM746646/KHM746610CD** | 0.47 | 1.44 | 2.15 | 1.41 | 52.4 |
| | | 488.95 | 19.25 | 254 | 10 | 120.65 | 4.75 | 196.85 | 7.75 | 1.5 | 6.4 | 2910 | 5650 | 630 | 840 | **KEE295950/K295192D/C9** | 0.31 | 2.18 | 3.24 | 2.13 | 217 |
| **234.95** | 9.25 | 327.025 | 12.875 | 114.3 | 4.5 | 52.388 | 2.063 | 82.55 | 3.25 | 1.5 | 6.4 | 790 | 1830 | 760 | 1000 | **K8575/K8520CD** | 0.41 | 1.66 | 2.47 | 1.62 | 26.9 |
| | | 327.025 | 12.875 | 114.3 | 4.5 | 52.388 | 2.063 | 82.55 | 3.25 | 1.5 | 6.4 | 790 | 1830 | 760 | 1000 | **K8575/K8520D-C3** | 0.41 | 1.66 | 2.47 | 1.62 | 26.9 |
| | | 348.175 | 13.708 | 238.125 | 9.375 | 112.712 | 4.437 | 193.675 | 7.625 | 1.5 | 6.4 | 2320 | 5080 | 750 | 950 | **KH247549/KH247510D** | 0.33 | 2.03 | 3.02 | 1.98 | 111 |
| **237.33** | 9.344 | 358.775 | 14.125 | 152.4 | 6 | 71.438 | 2.813 | 117.475 | 4.625 | 1.5 | 6.4 | 1530 | 3090 | 750 | 950 | **KRM249736/M249710CD** | 0.33 | 2.03 | 3.02 | 1.98 | 53.2 |
| **241.3** | 9.5 | 327.025 | 12.875 | 114.3 | 4.5 | 52.388 | 2.063 | 82.55 | 3.25 | 1.5 | 6.4 | 790 | 1830 | 760 | 1000 | **K8578/K8520CD** | 0.41 | 1.66 | 2.47 | 1.62 | 25 |
| | | 327.025 | 12.875 | 114.3 | 4.5 | 52.388 | 2.063 | 82.55 | 3.25 | 1.5 | 6.4 | 790 | 1830 | 760 | 1000 | **K8578/K8520DC** | 0.41 | 1.66 | 2.47 | 1.62 | 25 |
| | | 406.4 | 16 | 215.9 | 8.5 | 100.012 | 3.937 | 184.15 | 7.25 | 1.5 | 6.4 | 2390 | 4950 | 760 | 1000 | **KH249148/KH249111CD** | 0.33 | 2.03 | 3.02 | 1.98 | 110 |
| | | 444.5 | 17.5 | 209.55 | 8.25 | 100.012 | 3.937 | 158.75 | 6.25 | 1.5 | 6.4 | 2480 | 4650 | 760 | 1000 | **EE923095/923176D** | 0.34 | 2.01 | 2.99 | 1.96 | 135 |
| | | 444.5 | 17.5 | 209.55 | 8.25 | 100.012 | 3.937 | 158.75 | 6.25 | 1.5 | 6.4 | 2480 | 4650 | 760 | 1000 | **KEE923095/K923176D** | 0.34 | 2 | 2.98 | 1.96 | 135 |
| **249.25** | 9.813 | 381 | 15 | 171.45 | 6.75 | 76.2 | 3 | 127 | 5 | 1.5 | 6.4 | 1240 | 2960 | 690 | 920 | **KEE126098/K126151CD** | 0.52 | 1.31 | 1.94 | 1.28 | 63.4 |
| | | 381 | 15 | 171.45 | 6.75 | 76.2 | 3 | 127 | 5 | 1.5 | 6.4 | 1240 | 2960 | 690 | 920 | **KEE126098/K126151CD-3** | 0.52 | 1.31 | 1.94 | 1.28 | 63.4 |
| **253.975** | 9.999 | 347.662 | 13.687 | 101.6 | 4 | 50.99 | 2.007 | 69.85 | 2.75 | 1.5 | 3.5 | 750 | 1740 | 690 | 920 | **LM249747NW/LM249710CD/C9YAB** | 0.33 | 2.03 | 3.02 | 1.98 | 25.3 |
| **254** | 10 | 347.662 | 13.687 | 101.6 | 4 | 50.99 | 2.007 | 69.85 | 2.75 | 1.5 | 3.5 | 825 | 1740 | 690 | 920 | **KLM249747NW/KLM249710D** | 0.33 | 2.03 | 3.02 | 1.98 | 25.3 |
| | | 347.662 | 13.687 | 101.6 | 4 | 50.99 | 2.007 | 69.85 | 2.75 | 1.5 | 3.5 | 825 | 1740 | 690 | 920 | **KLM249747NWSH/KLM249710D** | 0.33 | 2.03 | 3.02 | 1.98 | 24.2 |
| | | 358.775 | 14.125 | 152.4 | 6 | 71.438 | 2.813 | 117.475 | 4.625 | 1.5 | 3.5 | 1530 | 3090 | 690 | 920 | **KRM249749/M249710CD** | 0.33 | 2.03 | 3.02 | 1.98 | 46.9 |
| | | 358.775 | 14.125 | 152.4 | 6 | 71.438 | 2.813 | 117.475 | 4.625 | 1.5 | 3.5 | 1530 | 3090 | 690 | 920 | **KRM249749/M249710CD-SMJ** | 0.33 | 2.03 | 3.02 | 1.98 | 45.8 |
| | | 358.775 | 14.125 | 152.4 | 6 | 71.438 | 2.813 | 117.475 | 4.625 | 1.5 | 3.5 | 1530 | 3090 | 690 | 920 | **M249749/M249710CD** | 0.33 | 2.03 | 3.02 | 1.98 | 46.9 |
| | | 358.775 | 14.125 | 152.4 | 6 | 71.438 | 2.813 | 117.475 | 4.625 | 1.5 | 3.5 | 1530 | 3090 | 690 | 920 | **M249749/M249710CD-SMJ** | 0.33 | 2.03 | 3.02 | 1.98 | 46.9 |
| | | 393.7 | 15.5 | 157.162 | 6.187 | 69.85 | 2.75 | 109.538 | 4.313 | 1.5 | 6.4 | 1290 | 2830 | 690 | 920 | **KEE275100/K275156D** | 0.4 | 1.68 | 2.5 | 1.64 | 66.4 |
| **260.35** | 10.25 | 365.125 | 14.375 | 130.175 | 5.125 | 58.738 | 2.313 | 98.425 | 3.875 | 1.5 | 6.4 | 885 | 2200 | 670 | 900 | **EE134102/134144CD** | 0.37 | 1.8 | 2.69 | 1.76 | 37.3 |
| | | 365.125 | 14.375 | 130.175 | 5.125 | 58.738 | 2.313 | 98.425 | 3.875 | 1.5 | 6.4 | 975 | 2200 | 670 | 900 | **EE134102/134144D** | 0.37 | 1.8 | 2.69 | 1.76 | 37.3 |
| | | 365.125 | 14.375 | 130.175 | 5.125 | 58.738 | 2.313 | 98.425 | 3.875 | 1.5 | 6.4 | 885 | 2200 | 670 | 900 | **EE134102/134144D/HE** | 0.37 | 1.8 | 2.69 | 1.76 | 37.3 |
| | | 400.05 | 15.75 | 155.58 | 6.125 | 67.47 | 2.656 | 107.95 | 4.25 | 1.5 | 9.7 | 1260 | 2500 | 670 | 900 | **KEE221026/K221576CD** | 0.39 | 1.71 | 2.54 | 1.67 | 61.7 |
| | | 419.1 | 16.5 | 184.15 | 7.25 | 84.138 | 3.313 | 136.525 | 5.375 | 1.5 | 6.4 | 1770 | 3890 | 670 | 900 | **EE435102/435165CD** | 0.6 | 1.13 | 1.68 | 1.1 | 92.1 |
| | | 419.1 | 16.5 | 184.15 | 7.25 | 84.138 | 3.313 | 136.525 | 5.375 | 1.5 | 6.4 | 1770 | 3890 | 670 | 900 | **EE435102/435165CD/YA1** | 0.6 | 1.13 | 1.68 | 1.1 | 92.1 |

Note: * indicates the maximum value of IDor OD.

d 260.35~304.8 mm



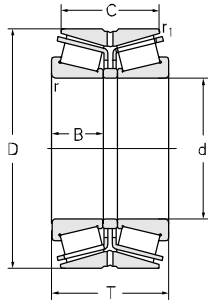



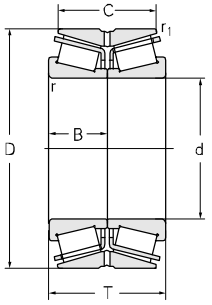

| Principal dimensions | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | | D | | T | | B | | C | | $r_{1min1}$ | $r_{min}$ |
| mm | in | mm | in | mm | in | mm | in | mm | in | mm | |
| **260.35** | | 422.275 | 16.625 | 178.592 | 7.031 | 79.771 | 3.141 | 139.7 | 5.5 | 1.5 | 6.8 |
| | | 422.275 | 16.625 | 178.592 | 7.031 | 79.771 | 3.141 | 139.7 | 5.5 | 1.5 | 6.8 |
| **263.525** | 10.375 | 355.6 | 14 | 127 | 5 | 57.15 | 2.25 | 101.6 | 4 | 1.5 | 3.5 |
| **266.7** | 10.5 | 355.6 | 14 | 127 | 5 | 57.15 | 2.25 | 101.6 | 4 | 1.5 | 3.5 |
| **269.875** | 10.625 | 381 | 15 | 158.75 | 6.25 | 74.612 | 2.937 | 123.825 | 4.875 | 1.5 | 6.4 |
| **273.05** | 10.75 | 393.7 | 15.5 | 157.162 | 6.187 | 69.85 | 2.75 | 109.538 | 4.313 | 1.5 | 6.4 |
| **279.4** | 11 | 469.9 | 18.5 | 200.025 | 7.875 | 93.662 | 3.687 | 149.225 | 5.875 | 1.5 | 9.7 |
| | | 488.95 | 19.25 | 254 | 10 | 120.65 | 4.75 | 196.85 | 7.75 | 1.3 | 1.5 |
| **279.982** | 11.023 | 380.898 | 14.996 | 139.7 | 5.5 | 65.088 | 2.563 | 107.95 | 4.25 | 1.5 | 3.5 |
| | | 380.898 | 14.996 | 139.7 | 5.5 | 65.088 | 2.563 | 107.95 | 4.25 | 1.5 | 3.5 |
| **280.192** | 11.031 | 406.4 | 16 | 149.226 | 5.875 | 67.673 | 2.664 | 117.475 | 4.625 | 1.5 | 6.8 |
| **285.75** | 11.25 | 380.898 | 14.996 | 139.7 | 5.5 | 65.088 | 2.563 | 107.95 | 4.25 | 1.5 | 3.5 |
| **288.925** | 11.375 | 406.6 | 16.008 | 165.1 | 6.5 | 77.788 | 3.063 | 130.175 | 5.125 | 1 | 6.4 |
| | | 406.6 | 16.008 | 165.1 | 6.5 | 77.788 | 3.063 | 130.175 | 5.125 | 1 | 6.4 |
| | | 406.4 | 16 | 165.1 | 6.5 | 77.788 | 3.063 | 130.175 | 5.125 | 1 | 6.4 |
| | | 406.6 | 16.008 | 165.1 | 6.5 | 77.788 | 3.063 | 130.175 | 5.125 | 1 | 6.4 |
| | | 406.6 | 16.008 | 165.1 | 6.5 | 77.788 | 3.063 | 130.175 | 5.125 | 1 | 6.4 |
| | | 406.6 | 16.008 | 165.1 | 6.5 | 77.788 | 3.063 | 130.175 | 5.125 | 1 | 6.4 |
| | | 406.6 | 16.008 | 165.1 | 6.5 | 77.788 | 3.063 | 130.175 | 5.125 | 1 | 6.4 |
| **300.038** | 11.813 | 422.275 | 16.625 | 174.625 | 6.875 | 82.55 | 3.25 | 136.525 | 5.375 | 1.5 | 6.4 |
| | | 422.275 | 16.625 | 174.625 | 6.875 | 82.55 | 3.25 | 136.525 | 5.375 | 1.5 | 6.4 |
| | | 422.275 | 16.625 | 174.625 | 6.875 | 82.55 | 3.25 | 136.525 | 5.375 | 1.5 | 6.4 |
| | | 422.275 | 16.625 | 174.625 | 6.875 | 82.55 | 3.25 | 136.525 | 5.375 | 1.5 | 6.4 |
| **304.8** | 12 | 393.7 | 15.5 | 107.95 | 4.25 | 54.166 | 2.133 | 82.55 | 3.25 | 1.5 | 6.4 |
| | | 393.7 | 15.5 | 107.95 | 4.25 | 50.8 | 2 | 82.55 | 3.25 | 1.5 | 6.4 |

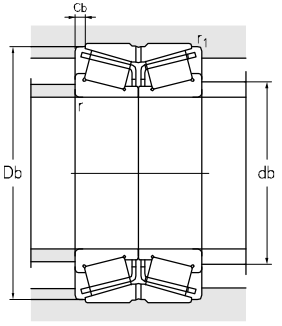
| Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| $C_r$ | $C_{or}$ | Grease | Oil | | e | Y | Yo | a | |
| kN | | r/min | | | | | | | kg |
| 1980 | 3750 | 670 | 900 | **HM252348/HM252310CD** | 0.33 | 2.03 | 3.02 | 1.98 | 89.1 |
| 1760 | 3750 | 670 | 900 | **KHM252348/KHM252310CD** | 0.33 | 2.03 | 3.02 | 1.98 | 89.1 |
| 985 | 2700 | 670 | 900 | **KLM451345/KLM451310CD** | 0.36 | 1.87 | 2.79 | 1.83 | 34 |
| 1080 | 2700 | 670 | 900 | **KLM451349/KLM451310CD** | 0.36 | 1.88 | 2.79 | 1.83 | 32.8 |
| 1740 | 3350 | 600 | 800 | **M252349/M252310CD** | 0.33 | 2.03 | 3.02 | 1.98 | 51.8 |
| 1290 | 2830 | 600 | 800 | **KEE275108/K275156CD** | 0.4 | 1.68 | 2.5 | 1.64 | 56.3 |
| 2740 | 5000 | 590 | 780 | **EE722110/722186D** | 0.38 | 1.79 | 2.67 | 1.75 | 132 |
| 2910 | 5650 | 580 | 770 | **EE295110/295192D** | 0.31 | 2.18 | 3.45 | 2.13 | 188 |
| 1035 | 2830 | 600 | 800 | **KLM654642/KLM654610CD** | 0.43 | 1.57 | 2.34 | 1.53 | 41.6 |
| 1130 | 2830 | 600 | 800 | **KLM654642/KLM654610CD/YA1** | 0.43 | 1.57 | 2.34 | 1.53 | 41.6 |
| 1320 | 2950 | 600 | 800 | **KEE128111/K128160CD** | 0.39 | 1.71 | 2.54 | 1.67 | 56.7 |
| 1130 | 2830 | 600 | 800 | **LM654649/LM654610CD** | 0.43 | 1.57 | 2.34 | 1.53 | 39.2 |
| 1720 | 4150 | 580 | 770 | **KM255449/KM255410CD** | 0.34 | 2 | 2.98 | 1.96 | 64.1 |
| 1620 | 4100 | 580 | 770 | **M255449/M255410CD** | 0.34 | 2 | 2.98 | 1.96 | 64.1 |
| 1620 | 4100 | 580 | 770 | **M255449/M255410CD-1** | 0.34 | 2 | 2.97 | 1.95 | 64.1 |
| 1620 | 4100 | 580 | 770 | **M255449/M255410CD** | 0.34 | 2 | 2.98 | 1.96 | 64.1 |
| 1620 | 4100 | 580 | 770 | **M255449/M255410CD/HE** | 0.34 | 2 | 2.98 | 1.96 | 64.1 |
| 1620 | 4100 | 580 | 770 | **M255449/M255410CD/HE-SMJ** | 0.34 | 2 | 2.98 | 1.96 | 64.1 |
| 1620 | 4100 | 580 | 770 | **M255449/M255410CD-SMJ** | 0.34 | 2 | 2.98 | 1.96 | 64.1 |
| 1560 | 4050 | 580 | 770 | **HM256849/HM256810CD** | 0.33 | 2 | 3 | 2 | 69.7 |
| 1560 | 4050 | 580 | 770 | **HM256849/HM256810CD/C9** | 0.33 | 2 | 3 | 2 | 69.7 |
| 1560 | 4050 | 580 | 770 | **HM256849/HM256810CD/YA1** | 0.33 | 2 | 3 | 2 | 69.7 |
| 1720 | 4050 | 580 | 770 | **HM256849/HM256810D** | 0.34 | 2 | 2.98 | 1.96 | 69.7 |
| 970 | 2330 | 580 | 770 | **KL357049NW/KL357010D** | 0.36 | 1.89 | 2.81 | 1.84 | 30.1 |
| 1070 | 2330 | 580 | 770 | **L357049/L357010CD** | 0.36 | 1.89 | 2.81 | 1.84 | 30.5 |

Note: * indicates the maximum value of IDor OD.

d 304.8~368.249 mm



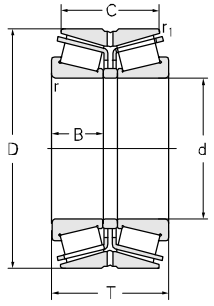



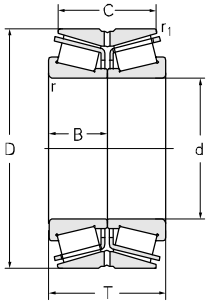

| Principal dimensions | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | | D | | T | | B | | C | | $r_{1min1}$ | $r_{min}$ |
| mm | in | mm | in | mm | in | mm | in | mm | in | mm | |
| **304.8** | | 393.7 | 15.5 | 107.95 | 4.25 | 50.8 | 2 | 82.55 | 3.25 | 1.5 | 6.4 |
| | | 393.7 | 15.5 | 107.95 | 4.25 | 54.166 | 2.133 | 82.55 | 3.25 | 1.5 | 6.4 |
| | | 412.75 | 16.25 | 123.825 | 4.875 | 53.975 | 2.125 | 92.075 | 3.625 | 1.5 | 6.4 |
| | | 444.5 | 17.5 | 146.05 | 5.75 | 61.912 | 2.437 | 98.425 | 3.875 | 1.5 | 8 |
| | | 495.3 | 19.5 | 196.85 | 7.75 | 92.075 | 3.625 | 146.05 | 5.75 | 1.5 | 16 |
| **311.15** | 12.25 | 558.8 | 22 | 190.5 | 7.5 | 82.55 | 3.25 | 111.125 | 4.375 | 3.3 | 9.7 |
| **317.5** | 12.5 | 444.5 | 17.5 | 146.05 | 5.75 | 61.912 | 2.437 | 98.425 | 3.875 | 1.5 | 8 |
| | | 447.675 | 17.625 | 180.975 | 7.125 | 85.725 | 3.375 | 146.05 | 5.75 | 1.5 | 3.5 |
| | | 447.675 | 17.625 | 180.975 | 7.125 | 85.725 | 3.375 | 146.05 | 5.75 | 1.5 | 3.5 |
| | | 447.675 | 17.625 | 180.975 | 7.125 | 85.725 | 3.375 | 146.05 | 5.75 | 1.5 | 3.5 |
| **330.2** | 13 | 482.6 | 19 | 177.8 | 7 | 80.167 | 3.156 | 127 | 5 | 1.5 | 6.4 |
| **333.375** | 13.125 | 469.9 | 18.5 | 190.5 | 7.5 | 90.488 | 3.563 | 152.4 | 6 | 1.5 | 6.4 |
| | | 469.9 | 18.5 | 190.5 | 7.5 | 90.488 | 3.563 | 152.4 | 6 | 1.5 | 6.4 |
| **342.9** | 13.5 | 457.098 | 17.996 | 142.875 | 5.625 | 63.5 | 2.5 | 104.775 | 4.125 | 1.6 | 3.6 |
| | | 457.098 | 17.996 | 142.875 | 5.625 | 63.5 | 2.5 | 101.6 | 4 | 1.5 | 3.3 |
| | | 533.4 | 21 | 165.1 | 6.5 | 76.2 | 3 | 114.3 | 4.5 | 1.5 | 4.8 |
| **343.154** | 13.51 | 450.85 | 17.75 | 189.35 | 7.455 | 66.675 | 2.625 | 52.388 | 2.063 | 1 | 8.5 |
| **346.075** | 13.625 | 488.95 | 19.25 | 200.025 | 7.875 | 95.25 | 3.75 | 158.75 | 6.25 | 1.5 | 6.4 |
| | | 488.95 | 19.25 | 200.025 | 7.875 | 95.25 | 3.75 | 158.75 | 6.25 | 1.5 | 6.4 |
| | | 488.95 | 19.25 | 200.025 | 7.875 | 95.25 | 3.75 | 158.75 | 6.25 | 1.5 | 6.4 |
| **355.6** | 14 | 444.5 | 17.5 | 136.524 | 5.375 | 60.325 | 2.375 | 111.125 | 4.375 | 1.5 | 3.5 |
| | | 444.5 | 17.5 | 136.524 | 5.375 | 60.325 | 2.375 | 111.125 | 4.375 | 1.5 | 3.5 |
| | | 444.5 | 17.5 | 136.524 | 5.375 | 60.325 | 2.375 | 111.125 | 4.375 | 1.5 | 3.5 |
| | | 501.65 | 19.75 | 155.575 | 6.125 | 66.675 | 2.625 | 107.95 | 4.25 | 1.5 | 6.4 |
| | | 501.65 | 19.75 | 145.05 | 5.711 | 61.413 | 2.418 | 107.95 | 4.25 | 1.5 | 6.4 |
| | | 514.35 | 20.25 | 193.675 | 7.625 | 84.138 | 3.313 | 152.4 | 6 | 1.5 | 6.4 |
| **368.249** | 14.498 | 523.875 | 20.625 | 214.312 | 8.437 | 101.6 | 4 | 169.862 | 6.687 | 1.5 | 6.4 |

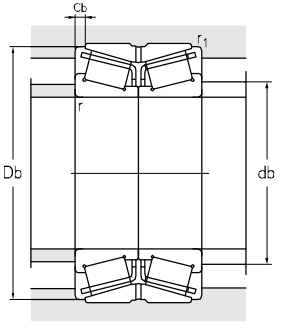
| Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| $C_r$ | $C_{or}$ | Grease | Oil | | e | Y | Yo | a | |
| kN | | r/min | | | | | | | kg |
| 1070 | 2330 | 580 | 770 | **L357049/L357010D** | 0.33 | 2.04 | 3.04 | 2 | 30.5 |
| 970 | 2330 | 580 | 770 | **L357049NW/L357010CD/C9YAB** | 0.36 | 1.89 | 2.81 | 1.84 | 30.1 |
| 1060 | 2350 | 580 | 770 | **EE109120/109163D** | 0.43 | 1.6 | 2.3 | 1.6 | 42.4 |
| 1240 | 2770 | 550 | 700 | **EE291201/291751D** | 0.38 | 1.79 | 2.67 | 1.75 | 64.9 |
| 2300 | 5000 | 500 | 660 | **EE724120/724196CD-3** | 0.4 | 1.68 | 2.5 | 1.64 | 139 |
| 2130 | 4140 | 550 | 720 | **EE148122/148220D** | 0.88 | 0.77 | 1.14 | 0.75 | 184 |
| 1240 | 2770 | 490 | 650 | **KEE291250/K291751CD** | 0.38 | 1.79 | 2.67 | 1.75 | 59.0 |
| 1800 | 4650 | 490 | 650 | **HM259049/HM259010CD-SMJ** | 0.33 | 2 | 3 | 2 | 85.4 |
| 1800 | 4650 | 490 | 650 | **HM259049/HM259010CD** | 0.33 | 2 | 3 | 2 | 85.4 |
| 1800 | 4650 | 490 | 650 | **KHM259049/KHM259010CD** | 0.33 | 2 | 3 | 2 | 85.4 |
| 2130 | 4650 | 490 | 650 | **EE526130/526191CD-2/C9YAD** | 0.47 | 1.44 | 2.14 | 1.4 | 100 |
| 2070 | 5080 | 490 | 650 | **HM261049/HM261010CD/YA1** | 0.33 | 2.02 | 3 | 1.97 | 97.7 |
| 2070 | 5080 | 490 | 650 | **HM261049/HM261010D** | 0.33 | 2.02 | 3 | 1.97 | 97.7 |
| 1300 | 3500 | 480 | 630 | **KLM961548A6/KLM961511DX2A6** | 0.7 | 0.97 | 1.44 | 0.94 | 45 |
| 1300 | 3550 | 480 | 630 | **KLM961548/KLM961511D** | 0.7 | 0.97 | 1.44 | 0.94 | 44.8 |
| 2200 | 4500 | 480 | 630 | **KEE971354/K972102D-3** | 0.33 | 2.03 | 3.02 | 1.98 | 120 |
| 1320 | 3500 | 480 | 630 | **KLM361649A/KLM361610/C9DB** | 0.35 | 1.93 | 2.87 | 1.89 | 59.2 |
| 2400 | 5800 | 480 | 630 | **HM262749/HM262710CD/YA1** | 0.34 | 1.99 | 2.96 | 1.95 | 108 |
| 2400 | 5800 | 480 | 630 | **HM262749/HM262710D** | 0.33 | 2 | 3 | 2 | 108 |
| 2560 | 6450 | 480 | 630 | **HM262749SH/HM262710CDSH/C9** | 0.33 | 2 | 3 | 2 | 114 |
| 1110 | 3450 | 460 | 600 | **KL163149/KL163110CD** | 0.31 | 2.2 | 3.27 | 2.15 | 46.1 |
| 1110 | 3450 | 460 | 600 | **KL163149NW/KL163110CD** | 0.31 | 2.2 | 3.27 | 2.15 | 46.1 |
| 1110 | 3450 | 460 | 600 | **L163149/L163110CD** | 0.31 | 2.2 | 3.27 | 2.15 | 46.1 |
| 1410 | 3450 | 410 | 540 | **EE231400/231976CD/YAD** | 0.44 | 1.53 | 2.28 | 1.5 | 88.1 |
| 1410 | 3450 | 420 | 560 | **KEE231400/K231976CDX2** | 0.44 | 1.53 | 2.28 | 1.5 | 83.4 |
| 2150 | 4950 | 410 | 540 | **EE333140/333203CD** | 0.37 | 1.8 | 2.7 | 1.8 | 120 |
| 2520 | 6070 | 400 | 520 | **HM265049/HM265010D** | 0.33 | 2.03 | 3.02 | 1.98 | 136 |

Note: * indicates the maximum value of IDor OD.

d 368.3~479.425 mm



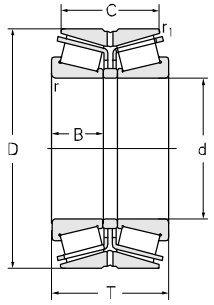



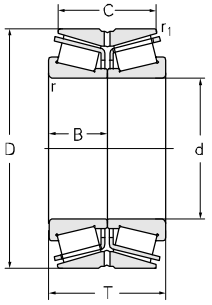

| Principal dimensions | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | | D | | T | | B | | C | | $r_{1min1}$ | $r_{min}$ |
| mm | in | mm | in | mm | in | mm | in | mm | in | mm | |
| **368.3** | 14.5 | 596.9 | 23.5 | 203.2 | 8 | 92.075 | 3.625 | 133.35 | 5.25 | 2.3 | 9.7 |
| **371.475** | 14.625 | 501.65 | 19.75 | 155.575 | 6.125 | 66.675 | 2.625 | 107.95 | 4.25 | 1.5 | 6.4 |
| **381** | 15 | 546.1 | 21.5 | 222.25 | 8.75 | 104.775 | 4.125 | 177.8 | 7 | 1.5 | 6.4 |
| | | 590.55 | 23.25 | 244.475 | 9.625 | 114.3 | 4.5 | 193.675 | 7.625 | 1.5 | 6.4 |
| | | 590.55 | 23.25 | 244.475 | 9.625 | 114.3 | 4.5 | 193.675 | 7.625 | 1.5 | 6.4 |
| | | 590.55 | 23.25 | 244.475 | 9.625 | 114.3 | 4.5 | 193.675 | 7.625 | 1.5 | 6.4 |
| **384.175** | 15.125 | 546.1 | 21.5 | 222.25 | 8.75 | 104.775 | 4.125 | 177.8 | 7 | 1.5 | 6.4 |
| | | 546.1 | 21.5 | 222.25 | 8.75 | 104.775 | 4.125 | 177.8 | 7 | 1.5 | 6.4 |
| **385.762** | 15.187 | 514.35 | 20.25 | 177.8 | 7 | 82.55 | 3.25 | 139.7 | 5.5 | 1.5 | 6.4 |
| | | 514.35 | 20.25 | 177.8 | 7 | 82.55 | 3.25 | 139.7 | 5.5 | 1.5 | 6.4 |
| **406.4** | 16 | 609.6 | 24 | 187.325 | 7.375 | 84.138 | 3.313 | 123.825 | 4.875 | 1.5 | 6.8 |
| **409.575** | 16.125 | 635 | 25 | 257.175 | 10.125 | 120.65 | 4.75 | 206.375 | 8.125 | 1.5 | 6.4 |
| **415.925** | 16.375 | 590.55 | 23.25 | 250 | 9.843 | 114.3 | 4.5 | 199.2 | 7.843 | 1.6 | 6.4 |
| | | 590.55 | 23.25 | 244.475 | 9.625 | 114.3 | 4.5 | 193.675 | 7.625 | 1.5 | 6.4 |
| | | 590.55 | 23.25 | 244.475 | 9.625 | 114.3 | 4.5 | 193.675 | 7.625 | 1.5 | 6.4 |
| | | 590.55 | 23.25 | 244.475 | 9.625 | 114.3 | 4.5 | 193.675 | 7.625 | 1.5 | 6.4 |
| **431.8** | 17 | 565.15 | 22.25 | 100.22 | 3.946 | 44.45 | 1.75 | 74.82 | 2.946 | 1.5 | 3.3 |
| | | 571.5 | 22.5 | 155.575 | 6.125 | 74.612 | 2.937 | 111.125 | 4.375 | 1.5 | 3.3 |
| | | 571.5 | 22.5 | 155.575 | 6.125 | 74.612 | 2.937 | 111.125 | 4.375 | 1.5 | 3.3 |
| **447.675** | 17.625 | 635 | 25 | 257.175 | 10.125 | 120.65 | 4.75 | 206.375 | 8.125 | 1.5 | 6.4 |
| **457.2** | 18 | 596.9 | 23.5 | 165.1 | 6.5 | 73.025 | 2.875 | 120.65 | 4.75 | 1.5 | 9.7 |
| **479.425** | 18.875 | 679.45 | 26.75 | 276.225 | 10.875 | 128.588 | 5.063 | 222.25 | 8.75 | 1.5 | 6.4 |
| | | 679.45 | 26.75 | 276.225 | 10.875 | 128.588 | 5.063 | 222.25 | 8.75 | 1.5 | 6.4 |
| | | 679.45 | 26.75 | 276.225 | 10.875 | 128.588 | 5.063 | 222.25 | 8.75 | 1.5 | 6.4 |
| | | 679.45 | 26.75 | 276.225 | 10.875 | 128.588 | 5.063 | 222.25 | 8.75 | 1.5 | 6.4 |

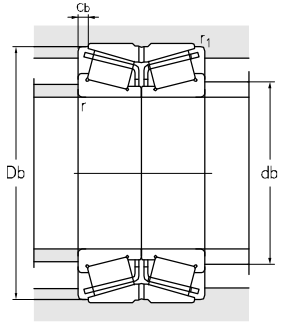
| Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| $C_r$ | $C_{or}$ | Grease | Oil | | e | Y | Yo | a | |
| kN | | r/min | | | | | | | kg |
| 2640 | 5200 | 400 | 520 | **EE181453/182351D** | 0.42 | 1.62 | 2.42 | 1.59 | 191 |
| 1410 | 3450 | 400 | 520 | **KEE231462/K231976CD** | 0.44 | 1.53 | 2.28 | 1.5 | 76.9 |
| 2910 | 8200 | 380 | 500 | **KHM266447/KHM266410CD-3** | 0.33 | 2.03 | 3.02 | 1.98 | 163 |
| 2820 | 8050 | 380 | 500 | **M268730/M268710CD/HE** | 0.33 | 2.03 | 3.02 | 1.98 | 245 |
| 4500 | 6600 | 380 | 500 | **M268730/M268710D/C9** | 0.33 | 2.03 | 3.02 | 1.98 | 247 |
| 3550 | 8800 | 380 | 500 | **M268730/M268710DC** | 0.33 | 2.03 | 3.02 | 1.98 | 245 |
| 3200 | 8200 | 410 | 540 | **HM266448/HM266410CD** | 0.33 | 2.04 | 3.02 | 1.98 | 161 |
| 3700 | 7900 | 410 | 540 | **HM266449/HM266410D/YA10** | 0.33 | 2 | 3 | 2 | 158 |
| 2050 | 5600 | 450 | 680 | **LM665949/LM665910CD** | 0.42 | 1.62 | 2.42 | 1.59 | 100 |
| 2050 | 5600 | 450 | 680 | **LM665949/LM665910DC** | 0.42 | 1.62 | 2.42 | 1.59 | 100 |
| 2500 | 5500 | 380 | 500 | **EE911600/912401D** | 0.38 | 1.76 | 2.62 | 1.72 | 169 |
| 4650 | 10300 | 380 | 500 | **M270730/M270710CD** | 0.33 | 2 | 3 | 2 | 300 |
| 3600 | 8250 | 380 | 500 | **M268749/M268710DX2** | 0.33 | 2.03 | 3.02 | 1.98 | 206 |
| 3250 | 8550 | 380 | 500 | **M268749/M268710DC** | 0.33 | 2.03 | 3.02 | 1.98 | 205 |
| 3250 | 8550 | 380 | 500 | **M268749/M268710DC/HEC9** | 0.33 | 2.03 | 3.02 | 1.98 | 205 |
| 3250 | 8550 | 380 | 500 | **M268749/M268710DC/HE** | 0.33 | 2.03 | 3.02 | 1.98 | 205 |
| 1010 | 2810 | 410 | 540 | **K80170/K80222/DB** | 0.32 | 2.12 | 3.15 | 2.07 | 61.2 |
| 1510 | 4200 | 410 | 540 | **KLM869448/KLM869410CD** | 0.55 | 1.24 | 1.84 | 1.21 | 102 |
| 1660 | 4200 | 410 | 540 | **LM869448/LM869410CD** | 0.55 | 1.24 | 1.84 | 1.21 | 102 |
| 4650 | 10300 | 360 | 480 | **M270749/M270710CD** | 0.33 | 2 | 3 | 2 | 247 |
| 1860 | 5000 | 380 | 500 | **EE244180/244236CD** | 0.4 | 1.67 | 2.48 | 1.63 | 109 |
| 4500 | 11900 | 320 | 440 | **M272749/M272710D-3** | 0.33 | 2.03 | 3.02 | 1.98 | 307 |
| 4180 | 10900 | 320 | 440 | **M272749/M272710DC** | 0.33 | 2.03 | 3.02 | 1.98 | 307 |
| 4200 | 10900 | 320 | 440 | **M272749/M272710DC/HE** | 0.33 | 2.03 | 3.02 | 1.98 | 307 |
| 4200 | 10900 | 320 | 440 | **M272749/M272710DC/HEC9** | 0.33 | 2.03 | 3.02 | 1.98 | 307 |

Note: * indicates the maximum value of IDor OD.

d 482.6~723.9 mm



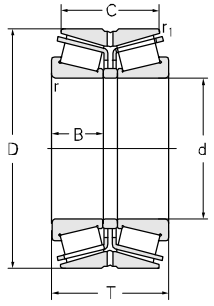



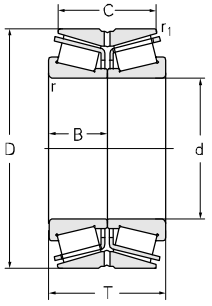

| Principal dimensions | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | | D | | T | | B | | C | | $r_{1min1}$ | $r_{min}$ |
| mm | in | mm | in | mm | in | mm | in | mm | in | mm | |
| **482.6** | 19 | 615.95 | 24.25 | 184.15 | 7.25 | 85.725 | 3.375 | 146.05 | 5.75 | 1.5 | 6.4 |
| **488.671** | 19.239 | 660.4 | 26 | 206.375 | 8.125 | 94.458 | 3.719 | 158.75 | 6.25 | 1.5 | 6.4 |
| **488.95** | 19.25 | 660.4 | 26 | 206.375 | 8.125 | 94.458 | 3.719 | 158.75 | 6.25 | 1.5 | 6.4 |
| | | 660.4 | 26 | 206.375 | 8.125 | 94.458 | 3.719 | 158.75 | 6.25 | 1.5 | 6.4 |
| **498.475** | 19.625 | 634.873 | 24.995 | 177.8 | 7 | 80.962 | 3.187 | 142.875 | 5.625 | 1.5 | 6.4 |
| **501.65** | 19.75 | 711.2 | 28 | 292.1 | 11.5 | 136.525 | 5.375 | 231.775 | 9.125 | 1.5 | 6.4 |
| | | 711.2 | 28 | 292.1 | 11.5 | 136.525 | 5.375 | 231.775 | 9.125 | 1.5 | 6.4 |
| **533.4** | 21 | 812.8 | 32 | 269.875 | 10.625 | 123.825 | 4.875 | 187.325 | 7.375 | 3.3 | 9.7 |
| | | 812.8 | 32 | 269.875 | 10.625 | 123.825 | 4.875 | 187.325 | 7.375 | 3.3 | 9.7 |
| | | 812.8 | 32 | 269.875 | 10.625 | 123.825 | 4.875 | 187.325 | 7.375 | 3.3 | 9.7 |
| **536.575** | 21.125 | 761.873 | 29.995 | 311.15 | 12.25 | 146.05 | 5.75 | 247.65 | 9.75 | 1.5 | 6.4 |
| | | 761.873 | 29.995 | 311.15 | 12.25 | 146.05 | 5.75 | 247.65 | 9.75 | 1.5 | 6.4 |
| | | 761.873 | 29.995 | 311.15 | 12.25 | 146.05 | 5.75 | 247.65 | 9.75 | 1.5 | 6.4 |
| **546.1** | 21.5 | 736.6 | 29 | 165.1 | 6.5 | 82.741 | 3.258 | 114.3 | 4.5 | 3.3 | 6.4 |
| **558.5** | 21.988 | 736.6 | 29 | 225.425 | 8.875 | 104.775 | 4.125 | 177.8 | 7 | 1.5 | 6.4 |
| | | 736.6 | 29 | 225.425 | 8.875 | 104.775 | 4.125 | 177.8 | 7 | 1.5 | 6.4 |
| **571.5** | 22.5 | 812.8 | 32 | 333.375 | 13.125 | 155.575 | 6.125 | 263.525 | 10.375 | 1.5 | 6.4 |
| **609.6** | 24 | 787.4 | 31 | 206.375 | 8.125 | 93.662 | 3.687 | 158.75 | 6.25 | 1.5 | 6.4 |
| **660.4** | 26 | 812.8 | 32 | 203.2 | 8 | 95.25 | 3.75 | 158.75 | 6.25 | 1.5 | 6.4 |
| | | 812.8 | 32 | 203.2 | 8 | 95.25 | 3.75 | 158.75 | 6.25 | 1.5 | 6.4 |
| **711.2** | 28 | 914.4 | 36 | 190.5 | 7.5 | 82.55 | 3.25 | 139.7 | 5.5 | 3.3 | 6.4 |
| | | 914.4 | 36 | 190.5 | 7.5 | 82.55 | 3.25 | 139.7 | 5.5 | 3.3 | 6.4 |
| **723.9** | 28.5 | 914.4 | 36 | 187.325 | 7.375 | 80.962 | 3.187 | 139.7 | 5.5 | 3.3 | 5.5 |

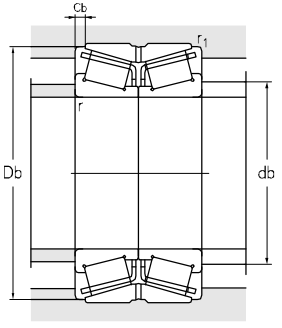
| Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| $C_r$ | $C_{or}$ | Grease | Oil | | e | Y | Yo | a | |
| kN | | r/min | | | | | | | kg |
| 2540 | 7510 | 360 | 480 | **LM272249/LM272210D** | 0.33 | 2.03 | 3.02 | 1.98 | 130 |
| 3000 | 7600 | 340 | 440 | **EE640191/640261CD-2/C9** | 0.31 | 2.21 | 3.28 | 2.16 | 180 |
| 3000 | 7600 | 340 | 440 | **EE640192/640261CD** | 0.31 | 2.21 | 3.28 | 2.16 | 181 |
| 3000 | 7600 | 340 | 440 | **EE640192/640261CD-3** | 0.31 | 2.21 | 3.28 | 2.16 | 181 |
| 2100 | 5900 | 340 | 440 | **EE243196/243251CD/YA1** | 0.34 | 1.98 | 2.95 | 1.94 | 125 |
| 4500 | 13400 | 300 | 400 | **M274149/M274110CD** | 0.35 | 1.92 | 2.86 | 1.88 | 355 |
| 4500 | 13400 | 300 | 400 | **M274149/M274110DC** | 0.33 | 2 | 3 | 2 | 355 |
| 4650 | 11100 | 250 | 260 | **EE626210/626321CD** | 0.44 | 1.54 | 2.29 | 1.5 | 470 |
| 4650 | 11100 | 250 | 260 | **EE626210/626321D** | 0.44 | 1.54 | 2.29 | 1.5 | 470 |
| 4650 | 11100 | 250 | 260 | **EE626210/626321D-3** | 0.44 | 1.54 | 2.29 | 1.5 | 470 |
| 5650 | 15000 | 280 | 350 | **KM276449/KM276410CD/HCRYA1** | 0.33 | 2 | 3 | 2 | 426 |
| 5650 | 15000 | 280 | 350 | **M276449/M276410CD** | 0.33 | 2 | 3 | 2 | 426 |
| 5650 | 15000 | 280 | 350 | **M276449/M276410CD/YA1** | 0.33 | 2 | 3 | 2 | 427 |
| 2500 | 6150 | 280 | 350 | **KNAEE542215SW/K542291D** | 0.51 | 1.33 | 1.97 | 1.3 | 179 |
| 4400 | 12800 | 280 | 350 | **LM377449/LM377410CD** | 0.35 | 1.92 | 2.86 | 1.88 | 256 |
| 4400 | 12800 | 280 | 350 | **LM377449/LM377410CD/HE** | 0.35 | 1.92 | 2.86 | 1.88 | 256 |
| 6400 | 15900 | 260 | 330 | **M278749/M278710D** | 0.33 | 2 | 3 | 2 | 521 |
| 4000 | 10500 | 260 | 330 | **EE649240/649311CD** | 0.37 | 1.8 | 2.7 | 1.8 | 233 |
| 3080 | 9900 | 240 | 300 | **KL281148/KL281110CD** | 0.33 | 2 | 3 | 2 | 212 |
| 3080 | 9900 | 240 | 300 | **L281148/L281110CD** | 0.33 | 2.05 | 3.05 | 2 | 212 |
| 3300 | 10000 | 220 | 280 | **EE755280/755361CD** | 0.38 | 1.77 | 2.64 | 1.73 | 282 |
| 3300 | 10000 | 220 | 280 | **EE755280/755361D** | 0.38 | 1.77 | 2.64 | 1.73 | 282 |
| 3300 | 10000 | 200 | 280 | **KEE755285/K755361CD-2-JG** | 0.37 | 1.8 | 2.7 | 1.8 | 255 |

Note: * indicates the maximum value of IDor OD.

d 723.9~914.4 mm



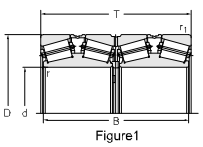



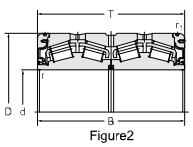



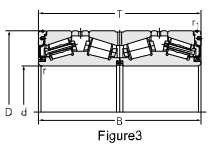

| Principal dimensions | | | | | | | | | | | | Basic load ratings | | Limit speed ratings | | Designations | Calculation coefficient | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | | D | | T | | B | | C | | $r_{1min1}$ | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | e | Y | Yo | a | |
| mm | in | mm | in | mm | in | mm | in | mm | in | mm | | kN | | r/min | | | | | | | kg |
| **723.9** | | 914.4 | 36 | 187.325 | 7.375 | 80.962 | 3.187 | 139.7 | 5.5 | 3.3 | 5.5 | 3300 | 10000 | 200 | 280 | **KEE755285/K755361D** | 0.38 | 1.77 | 2.64 | 1.73 | 255 |
| | | 914.4 | 36 | 187.325 | 7.375 | 80.962 | 3.187 | 139.7 | 5.5 | 3.3 | 5.5 | 3000 | 10000 | 200 | 280 | **KEE755285/K755361D-C3** | 0.38 | 1.77 | 2.64 | 1.73 | 255 |
| **762** | 30 | 965.2 | 38 | 187.325 | 7.375 | 80.962 | 3.187 | 133.35 | 5.25 | 1.5 | 6.4 | 3400 | 10000 | 180 | 260 | **KEE752300/K752381D** | 0.4 | 1.7 | 2.5 | 1.5 | 290 |
| **914.4** | 36 | 1066.8 | 42 | 139.7 | 5.5 | 63.5 | 2.5 | 101.6 | 4 | 3.3 | 6.4 | 2350 | 7860 | 160 | 220 | **LL686947/LL686910D** | 0.41 | 1.64 | 2.5 | 1.6 | 180 |

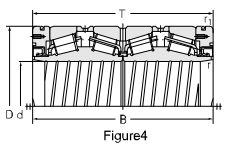
Note: * indicates the maximum value of IDor OD.

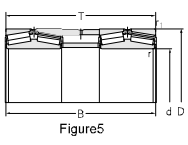
d 110.2~200 mm

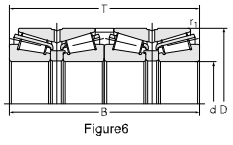

Figure1

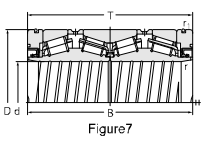

Figure2

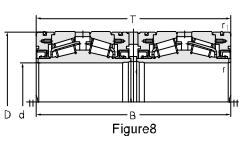

Figure3

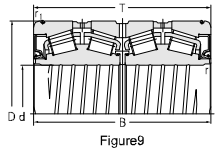

Figure4

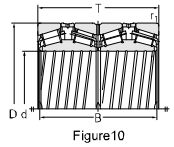

Figure5

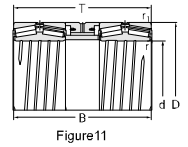

Figure6

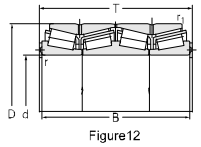

Figure7

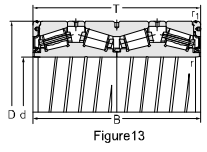

Figure8

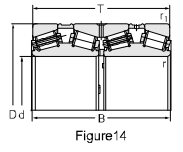

Figure9

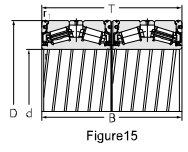

Figure10

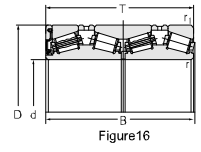

Figure11


Figure12


Figure13

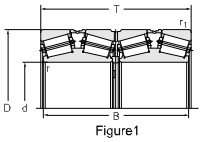

Figure14

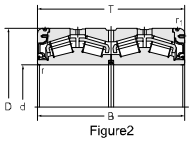

Figure15

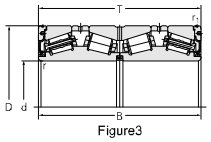

Figure16

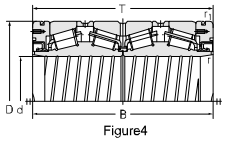
| Principal dimensions | | | | | | Basic load ratings | | Designations | Weight | Graph |
|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | T | $r_{min}$ | $r_{1min}$ | Cr | Cor | | | |
| mm | | | | | | kN | | | kg | |
| **110.2** | 170 | 176 | 176 | 2.5 | 2 | 670 | 1460 | **382022X4** | 14.6 | 1 |
| **120.65** | 166.88 | 152.413 | 152.413 | 0.8 | 3.3 | 590 | 1650 | **380624X4/C9** | 9.92 | 1 |
| **139.7** | 200.025 | 157.162 | 160.338 | 1.1 | 1.8 | 590 | 1870 | **3806/139.7/HC** | 16.2 | 1 |
| | 200.025 | 157.162 | 160.338 | 1.1 | 1.8 | 695 | 1870 | **3806/139.7/HCP59** | 16.2 | 1 |
| | 200.025 | 74.581 | 157.162 | 1.1 | 1.8 | 695 | 1870 | **3806/139.7/HCP691** | 16.2 | 1 |
| | 200.025 | 157.162 | 160.338 | 1.1 | 1.8 | 695 | 1870 | **3806/139.7/P5** | 16.2 | 1 |
| **150** | 210 | 186 | 195 | SP | 2 | 850 | 2000 | **372930X2/HCC9DB/W281** | 19.1 | 5 |
| | 210 | 165 | 165 | 0.7 | 2.3 | 660 | 1590 | **382930X2** | 21.2 | 1 |
| | 210 | 165 | 165 | 0.7 | 2.3 | 660 | 1590 | **382930X2/C9** | 21.2 | 1 |
| | 225 | 136 | 136 | 3 | 2.5 | 595 | 1460 | **382030X2** | 17.7 | 1 |
| **160.2** | 240 | 210 | 210 | 3 | 2.5 | 1230 | 2920 | **382032X4** | 32.9 | 1 |
| | | | | SP | SP | | | | | |
| **170** | 230 | 175 | 175 | 3 | 2.5 | 920 | 2630 | **380634/HCC9** | 20.6 | 1 |
| | 260 | 230 | 230 | 3 | 2.5 | 1030 | 3100 | **382034X2** | 43 | 1 |
| **177.8** | 273.05 | 234.95 | 234.947 | 1.5 | 3.3 | 1830 | 3750 | **3806/177X4/HCYAD** | 49.7 | 1 |
| **180** | 250 | 190 | 190 | 2.5 | 0.7 | 880 | 2290 | **352936X2A1/DF** | 26.7 | 6 |
| | 250 | 207 | 207 | 2.5 | 0.7 | 790 | 2100 | **352936X2/DF-1** | 29.00 | 6 |
| | 250 | 190 | 190 | 2.5 | 0.7 | 790 | 2100 | **352936X2/DF** | 27.30 | 6 |
| | 250 | 185 | 185 | 7.4*12.5* | 2.5 | 980 | 2550 | **382936/HCC9YAD** | 26.5 | 1 |
| | 260 | 200 | 200 | 2.2 | 2 | 1110 | 2700 | **382936X3** | 33.2 | 1 |
| | 260 | 200 | 200 | 2.5 | 2 | 1110 | 2700 | **382936X3-1** | 33.2 | 1 |
| | 260 | 200 | 200 | 2.5 | 2 | 1110 | 2700 | **382936X3/HCC9** | 33.7 | 1 |
| | 280 | 180 | 180 | 3 | 2.5 | 920 | 2540 | **380636** | 39.6 | 1 |
| **190** | 260 | 200 | 200 | 2.5 | 2 | 1040 | 2780 | **382938X2-1/HCC9** | 29.6 | 1 |
| | 260 | 190 | 190 | 2.5 | 0.7 | 1200 | 2690 | **382938X2/HC** | 27.3 | 1 |
| | 260 | 190 | 190 | 2.5 | 0.7 | 1200 | 2690 | **382938X2/HG2** | 27.3 | 1 |
| **200** | 280 | 206 | 206 | 1.5 | 3 | 1600 | 3410 | **380640/HCC9/W283** | 38.9 | 1 |

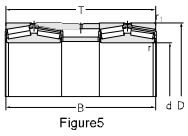
d 200~220.663 mm

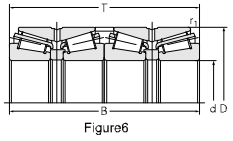

Figure1

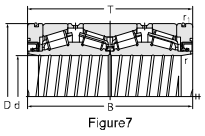

Figure2

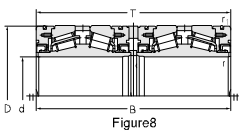

Figure3

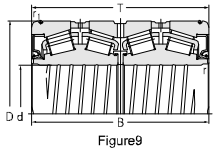

Figure4

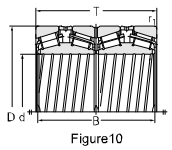

Figure5

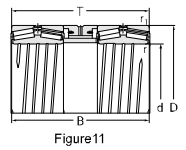

Figure6

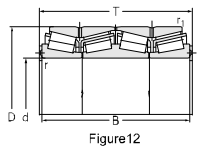

Figure7

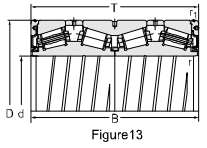

Figure8

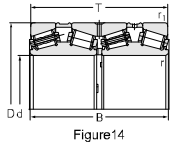

Figure9

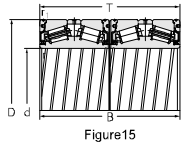

Figure10

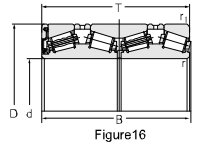

Figure11


Figure12


Figure13

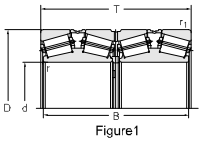

Figure14

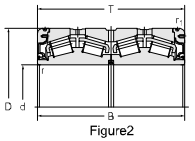

Figure15

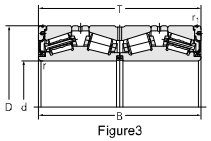

Figure16

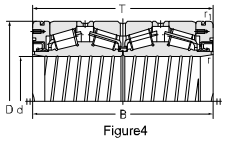
| Principal dimensions | | | | | | Basic load ratings | | Designations | Weight | Graph |
|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | T | $r_{min}$ | $r_{1min}$ | Cr | Cor | | | |
| mm | | | | | | kN | | | kg | |
| **200** | 280 | 206 | 206 | 3 | 2.5 | 1280 | 3580 | **380640/HCYAD/W283** | 38.8 | 1 |
| | 282 | 206 | 206 | 3 | 2.5 | 1280 | 3580 | **380640X1/HCYAD/W283** | 39.5 | 1 |
| | 282 | 206 | 206 | 1.5 | 2.5 | 1040 | 2540 | **380640-2RS/HCEC9** | 37.6 | 2 |
| | 310 | 275 | 275 | 3 | 2.5 | 1350 | 4200 | **382040** | 75.1 | 1 |
| | 310 | 200 | 200 | 3 | 2.5 | 2170 | 1520 | **382040X2-1** | 55.6 | 1 |
| | 360 | 210 | 210 | 4 | 4 | 1810 | 3290 | **382140X2/YB2** | 90.2 | 1 |
| **205** | 320 | 205 | 205 | 4 | 3 | 1160 | 2850 | **380641** | 55.4 | 1 |
| **206.375** | 282.575 | 190.5 | 190.5 | 7*1 | 3.3 | 1200 | 2790 | **3806/206X4-XRS/HC** | 32.7 | 2 |
| **210** | 288.925 | 262 | 262 | 10*1.79 | 3 | 1510 | 4050 | **380642-XRS/HCC9** | 49.3 | S |
| **215.9** | 288.925 | 177.8 | 177.8 | 7*1 | 3.3 | 1070 | 2440 | **3806/215.9-XRS/HCC9** | 30.7 | 2 |
| | 288.925 | 177.8 | 177.8 | 7*1 | 3.3 | 1070 | 2440 | **3806/215.9-XRS/HCC9/W281** | 30.7 | 2 |
| **220** | 295 | 315 | 315 | SP | SP | 1580 | 3950 | **380644-2RS/HCEC9** | 56.4 | 2 |
| | 295 | 315 | 315 | SP | SP | 1270 | 3780 | **380644-XRS/HC** | 56.6 | 8 |
| | 295 | 315 | 315 | SP | SP | 1270 | 3780 | **380644-XRS/HCYAB** | 56.6 | 8 |
| | 295 | 315 | 315 | 1.5 | 3 | 1470 | 3450 | **380644/W283** | 57.2 | 1 |
| | 300 | 230 | 230 | 3 | 2.5 | 1570 | 4000 | **382944X2/HCE/W283-LG** | 47.9 | 1 |
| | 300 | 230 | 230 | 3 | 2.5 | 1570 | 4000 | **382944X2/HCR** | 47.9 | 1 |
| | 300 | 230 | 230 | 3 | 2.5 | 1550 | 4050 | **382944X2/HCYA3** | 47.9 | 1 |
| | 310 | 220 | 220 | 3 | 2.5 | 1900 | 4400 | **380644X2/HCC2H/W283** | 53.1 | 1 |
| | 330 | 260 | 260 | 3 | 3 | 2200 | 5300 | **380644/HC/W283** | 77.9 | 1 |
| | 340 | 305 | 305 | 4 | 3 | 2800 | 5950 | **382044** | 99.5 | 1 |
| | 340 | 305 | 305 | 4 | 3 | 2800 | 5950 | **382044/HC** | 99.5 | 1 |
| **220.662** | 314.325 | 290 | 290 | 1.5 | 3.3 | 2140 | 6150 | **3806/220X4/HC** | 73.2 | 1 |
| | 314.325 | 290 | 290 | 1.5 | 3.3 | 2140 | 6150 | **3806/220X4/HCP59** | 73.2 | 1 |
| | 314.325 | 239.712 | 239.712 | 3.8*1.5 | 3.3 | 1750 | 4150 | **380644X4-XRS/HC-1** | 57.4 | 2 |
| **220.663** | 314.325 | 330 | 330 | 3.8*1.5 | 3.2 | 1910 | 5480 | **380644X4-XRS/HC** | 80.4 | 4 |

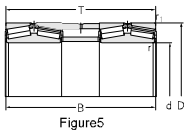
d 228~260 mm

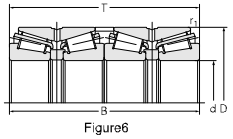

Figure1

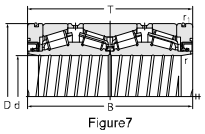

Figure2

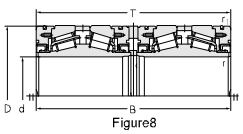

Figure3

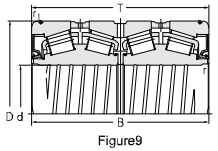

Figure4

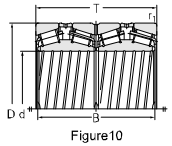

Figure5

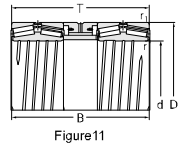

Figure6

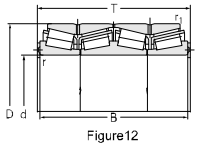

Figure7

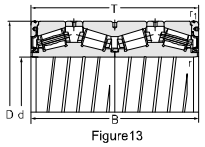

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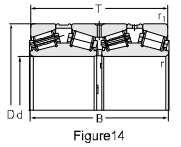

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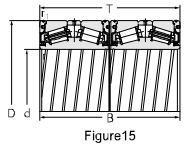

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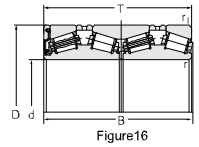

Figure11


Figure12


Figure13

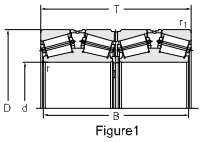

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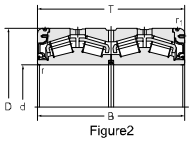

Figure15

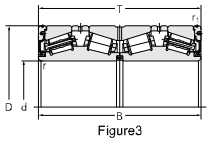

Figure16

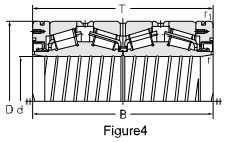
| Principal dimensions | | | | | | Basic load ratings | | Designations | Weight | Graph |
|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | T | $r_{min}$ | $r_{1min}$ | Cr | Cor | | | |
| mm | | | | | | kN | | | kg | |
| **228** | 338 | 340 | 340 | 10*15* | 3.3 | 2650 | 7130 | **3806/228-XRS/HCC9YAD** | 105 | 2 |
| **240** | 320 | 250 | 250 | 1.5 | 2.5 | 2100 | 5350 | **382948X2-1/HCC9/W283** | 56.5 | 1 |
| | 320 | 294 | 294 | 7*2.06 | 4 | 1550 | 5000 | **382948X2-XRS/HC** | 61.6 | 4 |
| | 338 | 248 | 248 | 4 | 4 | 2030 | 5400 | **380648/HCC9** | 69 | 1 |
| | 338 | 248 | 248 | 4 | 4 | 2210 | 5950 | **380648/HCC9-1** | 69 | 1 |
| | 338 | 248 | 248 | 4 | 4 | 2210 | 5950 | **380648/HCC9-3** | 69.2 | 1 |
| | 338 | 118 | 248 | 6.4 | 6.4 | 2210 | 5950 | **380648/HCC9YAB** | 69 | 1 |
| | 338 | 248 | 248 | 4 | 4 | 2210 | 5950 | **380648/HCEC9** | 69 | 1 |
| | 338 | 248 | 248 | 4 | 4 | 2210 | 5950 | **380648/HCEC9-1** | 69 | 1 |
| | 338 | 248 | 248 | 4 | 4 | 2210 | 5950 | **380648/HCEC9/W283-LG** | 69 | 1 |
| | 338 | 162 | 340 | SP | 3 | 1900 | 5160 | **380648X2-XRS/HCC9YAB** | 78.8 | 8 |
| | 338 | 340 | 340 | SP | 4 | 1900 | 5160 | **380648X2-XRS/HCRG2C9YAB** | 78.8 | 8 |
| | 338 | 340 | 340 | SP | 4 | 1900 | 5160 | **380648-XRS/HC** | 78.8 | 8 |
| | 338 | 248 | 248 | 3 | 2.5 | 2050 | 5650 | **380648/C9-3** | 69.2 | 1 |
| | 350 | 230 | 230 | 1.5 | 2 | 2050 | 4700 | **380648/HC-2** | 72.2 | 1 |
| | 350 | 230 | 230 | 1.5 | 2 | 2050 | 4700 | **380648-2** | 72.2 | 1 |
| | 360 | 310 | 310 | 4 | 3 | 3630 | 2210 | **382048X2** | 90.5 | 1 |
| | 360 | 310 | 310 | 4 | 3 | 2400 | 6100 | **382048X2/HC** | 90.5 | 1 |
| **250** | 365 | 270 | 270 | 20*3.12 | 3 | 1950 | 4600 | **380650X1-XRS/HCC9** | 90.4 | 4 |
| | 385 | 255 | 255 | 5 | 5 | 2310 | 5350 | **380650-1** | 107 | 1 |
| | 460 | 270 | 270 | 5 | 4 | 2470 | 6400 | **380650/HC** | 192 | 1 |
| **254** | 358.775 | 134.937 | 269.875 | 1.5 | 3.3 | 1890 | 4950 | **3806/254-XRS/HC** | 80.5 | 2 |
| **260** | 360 | 265 | 265 | 3 | 2.5 | 1730 | 5050 | **382952/HC** | 77.8 | 1 |
| | 360 | 272 | 272 | 3 | 2.5 | 2200 | 6500 | **382952X2/HCC2HYA23/W283** | 83.1 | 1 |
| | 360 | 272 | 272 | 3 | 2.5 | 2200 | 6500 | **382952X2/HCC9YB2** | 83.1 | 1 |
| | 360 | 272 | 272 | 3 | 2.5 | 2200 | 6500 | **382952X2/HCR** | 83.1 | 1 |
| | 360 | 272 | 272 | 3 | 2.5 | 2600 | 6500 | **382952X2/HCYA3/W283** | 83.1 | 1 |
| | 365 | 340 | 340 | 20*1.75 | 3.5 | 2500 | 6650 | **380652-XRS/HCC9YB2/W281** | 107 | 4 |
| | 365 | 340 | 340 | 16*1 | 4 | 2900 | 7300 | **380652-XRS/HCEC9-1/W281** | 116 | 2 |

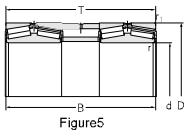
d 260~300 mm

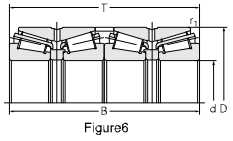

Figure1

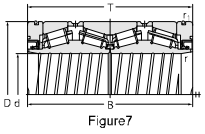

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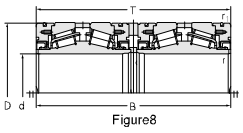

Figure3

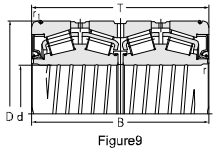

Figure4

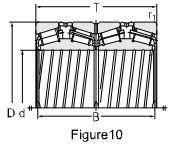

Figure5

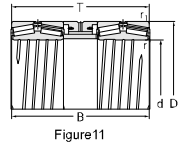

Figure6

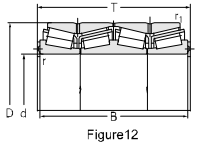

Figure7

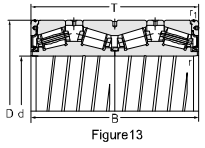

Figure8

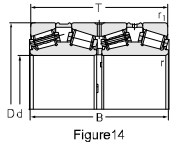

Figure9

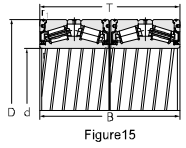

Figure10

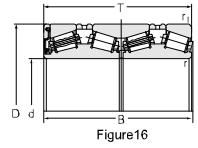

Figure11


Figure12


Figure13

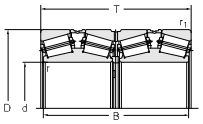

Figure14

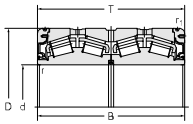

Figure15

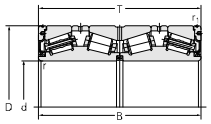

Figure16

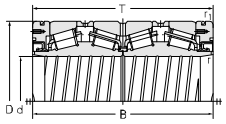
| Principal dimensions | | | | | | Basic load ratings | | Designations | Weight | Graph |
|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | T | $r_{min}$ | $r_{1min}$ | Cr | Cor | | | |
| mm | | | | | | kN | | | kg | |
| **260** | 365 | 340 | 340 | 20*1.75 | 3.5 | 2500 | 6650 | **380652-XRS/HCP59YAB** | 107 | 4 |
| | 380 | 200 | 200 | 2 | 5 | 1870 | 4650 | **380652-2** | 76.9 | 1 |
| | 380 | 280 | 280 | 4 | 7.5 | 2400 | 6400 | **380652X3/HC-FM** | 108 | 1 |
| | 400 | 255 | 255 | 4 | 7.5 | 2250 | 4800 | **380652/HC-1** | 117 | 1 |
| | 400 | 255 | 255 | 4 | 7.5 | 2050 | 4800 | **380652/HC** | 117 | 1 |
| | 400 | 255 | 255 | 5 | 4 | 2100 | 4900 | **380652/HG2** | 117 | 1 |
| | 400 | 345 | 345 | 5 | 4 | 2850 | 7700 | **382052** | 161 | 1 |
| | 400 | 345 | 345 | 5 | 4 | 2850 | 7700 | **382052/HC** | 161 | 1 |
| | 440 | 300 | 300 | 2 | 5 | 2670 | 5850 | **382152X2/HCYA6** | 182 | 1 |
| **266.7** | 355.6 | 230.184 | 228.6 | 3.3*1.5 | 3.3 | 1750 | 4450 | **3806/266.7-XRS/HC** | 58.9 | 2 |
| | 355.6 | 230.184 | 228.6 | 3.3*1.5 | 3.3 | 1750 | 4450 | **3806/266.7-XRS/HCGP** | 58.9 | 2 |
| | 355.6 | 230.184 | 228.6 | 3.3*1.5 | 3.3 | 1750 | 4450 | **3806/266.7-XRS/HC/W281** | 58.9 | 2 |
| **274.97** | 393.7 | 269.875 | 269.875 | SP | 6.4 | 2600 | 5700 | **380655X4-XRS/HCEC9/W283** | 102 | 9 |
| **279.4** | 393.7 | 320 | 320 | SP | 3.2 | 2500 | 7200 | **3806/279.4-XRS/HC** | 120 | 4 |
| | 393.7 | 269.875 | 269.875 | 1 | 6.4 | 2200 | 5300 | **3806/279.4-XRS/HCYB2** | 98.3 | 2 |
| **280** | 395 | 290 | 290 | SP | 4 | 2830 | 6550 | **380656-XRS/HC-1** | 109 | 2 |
| | 395 | 340 | 340 | SP | 3.5 | 3300 | 7600 | **380656-XRS/HCC9** | 125 | 2 |
| | 395 | 288 | 288 | 4 | 7 | 2510 | 7060 | **382956X3/C9YAD** | 110 | 1 |
| | 395 | 288 | 288 | 4 | 7 | 2990 | 7090 | **382956X3/HCC9YAD** | 110 | 1 |
| | 420 | 250 | 250 | 5 | 5 | 1690 | 5300 | **380656** | 119 | 1 |
| | 460 | 324 | 324 | 5 | 4 | 3680 | 8350 | **381156** | 219 | 1 |
| **300** | 420 | 300 | 300 | 4 | 3 | 2750 | 7500 | **382960/C9** | 125 | 1 |
| | 420 | 300 | 300 | 4 | 3 | 2750 | 7500 | **382960/HC** | 125 | 1 |
| | 420 | 310 | 310 | 4 | 3 | 2020 | 8100 | **382960X2/HCC9YA3** | 134 | 1 |
| | 424 | 148 | 310 | 4 | 3 | 3300 | 8500 | **382960X3/HC** | 140 | 1 |
| | 460 | 390 | 390 | 5 | 4 | 3850 | 10200 | **382060/HC** | 222 | 1 |
| | 460 | 360 | 360 | 5 | 4 | 4450 | 9440 | **382060X2/HCYB2** | 217 | 1 |
| | 460 | 390 | 390 | 5 | 4 | 4230 | 10200 | **382160/HC** | 222 | 1 |

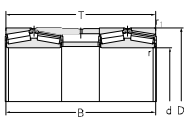
d 300~360 mm

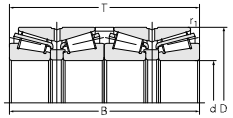

Figure1

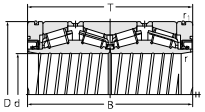

Figure2

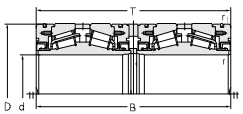

Figure3

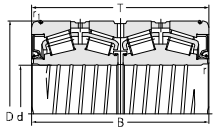

Figure4

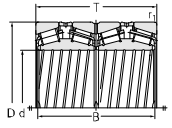

Figure5

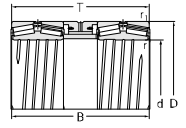

Figure6

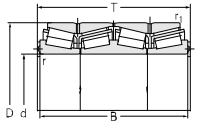

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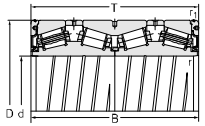

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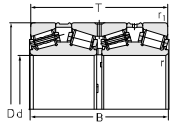

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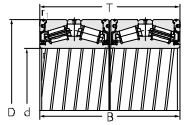

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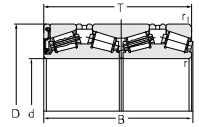

Figure11


Figure12


Figure13

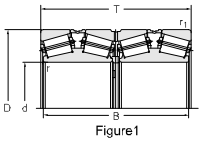

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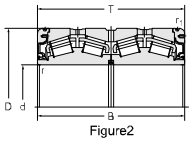

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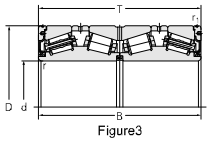

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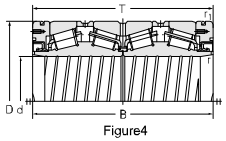
| Principal dimensions | | | | | | Basic load ratings | | Designations | Weight | Graph |
|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | T | $r_{min}$ | $r_{1min}$ | Cr | Cor | | | |
| mm | | | | | | kN | | | kg | |
| **300** | 500 | 350 | 350 | 5 | 4 | 2730 | 8900 | **380660/HCC9** | 280 | 1 |
| | 500 | 350 | 350 | 5 | 4 | 4000 | 8900 | **380660/HCC91** | 280 | 1 |
| | 500 | 370 | 370 | 5 | 4 | 3900 | 8800 | **381160/HC** | 282 | 1 |
| **310** | 430 | 310 | 310 | 4 | 4 | 3050 | 7900 | **380662/HCC9** | 135 | 1 |
| | 430 | 310 | 310 | 15*10* | 4 | 2750 | 7000 | **380662-XRS/HC** | 131 | 2 |
| | 430 | 310 | 310 | 11*11* | 4 | 3250 | 7950 | **380662-XRS/HC-2** | 133 | 2 |
| | 430 | 350 | 350 | 16*5* | 4 | 3700 | 9450 | **380662-XRS/HCEC9-1/W281** | 154 | 2 |
| **317.5** | 422.275 | | 269.875 | 1.5 | 3.3 | 2490 | 5950 | **3806/317.5-XRS/HCC9YAB** | 99.1 | 2 |
| | 422.275 | 269.875 | 269.875 | 1.5 | 3.3 | 2490 | 5950 | **3806/317.5-XRS/HCC9YAB2** | 99.1 | 2 |
| **320** | 480 | 380 | 380 | 5 | 4 | 3300 | 11500 | **382064X2/HC** | 252 | 1 |
| **330.2** | 444.5 | 301.625 | 301.625 | 3.3 | 3.3 | 3240 | 7850 | **3806/330.2-XRS/HCC9** | 126 | 2 |
| **335** | 460 | 342.9 | 342.9 | 3.3 | 3.3 | 4000 | 10500 | **3806/335/HCZPC9** | 166 | 1 |
| **340** | 460 | 310 | 310 | 4 | 4 | 3000 | 8950 | **382968X2/HC** | 147 | 1 |
| | 460 | 310 | 310 | 4 | 4 | 3000 | 8950 | **382968X2/HCC9** | 146 | 1 |
| | 460 | 310 | 310 | 4 | 4 | 3350 | 8500 | **382968X2/HCEP6-AL** | 141 | 1 |
| | 520 | 325 | 325 | 5 | 4 | 3520 | 8200 | **381068** | 247 | 1 |
| | 520 | 323 | 323 | 6.7*9 | 6.6*8.4 | 3850 | 9060 | **381068X2/HCC9YA6** | 243 | 1 |
| | 580 | 425 | 425 | 5 | 4 | 5150 | 12650 | **381168** | 468 | 1 |
| **343.052** | 457.098 | 254 | 254 | 1 | 3.3 | 2300 | 6000 | **3806/343X4-XRS/HCC9-LG** | 108 | 2 |
| **355** | 490 | 158 | 316 | 1.5 | 3.3 | 4460 | 10000 | **380671/HC** | 175 | 1 |
| | 490 | 158 | 316 | 1.5 | 3.3 | 4460 | 10000 | **380671/HCC9** | 175 | 1 |
| **355.6** | 482.6 | 265.114 | 269.875 | 1.5 | 3.3 | 2570 | 7440 | **3806/355.6/HCC9** | 139 | 10 |
| | 488.95 | | 317.5 | 1.5 | 3.3 | 4750 | 11000 | **3806/355X4-2RS/HCC9** | 165 | 2 |
| | 488.95 | 317.5 | 317.5 | 1.5 | 3.3 | 4750 | 11000 | **3806/355X4-2RS/HCC9/W281** | 165 | 2 |
| **360** | 480 | 370 | 370 | 9*20* | SP | 4100 | 11000 | **370672/HCC9DBYAD** | 177 | 5 |

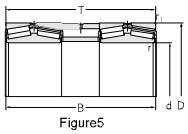
d 360~400 mm

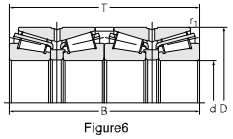

Figure1

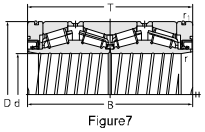

Figure2

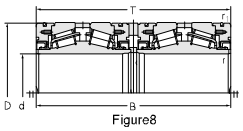

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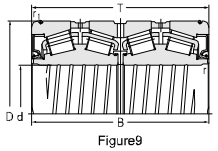

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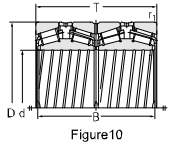

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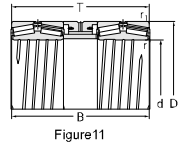

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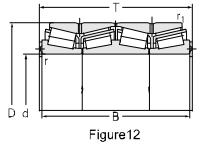

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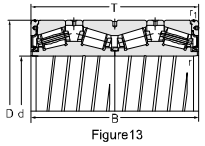

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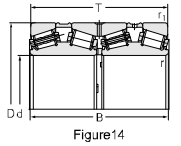

Figure9

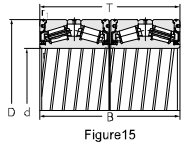

Figure10

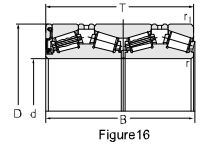

Figure11


Figure12


Figure13

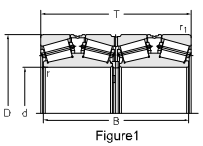

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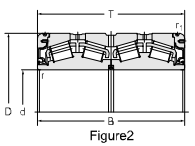

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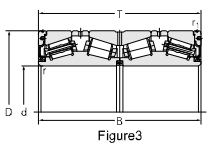

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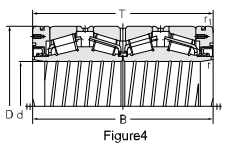
| Principal dimensions | | | | | | Basic load ratings | | Designations | Weight | Graph |
|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | T | $r_{min}$ | $r_{1min}$ | Cr | Cor | | | |
| mm | | | | | | kN | | | kg | |
| **360** | 480 | 370 | 370 | 9*20* | SP | 4100 | 11000 | **370672/HCEC9DBYAD** | 177 | 5 |
| | 480 | 310 | 310 | 4 | 3 | 2870 | 9000 | **382972/HC** | 155 | 1 |
| | 480 | 375 | 375 | 4 | 4 | 2550 | 11800 | **382972X2/HCYA3** | 197 | 1 |
| | 600 | 420 | 420 | 4.7 | 4.7 | 3950 | 13500 | **381172/HCYA6** | 423 | 1 |
| **380** | 536 | 390 | 390 | SP | SP | 5000 | 12900 | **380676/HCC9-2** | 270 | 1 |
| | 550 | 330 | 350 | 5 | 5 | 2490 | 9450 | **380676/HC-1** | 273 | 1 |
| | 560 | 325 | 325 | 5 | 4 | 4810 | 10000 | **381076** | 263 | 1 |
| | 620 | 388 | 388 | 6 | 6 | 3450 | 11600 | **380676/HC** | 443 | 1 |
| | 620 | 420 | 420 | 5 | 4 | 5050 | 12600 | **381176/HC** | 485 | 1 |
| | 620 | 420 | 420 | 5 | 4 | 5050 | 12600 | **381176/HCC9** | 485 | 1 |
| | 620 | 420 | 420 | 5 | 4 | 5050 | 12600 | **381176/HCW33** | 485 | 1 |
| | 620 | 420 | 420 | 5 | 4 | 5050 | 12600 | **381176/HCYA2** | 484 | 1 |
| **384.175** | 546.1 | 400.05 | 400.05 | SP | 6.4 | 5200 | 12000 | **HM266449DW/HM266410-HM266410D-XRS/C9YB2** | 293 | 2 |
| **385.762** | 514.35 | 317.5 | 317.5 | SP | 5 | 3750 | 9900 | **3806/385X4-XRS/HCEC9** | 177 | 2 |
| **390** | 510 | 350 | 350 | 1.5*3.8 | 5.5*3 | 3750 | 12100 | **380678/HCEC9-HBIS** | 184 | 1 |
| | 540 | 530 | 530 | 9*4 | 7.5*4 | 5050 | 14000 | **370678/HCC9DBYAD** | 366 | 1 |
| **395** | 545 | 268 | 288.9 | 5 | 10 | 2130 | 6500 | **380679/HCYA3** | 194 | 1 |
| | 545 | 268.7 | 288.7 | 4 | 7.5 | 2130 | 6500 | **380679X2/HC** | 194 | 1 |
| | 545 | 268.7 | 288.7 | 4 | 7.5 | 2130 | 6500 | **380679X2/HCC9** | 194 | 1 |
| | 545 | 268.7 | 288.7 | 4 | 7.5 | 2130 | 6500 | **380679X2/HCYA7** | 194 | 1 |
| **400** | 540 | 280 | 280 | 3.7 | 7.5 | 2690 | 6500 | **380680/HC-1** | 187 | 1 |
| | 540 | 400 | 400 | 5 | 5 | 6350 | 13300 | **380680/HC** | 262 | 1 |
| | 540 | 400 | 400 | 5 | 5 | 6350 | 13300 | **380680/HCC9** | 262 | 1 |
| | 540 | 280 | 280 | 3.7 | 7.5 | 2690 | 6500 | **380680/HCEC9YA6-1** | 187 | 1 |
| | 540 | 339.96 | 339.96 | SP | 1.5 | 4650 | 11700 | **380680/HCEC9YAD** | 214 | 12 |
| | 540 | 400 | 400 | 5 | 5 | 6350 | 13300 | **380680/HG2** | 262 | 1 |
| | 540 | 280 | 280 | 3.7 | 7.5 | 2450 | 6500 | **380680X2-XRS/HCC9** | 179 | 2 |
| | 540 | 400 | 400 | SP | 5 | 6050 | 12300 | **380680-XRS/HCC9** | 248 | 2 |

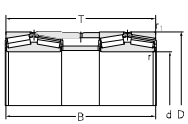
d 400~440 mm

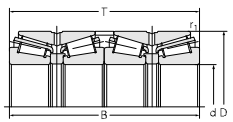

Figure1

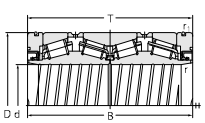

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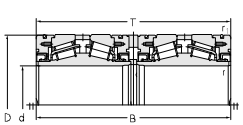

Figure3

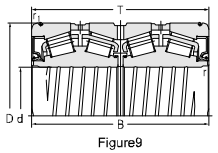

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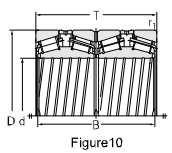

Figure5

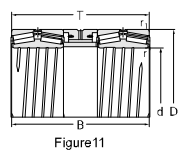

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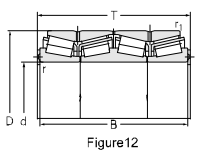

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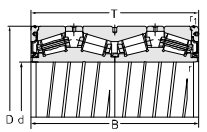

Figure8

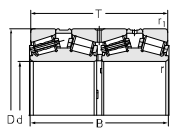

Figure9

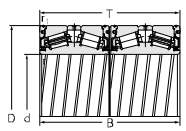

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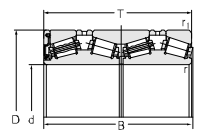

Figure11


Figure12


Figure13

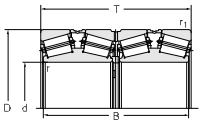

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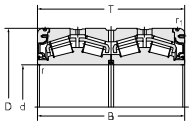

Figure15

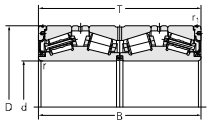

Figure16

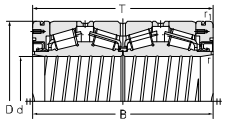
| Principal dimensions | | | | | | Basic load ratings | | Designations | Weight | Graph |
|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | T | $r_{min}$ | $r_{1min}$ | Cr | Cor | | | |
| mm | | | | | | kN | | | kg | |
| **400** | 600 | 356 | 356 | 5 | 4 | 4950 | 12400 | **381080/HC** | 345 | 1 |
| | 600 | 356 | 356 | 5 | 4 | 4950 | 12400 | **381080/HCRG2C9** | 345 | 1 |
| **406.4** | 546.1 | 288.925 | 288.925 | 1.5 | 6.4 | 4020 | 10500 | **3806/406X4/HC/W281** | 191 | 1 |
| | 562 | 381 | 381 | 3.3 | 6.4 | 4620 | 13900 | **3806/406.4/HCC9YB2** | 283 | 1 |
| | 562 | 381 | 381 | 1.5 | SP | 4900 | 13500 | **3806/406X4-XRS/HCC9** | 229 | 2 |
| | 562 | 381 | 381 | 4 | SP | 4900 | 13500 | **3806/406X4-XRS/HCC9YAD** | 229 | 2 |
| | 562 | 381 | 381 | SP | 3.3 | 4900 | 13500 | **3806/406X4-XRS/HCC9YAD-1** | 283 | 2 |
| **409.575** | 546.1 | 334.962 | 334.962 | 1.5 | 6.4 | 4650 | 12000 | **3806/409X4/HCEC9** | 214 | 10 |
| **420** | 560 | 437 | 437 | 5 | 5 | 7900 | 16300 | **380684/HC** | 298 | 1 |
| | 560 | 437 | 437 | 5 | 5 | 4940 | 16300 | **380684/HCC3** | 298 | 1 |
| | 560 | 437 | 437 | 5 | 5 | 4940 | 16300 | **380684/HCC9** | 298 | 1 |
| | 560 | 437 | 437 | SP | 6 | 4800 | 15200 | **380684-XRS/HCP69** | 292 | 2 |
| | 592 | 432 | 432 | 5 | 5 | 6600 | 16300 | **380684/HC-1** | 375 | 1 |
| | 592 | 432 | 432 | 5 | 5 | 6600 | 16300 | **380684/HCE-1** | 375 | 1 |
| | 620 | 356 | 356 | 5 | 4 | 4560 | 11700 | **381084** | 369 | 1 |
| | 700 | 480 | 480 | 6 | 5 | 10500 | 11900 | **381184** | 755 | 3 |
| | 700 | 480 | 480 | 6 | 5 | 9560 | 11900 | **381184/HCW33** | 755 | 3 |
| | 700 | 480 | 480 | 6 | 5 | 5610 | 18200 | **381184X2J/HC** | 749 | 1 |
| **440** | 590 | 480 | 480 | 3 | 5 | 8000 | 19000 | **381188X1-2RS/HCC9** | 359 | 2 |
| | 590 | 480 | 480 | 3 | 5 | 8000 | 19000 | **381188X1-2RS/HCC9/W281** | 359 | 2 |
| | 590 | 480 | 480 | SP | SP | 8000 | 19000 | **381188X1-XRS/HC-1** | 359 | 2 |
| | 590 | 480 | 480 | 3 | 5 | 8000 | 19000 | **381188X1-XRS/HC** | 359 | 2 |
| | 620 | 454 | 454 | 6 | 6 | 6650 | 18800 | **380688/HC-1** | 432 | 1 |
| | 620 | 454 | 454 | 6 | 6 | 6650 | 18800 | **380688/HC-1C9** | 432 | 1 |
| | 620 | 454 | 454 | 6 | 6 | 6650 | 18800 | **380688/HCC9** | 432 | 1 |
| | 620 | 454 | 454 | 6 | 6 | 6050 | 18800 | **380688/HCC9-1** | 432 | 1 |
| | 620 | 454 | 454 | 6 | 6 | 6050 | 18800 | **380688/HCC9-2** | 432 | 1 |
| | 620 | 454 | 454 | 6 | 6 | 6500 | 20200 | **380688/HCC9YA8** | 422 | 3 |
| | 620 | 454 | 454 | SP | 7.5 | 6750 | 16700 | **380688-XRS/HCC9** | 408 | 13 |

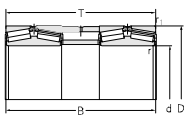
d 440~490 mm

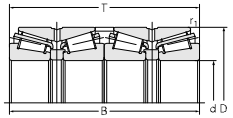

Figure1

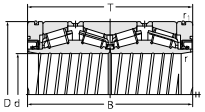

Figure2

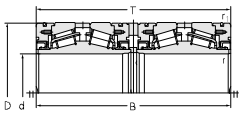

Figure3

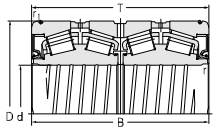

Figure4

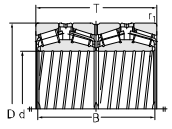

Figure5

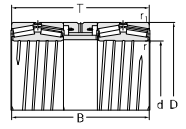

Figure6

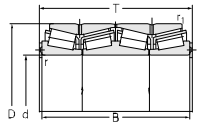

Figure7

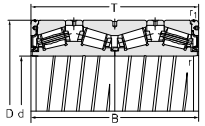

Figure8

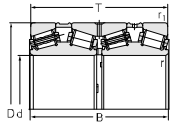

Figure9

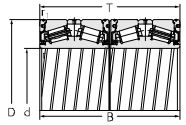

Figure10

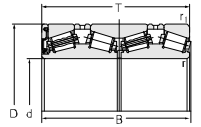

Figure11


Figure12


Figure13

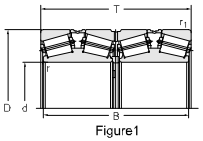

Figure14

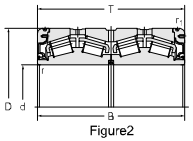

Figure15

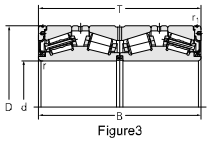

Figure16

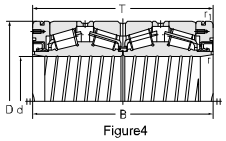
| Principal dimensions | | | | | | Basic load ratings | | Designations | Weight | Graph |
|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | T | $r_{min}$ | $r_{1min}$ | Cr | Cor | | | |
| mm | | | | | | kN | | | kg | |
| **440** | 650 | 355 | 355 | 6 | 5 | 4900 | 12000 | **380688** | 385 | 1 |
| | 650 | 355 | 355 | 6* | 5* | 3680 | 12100 | **380688/HC** | 385 | 1 |
| | 650 | 355 | 355 | 4 | 5 | 4550 | 12300 | **380688/HCYA7** | 385 | 1 |
| | 650 | 376 | 376 | 6 | 5 | 4900 | 13800 | **381088/HC** | 420 | 1 |
| | 650 | 355 | 355 | 6 | 5 | 4550 | 12300 | **381088X2/HC** | 403 | 3 |
| | 650 | 355 | 355 | 6 | 5 | 4550 | 12300 | **381088X2/HG2** | 403 | 3 |
| **450** | 595 | 415 | 415 | SP | 6 | 4900 | 16700 | **370690X2/HCC9DB** | 305 | 5 |
| | 595 | 415 | 415 | 9*20* | 6 | 4900 | 16700 | **370690X2/HCC9DB/W281** | 305 | 5 |
| | 595 | 350 | 350 | 6 | 1.5 | 5350 | 14700 | **380690/HC** | 285 | 6 |
| | 595 | 368 | 368 | 3 | 6 | 6300 | 16000 | **380690/HCEC9-1** | 281 | 10 |
| | 595 | 368 | 368 | SP | 5 | 5250 | 13400 | **380690-XRS/HC** | 268 | 2 |
| **460** | 590 | 360 | 360 | SP | SP | 5100 | 14400 | **380692/HCEC9YAD** | 241 | 1 |
| | 610 | 360 | 360 | 3 | 6 | 6100 | 16400 | **381992X3/HC** | 291 | 10 |
| | 610 | 360 | 360 | 3 | 6 | 6100 | 16400 | **381992X3/YA** | 291 | 10 |
| | 620 | 310 | 310 | 5 | 4 | 3650 | 10000 | **381992/HC** | 260 | 1 |
| | 620 | 310 | 310 | 5 | 4 | 3650 | 10000 | **381992/HCC9** | 260 | 1 |
| | 650 | 474 | 474 | 6 | 6 | 4500 | 20000 | **380692/HCC9-1** | 506 | 1 |
| | 730 | 440 | 440 | 4 | 7.5 | 5600 | 14800 | **381192X3/HC** | 663 | 1 |
| **475** | 600 | 368 | 368 | 2 | 6 | 4700 | 15600 | **3806/475/HCC9YB2** | 243 | 1 |
| | 620 | 380 | 380 | 2 | 6 | 5000 | 16200 | **380695/HCC9YB2** | 298 | 1 |
| **480** | 678 | 494 | 494 | 6 | 6 | 9130 | 23800 | **380696/HC** | 571 | 1 |
| | 700 | 420 | 420 | 5 | 5 | 4730 | 16900 | **381096** | 582 | 3 |
| | 700 | 420 | 420 | 6 | 5 | 5880 | 15500 | **381096/HCYA2** | 535 | 1 |
| **482.6** | 615.95 | 400 | 400 | SP | 6.4 | 4700 | 16000 | **3806/482.6-XRS/HCEC9YAB** | 299 | 2 |
| **488.95** | 622.3 | 365.125 | 365.125 | 3.8 | 6.4 | 4600 | 16200 | **3806/488X4/HC-TZ** | 267 | 1 |
| **490** | 625 | 385 | 385 | 7*3 | 4 | 4900 | 16500 | **380698/HC** | 278 | 1 |
| | 625 | 385 | 385 | 7*3 | 4 | 4900 | 16500 | **380698/HCYA2** | 278 | 1 |
| | 625 | 385 | 385 | SP | 6 | 5200 | 14350 | **380698-XRS/HCEC9YAD** | 275 | 2 |

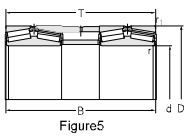
d 490~600 mm

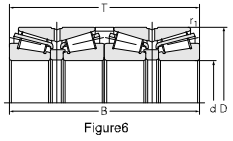

Figure1

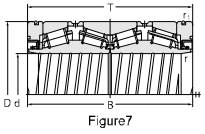

Figure2

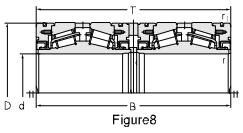

Figure3

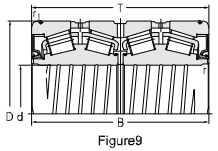

Figure4

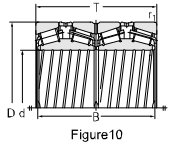

Figure5

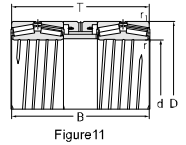

Figure6

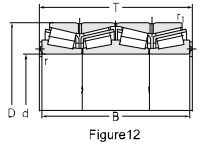

Figure7

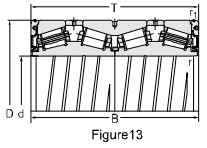

Figure8

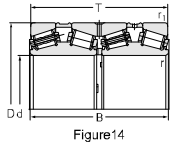

Figure9

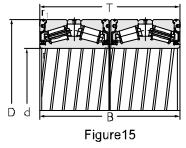

Figure10

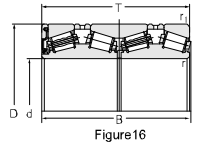

Figure11


Figure12


Figure13

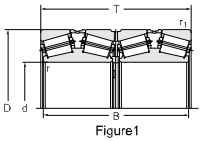

Figure14

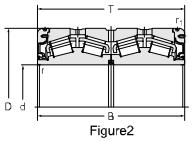

Figure15

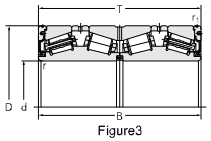

Figure16

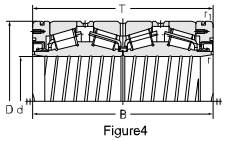
| Principal dimensions | | | | | | Basic load ratings | | Designations | Weight | Graph |
|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | T | $r_{min}$ | $r_{1min}$ | Cr | Cor | | | |
| mm | | | | | | kN | | | kg | |
| **490** | 625 | 385 | 385 | SP | 4 | 5200 | 14350 | **380698-XRS/HCEC9YB2** | 275 | 2 |
| **500** | 720 | 400 | 400 | 5 | 5 | 7500 | 18600 | **3810/500X2/HC** | 542 | 3 |
| **501.65** | 673.1 | 400.05 | 387.35 | 3.3 | 6.4 | 6450 | 17100 | **3806/501X4/HC** | 381 | 10 |
| **510** | 655 | 377 | 379 | 1.5 | 6.4 | 5500 | 16200 | **3806/510/HCC9** | 316 | 10 |
| | 655 | 377 | 379 | 1.5 | 6.4 | 5150 | 14700 | **3806/510-XRS/HCC9YAD** | 305 | 2 |
| **514.35** | 673.1 | 422.275 | 422.275 | SP | 6.4 | 5320 | 17100 | **3806/514X4-XRS/HCC9** | 379 | 2 |
| **520** | 740 | 540 | 540 | 5 | 6 | 8350 | 24500 | **3806/520/HCC9-1** | 728 | 1 |
| **530** | 730 | 515 | 535 | 5 | 5 | 10200 | 27400 | **3806/530/HCYAB** | 666 | 1 |
| | 780 | 450 | 450 | 6 | 5 | 7200 | 18200 | **3810/530** | 745 | 3 |
| | 780 | 450 | 450 | 6 | 5 | 6550 | 18200 | **3810/530/HC** | 742 | 3 |
| **540** | 690 | 400 | 400 | 2 | 5 | 5700 | 11400 | **3806/540J/HC** | 375 | 1 |
| **558.8** | 736.6 | 409.575 | 409.575 | SP | 6.4 | 6500 | 20000 | **3806/558X4-2RS/HCC9** | 456 | 3 |
| | 736.6 | 409.575 | 409.575 | 3.3 | 6.4 | 6500 | 20000 | **3806/558X4-2RS/HCC9-1** | 456 | 3 |
| | 736.6 | 409.575 | 409.575 | SP | 6.4 | 6500 | 20000 | **3806/558X4-2RS/HCC9/W281** | 456 | 3 |
| | 736.6 | 450 | 450 | 5 | 5 | 7250 | 23600 | **3806/558X4/HC** | 534 | 14 |
| | 736.6 | 455.612 | 457.2 | 3.3 | 6.4 | 8140 | 23200 | **3806/558X4-XRS/HCEC9-1/W281** | 517 | 2 |
| **560** | 750 | 368 | 368 | 5 | 4 | 7850 | 15800 | **3819/560/HC** | 447 | 3 |
| | 920 | 620 | 620 | 7.5 | 6 | 20000 | 32000 | **3811/560** | 1690 | 1 |
| **570** | 780 | 515 | 515 | SP | 6 | 9200 | 28100 | **3806/570/HCC9YAB** | 730 | 3 |
| **595.312** | 844.55 | 615.95 | 615.95 | 3.3 | 6.4 | 13600 | 36900 | **3806/595X4/HCC9YAB** | 1125 | 1 |
| **596.9** | 980 | 604.838 | 609.6 | 6.4 | 12.7 | 16100 | 33700 | **3806/596.9/HC** | 1760 | 14 |
| **600** | 800 | 365 | 365 | 5 | 5 | 4000 | 18100 | **779/600** | 489 | 1 |
| | 800 | 380 | 380 | 5 | 4 | 4400 | 18100 | **3819/600/HC** | 497 | 1 |

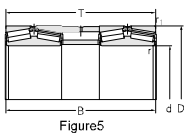
d 600~670 mm

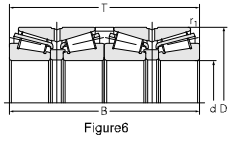

Figure1

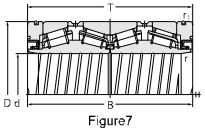

Figure2

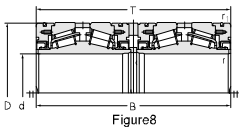

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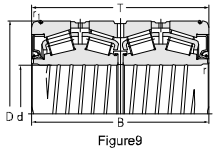

Figure4

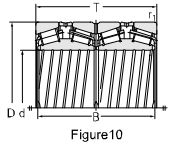

Figure5

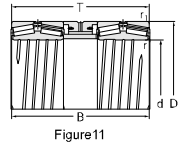

Figure6

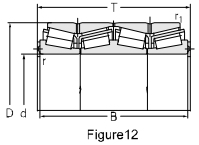

Figure7

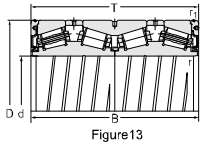

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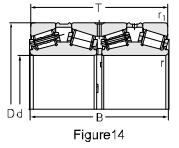

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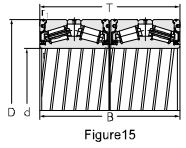

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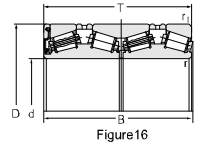

Figure11


Figure12


Figure13

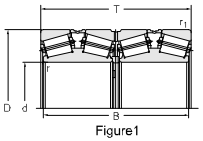

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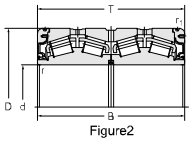

Figure15

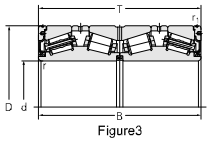

Figure16

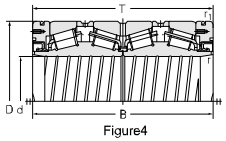
| Principal dimensions | | | | | | Basic load ratings | | Designations | Weight | Graph |
|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | T | $r_{min}$ | $r_{1min}$ | Cr | Cor | | | |
| mm | | | | | | kN | | | kg | |
| **600** | 800 | 380 | 380 | 5 | 4 | 5800 | 18100 | **3819/600/HCRG2** | 497 | 1 |
| | 800 | 365 | 365 | 5 | 5 | 4400 | 18100 | **3806/600/HC** | 489 | 1 |
| | 800 | 365 | 365 | 5 | 5 | 5110 | 17200 | **3806/600/HCYA8** | 521 | 3 |
| | 870 | 480 | 480 | 6 | 6 | 8900 | 27500 | **3810/600HC** | 990 | 3 |
| | 980 | 650 | 650 | 7.5 | 7.5 | 9650 | 37500 | **3811/600/HC** | 1950 | 3 |
| **609.6** | 787.4 | 361.95 | 361.95 | 3.3 | 6.4 | 7800 | 19000 | **EE649241D/649310-649311D-XRS** | 411 | 2 |
| **625** | 815 | 480 | 480 | 3.5 | 6.5 | 9720 | 28900 | **3806/625/GW/HC** | 658 | 10 |
| | 815 | 480 | 480 | 3.5 | 6.5 | 9720 | 28900 | **3806/625GW/HC/W281** | 658 | 10 |
| | 815 | 480 | 480 | 3.5 | 6.5 | 9720 | 28900 | **3806/625/HC** | 658 | 10 |
| **630** | 850 | 418 | 418 | 6 | 6 | 6700 | 22200 | **3819/630/HC** | 683 | 14 |
| | 850 | 418 | 418 | 6 | 6 | 7650 | 22500 | **3819/630/HCC9YAD** | 668 | 1 |
| | 860 | 615 | 615 | 6.5 | 6.5 | 8810 | 28500 | **3806/630/HC** | 1020 | 1 |
| | 860 | 615 | 615 | 5 | 5 | 13300 | 37000 | **3806/630-XRS/HCC9** | 1034 | 2 |
| | 920 | 515 | 515 | 7.5 | 7.5 | 6550 | 27500 | **3810/630/HC** | 1190 | 14 |
| | 1030 | 670 | 670 | 7.5 | 6 | 16500 | 42000 | **3811/630/HC** | 2200 | 14 |
| **646.112** | 857.25 | 542.925 | 542.925 | 3.3 | 6.4 | 9250 | 29100 | **3806/646X4-XRS/HCC9** | 837 | 2 |
| **647.7** | 1028.7 | 558.8 | 558.8 | 7.5 | 12 | 15000 | 30000 | **EE424257X2D/424405X2-424406X2D** | 1731 | 14 |
| | 1028.7 | 558.8 | 558.8 | 7.5 | 12 | 15000 | 30000 | **EE424257X2D/424405X2-424406X2D/W283** | 1731 | 14 |
| **650** | 1030 | 560 | 560 | 7.5 | 12 | 16020 | 39300 | **777/650UY** | 1712 | 14 |
| | 1030 | 560 | 560 | 7.5 | 12 | 17600 | 39300 | **3806/650/HC** | 1720 | 14 |
| | 1030 | 560 | 560 | 7.5 | 12 | 17600 | 39300 | **3806/650/HCC9** | 1723 | 14 |
| | 1030 | 560 | 560 | 7.5 | 12 | 16000 | 39300 | **3806/650/HCYA7** | 1770 | 14 |
| | 1030 | 560 | 560 | 7.5 | 12 | 16000 | 39300 | **3806/650/HCYAD** | 1735 | 14 |
| **660.011** | 855.015 | 319.99 | 319.99 | SP | 5.2 | 4750 | 17000 | **3806/660X4/HC** | 495 | 14 |
| **670** | 900 | 412 | 412 | 6 | 6 | 5250 | 24600 | **3819/670/HC** | 773 | 14 |
| | 900 | 412 | 412 | 6 | 6 | 5250 | 24600 | **3819/670/HCR** | 773 | 14 |

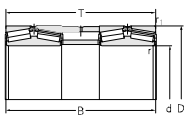
d 676~750 mm

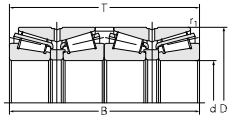

Figure1

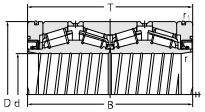

Figure2

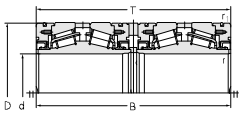

Figure3

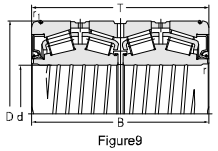

Figure4

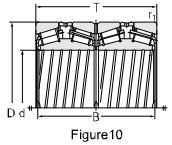

Figure5

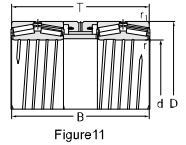

Figure6

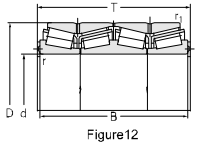

Figure7

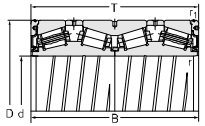

Figure8

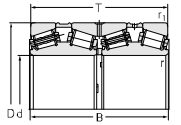

Figure9

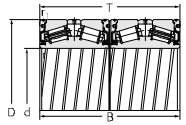

Figure10

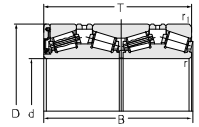

Figure11


Figure12


Figure13

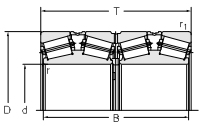

Figure14

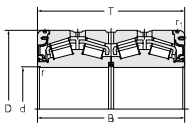

Figure15

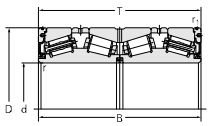

Figure16

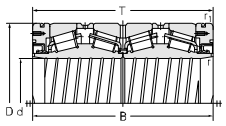
| Principal dimensions | | | | | | Basic load ratings | | Designations | Weight | Graph |
|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | T | $r_{min}$ | $r_{1min}$ | Cr | Cor | | | |
| mm | | | | | | kN | | | kg | |
| **676** | 910 | 620 | 620 | 4 | 8 | 11000 | 37500 | **3806/676/HCYA3** | 1162 | 14 |
| **680** | 930 | 700 | 700 | 3 | 6 | 16900 | 52300 | **3806/621X4K/HC** | 1665 | 14 |
| **685.8** | 876.3 | 352.425 | 355.6 | 6.4 | 6.4 | 5800 | 14500 | **3806/685.8-XRS/HCC9** | 490 | 7 |
| **707** | 914.4 | 552.45 | 552.45 | 3 | SP | 8900 | 30700 | **3806/704.85-XRS/HCC9** | 900 | 2 |
| **710** | 900 | 410 | 410 | 3 | 6 | 7850 | 27400 | **779/710** | 650 | 14 |
| | 900 | 410 | 410 | 3 | 7.5 | 8400 | 24100 | **3806/710-2RS/HCC9** | 619 | 13 |
| | 900 | 410 | 410 | 3 | 7.5 | 8400 | 24100 | **3806/710-2RS/HCC9/W281** | 619 | 13 |
| | 900 | 410 | 410 | 3 | 6 | 9250 | 26400 | **3806/710/HCC9YAD** | 601 | 1 |
| | 900 | 410 | 410 | 3 | 6 | 8080 | 27400 | **3806/710/HCEYB2** | 643 | 1 |
| | 900 | 410 | 410 | 3 | 6 | 5880 | 27500 | **3806/710/HCYA2** | 650 | 1 |
| | 900 | 410 | 410 | 4 | 7.5 | 8400 | 24100 | **3806/710-XRS/HCC9** | 620 | 2 |
| **711.2** | 914.4 | 390 | 420 | SP | 6.4 | 6200 | 19400 | **3806/711.2-XRS/HCEC9** | 671 | 7 |
| | 914.4 | 390 | 420 | SP | 5 | 6200 | 19400 | **3806/711.2-XRS/HCEP59** | 671 | 7 |
| | 914.4 | 390 | 420 | SP | 5 | 7900 | 20100 | **3806/711X4-XRS** | 674 | 13 |
| | 914.4 | 387.35 | 387.35 | SP | 6.4 | 7900 | 20100 | **3806/711X4-XRS/HCC91YAD** | 614 | 13 |
| | 914.4 | 387.35 | 387.35 | SP | 6.4 | 7900 | 20100 | **3806/711X4-XRS/HCC91YAD-1** | 622 | 13 |
| | 914.4 | 390 | 390 | SP | 7.5 | 7900 | 20100 | **3806/711X4-XRS/HCE** | 620 | 13 |
| | 914.4 | 390 | 390 | 1.1 | 7.5 | 7900 | 20100 | **3806/711X4-XRS/HCEC9YB2** | 622 | 13 |
| **730** | 940 | 500 | 500 | 3.5 | 8 | 11000 | 33000 | **3806/730/HCEYB2-1** | 868 | 14 |
| | 1035 | 755 | 755 | 3.3 | 6.4 | 20500 | 58500 | **3806/730/HCYB2** | 2120 | 14 |
| **749.3** | 990.6 | 605 | 605 | 4 | 8 | 13000 | 45300 | **3806/749.3/HC-JG** | 1284 | 14 |
| **750** | 950 | 410 | 410 | 6 | 6 | 9560 | 27780 | **3806/750/HCEC9** | 703 | 14 |
| | 1130 | 690 | 690 | 7.5 | 9.5 | 1680 | 49000 | **3810/750X3/HC** | 2490 | 14 |
| | 1220 | 840 | 840 | 9.5 | 8 | 21800 | 63000 | **3711/750X2-2RS/HCP69DB** | 3920 | 15 |
| | 1220 | 840 | 840 | 6 | 13 | 21100 | 70500 | **3806/780/HCC9** | 3810 | 14 |
| | 1220 | 840 | 840 | 9.5 | 9.5 | 17700 | 68500 | **3811/750** | 3985 | 14 |
| | 1220 | 840 | 840 | 9.5 | 9.5 | 30500 | 71500 | **3811/750/HCE** | 3979 | 14 |
| | 1220 | 840 | 840 | 9.5 | 9.5 | 24600 | 64500 | **3811/750-RS/HCC9** | 3880 | 16 |

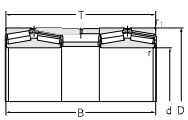
d 127~220.662 mm

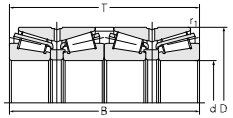

Figure1

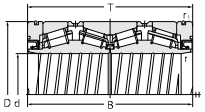

Figure2

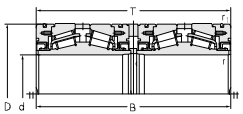

Figure3

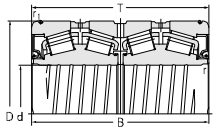

Figure4

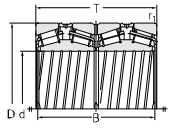

Figure5

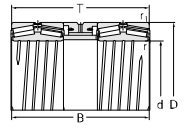

Figure6

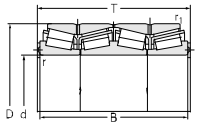

Figure7

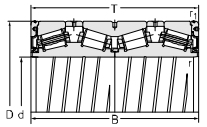

Figure8

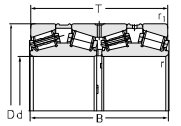

Figure9

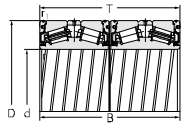

Figure10

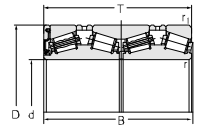

Figure11


Figure12


Figure13


Figure14

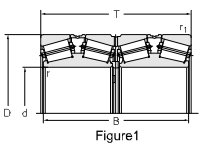

Figure15

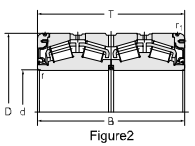

Figure16

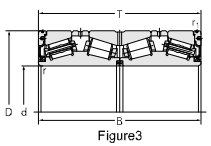
| Principal dimensions | | | | | | | | Chamfer dimensions | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | | D | | T | | B | | $r_{min}$ radial | $r_{min}$ axial | $r_{1min}$ radial | $r_{1min}$ axial |
| mm | in | mm | in | mm | in | mm | in | mm | | | |
| **127** | 5 | 182.562 | 7.1875 | 158.75 | 6.25 | 158.75 | 6.25 | 1.5 | 1.5 | 3.3 | 3.3 |
| **120.65** | 4.75 | 174.625 | 6.875 | 139.703 | 5.5 | 141.288 | 5.563 | 0.8 | 0.8 | 1.5 | 1.5 |
| **133.35** | 5.25 | 196.85 | 7.75 | 193.675 | 7.625 | 193.675 | 7.625 | 1.5 | 1.5 | 3.3 | 3.3 |
| | | 196.85 | 7.75 | 193.675 | 7.625 | 193.675 | 7.625 | 1.5 | 1.5 | 3.3 | 3.3 |
| **136.525** | 5.375 | 190.5 | 7.5 | 161.925 | 6.375 | 161.925 | 6.375 | 1.5 | 1.5 | 3.3 | 3.3 |
| **177.8** | 7 | 247.65 | 9.75 | 192.088 | 7.562 | 192.088 | 7.5625 | 1.5 | 1.5 | 3.3 | 3.3 |
| **187.325** | 7.375 | 269.875 | 10.625 | 211.138 | 8.3125 | 211.138 | 8.3125 | 1.5 | 1.5 | 3.3 | 3.3 |
| | | 269.875 | 10.625 | 211.138 | 8.3125 | 211.138 | 8.3125 | 1.5 | 1.5 | 3.3 | 3.3 |
| | | 269.875 | 10.625 | 211.138 | 8.3125 | 211.138 | 8.3125 | 1.5 | 1.5 | 3.3 | 3.3 |
| **190.5** | 7.5 | 266.7 | 10.5 | 188.912 | 7.437480315 | 187.325 | 7.375 | 1.5 | 1.5 | 3.3 | 3.3 |
| **198.438** | 7.8125 | 284.162 | 11.1875 | 225.425 | 8.875 | 225.425 | 8.875 | 1.5 | 1.5 | 3.3 | 3.3 |
| **204.127** | 8.0365 | 314.325 | 12.375 | 255.588 | 10.0625 | 255.588 | 10.0625 | 3.3 | 3.3 | 1.5 | 1.5 |
| **206.35** | 8.124 | 365.125 | 14.375 | 228.6 | 9 | 228.6 | 9 | 3.3 | 3.3 | 6.4 | 6.4 |
| **206.375** | 8.125 | 282.575 | 11.125 | 190.5 | 7.5 | 190.5 | 7.5 | 0.8 | 0.8 | 3.3 | 3.3 |
| | | 282.575 | 11.125 | 190.5 | 7.5 | 190.5 | 7.5 | 0.8 | 0.8 | 3.3 | 3.3 |
| | | 282.575 | 11.125 | 190.5 | 7.5 | 190.5 | 7.5 | 0.8 | 0.8 | 3.3 | 3.3 |
| **206.375** | | 282.575 | 11.125 | 190.5 | 7.5 | 190.5 | 7.5 | 0.8 | 0.8 | 3.3 | 3.3 |
| | | 282.575 | 11.125 | 190.5 | 7.5 | 190.5 | 7.5 | 0.8 | 0.8 | 3.3 | 3.3 |
| | | 282.575 | 11.125 | 190.5 | 7.5 | 190.5 | 7.5 | 0.8 | 0.8 | 3.3 | 3.3 |
| **220.662** | 8.6875 | 314.325 | 12.375 | 239.712 | 9.4375 | 239.712 | 9.4375 | 1.5 | 1.5 | 3.3 | 3.3 |
| | | 314.325 | 12.375 | 239.712 | 9.4375 | 239.712 | 9.4375 | 1.5 | 1.5 | 3.3 | 3.3 |
| | | 314.325 | 12.375 | 239.712 | 9.4375 | 239.712 | 9.4375 | 1.5 | 1.5 | 3.3 | 3.3 |
| | | 314.325 | 12.375 | 239.712 | 9.4375 | 239.712 | 9.4375 | 3.8 | 1.5 | 3.3 | 3.3 |

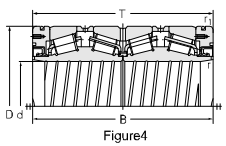
| Basic load ratings | | Designations | Weight | Graph |
|---|---|---|---|---|
| Cr | Cor | | | |
| kN | | | kg | |
| 690 | 1790 | **48290DW/48220-48220D/W283** | 13.2 | 1 |
| 615 | 1460 | **KM224749D/KM224710-KM224710D-3** | 11.1 | 1 |
| 970 | 2370 | **K67390D/K67322-K67322D** | 20.2 | 1 |
| 970 | 2370 | **K67390D/K67322-K67322D-3** | 20.2 | 1 |
| 720 | 1820 | **48393DW/48320-48320D/W283** | 13.8 | 1 |
| 1070 | 3000 | **K67791DGW/K67720-K67721D** | 28.6 | 1 |
| 1570 | 3430 | **KM238849D/KM238810-KM238810D** | 41.5 | 1 |
| 1250 | 3440 | **M238849DGW/M238810-M238810CD/HCOC2H/W283** | 41.5 | 1 |
| 1250 | 3440 | **M238849D/M238810-M238810D** | 41.5 | 1 |
| 1050 | 3030 | **K67885D/K67820-K67820D/C9YB2** | 32.8 | 1 |
| 1880 | 4200 | **M240648DW/M240611-M240611D** | 46.6 | 1 |
| 2100 | 4650 | **M244230T-M244247TD-M244249T/M244210DX2** | 65.1 | 12 |
| 1900 | 4580 | **EE134102D/134143-134144CD-3** | 71.8 | 1 |
| 1030 | 2830 | **67986D/67920-67921D** | 34.4 | 1 |
| 1030 | 2830 | **67986D/67920-67921D-2** | 34.4 | 1 |
| 1030 | 2830 | **67986D/67920-67921D-3/C9** | 34.4 | 1 |
| 1030 | 2830 | **67986D/67920-67921D/W283** | 34.4 | 1 |
| 1030 | 2830 | **K67986DGW/K67920-K67921D-2** | 34.4 | 1 |
| 1030 | 2830 | **K67986D/K67920-K67921D** | 34.4 | 1 |
| 2090 | 4900 | **KM244249D/KM244210-KM244210D** | 60.2 | 1 |
| 2000 | 4500 | **M244249DGW/M244210-M244210CD/C9** | 60.2 | 1 |
| 2000 | 4500 | **M244249DGW/M244210-M244210D/HEC9** | 59.8 | 1 |
| 1750 | 4150 | **M244249DGW/M244210-M244210D-XRS** | 57.4 | 2 |

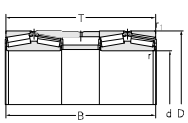
d 220.662~279.4 mm

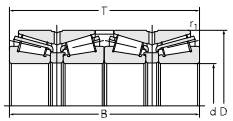

Figure1

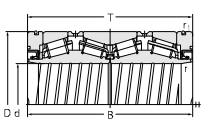

Figure2

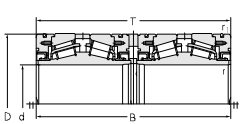

Figure3

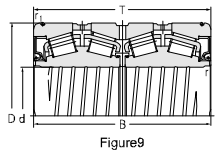

Figure4

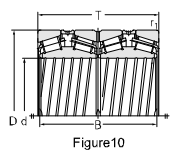

Figure5

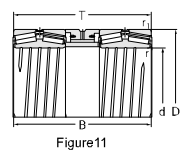

Figure6

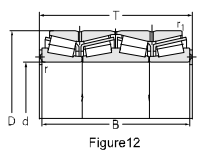

Figure7

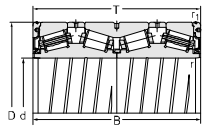

Figure8

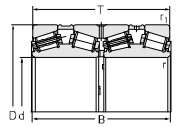

Figure9

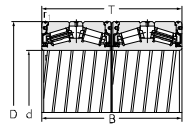

Figure10

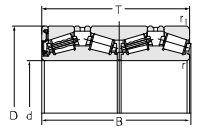

Figure11


Figure12


Figure13


Figure14

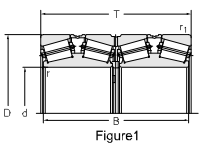

Figure15

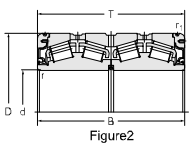

Figure16

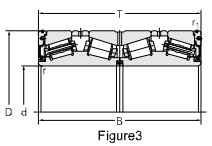
| Principal dimensions | | | | | | | | Chamfer dimensions | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | | D | | T | | B | | $r_{min}$ radial | $r_{min}$ axial | $r_{1min}$ radial | $r_{1min}$ axial |
| mm | in | mm | in | mm | in | mm | in | mm | | | |
| **220.662** | | 314.325 | 12.375 | 239.712 | 9.4375 | 239.712 | 9.4375 | 1.5 | 1.5 | 3.3 | 3.3 |
| | | 314.325 | 12.375 | 239.712 | 9.4375 | 239.712 | 9.4375 | 1.5 | 1.5 | 3.3 | 3.3 |
| | | 314.325 | 12.375 | 239.712 | 9.4375 | 239.712 | 9.4375 | 1.5 | 1.5 | 3.3 | 3.3 |
| **228.6** | 9 | 311.15 | 12.25 | 200.025 | 7.875 | 200.025 | 7.875 | 1.5 | 1.5 | 3.3 | 3.3 |
| | | 311.15 | 12.25 | 200.025 | 7.875 | 200.025 | 7.875 | 1.5 | 1.5 | 3.3 | 3.3 |
| **241.478** | 9.507 | 349.148 | 13.746 | 228.6 | 9 | 228.6 | 9 | 1.5 | 1.5 | 3.3 | 3.3 |
| **244.475** | 9.625 | 381 | 15 | 304.8 | 12 | 304.8 | 12 | 7.5 | 3.3 | 8.5 | 4.8 |
| | | 327.025 | 12.875 | 193.675 | 7.625 | 193.675 | 7.625 | 1.5 | 1.5 | 3.3 | 3.3 |
| | | 327.025 | 12.875 | 193.675 | 7.625 | 193.675 | 7.625 | 3.3 | 1.5 | 3.3 | 3.3 |
| | | 327.025 | 12.875 | 193.675 | 7.625 | 193.675 | 7.625 | 3.3 | 1.5 | 3.3 | 3.3 |
| | | 327.025 | 12.875 | 193.675 | 7.625 | 193.675 | 7.625 | 3.3 | 1.5 | 3.3 | 3.3 |
| **254** | 10 | 358.775 | 14.125 | 269.875 | 10.625 | 269.875 | 10.625 | 3.3 | 3.3 | 3.3 | 3.3 |
| | | 358.775 | 14.125 | 269.875 | 10.625 | 269.875 | 10.625 | 3.3 | 3.3 | 3.3 | 3.3 |
| | | 358.775 | 14.125 | 269.875 | 10.625 | 269.875 | 10.625 | 3.3 | 3.3 | 3.3 | 3.3 |
| | | 358.775 | 14.125 | 269.875 | 10.625 | 269.875 | 10.625 | 3.3 | 3.3 | 3.3 | 3.3 |
| **254** | | 358.775 | 14.125 | 269.875 | 10.625 | 269.875 | 10.625 | 3.3 | 3.3 | 3.3 | 3.3 |
| | | 358.775 | 14.125 | 269.875 | 10.625 | 269.875 | 10.625 | 3.3 | 3.3 | 3.3 | 3.3 |
| | | 358.775 | 14.125 | 269.875 | 10.625 | 269.875 | 10.625 | 1.5 | 1.5 | 3.3 | 3.3 |
| **266.7** | 10.5 | 355.6 | 14 | 228.6 | 9 | 230.188 | 9.063 | 1.6 | 1.6 | 3.2 | 3.2 |
| | | 355.6 | 14 | 230.188 | 9.0625 | 228.6 | 9 | 3.3 | 1.5 | 3.3 | 3.3 |
| | | 355.6 | 14 | 230.188 | 9.0625 | 228.6 | 9 | 3.3 | 1.5 | 3.3 | 3.3 |
| | | 355.6 | 14 | 230.188 | 9.0625 | 230.188 | 9.063 | 3.3 | 1.5 | 3.3 | 3.3 |
| **269.875** | 10.625 | 381 | 15 | 282.575 | 11.125 | 282.575 | 11.125 | 3.3 | 3.3 | 3.3 | 3.3 |
| | | 381 | 15 | 282.575 | 11.125 | 282.575 | 11.125 | 3.3 | 3.3 | 3.3 | 3.3 |
| **279.4** | 11 | 393.7 | 15.5 | 269.875 | 10.625 | 269.875 | 10.625 | 1.5 | 1.5 | 6.4 | 6.4 |
| | | 393.7 | 15.5 | 269.875 | 10.625 | 269.875 | 10.625 | 1.5 | 1.5 | 6.4 | 6.4 |
| | | 393.7 | 15.5 | 269.875 | 10.625 | 269.875 | 10.625 | 1.5 | 1.5 | 6.4 | 6.4 |

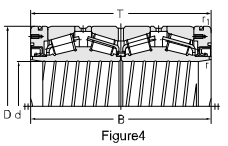
| Basic load ratings | | Designations | Weight | Graph |
|---|---|---|---|---|
| Cr | Cor | | | |
| kN | | | kg | |
| 1790 | 4900 | **M244249D/M244210-M244210D-2/C9** | 60.2 | 1 |
| 1790 | 4900 | **M244249D/M244210-M244210D/C9W283** | 58.8 | 1 |
| 2160 | 4900 | **M244249DW/M244210-M244210D/HEC9** | 60.2 | 1 |
| 1560 | 3650 | **LM245149DGW/LM245110-LM245110D** | 43.9 | 1 |
| 1560 | 3650 | **LM245149D/LM245110-LM245110D** | 43.9 | 1 |
| 1800 | 4350 | **EE127097DW/127135-127136CD/YA10-3** | 71.9 | 1 |
| 2700 | 5900 | **EE126096DGWA6/126150A6-126151D/C9** | 124 | 1 |
| 1450 | 4050 | **KLM247748DGW/KLM247710-KLM247710D/HG2-3** | 44 | 1 |
| 1740 | 3930 | **KLM247748DW/KLM247710-KLM247710D** | 42.7 | 1 |
| 1740 | 4050 | **LM247748DW/LM247710-LM247710D** | 42.7 | 1 |
| 1450 | 4050 | **LM247748DW/LM247710-LM247710D-3** | 44 | 1 |
| 2720 | 6050 | **K3M249748DW/K3M249710-K3M249710D-3** | 88.9 | 1 |
| 2080 | 6050 | **KRM249748D/M249710-M249710D** | 86.8 | 1 |
| 2080 | 6050 | **KRM249748DW/M249710-M249710D** | 86.8 | 1 |
| 2080 | 6050 | **M249748D/KM249710-KM249710D** | 86.8 | 1 |
| 2720 | 6050 | **M249748D/M249710-M249710D** | 88.9 | 1 |
| 2080 | 6050 | **M249748DW/M249710-M249710D/W283-LG** | 86.8 | 1 |
| 2230 | 6150 | **M249749D/M249710-M249710CD** | 86.8 | 1 |
| 1700 | 4800 | **K76589D/K76520-K76520D** | 59.6 | 1 |
| 1950 | 5560 | **KLM451349DW/KLM451310-KLM451310D** | 65.3 | 1 |
| 1950 | 5800 | **LM451349DW/LM451310-LM451310D** | 63.9 | 1 |
| 2110 | 5140 | **LM451349DW/LM451310-LM451310D-WY** | 61.5 | 1 |
| 2930 | 7550 | **M252349DW/M252310-M252310D** | 105 | 1 |
| 2340 | 7550 | **M252349DW/M252310-M252310D-3** | 105 | 1 |
| 2040 | 6200 | **EE135111D/135155-135156D** | 103 | 1 |
| 2040 | 6200 | **EE135111D/135155-135156D-2/C91** | 103 | 1 |
| 2040 | 6200 | **EE135111DW/135155-135156DW** | 103 | 1 |

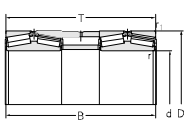
d 279.4~341.312 mm

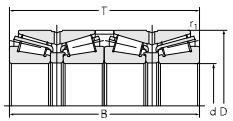

Figure1

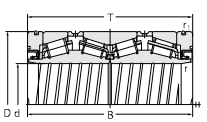

Figure2

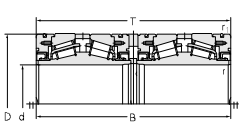

Figure3

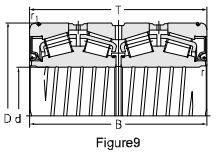

Figure4

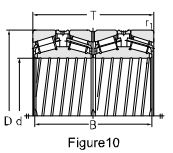

Figure5

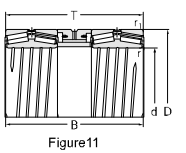

Figure6

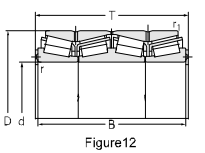

Figure7

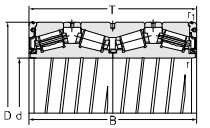

Figure8

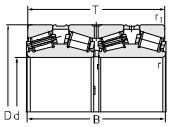

Figure9

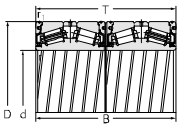

Figure10

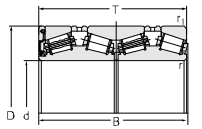

Figure11


Figure12


Figure13


Figure14

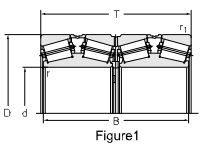

Figure15

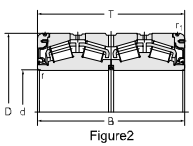

Figure16

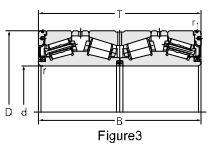
| Principal dimensions | | | | | | | | Chamfer dimensions | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | | D | | T | | B | | $r_{min}$ radial | $r_{min}$ axial | $r_{1min}$ radial | $r_{1min}$ axial |
| mm | in | mm | in | mm | in | mm | in | mm | | | |
| **279.4** | | 393.7 | 15.5 | 269.875 | 10.625 | 269.875 | 10.625 | 1.5 | 1.5 | 6.4 | 6.4 |
| | | 393.7 | 15.5 | 269.875 | 10.625 | 269.875 | 10.625 | 1.5 | 1.5 | 6.4 | 6.4 |
| | | 393.7 | 15.5 | 269.875 | 10.625 | 269.875 | 10.625 | 1.5 | 1.5 | 6.4 | 6.4 |
| | | 393.7 | 15.5 | 269.875 | 10.625 | 269.875 | 10.625 | 1.5 | 1.5 | 6.4 | 6.4 |
| **285.75** | 11.25 | 380.898 | 14.996 | 244.475 | 9.625 | 244.475 | 9.625 | 3.8 | 1.5 | 5.5 | 3.3 |
| **288.925** | 11.375 | 406.4 | 16 | 298.45 | 11.75 | 298.45 | 11.75 | 3.3 | 3.3 | 3.3 | 3.3 |
| | | 406.4 | 16 | 298.45 | 11.75 | 298.45 | 11.75 | 3.3 | 3.3 | 3.3 | 3.3 |
| | | 406.4 | 16 | 298.45 | 11.75 | 298.45 | 11.75 | 3.3 | 3.3 | 3.3 | 3.3 |
| **288.925** | | 406.4 | 16 | 298.45 | 11.75 | 298.45 | 11.75 | 3.3 | 3.3 | 3.3 | 3.3 |
| | | 406.4 | 16 | 298.45 | 11.75 | 298.45 | 11.75 | 3.3 | 3.3 | 3.3 | 3.3 |
| | | 406.4 | 16 | 298.45 | 11.75 | 298.45 | 11.75 | 3.3 | 3.3 | 3.3 | 3.3 |
| **300.038** | 11.8125 | 422.275 | 16.625 | 311.15 | 12.25 | 311.15 | 12.25 | 3.3 | 3.3 | 3.3 | 3.3 |
| | | 422.275 | 16.625 | 311.15 | 12.25 | 311.15 | 12.25 | 3.3 | 3.3 | 3.3 | 3.3 |
| **304.648** | 11.994 | 438.048 | 17.246 | 279.4 | 11 | 279.4 | 11 | 3.3 | 3.3 | 4.8 | 4.8 |
| | | 438.048 | 17.246 | 279.4 | 11 | 279.4 | 11 | | | | |
| **304.8** | 12 | 419.1 | 16.5 | 269.875 | 10.625 | 269.875 | 10.625 | 1.5 | 1.5 | 6.4 | 6.4 |
| **304.902** | 12.004 | 412.648 | 16.246 | 266.7 | 10.5 | 266.7 | 10.5 | 3.3 | 3.3 | 3.3 | 3.3 |
| **317.5** | 12.5 | 422.275 | 16.625 | 269.875 | 10.625 | 269.875 | 10.625 | 4.32 | 1.57 | 3.3 | 3.3 |
| | | 422.275 | 16.625 | 269.875 | 10.625 | 269.875 | 10.625 | 3.8 | 1.5 | 5.5 | 3.3 |
| **330.2** | 13 | 444.5 | 17.5 | 301.625 | 11.875 | 301.625 | 11.875 | 3.3 | 3.3 | 3.3 | 3.3 |
| **333.375** | 13.125 | 469.9 | 18.5 | 342.9 | 13.5 | 342.9 | 13.5 | 8 | 2 | 5 | 4 |
| **340.8** | 13.4173 | 419.1 | 16.5 | 268.875 | 10.5856 | 268.875 | 10.5856 | 1.5 | 1.5 | 6.4 | 6.4 |
| **341.312** | 13.4375 | 457.098 | 17.996 | 254 | 10 | 254 | 10 | 2 | 1.5 | 3.3 | 3.3 |
| | | 457.098 | 17.996 | 254 | 10 | 254 | 10 | 2 | 1.5 | 3.3 | 3.3 |

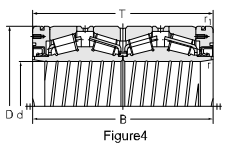
| Basic load ratings | | Designations | Weight | Graph |
|---|---|---|---|---|
| Cr | Cor | | | |
| kN | | | kg | |
| 2040 | 6200 | **EE135111DW/135155-135156DW-3/C9** | 103 | 1 |
| 2880 | 6200 | **EE135111DW/135155-135156DW/HEC9** | 103 | 1 |
| 2040 | 6200 | **EE135111DW/135155-135156DW/W281** | 103 | 1 |
| 2880 | 6200 | **KEE135111DW/K135155-K135156D** | 103 | 1 |
| 2000 | 5900 | **LM654648DGW/LM654610-LM654610D-3/C9** | 74.4 | 1 |
| 2640 | 8150 | **M255449DGW/M255410-M255410D** | 125 | 1 |
| 2640 | 8150 | **M255449DGW/M255410-M255410D/HE** | 125 | 1 |
| 3500 | 8400 | **M255449DGW/M255410-M255410D/W283** | 125 | 1 |
| 3400 | 8150 | **M255449D/M255410-M255410D** | 125 | 1 |
| 3400 | 8150 | **M255449DW/M255410-M255410D** | 125 | 1 |
| 2640 | 8150 | **M255449DW/M255410-M255410D/HE** | 125 | 1 |
| 3700 | 9400 | **HM256849D/HM256810-HM256810D** | 142 | 1 |
| 3400 | 8300 | **HM256849D/HM256810-HM256810D/W283** | 135 | 1 |
| 2700 | 7450 | **M757448D/M757410-M757410D-3** | 134 | 1 |
| 2700 | 7450 | **M757448DWX2A6/M757410A6-M757410D-3/C9YA11** | 134 | 1 |
| 2570 | 7500 | **M257149DW/M257110-M257110D** | 112 | 1 |
| 2420 | 6960 | **KM257248DW/KM257210-KM257210D** | 102 | 1 |
| 2880 | 7280 | **LM258648DGW/LM258610/HEC9DB** | 103 | 1 |
| 2880 | 7280 | **LM258648DWA6/LM258610A6-LM258610D/C9** | 103 | 1 |
| 3600 | 8800 | **M260149DGW/M260110-M260110D/C9** | 129 | 1 |
| 3400 | 10300 | **HM261049DWYAD/HM261010A6-HM261010D/C9** | 188 | 1 |
| 2570 | 7500 | **M257149DGW/M257110-M257110D** | 112 | 1 |
| 2740 | 7050 | **LM761648D/LM761610-LM761610D** | 112 | 1 |
| 2740 | 7050 | **LM761648D/LM761610-LM761610D-3** | 112 | 1 |

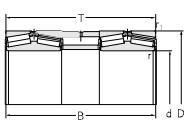
d 342.9~456.794 mm

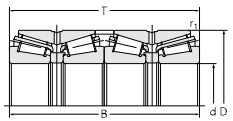

Figure1

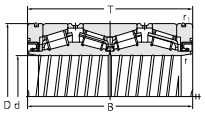

Figure2

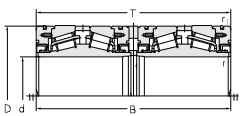

Figure3

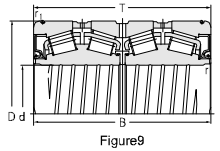

Figure4

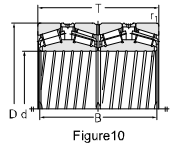

Figure5

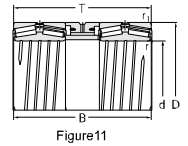

Figure6

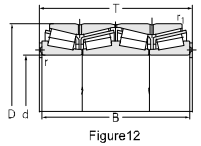

Figure7

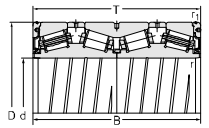

Figure8

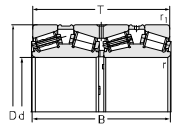

Figure9

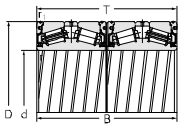

Figure10

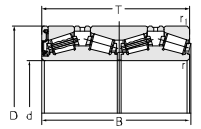

Figure11


Figure12


Figure13


Figure14

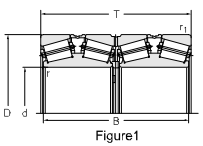

Figure15

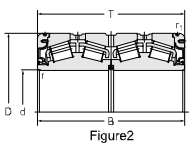

Figure16

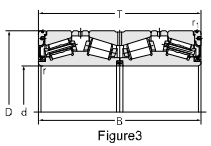
| Principal dimensions | | | | | | | | Chamfer dimensions | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | | D | | T | | B | | $r_{min}$ radial | $r_{min}$ axial | $r_{1min}$ radial | $r_{1min}$ axial |
| mm | in | mm | in | mm | in | mm | in | mm | | | |
| **342.9** | 13.5 | 533.4 | 21 | 307.975 | 12.125 | 307.975 | 12.125 | 3.3 | 3.3 | 3.3 | 3.3 |
| | | 533.4 | 21 | 301.625 | 11.875 | 307.975 | 12.125 | 3.3 | 3.3 | 3.3 | 3.3 |
| | | 533.4 | 21 | 301.625 | 11.875 | 307.975 | 12.125 | 3.3 | 3.3 | 3.3 | 3.3 |
| **343.052** | 13.506 | 457.098 | 17.996 | 254 | 10 | 254 | 10 | 1.5 | 1.5 | 3.3 | 3.3 |
| **347.662** | 13.6875 | 469.9 | 18.5 | 292.1 | 11.5 | 292.1 | 11.5 | 3.3 | 3.3 | 3.3 | 3.3 |
| **355.6** | | 457.2 | 18 | 252.412 | 9.9375 | 252.412 | 9.9375 | 1.5 | 1.5 | 3.3 | 3.3 |
| | 14 | 488.95 | 19.25 | 317.5 | 12.5 | 317.5 | 12.5 | 1.5 | 1.5 | 3.3 | 3.3 |
| | | 488.95 | 19.25 | 317.5 | 12.5 | 317.5 | 12.5 | 1.5 | 1.5 | 3.3 | 3.3 |
| **355.6** | | 488.95 | 19.25 | 317.5 | 12.5 | 317.5 | 12.5 | 1.5 | 1.5 | 3.3 | 3.3 |
| | | 488.95 | 19.25 | 317.5 | 12.5 | 317.5 | 12.5 | 1.5 | 1.5 | 3.3 | 3.3 |
| | | 488.95 | 19.25 | 317.5 | 12.5 | 317.5 | 12.5 | 1.5 | 1.5 | 3.3 | 3.3 |
| | | 488.95 | 19.25 | 317.5 | 12.5 | 317.5 | 12.5 | 1.5 | 1.5 | 3.3 | 3.3 |
| **368.3** | 14.5 | 523.875 | 20.625 | 382.588 | 15.0625 | 382.588 | 15.0625 | 3.3 | 3.3 | 6.4 | 6.4 |
| **384.175** | 15.125 | 546.1 | 21.5 | 400.05 | 15.75 | 400.05 | 15.75 | 3.3 | 3.3 | 6.4 | 6.4 |
| **409.575** | 16.125 | 546.1 | 21.5 | 334.962 | 13.1875 | 334.962 | 13.1875 | 1.5 | 1.5 | 6.4 | 6.4 |
| | | 546.1 | 21.5 | 334.962 | 13.1875 | 334.962 | 13.1875 | 1.5 | 1.5 | 6.4 | 6.4 |
| | | 546.1 | 21.5 | 334.962 | 13.1875 | 334.962 | 13.1875 | 1.5 | 1.5 | 6.4 | 6.4 |
| | | 546.1 | 21.5 | 334.962 | 13.1875 | 334.962 | 13.1875 | 1.5 | 1.5 | 6.4 | 6.4 |
| | | 546.1 | 21.5 | 334.962 | 13.1875 | 334.962 | 13.1875 | 1.5 | 1.5 | 6.4 | 6.4 |
| **415.925** | 16.375 | 590.55 | 23.25 | 434.975 | 17.125 | 434.975 | 17.125 | 3.3 | 3.3 | 6.4 | 6.4 |
| | | 590.55 | 23.25 | 434.975 | 17.125 | 434.975 | 17.125 | 3.3 | 3.3 | 6.4 | 6.4 |
| **447.675** | 17.625 | 635 | 25 | 463.55 | 18.25 | 463.55 | 18.25 | 3.3 | 3.3 | 6.4 | 6.4 |
| | | 635 | 25 | 463.55 | 18.25 | 463.55 | 18.25 | 3.3 | 3.3 | 6.4 | 6.4 |
| **449.949** | 17.7145 | 594.949 | 23.4232 | 368 | 14.4882 | 368 | 14.4882 | 4 | 4 | 8 | 8 |
| **456.794** | 17.984 | 761.873 | 29.995 | 527.05 | 20.75 | 527.05 | 20.75 | 3.3 | 3.3 | 6.4 | 6.4 |

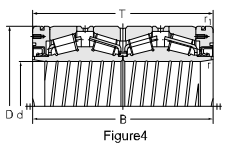
| Basic load ratings | | Designations | Weight | Graph |
|---|---|---|---|---|
| Cr | Cor | | | |
| kN | | | kg | |
| 4300 | 9000 | **EE971355DW/972100-972103D** | 246 | 1 |
| 3660 | 8460 | **KEE971355DW/K972100-K972103D** | 246 | 1 |
| 3660 | 8460 | **KEE971355DW/K972100-K972103D/HG2** | 246 | 1 |
| 2800 | 6900 | **LM761649DWSH/LM761610SH-LM761610DSH-3** | 111 | 1 |
| 2600 | 7950 | **M262449D/M262410-M262410D** | 142 | 1 |
| 2080 | 6850 | **LM263149D/LM263110-LM263110D** | 97.4 | 1 |
| 3150 | 10000 | **KM263349D/KM263310-KM263310D** | 177 | 1 |
| 3550 | 10000 | **M263349DGW/M263310-M263310D/C9** | 177 | 1 |
| 3150 | 10000 | **M263349D/M263310-M263310D** | 177 | 1 |
| 4750 | 11000 | **M263349D/M263310-M263310D-XRS** | 165 | 2 |
| 4750 | 11000 | **M263349D/M263310-M263310D-XRS/HCEC9** | 165 | 2 |
| 3150 | 10000 | **M263349DW/M263310-M263310D-3** | 177 | 1 |
| 6200 | 14800 | **HM265049DW/HM265010-HM265010D** | 274 | 1 |
| 6120 | 16400 | **HM266449DW/HM266410-HM266410CD** | 310 | 1 |
| 3470 | 11500 | **M667947ADW/M667910-M667910D/C9** | 213 | 1 |
| 4400 | 11500 | **M667947DGW/M667911-M667911D/ZP-1** | 213 | 1 |
| 4400 | 11500 | **M667947DGW/M667911-M667911D/ZPC91** | 213 | 1 |
| 3470 | 11500 | **M667947D/M667910-M667910D** | 213 | 1 |
| 4150 | 10400 | **M667947DW/M667910-M667910D-XRS/HEC9YB2** | 205 | 2 |
| 5400 | 16500 | **M268749D/M268710-M268710D** | 369 | 1 |
| 5700 | 17700 | **M268749DWH/M268710-M268710D** | 375 | 14 |
| 8150 | 21000 | **M270749ADW/M270710-M270710D-3** | 485 | 1 |
| 8150 | 21000 | **M270749DGW/M270710-M270710D** | 485 | 1 |
| 4900 | 15700 | **M270448DGW/M270410/DB-3** | 300 | 1 |
| 10600 | 22900 | **EE425176D/425299-425299D-3** | 973 | 1 |

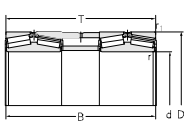
d 457.2~603.25 mm

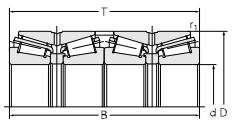

Figure1

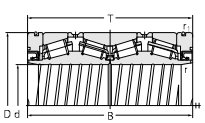

Figure2

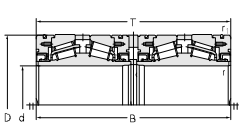

Figure3

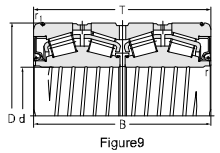

Figure4

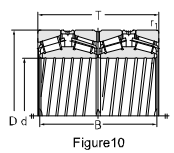

Figure5

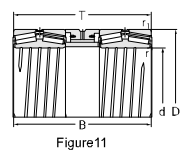

Figure6

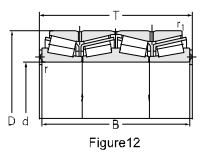

Figure7

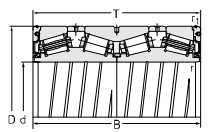

Figure8

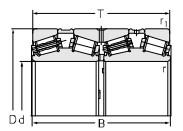

Figure9

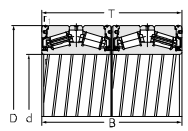

Figure10

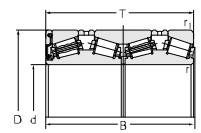

Figure11


Figure12


Figure13


Figure14

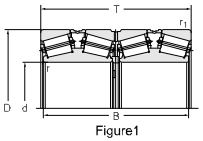

Figure15

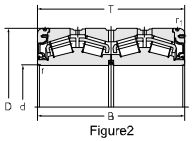

Figure16

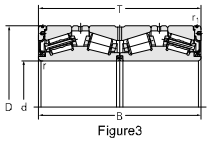
| Principal dimensions | | | | | | | | Chamfer dimensions | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | | D | | T | | B | | $r_{min}$ radial | $r_{min}$ axial | $r_{1min}$ radial | $r_{1min}$ axial |
| mm | in | mm | in | mm | in | mm | in | mm | | | |
| **457.2** | 18 | 596.9 | 23.5 | 279.4 | 11 | 276.225 | 10.875 | 3.8 | 1.5 | 5.5 | 3.3 |
| **460*** | | 625 | | 421 | | 421 | | 3 | 3 | 9 | 9 |
| | | 625* | | 421 | | 421 | | 1.5 | 1.5 | 6.4 | 6.4 |
| **482.6** | 19 | 615.95 | 24.25 | 330.2 | 13 | 158.75 | 6.25 | 3.3 | 3.3 | 6.4 | 6.4 |
| | | 615.95 | 24.25 | 330.2 | 13 | 330.2 | 13 | 3.3 | 3.3 | 6.4 | 6.4 |
| | | 635 | 25 | 421 | 16.5748 | 421 | 16.575 | 3 | 3 | 6.4 | 6.4 |
| | | 647.7 | 25.5 | 417.512 | 16.437 | 417.512 | 16.437 | 3.3 | 3.3 | 6.4 | 6.4 |
| **489.026** | 19.253 | 634.873 | 24.995 | 320.675 | 12.625 | 320.675 | 12.625 | 7.5 | 3.3 | 3.3 | 3.3 |
| **501.65** | 19.75 | 711.2 | 28 | 520.7 | 20.5 | 520.7 | 20.5 | 3.3 | 3.3 | 6.4 | 6.4 |
| | | 711.2 | 28 | 520.7 | 20.5 | 520.7 | 20.5 | 3.3 | 3.3 | 6.4 | 6.4 |
| **508** | 20 | 695.325 | 27.375 | 415.925 | 16.375 | 415.925 | 16.375 | 3.3 | 3.3 | 6.4 | 6.4 |
| **514.35** | 20.25 | 673.1 | 26.5 | 422.275 | 16.625 | 422.275 | 16.625 | 3.3 | 3.3 | 6.4 | 6.4 |
| **519.112** | 20.437 | 736.6 | 29 | 536.575 | 21.125 | 536.575 | 21.125 | 3.3 | 3.3 | 6.4 | 6.4 |
| | | 736.6 | 29 | 536.575 | 21.125 | 536.575 | 21.125 | 3.3 | 3.3 | 6.4 | 6.4 |
| **558.8** | 22 | 736.6 | 29 | 409.575 | 16.125 | 409.575 | 16.125 | 3.3 | 3.3 | 6.4 | 6.4 |
| | | 736.6 | 29 | 409.575 | 16.125 | 409.575 | 16.125 | 3.3 | 3.3 | 6.4 | 6.4 |
| | | 736.6 | 29 | 409.575 | 16.125 | 409.575 | 16.125 | 3.3 | 3.3 | 6.4 | 6.4 |
| | | 736.6 | 29 | 409.575 | 16.125 | 409.575 | 16.125 | 3.3 | 3.3 | 6.4 | 6.4 |
| **571.5** | 22.5 | 812.8 | 32 | 593.725 | 23.375 | 593.725 | 23.375 | 3.3 | 3.3 | 6.4 | 6.4 |
| **585.788** | 23.063 | 771.525 | 30.375 | 479.425 | 18.875 | 479.425 | 18.875 | 3.3 | 3.3 | 6.4 | 6.4 |
| | | 771.525 | 30.375 | 479.425 | 18.875 | 479.425 | 18.875 | 3.3 | 3.3 | 6.4 | 6.4 |
| | | 771.525 | 30.375 | 479.425 | 18.875 | 479.425 | 18.875 | 3.3 | 3.3 | 6.4 | 6.4 |
| **603.25** | 23.75 | 857.25 | 33.75 | 622.3 | 24.5 | 622.3 | 24.5 | 3.3 | 3.3 | 6.4 | 6.4 |
| | | 857.25 | 33.75 | 622.3 | 24.5 | 622.3 | 24.5 | 8.7 | 12.7 | 8.3 | 6.5 |
| | | 857.25 | 33.75 | 622.3 | 24.5 | 622.3 | 24.5 | 8.7 | 12.7 | 8.3 | 6.5 |

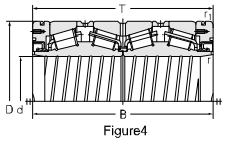
| Basic load ratings | | Designations | Weight | Graph |
|---|---|---|---|---|
| Cr | Cor | | | |
| kN | | | kg | |
| 4000 | 10300 | **L770847DGWA6/L770810A6-L770810D-3/C9** | 198 | 10 |
| 8050 | 18400 | **M271149D/M271110-M271110D** | 375 | 10 |
| 6450 | 16900 | **M271149DW/M271110-M271110D-XRS/C9YB2** | 366 | 2 |
| 4100 | 15200 | **LM272249D/LM272210-LM272210D-2/C9** | 252 | 1 |
| 4800 | 13700 | **LM272249DW/LM272210-LM272210D-XRS** | 237 | 2 |
| 6790 | 19000 | **M272449DW/M272410-M272410D/C9** | 354 | 1 |
| 7000 | 18700 | **M272647D/M272610-M272610D-3/C9** | 383 | 1 |
| 3850 | 12600 | **LM772749DGWA6/LM772710-LM772710D-3/C9** | 258 | 10 |
| 9690 | 26900 | **M274149DW/M274110-M274110D** | 687 | 14 |
| 9650 | 26900 | **M274149DW/M274110-M274110D-3/C9** | 671 | 14 |
| 5800 | 19600 | **LM274049DW/LM274010-LM274010D** | 464 | 1 |
| 7000 | 21000 | **LM274449DW/LM274410-LM274410D** | 408 | 1 |
| 8740 | 25900 | **M275349DGW/M275310-M275310D** | 720 | 10 |
| 8740 | 25900 | **M275349DGW/M275310-M275310D-3** | 720 | 10 |
| 6430 | 20500 | **LM377449D/LM377410-LM377410D** | 460 | 1 |
| 6430 | 20500 | **LM377449D/LM377410-LM377410D/HE** | 460 | 1 |
| 6430 | 20500 | **LM377449D/LM377410-LM377410D/HE-2** | 460 | 1 |
| 6430 | 20500 | **LM377449D/LM377410-LM377410D/HEC9** | 460 | 1 |
| 11500 | 36500 | **M278749DW/M278710-M278710D/YB2-2** | 1073 | 1 |
| 8100 | 26700 | **LM278849DGW/LM278810-LM278810D** | 595 | 10 |
| 8100 | 26700 | **LM278849DGWX2/LM278810-LM278810D-XRS** | 676 | 2 |
| 9000 | 24200 | **LM278849D/LM278810-LM278810D-XRS** | 600 | 2 |
| 14000 | 38900 | **M280249DGWA/M280210/DBYB2** | 1167 | 14 |
| 14000 | 38900 | **M280249DWA6/M280210A6-M280210D** | 1168 | 14 |
| 14000 | 38900 | **M280249DWA6/M280210A6-M280210D/C9** | 1172 | 14 |

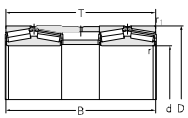
d 609.6~963.6 mm

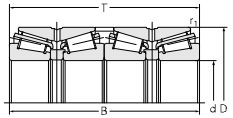

Figure1

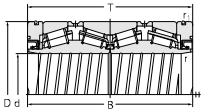

Figure2

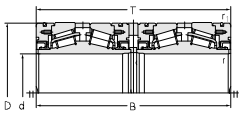

Figure3

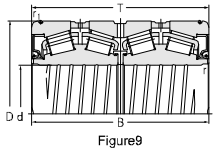

Figure4

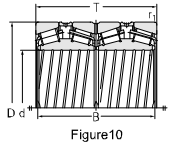

Figure5

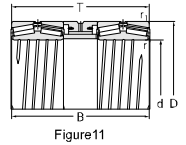

Figure6

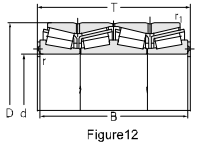

Figure7

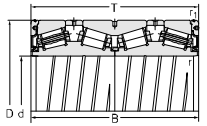

Figure8

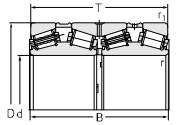

Figure9

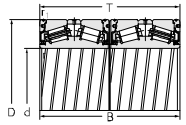

Figure10

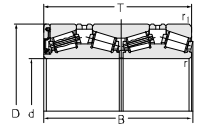

Figure11


Figure12


Figure13


Figure14


Figure15


Figure16

| Principal dimensions | | | | | | | | Chamfer dimensions | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | | D | | T | | B | | $r_{min}$ radial | $r_{min}$ axial | $r_{1min}$ radial | $r_{1min}$ axial |
| mm | in | mm | in | mm | in | mm | in | mm | | | |
| **609.6** | 24 | 787.4 | 31 | 361.95 | 14.25 | 361.95 | 14.25 | 3.3 | 3.3 | 6.4 | 6.4 |
| | | 787.4 | 31 | 361.95 | 14.25 | 361.95 | 14.25 | 3.3 | 3.3 | 6.4 | 6.4 |
| **646.112** | 25.4375 | 857.25 | 33.75 | 542.925 | 21.375 | 542.925 | 21.375 | 3.3 | 3.3 | 6.4 | 6.4 |
| | | 857.25 | 33.75 | 542.925 | 21.375 | 542.925 | 21.375 | 3.3 | 3.3 | 6.4 | 6.4 |
| **660.4** | 26 | 812.8 | 32 | 356.125 | 14.375 | 356.125 | 14.375 | 3.3 | 3.3 | 6.4 | 6.4 |
| **682.625** | 26.875 | 965.2 | 38 | 701.675 | 27.625 | 701.675 | 27.625 | 3.3 | 3.3 | 6.4 | 6.4 |
| **717.55** | 28.25 | 946.15 | 37.25 | 565.15 | 22.25 | 565.15 | 22.25 | 3.3 | 3.3 | 6.4 | 6.4 |
| | | 946.15 | 37.25 | 565.15 | 22.25 | 565.15 | 22.25 | 3.3 | 3.3 | 6.4 | 6.4 |
| | | 946.15 | 37.25 | 565.15 | 22.25 | 565.15 | 22.25 | 3.3 | 3.3 | 6.4 | 6.4 |
| **762** | 30 | 1079.5 | 42.5 | 787.4 | 31 | 787.4 | 31 | 4.8 | 4.8 | 12.7 | 12.7 |
| | | 1079.5 | 42.5 | 787.4 | 31 | 787.4 | 31 | 4.8 | 4.8 | 12.7 | 12.7 |
| **803.803** | 31.646 | 1130.3 | 44.5 | 717.551 | 28.25 | 717.551 | 28.25 | 3.3 | 3.3 | 9.7 | 9.7 |
| **863.6** | 34 | 1130.3 | 44.5 | 717.551 | 28.25 | 717.551 | 28.25 | 3.3 | 3.3 | 9.7 | 9.7 |
| | | 1130.3 | 44.5 | 669.925 | 26.375 | 669.925 | 26.375 | 11 | 4.8 | 12.7 | 12.7 |

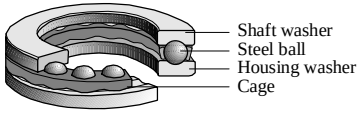
| Basic load ratings | | Designations | Weight | Graph |
|---|---|---|---|---|
| Cr | Cor | | | |
| kN | | | kg | |
| 7100 | 22000 | **EE649241D/649310-649311D** | 460 | 10 |
| 7100 | 22000 | **EE649241DGW/649310-649311D/C9YAD** | 454 | 14 |
| 11300 | 33500 | **LM281049DW/LM281010-LM281010D** | 859 | 10 |
| 11300 | 33500 | **LM281049DW/LM281010-LM281010D/HEC9/W281** | 859 | 10 |
| 5300 | 19800 | **L281149DW/L281110-L281110D** | 403 | 10 |
| 17400 | 50000 | **M282249D/M282210-M282210D** | 1714 | 14 |
| 14100 | 40800 | **LM282847DGW/LM282810-LM282810D-2-JG** | 1095 | 14 |
| 14100 | 40800 | **LM282847DGW/LM282810-LM282810D-EG** | 1095 | 14 |
| 13300 | 41000 | **LM282847D/LM282810-LM282810D** | 1085 | 14 |
| 20500 | 61900 | **M284249DGW/M284210-M284210D/CNH** | 2340 | 14 |
| 21800 | 65000 | **M284249DW/M284210-M284210D** | 2490 | 14 |
| 19500 | 62000 | **LM286230T-46TD-49T/10/C9YA6-3** | 2160 | 12(****) |
| 19500 | 62000 | **LM286230T-46TD-49T/10/C9YA6** | 2160 | 12(****) |
| 19500 | 62000 | **LM286249DGW/LM286210-LM286210D/C9** | 1885 | 14 |

## Product Characteristics

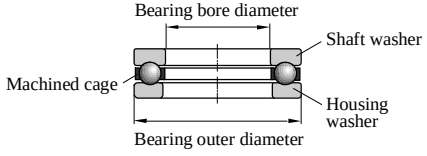
Thrust ball bearing consists of shaft washer, housing washer, steel balls and cage. The ring matched with shaft is called shaft washer, the ring matched with housing is called housing washer. If the housing washer's installation surface is spherical, then the bearing can be aligned by itself and reduce influence of installation deviation.

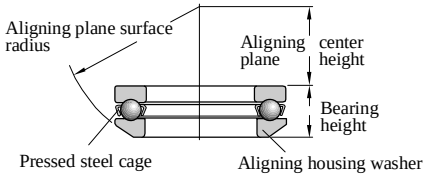
Thrust ball bearing is mainly used to bear axial loads, and can transfer big axial loads. It can not bear radial loads.

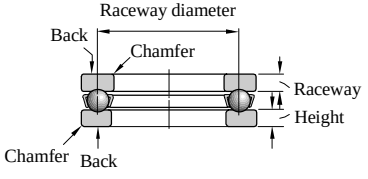
This type of bearing can be applied to steering system of automobile and main shaft of machinery.




(Thrust ball bearing)




## Product types

ZWZ thrust ball bearings can be classified into 2 types:

- Single-direction thrust ball bearing
- Double-direction thrust ball bearing

## Single- direction thrust ball bearing:

Consist of one shaft washer, one housing washer and steel balls - cage units. Bearing can be separated. Shaft washer, housing washers, steel ball - cage units can be installed individually. These bearings cover 3 types:

- Thrust ball bearing with flat housing washer
- Thrust ball bearing with self-aligning housing washer
- Thrust ball bearing with self-aligning washer and self-aligning housing washer

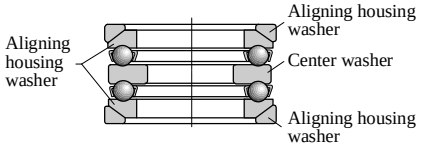
Single-direction thrust ball bearings are mainly used to bear axial loads from one direction and make axial location in one direction.

## Double-direction thrust ball bearing

Consist of one shaft washer, two housing washers and steel balls - cage units. Bearing can be separated. Shaft washer, housing washer, steel ball-cage units can be installed individually. These bearings cover 3 types:

- Thrust ball bearing with flat housing washer
- Thrust ball bearing with self-aligning housing washer
- Thrust ball bearing with self-aligning washer and self-aligning housing washer

Double-direction thrust ball bearings are mainly used to bear axial loads from two directions and make asial location for two directions.




## Dimension range

Thrust ball bearings produced by ZWZ are listed in the table,

Bore diameter range: 25mm~1380mm

Outer diameter range: 42mm~1540 mm

Width range: 11mm~160mm

## Tolerance

ZWZ standard thrust ball bearing precisions cover P0, P6, P5, and P4 and conform to state standards. Please refer to tolerance table in preface.

## Cage

Normally pressed cage and solid cage are adopted for this type of bearings. Other cages can be used for this type of bearing for special applications.

If bearing max O.D. is 250 mm, the pressed sheet-steel cage will be adopted that are not indicated in the suffix of bearing specifications.

If bearing minimum OD is 250 mm, then the solid brass cage will be used. And the cage type will not be indicated in the suffix of bearing specifications. Others will be relatively indicated their suffix.

## Minimum axial loads

During the thrust ball is in operation, if the external loads are too small and the axial direction is not pressed tightly, then due to the function of eccentric force, the steel balls will be caused to slide as well as to effect the bearing normal operation. In order to avoid this, minimum axial loads Famin must be applied to the thrust ball bearing.

$$Famin = 5.1\left(\frac{n \cdot Coa}{1000}\right) \times 10^{-6}$$

Famin: minimum loads needed [KN]

n: Rotation speed r/min

Coa: basic rating loads [KN]

## Permissible angle deviation

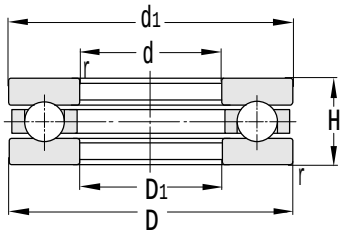
The two supporting surface of the thrust ball bearing must be parallel, any of the deviation is not allowed. The spherical housing washer and the spherical washer possess aligning property, which can reduce the effect of the angle deviation while mounting.

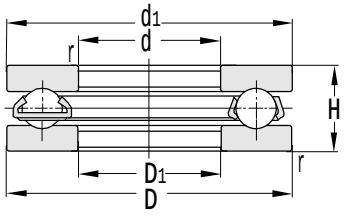
### Equivalent Dynamic Load

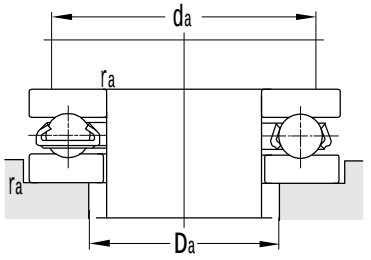
P=Fa [KN]

### Equivalent Static Load

P0=Fa [KN]

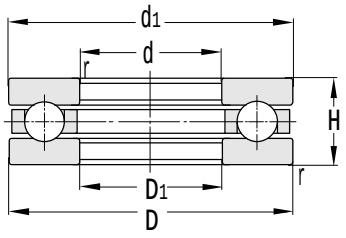


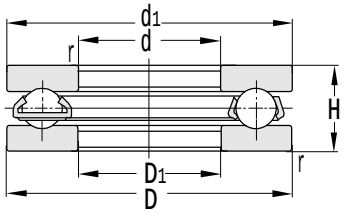



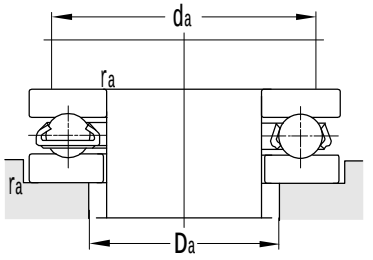




| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|
| d | D | H | $r_{min}$ | Cr | Cor | Grease | Oil | |
| mm | | | | kN | | r/min | | |
| **25** | 42 | 11 | 0.6 | 18.7 | 38.0 | 4800 | 6300 | **51105** |
| | 47 | 15 | 0.6 | 27.0 | 54.0 | 4000 | 5300 | **51205** |
| | 52 | 18 | 1 | 35.0 | 59.0 | 3400 | 4500 | **51305** |
| **30** | 47 | 11 | 0.6 | 19.6 | 42.0 | 4500 | 6000 | **51106** |
| | 52 | 16 | 0.6 | 27.3 | 50.0 | 3600 | 4800 | **51206** |
| | 60 | 21 | 1 | 42.5 | 70.0 | 2800 | 3800 | **51306** |
| | 70 | 28 | 1 | 71.0 | 134 | 2000 | 3000 | **51406** |
| **35** | 52 | 12 | 0.6 | 20.8 | 50.0 | 4300 | 5600 | **51107** |
| | 52 | 12 | 0.6 | 20.8 | 50.0 | 4300 | 5600 | **51107H** |
| | 52 | 12 | 0.6 | 20.8 | 50.0 | 4300 | 5600 | **51107M** |
| | 55 | 16 | 0.6 | 24.9 | 53.5 | 4300 | 5600 | **51107X3** |
| | 62 | 18 | 1 | 37.0 | 72.0 | 3000 | 4000 | **51207** |
| | 68 | 24 | 1 | 55.5 | 94.5 | 2400 | 3400 | **51307** |
| | 68 | 24 | 1 | 55.5 | 94.5 | 2400 | 3400 | **51307/YA6** |
| **40** | 60 | 13 | 0.6 | 27.3 | 62.0 | 3800 | 5000 | **51108** |
| | 60 | 13 | 0.6 | 27.3 | 62.0 | 3800 | 5000 | **51108H** |
| | 68 | 19 | 1 | 47.0 | 104 | 2800 | 3800 | **51208** |
| | 68 | 19 | 1 | 47.0 | 104 | 2800 | 3800 | **51208M** |
| | 78 | 26 | 1 | 68.5 | 120 | 2000 | 3000 | **51308** |
| | 100 | 28 | 1.1 | 75.0 | 189 | 1700 | 2400 | **51708** |
| **45** | 65 | 14 | 0.6 | 26.7 | 68.0 | 3400 | 4500 | **51109** |
| | 65 | 14 | 0.6 | 26.7 | 68.0 | 3400 | 4500 | **51109M** |
| | 73 | 20 | 1 | 38.0 | 85.0 | 2600 | 3600 | **51209** |
| | 85 | 28 | 1 | 74.5 | 150 | 1900 | 2800 | **51309** |
| **50** | 70 | 14 | 0.6 | 27.3 | 73.5 | 3200 | 4300 | **51110** |
| | 70 | 14 | 0.6 | 27.3 | 73.5 | 3200 | 4300 | **51110M** |
| | 78 | 22 | 1 | 54.5 | 114 | 2400 | 3400 | **51210** |
| | 95 | 31 | 1.1 | 96.0 | 186 | 1800 | 2600 | **51310** |
| | 110 | 43 | 1.5 | 159 | 335 | 1600 | 2500 | **51410M** |
| **55** | 78 | 16 | 0.6 | 33.5 | 83.0 | 2800 | 3800 | **51111** |

| Other dimensions | | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|
| d1 | D1 | $da_{min}$ | $Da_{max}$ | $ra_{max}$ | |
| mm | | mm | | | kg |
| 42 | 26 | 35 | 32 | 0.6 | 0.0589 |
| 47 | 27 | 38 | 34 | 0.6 | 0.117 |
| 52 | 27 | 41 | 36 | 1 | 0.165 |
| 47 | 32 | 40 | 37 | 0.6 | 0.0642 |
| 52 | 32 | 43 | 39 | 0.6 | 0.138 |
| 60 | 32 | 48 | 42 | 1 | 0.266 |
| 70 | 32 | 54 | 46 | 1 | 3.94 |
| 52 | 37 | 45 | 42 | 0.6 | 0.0779 |
| 52 | 37 | 45 | 42 | 0.6 | 0.0779 |
| 52 | 37 | 45 | 42 | 0.6 | 0.0817 |
| 55 | 37 | 50 | 45 | 0.6 | 0.141 |
| 62 | 37 | 51 | 46 | 1 | 0.193 |
| 68 | 37 | 55 | 48 | 1 | 0.361 |
| 68 | 37 | 55 | 48 | 1 | 0.301 |
| 60 | 42 | 52 | 48 | 0.6 | 0.118 |
| 60 | 42 | 52 | 48 | 0.6 | 0.126 |
| 68 | 42 | 57 | 51 | 1 | 0.273 |
| 68 | 42 | 57 | 51 | 1 | 0.324 |
| 78 | 42 | 63 | 55 | 1 | 0.521 |
| 100 | 58 | 75 | 65 | 1 | 0.970 |
| 65 | 47 | 57 | 53 | 0.6 | 0.139 |
| 65 | 47 | 57 | 53 | 0.6 | 0.162 |
| 73 | 47 | 62 | 56 | 1 | 0.332 |
| 85 | 47 | 69 | 61 | 1 | 0.656 |
| 70 | 52 | 62 | 58 | 0.6 | 0.155 |
| 70 | 52 | 62 | 58 | 0.6 | 0.186 |
| 78 | 52 | 67 | 61 | 1 | 0.374 |
| 95 | 52 | 77 | 68 | 1 | 0.942 |
| 110 | 52 | 86 | 74 | 1.5 | 1.86 |
| 78 | 57 | 69 | 64 | 0.6 | 0.226 |

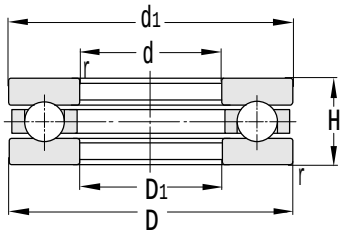


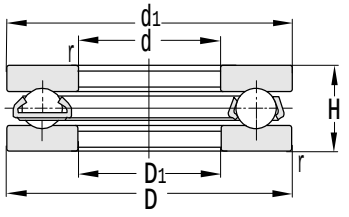



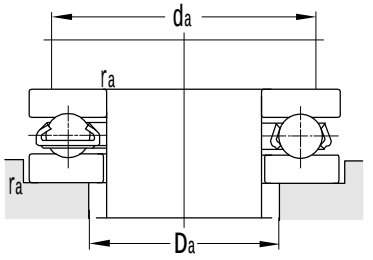




| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|
| d | D | H | $r_{min}$ | Cr | Cor | Grease | Oil | |
| mm | | | | kN | | r/min | | |
| **55** | 78 | 16 | 0.6 | 33.5 | 83.0 | 2800 | 3800 | **51111M** |
| | 90 | 25 | 1 | 69.0 | 143 | 2200 | 3200 | **51211** |
| | 105 | 35 | 1.1 | 119 | 220 | 1700 | 2400 | **51311** |
| | 120 | 48 | 1.5 | 191 | 380 | 1500 | 2100 | **51411M** |
| **60** | 85 | 17 | 1 | 41.0 | 120 | 2600 | 3600 | **51112** |
| | 85 | 17 | 1 | 41.0 | 120 | 2600 | 3600 | **51112M** |
| | 95 | 26 | 1 | 74.0 | 147 | 1900 | 2800 | **51212** |
| | 95 | 26 | 1 | 74.0 | 147 | 1900 | 2800 | **51212M** |
| | 110 | 35 | 1.1 | 100 | 220 | 1600 | 2200 | **51312** |
| | 130 | 51 | 1.5 | 200 | 420 | 1400 | 1900 | **51412M** |
| **65** | 90 | 18 | 1 | 45.5 | 106 | 2500 | 3500 | **51113** |
| | 90 | 18 | 1 | 45.5 | 106 | 2500 | 3500 | **51113M** |
| | 100 | 27 | 1 | 75.5 | 160 | 1850 | 2700 | **51213** |
| | 115 | 36 | 1.1 | 107 | 235 | 1500 | 2000 | **51313** |
| | 140 | 56 | 2 | 239 | 480 | 1300 | 1800 | **51413M** |
| | 140 | 56 | 2 | 240 | 505 | 1300 | 1800 | **51413J** |
| **70** | 95 | 18 | 1 | 49.5 | 119 | 2400 | 3400 | **51114** |
| | 95 | 18 | 1 | 49.5 | 119 | 2400 | 3400 | **51114M** |
| | 95 | 18 | 1 | 47.5 | 134 | 2400 | 3400 | **51114/YA8** |
| | 105 | 27 | 1 | 77.0 | 170 | 1800 | 2600 | **51214** |
| | 105 | 27 | 1 | 77.0 | 170 | 1800 | 2600 | **51214/YA8** |
| | 125 | 40 | 1.1 | 148 | 315 | 1400 | 1900 | **51314** |
| | 125 | 40 | 1.1 | 148 | 315 | 1400 | 1900 | **51314M** |
| | 150 | 60 | 2 | 257 | 540 | 1200 | 1600 | **51414M** |
| **75** | 100 | 19 | 1 | 48.0 | 143 | 2200 | 3200 | **51115** |
| | 100 | 19 | 1 | 48.0 | 143 | 2200 | 3200 | **51115M** |
| | 110 | 27 | 1 | 66.0 | 180 | 1750 | 2500 | **51215** |
| | 135 | 44 | 1.5 | 175 | 380 | 1300 | 1800 | **51315** |
| | 160 | 65 | 2 | 251 | 560 | 1100 | 1500 | **51415M** |
| **80** | 105 | 19 | 1 | 49.5 | 150 | 2000 | 3000 | **51116** |
| | 115 | 28 | 1 | 74.5 | 205 | 1700 | 2400 | **51216** |

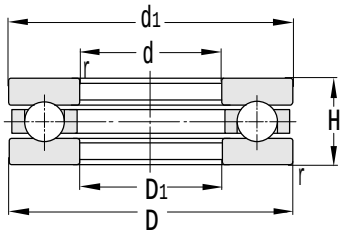
| Other dimensions | | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|
| d1 | D1 | $da_{min}$ | $Da_{max}$ | $ra_{max}$ | |
| mm | | mm | | | kg |
| 78 | 57 | 69 | 64 | 0.6 | 0.242 |
| 90 | 57 | 76 | 69 | 1 | 0.571 |
| 105 | 57 | 85 | 75 | 1 | 1.35 |
| 120 | 57 | 94 | 81 | 1.5 | 2.61 |
| 85 | 62 | 75 | 70 | 1 | 0.263 |
| 85 | 62 | 75 | 70 | 1 | 0.294 |
| 95 | 62 | 81 | 74 | 1 | 0.695 |
| 95 | 62 | 81 | 74 | 1 | 0.752 |
| 110 | 62 | 90 | 80 | 1 | 1.39 |
| 130 | 62 | 102 | 88 | 1.5 | 3.48 |
| 90 | 67 | 80 | 75 | 1 | 0.315 |
| 90 | 67 | 80 | 75 | 1 | 0.363 |
| 100 | 67 | 86 | 79 | 1 | 0.733 |
| 115 | 67 | 95 | 85 | 1 | 1.54 |
| 140 | 68 | 110 | 95 | 2 | 4.71 |
| 140 | 68 | 110 | 95 | 2 | 4.16 |
| 95 | 72 | 85 | 80 | 1 | 0.351 |
| 95 | 72 | 85 | 80 | 1 | 0.377 |
| 95 | 72 | 85 | 80 | 1 | 0.348 |
| 105 | 72 | 91 | 84 | 1 | 0.764 |
| 105 | 72 | 91 | 84 | 1 | 0.756 |
| 125 | 72 | 103 | 92 | 1 | 2.00 |
| 125 | 72 | 103 | 92 | 1 | 2.85 |
| 150 | 73 | 118 | 102 | 2 | 5.06 |
| 100 | 77 | 90 | 85 | 1 | 0.382 |
| 100 | 77 | 90 | 85 | 1 | 0.429 |
| 110 | 77 | 96 | 89 | 1 | 0.83 |
| 135 | 77 | 111 | 99 | 1.5 | 2.61 |
| 160 | 78 | 126 | 109 | 2 | 6.61 |
| 105 | 82 | 95 | 90 | 1 | 0.399 |
| 115 | 82 | 101 | 94 | 1 | 0.92 |

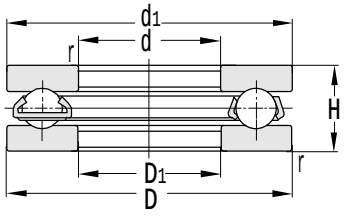


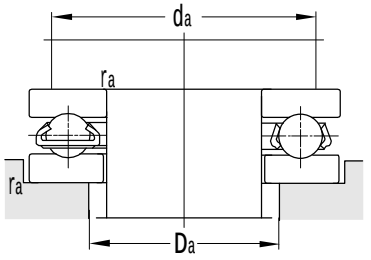




| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | Other dimensions | | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | H | $r_{min}$ | Cr | Cor | Grease | Oil | | d1 | D1 | $da_{min}$ | $Da_{max}$ | $ra_{max}$ | |
| mm | | | | kN | | r/min | | | mm | | mm | | | kg |
| **80** | 140 | 44 | 1.5 | 181 | 425 | 1200 | 1700 | **51316** | 140 | 82 | 116 | 104 | 1.5 | 2.63 |
| | 140 | 44 | 1.5 | 173 | 395 | 1200 | 1700 | **51316M** | 140 | 82 | 116 | 104 | 1.5 | 2.92 |
| | 170 | 68 | 1.1 | 315 | 655 | 1000 | 1400 | **51416M** | 170 | 83 | 133 | 117 | 2 | 7.89 |
| **85** | 110 | 19 | 1 | 49.5 | 160 | 1900 | 2800 | **51117** | 110 | 87 | 100 | 95 | 1 | 0.419 |
| | 125 | 31 | 1 | 111 | 270 | 1600 | 2200 | **51217** | 125 | 88 | 109 | 101 | 1 | 1.21 |
| | 150 | 49 | 1.5 | 223 | 475 | 1100 | 1600 | **51317** | 150 | 88 | 124 | 111 | 1.5 | 3.49 |
| | 150 | 49 | 1.5 | 223 | 475 | 1100 | 1600 | **51317M** | 150 | 88 | 124 | 111 | 1.5 | 3.97 |
| | 180 | 72 | 1.1 | 335 | 735 | 950 | 1200 | **51417M** | 177 | 88 | 141 | 124 | 2 | 8.60 |
| | 180 | 72 | 1.1 | 335 | 735 | 950 | 1200 | **51417** | 177 | 88 | 141 | 124 | 2 | 8.35 |
| **90** | 120 | 22 | 1 | 65.0 | 205 | 1800 | 2600 | **51118** | 120 | 92 | 108 | 102 | 1 | 0.632 |
| | 120 | 22 | 1 | 65.0 | 205 | 3000 | 4000 | **51118M/P4** | 120 | 92 | 108 | 102 | 1 | 0.721 |
| | 135 | 35 | 1.1 | 132 | 320 | 1500 | 2000 | **51218** | 135 | 93 | 117 | 108 | 1 | 1.67 |
| | 155 | 50 | 1.5 | 232 | 520 | 1000 | 1500 | **51318** | 155 | 93 | 129 | 116 | 1.5 | 4.02 |
| | 155 | 50 | 1.5 | 232 | 520 | 1000 | 1500 | **51318M** | 155 | 93 | 129 | 116 | 1.5 | 4.44 |
| | 190 | 77 | 2.1 | 380 | 800 | 900 | 1100 | **51418M** | 187 | 93 | 149 | 131 | 2 | 9.91 |
| **100** | 135 | 25 | 1 | 83.5 | 285 | 1700 | 2400 | **51120** | 135 | 102 | 121 | 114 | 1 | 0.937 |
| | 135 | 25 | 1 | 83.5 | 285 | 1700 | 2400 | **51120M** | 135 | 102 | 121 | 114 | 1 | 0.937 |
| | 150 | 38 | 1.1 | 125 | 350 | 1300 | 1800 | **51220** | 150 | 103 | 130 | 120 | 1 | 2.12 |
| | 150 | 38 | 1.1 | 125 | 350 | 1300 | 1800 | **51220M** | 150 | 103 | 130 | 120 | 1 | 2.33 |
| | 170 | 55 | 1.5 | 276 | 705 | 950 | 1400 | **51320** | 170 | 103 | 142 | 128 | 1.5 | 4.85 |
| | 170 | 55 | 1.5 | 276 | 705 | 950 | 1400 | **51320M** | 170 | 103 | 142 | 128 | 1.5 | 5.42 |
| | 172 | 57 | 1.8 | 276 | 705 | 900 | 1300 | **51720** | 172 | 100.2 | 143 | 129 | 1.8 | 5.36 |
| | 210 | 85 | 3 | 420 | 1130 | 850 | 1000 | **51420** | 205 | 103 | 165 | 145 | 2.5 | 13.6 |
| | 210 | 85 | 3 | 420 | 1040 | 850 | 1000 | **51420M** | 205 | 103 | 165 | 145 | 2.5 | 13.5 |
| **100.2** | 150 | 38 | 1.1 | 163 | 430 | 1600 | 1800 | **517/100.2** | 150 | 100.2 | 130 | 120 | 1 | 2.20 |
| **110** | 145 | 25 | 1 | 85.5 | 310 | 1650 | 2300 | **51122** | 145 | 112 | 131 | 124 | 1 | 1.12 |
| | 145 | 25 | 1 | 85.5 | 310 | 1650 | 2300 | **51122M** | 145 | 112 | 131 | 124 | 1 | 1.21 |
| | 160 | 38 | 1.1 | 131 | 395 | 1200 | 1700 | **51222** | 160 | 113 | 140 | 130 | 1 | 2.43 |
| | 160 | 38 | 1.1 | 131 | 395 | 1200 | 1700 | **51222M** | 160 | 113 | 140 | 130 | 1 | 2.67 |
| | 190 | 63 | 2 | 305 | 800 | 850 | 1200 | **51322M** | 187 | 113 | 158 | 142 | 2 | 7.36 |
| | 190 | 63 | 2 | 305 | 800 | 850 | 1200 | **51322** | 187 | 113 | 158 | 142 | 2 | 7.08 |

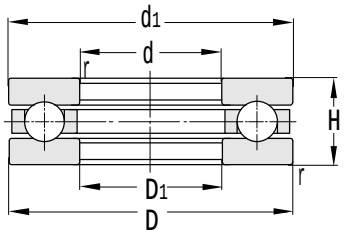


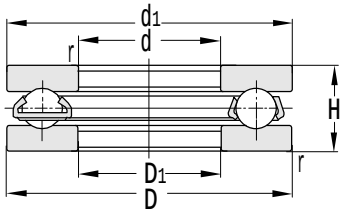



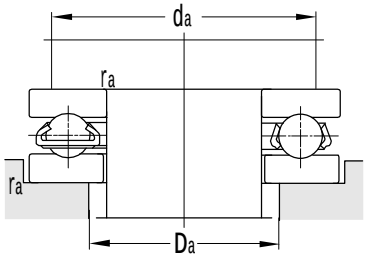




| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|
| d | D | H | $r_{min}$ | Cr | Cor | Grease | Oil | |
| mm | | | | kN | | r/min | | |
| **110** | 230 | 95 | 3 | 490 | 1200 | 750 | 900 | **51422M** |
| **120** | 155 | 25 | 1 | 86.5 | 330 | 1600 | 2200 | **51124** |
| | 155 | 25 | 1 | 86.5 | 330 | 1600 | 2200 | **51124M** |
| | 170 | 39 | 1.1 | 167 | 430 | 1100 | 1600 | **51224** |
| | 170 | 39 | 1.1 | 167 | 430 | 1100 | 1600 | **51224M** |
| | 210 | 70 | 2.1 | 350 | 960 | 800 | 1100 | **51324M** |
| | 210 | 70 | 2.1 | 350 | 960 | 800 | 1100 | **51324** |
| | 250 | 102 | 4 | 535 | 1670 | 600 | 800 | **51424M** |
| **130** | 170 | 27 | 3 | 111 | 415 | 1500 | 2000 | **51726M** |
| | 170 | 30 | 1 | 111 | 415 | 1400 | 1900 | **51126M** |
| | 170 | 30 | 1 | 111 | 415 | 1400 | 1900 | **51126** |
| | 190 | 45 | 1.5 | 230 | 575 | 1000 | 1500 | **51226** |
| | 190 | 45 | 1.5 | 230 | 575 | 1000 | 1500 | **51226M** |
| | 225 | 75 | 2.1 | 395 | 1120 | 750 | 1000 | **51326M** |
| | 225 | 75 | 2.1 | 395 | 1120 | 750 | 1000 | **51326** |
| | 270 | 110 | 4 | 635 | 1670 | 560 | 750 | **51426J** |
| | 270 | 110 | 4 | 635 | 1670 | 560 | 750 | **51426** |
| **140** | 180 | 31 | 1 | 114 | 430 | 1300 | 1800 | **51128** |
| | 180 | 31 | 1 | 114 | 430 | 1300 | 1800 | **51128M** |
| | 200 | 46 | 1.5 | 234 | 610 | 950 | 1400 | **51228** |
| | 200 | 46 | 1.5 | 234 | 610 | 950 | 1400 | **51228M** |
| | 240 | 80 | 2.1 | 415 | 1300 | 700 | 950 | **51328** |
| | 280 | 112 | 4 | 630 | 1700 | 530 | 700 | **51428** |
| **150** | 190 | 31 | 1 | 117 | 430 | 1200 | 1700 | **51130M** |
| | 190 | 31 | 1 | 117 | 430 | 1200 | 1700 | **51130** |
| | 200 | 35 | 2.1 | 164 | 535 | 1100 | 1600 | **51730M** |
| | 215 | 50 | 1.5 | 262 | 785 | 900 | 1300 | **51230M** |
| | 215 | 50 | 1.5 | 262 | 785 | 900 | 1300 | **51230** |
| | 250 | 80 | 2.1 | 430 | 1370 | 670 | 900 | **51330M** |
| | 250 | 80 | 2.1 | 430 | 1370 | 670 | 900 | **51330** |
| | 300 | 120 | 4 | 675 | 2240 | 500 | 670 | **51430** |

| Other dimensions | | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|
| d1 | D1 | $da_{min}$ | $Da_{max}$ | $ra_{max}$ | |
| mm | | mm | | | kg |
| 225 | 113 | 181 | 159 | 2.5 | 18.6 |
| 155 | 122 | 141 | 134 | 1 | 1.13 |
| 155 | 122 | 141 | 134 | 1 | 1.25 |
| 170 | 123 | 150 | 140 | 1 | 2.71 |
| 170 | 123 | 150 | 140 | 1 | 2.58 |
| 205 | 123 | 173 | 157 | 2 | 9.85 |
| 205 | 123 | 173 | 157 | 2 | 9.43 |
| 245 | 123 | 197 | 173 | 3 | 23.9 |
| 170 | 130.2 | 154 | 146 | 1 | 1.65 |
| 170 | 170 | 154 | 146 | 1 | 1.86 |
| 170 | 170 | 154 | 146 | 1 | 1.67 |
| 187 | 133 | 166 | 154 | 1.5 | 4.17 |
| 187 | 133 | 166 | 154 | 1.5 | 4.64 |
| 220 | 134 | 186 | 169 | 2 | 12.5 |
| 220 | 134 | 186 | 169 | 2 | 11.6 |
| 265 | 134 | 213 | 187 | 3 | 28.8 |
| 265 | 134 | 213 | 187 | 3 | 29.0 |
| 178 | 142 | 164 | 156 | 1 | 1.80 |
| 178 | 142 | 164 | 156 | 1 | 2.00 |
| 197 | 143 | 176 | 164 | 1.5 | 4.49 |
| 197 | 143 | 176 | 164 | 1.5 | 4.33 |
| 235 | 144 | 199 | 181 | 2 | 14.6 |
| 275 | 144 | 223 | 197 | 3 | 31.6 |
| 188 | 152 | 174 | 166 | 1 | 2.19 |
| 188 | 152 | 174 | 166 | 1 | 1.96 |
| 200 | 150.3 | 187 | 168 | 2 | 3.15 |
| 212 | 153 | 189 | 176 | 1.5 | 5.80 |
| 212 | 153 | 189 | 176 | 1.5 | 5.61 |
| 245 | 154 | 209 | 191 | 2 | 17.0 |
| 245 | 154 | 209 | 191 | 2 | 17.0 |
| 295 | 154 | 239 | 211 | 3 | 38.7 |

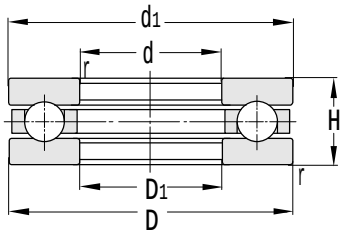


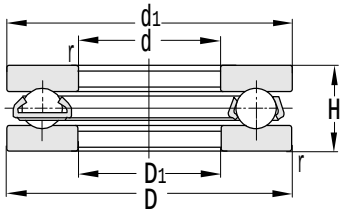



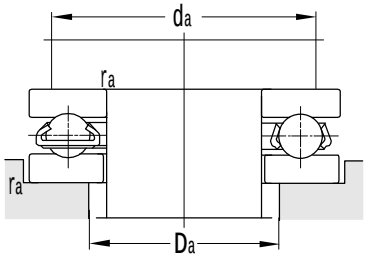




| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|
| d | D | H | $r_{min}$ | Cr | Cor | Grease | Oil | |
| mm | | | | kN | | r/min | | |
| **160** | 200 | 31 | 1 | 121 | 455 | 1150 | 1650 | **51132M** |
| | 225 | 51 | 1.5 | 266 | 835 | 850 | 1200 | **51232M** |
| | 225 | 51 | 1.5 | 266 | 835 | 850 | 1200 | **51232** |
| | 270 | 87 | 3 | 455 | 1630 | 630 | 850 | **51332M** |
| **170** | 215 | 34 | 1.1 | 131 | 530 | 1100 | 1600 | **51134M** |
| | 215 | 34 | 1.1 | 110 | 430 | 1100 | 1600 | **51134M-1** |
| | 215 | 34 | 1.1 | 131 | 530 | 1100 | 1600 | **51134** |
| | 240 | 55 | 1.5 | 281 | 1000 | 830 | 1100 | **51234M** |
| | 240 | 55 | 1.5 | 281 | 1000 | 830 | 1100 | **51234** |
| | 280 | 87 | 3 | 470 | 1730 | 600 | 800 | **51334** |
| **180** | 225 | 34 | 1.1 | 151 | 560 | 1000 | 1500 | **51136M** |
| | 225 | 34 | 1.1 | 151 | 560 | 1000 | 1500 | **51136** |
| | 250 | 56 | 1.5 | 295 | 1060 | 800 | 1050 | **51236M** |
| | 250 | 56 | 1.5 | 295 | 1060 | 800 | 1050 | **51236** |
| | 300 | 95 | 3 | 515 | 1960 | 560 | 750 | **51336** |
| **190** | 240 | 37 | 1.1 | 178 | 670 | 950 | 1400 | **51138M** |
| | 240 | 37 | 1.1 | 178 | 670 | 950 | 1400 | **51138** |
| | 270 | 62 | 2 | 355 | 1250 | 780 | 1000 | **51238J** |
| | 270 | 62 | 2 | 355 | 1250 | 780 | 1000 | **51238** |
| | 320 | 105 | 4 | 607 | 2350 | 500 | 700 | **51338** |
| **190.5** | 266.7 | 57.1 | 4 | 276 | 695 | 710 | 1030 | **517/190.5** |
| **200** | 250 | 37 | 1.1 | 183 | 695 | 930 | 1350 | **51140M** |
| | 280 | 62 | 2 | 350 | 1290 | 750 | 980 | **51240J** |
| | 280 | 62 | 2 | 350 | 1290 | 750 | 980 | **51240** |
| | 340 | 110 | 4 | 660 | 2550 | 480 | 630 | **51340** |
| **220** | 270 | 37 | 1.1 | 186 | 785 | 900 | 1300 | **51144** |
| | 300 | 63 | 2 | 365 | 1430 | 700 | 950 | **51244** |
| | 300 | 63 | 2 | 365 | 1430 | 700 | 950 | **51244J** |
| | 300 | 93.75 | 2 | 400 | 1550 | 650 | 900 | **51244X2V** |

| Other dimensions | | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|
| d1 | D1 | $da_{min}$ | $Da_{max}$ | $ra_{max}$ | |
| mm | | mm | | | kg |
| 198 | 162 | 184 | 176 | 1 | 2.38 |
| 222 | 163 | 199 | 186 | 1.5 | 6.19 |
| 222 | 163 | 199 | 186 | 1.5 | 6.08 |
| 265 | 164 | 225 | 205 | 2.5 | 18.8 |
| 213 | 172 | 197 | 188 | 1 | 2.99 |
| 213 | 172 | 197 | 188 | 1 | 2.94 |
| 213 | 172 | 197 | 188 | 1 | 2.64 |
| 237 | 173 | 212 | 198 | 1.5 | 7.65 |
| 237 | 173 | 212 | 198 | 1.5 | 7.33 |
| 275 | 174 | 235 | 215 | 2.5 | 19.9 |
| 222 | 183 | 207 | 198 | 1 | 3.08 |
| 222 | 183 | 207 | 198 | 1 | 2.86 |
| 247 | 183 | 222 | 208 | 1.5 | 8.15 |
| 247 | 183 | 222 | 208 | 1.5 | 8.02 |
| 295 | 184 | 251 | 229 | 2.5 | 26.7 |
| 237 | 193 | 220 | 210 | 1 | 4.02 |
| 237 | 193 | 220 | 210 | 1 | 3.62 |
| 267 | 194 | 238 | 222 | 2 | 11.0 |
| 267 | 194 | 238 | 222 | 2 | 11.7 |
| 315 | 195 | 266 | 244 | 3 | 33.5 |
| 190.5 | 266.7 | 242.6 | 214.6 | 4 | 14.3 |
| 247 | 203 | 230 | 220 | 1 | 3.60 |
| 277 | 204 | 248 | 232 | 2 | 10.9 |
| 277 | 204 | 248 | 232 | 2 | 11.5 |
| 335 | 205 | 282 | 258 | 3 | 30.8 |
| 267 | 223 | 250 | 240 | 1 | 4.45 |
| 297 | 224 | 268 | 252 | 2 | 12.9 |
| 297 | 224 | 268 | 252 | 2 | 12.2 |
| 300 | 220.5 | 268 | 252 | 2 | 19.8 |

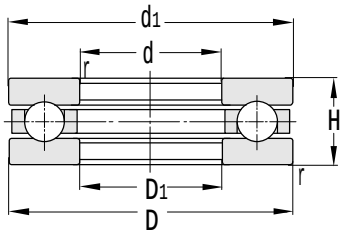


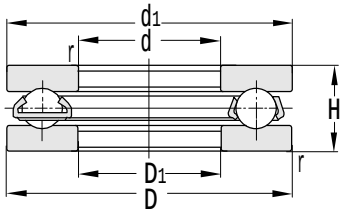



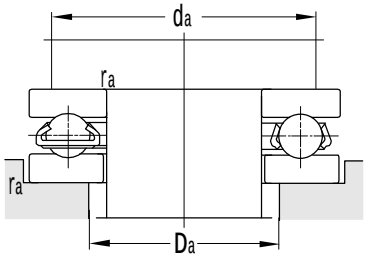




| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|
| d | D | H | $r_{min}$ | Cr | Cor | Grease | Oil | |
| mm | | | | kN | | r/min | | |
| **230** | 300 | 53.4 | 2.1 | 264 | 955 | 650 | 900 | **51746** |
| **240** | 300 | 45 | 1.5 | 259 | 1020 | 850 | 1200 | **51148** |
| | 340 | 78 | 2.1 | 455 | 1960 | 630 | 860 | **51248** |
| | 340 | 70 | 2.5 | 415 | 1650 | 600 | 800 | **51748** |
| | 340 | 70 | 2.5 | 415 | 1650 | 600 | 800 | **51748J** |
| | 380 | 112 | 4 | 695 | 2870 | 430 | 600 | **51348** |
| **260** | 320 | 45 | 1.5 | 264 | 1080 | 800 | 1100 | **51152** |
| | 360 | 79 | 2.1 | 475 | 2120 | 600 | 800 | **51252** |
| | 360 | 79 | 2.1 | 475 | 2120 | 600 | 800 | **51252J** |
| **280** | 350 | 53 | 1.5 | 335 | 1430 | 640 | 900 | **51156** |
| | 380 | 80 | 2.1 | 495 | 2270 | 560 | 750 | **51256** |
| **300** | 380 | 62 | 2 | 415 | 1730 | 630 | 850 | **51160** |
| | 420 | 95 | 3 | 595 | 2940 | 530 | 710 | **51260** |
| | 435 | 104 | 3.7 | 740 | 3410 | 450 | 600 | **51760** |
| | 432 | 104.8 | 3.7 | 460 | 2240 | 450 | 600 | **51760V** |
| **320** | 400 | 63 | 2 | 425 | 1990 | 610 | 800 | **51164** |
| | 440 | 95 | 3 | 560 | 2940 | 500 | 700 | **51264** |
| | 399.5 | 63 | 2 | 425 | 1990 | 600 | 800 | **51164X1** |
| **340** | 420 | 64 | 2 | 420 | 1920 | 600 | 830 | **51168** |
| | 460 | 96 | 3 | 605 | 3130 | 450 | 600 | **51268** |
| | 460 | 96 | 3 | 605 | 3130 | 450 | 600 | **51268/YB5** |
| | 540 | 160 | 5 | 1120 | 5700 | 400 | 530 | **51368** |
| **350** | 476 | 85 | 3.7 | 630 | 3150 | 430 | 550 | **51770** |
| **360** | 440 | 65 | 2 | 430 | 2040 | 560 | 750 | **51172** |
| | 500 | 110 | 4 | 795 | 4050 | 400 | 530 | **51272** |
| **380** | 460 | 65 | 2 | 420 | 2110 | 850 | 1000 | **51176/P4** |

| Other dimensions | | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|
| d1 | D1 | $da_{min}$ | $Da_{max}$ | $ra_{max}$ | |
| mm | | mm | | | kg |
| 300 | 230.3 | 270 | 260 | 2 | 9.47 |
| 297 | 243 | 276 | 264 | 1.5 | 7.28 |
| 335 | 244 | 299 | 281 | 2 | 21.1 |
| 340 | 238 | 299 | 281 | 2.5 | 19.4 |
| 340 | 238 | 299 | 281 | 2.5 | 18.8 |
| 375 | 245 | 320 | 300 | 3 | 49.6 |
| 317 | 263 | 296 | 248 | 1.5 | 7.56 |
| 355 | 264 | 319 | 301 | 2 | 23.3 |
| 355 | 264 | 319 | 301 | 2 | 22.0 |
| 347 | 283 | 322 | 308 | 1.5 | 11.4 |
| 375 | 284 | 339 | 321 | 2 | 25.3 |
| 376 | 304 | 348 | 332 | 2 | 17.4 |
| 415 | 304 | 371 | 349 | 2.5 | 40.0 |
| 435 | 300.3 | 379 | 356 | 3 | 50.7 |
| 432 | 300.3 | 379 | 356 | 3 | 49.7 |
| 396 | 324 | 368 | 352 | 2 | 18.0 |
| 435 | 325 | 391 | 369 | 3 | 44.5 |
| 396 | 324 | 391 | 369 | 2 | 18.0 |
| 416 | 344 | 388 | 372 | 2 | 19.9 |
| 455 | 345 | 411 | 389 | 2.5 | 44.6 |
| 455 | 345 | 411 | 389 | 2.5 | 44.6 |
| 535 | 345 | 452 | 356 | 4 | 137 |
| 476 | 350.4 | 425 | 401 | 3 | 43.3 |
| 436 | 364 | 408 | 392 | 2 | 23.9 |
| 495 | 365 | 442 | 418 | 3 | 64.7 |
| 456 | 384 | 445 | 394 | 2 | 22.5 |

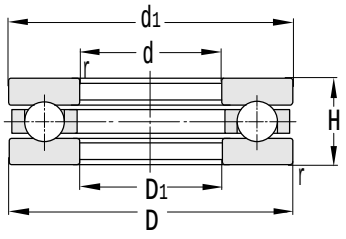


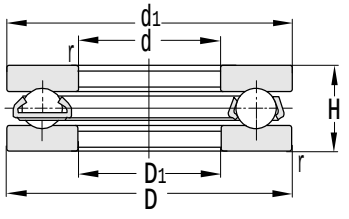



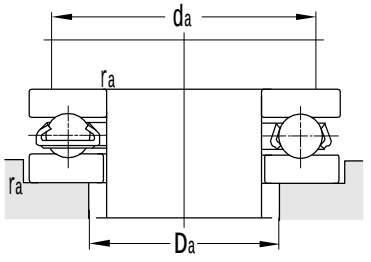




| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|
| d | D | H | $r_{min}$ | Cr | Cor | Grease | Oil | |
| mm | | | | kN | | r/min | | |
| **400** | 480 | 65 | 2 | 435 | 2240 | 800 | 1000 | **51180/P5** |
| | 540 | 112 | 4 | 835 | 4450 | 380 | 510 | **51280** |
| **420** | 500 | 65 | 2 | 440 | 2560 | 530 | 700 | **51184** |
| | 550 | 80 | 2.1 | 570 | 3110 | 500 | 600 | **51784/P4** |
| **440** | 540 | 80 | 2.1 | 565 | 3200 | 500 | 650 | **51188** |
| **460** | 560 | 80 | 2.1 | 585 | 3200 | 450 | 600 | **51192** |
| | 620 | 130 | 5 | 895 | 5250 | 350 | 500 | **51292** |
| | 620 | 130 | 5 | 895 | 5250 | 350 | 500 | **51292F1** |
| **480** | 580 | 80 | 2.1 | 600 | 3500 | 400 | 500 | **51196** |
| **500** | 600 | 80 | 2.1 | 615 | 3500 | 430 | 560 | **511/500/P5** |
| | 600 | 80 | 2.1 | 615 | 3500 | 430 | 560 | **511/500** |
| | 600 | 80 | 2.1 | 615 | 3500 | 430 | 560 | **511/500F3** |
| | 600 | 80 | 2.1 | 615 | 3500 | 430 | 560 | **511/500/P5YB5** |
| **530** | 640 | 85 | 3 | 690 | 4300 | 400 | 530 | **511/530** |
| | 640 | 85 | 3 | 690 | 4300 | 400 | 530 | **511/530/P5YB5** |
| **560** | 670 | 85 | 3 | 650 | 4550 | 390 | 510 | **511/560** |
| **600** | 710 | 85 | 3 | 720 | 4700 | 380 | 500 | **511/600** |
| | 710 | 85 | 3 | 720 | 4700 | 380 | 500 | **511/600F3** |
| | 710 | 85 | 3 | 720 | 4700 | 380 | 500 | **511/600/P4YB5** |
| | 710 | 67 | 3 | 520 | 3450 | 450 | 600 | **591/600** |
| | 710 | 67 | 3 | 520 | 3450 | 450 | 600 | **591/600F3** |
| **630** | 780 | 112 | 4 | 905 | 6150 | 320 | 430 | **517/630** |
| **670** | 800 | 105 | 4 | 885 | 6550 | 300 | 400 | **511/670F3** |
| | 800 | 105 | 4 | 885 | 6550 | 300 | 400 | **511/670/P5** |
| **710** | 950 | 185 | 8 | 1350 | 10010 | 260 | 300 | **512/710X1** |

| Other dimensions | | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|
| d1 | D1 | $da_{min}$ | $Da_{max}$ | $ra_{max}$ | |
| mm | | mm | | | kg |
| 476 | 404 | 448 | 432 | 2 | 23.0 |
| 535 | 405 | 517 | 423 | 4 | 71.8 |
| 496 | 424 | 468 | 452 | 2 | 24.5 |
| 545 | 425 | 531 | 439 | 2 | 50.3 |
| 535 | 444 | 499 | 481 | 2 | 40.6 |
| 555 | 464 | 519 | 501 | 2 | 42.2 |
| 615 | 465 | 552 | 528 | 4 | 114 |
| 615 | 465 | 552 | 528 | 4 | 113 |
| 575 | 484 | 561 | 498 | 2 | 43.7 |
| 595 | 505 | 559 | 541 | 2 | 45.3 |
| 595 | 505 | 559 | 541 | 2 | 45.3 |
| 595 | 505 | 559 | 541 | 2 | 44.7 |
| 595 | 505 | 559 | 541 | 2 | 45.3 |
| 635 | 534 | 595 | 575 | 2.5 | 57.1 |
| 635 | 534 | 595 | 575 | 2.5 | 56.8 |
| 564 | 666 | 625 | 606 | 2.5 | 58.7 |
| 705 | 604 | 667 | 643 | 2.5 | 64.9 |
| 705 | 604 | 665 | 645 | 2.5 | 64.3 |
| 705 | 604 | 667 | 643 | 2.5 | 64.9 |
| 705 | 604 | 663 | 647 | 2.5 | 49.2 |
| 705 | 604 | 663 | 647 | 2.5 | 48.3 |
| 760 | 650 | 717 | 693 | 3 | 118 |
| 795 | 674 | 748 | 722 | 3 | 109 |
| 795 | 674 | 748 | 722 | 3 | 111 |
| 950 | 711 | 929 | 732 | 8 | 382 |



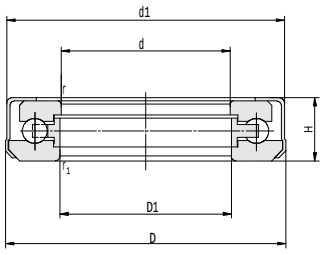



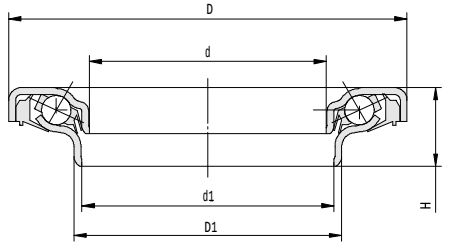




| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|
| d | D | H | $r_{min}$ | Cr | Cor | Grease | Oil | |
| mm | | | | kN | | r/min | | |
| **750** | 900 | 90 | 4 | 815 | 6330 | 300 | 400 | **591/750** |
| | 900 | 120 | 4 | 980 | 7540 | 240 | 340 | **511/750/P5** |
| **780** | 930 | 100 | 4 | 905 | 6700 | 230 | 300 | **517/780F3** |
| **900** | 1060 | 95 | 5 | 835 | 7240 | 210 | 280 | **591/900** |
| **950** | 1110 | 110 | 5 | 1010 | 8900 | 200 | 280 | **591/950X3/YB2** |
| **980** | 1120 | 120 | 5 | 1080 | 9700 | 190 | 260 | **517/980/P5** |
| **1060** | 1250 | 150 | 5 | 1390 | 13200 | 180 | 250 | **511/1060** |
| | 1250 | 150 | 5 | 1390 | 13200 | 180 | 250 | **511/1060/P4YB5** |
| **1380** | 1540 | 130 | 5 | 1280 | 1410 | 170 | 240 | **517/1380** |
| | 1540 | 130 | 5 | 1280 | 1410 | 170 | 240 | **517/1380/P5YB5** |
| **1700** | 1960 | 170 | 7.5 | 1510 | 18800 | 150 | 220 | **511/1700X3/P5YB5** |
| **1720** | 1880 | 130 | 5 | 1440 | 17900 | 140 | 210 | **517/1720** |
| **1800** | 2000 | 140 | 5 | 1730 | 22300 | 120 | 180 | **517/1800/P5** |

| Other dimensions | | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|
| d1 | D1 | $da_{min}$ | $Da_{max}$ | $ra_{max}$ | |
| mm | | mm | | | kg |
| 895 | 755 | 836 | 810 | 3 | 108 |
| 895 | 755 | 839 | 810 | 3 | 158 |
| 930 | 782 | 912 | 800 | 4 | 128 |
| 1054 | 906 | 1041 | 919 | 5 | 143 |
| 1105 | 955 | 1092 | 968 | 5 | 183 |
| 1115 | 985 | 1097 | 1006 | 5 | 183 |
| 1244 | 1066 | 1223 | 1087 | 5 | 343 |
| 1244 | 1066 | 1223 | 1087 | 5 | 343 |
| 1535 | 1385 | 1475 | 1445 | 4 | 319 |
| 1535 | 1385 | 1475 | 1445 | 4 | 319 |
| 1955 | 1705 | 1943 | 1717 | 7 | 824 |
| 1880 | 1721.2 | 1859 | 1743 | 5 | 401 |
| 1990 | 1810 | 1969 | 1831 | 5 | 545 |

d 25.1~86.6 mm



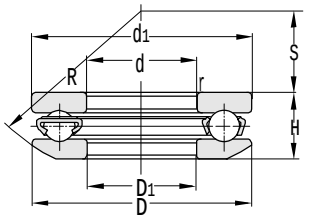



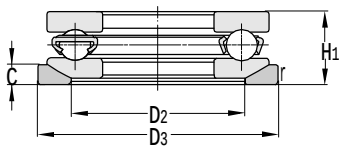

| Principal dimensions | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|
| d | D | H | $r_{min}$ | $r_{1min}$ | Cr | Cor | Grease | Oil |
| mm | | | | | kN | | r/min | |
| **25.1** | 49 | 16 | 0.6 | 0.6 | 16 | 42 | 4000 | 5300 |
| **30** | 53 | 15.8 | 0.6 | 0.6 | 17 | 38 | 3600 | 4800 |
| **32.1** | 60.5 | 18 | 0.6 | 0.6 | 24.5 | 67 | 3000 | 4200 |
| **35.1** | 65.9 | 19.7 | 0.6 | 0.6 | 32.7 | 89.4 | 2800 | 3800 |
| **50** | 81 | 23 | | 1 | 59.0 | 105 | 2400 | 3400 |
| **52.388** | 84.5 | 20.7 | 1.1 | 1.1 | 21.8 | 46.5 | 2200 | 3200 |
| | 84.5 | 20.7 | 1.1 | 1.1 | 21.8 | 46.5 | 2200 | 3200 |
| | 84.5 | 20.7 | 1.1 | 1.1 | 21.8 | 46.5 | 2200 | 3200 |
| **54.23** | 90.2 | 20.2 | 1 | 1.5 | 23.2 | 66 | 1900 | 2800 |
| **69.84** | 114.3 | 22.1 | 1 | 1.5 | 42 | 96 | 1700 | 2500 |
| **80** | 145 | 45 | 1 | 1.5 | 147 | 335 | 1200 | 1700 |
| **86.6** | 137 | 12 | 1 | 3.5 | 20.7 | 95 | 850 | 1600 |

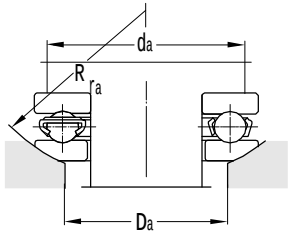
| Designations | Other dimensions | | Weight |
|---|---|---|---|
| | d1 | D1 | |
| | mm | | kg |
| **51205ZSV** | | 25.3 | 0.13 |
| **51206ZSV** | | 30.4 | 0.139 |
| **517/32-2ZSV** | 58 | 32.5 | 0.211 |
| **51207-2ZSV** | 64 | 35.6 | 0.206 |
| **51710ZSV/YA** | | 50.2 | 0.415 |
| **517/52X4ZS** | 83.5 | 52.8 | 0.366 |
| **517/52X4ZS/YA8** | 83.5 | 52.8 | 0.372 |
| **517/52X4ZSD** | 83.5 | 52.8 | 0.372 |
| **517/54X4ZSTN1** | 88.9 | 54.8 | 0.402 |
| **517/69X4ZSTN1** | 112.8 | 70.6 | 0.642 |
| **51316ZSV** | | 82 | 2.83 |
| **517/86.6ZSV/RT6** | 86.6 | 137 | 0.145 |

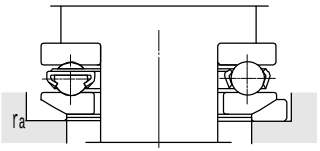
# Thrust Ball Bearing With Aligning Seat and Ring

d 30~110 mm



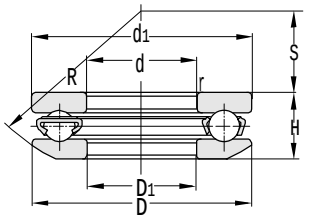



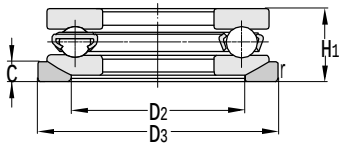



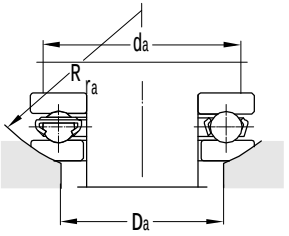

| Principal dimensions | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|
| d | D | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | kN | | r/min | | |
| **30** | 52 | 0.6 | 26.6 | 50.0 | 3600 | 4800 | **53206+U206** |
| **35** | 62 | 1 | 37.3 | 72.0 | 3000 | 4000 | **53207+U207** |
| **40** | 68 | 1 | 46.9 | 104 | 2800 | 3800 | **53208+U208** |
| **45** | 73 | 1 | 47.6 | 84.8 | 2600 | 3600 | **53209** |
| | 73 | 1 | 47.6 | 84.8 | 2600 | 3600 | **53209+U209** |
| **50** | 110 | 1.5 | 160 | 305 | 2300 | 3200 | **53410M** |
| **55** | 90 | 1 | 69 | 143 | 1900 | 2800 | **53211+U211** |
| **60** | 110 | 1 | 130 | 287 | 1850 | 2700 | **53312** |
| **65** | 100 | 1 | 74.9 | 160 | 1800 | 2600 | **53213+U213** |
| **70** | 105 | 1 | 59.0 | 170 | 1750 | 2500 | **53214+U214** |
| | 130 | 1.1 | 148 | 314 | 1400 | 1900 | **53314+U314** |
| | 125 | 1.1 | 148 | 314 | | | **53314** |
| **75** | 110 | 1 | 82.1 | 179 | 1700 | 2400 | **53215+U215** |
| **80** | 115 | 1 | 86.6 | 204 | 1600 | 2200 | **53216+U216** |
| | 145 | 1.5 | 181 | 382 | 1200 | 1700 | **53316+U316** |
| **85** | 180 | 1.1 | 336 | 821 | 1300 | 1900 | **53417M** |
| **90** | 135 | 1.1 | 133 | 320 | 1500 | 2000 | **53218+U218** |
| **100** | 170 | 1.5 | 282 | 495 | 950 | 1400 | **53320+U320** |
| | 170 | 1.5 | 282 | 495 | 950 | 1400 | **53320** |
| | 205 | 3 | 445 | 1040 | 700 | 950 | **53420M+U420** |
| | 205 | 3 | 445 | 1040 | 700 | 950 | **53420+U420** |
| **110** | 160 | 1.1 | 170 | 390 | 1200 | 1700 | **53222+U222** |

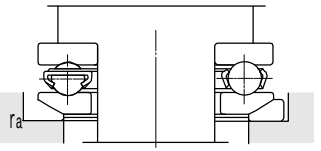
| Other dimensions | | | | | | | | | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d1 | D1 | D2 | D3 | C | H1 | R | S | H | $da_{min}$ | $Da_{max}$ | $ra_{max}$ | |
| mm | | | | | | | | | mm | | | kg |
| 52 | 32 | 42 | 55 | 5.5 | 20 | 45 | 22 | 17.8 | 43 | 42 | 0.6 | 0.180 |
| 62 | 37 | 48 | 65 | 7 | 22 | 50 | 24 | 19.9 | 51 | 48 | 1 | 0.263 |
| 68 | 42 | 55 | 72 | 7 | 23 | 56 | 28.5 | 20.3 | 57 | 55 | 1 | 0.395 |
| 73 | 47 | | | | | 56 | 26 | 21.3 | | | | 0.321 |
| 73 | 47 | 60 | 78 | 7.5 | 24 | 56 | 26 | 21.3 | 62 | 60 | 1 | 0.400 |
| 110 | 52 | | | | | 90 | 35 | 45.6 | | | | 1.92 |
| 90 | 57 | 72 | 95 | 9 | 30 | 72 | 35 | 27.3 | 76 | 72 | 1 | 0.747 |
| 110 | 62 | | | | | 90 | 41 | 38.3 | | | | 1.44 |
| 100 | 67 | 82 | 105 | 9 | 32 | 80 | 40 | 28.5 | 86 | 82 | 1 | 0.898 |
| 105 | 72 | 88 | 110 | 9 | 32 | 80 | 38 | 28.8 | 91 | 88 | 1 | 0.961 |
| 125 | 72 | 98 | 130 | 13 | 48 | 100 | 43 | 44.2 | 103 | 98 | 1 | 2.51 |
| 125 | 72 | | | | | 100 | 43 | 44.2 | | | | 2.10 |
| 110 | 77 | 92 | 115 | 9.5 | 32 | 90 | 49 | 28.2 | 96 | 92 | 1 | 1.15 |
| 115 | 82 | 98 | 120 | 10 | 33 | 90 | 46 | 29.5 | 101 | 98 | 1 | 1.18 |
| 140 | 82 | 110 | 145 | 15 | 52 | 112 | 50 | 47.6 | 116 | 110 | 1.5 | 3.17 |
| 177 | 88 | | | | | 140 | 47 | 77 | | | | 8.95 |
| 135 | 93 | 110 | 140 | 13.5 | 42 | 100 | 45 | 38.5 | 117 | 110 | 1 | 2.33 |
| 170 | 103 | 135 | 175 | 18 | 64 | 125 | 46 | 59.2 | 142 | 135 | 1.5 | 5.83 |
| 170 | 103 | | | | | 125 | 46 | 59.2 | | | | 4.90 |
| 205 | 103 | 155 | 220 | 27 | 98 | 160 | 50 | 90 | 165 | 155 | 2.5 | 16.5 |
| 205 | 103 | 155 | 220 | 27 | 98 | 160 | 50 | 90 | 165 | 155 | 2.5 | 16.2 |
| 160 | 113 | 135 | 165 | 14 | 45 | 125 | 65 | 40.2 | 140 | 135 | 1 | 2.87 |

d 110~430 mm



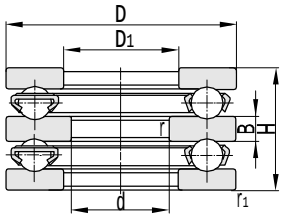



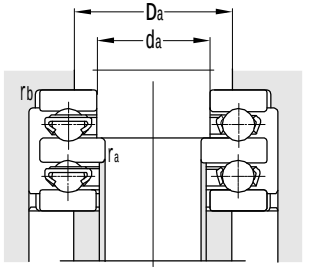




| Principal dimensions | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|
| d | D | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | kN | | r/min | | |
| **110** | 190 | 2 | 305 | 780 | 850 | 1200 | **53322M+U322** |
| | 190 | 2 | 305 | 780 | 850 | 1200 | **53322+U322** |
| **120** | 170 | 1.1 | 168 | 430 | 1100 | 1600 | **53224+U224** |
| | 205 | 2.1 | 320 | 960 | 800 | 1100 | **53324M+U324** |
| | 205 | 2.1 | 320 | 960 | 800 | 1100 | **53324+U324** |
| | 205 | 2.1 | 320 | 960 | 800 | 1100 | **53324/YB2+U324** |
| | 205 | 2.1 | 320 | 960 | 800 | 1100 | **53324U/YB2+U324-1** |
| **130** | 265 | 4 | 635 | 2010 | 700 | 1000 | **53426J+U426** |
| | 265 | 4 | 635 | 2010 | 700 | 1000 | **53426+U426** |
| **150** | 250 | 2.1 | 430 | 1360 | 600 | 900 | **53330M+U330** |
| | 250 | 2.1 | 430 | 1360 | 600 | 900 | **53330+U330** |
| | 250 | 2.1 | 430 | 1360 | 600 | 900 | **53330/YB2+U330** |
| | 250 | 2.1 | 430 | 1360 | 600 | 900 | **53330** |
| | 295 | 4 | 675 | 2240 | 580 | 880 | **53430+U430** |
| **180** | 260 | 1.5 | 295 | 985 | 550 | 850 | **53236M/YB5+U237** |
| **220** | 297 | 2 | 365 | 1370 | 500 | 800 | **53244+U224** |
| **300** | 375 | 2.5 | 380 | 1680 | 400 | 700 | **51760+U760** |
| **430** | 580 | 3.7 | 920 | 5150 | 300 | 550 | **51786+U786** |

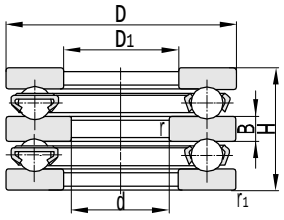
| Other dimensions | | | | | | | | | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d1 | D1 | D2 | D3 | C | H1 | R | S | H | $da_{min}$ | $Da_{max}$ | $ra_{max}$ | |
| mm | | | | | | | | | mm | | | kg |
| 187 | 113 | 150 | 195 | 20.5 | 72 | 140 | 51 | 67.2 | 158 | 150 | 2 | 9.05 |
| 187 | 113 | 150 | 195 | 20.5 | 72 | 140 | 51 | 67.2 | 158 | 150 | 2 | 8.78 |
| 170 | 123 | 145 | 175 | 15 | 46 | 125 | 61 | 40.8 | 150 | 145 | 1 | 3.07 |
| 205 | 123 | 165 | 220 | 22 | 80 | 160 | 63 | 74.1 | 173 | 165 | 2 | 12.3 |
| 205 | 123 | 165 | 220 | 22 | 80 | 160 | 63 | 74.1 | 173 | 165 | 2 | 11.9 |
| 205 | 123 | 165 | 220 | 22 | 80 | 160 | 63 | 74.1 | 173 | 165 | 2 | 11.9 |
| 205 | 123 | 165 | 220 | 22 | 80 | 160 | 63 | 74.1 | 173 | 165 | 2 | 11.9 |
| 265 | 134 | 200 | 280 | 38 | 128 | 200 | 58 | 115.2 | 213 | 200 | 4 | 34.6 |
| 265 | 134 | 200 | 280 | 38 | 128 | 200 | 58 | 115.2 | 213 | 200 | 4 | 34.8 |
| 245 | 154 | 200 | 260 | 26 | 92 | 200 | 89.5 | 83.7 | 209 | 200 | 2 | 19.5 |
| 245 | 154 | 200 | 260 | 26 | 92 | 200 | 89.5 | 83.7 | 209 | 200 | 2 | 18.0 |
| 245 | 154 | 200 | 260 | 26 | 92 | 200 | 89.5 | 83.7 | 209 | 200 | 2 | 18.6 |
| 245 | 154 | | | | | 200 | 89.5 | 83.7 | 209 | | 2 | 15.1 |
| 295 | 154 | 225 | 310 | 41 | 140 | 225 | 69 | 125.9 | 239 | 225 | 4 | 44.1 |
| 247 | 183 | 210 | 260 | 21.5 | 66 | 200 | 112 | 58.2 | 222 | 210 | 1.5 | 10.1 |
| 297 | 224 | 260 | 310 | 25 | 75 | 225 | 118 | 65.6 | 268 | 260 | 2 | 15.6 |
| 375 | 300.3 | 340 | 385 | 17 | 75 | 320 | 202 | 70 | 379 | 340 | 2.5 | 17.2 |
| 580 | 430.5 | 500 | 610 | 45 | 150 | 500 | 301.3 | 131.7 | 562 | 500 | 3.5 | 129 |

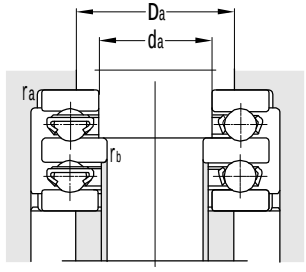



| Principal dimensions | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|
| d | D | H | $r_{min}$ | $r_{1min}$ | Cr | Cor | Grease | Oil |
| mm | | | | | kN | | r/min | |
| **25** | 52 | 29 | 0.6 | 0.3 | 27.3 | 50.0 | 5000 | 6500 |
| **30** | 62 | 34 | 1 | 0.3 | 37.0 | 73.0 | 4800 | 6000 |
| | 68 | 44 | 1 | 0.3 | 88.5 | 148 | 4600 | 5800 |
| | 68 | 36 | 1 | 0.6 | 47 | 102.0 | 4500 | 5900 |
| **35** | 73 | 37 | 1 | 0.6 | 48.0 | 85.0 | 4200 | 5300 |
| **40** | 78 | 39 | 1 | 0.6 | 54.5 | 114 | 4000 | 5100 |
| **45** | 90 | 45 | 1 | 0.6 | 69.0 | 143 | 3800 | 5000 |
| | 120 | 87 | 1.5 | 0.6 | 191 | 385 | 3700 | 4900 |
| **50** | 95 | 46 | 1 | 0.6 | 74.0 | 147 | 3600 | 4800 |
| **55** | 100 | 47 | 1 | 0.6 | 75.5 | 160 | 3500 | 4700 |
| | 105 | 47 | 1 | 1 | 76.5 | 170 | 3400 | 4600 |
| | 125 | 72 | 1.1 | 1 | 148 | 315 | 3300 | 4500 |
| | 150 | 107 | 2 | 1 | 257 | 539 | 3250 | 4400 |
| **65** | 115 | 48 | 1 | 1 | 87.1 | 204 | 3300 | 4500 |
| | 180 | 128 | 1.1 | 1.1 | 545 | 1070 | 3100 | 4200 |
| **70** | 125 | 55 | 1 | 1 | 112 | 270 | 3200 | 4300 |
| **75** | 135 | 62 | 1.1 | 1 | 133 | 320 | 3100 | 4200 |
| **80** | 210 | 150 | 3 | 1.1 | 730 | 1550 | 3100 | 4100 |
| | 210 | 150 | 3 | 1.1 | 685 | 1470 | 3100 | 4100 |
| **85** | 150 | 67 | 1.1 | 1 | 163 | 340 | 3000 | 4000 |
| | 170 | 97 | 1.5 | 1 | 276 | 595 | 2950 | 3900 |
| **90** | 230 | 166 | 3 | 1.1 | 795 | 1800 | 2900 | 3800 |
| **95** | 160 | 67 | 1.1 | 1 | 170 | 395 | 2800 | 3700 |

| Designations | Other dimensions | | Abutment and fillet dimensions | | | | Weight |
|---|---|---|---|---|---|---|---|
| | D1 | B | $da_{min}$ | $Da_{max}$ | $ra_{max}$ | $rb_{max}$ | |
| | mm | | mm | | | | kg |
| **52206** | 32 | 7 | 30 | 39 | 0.3 | 0.6 | 0.261 |
| **52207** | 37 | 8 | 35 | 46 | 0.3 | 1 | 0.354 |
| **52307** | 37 | 10 | 35 | 48 | 0.3 | 1 | 0.674 |
| **52208** | 42 | 9 | 40 | 51 | 0.6 | 1 | 0.496 |
| **52209** | 47 | 9 | 45 | 56 | 0.6 | 1 | 0.623 |
| **52210** | 52 | 9 | 50 | 61 | 0.6 | 1 | 0.722 |
| **52211** | 57 | 10 | 55 | 69 | 0.6 | 1 | 1.06 |
| **52411M** | 57 | 20 | 53 | 81 | 0.6 | 1.5 | 4.87 |
| **52212** | 62 | 10 | 60 | 74 | 0.6 | 1 | 1.25 |
| **52213** | 67 | 10 | 65 | 79 | 0.6 | 1 | 1.29 |
| **52214** | 72 | 10 | 64 | 102 | 1 | 1 | 1.37 |
| **52314** | 72 | 16 | 70 | 92 | 1 | 1 | 3.65 |
| **52414M** | 73 | 24 | 70 | 124 | 1 | 2 | 9.15 |
| **52216** | 82 | 10 | 80 | 94 | 1 | 1 | 1.73 |
| **52417M** | 88 | 29 | 86 | 124 | 1 | 1 | 16.0 |
| **52217** | 88 | 12 | 85 | 101 | 1 | 1 | 2.19 |
| **52218** | 93 | 14 | 90 | 108 | 1 | 1 | 3.11 |
| **52420M** | 103 | 33 | 101 | 145 | 1 | 3 | 25.3 |
| **52420** | 103 | 33 | 101 | 145 | 1 | 3 | 24.4 |
| **52220** | 103 | 15 | 100 | 120 | 1 | 1 | 4.05 |
| **52320** | 103 | 21 | 100 | 128 | 1 | 1 | 8.81 |
| **52422M** | 113 | 37 | 110 | 159 | 1 | 3 | 33.4 |
| **52222** | 113 | 15 | 110 | 130 | 1 | 1 | 4.51 |

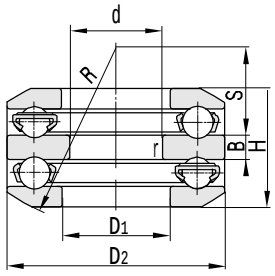


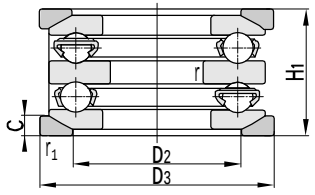



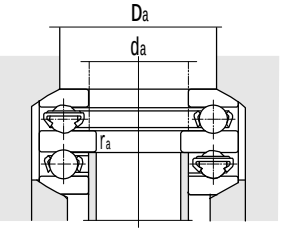

| Principal dimensions | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|
| d | D | H | $r_{min}$ | $r_{1min}$ | Cr | Cor | Grease | Oil |
| mm | | | | | kN | | r/min | |
| **95** | 190 | 110 | 2 | 1 | 305 | 590 | 2700 | 3500 |
| | 190 | 110 | 2 | 1 | 305 | 590 | 2700 | 3500 |
| | 190 | 110 | 2 | 1 | 305 | 590 | 2700 | 3500 |
| | 250 | 177 | 4 | 1.5 | 1380 | 4140 | 2600 | 3300 |
| **100** | 170 | 68 | 1.1 | 1.1 | 137 | 430 | 2400 | 3000 |
| | 210 | 123 | 2.1 | 1.1 | 565 | 1420 | 2300 | 2800 |
| **110** | 190 | 80 | 1.5 | 1.1 | 230 | 575 | 2000 | 2500 |
| | 280 | 196 | 2 | 2 | 1020 | 2630 | 1600 | 2200 |
| **120** | 200 | 81 | 1.5 | 1.1 | 365 | 1090 | 1300 | 1800 |
| | 200 | 81 | 1.5 | 1.1 | 365 | 1090 | 1300 | 1800 |
| | 300 | 209 | 4 | 2 | 1100 | 2960 | 1000 | 1600 |
| **130** | 215 | 89 | 1.5 | 1.1 | 425 | 1300 | 900 | 1400 |
| | 250 | 140 | 2.1 | 2.1 | 430 | 1020 | 800 | 1200 |
| | 250 | 140 | 2.1 | 2.1 | 430 | 1020 | 800 | 1200 |
| **140** | 225 | 90 | 1.5 | 1.1 | 430 | 1380 | 700 | 1000 |
| | 225 | 90 | 1.5 | 1.1 | 430 | 1380 | 700 | 1000 |
| **150** | 250 | 98 | 1.5 | 2 | 760 | 3300 | 590 | 820 |
| | 250 | 98 | 1.5 | 2 | 760 | 3300 | 590 | 820 |
| | 300 | 165 | 3 | 2 | 835 | 2780 | 520 | 800 |
| **160** | 270 | 109 | 2 | 2 | 920 | 4080 | 500 | 760 |
| | 270 | 109 | 2 | 2 | 920 | 4080 | 500 | 760 |
| **170** | 280 | 109 | 2 | 2 | 910 | 4110 | 460 | 720 |
| | 340 | 192 | 4 | 2 | 1070 | 3730 | 430 | 680 |
| **300** | 400 | 80 | 1.8 | 1.3 | 430 | 3240 | 350 | 550 |
| **469.5** | 570 | 84 | 2 | 2 | 365 | 2720 | 230 | 360 |
| **570** | 700 | 90 | 3 | 1.3 | 292 | 2150 | 200 | 320 |

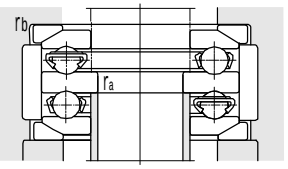
| Designations | Other dimensions | | Abutment and fillet dimensions | | | | Weight |
|---|---|---|---|---|---|---|---|
| | D1 | B | $da_{min}$ | $Da_{max}$ | $ra_{max}$ | $rb_{max}$ | |
| | mm | | mm | | | | kg |
| **52322M** | 113 | 24 | 110 | 142 | 1 | 2 | 13.2 |
| **52322** | 113 | 24 | 110 | 142 | 1 | 2 | 12.9 |
| **52322U** | 113 | 24 | 110 | 142 | 1 | 2 | 13.22 |
| **52424M** | 249 | 40 | 246 | 173 | 1.5 | 4 | 42.1 |
| **52224** | 123 | 15 | 120 | 140 | 1 | 1 | 4.94 |
| **52324** | 123 | 21 | 120 | 157 | 1 | 2 | 17.3 |
| **52226M** | 133 | 18 | 130 | 156 | 1 | 1.5 | 8.60 |
| **52428** | 279 | 44 | 276 | 197 | 2 | 2 | 56.8 |
| **52228M** | 143 | 18 | 140 | 164 | 1 | 1.5 | 8.67 |
| **52228** | 143 | 18 | 143 | 164 | 1 | 1.5 | 8.37 |
| **52430** | 154 | 46 | 151 | 211 | 2 | 4 | 70.3 |
| **52230** | 153 | 20 | 150 | 176 | 1 | 1.5 | 10.3 |
| **52330M** | 154 | 31 | 150 | 176 | 1 | 2 | 31.2 |
| **52330** | 154 | 31 | 150 | 176 | 1 | 2 | 29.4 |
| **52232M** | 163 | 20 | 160 | 186 | 1 | 1.5 | 11.8 |
| **52232** | 163 | 20 | 160 | 186 | 1 | 1.5 | 11.7 |
| **52236M** | 183 | 21 | 180 | 208 | 2 | 1.5 | 15.6 |
| **52236** | 183 | 21 | 180 | 208 | 2 | 1.5 | 14.3 |
| **52336** | 184 | 37 | 180 | 208 | 2 | 3 | 48.8 |
| **52238** | 194 | 24 | 191 | 222 | 2 | 2 | 21.4 |
| **52238J** | 194 | 24 | 191 | 222 | 2 | 2 | 20.9 |
| **52240** | 204 | 24 | 201 | 232 | 2 | 2 | 22.1 |
| **52340** | 105 | 42 | 102 | 258 | 2 | 4 | 59.3 |
| **52768** | 340 | 18 | 337 | 388 | 1 | 1.5 | 21.2 |
| **52794X** | 499 | 29 | 493 | 557 | 2 | 2 | 39.9 |
| **527/615F1** | 615 | 20 | 612 | 684 | 1 | 3 | 53.7 |

d 30~100 mm




| Principal dimensions | | | | | Basic load ratings | | Designations |
|---|---|---|---|---|---|---|---|
| d | D | T | $r_{min}$ | $r_{1min}$ | Cr | Cor | |
| mm | | | | | kN | | |
| **30** | 68 | 47.2 | 1 | 0.3 | 90.2 | 147 | **54307+U307** |
| **40** | 64 | 35.4 | 0.6 | 0.6 | 41.1 | 99.3 | **54208+U208** |
| **85** | 170 | 105.4 | 1.5 | 1 | 450 | 1030 | **54320+U320** |
| **100** | 210 | 131.2 | 2.1 | 2.1 | 565 | 1420 | **54324M+U324** |
| | 210 | 131.2 | 2.1 | 2.1 | 565 | 1420 | **54324+U324** |

| Other dimensions | | | | | | | | Abutment and fillet dimensions | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| D1 | D2 | D3 | b | C | H1 | R | S | $da_{min}$ | $Da_{max}$ | $ra_{max}$ | $rb_{max}$ | |
| mm | | | | | | | | mm | | | | kg |
| 37 | 52 | 72 | 10 | 7.5 | 52 | 56 | 21 | 35 | 52 | 0.3 | 1 | 0.909 |
| 42 | 48 | 69 | 7 | 7 | 42 | 50 | 20.9 | 40 | 48 | 0.6 | 1 | 0.563 |
| 103 | 135 | 175 | 21 | 18 | 115 | 125 | 42 | 100 | 135 | 1 | 1.5 | 10.8 |
| 123 | 165 | 220 | 27 | 22 | 143 | 160 | 58 | 120 | 165 | 2 | 2 | 23.0 |
| 123 | 165 | 220 | 27 | 22 | 143 | 160 | 58 | 120 | 165 | 2 | 2 | 22.2 |

## Product characteristic

This type bearing consist by two shaft washer, one housing washer with lubricating groove and oil hole, one spacer, double-row rolling element and cage. Through grinding the thickness of spacer, could adjust the clearance and preload of the bearing. Bearing contact angle is 60*. Can carrying combination load in double direction load(mainly axile load). This type of bearing is widely apply to the main shaft of grinding machine, boring machine, turning machine, milling machine and rilling machine, is the high precision bearing especially designed for these machine tools. This type of bearing with high precision, high rigidity, low temperature raise, high rotation speed and easily to mounting and dismounting.

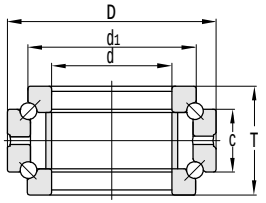
## Dimension range

Basic dimension is listed in the bearing dimension data sheet.

Inner diameter range: 50mm~300mm

Outer diameter range: 80mm~420mm

Width diameter range:38mm~144mm




## Tolerance

ZWZ double direction angular contact thrust ball bearing can provide SP, P4 level tolerance, can provide UP level tolerance if needed.

Tolerance of SP, UP level housing washer μm

| d mm | | SP | | | | | UP | | | SP、UP | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | △dmp | | △ds | | Si Se | △ds △dmp | | Si Se | △Ts | |
| Over | To | High | Low | High | Low | max | High | Low | max | High | Low |
| - | 30 | | -8 | +1 | -9 | 3 | | -6 | 1.5 | +50 | -30 |
| 30 | 50 | | -10 | +1 | -11 | 3 | | -8 | 1.5 | +60 | -100 |
| 50 | 80 | | -12 | +2 | -14 | 4 | | -9 | 2 | +70 | -120 |
| 80 | 120 | 0 | -15 | +3 | -18 | 4 | 0 | -10 | 2 | +85 | -140 |
| 120 | 180 | | -18 | +3 | -21 | 5 | | -13 | 3 | +95 | -160 |
| 180 | 250 | | -22 | +4 | -26 | 5 | | -15 | 3 | +120 | -200 |
| 250 | 315 | | -25 | +5 | -30 | 7 | | -18 | 4 | +150 | -250 |
| 315 | 400 | | -30 | +5 | -35 | 7 | | -23 | 4 | +200 | -300 |



Tolerance of SP, UP level housing washer μm

| D mm | | △Dmp | | △Cs | |
|---|---|---|---|---|---|
| Over | To | High | Low | High | Low |
| 30 | 50 | -20 | -27 | | |
| 50 | 80 | -24 | -33 | | |
| 80 | 120 | -28 | -38 | | |
| 120 | 150 | -33 | -44 | | |
| 150 | 180 | -33 | -46 | 0 | -30 |
| 180 | 250 | -37 | -52 | | |
| 250 | 315 | -41 | -59 | | |
| 315 | 400 | -46 | -64 | | |
| 400 | 500 | -50 | -70 | | |
| 500 | 630 | -55 | -77 | | |

## Cage

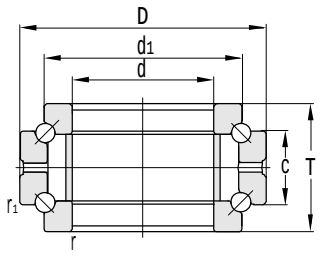
The double direction angular contact thrust ball bearing made by ZWZ select machined brass cage, the suffix code not marked.

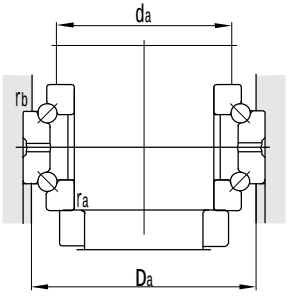
## Preload

The preload of double direction angular contact thrust ball bearing is determined by spacer, the value of preload is list as follow table:

The preload value of double direction angular contact thrust ball bearing N

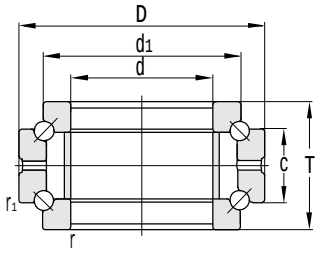
| Bearing ID Code | | Preload | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Over | To | 1 | 2 | 0 | 3 | 4 | 5 | 6 |
| - | 05 | - | 196 | 295 | 390 | 490 | 590 | 785 |
| 05 | 09 | 195 | 295 | 490 | 590 | 680 | 835 | 980 |
| 09 | 13 | 490 | 685 | 980 | 1175 | 1375 | 1670 | 1960 |
| 13 | 16 | 490 | 980 | 1470 | 1765 | 2060 | 2450 | 2945 |
| 16 | 19 | 490 | 980 | 1470 | 1765 | 2160 | 2550 | 2945 |
| 19 | 24 | 785 | 1175 | 1960 | 2450 | 2945 | 3435 | 4415 |
| 24 | 26 | 785 | 1470 | 1960 | 2450 | 2945 | 3925 | 4415 |
| 26 | 34 | 980 | 1470 | 1960 | 2450 | 2945 | 3925 | 4905 |
| 34 | 40 | 1470 | 1960 | 2450 | 2945 | 3925 | 4905 | 5885 |
| 40 | 56 | 1470 | 1960 | 2945 | 3925 | 4905 | 5885 | 6865 |
| 56 | 68 | 1960 | 2450 | 3435 | 4905 | 5885 | 6865 | 7850 |
| 68 | 80 | 1960 | 2450 | 3925 | 5885 | 6865 | 7850 | 8830 |

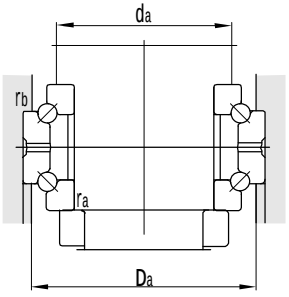



| Principal dimensions | | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | T | C | $r_{min}$ | $r_{1min}$ | Cr | Cor | Grease | Oil |
| mm | | | | | | kN | | r/min | |
| **50** | 80 | 38 | 19 | 1 | 0.15 | | | | |
| | 72 | 28 | 14 | 1 | 0.3 | | | | |
| **70** | 110 | 48 | 24 | 1.1 | 0.3 | 42.5 | 93 | 5300 | 7000 |
| **75** | 115 | 48 | 24 | 1.1 | 0.3 | | | | |
| | 105 | 38 | 19 | 1 | 0.5 | | | | |
| **80** | 125 | 54 | 27 | 1.1 | 0.3 | 52 | 120 | 4500 | 6000 |
| | 110 | 38 | 19 | 1 | 0.5 | | | | |
| **85** | 130 | 54 | 27 | 1.1 | 0.3 | | | | |
| | 120 | 44 | 22 | 1 | 0.5 | | | | |
| **90** | 140 | 60 | 30 | 1.5 | 0.3 | 108 | 400 | 4000 | 5300 |
| | 125 | 44 | 22 | 1 | 0.6 | | | | |
| **95** | 145 | 60 | 30 | 1.5 | 0.3 | | | | |
| | 130 | 44 | 22 | 1 | 0.6 | | | | |
| **100** | 150 | 60 | 30 | 1.5 | 1 | 108 | 400 | 2900 | 3800 |
| | 150 | 60 | 30 | 1.5 | 1 | 108 | 400 | 2900 | 3800 |
| | 140 | 48 | 24 | 1 | 0.6 | 71 | 281 | 3200 | 3800 |
| **105** | 160 | 66 | 33 | 2 | 0.6 | 109 | 200 | 2600 | 3500 |
| | 145 | 48 | 24 | 1 | 0.6 | | | | |
| **110** | 170 | 72 | 36 | 2 | 0.6 | | | | |
| | 150 | 48 | 24 | 1 | 0.6 | | | | |
| **120** | 180 | 72 | 36 | 2 | 0.6 | 139 | 265 | 2400 | 3200 |
| | 165 | 54 | 27 | 1 | 0.6 | | | | |
| **130** | 200 | 84 | 42 | 2 | 0.6 | 119 | 360 | 2200 | 3000 |
| | 180 | 60 | 30 | 1.5 | 1 | | | | |

| Designations | Dimensions | Abutment and fillet dimensions | | | | Weight |
|---|---|---|---|---|---|---|
| | $d_{1max}$ | $da_{min}$ | $Da_{max}$ | $ra_{max}$ | $rb_{max}$ | |
| | mm | mm | | | | kg |
| **234410** | 70 | | | | | |
| **234910** | 64 | | | | | |
| **234414** | 97 | 86.5 | 103.5 | 1.1 | 0.3 | 1.49 |
| **234415** | 102 | | | | | |
| **234915** | 94 | | | | | |
| **234416** | 110 | 98.5 | 117 | 1.1 | 0.3 | 2.16 |
| **234916** | 99 | | | | | |
| **234417** | 115 | | | | | |
| **234917** | 106 | | | | | |
| **234418/SP5** | 123 | 110.5 | 130.5 | 1.5 | 0.3 | 2.99 |
| **234918** | 111 | | | | | |
| **234419** | 128 | | | | | |
| **234919** | 116 | | | | | |
| **234420** | 133 | 119 | 142 | 1.5 | 0.3 | 3.19 |
| **234420TN1** | 133 | 119 | 142 | 1.5 | 0.3 | 2.67 |
| **234920/P4YAB** | 126 | 117 | 134 | 1 | 0.6 | 2.04 |
| **234421/YA6** | 142 | 125 | 151 | 2 | 0.6 | 4.15 |
| **234921** | 121 | | | | | |
| **234422** | 150 | | | | | |
| **234922** | 136 | | | | | |
| **234424** | 160 | 142 | 171 | 2 | 0.6 | 5.54 |
| **234924** | 150 | | | | | |
| **234426** | 177 | 143 | 192 | 2 | 0.6 | 8.64 |
| **234926** | 163 | | | | | |

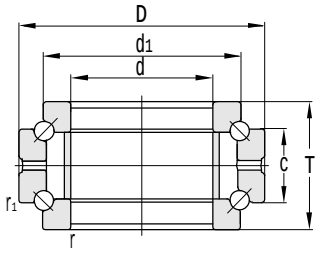


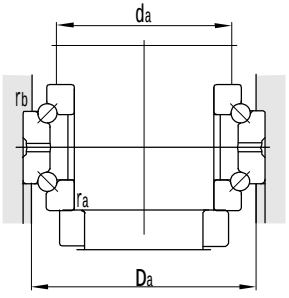




| Principal dimensions | | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | T | C | $r_{min}$ | $r_{1min}$ | $C_r$ | $C_{or}$ | Grease | Oil |
| mm | | | | | | kN | | r/min | |
| **140** | 210 | 84 | 42 | 2.1 | 0.6 | 113 | 355 | 1800 | 2600 |
| | 210 | 84 | 42 | 2.1 | 0.6 | 113 | 355 | 2500 | 3600 |
| | 210 | 84 | 42 | 2.1 | 0.6 | 113 | 355 | 2200 | 3300 |
| | 190 | 60 | 30 | 1.5 | 1 | | | | |
| **150** | 225 | 90 | 45 | 2.1 | 0.6 | 250 | 390 | 1700 | 2500 |
| | 210 | 72 | 36 | 2 | 1 | 151 | 320 | 1800 | 2600 |
| **160** | 240 | 96 | 48 | 2.1 | 1.1 | 241 | 680 | 1700 | 2300 |
| | 240 | 96 | 48 | 2.1 | 1.1 | 241 | 680 | 3000 | 4000 |
| | 240 | 84 | 36 | 2.1 | 1.1 | 132 | 445 | 1700 | 2300 |
| | 240 | 96 | 48 | 2.1 | 1.1 | 241 | 680 | 1800 | 2500 |
| **170** | 260 | 108 | 54 | 2.5 | 1.3 | 287 | 590 | 1600 | 2100 |
| **180** | 280 | 120 | 60 | 2.1 | 0.6 | 280 | 665 | 1500 | 2000 |
| | 280 | 120 | 60 | 2.1 | 0.6 | 280 | 665 | 2000 | 3000 |
| | 280 | 120 | 60 | 2.1 | 0.6 | 280 | 665 | 1500 | 2000 |
| **190** | 290 | 120 | 60 | 2.1 | 0.6 | 224 | 630 | 1900 | 2800 |
| | 260 | 84 | 42 | 2 | 1 | 150 | 625 | 2300 | 3300 |
| **200** | 310 | 132 | 66 | 2.1 | 0.6 | 230 | 765 | 1300 | 1700 |
| | 280 | 96 | 48 | 2 | 1 | | | | |
| **220** | 300 | 96 | 48 | 2 | 1 | 210 | 930 | 1200 | 1700 |
| | 340 | 144 | 72 | 3 | 1 | 450 | 1890 | 1200 | 1600 |
| **240** | 320 | 96 | 48 | 2 | 1 | 270 | 1280 | 900 | 1300 |
| | 360 | 144 | 72 | 3 | 1 | 300 | 1090 | 800 | 1100 |
| **260** | 360 | 120 | 60 | 2.1 | 1.1 | 315 | 1390 | 1500 | 2100 |

| Designations | Dimensions | Abutment and fillet dimensions | | | | Weight |
|---|---|---|---|---|---|---|
| | $d_{1max}$ | $da_{min}$ | $Da_{max}$ | $ra_{max}$ | $rb_{max}$ | |
| | mm | mm | | | | kg |
| **234428** | 187 | 166 | 200 | 2 | 0.6 | 8.97 |
| **234428/P4** | 187 | 166 | 200 | 2 | 0.6 | 8.97 |
| **234428/P5** | 187 | 166 | 200 | 2 | 0.6 | 8.97 |
| **234928** | 173 | | | | | |
| **234430/P4YAB** | 200 | 178 | 213 | 2 | 0.6 | 12.5 |
| **234930** | 190 | 172 | 200 | 2 | 1 | 7.26 |
| **234432** | 212 | 190 | 227 | 2 | 0.6 | 14.0 |
| **234432/P4YAB** | 212 | 190 | 227 | 2 | 0.6 | 14.0 |
| **234432X2** | 212 | 190 | 227 | 2 | 0.6 | 11.6 |
| **234432YA6** | 212 | 190 | 227 | 2 | 0.6 | 14 |
| **234434** | 230 | 206 | 245 | 2 | 1 | 18.5 |
| **234436** | 248 | 221 | 263 | 2.1 | 0.6 | 23.4 |
| **234436/P4YAB** | 248 | 230 | 270 | 2 | 1 | 24.8 |
| **234436/SP3** | 248 | 230 | 270 | 2 | 1 | 24.8 |
| **234438/P4YAB** | 258 | 231 | 273 | 2.1 | 0.6 | 24.7 |
| **234938/P5YB2** | 237 | | | | | 12.0 |
| **234440** | 274 | 243 | 300 | 2 | 1 | 33.6 |
| **234940** | 252 | | | | | |
| **234944/P5W33** | 272 | 250 | 287 | 2 | 1 | 17.0 |
| **234444** | 304 | 265 | 330 | 2 | 1 | 43.9 |
| **234948** | 292 | 253 | 310 | 2 | 1 | 19.7 |
| **234448** | 322 | 287 | 350 | 2.5 | 1 | 46.7 |
| **234952/P4** | 326 | 300 | 344 | 2 | 1 | 33.7 |

d 280~1374.775 mm




| Principal dimensions | | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | T | C | $r_{min}$ | $r_{1min}$ | Cr | Cor | Grease | Oil |
| mm | | | | | | kN | | r/min | |
| **280** | 380 | 120 | 60 | 2 | 1 | 232 | 955 | 800 | 1200 |
| | 420 | 164 | 82 | 3 | 1.5 | 390 | 1270 | 700 | 1100 |
| **300** | 460 | 190 | 95 | 3 | 1.5 | | | | |
| | 420 | 144 | 72 | 3 | 1 | 315 | 765 | 670 | 1100 |
| **420** | 620 | 236 | 118 | 5 | 2 | 590 | 2980 | 600 | 1000 |
| **460** | 680 | 256 | 128 | 6 | 2 | 665 | 3500 | 550 | 900 |
| **1374.775** | 1597.025 | 247.65 | 49.23 | 5 | 3 | 3000 | 17300 | 500 | 800 |

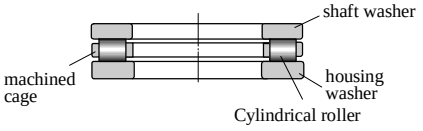
| Designations | Dimensions | Abutment and fillet dimensions | | | | Weight |
|---|---|---|---|---|---|---|
| | $d_{1max}$ | $da_{min}$ | $Da_{max}$ | $ra_{max}$ | $rb_{max}$ | |
| | mm | mm | | | | kg |
| **234956** | 348 | 323 | 365 | 2.5 | 1 | 44.9 |
| **234456** | 374 | 337.5 | 394.5 | 4 | 1.5 | 69 |
| **234460** | 406 | | | | | |
| **234960** | 384 | | | | | |
| **234484/P4** | 552 | 441 | 607 | 5 | 2 | 222 |
| **234492/SP** | 608 | 485 | 667 | 6 | 2 | 291 |
| **2327/1374X4/HCEP5** | 1536.7 | 1395 | 1580 | 5 | 3 | 648 |

## Product Characteristics

Consists washer type raceway rings (shaft washer, housing washer), cylindrical roller and cage. Cylindrical roller adopt convexity process, so the stress between roller and raceway is equally distributed.

This type of bearing is separable structure, can install shaft washer, housing washer, rolling element components separately. The lean between shaft and housing is not allowed while mounting.

This type of bearing is suitable for low rotation speed, can carrying single direction axial load, can not limit radial displacement, have large axial load carrying capacity, and also higher axial rigidity.




## Product Category

· Single direction cylindrical roller thrust bearing

· Double direction cylindrical roller thrust bearing

## Dimension range:

Inner diameter dimension range:

30mm~1800mm

Outer diameter dimension range :

52mm~2080mm

Width dimension range:

14mm~250mm

## Tolerance

The tolerance of cylindrical roller bearing made by ZWZ is according to standard GB307. 4. The value of tolerance please refer to the table in preface. ZWZ can provide P0, P6, P5 and P4 class products.

## Cage

Brass machined solid cage is normally selected for cylindrical roller thrust bearing which made by ZWZ.

While Bearing outer diameter D≤500mm, choose brass cage;

While bearing outer diameter D>500mm, choose steel solid cage, cage suffix code not marked, other shall mark the suffix code accordingly.

## Equivalent dynamic load

P=Fa

## Equivalent static load

P0=Fa

## Related bearing code explanation:

X1- Non-standard outer diameter.

X2- Non-standard width (height).

X3- Non-standard outer diameter, width (height) (standard bore diameter)

F1- Carbon steel

F3- Nodular cast iron

HC- Ring and rolling elements or only ring or rolling elements are made from case hardened steel (/HC-20Cr2Ni4A; /HC1-20Cr2Mn2MoA; /HC2-15Mn; /HC3-G20CrMo).

M- Brass solid cage

TN1- Nylon

P5- Tolerance grade conforms to the standard P5.

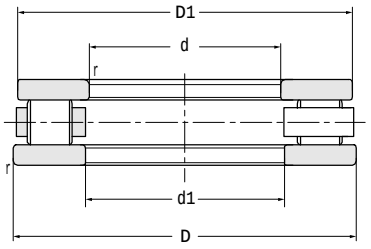
P4- Tolerance grade conforms to the standard P4.

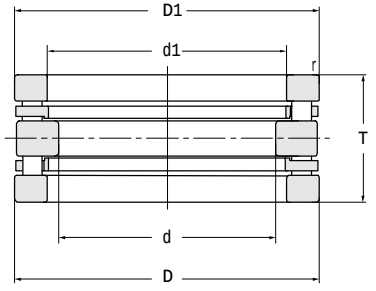
SP- Ultra precision grade, dimension tolerance equals to P5, rotating precision equals to P4.

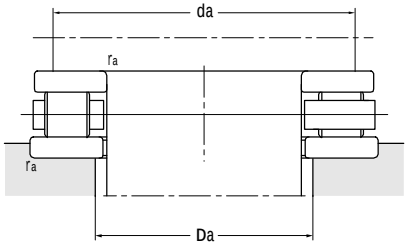
YB2- Bearing dimension and tolerance changed.

YB5- Structure and position tolerance have special requirements.

ZW- Double-row needle rollers and cage assembly.

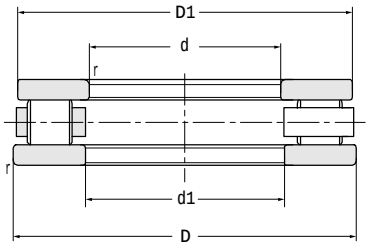


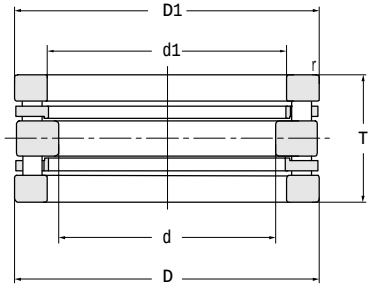



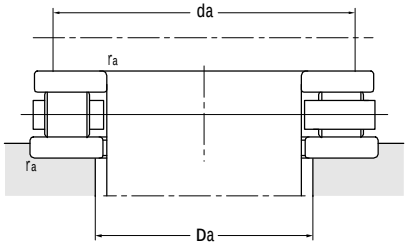




| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|
| d | D | T | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | kN | | r/min | | |
| **30** | 52 | 16 | 0.6 | 59.4 | 129 | 3200 | 3800 | **81206TN1** |
| **30.05** | 54 | 13.8 | | 41.3 | 113 | 3200 | 3800 | **81206X2ZRS** |
| **38.5** | 66.7 | 18 | | 71 | 190 | 2200 | 2500 | **817/38.5-ZS** |
| **42** | 65 | 14 | 0.6 | 45.1 | 113 | 2000 | 2300 | **811/42TN1** |
| **50** | 78.6 | 22 | | 103 | 300 | 1500 | 1800 | **81210X1ZSTN1** |
| | 82 | 22 | | 69 | 223 | 1500 | 1800 | **81210X1ZRS** |
| | 80 | 18.89 | | 72.5 | 245 | 1500 | 1800 | **81210X2ZRS** |
| **75** | 135 | 36 | 1.5 | 265 | 885 | 640 | 860 | **89315** |
| **80** | 115 | 28 | 1 | 140 | 505 | 690 | 920 | **81216** |
| **85** | 150 | 39 | 1.5 | 300 | 1120 | 1420 | 1900 | **89317/P4** |
| **100** | 150 | 38 | 1.1 | 230 | 880 | 540 | 720 | **81220** |
| **110** | 160 | 38 | 1.1 | 264 | 878 | 900 | 1300 | **81222** |
| **120** | 155 | 25 | 1.1 | 154 | 653 | 950 | 1400 | **81124** |
| **140** | 180 | 31 | 1 | 193 | 850 | 670 | 900 | **81128** |
| **160** | 200 | 31 | 1 | 216 | 1020 | 630 | 850 | **81132** |
| **175** | 250 | 82 | 2 | 325 | 1580 | 400 | 530 | **82635** |
| **180** | 250 | 56 | 1.5 | 545 | 2300 | 280 | 380 | **81236** |
| | 360 | 82 | 5 | 1580 | 6270 | 340 | 450 | **87436ZW** |
| | 360 | 109 | 5 | 2090 | 6240 | 800 | 1200 | **89436ZW** |
| | 360 | 109 | 5 | 2090 | 6240 | 800 | 1200 | **89436ZW-1/HC** |
| **200** | 280 | 62 | 2 | 700 | 3000 | 360 | 500 | **81240** |
| | 250 | 37 | 1.1 | 325 | 1530 | 530 | 700 | **81140** |

| Other dimensions | | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|
| d1 | D1 | $da_{min}$ | $Da_{max}$ | $ra_{max}$ | |
| mm | | mm | | | kg |
| 32 | 52 | 48 | 33 | 0.6 | 0.127 |
| 30.2 | 54 | 50 | 32 | | 0.113 |
| 42 | 66.7 | 62 | 40 | | 0.232 |
| 44 | 65 | 63 | 42 | 0.6 | 0.147 |
| 50.5 | 78.6 | 75 | 53 | | 0.381 |
| 50.3 | 82 | 80 | 51 | | 0.439 |
| 50.1 | 74.2 | 72 | 48 | | 0.333 |
| 77 | 135 | 130 | 80 | 1.5 | 2.42 |
| 82 | 115 | 113 | 85 | 1 | 1.03 |
| 88 | 150 | 146 | 92 | 1.5 | 3.12 |
| 103 | 150 | 146 | 106 | 1 | 2.61 |
| 113 | 160 | 156 | 117 | 1 | 2.80 |
| 120.2 | 155 | 150 | 125 | 1 | 1.24 |
| 142 | 178 | 175 | 145 | 1 | 2.07 |
| 162 | 198 | 195 | 165 | 1 | 2.33 |
| 203 | 247 | 240 | 208 | 2 | 11.9 |
| 183 | 247 | 245 | 185 | 1 | 9.37 |
| 184 | 358 | 350 | 195 | 4 | 41.7 |
| 184 | 355 | 345 | 194 | 4 | 59.3 |
| 184 | 360 | 350 | 194 | 4 | 60 |
| 204 | 277 | 275 | 210 | 2 | 13.0 |
| 203 | 247 | 243 | 206 | 1 | 43.6 |



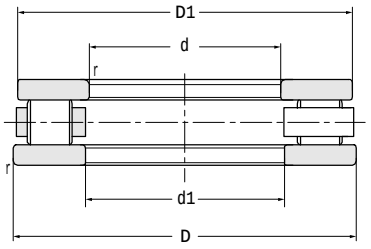



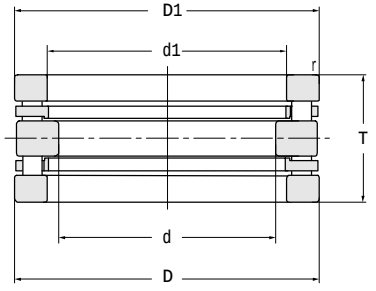



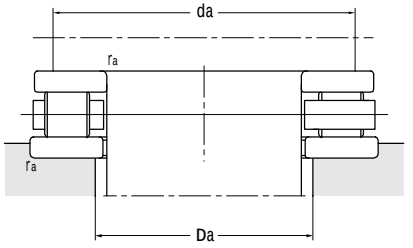

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|
| d | D | T | $r_{min}$ | Cr | Cor | Grease | Oil | |
| mm | | | | kN | | r/min | | |
| **200** | 340 | 85 | 4 | 1540 | 5170 | 210 | 280 | **89340** |
| | 340 | 85 | 4 | 1540 | 5170 | 210 | 280 | **89340/P5YB5** |
| **220** | 270 | 37 | 1.1 | 320 | 1630 | 240 | 320 | **81144** |
| | 300 | 63 | 2 | 750 | 3350 | 360 | 480 | **81244** |
| **240** | 300 | 45 | 1.5 | 490 | 2350 | 420 | 2280 | **81148** |
| | 340 | 78 | 2.1 | 1080 | 4730 | 190 | 250 | **81248** |
| **260** | 320 | 45 | 1.5 | 515 | 2500 | 430 | 560 | **81152** |
| | 360 | 79 | 2.1 | 1140 | 5300 | 280 | 380 | **81252** |
| | 360 | 79 | 2.1 | 1140 | 5300 | 280 | 380 | **81252/HC** |
| | 420 | 100 | 6 | 2050 | 10000 | 160 | 210 | **87452X1ZW** |
| | 480 | 132 | 6 | 3000 | 12900 | 200 | 300 | **89452ZW/P5YB5** |
| | 480 | 132 | 6 | 3000 | 12900 | 200 | 300 | **89452ZW/YB5** |
| **280** | 350 | 53 | 1.5 | 653 | 3410 | 170 | 230 | **81156** |
| | 380 | 80 | 2.1 | 1130 | 5280 | 250 | 350 | **81256** |
| | 380 | 80 | 2.1 | 1130 | 5280 | 250 | 350 | **81256F1** |
| | 380 | 80 | 2.1 | 1130 | 5280 | 250 | 350 | **81256/P5YB5** |
| **300** | 420 | 95 | 3 | 1540 | 6910 | 190 | 250 | **81260** |
| | 420 | 95 | 3 | 1540 | 6910 | 190 | 250 | **81260F1** |
| | 420 | 95 | 3 | 1470 | 5950 | 190 | 250 | **81260/YB5** |
| | 460 | 80 | 3 | 780 | 5600 | 300 | 400 | **82760ZW** |
| | 540 | 145 | 6 | 3740 | 15400 | 190 | 280 | **89460ZW/P4YB5** |
| **340** | 460 | 96 | 3 | 1630 | 8000 | 200 | 300 | **81268** |
| | 620 | 170 | 10 | 4480 | 21000 | 140 | 190 | **89468ZT** |
| **360** | 440 | 65 | 2 | 890 | 4030 | 180 | 270 | **81172/P5** |
| | 500 | 110 | 4 | 2160 | 10400 | 180 | 260 | **81272** |
| | 520 | 82 | 4 | 2220 | 11600 | 120 | 160 | **81272X3M/YB2** |
| **380** | 460 | 65 | 2 | 930 | 5300 | 260 | 360 | **81176** |
| | 520 | 112 | 4 | 2290 | 10800 | 180 | 260 | **81276M** |

| Other dimensions | | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|
| d1 | D1 | $da_{min}$ | $Da_{max}$ | $ra_{max}$ | |
| mm | | mm | | | kg |
| 205 | 340 | 332 | 215 | 3 | 35.1 |
| 205 | 340 | 332 | 215 | 3 | 35.1 |
| 223 | 267 | 265 | 225 | 1 | 4.83 |
| 224 | 297 | 290 | 230 | 2 | 13.6 |
| 243 | 297 | 292 | 248 | 1.5 | 7.43 |
| 244 | 335 | 330 | 250 | 2 | 24 |
| 263 | 317 | 315 | 268 | 1 | 8.84 |
| 264 | 355 | 351 | 280 | 2 | 25.4 |
| 264 | 355 | 351 | 280 | 2 | 25.4 |
| 264 | 419.5 | 410 | 274 | 5 | 59.7 |
| 265 | 480 | 470 | 275 | 5 | 117 |
| 265 | 480 | 470 | 275 | 5 | 117 |
| 283 | 347 | 345 | 285 | 1 | 12.4 |
| 284 | 375 | 372 | 300 | 2 | 29.2 |
| 284 | 375 | 372 | 300 | 2 | 29.4 |
| 284 | 375 | 372 | 300 | 2 | 29.4 |
| 304 | 415 | 413 | 328 | 3 | 41.6 |
| 304 | 415 | 413 | 328 | 3 | 41.3 |
| 304 | 415 | 413 | 328 | 3 | 41.6 |
| 300 | 460 | 454 | 304 | 3 | 54.6 |
| 305 | 540 | 533 | 331 | 5 | 152 |
| 345 | 455 | 452 | 367 | 2.5 | 47 |
| 342 | 615 | 600 | 360 | 9 | 241 |
| 364 | 436 | 372 | 428 | 1.5 | 22.7 |
| 365 | 495 | 492 | 375 | 3 | 69.9 |
| 365 | 515 | 510 | 375 | 3 | 61.5 |
| 384 | 456 | 453 | 393 | 2 | 22.5 |
| 385 | 515 | 510 | 390 | 3 | 74.4 |

d 380~572 mm

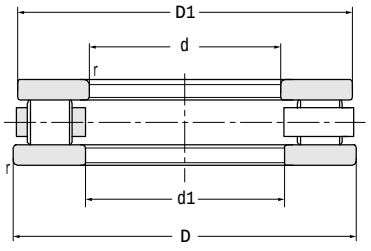


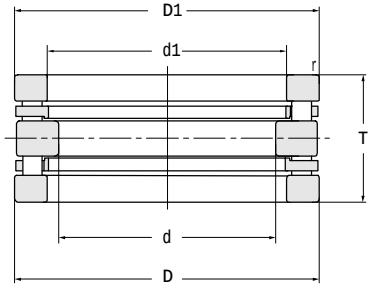



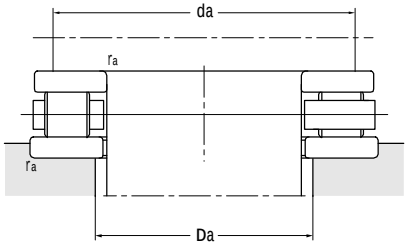




| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|
| d | D | T | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | kN | | r/min | | |
| **380** | 560 | 112 | 4 | 2920 | 12800 | 180 | 260 | **81276X1M** |
| | 560 | 112 | 4 | 2920 | 12800 | 180 | 260 | **81276X1M/YB2** |
| **400** | 480 | 65 | 2 | 1000 | 5380 | 110 | 150 | **81180** |
| **420** | 500 | 65 | 2 | 940 | 5620 | 200 | 280 | **81184** |
| **440** | 540 | 80 | 2.1 | 1430 | 1680 | 170 | 230 | **81188** |
| | 600 | 130 | 5 | 2850 | 12800 | 90 | 120 | **81288** |
| **460** | 560 | 80 | 2.1 | 1400 | 8160 | 210 | 290 | **81192/P5** |
| | 800 | 206 | 9.5 | 6500 | 32000 | 110 | 150 | **89492ZT** |
| **480** | 580 | 80 | 2 | 1550 | 8300 | 150 | 200 | **81196F1** |
| | 580 | 80 | 2 | 1550 | 8300 | 150 | 200 | **81196F3** |
| | 580 | 80 | 2 | 1550 | 8300 | 150 | 200 | **81196M** |
| | 650 | 135 | 5 | 3350 | 17000 | 130 | 180 | **81296M** |
| **500** | 600 | 80 | 2.1 | 1600 | 9000 | 150 | 200 | **811/500** |
| | 670 | 135 | 5 | 3520 | 3600 | 140 | 190 | **812/500** |
| | 670 | 135 | 5 | 3520 | 3600 | 140 | 190 | **812/500F3** |
| | 670 | 135 | 5 | 3520 | 3600 | 140 | 190 | **812/500/YB5** |
| **508** | 762 | 139.7 | 6.4 | 4950 | 26200 | 110 | 150 | **817/508/P5YB5** |
| | 762 | 139.7 | 6.4 | 4950 | 26200 | 110 | 150 | **817/508/P4YB5** |
| **530** | 640 | 85 | 3 | 1750 | 9700 | 180 | 250 | **811/530** |
| | 640 | 85 | 3 | 1750 | 9700 | 450 | 600 | **811/530/SPYB5** |
| | 710 | 140 | 5 | 3650 | 18600 | 320 | 450 | **812/530/P5YB5** |
| **560** | 670 | 85 | 3 | 1760 | 11100 | 180 | 260 | **811/560** |
| | 750 | 150 | 5 | 4200 | 20100 | 150 | 230 | **812/560** |
| | 820 | 200 | 7.5 | 5950 | 28800 | 130 | 210 | **817/560/YB5** |
| | 820 | 200 | 7.5 | 5950 | 28800 | 130 | 210 | **817/560/P4YB5** |
| **572** | 763 | 115 | 5 | 3360 | 22900 | 110 | 160 | **817/572ZW/P4YB5** |

| Other dimensions | | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|
| d1 | D1 | $da_{min}$ | $Da_{max}$ | $ra_{max}$ | |
| mm | | mm | | | kg |
| 385 | 555 | 550 | 390 | 3 | 99.5 |
| 385 | 555 | 550 | 390 | 3 | 99.5 |
| 404 | 476 | 473 | 404 | 1.5 | 25.8 |
| 424 | 495 | 493 | 433 | 1.5 | 27.2 |
| 444 | 535 | 415 | 525 | 2 | 41.5 |
| 445 | 595 | 533 | 459 | 4 | 114 |
| 464 | 555 | 553 | 479 | 2 | 43.7 |
| 462 | 795 | 775 | 480 | 9 | 464 |
| 484 | 575 | 573 | 500 | 1.5 | 44.1 |
| 484 | 575 | 573 | 500 | 1.5 | 44.1 |
| 484 | 575 | 573 | 500 | 1.5 | 44.6 |
| 485 | 645 | 520 | 641 | 4 | 135 |
| 505 | 595 | 592 | 519 | 2 | 45.3 |
| 505 | 665 | 655 | 515 | 5 | 137 |
| 505 | 665 | 655 | 515 | 5 | 137 |
| 505 | 665 | 655 | 515 | 5 | 137 |
| 511.18 | 758.83 | 748 | 520 | 5 | 238 |
| 511.18 | 758.83 | 748 | 520 | 5 | 238 |
| 534 | 635 | 632 | 554 | 2.5 | 56.7 |
| 534 | 635 | 632 | 540 | 2.5 | 56.7 |
| 535 | 705 | 701 | 545 | 4 | 154 |
| 565 | 665 | 662 | 584 | 2.5 | 60 |
| 565 | 745 | 735 | 584 | 4 | 203 |
| 565 | 815 | 800 | 584 | 6 | 379 |
| 565 | 815 | 800 | 584 | 6 | 379 |
| 574 | 760 | 750 | 585 | 4 | 147 |

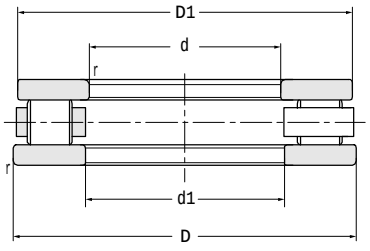


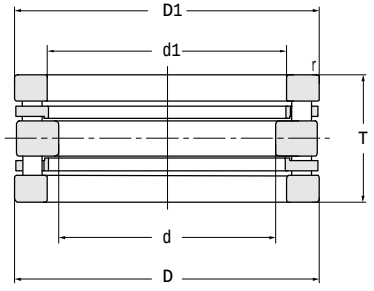



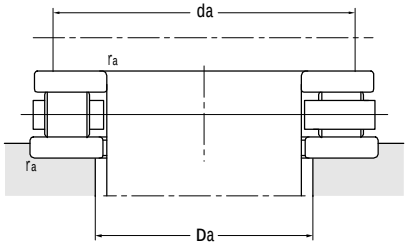




| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|
| d | D | T | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | kN | | r/min | | |
| **600** | 710 | 85 | 3 | 1730 | 11100 | 170 | 260 | **811/600** |
| | 800 | 160 | 5 | 4400 | 24000 | 110 | 160 | **812/600** |
| | 800 | 160 | 5 | 4400 | 24000 | 110 | 160 | **812/600/P4YB5** |
| **610** | 710 | 65 | 2 | 1300 | 8250 | 170 | 260 | **817/610/P4YB5** |
| **650** | 930 | 130 | 4 | 5300 | 37000 | 150 | 230 | **817/650ZW** |
| **710** | 950 | 190 | 6 | 5860 | 29200 | 120 | 150 | **812/710/P4YB5** |
| | 950 | 290 | 6 | 6330 | 26200 | 120 | 150 | **822/710** |
| | 850 | 85 | 4 | 2200 | 14300 | 150 | 230 | **891/710/P4YB5** |
| **711.45** | 846.4 | 95.25 | 6.4 | 2360 | 17700 | 170 | 260 | **817/711X4ZW** |
| **750** | 900 | 120 | 4 | 3250 | 21200 | 120 | 170 | **811/750/SPYB5** |
| | 1000 | 195 | 6 | 6550 | 36000 | 85 | 120 | **812/750/YB5** |
| | 1000 | 195 | 6 | 6550 | 36000 | 85 | 120 | **812/750/P4YB5** |
| **765** | 1360 | 220 | 15 | 15000 | 91000 | 80 | 100 | **817/765ZWF1** |
| | 1360 | 220 | 15 | 15000 | 91000 | 80 | 100 | **817/765ZWF3** |
| **800** | 950 | 120 | 4 | 3400 | 22000 | 130 | 180 | **811/800** |
| | 1060 | 205 | 7.5 | 7300 | 40000 | 80 | 100 | **812/800** |
| **812.8** | 1016 | 127.127 | 2.3 | 5150 | 33500 | 80 | 100 | **817/812.8/P5YB5** |
| **850** | 1000 | 120 | 4 | 3400 | 23000 | 100 | 150 | **811/850** |
| | 1120 | 212 | 7.5 | 8000 | 45000 | 80 | 100 | **812/850/YB5** |
| | 1120 | 212 | 7.5 | 8000 | 45000 | 130 | 180 | **812/850/P4YB5** |
| **860** | 1000 | 96 | 3 | 2200 | 16200 | 130 | 180 | **817/860/P4YB5** |
| **900** | 1060 | 130 | 5 | 4000 | 27000 | 100 | 150 | **811/900** |
| | 1180 | 125 | 7.5 | 6050 | 8300 | 100 | 130 | **872/900ZWF1/HC** |

| Other dimensions | | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|
| d1 | D1 | $da_{min}$ | $Da_{max}$ | $ra_{max}$ | |
| mm | | mm | | | kg |
| 604 | 705 | 702 | 624 | 2.5 | 63.4 |
| 605 | 795 | 651 | 789 | 4 | 240 |
| 605 | 795 | 651 | 789 | 4 | 240 |
| 610 | 710 | 705 | 615 | 1.5 | 50.7 |
| 650 | 930 | 925 | 655 | 3 | 318 |
| 718 | 942 | 932 | 728 | 5 | 387 |
| 750 | 945 | 935 | 760 | 5 | 564 |
| 715 | 850 | 845 | 720 | 3 | 99.9 |
| 672.84 | 831.8 | 820 | 680 | 5 | 113 |
| 755 | 895 | 890 | 760 | 3 | 160 |
| 758 | 992 | 982 | 768 | 5 | 468 |
| 758 | 992 | 982 | 768 | 5 | 468 |
| | | | | | 1288 |
| | | | | | 1288 |
| 805 | 945 | 940 | 810 | 3 | 170 |
| 810 | 1050 | 1040 | 820 | 6 | 520 |
| 815.8 | 1016 | 1010 | 820 | 2 | 260 |
| 855 | 995 | 990 | 860 | 3 | 175 |
| 860 | 1110 | 1100 | 870 | 6 | 622 |
| 860 | 1110 | 1100 | 870 | 6 | 622 |
| 860 | 1000 | 995 | 865 | 2 | 148 |
| 906 | 1054 | 1045 | 915 | 4 | 220 |
| 905 | 1175 | 1160 | 920 | 7.5 | 393 |



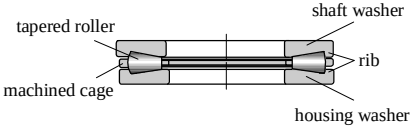

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|
| d | D | T | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | kN | | r/min | | |
| **900** | 1180 | 220 | 7.5 | 8000 | 48000 | 70 | 100 | **812/900** |
| **950** | 1120 | 135 | 5 | 4000 | 30000 | 90 | 140 | **811/950** |
| | 1250 | 236 | 7.5 | 10000 | 58000 | 60 | 90 | **812/950** |
| **1000** | 1180 | 140 | 5 | 4700 | 32000 | 90 | 120 | **811/1000** |
| | 1320 | 250 | 9.5 | 10100 | 58000 | 60 | 80 | **812/1000** |
| **1060** | 1250 | 150 | 5 | 5300 | 36500 | 80 | 110 | **811/1060** |
| **1120** | 1320 | 160 | 5 | 6000 | 41500 | 80 | 100 | **811/1120** |
| **1180** | 1400 | 100 | 6 | 4730 | 7200 | 87 | 110 | **871/1180ZW/HC** |
| **1320** | 1540 | 100 | 6 | 5450 | 5900 | 80 | 100 | **871/1320ZW/P4YB5** |
| **1800** | 2080 | 150 | 7.5 | 9320 | 87000 | 60 | 90 | **871/1800/P4YB5** |

| Other dimensions | | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|
| d1 | D1 | $da_{min}$ | $Da_{max}$ | $ra_{max}$ | |
| mm | | mm | | | kg |
| 910 | 1170 | 1160 | 920 | 6 | 660 |
| 956 | 1114 | 1105 | 965 | 4 | 250 |
| 960 | 1240 | 1230 | 970 | 6 | 800 |
| 1006 | 1174 | 1165 | 1015 | 4 | 290 |
| 1012 | 1308 | 1290 | 1030 | 8 | 975 |
| 1066 | 1244 | 1235 | 1075 | 4 | 230 |
| 1126 | 1314 | 1305 | 1135 | 4 | 410 |
| 1185 | 1395 | 1385 | 1195 | 5 | 308 |
| 1325 | 1535 | 1525 | 1335 | 5 | 348 |
| 1810 | 2070 | 2060 | 1820 | 6 | 858 |

## Product Characteristics

This type of bearings are equipped with cone-shaped rollers (with lager spherical end) and the rollers are precisely guided by the integral flanges of the washers (shaft washer and housing washer) with raceways. When extended, the design makes the shaft washer, housing washer, raceway surface and the circular conical surfaces of rollers' sliding surface converge towards to the same single point on the bearing axis. Single-direction bearings can carry axial load in one direction. Double-direction bearings can carry axial load in two directions. The middle washer of double-direction bearings is connected with the shaft, but due to the clearance inside, a sleeve must be used to fix the middle washer in the axial direction.

The tapered roller thrust bearings with housing can avoid dirt entering and roller falling. As without cage, more rollers can be put in, therefore the bearings can carry bigger axial load, but due to the lower limit rotation speed, axial load can only be suffered in one direction.




## Applications of tapered roller thrust bearings:

Single-direction bearings: shaft washer is the same as housing washer ( all with ribs), suitable for radial direction fixing, are mainly found in crane hooks and rotating platforms of oil drillings, etc.

Full rollers bearings are used when axial load is bigger.

During rotation, little shaft eccentric can be allowed for the bearings with plane housing washer raceway.

Double-direction bearings: in the mill roll necks.

## Product types

· Single-direction tapered roller thrust bearings
· Double-direction tapered roller thrust bearings
· Tapered roller thrust bearings with housing

## Dimension range

Bore diameter range: 38.4mm-670mm
Outer diameter range: 66mm-900mm
Width range: 18mm-319mm

## Tolerance

The tolerances of ZWZ tapered roller thrust bearings are standardized as GB307.4. The clearance dimensions can be found in preface form. ZWZ can supply bearings with P0, P6 P5 and P4 classes.

## Cage

ZWZ tapered roller thrust bearings generally use brass solid cages and other machined solid cages. When they use brass solid cages, there is no suffix in the bearing code name. When they use other cages, there is relative suffix in the bearing code name.

## Axial equivalent dynamic load rating

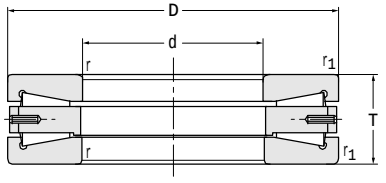
Pa=Fa

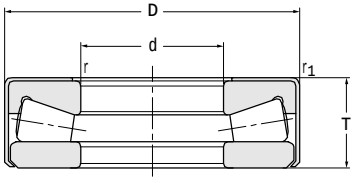
## Axial equivalent static load rating

Poa=Fa

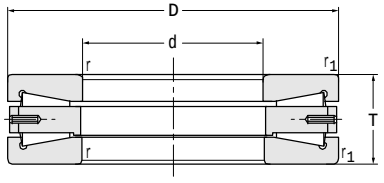
## Related Bearing Code explanation:

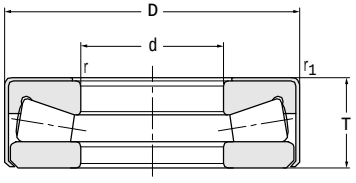
X1- Non-standard outer diameter.
X2- Non-standard width (height).
X3- Non-standard outer diameter, width (height) (standard bore diameter)
X4- Inner diameter select the integer of non-standard bearing, while inner diameter is not integer and have two and more decimal places, indicated by X4 as select integer of the figures.
V- Full complement rolling elements (without cage)
/HG- Ring and rolling elements or only ring are made by other bearing steel (/HG-5GrMnMo; /HG1-55SiMoVA; /HG2-GCr18Mo; /HG3-42CrMo/ HG4-GCr15SiMn).
/W281- Indicates the metallurgical bearings (execute standard Q/WZ.J14281)
Q1- Aluminum iron manganese bronze.
F1- Carbon steel
F3- Nodular cast iron
/HA- Ring rolling elements and cage or only the ring and rolling elements are made from vacuum smelted bearing steel.
/HC- Ring and rolling elements or only ring or rolling elements are made from case hardened steel (/HC-20Cr2Ni4A; /HC1-20Cr2Mn2MoA; /HC2-15Mn; /HC3-G20CrMo).
M- Brass solid cage
YA2- Bore of inner ring has changed comparing to the standard design.
YA3- End face of bearing ring has changed comparing to the standard design.
YAD- One type of bearing has two or more changes on structure.



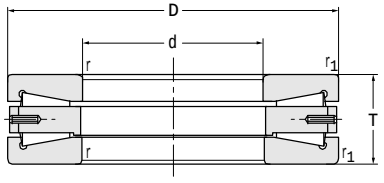



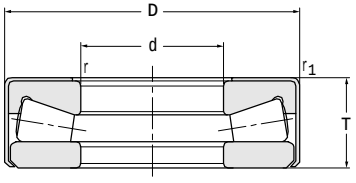

| Principal dimensions | | | | | Basic load ratings | | Designations | Weight |
|---|---|---|---|---|---|---|---|---|
| d | D | T | $r_{min}$ | $r_{1min}$ | $C_r$ | $C_{or}$ | | |
| mm | | | | | kN | | | kg |
| **38.4** | 66 | 18 | 0.6 | 2.5 | 96.5 | 300 | **917/38.4PZSV** | 0.25 |
| **42.1** | 70 | 18 | 1 | 2.5 | 106 | 224 | **917/42.1PZSV** | 0.272 |
| **45.1** | 73 | 18 | 1 | 2.5 | 100 | 350 | **917/45.1PZSV** | 0.297 |
| **47** | 78 | 22 | 1 | 2.5 | 89 | 325 | **917/47ZSV/YA** | 0.409 |
| **50** | 80 | 19 | 0.6 | 2 | 120 | 345 | **91210X2PZSV** | 0.366 |
| | 78 | 22 | 0.8 | 2.5 | 120 | 350 | **91210X3PZSV** | 0.385 |
| | 78 | 22 | 1 | 2 | 78 | 275 | **91710ZSV/YA** | 0.371 |
| **50.1** | 83 | 22 | 2 | 2 | 132 | 350 | **917/50.1PZSV** | 0.446 |
| **52.4** | 85 | 22 | 1 | 1 | 134 | 460 | **917/52.4ZSV** | 0.505 |
| **60** | 130 | 42 | 1.5 | 1.5 | 365 | 1035 | **99412** | 2.88 |
| **75** | 160 | 51 | 2 | 2 | 540 | 1570 | **99415** | 5.3 |
| **111.76** | 223.52 | 55.88 | 3.3 | 3.3 | 980 | 3850 | **917/111X4** | 11.8 |
| **140** | 280 | 85 | 4 | 4 | 1550 | 5650 | **99428** | 26.1 |
| **177.8** | 368.3 | 82.55 | 8 | 8 | 2190 | 7750 | **917/177.8** | 47.6 |
| | 431.8 | 101.6 | 6.4 | 3.3 | 3100 | 12800 | **917/177.8-1** | 87.6 |
| **180** | 360 | 109 | 5 | 5 | 250 | 8950 | **99436** | 55.9 |
| **203.2** | 419.1 | 92.075 | 9.7 | 9.7 | 2670 | 11600 | **KT811** | 70.6 |
| **200** | 400 | 122 | 5 | 5 | 2960 | 8670 | **99440** | 80 |
| | 405.638 | 111.506 | 4 | 4 | 3030 | 11400 | **91740/YA3** | 75.1 |
| **210** | 460 | 150 | 10 | 2.3 | 3550 | 12700 | **91742** | 143 |
| | 460 | 150 | 10 | 2.3 | 3550 | 12700 | **91742F1** | 135 |



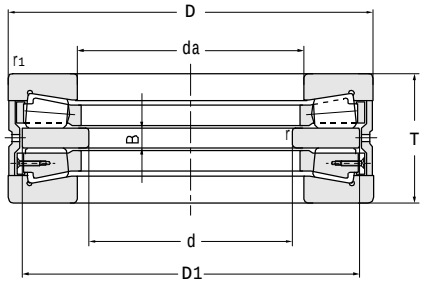

| Principal dimensions | | | | | Basic load ratings | | Designations | Weight |
|---|---|---|---|---|---|---|---|---|
| d | D | T | $r_{min}$ | $r_{1min}$ | $C_r$ | $C_{or}$ | | |
| mm | | | | | kN | | | kg |
| **220** | 330 | 65 | 2 | 2 | 900 | 3500 | **1-9017M/HG2** | 20.7 |
| | 330 | 65 | 3 | 2.1 | 915 | 4100 | **91744/HG2** | 21 |
| **228.6** | 482.6 | 104.775 | 11.2 | 11.2 | 3350 | 15500 | **917/228.6** | 101 |
| | 482.6 | 104.775 | 11.2 | 11.2 | 3350 | 15500 | **917/228.6/HCYAD/W281** | 99.6 |
| **234.95** | 482.6 | 104.775 | 11.2 | 11.2 | 3350 | 15500 | **917/234X4** | 99.2 |
| | 546.1 | 127 | 16 | 16 | 5350 | 20500 | **917/234X4-1** | 174 |
| **240** | 350 | 65 | 2.1 | 2.1 | 1020 | 4950 | **99248X3M/HG2** | 22.2 |
| **260** | 480 | 132 | 6 | 6 | 3650 | 11900 | **99452** | 115 |
| **270** | 540 | 130 | 6 | 6 | 6150 | 26750 | **91754** | 165 |
| | 540 | 130 | 6 | 6 | 6150 | 26750 | **91754Q1** | 164 |
| **279.4** | 603.25 | 136.525 | 11.2 | 11.2 | 5770 | 21800 | **917/279.4** | 217 |
| **280** | 520 | 145 | 6 | 6 | 6050 | 20700 | **99456** | 157 |
| | 520.4 | 145 | 6 | 6 | 6050 | 20700 | **99456X1** | 158 |
| **320** | 440 | 95 | 3 | 3 | 1650 | 5800 | **91264** | 43.4 |
| | 580 | 155 | 7.5 | 7.5 | 5350 | 14300 | **99464** | 193 |
| **340** | 710 | 160 | 4 | 4 | 8800 | 32500 | **91768** | 339 |
| **360** | 500 | 110 | 4 | 4 | 2000 | 7500 | **91272** | 69.5 |
| **365** | 710 | 160 | 5 | 5 | 6250 | 31500 | **1-9011** | 328 |
| **380** | 670 | 175 | 7.5 | 7.5 | 6890 | 23500 | **99476** | 290 |
| **400** | 540 | 112 | 4 | 4 | 2240 | 7900 | **91280** | 77.8 |
| **406.4** | 711.2 | 146.05 | 9.7 | 9.7 | 6160 | 25400 | **917/406.4Q1** | 279 |




| Principal dimensions | | | | | Basic load ratings | | Designations | Weight |
|---|---|---|---|---|---|---|---|---|
| d | D | T | $r_{min}$ | $r_{1min}$ | $C_r$ | $C_{or}$ | | |
| mm | | | | | kN | | | kg |
| **420** | 740 | 95 | 5 | 5 | 2460 | 29200 | **99284X1/HC** | 198 |
| **431.8** | 863.6 | 228.6 | 10.2 | 10.2 | 15100 | 69500 | **917/431.8/HC** | 701 |
| **460** | 800 | 206 | 9.5 | 9.5 | 7250 | 31500 | **99492** | 487 |
| **480** | 680 | 120 | 5 | 5 | 3550 | 16800 | **1-9012** | 179 |
| **480** | 850 | 224 | 9.5 | 9.5 | 9000 | 40000 | **99496** | 613 |
| **500** | 750 | 190 | 6 | 6 | 6260 | 23500 | **913/500X2** | 325 |
| **520** | 900 | 224 | 9.5 | 9.5 | 10400 | 39900 | **917/520** | 661 |
| **560** | 730 | 115 | 5 | 2.3 | 2566 | 6423 | **917/560F1/HC** | 126 |
| **600** | 860 | 125 | 6 | 6 | 4450 | 32300 | **917/600/HC** | 269 |

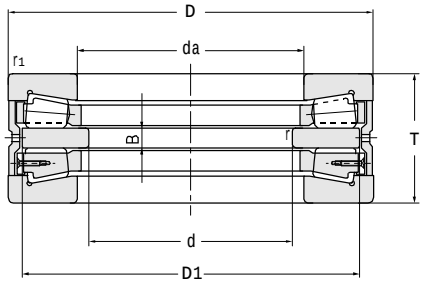
d 160~320 mm




| Principal dimensions | | | Basic load ratings | | Designations |
|---|---|---|---|---|---|
| d | D | T | $C_r$ | $C_{or}$ | |
| mm | | | kN | | |
| **160** | 260 | 66 | 230 | 1470 | **92232X3** |
| | 300 | 110 | 580 | 2900 | **829232** |
| | 240 | 84 | 380 | 1460 | **92732X3** |
| **170** | 240 | 84 | 330 | 1300 | **92734** |
| | 240 | 84 | 330 | 1300 | **92734/W281** |
| **180** | 280 | 90 | 580 | 2900 | **353162** |
| | 280 | 90 | 500 | 2720 | **92736** |
| | 280 | 90 | 500 | 2720 | **92736/W281** |
| **220** | 300 | 96 | 510 | 4500 | **92744** |
| | 300 | 96 | 510 | 4500 | **92744/HC** |
| | 372 | 195 | 1380 | 5400 | **92744/HCYA2-1** |
| **230** | 400 | 180 | 980 | 4800 | **829746** |
| | 475 | 300 | 3050 | 26500 | **92746/HCEYAD** |
| **240** | 320 | 96 | 640 | 2300 | **92748** |
| **250** | 380 | 100 | 900 | 5000 | **92750** |
| | 380 | 100 | 900 | 5000 | **92750/YA2** |
| | 380 | 100 | 900 | 5000 | **92750/YA2/W281** |
| | 380 | 100 | 900 | 5000 | **92750/HCYA2** |
| **260** | 360 | 92 | 630 | 3200 | **350981C** |
| | 360 | 92 | 540 | 2830 | **92752** |
| **270** | 450 | 180 | 1400 | 6600 | **92754** |
| **291** | 520 | 266 | 2570 | 4050 | **1-9014** |
| **300** | 420 | 100 | 1050 | 4450 | **92760** |
| | 420 | 100 | 1050 | 4450 | **92760/HC** |
| **320** | 470 | 130 | 1600 | 8000 | **92764/HC** |

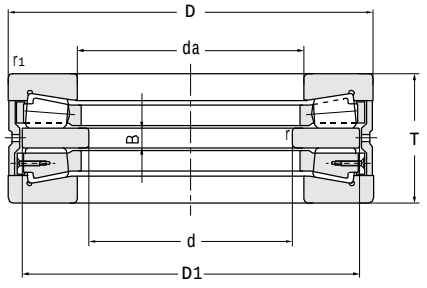
| Other dimensions | | | | | Weight |
|---|---|---|---|---|---|
| da | D1 | B | $r_{min}$ | $r_{1min}$ | |
| kN | | | | | kg |
| 190 | 195 | 18 | 1 | 1.5 | 12.3 |
| 186 | 190 | 34 | 1 | 1.5 | 3.5 |
| 182.5 | 184 | 20 | 0.6 | 2 | 12 |
| 182.5 | 184 | 20 | 0.6 | 2 | 12.9 |
| 182.5 | 184 | 20 | 0.6 | 2 | 12.9 |
| 192 | 196 | 20 | 1 | 2 | 21 |
| 192 | 196 | 20 | 1 | 2 | 20.9 |
| 192 | 196 | 20 | 1 | 2 | 20.9 |
| 231 | 236 | 22 | 0.6 | 2 | 19.7 |
| 231 | 236 | 22 | 0.6 | 2 | 19.7 |
| 260 | 254 | 75 | 0.6 | 2 | 86.9 |
| 254 | 260 | 42 | 1 | 3 | 114 |
| 285 | 296 | 110 | 3 | 12 | 256 |
| 314 | 256 | 22 | 0.6 | 2 | 21.6 |
| 268 | 275 | 22 | 0.6 | 2 | 40.8 |
| 268 | 275 | 22 | 0.6 | 2 | 37.5 |
| 268 | 275 | 22 | 0.6 | 2 | 37.5 |
| 268 | 275 | 22 | 0.6 | 2 | 37.5 |
| 276 | 285 | 20 | 1 | 2 | 27.7 |
| 278 | 285 | 20 | 1 | 2 | 27.1 |
| 305 | 310 | 45 | 2 | 5 | 115 |
| 349 | 483 | 118 | 2 | 12 | 239 |
| 324 | 330 | 23 | 1.5 | 2.5 | 39.7 |
| 324 | 330 | 23 | 1.5 | 2.5 | 39.7 |
| 350 | 446 | 30 | 1.1 | 3 | 77.6 |

d 320~470 mm



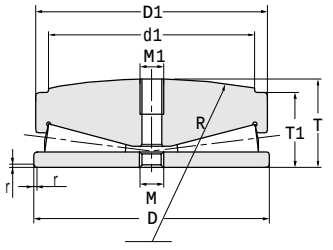

| Principal dimensions | | | Basic load ratings | | Designations |
|---|---|---|---|---|---|
| d | D | T | $C_r$ | $C_{or}$ | |
| mm | | | kN | | |
| **320** | 440 | 108 | 1010 | 4750 | **92764-1** |
| | 440 | 108 | 1010 | 4750 | **92764/HC-1** |
| | 470 | 130 | 1350 | 5800 | **350982C** |
| **336** | 630 | 319 | 3400 | 5150 | **1-9013** |
| **348** | 490 | 130 | 1200 | 7200 | **92770B** |
| | 490 | 136 | 1200 | 7200 | **92770B-1** |
| **350** | 490 | 130 | 1200 | 7200 | **92770** |
| | 540 | 135 | 2050 | 11000 | **92770X3** |
| | 540 | 199 | 1770 | 9060 | **92770X3/HC-1** |
| | 490 | 130 | 1200 | 5300 | **351100C** |
| | 540 | 135 | 1750 | 9200 | **353006** |
| **360** | 560 | 200 | 2400 | 12500 | **829272** |
| | 530 | 145 | 1170 | 7950 | **92772** |
| **380** | 530 | 130 | 1650 | 9850 | **92776** |
| | 530 | 130 | 1650 | 9850 | **92776-1** |
| | 560 | 130 | 1760 | 9700 | **92776/YA2** |
| | 560 | 130 | 1760 | 9700 | **92776/HCYA2** |
| | 650 | 215 | 3400 | 17000 | **BFDB353204** |
| **400** | 650 | 200 | 2700 | 13800 | **829780** |
| **420** | 620 | 185 | 2420 | 12200 | **92784/HC** |
| | 620 | 185 | 2700 | 13000 | **92784/YA2** |
| **440** | 650 | 240 | 3000 | 15800 | **92788/YA2** |
| | 650 | 240 | 3000 | 15800 | **92788-DNL** |
| **460** | 680 | 215 | 3200 | 16000 | **92792/HC** |
| **470** | 720 | 200 | 3450 | 18000 | **353151** |
| | 720 | 210 | 3450 | 18000 | **BFDB353238/HA3** |

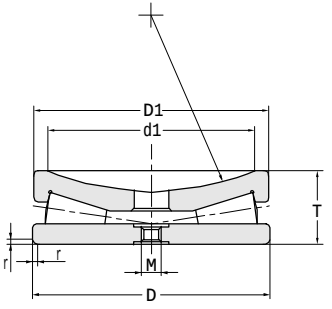
| Other dimensions | | | | | Weight |
|---|---|---|---|---|---|
| da | D1 | B | $r_{min}$ | $r_{1min}$ | |
| kN | | | | | kg |
| 348 | 355 | 26 | 1.1 | 3 | 45.4 |
| 348 | 355 | 26 | 1.1 | 3 | 45.4 |
| 340 | 350 | 30 | 1.1 | 3 | 79 |
| 415 | 578 | 130 | 3 | 13 | 425 |
| 380 | 390 | 30 | 1 | 3 | 99.5 |
| 380 | 390 | 30 | 1 | 3 | 104 |
| 380 | 390 | 30 | 1.1 | 3 | 70.1 |
| 388 | 400 | 30 | 1.1 | 4 | 107 |
| 402 | 410 | 100 | 1.5 | 3 | 161 |
| 380 | 390 | 30 | 1.1 | 3.5 | 73.5 |
| 384 | 400 | 30 | 1.1 | 4 | 112 |
| 382 | 396 | 48 | 1.5 | 4 | 180 |
| 400 | 410 | 45 | 2 | 4 | 105 |
| 398 | 410 | 30 | 3 | 5 | 90.1 |
| 398 | 410 | 30 | 3 | 5 | 90.1 |
| 418 | 430 | 32 | 1.5 | 3 | 106 |
| 418 | 430 | 32 | 1.5 | 3 | 106 |
| 446 | 450 | 65 | 2 | 5 | 275 |
| 436 | 450 | 50 | 1.5 | 5 | |
| 420 | 465 | 50 | 1.5 | 3 | 200 |
| 463 | 470 | 50 | 1.5 | 3 | 187 |
| 485 | 493 | 90 | 2 | 6 | 270 |
| 485 | 493 | 90 | 2 | 6 | 271 |
| 504 | 510 | 90 | 2 | 4 | 271 |
| 515 | 535 | 50 | 3 | 4.5 | 285 |
| 515 | 535 | 60 | 3 | 4.5 | 305 |




| Principal dimensions | | | Basic load ratings | | Designations |
|---|---|---|---|---|---|
| d | D | T | $C_r$ | $C_{or}$ | |
| mm | | | kN | | |
| **480** | 710 | 218 | 2900 | 13000 | **829796** |
| **530** | 710 | 218 | 2300 | 14000 | **351475C** |
| **550** | 760 | 230 | 2950 | 13500 | **350976C** |
| **600** | 880 | 290 | 4750 | 21500 | **BFDB350824B/HA1** |
| **670** | 900 | 230 | 3600 | 19500 | **927/670/HC** |

| Other dimensions | | | | | Weight |
|---|---|---|---|---|---|
| da | D1 | B | $r_{min}$ | $r_{1min}$ | |
| kN | | | | | kg |
| 560 | 575 | 57 | 3 | 4.5 | |
| 560 | 575 | 57 | 3 | 4.5 | 245 |
| 585 | 610 | 50 | 3 | 4.5 | 310 |
| 670 | 680 | 70 | 4 | 5 | 550 |
| 725 | 870 | 50 | 2 | 5 | 396 |



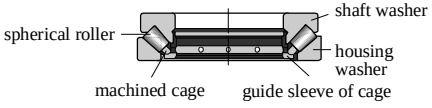




| Outer diameter | Bearing designation | | Boundary dimension | | | | Boundary dimension | | | | | Axile static load | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Old designation | New designation | D | D1 | T | T1 | d1 | R | M | M1 | $r_{min}$ | | |
| | | | | | | | kN | | | | | | kg |
| 120 | **4397/120** | **TTSX120** | **120** | 118 | 45 | 38 | 105 | 300 | M10 | M12 | 1.5 | 800 | 3.16 |
| 205 | **4397/205** | **TTSX205** | **205** | 203 | 75.6 | 65 | 178 | 508 | M12 | M16 | 1.6 | 2210 | 15.8 |
| 235 | **4297/235/HG2I** | **TTSV235/HG2I** | **235** | 233 | 73 | | 208 | 280 | M20 | | 1.5 | 5100 | 18.3 |
| 380 | **4397/380/HC** | **TTSX380/HC** | **380** | 378 | 129 | 112 | 330 | 914.4 | M24 | M30 | 2 | 15300 | 91.4 |
| 410 | **4397/410/HC** | **TTSX410/HC** | **410** | 408 | 142 | 122 | 355 | 1016 | M24 | M30 | 3 | 18000 | 115 |
| 495 | **4397/495/HC** | **TTSX495/HC** | **495** | 492 | 172 | 146 | 432 | 1066.8 | M24 | M36 | 3 | 28100 | 210 |
| 525 | **4397/525/HC** | **TTSX525/HC** | **525** | 522 | 180 | 155 | 460 | 1270 | M24 | M36 | 3 | 30000 | 245 |
| 533.4 | **4397/533.4/HC** | **TTSX533.4/HC** | **533.4** | 533.4 | 177.8 | 144 | 457.2 | 1981.2 | M24 | M36 | 3.2 | 30000 | 251 |
| 555 | **4397/555/HC** | **TTSX555/HC** | **555** | 553.26 | 190.86 | 165.1 | 482.6 | 1270 | M24 | M42 | 3.2 | 37000 | 301 |
| 555.63 | **4397/555X2/HC** | **TTSX555X4/HC** | **555.63** | 553.26 | 190.86 | 165.1 | 482.6 | 1270 | M24 | M42 | 3.2 | 37000 | 301 |
| 609.6 | **4397/609.6/HC** | **TTSX609.6/HC** | **609.6** | 607.24 | 204.01 | 177.8 | 533.4 | 1524 | M30 | M42 | 3.3 | 46000 | 383 |
| 640 | **4397/640/HC** | **TTSX640/HC** | **640** | 637 | 214.5 | 185 | 550 | 1520 | M30 | M42 | 3 | 82200 | 439 |
| 641.35 | **4397/641X4/HC** | **TTSX641X4/HC** | **641.35** | 638.99 | 212.67 | 184.15 | 558.8 | 1524 | M24 | | 3.2 | 52900 | 426 |
| 750 | **4397/750/HC** | **TTSX750/HC** | **750** | 745 | 260 | 220 | 650 | 1600 | M30 | M48 | 4 | 64000 | 718 |

## Product Characteristics:

The same as self-aligning roller bearings, the housing washer raceway surface is spherical which takes the same point of the bearing central axle as the spherical center point. The rollers of these bearings are of spherical shape, therefore they are self-aligning. They are not so sensitive to eccentricity and bending of the shaft.

Different with other thrust bearings, these bearings are featured by the extremely big axial load carrying capacity and meanwhile they can also carry a certain radial loads, however, the radial load should not exceed 55% of the axial loads. If the load P and P0 do not exceed 0.05Co and the shaft washer rotates, then the following angles of misalignment are permissible:




| Bearing diameter series | Aligning angle |
|---|---|
| 200 series | 1° ～1.5° |
| 300 series | 1.5° ～2° |
| 400 series | 1.2° ～3° |

The figures with small values are suitable for comparatively large size bearings and when the load increases, the permissible misalignment shall decrease.

Oil lubrication is commonly used while working.

Applications of these bearings can be found in hydroelectric generators, vertical motors, propeller axle of vessels, tower cranes and squeezing presses,etc.

## Product types

· Symmetric self-aligning roller thrust bearings
· Asymmetric self-aligning roller thrust bearings

## Dimension Range

The Principal dimensions of ZWZ self-aligning roller thrust bearings have been listed in dimension table.

Bore diameter range: 60mm-1260mm
Outer diameter range: 130mm-1860mm
Width range: 39mm-426mm

## Tolerance

ZWZ can supply bearings with P0, P6 P5 and P4 classes.

## Cage

ZWZ self-aligning roller thrust bearings generally use brass solid cages and pressed cages. When they use the brass solid cages, there is no suffix in the bearing code name. When they use other cages, there is relative suffix in the bearing code name.

## Minimum axial load

The minimum axial load Fa min. required by the self-aligning roller thrust bearings when they are working is the bigger value of the two calculated according to the following two formulas:

Where:

Famin: the minimal axial load kN required
N: rotation speed r/min
Coa: basic static load rating kN
Fr: radial load kN

$$F_{amin}=\frac{C_{0a}}{2000}$$

$$F_{amin}=1.8Fr+1.33\left(\frac{C_{0a}}{2000}\right)^{2}x10^{-7}$$

## Equivalent dynamic load

P= Fa+1.2Fr

P0=Fa+2.7Fr

## Equivalent static load

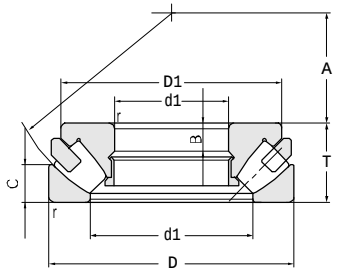
P0=Fa+2.7Fr

Applications of these bearings are mainly used in the oil drillers and ron and steel processing machines.

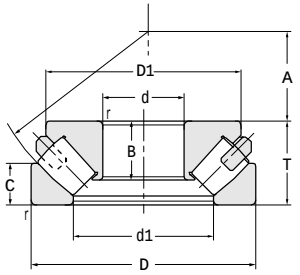
## Related bearing code explanation:

| | |
|---|---|
| -1, -2... | to express one series none standard X1,X2,YA2 |
| E- | internal structure changes, enhanced structure: |
| F1- | Carbon Steel |
| F2- | Graphitic steel |
| F3- | Nodular cast iron |
| HC- | Ring and rolling elements or only ring or rolling elements are made from case hardened steel (/HC-20Cr2Ni4A; /HC1-20Cr2Mn2MoA; /HC2-15Mn; HC3-G20CrMo). |
| /HCOR | Indicates the outer ring & rolling element are made by carburized steel. |
| J- | Pressed steel cage. When material is changed, it is indicated with the added digitals. |
| M- | Brass solid cage |
| P5- | Tolerance grade conforms to the standard P5 |
| P4- | Tolerance grade conforms to the standard P4. |
| S1- | Bearing ring tempered in high temperature, which can reach to 200℃. |
| SP- | Ultra precision grade, dimension tolerance equals to P5, rotating precision equals to P4. |
| TN1- | Nylon |
| YA3- | End face of bearing ring has changed comparing to the standard design. |
| YA7- | Bearing rib or flange has changed comparing to the standard design |
| YA8- | Bearing cage structure changed. |
| YAB- | Structure and technical specification has changed at the same time. |
| YAD- | One type of bearing has two or more changes on structure. |
| YB2- | Bearing dimension and tolerance changed. |
| YB5- | Structure and position tolerance have special requirements. |

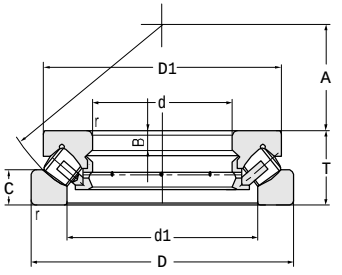
d 60~130 mm



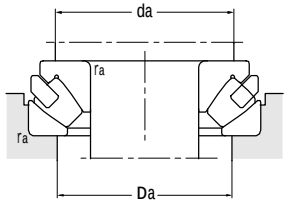

Basic structure




YA7 structure

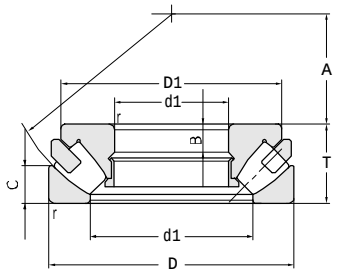



YA8 structure

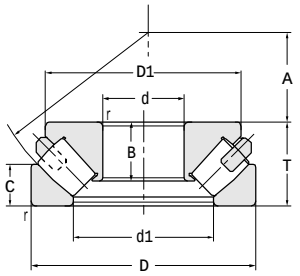



| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | Other dimensions | | | | | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | T | $r_{min}$ | Cr | Cor | Grease | Oil | | d1 | D1 | B | C | A | damin | Damax | ramax | |
| mm | | | | kN | | r/min | | | mm | | | | | mm | | | kg |
| **60** | 130 | 42 | 1.5 | 375 | 880 | 1800 | 2600 | **29412** | 89 | 117.6 | 15 | 20 | 38 | 90 | 107 | 1.5 | 2.60 |
| | 130 | 42 | 1.5 | 375 | 880 | 1800 | 2600 | **29412J** | 89 | 117 | 15 | 20 | 38 | 90 | 107 | 1.5 | 2.60 |
| **65** | 140 | 45 | 2 | 440 | 1040 | 1700 | 2400 | **29413** | 95 | 125 | 29.5 | 21 | 42 | 100 | 117 | 2 | 3.33 |
| | 140 | 45 | 2 | 440 | 1040 | 1700 | 2400 | **29413J** | 91 | 120 | 29.5 | 22 | 42 | 100 | 117 | 2 | 3.14 |
| | 140 | 45 | 2 | 440 | 1040 | 1700 | 2400 | **29413J1** | 95 | 125 | 29.5 | 21.5 | 42 | 100 | 117 | 2 | 3.34 |
| **70** | 150 | 48 | 2 | 500 | 1200 | 1600 | 2200 | **29414** | 103 | 135 | 31 | 23 | 44 | 107 | 130 | 2 | 4.24 |
| **75** | 160 | 51 | 2 | 580 | 1370 | 1600 | 2200 | **29415** | 108 | 140 | 18 | 24 | 47 | 115 | 133 | 2 | 4.27 |
| **80** | 170 | 54 | 2.1 | 640 | 1600 | 1400 | 2000 | **29416** | 113 | 153.7 | 19 | 26.8 | 50 | 120 | 141 | 2 | 6.06 |
| | 170 | 54 | 2.1 | 640 | 1600 | 1400 | 2000 | **29416Q1** | 113 | 153.7 | 19 | 26.8 | 50 | 120 | 141 | 2 | 6.06 |
| | 170 | 54 | 2.1 | 640 | 1570 | 1400 | 2000 | **29416Q1/YA7** | 114 | 151 | 43 | 25.2 | 50 | 120 | 141 | 2 | 9.65 |
| **85** | 150 | 39 | 1.5 | 365 | 1070 | 1600 | 2200 | **29317** | 111 | 138 | 13 | 18.7 | 50 | 115 | 129 | 1.5 | 2.81 |
| **90** | 155 | 39 | 1.5 | 385 | 1040 | 1600 | 2200 | **29318** | 115.5 | 143.2 | 13 | 18.8 | 52 | 120 | 134 | 1.5 | 2.93 |
| | 190 | 60 | 2.1 | 785 | 1980 | 1300 | 1800 | **29418** | 127 | 170 | 22 | 28.5 | 56 | 135 | 158 | 2 | 7.85 |
| | 190 | 60 | 2.1 | 785 | 1980 | 1300 | 1800 | **29418Q1** | 127 | 170 | 22 | 28.5 | 56 | 135 | 158 | 2 | 7.85 |
| | 190 | 60 | 2.1 | 785 | 1980 | 1300 | 1800 | **29418Q1/HAYA7** | 127 | 170 | 49.6 | 28.5 | 56 | 135 | 158 | 2 | 7.85 |
| **100** | 170 | 42 | 1.5 | 450 | 1330 | 1500 | 2000 | **29320** | 127.5 | 158.9 | 14 | 20.6 | 58 | 130 | 147 | 1.5 | 3.80 |
| **110** | 190 | 48 | 2 | 590 | 1660 | 1200 | 1700 | **29322** | 143 | 175 | 16 | 23 | 64 | 145 | 164 | 2 | 6.94 |
| | 230 | 73 | 3 | 1130 | 2880 | 1100 | 1600 | **29422** | 155.5 | 208 | 26 | 34.4 | 69 | 164 | 193 | 2.5 | 18.1 |
| **120** | 210 | 54 | 2.1 | 545 | 2010 | 1100 | 1600 | **29324** | 156 | 193.5 | 18 | 25.9 | 70 | 160 | 181 | 2 | 7.45 |
| | 250 | 78 | 4 | 910 | 1590 | 1000 | 1500 | **39424** | 172 | 222 | 50.5 | 37 | 74 | 180 | 209 | 3 | 17.1 |
| | 250 | 156 | 5 | 980 | 2700 | 900 | 1300 | **29424D/YA7** | 174 | 220 | 153 | 37 | | 180 | 209 | 3 | 33.3 |
| **130** | 225 | 58 | 2.1 | 830 | 2400 | 1000 | 1500 | **29326** | 168 | 206.7 | 19 | 27.8 | 76 | 175 | 194 | 2 | 9.08 |
| | 225 | 116 | 2.1 | 830 | 2400 | 1000 | 1500 | **29326D** | 168 | 206.7 | 19 | 27.8 | 76 | 175 | 194 | 2 | 18.6 |
| | 225 | 58 | 2.1 | 830 | 2400 | 1100 | 1600 | **29326J** | 166 | 200 | 19 | 28 | 76 | 170 | 195 | 2 | 8.48 |
| | 225 | 58 | 2.1 | 830 | 2400 | 1100 | 1600 | **29326/YA7** | 168 | 206.7 | 45 | 27.8 | 76 | 170 | 195 | 2 | 8.99 |
| | 225 | 58 | 2.1 | 830 | 2400 | 1000 | 1500 | **29326/YA8** | 168 | 206.7 | 19 | 27.8 | 76 | 170 | 195 | 2 | 9.11 |

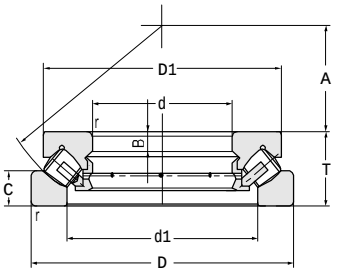
d 130~200 mm



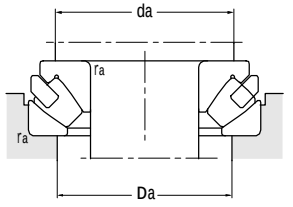

Basic structure




YA7 structure




YA8 structure

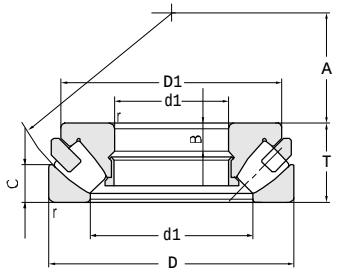



| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|
| d | D | T | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | kN | | r/min | | |
| **130** | 270 | 85 | 4 | 1500 | 3890 | 950 | 1400 | **29426/YA7** |
| **140** | 240 | 60 | 2.1 | 940 | 2600 | 950 | 1400 | **29328** |
| **150** | 250 | 60 | 2.1 | 960 | 2740 | 950 | 1400 | **29330** |
| | 250 | 60 | 2.1 | 960 | 2740 | 950 | 1400 | **29330A** |
| | 250 | 60 | 2.1 | 960 | 2740 | 950 | 1400 | **29330J** |
| | 250 | 60 | 2.1 | 960 | 2740 | 950 | 1400 | **29330/YA8** |
| | 300 | 90 | 4 | 1790 | 4900 | 800 | 1100 | **29430/YA8** |
| **160** | 270 | 67 | 3 | 1130 | 3330 | 850 | 1200 | **29332** |
| | 270 | 67 | 3 | 1130 | 3330 | 850 | 1200 | **29332F3** |
| | 320 | 95 | 5 | 2000 | 5330 | 700 | 1000 | **29432** |
| **170** | 280 | 67 | 3 | 1150 | 3410 | 850 | 1200 | **29334** |
| | 280 | 67 | 3 | 1150 | 3680 | 850 | 1200 | **29334J** |
| | 340 | 103 | 5 | 2270 | 6350 | 700 | 950 | **29434/YA7** |
| **180** | 250 | 42 | 1.5 | 475 | 1960 | 900 | 1300 | **29236** |
| | 300 | 73 | 3 | 1370 | 4130 | 700 | 1000 | **29336** |
| | 300 | 73 | 3 | 1370 | 4130 | 700 | 1000 | **29336/YA8** |
| | 360 | 109 | 5 | 2500 | 7060 | 700 | 950 | **29436** |
| | 360 | 109 | 5 | 2500 | 7200 | 700 | 950 | **29436/YA7** |
| | 360 | 109 | 5 | 2500 | 7060 | 700 | 950 | **29436/YA8** |
| **190** | 270 | 48 | 2 | 620 | 2660 | - | 1400 | **29238** |
| | 270 | 48 | 2 | 620 | 2660 | - | 1400 | **29238F3** |
| | 320 | 78 | 4 | 1565 | 4950 | 750 | 1000 | **29338** |
| | 320 | 78 | 4 | 1565 | 5300 | 750 | 1000 | **29338/YA8** |
| | 380 | 115 | 5 | 2740 | 7680 | 630 | 850 | **29438** |
| **200** | 280 | 48 | 2 | 630 | 2590 | - | 1400 | **29240** |
| | 340 | 85 | 4 | 1790 | 5280 | 700 | 950 | **29340** |
| | 340 | 85 | 4 | 1790 | 5280 | 700 | 950 | **29340J** |
| | 340 | 85 | 4 | 1790 | 5280 | 700 | 950 | **29340/YA8** |

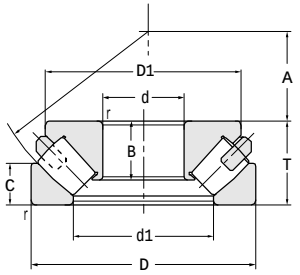
| Other dimensions | | | | | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|
| d1 | D1 | B | C | A | $d_{amin}$ | $D_{amax}$ | $r_{amax}$ | |
| mm | | | | | mm | | | kg |
| 183 | 246 | 67.5 | 39.7 | 81 | 142.5 | 227 | 3 | 28.3 |
| 183 | 221 | 20 | 28 | 82 | 185 | 208 | 2 | 10.1 |
| 194 | 240 | 20 | 29 | 87 | 195 | 235 | 2 | 11.5 |
| 190 | 215 | 34.6 | 29 | 87 | 190 | 210 | 2 | 10.5 |
| 190 | 225.5 | 38 | 29 | 87 | 195 | 219 | 2 | 10.9 |
| 194 | 240 | 20 | 29 | 87 | 195 | 219 | 2 | 11.5 |
| 209.5 | 273 | 32 | 42.1 | 92 | 220 | 253 | 3 | 28.6 |
| 205 | 249.6 | 23 | 31.7 | 92 | 210 | 235 | 2.5 | 14.6 |
| 205 | 249.6 | 23 | 31.7 | 92 | 210 | 235 | 2.5 | 14.5 |
| 218.5 | 285 | 34 | 46.9 | 99 | 235 | 270 | 4 | 32.8 |
| 216 | 260.3 | 23 | 31.7 | 96 | 220 | 245 | 2.5 | 15.7 |
| 215 | 252.5 | 42.2 | 32 | 96 | 220 | 245 | 2.5 | 14.8 |
| 234 | 310 | 79 | 48.8 | 103 | 250 | 286 | 4 | 42.8 |
| 209 | 239 | 15 | 21.3 | 97 | 215 | 227 | 1.5 | 7.05 |
| 229 | 275 | 25 | 34.4 | 103 | 235 | 262 | 2.5 | 19.9 |
| 229 | 275 | 25 | 34.4 | 103 | 235 | 262 | 2.5 | 20.3 |
| 249.5 | 326 | 39 | 51.2 | 110 | 265 | 304 | 4 | 64.2 |
| 249.5 | 326 | 84 | 51.2 | 110 | 265 | 304 | 4 | 49.8 |
| 249.5 | 326 | 39 | 51.2 | 5 | 265 | 304 | 4 | 62.5 |
| 222.5 | 257 | 15.5 | 24.1 | 104 | 225 | 243 | 2 | 8.44 |
| 222.5 | 257 | 15.5 | 24.1 | 104 | 225 | 243 | 2 | 8.37 |
| 240.5 | 298.3 | 27 | 38.6 | 110 | 250 | 280 | 3 | 25.1 |
| 240.5 | 308 | 27 | 38.6 | 110 | 250 | 280 | 3 | 25.7 |
| 263 | 345 | 41 | 53.7 | 117 | 280 | 321 | 4 | 59.0 |
| 234.5 | 266 | 15 | 24 | 108 | 240 | 254 | 2 | 8.54 |
| 259 | 314 | 29 | 39.1 | 116 | 265 | 297 | 3 | 29.5 |
| 261 | 318 | 54.5 | 41 | 116 | 265 | 297 | 3 | 29.3 |
| 261 | 325 | 29 | 41 | 116 | 265 | 297 | 3 | 34.0 |

# Thrust Spherical Roller Bearing(Asymmetrical)

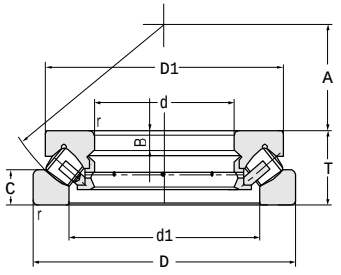
d 200~340 mm



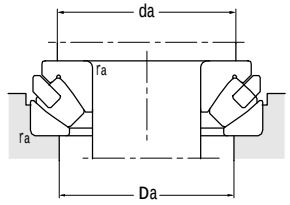
Basic structure



YA7 structure



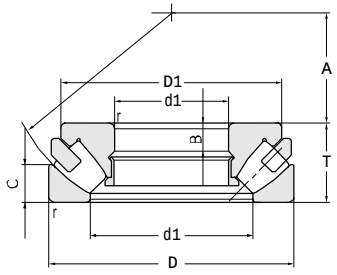
YA8 structure



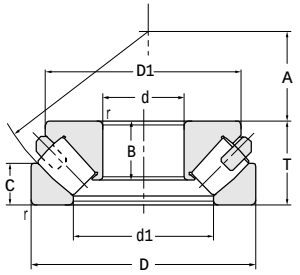

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|
| d | D | T | $r_{min}$ | Cr | Cor | Grease | Oil | |
| mm | | | | kN | | r/min | | |
| **200** | 400 | 122 | 5 | 2480 | 9100 | 600 | 800 | **29440/YA7** |
| **220** | 300 | 48 | 2 | 665 | 2780 | - | 1300 | **29244** |
| | 360 | 85 | 4 | 1920 | 2800 | 670 | 900 | **29344** |
| | 360 | 85 | 4 | 1920 | 6050 | 670 | 900 | **29344J** |
| | 360 | 85 | 4 | 1920 | 6050 | 670 | 900 | **29344/YA8** |
| | 420 | 122 | 6 | 3220 | 9270 | 560 | 750 | **29444** |
| **240** | 340 | 60 | 2.1 | 910 | 4360 | 670 | 900 | **29248** |
| | 380 | 85 | 4 | 1960 | 6290 | 600 | 800 | **29348** |
| | 380 | 85 | 4 | 1960 | 6290 | 600 | 800 | **29348/YA7** |
| | 380 | 85 | 4 | 1960 | 6500 | 600 | 800 | **29348/YA8** |
| | 440 | 122 | 6 | 3270 | 10100 | 530 | 750 | **29448** |
| **260** | 360 | 60 | 2.1 | 830 | 4150 | - | 1100 | **29252** |
| | 420 | 95 | 5 | 2450 | 7970 | 600 | 800 | **29352** |
| | 480 | 132 | 6 | 3890 | 12400 | 500 | 670 | **29452J** |
| | 480 | 132 | 6 | 3890 | 13400 | 500 | 670 | **29452J/HC** |
| | 480 | 132 | 6 | 3890 | 12400 | 500 | 670 | **29452J/HC-1** |
| **280** | 380 | 60 | 2.1 | 895 | 3840 | 700 | 1000 | **29256** |
| | 440 | 95 | 5 | 2450 | 8300 | 500 | 670 | **29356** |
| | 520 | 145 | 6 | 4700 | 14700 | 480 | 630 | **29456** |
| | 520 | 145 | 6 | 4700 | 14700 | 480 | 630 | **29456F1** |
| **300** | 420 | 73 | 3 | 1220 | 6200 | - | 900 | **29260** |
| | 480 | 109 | 5 | 2530 | 10500 | 700 | 750 | **29360** |
| | 540 | 145 | 6 | 3500 | 14800 | 450 | 600 | **29460** |
| **320** | 440 | 73 | 3 | 1320 | 7050 | 670 | 900 | **29264** |
| | 500 | 109 | 5 | 3250 | 10800 | 600 | 800 | **29364** |
| | 500 | 109 | 5 | 3250 | 10800 | 600 | 800 | **29364/HC** |
| | 580 | 155 | 7.5 | 4750 | 18200 | 430 | 560 | **29464/YA8** |
| **340** | 540 | 122 | 5 | 3150 | 12400 | 600 | 800 | **29368** |

| Other dimensions | | | | | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|
| d1 | D1 | B | C | A | damin | Damax | ramax | |
| mm | | | | | mm | | | kg |
| 276.5 | 360 | 94 | 56.7 | 122 | 295 | 337 | 4 | 85 |
| 254 | 284.4 | 15 | 24 | 117 | 260 | 273 | 2 | 9.20 |
| 277.5 | 330 | 29 | 40.7 | 125 | 285 | 316 | 3 | 28.6 |
| 273.5 | 326.3 | 55 | 41 | 125 | 285 | 316 | 3 | 31 |
| 277.5 | 330 | 29 | 40.7 | 125 | 285 | 316 | 3 | 29.4 |
| 300 | 381 | 43 | 56.9 | 132 | 315 | 358 | 5 | 73.2 |
| 281 | 316 | 19 | 30 | 130 | 290 | 308 | 2 | 15.7 |
| 298.5 | 360 | 29 | 41.7 | 135 | 305 | 336 | 3 | 35.4 |
| 298.5 | 360 | 63.5 | 41.7 | 135 | 305 | 336 | 3 | 35.6 |
| 298.5 | 365 | 29 | 41.7 | 135 | 305 | 336 | 3 | 20.3 |
| 316 | 400 | 43 | 60 | 142 | 335 | 378 | 5 | 96.1 |
| 302 | 338 | 19 | 30 | 139 | 310 | 326 | 2 | 16.9 |
| 327.5 | 392.3 | 32 | 46 | 148 | 335 | 380 | 4 | 50.2 |
| 353 | 446 | 83 | 65 | 154 | 360 | 412 | 5 | 98.6 |
| 342 | 432 | 88.2 | 65 | 154 | 360 | 412 | 5 | 101 |
| 353 | 446 | 83 | 65 | 154 | 360 | 412 | 5 | 98.6 |
| 322.5 | 364 | 19 | 29.5 | 150 | 325 | 347 | 2 | 21.7 |
| 346 | 411 | 32 | 46.3 | 158 | 360 | 400 | 4 | 50.6 |
| 373.5 | 470 | 54 | 68.9 | 166 | 395 | 446 | 5 | 127 |
| 373.5 | 470 | 54 | 68.9 | 166 | 395 | 446 | 5 | 125 |
| 405 | 353 | 21 | 38 | 162 | 360 | 380 | 2.5 | 29.5 |
| 371.5 | 448 | 37 | 53 | 168 | 385 | 423 | 4 | 72.7 |
| 395 | 494.4 | 52 | 68.3 | 175 | 395 | 446 | 5 | 138 |
| 369.5 | 419.4 | 21 | 36 | 172 | 375 | 410 | 2.5 | 31.4 |
| 394.5 | 466.5 | 37 | 53 | 180 | 340 | 456 | 4 | 75.8 |
| 394.5 | 466.5 | 37 | 53 | 180 | 340 | 456 | 4 | 75.8 |
| 420 | 534 | 55 | 75 | 191 | 450 | 500 | 6 | 170 |
| 421 | 503 | 41 | 59.5 | 192 | 440 | 479 | 4 | 101 |

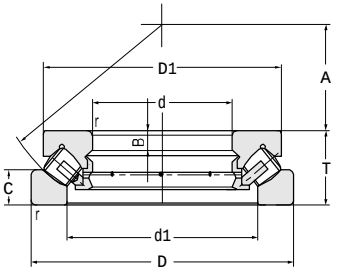
d 340~500 mm



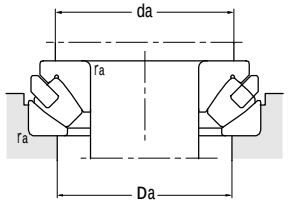

Basic structure




YA7 structure



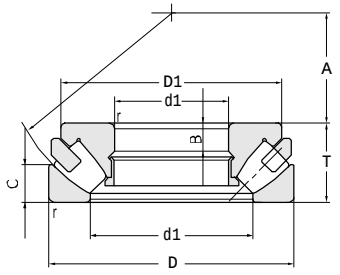

YA8 structure



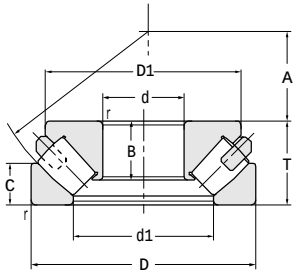

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|
| d | D | T | $r_{min}$ | Cr | Cor | Grease | Oil | |
| mm | | | | kN | | r/min | | |
| **340** | 620 | 170 | 7.5 | 5520 | 21500 | 500 | 700 | **29468F3** |
| | 620 | 170 | 7.5 | 5700 | 18500 | 380 | 500 | **29468/YA57** |
| **360** | 500 | 85 | 4 | 1630 | 8500 | 600 | 800 | **29272** |
| | 560 | 122 | 5 | 3080 | 12400 | 500 | 600 | **29372** |
| | 640 | 170 | 7.5 | 5230 | 20800 | 400 | 500 | **29472/HC** |
| **380** | 520 | 85 | 4 | 1820 | 8900 | 500 | 700 | **29276** |
| | 600 | 132 | 6 | 3280 | 15200 | 450 | 650 | **29376** |
| | 600 | 132 | 6 | 3280 | 15200 | 450 | 650 | **29376/HC** |
| **400** | 540 | 85 | 4 | 1720 | 7680 | 500 | 700 | **29280** |
| | 540 | 85 | 4 | 1720 | 7680 | 500 | 700 | **29280F3** |
| | 540 | 85 | 4 | 1650 | 9050 | 500 | 700 | **29280F3/YA7** |
| | 620 | 132 | 6 | 3500 | 16800 | 440 | 620 | **29380** |
| | 620 | 132 | 6 | 3500 | 16800 | 440 | 620 | **29380F3** |
| | 710 | 185 | 7.5 | 6230 | 25500 | 300 | 450 | **29480** |
| **420** | 650 | 140 | 6 | 3800 | 17900 | 420 | 600 | **29384** |
| | 730 | 185 | 7.5 | 6900 | 28000 | 400 | 580 | **29484** |
| **440** | 600 | 95 | 5 | 2000 | 10100 | 400 | 580 | **29288/YA8** |
| | 680 | 145 | 6 | 4310 | 19500 | 360 | 480 | **29388** |
| | 780 | 206 | 9.5 | 7500 | 30700 | 260 | 380 | **29488** |
| | 780 | 206 | 9.5 | 7500 | 30700 | 260 | 380 | **29488/HC** |
| **460** | 620 | 95 | 5 | 2280 | 12900 | 400 | 580 | **29292** |
| | 620 | 95 | 5 | 2280 | 12900 | 420 | 600 | **29292/YA8** |
| | 710 | 150 | 6 | 4460 | 18800 | 300 | 450 | **29392** |
| | 710 | 150 | 6 | 4460 | 18800 | 300 | 450 | **29392/HC** |
| | 710 | 150 | 6 | 4460 | 18800 | 300 | 450 | **29392/YA8** |
| | 800 | 206 | 9.5 | 8100 | 32300 | 260 | 380 | **29492/YA8** |
| **480** | 650 | 103 | 5 | 2350 | 11800 | 430 | 560 | **29296** |
| | 650 | 103 | 5 | 2260 | 12700 | 360 | 480 | **29296/YA7** |
| **500** | 750 | 150 | 6 | 4950 | 23100 | 280 | 430 | **293/500** |

| Other dimensions | | | | | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|
| d1 | D1 | B | C | A | damin | Damax | ramax | |
| mm | | | | | mm | | | kg |
| 449.5 | 560 | 61 | 80 | 201 | 475 | 530 | 6 | 218 |
| 449.5 | 560 | 115 | 80.1 | 201 | 475 | 530 | 6 | 206 |
| 420 | 470 | 25 | 41 | 194 | 430 | 453 | 3 | 45.9 |
| 445 | 521 | 41 | 59.5 | 202 | 460 | 500 | 4 | 103 |
| 470 | 588 | 61 | 81 | 210 | 495 | 500 | 6 | 221 |
| 439 | 498 | 27 | 42 | 202 | 450 | 473 | 3 | 50 |
| 475 | 561 | 44 | 61.4 | 216 | 495 | 535 | 5 | 129 |
| 475 | 561 | 44 | 61.4 | 216 | 495 | 535 | 5 | 129 |
| 460 | 510 | 27 | 42 | 212 | 470 | 493 | 3 | 64.6 |
| 460 | 510 | 27 | 42 | 212 | 470 | 493 | 3 | 63.1 |
| 460 | 510 | 64 | 42 | 212 | 470 | 493 | 3 | 62.9 |
| 489 | 582 | 44 | 64.7 | 225 | 510 | 550 | 5 | 153 |
| 489 | 582 | 44 | 64.7 | 225 | 510 | 550 | 5 | 153 |
| 529.5 | 652 | 67 | 86 | 236 | 550 | 615 | 6 | 309 |
| 514.5 | 610 | 48 | 6.8 | 235 | 535 | 580 | 5 | 159 |
| 545 | 673 | 67 | 89 | 244 | 575 | 635 | 6 | 311 |
| 508 | 585 | 30 | 46.5 | 235 | 520 | 545 | 4 | 77.1 |
| 539 | 636 | 49 | 70.8 | 245 | 585 | 630 | 3 | 180 |
| 583 | 716 | 74 | 97 | 260 | 630 | 695 | 8 | 394 |
| 583 | 716 | 74 | 97 | 260 | 630 | 695 | 8 | 394 |
| 525.5 | 590 | 30 | 49.4 | 245 | 540 | 565 | 4 | 75.2 |
| 525.5 | 590 | 30 | 49.4 | 245 | 540 | 565 | 4 | 76.6 |
| 567 | 668 | 51 | 72 | 257 | 586 | 630 | 5 | 207 |
| 567 | 668 | 51 | 72 | 257 | 586 | 630 | 5 | 207 |
| 567 | 668 | 51 | 72 | 257 | 586 | 630 | 5 | 210 |
| 596 | 730 | 74 | 99.5 | 272 | 630 | 695 | 8 | 415 |
| 556 | 635 | 33 | 53.5 | 259 | 570 | 595 | 4 | 99.3 |
| 554 | 626 | 79 | 51 | 259 | 570 | 595 | 4 | 93.4 |
| 601.5 | 709.4 | 51 | 75.5 | 280 | 630 | 675 | 5 | 221 |

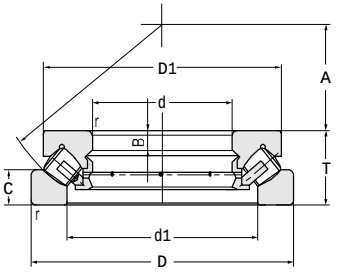
d 500~850 mm



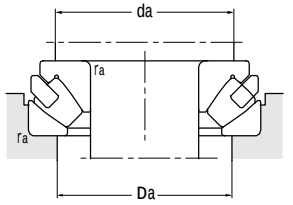

Basic structure




YA7 structure

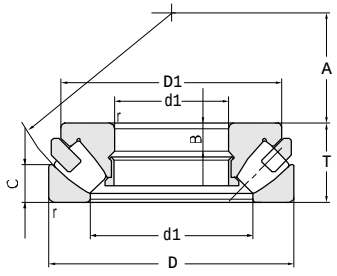



YA8 structure

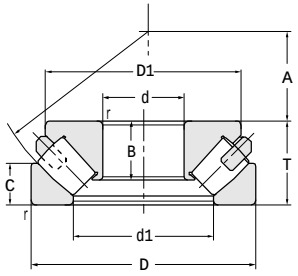



| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations | Other dimensions | | | | | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | T | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | d1 | D1 | B | C | A | $d_{amin}$ | $D_{amax}$ | $r_{amax}$ | |
| mm | | | | kN | | r/min | | | mm | | | | | mm | | | kg |
| **500** | 750 | 150 | 6 | 4950 | 23100 | 280 | 430 | **293/500/YA3** | 601.5 | 709.4 | 51 | 75.5 | 280 | 630 | 675 | 5 | 221 |
| | 750 | 150 | 6 | 4400 | 21000 | 280 | 430 | **293/500/YB2** | 595 | 675 | 51 | 63 | 280 | 630 | 675 | 5 | 201 |
| | 870 | 224 | 9.5 | 9000 | 39500 | 320 | 460 | **294/500** | 648 | 790 | 81 | 106 | 290 | 685 | 755 | 8 | 589 |
| | 870 | 224 | 9.5 | 8900 | 39500 | 320 | 460 | **294/500/HC** | 648 | 790 | 81 | 106 | 290 | 685 | 755 | 8 | 589 |
| **530** | 710 | 109 | 5 | 5000 | 16600 | 350 | 500 | **292/530** | 604 | 680 | 35 | 54 | 288 | 615 | 655 | 4 | 118 |
| | 920 | 236 | 9.5 | 10000 | 40500 | 220 | 300 | **294/530** | 686 | 845 | 89 | 114 | 309 | 725 | 800 | 8 | 615 |
| **560** | 750 | 115 | 5 | 3100 | 15400 | 360 | 480 | **292/560** | 640 | 715 | 40 | 56.8 | 302 | 655 | 685 | 4 | 131 |
| | 750 | 115 | 5 | 3100 | 15400 | 360 | 480 | **292/560F3** | 640 | 715 | 40 | 56.8 | 302 | 655 | 685 | 4 | 131 |
| | 980 | 250 | 12 | 11500 | 49000 | 230 | 310 | **294/560** | 727 | 890 | 92 | 120 | 328 | 770 | 850 | 10 | 741 |
| **600** | 800 | 122 | 5 | 4050 | 21200 | 360 | 480 | **292/600** | 688 | 760 | 39 | 59.4 | 321 | 700 | 735 | 4 | 159 |
| | 900 | 180 | 7.5 | 7000 | 33500 | 320 | 460 | **293/600F3/HCORYA7S1** | 726 | 841.5 | 132.5 | 87 | 335 | 755 | 810 | 6 | 373 |
| | 1030 | 258 | 12 | 12500 | 54000 | 300 | 450 | **294/600** | 769 | 940 | 92 | 127 | 347 | 815 | 900 | 10 | 839 |
| **630** | 1090 | 280 | 12 | 13800 | 62400 | 300 | 450 | **294/630** | 816 | 995 | 100 | 137.5 | 365 | 860 | 950 | 10 | 1005 |
| | 1090 | 280 | 12 | 13800 | 62400 | 300 | 450 | **294/630/HC** | 816 | 995 | 100 | 137.5 | 365 | 860 | 950 | 10 | 1005 |
| **670** | 900 | 140 | 6 | 4200 | 22800 | 260 | 380 | **292/670** | 773 | 880 | 45 | 73 | 365 | 790 | 825 | 5 | 225 |
| | 1150 | 290 | 15 | 15400 | 68000 | 190 | 240 | **294/670HC** | 864 | 1045 | 110 | 141 | 387 | 905 | 1000 | 12 | 1170 |
| **710** | 1220 | 308 | 15 | 15600 | 71000 | 170 | 220 | **294/710** | 910 | 1130 | 113 | 148.5 | 415 | 965 | 1070 | 12 | 1406 |
| | 1220 | 308 | 15 | 15600 | 71000 | 170 | 220 | **294/710/HC** | 910 | 1130 | 113 | 148.5 | 415 | 965 | 1070 | 12 | 1406 |
| **750** | 1000 | 150 | 6 | 6100 | 31000 | 220 | 340 | **292/750** | 858 | 950 | 50 | 74 | 406 | 880 | 925 | 5 | 296 |
| | 1120 | 224 | 9.5 | 9370 | 45000 | 180 | 260 | **293/750** | 910 | 1086 | 76 | 108 | 415 | 935 | 1000 | 8 | 703 |
| | 1280 | 315 | 15 | 18000 | 81600 | 140 | 200 | **294/750** | 972 | 1164 | 116 | 158 | 436 | 1015 | 1120 | 12 | 1530 |
| | 1280 | 315 | 15 | 18000 | 81600 | 140 | 200 | **294/750F3** | 972 | 1164 | 116 | 158 | 436 | 1015 | 1120 | 12 | 1530 |
| **800** | 1060 | 155 | 7.5 | 6220 | 36000 | 240 | 340 | **292/800** | 907.5 | 1010 | 50 | 80 | 426 | 935 | 980 | 6 | 343 |
| | 1360 | 335 | 15 | 19400 | 89300 | 230 | 310 | **294/800F3** | 1034 | 1250 | 120 | 165 | 462 | 1080 | 1185 | 12 | 1826 |
| **850** | 1440 | 354 | 15 | 28600 | 100000 | 120 | 150 | **294/850F1** | 1098 | 1330 | 221 | 172 | 494 | 1080 | 1230 | 12 | 2090 |
| | 1440 | 354 | 15 | 28600 | 100000 | 120 | 150 | **294/850F1/HC** | 1098 | 1330 | 221 | 172 | 494 | 1080 | 1230 | 12 | 2090 |

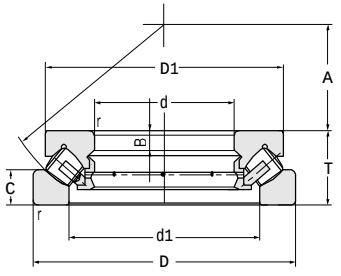
d 900~1620 mm



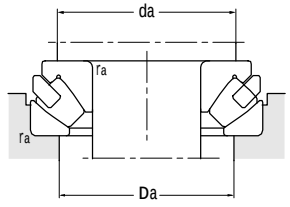

Basic structure




YA7 structure




YA8 structure

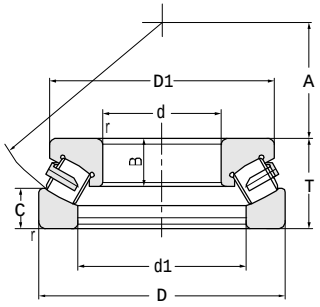


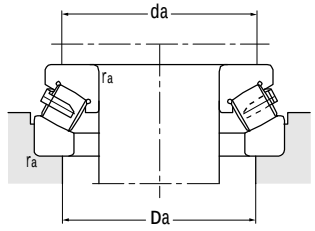

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|
| d | D | T | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | kN | | r/min | | |
| **900** | 1180 | 170 | 7.5 | 7550 | 41500 | 120 | 150 | **292/900** |
| | 1520 | 372 | 15 | 26400 | 121000 | 120 | 150 | **294/900F3/HCYA8** |
| **950** | 1250 | 180 | 7.5 | 8430 | 46900 | 190 | 240 | **292/950** |
| | 1600 | 390 | 15 | 27100 | 127000 | 170 | 220 | **294/950F1/HC** |
| **1060** | 1400 | 206 | 9.5 | 10500 | 62000 | 180 | 260 | **292/1060** |
| | 1400 | 206 | 9.5 | 10500 | 62000 | 180 | 260 | **292/1060F3** |
| | 1770 | 426 | 15 | 32100 | 150000 | 150 | 200 | **294/1060F3/HCSYA8** |
| **1120** | 1460 | 206 | 9.5 | 11000 | 68600 | 170 | 220 | **292/1120F1** |
| | 1460 | 206 | 9.5 | 11000 | 68600 | 170 | 220 | **292/1120F3** |
| **1180** | 1520 | 206 | 9.5 | 10900 | 64000 | 170 | 220 | **292/1180** |
| **1320** | 1540 | 175 | 6 | 6500 | 48500 | 120 | 150 | **217/1320** |
| **1620** | 1860 | 150 | 6 | 6490 | 48600 | 120 | 150 | **292/1620/YAD** |

| Other dimensions | | | | | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|
| d1 | D1 | B | C | A | $d_{amin}$ | $D_{amax}$ | $r_{amax}$ | |
| mm | | | | | mm | | | kg |
| 1023 | 1125 | 54 | 86 | 477 | 1030 | 1080 | 6 | 445 |
| 1137 | 1394 | 244.5 | 186 | 518 | 1160 | 1370 | 12 | 2653 |
| 1081 | 1185 | 58 | 88 | 507 | 1095 | 1155 | 6 | 537 |
| 1209 | 1470 | 253 | 191 | 546 | 1275 | 1400 | 12 | 2920 |
| 1208 | 1335 | 66 | 100 | 566 | 1225 | 1290 | 8 | 767 |
| 1208 | 1335 | 66 | 100 | 566 | 1225 | 1290 | 8 | 767 |
| 1332 | 1640 | 192 | 207 | 610 | 1410 | 1555 | 12 | 4040 |
| 1272 | 1385 | 141.5 | 101 | 601 | 1300 | 1365 | 8 | 804 |
| 1272 | 1385 | 141.5 | 101 | 601 | 1300 | 1365 | 8 | 804 |
| 1331 | 1450 | 83 | 101 | 625 | 1345 | 1410 | 8 | 854 |
| 1380 | 1510 | 72 | 98 | 1446 | 1470 | 1400 | 5 | 514 |
| 1722 | 1799 | 103 | 78.5 | 850 | 1780 | 1720 | 5 | 548 |

# Thrust Spherical Roller Bearing(Symmetrical)

d 70~260 mm

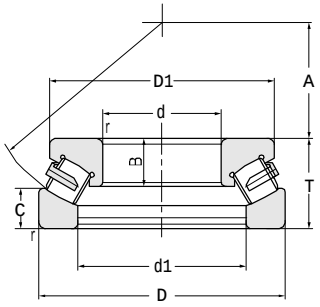


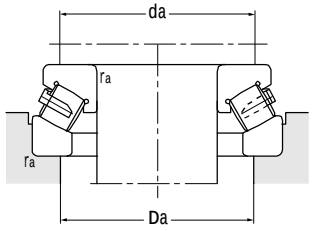




| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|
| d | D | T | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | kN | | r/min | | |
| **70** | 150 | 48 | 2.3 | 314 | 430 | 1400 | 2000 | **29414/YAD** |
| **80** | 170 | 54 | 2.5 | 407 | 550 | 1100 | 1700 | **29416/YAD** |
| **90** | 190 | 60 | 2.5 | 484 | 690 | 950 | 1500 | **29418/YAD** |
| **100** | 210 | 67 | 3 | 644 | 865 | 850 | 1300 | **29420/YAD** |
| **110** | 190 | 48 | 2 | 400 | 1270 | 1300 | 1800 | **29322/YAD** |
| **120** | 210 | 54 | 2.5 | 418 | 650 | 1000 | 1600 | **29324/YAD** |
| | 250 | 78 | 3.7 | 781 | 1060 | 750 | 1100 | **29424/YAD** |
| | 250 | 78 | 3.7 | 781 | 1060 | 750 | 1100 | **29424/YAD-1** |
| **130** | 225 | 58 | 2.5 | 484 | 750 | 950 | 1500 | **29326/YAD** |
| | 270 | 85 | 3.7 | 836 | 1100 | 700 | 1100 | **29426/YAD** |
| **140** | 280 | 85 | 3.7 | 908 | 1120 | 670 | 950 | **29428/YAD** |
| **150** | 300 | 90 | 3.7 | 1090 | 1710 | 630 | 900 | **29430/YAD** |
| **160** | 270 | 67 | 3 | 730 | 2380 | 630 | 900 | **29332/YAD** |
| | 320 | 95 | 4.7 | 1100 | 1720 | 560 | 800 | **29432/YAD** |
| **170** | 340 | 103 | 4.7 | 1330 | 2130 | 530 | 750 | **29434/YAD** |
| **180** | 300 | 73 | 3 | 974 | 3000 | 630 | 900 | **29336/YAD** |
| | 360 | 109 | 4.7 | 1330 | 2130 | 750 | 750 | **29436/YAD** |
| **220** | 300 | 48 | 2 | 484 | 910 | 850 | 1300 | **29244/YAD** |
| **240** | 440 | 122 | 6 | 2420 | 8000 | 530 | 750 | **29448A** |
| | 440 | 122 | 6 | 1920 | 3550 | 530 | 750 | **29448/YAD** |
| **260** | 360 | 60 | 2.1 | 798 | 1550 | 530 | 750 | **29252/YAD** |
| | 480 | 132 | 6 | 3200 | 11000 | 530 | 750 | **29452A** |

| Other dimensions | | | | | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|
| d1 | D1 | B | C | A | $d_{amin}$ | $D_{amax}$ | $r_{amax}$ | |
| mm | | | | | mm | | | kg |
| 103 | 135 | 31 | 23 | 44 | 105 | 125 | 2 | 3.87 |
| 117 | 155 | 35 | 25 | 50 | 120 | 141 | 2 | 5.33 |
| 132 | 170 | 39 | 29 | 56 | 135 | 158 | 2 | 7.13 |
| 146 | 190 | 45 | 32 | 62 | 150 | 175 | 2.5 | 10.5 |
| 140 | 175 | 31 | 24 | 64 | 145 | 164 | 2 | 5.08 |
| 161 | 188 | 34 | 30 | 57 | 160 | 181 | 2 | 6.88 |
| 181 | 222 | 48 | 38 | 74 | 180 | 209 | 3 | 19.5 |
| 181 | 222 | 48 | 38 | 74 | 180 | 209 | 2 | 19.4 |
| 170 | 200 | 37 | 29 | 76 | 175 | 194 | 2 | 8.26 |
| 190 | 240 | 55 | 44 | 79 | 195 | 227 | 3 | 23.0 |
| 203 | 247 | 55 | 47 | 64 | 205 | 236 | 3 | 22.7 |
| 220 | 270 | 60 | 48 | 69 | 220 | 253 | 3 | 27.3 |
| 200 | 240 | 45 | 32 | 92 | 205 | 235 | 2 | 13.5 |
| 234 | 275 | 61 | 53 | 74 | 235 | 270 | 4 | 33.3 |
| 243 | 310 | 71 | 48 | 104 | 250 | 286 | 2 | 40.7 |
| 230 | 276 | 50 | 35 | 103 | 235 | 262 | 2.5 | 19.4 |
| 265 | 308 | 67 | 58 | 82 | 265 | 304 | 2 | 42.3 |
| 260 | 286 | 31 | 24 | 117 | 260 | 273 | 5 | 7.92 |
| 328 | 370 | 65 | 59 | 142 | 335 | 378 | 5 | 72.7 |
| 330 | 400 | 78 | 59 | 142 | 335 | 378 | 5 | 74.5 |
| 302 | 335 | 38 | 30 | 139 | 310 | 326 | 2 | 15.7 |
| 343 | 400 | 76 | 65 | 154 | 310 | 326 | 5 | 95.3 |

d 280~1320 mm




| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations |
|---|---|---|---|---|---|---|---|---|
| d | D | T | $r_{min}$ | $C_r$ | $C_{or}$ | Grease | Oil | |
| mm | | | | kN | | r/min | | |
| **280** | 440 | 95 | 5 | 1600 | 6060 | 530 | 750 | **29356/YAD** |
| | 440 | 95 | 5 | 1450 | 6060 | 530 | 750 | **9069356** |
| **340** | 460 | 73 | 3 | 1250 | 2440 | 530 | 750 | **29268/YAD** |
| | 620 | 170 | 7.5 | 5050 | 19000 | 500 | 690 | **29468A** |
| **380** | 600 | 132 | 6 | 3750 | 15200 | 500 | 690 | **29376/P5YAD** |
| **420** | 580 | 95 | 4.7 | 2060 | 4150 | 460 | 560 | **29284/YAD** |
| **440** | 780 | 206 | 9.5 | 7150 | 26000 | 400 | 450 | **29488A** |
| **490** | 655 | 90 | 5 | 2300 | 12000 | 400 | 450 | **217/490/YAD** |
| **500** | 870 | 224 | 9.5 | 6930 | 27700 | 260 | 340 | **294/500/YAD** |
| **590** | 755 | 95 | 5 | 2390 | 13200 | 260 | 340 | **217/590/YAD** |
| **630** | 850 | 132 | 6 | 3580 | 8350 | 250 | 300 | **292/630F3/YAD** |
| **670** | 900 | 140 | 6 | 3900 | 20300 | 200 | 240 | **292/670F3/YAD** |
| **710** | 950 | 145 | 6 | 3960 | 12000 | 200 | 240 | **292/710/YAD** |
| **750** | 1280 | 315 | 15 | 14850 | 31000 | 80 | 100 | **294/750F1/YAD** |
| | 1280 | 315 | 15 | 14850 | 31000 | 80 | 100 | **294/750F3/YAD** |
| **1320** | 1540 | 175 | 6 | 6500 | 48500 | 60 | 80 | **217/1320** |

| Other dimensions | | | | | Abutment and fillet dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|
| d1 | D1 | B | C | A | $d_{amin}$ | $D_{amax}$ | $r_{amax}$ | |
| mm | | | | | mm | | | kg |
| 348 | 413 | 64 | 46 | 158 | 355 | 390 | 4 | 49.1 |
| 348 | 413 | 64 | 46 | 158 | 355 | 390 | 4 | 49.1 |
| 388 | 438 | 48 | 36 | 204 | 400 | 422 | 2.5 | 31.4 |
| 450 | 520 | 102 | 77 | 201 | 440 | 500 | 6 | 197 |
| 475 | 561 | 106.5 | 61.4 | 216 | 480 | 550 | 5 | 131 |
| 489 | 548 | 62 | 46 | 251 | 500 | 525 | 4 | 78.9 |
| 583 | 650 | 115 | 96.5 | 260 | 550 | 630 | 8 | 355 |
| 552 | 627 | 52 | 40 | 482 | 615 | 635 | 4 | 73.7 |
| 654 | 760 | 140 | 108 | 290 | 685 | 755 | 8 | 462 |
| 654 | 727 | 55 | 41.5 | 570 | 715 | 735 | 4 | 90 |
| 728 | 800 | 86 | 65 | 338 | 740 | 780 | 5 | 231 |
| 750 | 830 | 86 | 70 | 365 | 760 | 820 | 5 | 210 |
| 805 | 895 | 92 | 75 | 380 | 820 | 880 | 5 | 279 |
| 972 | 1152 | 160 | 158 | 448 | 1015 | 1120 | 12 | 1340 |
| 972 | 1152 | 160 | 158 | 448 | 1015 | 1120 | 12 | 1340 |
| 1380 | 1510 | 98 | 72 | 1446 | 1495 | 1515 | 5 | 514 |

## 1. Railway Bearing Application

The bearing applied for railway industry must possess high load carrying capacity and safety performance, Wafangdian Bearing Group Corp.,Ltd. have professional experience in the railway bearing application for more than 60 years providing professional technical supporting comprehensive and high quality products. ZWZ Group is the most important railway bearing manufacturer in China, also is the only enterprise that can manufacture railway locomotive, passenger car, wheel bearing journal box free type bearing for railway wagon, during the process of close cooperation with Ministry of Railways and manufacturer of locomotive vehicle, we design the best allocation plan for each type of bearings' application. Our products include journal box bearings for railway passenger car, railway wagon wheel bearing journal box free bearings, locomotive journal box bearing, main generator bearing, traction motor bearing, axle gearbox bearing, traction motor journal sticking bearing, wheel set hollow shaft drive bearing (full suspended bearing) and etc.

Subway, light railway, rural railway as one important component of the city public transport system, are known as "major arteries of urban passenger traffic", since entered the 21st century, along with the rapid growth of the economy and the progress of urbanization in China, urban railway system also enter into a fast growing period, China have already become the world's biggest urban railway transit market, and urban railway vehicle bearing gradually changed from depending on imported bearing to localization. ZWZ Group rely on abundant R&D technology, advanced production techniques & equipments and perfect service system, successfully complete the research and development of the rail transit bearings, supporting several rail transit vehicle in different major cities in China, the major products include each kind of subway journal box bearing, light rail journal box bearing, journal box bearing for low floor vehicle and subway gearbox bearings.

## 2. Wheel Bearing

Railway locomotive vehicle wheel bearings adopt different structure designs due to different application conditions, locomotive and passenger vehicle have journal box, bearing is connected with bogie through journal box, railway wagon is journal box free, bearing is connected with side bogie through adapter. Bearing carry the impact load between wheel bearing and bogie structure, and also need to carry the axle load while the vehicle turns.

Wheel bearing structure includes cylindrical roller bearing, cylindrical roller bearing unit, tapered roller bearing, tapered roller bearing unit. According to the application requirement to the railway bearing, wheel bearing shall have long-term period of free maintaining period, structure design for easier maintaining, and high reliability.

### 2.1 Classification and Application of Wheel Bearings

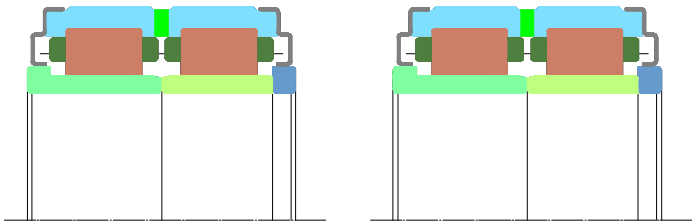
The railway vehicle wheel bearing can be divided into following types, according to the design technology and applications of vehicle types:

· Cylindrical roller bearing unit
· Double-row tapered roller bearing unit
· Single-row tapered roller bearing
· Single-row cylindrical roller bearing

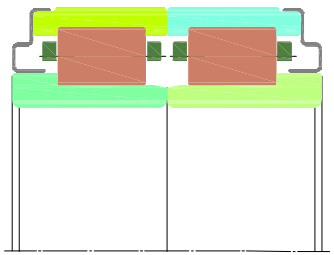


### 2.2 Cylindrical Roller Bearing Unit

Cylindrical roller bearing unit mainly is applied to railway locomotive, passenger vehicle, urban railway transit vehicle journal box, generally, the double-row cylindrical roller bearing with sealing devices on both sides of bearings, or one pair matched single-row cylindrical roller bearing with single side sealing device. Bearing units have been already filled with lubricating grease before mounting, free of filling lubricating grease while mounting. Because bearings have integrated sealing devices, making the bearing with long period free of maintaining. This type of bearing have special internal structure designs, the modified liner contact between roller and raceway reduce the edge stress and can make the bearing especially fit for carrying very high level of radial load, also can carry part of axle load at the same time. Compared with tapered roller bearing unit, cylindrical roller bearing unit is easy for mounting and assembling, convenient for bearing's repair and maintenance.



Double-row Cylindrical Roller Bearing Unit



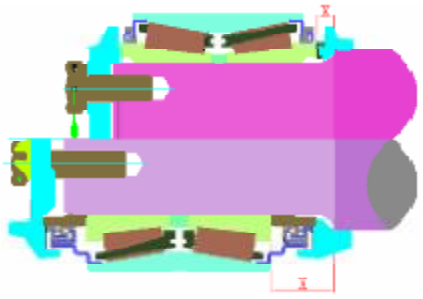
Paired Single-row Cylindrical Roller Bearing Unit

### 2.3 Double-row Tapered Roller Bearing Unit

Bearing units have complete sealing, filled with lubricating grease and adjusted clearance before mounting, integrated unit design is good for bearing's mounting and dismounting, bearing mounting onto the journal by cold press method. Bearing internal adopt ECP structure design, optimized inner ring flange and roller reference plane, decrease bearing

sliding friction and temperature rise, at the same time adopt modified contact design between roller tessellation lines and raceway to avoid edge stress, which can guarantee the bearing is especially fit for carrying the combination load of radial and axle load. Through the calculation FEM and comprehensive performance testing, make sure of the optimized design of bearing structure. The FEM method not only can describe the magnitude of stress level, but also can actually reflect the stress gradient distribution of the bearings.

In order to lower the bending deformation to the shaft while carrying heavy load, adopt compact design for heavy load railway bearings, shorten the distance to journal shoulder, improve the rigidity of shaft, decrease the micro abrasive of bearing, decrease the failure in actual application and improve bearing's service life.

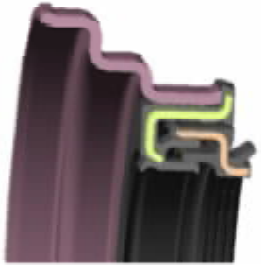


Comparison of compact structure design and traditional design

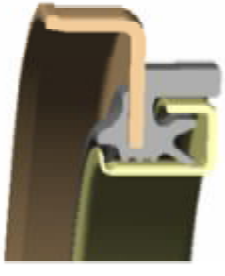
Good sealing devices can effectively prevent the leak of lubricating grease, prevent the foreign matter and water invading into the bearing, which can effectively reduce the failure in application, prolong the maintaining period, and guarantee the bearing with long service life. The labyrinth sealing structure performs better than traditional contact sealing in the aspect of sealing performance, lower temperature rise, but due to large axle load, not good for decreasing micro abrasion effect to the bearings; Composite sealing is integrated structure design, benefit for mounting and dismounting, and can shorten the bearing axial width, fit for the compact structure design with better sealing performance, have the characteristic low friction torque, low running temperature rise, generally apply to heavy load railway wagon bearing and urban rail transit journal box bearing and etc.



Contact Type Sealing



Labyrinth Sealing

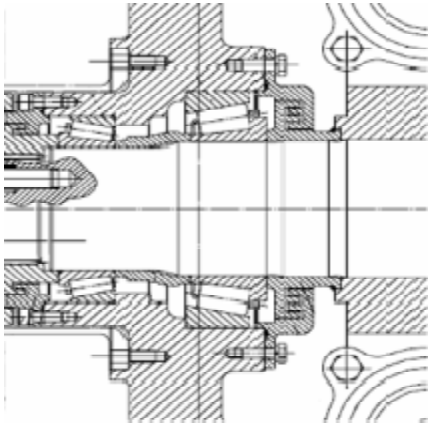


Composite Sealing



### 2.4 Single-row Tapered Roller Bearing

This series bearing are generally applied to the low speed railway vehicle with urban low floor, because of the limit of the structure of trailer bogie, need low floor type special axle instead of normal journal wheel and axle, the bearing mounting in the wheel set, bearing inner ring fit with special shaft, outer ring fit with wheel set, the wheel set is considered as journal box, bearing outer ring rotating, this application was called "Embedded wheel hub bearing unit". The ZWZ embedded wheel hub bearing unit which is mounted on independent wheel set in the light rail low floor vehicle is combined with one pair of tapered roller bearing, these two bearings adopt high precision manufacturing technique, to guarantee the bearing with high mounting precision and rotating performance. Select proper matching clearance, make the wheel set have relative high rigidity and guarantee the stability when the vehicle running.



Embedded Journal Box Bearing

### 2.5 Single-row Cylindrical Roller Bearing

Cylindrical roller bearing is one of the most widely adopted bearing type, already passed the verifications on each kind of application in different kinds of railway vehicle, which are applied to the journal box in railway locomotive, passenger car and light rail vehicles, this type of bearings are generally applied in pairs with NJ/NJP type bearings, fit for carrying very high level radial load and amount of axial load. Bearings have special internal structure design, rolling element and raceway modification design, avoiding edge stress to guarantee the bearing with high load carrying capacity and adopt plastic-steel cage to benefit bearing high speed rotation.

## 3. Transmission and driving system bearing

### 3.1 axle gearbox bearing

The main function of rolling bearing in gearbox is mainly for output stable torque while the locomotive running at high speed, it means they must carry varying impact load under complicate environment. The type of bearings are mainly tapered roller bearing, four-point contact bearing and cylindrical roller bearing. The collocation of bearing varying in different types, mainly depend on gearbox design and working condition.

The main application performance of gearbox bearings are:

· High speed
· High Load Carrying
· Vibration and impact resistance
· High temperature resistance

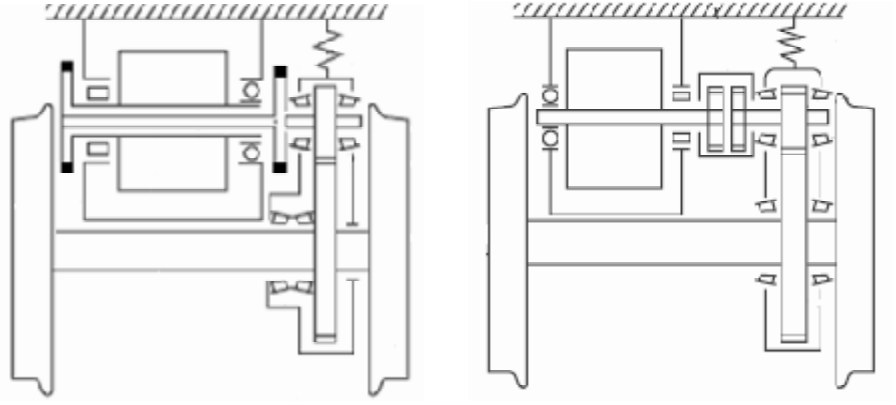
The bearing selection and confirmation is determined by related structure dimension of

gearbox , meanwhile shall consider elements of application above, generally it requires the calculated service life is over two million kilometers.

Besides the locomotive gearbox bearing made by ZWZ Group adopt special structure designs, in addition, improve cage strength through increasing the thickness pocket bar of the brass cage and conducting special surface treatment of pressed sheet-steel cage, in order to fulfill the effect of the impact caused by locomotive vehicle running in high speed. The main structural characteristics of the bearing are:

· Enhance internal design, improve bearing's load carrying capacity;

· Adopt high strength high quality copper alloy material, optimize cage structure design, to guarantee bearing rotating reliability;



Railway Locomotive Transmission And Driving System

### 3.2 Traction Motor Bearing

Traction motor is the key equipment in the locomotive transmission system, bearing is the critical component of traction motor, besides the bearing carrying the weight of rotor, it also need to bear the traction force and break force effects caused by frequent starting and break, meanwhile, it need to carry the impact load during running of the locomotive and the force generated by gear engagement. As a result, under such complicate working conditions, bearing must satisfy high running operating reliability and long service life requirement, so this makes greater requirements for bearing's design and manufacturing quality. The traction motor bearings developed by ZWZ Group are all conducted optimized designs depending on the actual demand of customer, through proper selection of clearance, optimized structure of cage, the advanced methods of ring and rolling element heat treatment processing technique, enhanced internal structure optimization, they improve bearing's design and manufacturing quality and ensure the bearing can satisfy the complicate working condition application and strict working requirement of the traction motor. The traction motor bearings always adopt Cylindrical roller bearing and Deep groove ball bearing, also part of traction motor's designs adopt Spherical roller bearing. The calculation life of the bearing is more than two million kilometers.

### 3.3 Axle box bearing

The two axle box bearings are mounted in the axle box applied to the locomotive vehicle with the structure of suspension type eclectic traction motor, to support the traction motor horizontal configured. Traction motor normally is supported on the bogie frame, the other side is supported on the axle through axle box bearing. In order to make the axle box bearing with high reliability and realize long operating life (in normal condition the operating condition shall be over 2 million km), the bearing applied in this position shall have high load carrying capacity. The high load caused by vibration and impact normally carried by the special tapered roller bearing with enhanced pressed metal cage.

### 3.4 Wheel Set hollow Axle Bearing(full suspension bearing)

This type of bearing is applied to wheel set hollow axle driving devices. The bearing for gear wheel is supported on the hollow axle sleeve which was fastened on the body of the traction motor and the bearing outer ring rotates. Wheel set hollow axle driving device is widely applied to the locomotive and bullet trains with high speed, the main characteristic is that the traction motor is fastened on the bogie frame, the weight of traction motor totally equals to the weight above the spring, reduced the weight below the spring, so that the wheeltrack vertical dynamic load is relatively small. The vertical and horizontal acceleration caused by wheeltrack impact on the rail where it is not smooth can not be delivered to the traction motor and traction gear unit pairs directly. The working condition of traction motor and traction gear pair is improved significantly, the failure rate decreases, service life extended and benefit the locomotive run at a high speed.

### 3.5 Transmission and Driving System Bearing Application Features

#### 3.5.1 Tapered Roller Bearing

Tapered roller bearing is separable, the cone assembly and cup can be separate and assembled independently. The modified liner contact of the rolling element and raceway avoid edge stress. Tapered roller bearing can carry high level axial and radial load. Because this type of bearing can carry the axial force in only one direction, so it should be applied in pairs. This type of bearings are applied in the gearbox and axle box.

#### 3.5.2 Four-point Contact Bearing

Four-point contact ball bearing is a kind of angular contact ball bearing. This type of bearing can carry axial load in double directions, generally together with cylindrical roller bearing which carry radial load, and adopt clearance fit in radial direction. The structure of inner ring is split type that can make bearing installed much more steel balls. This type of bearings are applied to gearbox.

#### 3.5.3 Cylindrical Roller Bearing

Single-row cylindrical roller bearing due to

the inner ring can be separated from the assembly made up of outer ring, roller and cage, extremely beneficial to bearing's mounting, dismounting, maintaining and inspection, therefore they are applied more widely than other types of bearing in railway bearing. Cylindrical roller bearing can carry high level of radial load, the modified liner contact of the rolling element and raceway can avoid edge stress and improve the reliability of the bearing in application. The combination of NJ and NUP type cylindrical roller bearing can carry amount of axial load. This type of bearing can be applied to traction motor, gearbox and wheel set hollow axle driving devices.

### 3.5.4 Insulated Bearing

Under some special or poor working conditions, journal box bearing and electronic motors can be damaged caused by additional voltage. Even the process technique of the electric motor is complete, it can not completely avoid the electric potential difference between the rotor and stator caused by electromagnetic asymmetry, so it formed closed circuit while the current went through the bearing. In order to avoid the circumstance above, the solution of ZWZ group, is to adopt bearing ceramic coating on the bearing outer ring surface, to blocking-up the voltage not lower than 1000V, to protect bearing not to t suffer the electric corrosion failure due to extra voltage.

## 4. Bearing Fit

### 4.1 The Purpose of Fit

The purpose of fit is to let the bearing inner ring or outer ring tight fastened on the shaft or housing, in order to avoid the disadvantageous relative sliding between the fitting surface. This type of disadvantageous relative sliding "called creep" can raise bearing's abnormal temperature rise, creeping abrasive in fitting surface(and then let the abrasive iron powder invade into the internal of bearings) and abnormal vibration and other operating failure. Hence, for the bearing, due to the rotation which carrying load, must let ring interference and let it strongly fasten with shaft or housing.

### 4.1.1 Dimensional Tolerance and Fit of The Shaft and Housing

Shaft and housing dimensional tolerance have already been standardized by GB/T275-93"Fit of Rolling Bering with Shaft and Housing " , select the dimensional tolerance inside so it can access and determine the fit between bearing and shaft or housing. For the specially required fit, it can be chosen from the agreement document provided by customers.

### 4.1.2 Selection of Fit

According to the load direction applied to the bearing, property and whether inner ring or outer ring rotating, the load can be divided into rotation load, static load or no directional load. The ring carrying rotation load and no directional load shall select interference fit, the ring carrying static load shall select clearance fit.

While bearing load is high or carrying vibration or impact load, the interference shall increase. While adopting hollow shaft or the bearing housing with thin wall or light alloy gearbox, it also shall increase interference. The selection of interference of the bearing can be calculated according to the methods as below:

(1) The effect of the magnitude of load

The inner ring under the radial load, initial interference shall be decreased. The decrease amount of interference can be calculated by the formula as below.

[Fr ≤0.25 Cor]

$$\triangle dF = 0.08\sqrt{\frac{d}{B}.Fr} \times 10^{-3}$$

[Fr >0.25 Cor]

$$\triangle dF = 0.02\frac{Fr}{B} \times 10^{-3}$$

△dF: the decrease amount of the inner ring interference
d: nominal bore diameter of bearing
B: nominal width of bearing inner ring
Fr: Radial load, N {kgf}
Cor: Basic rating static load, N {kgf}

(2) The effect of the roughness of the fitting surface

If considering the plastic deformation of salient point of the fitting surface, then the effective interference after fitting can be affected by the manufacturing precision to the fitting surface

[Grinded shaft]

$$\triangle deff = \frac{d}{d+2}\ \triangle d$$

[Turned shaft]

$$\triangle deff = \frac{d}{d+3}\ \triangle d$$

△deff: effective interference, mm
△d: actual interface, mm
d: bearing nominal bore diameter, mm

(3) Influence of temperature

In general, while in operation, the temperature of the bearing is higher than that of the components around, hence the inner ring temperature is higher than shaft temperature and the thermal expansion make the effective interference small.

The decrease amount of the interference due to the temperature difference can be calculated by formula as below.

$$\triangle dt = 0.0015\triangle t \cdot x10^{-3}$$

Besides, between the outer ring and housing, because of the temperature difference or the difference expansion factor, in return, the interference will be increased. So while choosing the fit between outer ring and housing, it need to consider the influence by the temperature.

(4) Minimum interface of bearing fitting

Comprehensively considered the magnitude of load, accuracy of fit and the influence by the temperature for bearings, the minimum interference of baring fit can be calculated according to the formula as below.

Fr≤0.25 Cor While

$$\triangle deff = \frac{d+2}{d}\left(0.08x\sqrt{Fr\ x\frac{d}{B}} + 0.0015x\triangle Txd\right)$$

Fr>0.25 Cor While

$$\triangle deff = \frac{d+2}{d}\left(0.02x\sqrt{Fr\ x\frac{d}{B}} + 0.0015x\triangle Txd\right)$$

(5) Others

For the extremely high requirements for the fit accuracy or applied to the working condition

with high rotation precision, high precision bearings shall be chosen, and improve the manufacturing precision of shaft and housing. Compared with shaft, the housing manufacturing is hard and the manufacturing precision is low, so that the fit between outer ring and housing can be relaxed appropriately. None-separable bearing (such as deep groove ball bearing) inner and outer ring all choose interference fit, but it is extremely not convenient for the mounting and dismounting the bearing, so based on the application of working condition, make one inner ring or outer ring adopt clearance fit.

## 5. Lubrication

Precondition for ensuring bearings long service life is clean working environment and good lubricating condition. As a result, good lubrication plays important role in improving bearing load capacity and service life.

### 5.1 Lubrication Effect

·Reduce the friction between the metal and slow wear;

·The formation of the oil film increase the contact area and reduce the contact stress;

· Make sure roller bearing can run for long time and prolong fatigue life under high frequent contact stress;

·Reduce friction heat, lower working temperature of bearing surface and avoid burning;

· Have anti-rust and anticorrosion effect.

### 5.2 Oil Lubrication

Oil lubrication is mainly used in gearbox bearing. The form of lubrication is splash lubrication and it is a common lubrication method applied in closed gear transmission device. Use gears to splash the oil on the bearing or flow into the predesigned oil tank along the box wall, then enter the roller bearing inside. For roller bearing lubrication, the used oil can be collected again in the box for recycling use. Because when roller bearings use splash lubrication, there is no auxiliary facilities, so it is often adopted by gear transmission device with simple and tight structure. But pay attention to 3 points as below when adopting splash lubrication:

(1) Lubrication oil surface can not be too high, or oil stirring loss will be too much. Meanwhile, sediment such as abrasive dust in the oil pool will be taken into bearing position and cause abrasive wear.

(2) Lubrication oil in the box should be kept clean, use magnetic adsorber in the oil pool to clean abrasive dust and foreign matter timely to Reduce the occurrence of abrasive wear.

(3) When designing structure, set a oil cistern on the box wall and an orifice leading into bearing to make bearings stay oil bath lubrication and drop lubrication state, as well as supplement lubrication and avoid insufficient oil supply.

### 5.3 Grease Lubrication

Grease lubrication is mainly applied in railway vehicles and can be used in axle box bearing, self-sealed bearing unit, traction motor bearing, axle hung bearing, full hanger bearing and so on. Normal rules on lubrication selection are as below:

(1) Working Temperature

The working temperature affects the viscosity variation and lubrication effect of the lubrication grease. So when the working temperature is low, the grease with low viscosity should be adopted; When the working temperature is high, the grease with high viscosity or with certain additive should be adopted. When the working temperature changes frequently, adopt grease with good viscosity-temperature characteristics whose viscosity will not change a lot as the working temperature increases or decreases, in order to ensure lubrication film thickness is controlled in a certain range.

(2) Working Speed

The higher rotation speed, the grease with lower viscosity should be used to avoid motion resistance increasing and generating too much heat; on the contrary, adopt grease with high viscosity when the rotation speed is low to enhance load capacity.

(3) Transport Property

The transport contains impact, vibration, frequent variable load, speed change and start. Parking, frequent inversion and round trip or intermittent movement are not good for forming oil film, so the grease with high viscosity should be applied.

(4) Working Load

The greater the load, the higher viscosity grease should be selected as well as with good EP properties, in order to avoid the grease squeezing out of the friction pair when with the high load and generate dry friction from direct contact between metal.

(5) Structure Characteristics

The smaller clearance of roller bearing, the higher working precision of the friction surface and the lower viscosity grease will be.

(6) Environment Condition

When the bearing works in the humid condition with corrosive gas, low temperature and dust, the grease is easy to be tainted, in this situation, should use the grease that is water-resistant, wear-resistant, corrode-resistant and cold-resistant.

(7) Bearing Precision

When the bearing movement friction surface is rough, it is common to use grease with high viscosity, in order to withstand big local stress caused by bad contact. When the precision of movement friction surface is high, the grease with low viscosity should be applied, so that the unnecessary energy losses and temperature rise can be reduced.

### 5.4 Wheel Bearing

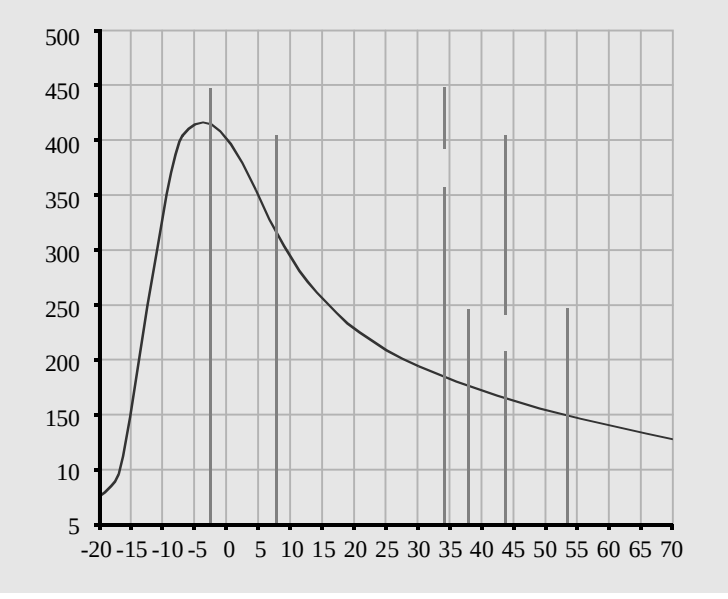
Railway wheel bearings often use special lubrication grease regulated by Ministry of Railways. Theses grease has been passed the test by using in railway vehicles and can satisfy the working condition of railway vehicles. For the bearings used in metro and light rail vehicles, the general recommendation is to use the grease specified by Ministry of Railways, such as railway*type grease, railway *type grease and locomotive wheel set lubrication grease, etc. Besides, it is also advised to use Mobil SHC series grease and Shell railway bearing grease, etc. For the grease of other bearing positions, it can select as customer's request or choose the proper grease according to the choice principle of the grease above.

## 6. Bearing Clearance

Theoretical clearance minus swelling or contraction amount caused by interference fit when mounting the bearing to the shaft or housing, the result of this clearance is called "mounting clearance". On the basis of mounting clearance, add or subtract the size change quantity caused by internal temperature

difference, the result of clearance is called "effective clearance". When the bearing is mounted in the machines rotating with a certain loads, the clearance resulted from adding amount of elastic deformation to the effect clearance is called "working clearance". When the working clearance value is micro negative, the bearing fatigue life is the longest, but with the negative clearance increases, the fatigue life decreases significantly. As a result, when choosing the bearing clearance, it is common to make the clearance zero or slightly positive for good.

Relationship between working clearance and fatigue life is shown as below ($10^4$km/10μm)




Bearing Life and Clearance Curve

## 7. Bearing Life

When the bearing is rotating with load, as alternating load continuously have effect on the ring raceway and rolling surface of rolling element, even under the conditions of normal use, there is still fish scale damage ( also called stripping or peeling) on the raceway surface and rolling surface because of material fatigue. The total number of rotating before these rolling fatigue damage happened is called "(fatigue)" life. Even bearings with the same structure, dimension, material and manufacturing method, under the same rotating condition, the bearing (fatigue) life still has large difference. This is because the material fatigue itself is dispersed and should be considered from the perspective of statistics. Then when the same batch bearings rotate under the same condition, the total number of rotating that 90% of the bearings without rolling fatigue damage is called "bearing basic rating life" (means reliability is 90% of life). When the rotation speed is fixed, it is also can be shown as total rotation time. But in the actual work, there are also other damages besides rolling fatigue damage. These damages can be avoided through reasonable bearing selection, mounting and lubricating, etc.

### 7.1 Basic Dynamic Load Rating

The basic rating dynamic load shows ability of bearing rolling fatigue resistance (means load capacity), it is the pure radial load witha rating size and direction, under the condition of inner ring rotating and outer ring fixed, the basic rating life can achieve one million revolutions. The basic rating dynamic load of radial bearing and thrust bearing are respectively called radial basic rating dynamic load and axial basic rating dynamic load, expressed as Cr and Ca and their values are listed in the bearing dimension table.

### 7.2 Basic Rating Life

Formula (1) Calculation formula of bearing basic rating life;
Formula (2) Life formula shown by time when the bearing rotation speed is fixed.

(Total rotations) $L_{10}=\left(\frac{C}{P}\right)^P$ ..... (1)

(Time) $L_{10h}=\frac{10^6}{60n}\left(\frac{C}{P}\right)^P$ ..... (2)

L10: Basic rating life, $10^6$ rotates
L10h: basic rating life, h
P: Equivalent Dynamic Load, N {kgf}
C: Basic static load rating N {kgf}
N: rotation speed,rpm
P: life factors
Ball bearing P=3
Roller bearing P= $10/3$

### 7.3 Dimension Stabilizing Treatment of Bearing

As the temperature of railway locomotive transmission and driving series bearings is high, the organization of bearing component material will change, the hardness will be reduced and the bearing service life will be shorter than that used in normal temperature.

When the material organization changes, bearings will not recover even the temperature changes to normal. So when the temperature of railway locomotive transmission and driving series bearings is more than 100 ℃, the bearings must be acted dimension stabilizing treatment.

Refer dimension stabilizing treatment specification as below:

| Dimension Stability Treatment Code | Operating Temperature Range |
|---|---|
| $S_0$ | Over100℃ to150℃ |
| $S_1$ | Over150℃ to200℃ |
| $S_2$ | Over200℃ to250℃ |

## 8. Bearing Reliability Test

Assembled bearing and every component material performance can all be tested in the inspection & test center of ZWZ. Through more than 200 different kinds of inspection instruments and more than 100 test equipments which are introduced and developed alone by ZWZ, there are about over 200 kinds of different design and dimension bearings test completed.



### 8.1 Material Performance Inspection and Lubrication Sealed Test Equipment

Material inspection equipment can do testing analysis on bearing parts material composition, microstructure performance. Coordinate measuring machining, roughmeter and profilometer can analyze bearing parts quality precisely, bearing dynamic analyzer can analyze the vibration noise of bearing and lubricant test equipment can make analysis and testing on different lubrication oil and grease.
















### 8.2 Special Wheel Bearing Test Bench

Railway axle box bearing reliability under the limiting condition is tested by railway bearing test bench, ZWZ railway bearing test bench is approved by Ministry of Railways and have performed relevant performance tests on domestic and foreign bearings many times according to Ministry of Railways requirements.

The special axle box bearing test bench can do tests on double-row tapered roller bearing and cylindrical roller bearing under stable radial load and alternating axial load, and provide testing results of radial load, axial load, temperature and noise. Because airflow has great influence on cooling axle box and axle box bearing in actual operation, the test bench is installed with wind cooling device whose simulated wind speed reaches 180km/h. According to TB/T3000 or DINEN 12082

standard., the test bench can make temperature rise performance and durability test, resistance to high and low temperature test and resistance to injection water infiltration test that includes injecting water continuously under the condition of still bearing axle box or with different working speed and no water is allowed to seep into the bearing in every testing working condition.

DINEN 12082 standard., the test bench can make temperature rise performance anddurability test, resistance to high and low temperature test and resistance to injection water infiltration test that includes injecting water continuously under the condition of still bearing axle box or with different working speed and no water is allowed to seep into the bearing in every testing working condition.



## 9. Wheel Bearing Installation and Maintenance

The railway wheel bearing unit is double-row tapered roller bearing or double-row cylindrical roller bearing, used in locomotive, passenger car, truck and urban rail transit vehicle. They have adjusted clearance, added lubrication grease and sealed safely when leaving factory. The bearings can be pushed to install on axle journal in the way of hydraulic pressure mode which is very simply and convenient, the can be pressed in the axle journal by only one step operation and fixed by bolts and attachments. When the axle journal and bearing ID dimension conform to the specified tolerances, bearings can reach the required axial clearance.

### 9.1 Bearing Press-fitting

(1) Bearing press-fitting should be performed in the clean and bright workshop. The equipment, tool and measuring instrument used in press-fitting should be kept clean.

(2) Before bearing press-fitting, scrap iron and dirt inside the center hole of shaft end and 3 bolt holes should be cleared away. Clean axle journal and dust guard seat, then measure axle journal, cylindricity and dust guard seat diameter. Then brush with antirust grease special for wheel axle journal with the thickness over 1mm on mounting face of root of axle journal, back porch of axle journal and dust guard seat. After that, paint antirust extreme pressure lithium-based grease type II on the axle journal uniformly.



(3) Install guide sleeve to the axle journal when bearing press-fitting, use sleeve for alignment and push bearing units to axle journal from the guide sleeve through hydraulic device. During press-fitting, Turn the bearing outer ring by hand and make it rotating flexible, in order to avoid clamping stagnation. If there is clamping stagnation, press-fitting must be stopped to check. Set press mounting force and end fitting force according to technical conditions of bearing press-fitting to make sure bearings are fitted in place.

(4) After press-fitting, the axial clearance value measured under specified axial thrust (tension) and the radial clearance after bearing mounting should conform to the technical requirements. Meanwhile, take running-in test that the rotation speed is higher than 200r/min and time is more than 5min. When doing test, the bearing rotation should have no abnormal noise.

### 9.2 Bearing Disassembly

When wheels need to be disassembled and the breakdown bearings need overhauling, the bearings need to be dismounted from the axle. No matter under what conditions, once the bearings are dismounted from axle, bearings must be disintegrated, cleaned, checked and made necessary repair.

Disassembly of bearing unites are the same as assembly with the help of guide sleeve and mounting sleeve or portable device. The force required by dismounting bearing from axle is about 20% higher of press mounting force.

When dismount the bearing from axle, it needs a guide sleeve fixed on the shaft end or pressure head to ensure the bearing parts are still a whole and not damaged. When take bearing off the guide sleeve, do not casually throw bearing to the ground from the high, in order to prevent bearing from damage.

Pay attention that traction horseshoe-shaped housing dimension matches with bearing dismounting size. It is greatly important for mounting and dismounting bearings successfully that the traction horseshoe-shaped housing connects with back ring well, and detacher and the axle journal are kept coaxial. Or the forces will be uneven and lead to hard dismounting.

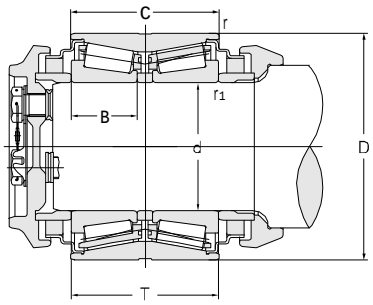
### 9.3 Maintenance and Overhauling During Operation

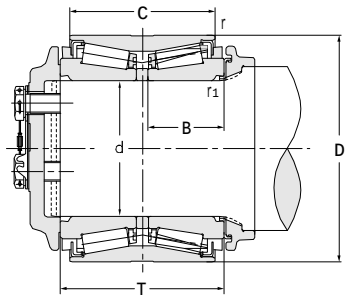
When vehicle runs for a certain range or needs overhauling for other reasons, the bearing units must be carefully checked to see if bearing is too hot, the lubricant leaks, sealed parts are damaged and if there is crack on the bearing outer ring, end cover and axle box body. If there is a problem, the bearing need to be dismounted, checked and repaired. When bearings run achieving the required design or mileage ( subject to the first coming), then they need overhauling.

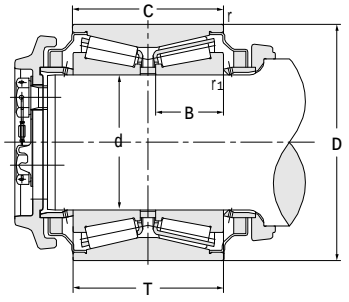
## 10. Railway Bearing Technical Services

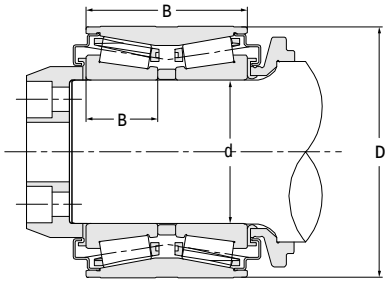
Our company can provide all-around professional technical service and high quality products to customers, the service range covers technical consultation in the field of practical application, product design, application calculation and test. Network of sales engineers, service and technical personnel for railway bearing spread across the country to make sure ZWZ make rapid response to customer demand.

d 99~150 mm



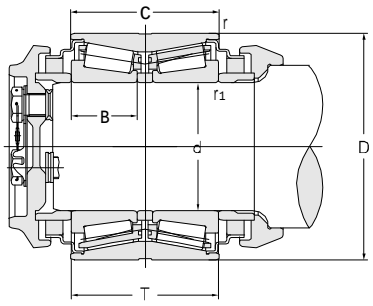



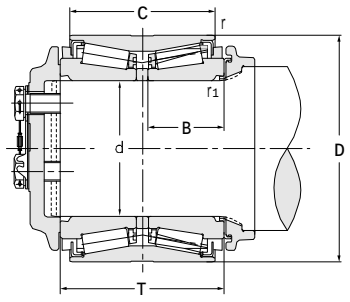



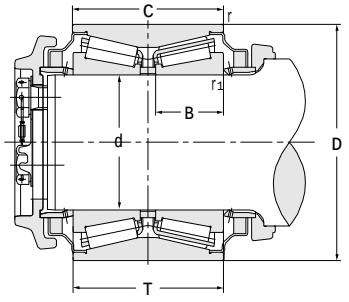

| Principal dimensions | | | | | | | Basic load ratings | |
|---|---|---|---|---|---|---|---|---|
| d | D | T | B | C | $r_{min}$ | $r1_{min}$ | Cr | Cor |
| mm | mm | mm | mm | mm | mm | mm | kN | |
| **99** | 182 | 117 | 52 | 117 | 2.5 | 1 | 535 | 917 |
| **99.5** | 182 | 117 | 52 | 117 | 2.5 | 1 | 535 | 917 |
| | 182 | 112 | 46 | 112 | 3 | 0.7 | 510 | 867 |
| **100** | 182 | 112 | 46 | 112 | 3 | 0.7 | 510 | 867 |
| | 182 | 117 | 52 | 117 | 2.5 | 1 | 535 | 917 |
| **110** | 195 | 126 | 57.658 | 131.35 | 1.5 | 0.6 | 570 | 1170 |
| **119.062** | 195.262 | 136.525 | 57.15 | 142.875 | 1.5 | 0.6 | 570 | 1170 |
| | 195.262 | 136.525 | 57.15 | 142.875 | 1.5 | 0.6 | 620 | 1050 |
| | 195.262 | 136.525 | 57.15 | 142.875 | 1.5 | 0.6 | 620 | 1050 |
| **130** | 230 | 150 | 67 | 150 | 2.5 | 1 | 882 | 1590 |
| | 230 | 176 | 79.5 | 160 | 8 | 0.8 | 870 | 1600 |
| | 230 | 166.35 | 75.675 | 150 | 2.5 | 1 | 870 | 1600 |
| | 230 | 150 | 67 | 150 | 2.5 | 1 | 890 | 1640 |
| **144.45** | 220.663 | 155.576 | 58.738 | 163.627 | 1.778 | 1.626 | 760 | 1310 |
| | 220.663 | 155.576 | 58.738 | 163.627 | 1.473 | 1.626 | 760 | 1310 |
| | 220.663 | 155.576 | 58.738 | 163.627 | 1.778 | 1.626 | 760 | 1310 |
| | 220.663 | 155.576 | 58.738 | 163.627 | 1.473 | 1.626 | 760 | 1310 |
| **150** | 250 | 180.6 | 83.15 | 160 | 3 | 1 | 968 | 1800 |
| | 250 | 180.6 | 83.15 | 160 | 3 | 1 | 968 | 1800 |
| | 250 | 180.6 | 83.15 | 160 | 2 | 1 | 1000 | 1930 |
| | 250 | 181.3 | 83.5 | 160 | 2 | 1 | 960 | 1900 |
| | 250 | 154.5 | 70.25 | 160 | 2.5 | 1 | 900 | 1820 |
| | 260 | 187 | 86.5 | 160 | 2.5 | 0.5 | 1060 | 2040 |
| | 250 | 156 | 71 | 160 | 2.5 | 0.5 | 962 | 1926 |
| | 250 | 156 | 71 | 160 | 2.5 | 0.5 | 962 | 1900 |
| | 270 | 170 | 75 | 170 | 2.5 | 0.7 | 1220 | 2470 |
| | 270 | 170 | 75 | 170 | 2.5 | 0.7 | 1220 | 2470 |
| | 270 | 170 | 75 | 170 | 2.5 | 0.7 | 1220 | 2470 |
| | 270 | 170 | 75 | 170 | 2.5 | 0.7 | 1220 | 2470 |

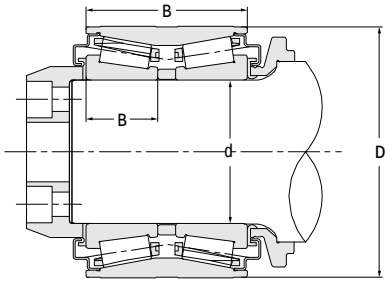
| Designations | Calculation coefficient | | | | Weight | Mounting position |
|---|---|---|---|---|---|---|
| | e | Y1 | Y2 | Yo | | |
| | mm | | | | kg | |
| **197720K2ZC** | 0.26 | 2.55 | 3.80 | 1.25 | 21.8 | Railway wagon journal box free bearing |
| **197720K1ZC** | 0.26 | 2.55 | 3.80 | 1.25 | 21.8 | Railway wagon journal box free bearing |
| **97720K** | 0.40 | 1.68 | 2.50 | 0.82 | 12.9 | Railway wagon journal box free bearing |
| **97720** | 0.40 | 1.68 | 2.50 | 0.82 | 12.9 | Railway wagon journal box free bearing |
| **197720ZC** | 0.26 | 2.55 | 3.80 | 1.25 | 15.7 | Railway wagon journal box free bearing |
| **352222X3-2RS-ZC** | 0.26 | 2.55 | 3.80 | 1.25 | 21.3 | Railway wagon journal box free bearing |
| **3506/119X4-2RS-ZC** | 0.26 | 2.55 | 3.80 | 1.25 | 22.1 | Railway wagon journal box free bearing |
| **HM124646/HM124618XD** | 0.26 | 2.55 | 3.80 | 1.25 | 19.9 | Railway wagon journal box free bearing |
| **197924** | 0.26 | 2.55 | 3.80 | 1.25 | 25.3 | Railway wagon journal box free bearing |
| **352226X2-2RZ-ZC** | 0.26 | 2.55 | 3.80 | 1.25 | 28.84 | Railway wagon wheel set journal box free |
| **352226GS** | 0.26 | 2.55 | 3.80 | 1.25 | 28 | Railway high-speed vehicle journal box |
| **352226X2B** | 0.26 | 2.55 | 3.80 | 1.25 | 29 | Subway vehicle journal box |
| **352226X2A-ZC** | 0.25 | 2.69 | 4.00 | 1.31 | 28.82 | Railway wagon wheel set journal box free |
| **KHM129848/KHM129814XD** | 0.26 | 2.56 | 3.81 | 1.25 | 23 | Railway wagon journal box free for export |
| **HM129848/HM129814XD** | 0.26 | 2.56 | 3.81 | 1.25 | 18.2 | Railway wagon journal box free for export |
| **TBU6X11-1** | 0.26 | 2.56 | 3.81 | 1.25 | 25.9 | Railway wagon journal box free for export |
| **TBU6X11** | 0.26 | 2.56 | 3.81 | 1.25 | 25 | Railway wagon journal box free for export |
| **353130B** | 0.26 | 2.56 | 3.81 | 1.25 | 32.3 | Railway wagon wheel set journal box free |
| **353130B-ZC** | 0.26 | 2.56 | 3.81 | 1.25 | 41.2 | Railway wagon journal box free for export |
| **353130X2-2RS-ZC** | 0.26 | 2.55 | 3.80 | 1.25 | 32.1 | Railway wagon journal box free for export |
| **353130X2-2RS-1-ZC** | 0.26 | 2.55 | 3.80 | 1.25 | 41.6 | Railway wagon journal box free for export |
| **353130X2-2RS-2-ZC** | 0.26 | 2.55 | 3.80 | 1.25 | 34.4 | Railway wagon journal box free for export |
| **353130X3-2RS-ZC** | 0.26 | 2.55 | 3.80 | 1.25 | 48.1 | Railway wagon journal box free for export |
| **353130X2-2RZ-ZC** | 0.26 | 2.55 | 3.80 | 1.25 | 35.48 | Railway wagon journal box free for export |
| **353130A-ZC** | 0.26 | 2.55 | 3.80 | 1.25 | 35.48 | Railway wagon journal box free for export |
| **197730** | 0.27 | 2.47 | 3.67 | 1.21 | 43.8 | Railway wagon journal box free for export |
| **197730Y** | 0.27 | 2.47 | 3.67 | 1.21 | 46.8 | Railway wagon journal box free for export |
| **197730Y1** | 0.27 | 2.47 | 3.67 | 1.21 | 42.9 | Railway wagon journal box free for export |
| **197730Y2** | 0.27 | 2.47 | 3.67 | 1.21 | 46.8 | Railway wagon journal box free for export |

d 157.15~177.787 mm



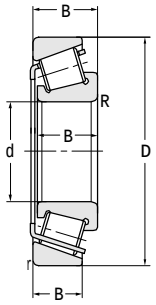




| Principal dimensions | | | | | | | Basic load ratings | |
|---|---|---|---|---|---|---|---|---|
| d | D | T | B | C | $r_{min}$ | $r1_{min}$ | Cr | Cor |
| mm | mm | mm | mm | mm | mm | mm | kN | |
| **157.15** | 252.489 | 177.8 | 69.85 | 184.277 | 1.778 | 1.626 | 910 | 1850 |
| | 252.489 | 177.8 | 69.85 | 184.277 | 1.778 | 1.626 | 910 | 1850 |
| **160** | 270 | 195 | 91 | 170 | 2.5 | 0.5 | 1200 | 2370 |
| | 270 | 195 | 90.5 | 170 | 2.5 | 1 | 1200 | 2320 |
| | 270 | 195 | 90.5 | 170 | 3 | 1 | 1300 | 2400 |
| | 280 | 180 | 80 | 180 | 1 | 2 | 1250 | 2390 |
| **165.087** | 301.701 | 190.5 | 87.312 | 196.85 | 4.8 | 1 | 1320 | 2660 |
| | 301.701 | 190.5 | 87.312 | 196.85 | 4.8 | 1 | 1320 | 2660 |
| | 301.701 | 190.475 | 87.3 | 196.85 | 4.8 | 0.5 | 1540 | 2960 |
| | 301.701 | 191.745 | 87.312 | 196.85 | 0.5 | 2 | 1540 | 2960 |
| **170** | 305 | 190.5 | 87.3 | 196 | 4.8 | 1 | 1320 | 2650 |
| **174.612** | 301.701 | 191.745 | 87.3 | 196.85 | 4.8 | 1 | 1540 | 2960 |
| | 301.701 | 190.475 | 87.312 | 196.85 | 2 | 0.5 | 1540 | 2960 |
| **175** | 305 | 190.475 | 87.3 | 196 | 4.8 | 1 | 1320 | 2650 |
| | 305 | 190.475 | 87.3 | 196 | 4.8 | 1 | 1320 | 2650 |
| **177.787** | 276.225 | 180.975 | 74.612 | 185.852 | 1.5 | 1 | 1130 | 2520 |
| | 276.225 | 180.975 | 74.612 | 185.852 | 1.5 | 1 | 1130 | 2520 |
| | 276.225 | 181.36 | 74.612 | 185.72 | 2 | 0.5 | 1380 | 2630 |

| Designations | Calculation coefficient | | | | Weight | Mounting position |
|---|---|---|---|---|---|---|
| | e | Y1 | Y2 | Yo | | |
| | mm | | | | kg | |
| **TBU61/2X12** | 0.26 | 2.56 | 3.81 | 1.25 | 36.8 | Railway wagon journal box free bearing for export |
| **KHM133444/KHM133416XDA** | 0.26 | 2.56 | 3.81 | 1.25 | 36.8 | Railway wagon journal box free bearing for export |
| **352132A-ZC** | 0.26 | 2.55 | 3.80 | 1.25 | 40.5 | Railway wagon wheel set journal box free |
| **353132X2A-ZC** | 0.26 | 2.55 | 3.80 | 1.25 | 53.3 | Railway wagon wheel set journal box free |
| **353132X2-2RS-ZC** | 0.26 | 2.55 | 3.80 | 1.25 | 53 | Railway wagon wheel set journal box free |
| **352132X3** | 0.26 | 2.55 | 3.80 | 1.25 | 46.1 | Railway "Harmonious" series journal box |
| **197933** | 0.35 | 1.95 | 2.90 | 0.95 | 72 | Railway locomotive wheel set journal box free |
| **197933S** | 0.35 | 1.95 | 2.90 | 0.95 | 72 | Railway locomotive wheel set journal box free |
| **GG6 1/2** | 0.29 | 1.95 | 3.45 | 1.13 | 77.3 | Railway wagon journal box free for export |
| **GG6 1/2-1** | 0.35 | 2.32 | 2.90 | 0.95 | 65.9 | Railway wagon journal box free for export |
| **350634X3-2RS** | 0.35 | 1.95 | 2.90 | 0.95 | 66 | Railway locomotive wheel set journal box free |
| **GG6 7/8** | 0.29 | 2.32 | 3.45 | 1.13 | 72.2 | Railway wagon journal box free for export |
| **GG6 7/8-1** | 0.35 | 1.95 | 2.9 | 0.95 | 59.1 | Railway wagon journal box free for export |
| **197735** | 0.35 | 1.95 | 2.90 | 0.95 | 63.7 | Railway wagon journal box free |
| **197735ZC** | 0.35 | 1.95 | 2.90 | 0.95 | 77.2 | Railway wagon journal box free |
| **197935** | 0.26 | 2.55 | 3.80 | 1.25 | 44.5 | Railway wagon journal box free |
| **197935ZC** | 0.26 | 2.55 | 3.80 | 1.25 | 59.7 | Railway wagon journal box free |
| **7x12** | 0.26 | 2.55 | 3.8 | 1.25 | 40.0 | Railway wagon journal box free for export |

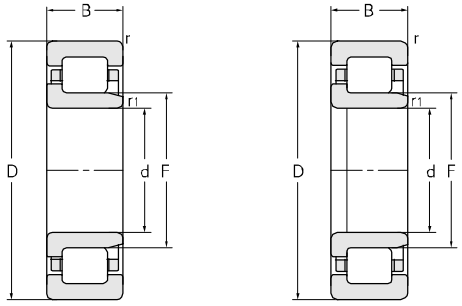
d 120~130 mm




| Principal dimensions | | | | | | | Basic load ratings | |
|---|---|---|---|---|---|---|---|---|
| d | D | T | B | C | $R_{min}$ | $r_{min}$ | Cr | Cor |
| mm | mm | mm | mm | mm | mm | mm | kN | |
| **120** | 180 | 48 | 48 | 38 | 2.5 | 2 | 295 | 530 |
| **130** | 230 | 67.75 | 64 | 54 | 4 | 3 | 560 | 855 |

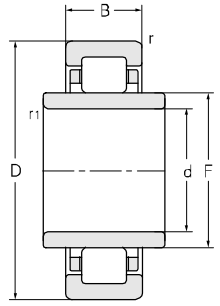
| Limit speed ratings | | Designations | Calculation coefficient | | | | Weight | Mounting position |
|---|---|---|---|---|---|---|---|---|
| 转速(Grease) | 转速(Oil) | | e | Y1 | Y2 | Yo | | |
| r/min | r/min | | mm | | | | kg | |
| 1800 | 2600 | **33024A** | 0.31 | 2 | 1.1 | 36 | 4.17 | Light rail axle box |
| 1500 | 2000 | **32226A** | 0.44 | 1.4 | 0.76 | 57 | 11.7 | Light rail axle box |

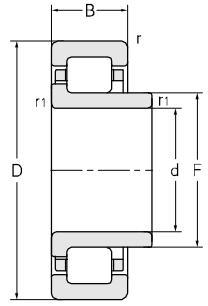
d 80~130 mm

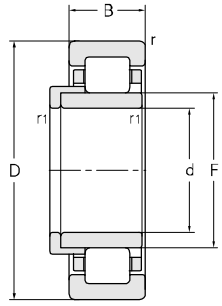






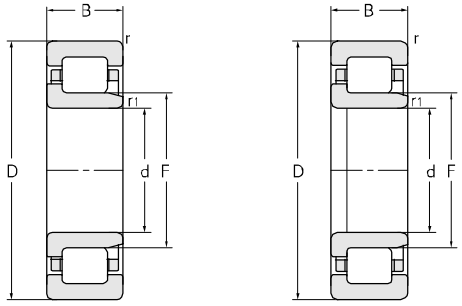


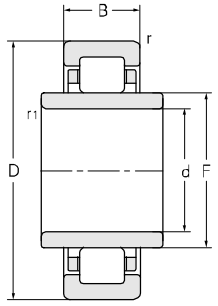

| Principal dimensions | | | | | | Basic load ratings | | Limit speed ratings | | Designations | Weight | Mounting position |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{s\,min}$ | $r1_{s\,min}$ | F | Cr | Cor | Grease | Oil | | | |
| mm | mm | mm | mm | mm | mm | kN | | r/min | r/min | | kg | |
| **80** | 150 | 45 | 2 | 2 | 97 | 245 | 320 | 3700 | 4500 | **NJ3216X3M/P54** | 3.69 | Tourist coach axle box |
| | 150 | 45 | 2 | 2 | 97 | 245 | 320 | 3700 | 4500 | **NJP3216X3M/P54** | 3.69 | Tourist coach axle box |
| | 150 | 90 | 2 | 2 | 97 | 420 | 640 | 3700 | 4500 | **NJ/NJP3216X3M/P54** | 7.40 | Tourist coach axle box |
| **100** | 180 | 60.3 | 2.1 | 2.1 | 119 | 335 | 440 | 3200 | 3800 | **NJ3220TN1/HG2P54** | 6.00 | Railway vehicle axle box Subway vehicle axle box |
| | 180 | 60.3 | 2.1 | 2.1 | 119 | 335 | 440 | 3200 | 3800 | **NJP3220TN1/HG2P54** | 5.98 | Railway vehicle axle box Subway vehicle axle box |
| | 215 | 73 | 3 | 3 | 127.5 | 530 | 650 | 2560 | 3150 | **4G42620EQT** | 13.4 | Railway vehicles axle box |
| | 215 | 73 | 3 | 3 | 127.5 | 530 | 650 | 2560 | 3150 | **4G152620EQT** | 13.5 | Railway vehicles axle box |
| **119** | 240 | 80 | 3.7 | 3 | 150 | 535 | 708 | 2400 | 3200 | **42724QK1T** | 17.3 | Railway passenger car axle box |
| | 240 | 80 | 3.7 | 3 | 150 | 535 | 708 | 2400 | 3200 | **152724QK1T** | 17.4 | Railway passenger car axle box |
| **119.5** | 240 | 80 | 3.7 | 3 | 150 | 535 | 708 | 2400 | 3200 | **152724QKT** | 17.2 | Railway passenger car axle box |
| | 240 | 80 | 3.7 | 3 | 150 | 535 | 708 | 2400 | 3200 | **42724QKT** | 17.2 | Railway passenger car axle box |
| **120** | 240 | 80 | 3.7 | 3 | 150 | 535 | 708 | 2400 | 3200 | **42724QT** | 17.1 | Railway passenger car axle box |
| | 240 | 80 | 3.7 | 3 | 150 | 535 | 708 | 2400 | 3200 | **152724QT** | 17.2 | Railway passenger car axle box |
| | 250 | 80 | 3.7 | 3 | 158 | 604 | 807 | 1800 | 2200 | **NJ3226X1K2** | 18.4 | Railway passenger car axle box |
| | 250 | 80 | 3.7 | 3 | 158 | 604 | 807 | 1800 | 2200 | **NJP3226X1K2** | 18.6 | Railway passenger car axle box |
| **129.5** | 250 | 80 | 3.7 | 3 | 158 | 604 | 807 | 1800 | 2200 | **NJ3226X1K1** | 18.4 | Railway passenger car axle box |
| | 250 | 80 | 3.7 | 3 | 158 | 604 | 807 | 1800 | 2200 | **NJP3226X1K1** | 18.5 | Railway passenger car axle box |
| **130** | 220 | 62 | 2.1 | 2.1 | 150 | 480 | 675 | 2200 | 2800 | **NJ2226X3TN1/HG2P64** | 8.69 | Railway vehicle axle box |
| | 220 | 62 | 2.1 | 2.1 | 150 | 480 | 675 | 2200 | 2800 | **NJP2226X3TN1/HG2P64** | 8.68 | Railway vehicle axle box |
| | 230 | 64 | 3 | 3 | 156 | 410 | 590 | 2200 | 2800 | **NJ2226Q1/C4S0** | 11.9 | Railway locomotive security vehicle axle box |
| | 230 | 64 | 3 | 3 | 156 | 410 | 590 | 2200 | 2800 | **NJP2226Q1/C4S0** | 11.9 | Railway locomotive security vehicle axle box |
| | 240 | 80 | 3 | 3 | 156 | 580 | 800 | 2200 | 2800 | **NJ3226X1SCTN** | 14.95 | Quasi high speed passenger car axle box |
| | 240 | 80 | 3 | 3 | 156 | 580 | 800 | 2200 | 2800 | **NJP3226X1SCTN** | 14.79 | Quasi high speed passenger car axle box |
| | 240 | 160 | 3 | 3 | 156 | 580 | 800 | 2200 | 2800 | **NJ/NJP3226X1SCTN** | 29.74 | Quasi high speed passenger car axle box |
| | 250 | 80 | 3.7 | 3 | 158 | 604 | 807 | 1800 | 2200 | **NJP3226X1** | 18.5 | Railway passenger car axle box |
| | 250 | 80 | 3.7 | 3 | 158 | 604 | 807 | 1800 | 2200 | **NJ3226X1** | 18.3 | Railway passenger car axle box |
| | 280 | 93 | 4 | 4 | 167 | 880 | 1160 | 2560 | 3150 | **4G42626EQT** | 29 | Railway vehicles axile box |
| | 280 | 93 | 4 | 4 | 167 | 880 | 1160 | 2560 | 3150 | **4G152626EQT** | 29 | Railway vehicles axile box |

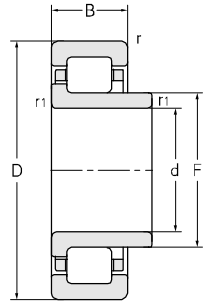
d 140~158.5 mm

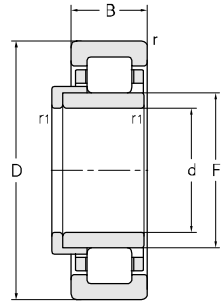






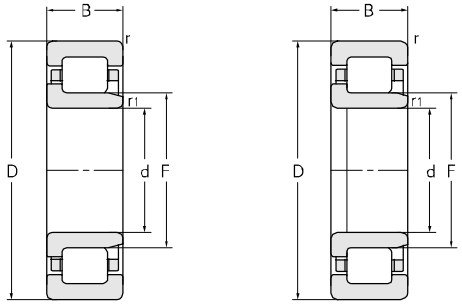


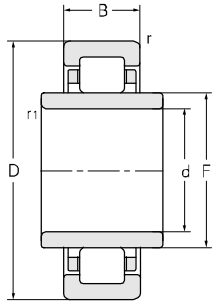

| Principal dimensions | | | | | | Basic load ratings | | Limit speed ratings | | Designations | Weight | Mounting position |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{s\,min}$ | $r_{1s\,min}$ | F | Cr | Cor | Grease | Oil | | | |
| mm | mm | mm | mm | mm | mm | kN | | r/min | r/min | | kg | |
| **140** | 250 | 68 | 3 | 3 | 169 | 510 | 755 | 2000 | 2600 | **NJP2228Q1/C4S0** | 15.1 | Engineering vehicle axle box |
| | 250 | 68 | 3 | 3 | 169 | 510 | 755 | 2000 | 2600 | **NJ2228Q1/C4S0** | 15.1 | Engineering vehicle axle box |
| **160** | 290 | 80 | 3 | 3 | 193 | 935 | 1130 | 1800 | 2200 | **NU2232WBQ1/YB2** | 24.8 | Railway locomotive axle box |
| | 290 | 80 | 3 | 3 | 193 | 935 | 1130 | 1800 | 2200 | **NJ2232WB1Q1/YB2** | 26 | Railway locomotive axle box |
| | 290 | 80 | 3 | 3 | 193 | 935 | 1130 | 1800 | 2200 | **NU2232WBQ1/YB2+HJR2** | 26.5 | Railway locomotive axle box |
| | 290 | 80 | 3 | 3 | 193 | 935 | 1130 | 1800 | 2200 | **NU2232WBQ1/YB2+HJR** | 27.1 | Railway locomotive axle box |
| | 290 | 80 | 3 | 3 | 193 | 935 | 1130 | 1800 | 2200 | **NU2232WBQ1/YB2+HJR1** | 27.1 | Railway locomotive axle box |
| | 290 | 80 | 3 | 3 | 193 | 935 | 1130 | 1800 | 2200 | **NU2232WB** | 24.8 | Railway locomotive axle box |
| | 290 | 80 | 3 | 3 | 193 | 935 | 1130 | 1800 | 2200 | **NUHJ2232WB** | 27.2 | Railway locomotive axle box |
| | 290 | 80 | 3 | 3 | 193 | 935 | 1130 | 1800 | 2200 | **NJ2232WB** | 26 | Railway locomotive axle box |
| | 290 | 80 | 3 | 3 | 193 | 935 | 1130 | 1800 | 2200 | **NUHJ2232WBY1** | 26.6 | Railway locomotive axle box |
| | 290 | 80 | 3 | 3 | 193 | 935 | 1130 | 1800 | 2200 | **NJ2232WB11Q1/YB2** | 24.2 | Railway locomotive axle box |
| | 290 | 80 | 3 | 3 | 193 | 935 | 1130 | 1800 | 2200 | **NJ2232WBY** | 24.2 | Railway locomotive axle box |
| | 290 | 80 | 3 | 3 | 193 | 935 | 1130 | 1800 | 2200 | **NUHJ2232WBY** | 27.2 | Railway locomotive axle box |
| **159.5** | 290 | 80 | 3 | 3 | 193 | 935 | 1130 | 1800 | 2200 | **NU2232WBK** | 24.8 | Railway locomotive axle box |
| | 290 | 80 | 3 | 3 | 193 | 935 | 1130 | 1800 | 2200 | **NJ2232WBK** | 26 | Railway locomotive axle box |
| | 290 | 80 | 3 | 3 | 193 | 935 | 1130 | 1800 | 2200 | **NUHJ2232WBK** | 27.2 | Railway locomotive axle box |
| | 290 | 80 | 3 | 3 | 193 | 935 | 1130 | 1800 | 2200 | **NUHJ2232WBY1K** | 26.6 | Railway locomotive axle box |
| | 290 | 80 | 3 | 3 | 193 | 935 | 1130 | 1800 | 2200 | **NUHJ2232WBYK** | 27.2 | Railway locomotive axle box |
| | 290 | 80 | 3 | 3 | 193 | 935 | 1130 | 1800 | 2200 | **NJ2232WBYK** | 24.3 | Railway locomotive axle box |
| **159** | 290 | 80 | 3 | 3 | 193 | 935 | 1130 | 1800 | 2200 | **NJ2232WBK1** | 26 | Railway locomotive axle box |
| | 290 | 80 | 3 | 3 | 193 | 935 | 1130 | 1800 | 2200 | **NUHJ2232WBK1** | 27.2 | Railway locomotive axle box |
| | 290 | 80 | 3 | 3 | 193 | 935 | 1130 | 1800 | 2200 | **NU2232WBK1** | 24.8 | Railway locomotive axle box |
| | 290 | 80 | 3 | 3 | 193 | 935 | 1130 | 1800 | 2200 | **NUHJ2232WBY1K1** | 26.6 | Railway locomotive axle box |
| | 290 | 80 | 3 | 3 | 193 | 935 | 1130 | 1800 | 2200 | **NUHJ2232WBYK1** | 27.2 | Railway locomotive axle box |
| | 290 | 80 | 3 | 3 | 193 | 935 | 1130 | 1800 | 2200 | **NJ2232WBYK1** | 24.4 | Railway locomotive axle box |
| **158.5** | 290 | 80 | 3 | 3 | 193 | 935 | 1130 | 1800 | 2200 | **NJ2232WBK2** | 26.4 | Railway locomotive axle box |
| | 290 | 80 | 3 | 3 | 193 | 935 | 1130 | 1800 | 2200 | **NU2232WBK2** | 25.0 | Railway locomotive axle box |
| | 290 | 80 | 3 | 3 | 193 | 935 | 1130 | 1800 | 2200 | **NUHJ2232WBK2** | 27.4 | Railway locomotive axle box |
| | 290 | 80 | 3 | 3 | 193 | 935 | 1130 | 1800 | 2200 | **NUHJ2232WBY1K2** | 26.9 | Railway locomotive axle box |
| | 290 | 80 | 3 | 3 | 193 | 935 | 1130 | 1800 | 2200 | **NUHJ2232WBYK2** | 27.5 | Railway locomotive axle box |
| | 290 | 80 | 3 | 3 | 193 | 935 | 1130 | 1800 | 2200 | **NJ2232WBYK2** | 24.5 | Railway locomotive axle box |

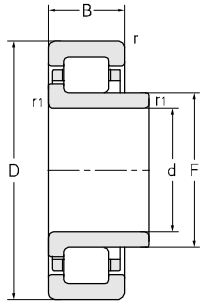
d 158 mm

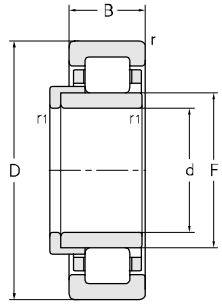






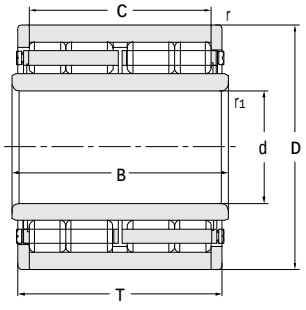


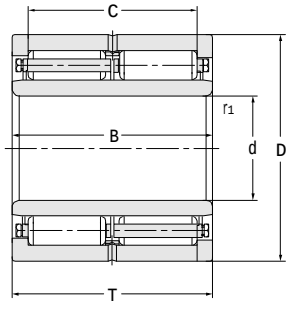



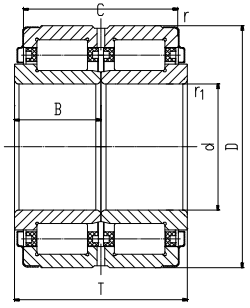



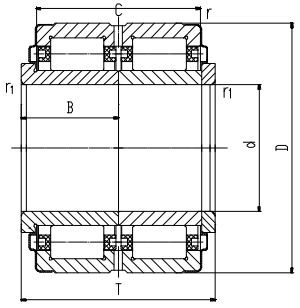

| Principal dimensions | | | | | | Basic load ratings | | Limit speed ratings | | Designations | Weight | Mounting position |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{s\,min}$ | $r_{1s\,min}$ | F | $C_r$ | $C_{or}$ | Grease | Oil | | | |
| mm | mm | mm | mm | mm | mm | kN | | r/min | r/min | | kg | |
| **158** | 290 | 80 | 3 | 3 | 193 | 935 | 1130 | 1800 | 2200 | **NJ2232WBK3** | 26.5 | Railway locomotive axle box |
| | 290 | 80 | 3 | 3 | 193 | 935 | 1130 | 1800 | 2200 | **NU2232WBK3** | 25.1 | Railway locomotive axle box |
| | 290 | 80 | 3 | 3 | 193 | 935 | 1130 | 1800 | 2200 | **NUHJ2232WBK3** | 27.5 | Railway locomotive axle box |
| | 290 | 80 | 3 | 3 | 193 | 935 | 1130 | 1800 | 2200 | **NUHJ2232WBY1K3** | 27.0 | Railway locomotive axle box |
| | 290 | 80 | 3 | 3 | 193 | 935 | 1130 | 1800 | 2200 | **NUHJ2232WBYK3** | 27.6 | Railway locomotive axle box |
| | 290 | 80 | 3 | 3 | 193 | 935 | 1130 | 1800 | 2200 | **NJ2232WBYK3** | 24.6 | Railway locomotive axle box |

**d 159~160 mm**



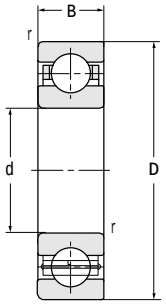




| Principal dimensions | | | | | | | | Basic load ratings | |
|---|---|---|---|---|---|---|---|---|---|
| d | D | B | C | T | $r_{s\,min}$ | $r1_{s\,min}$ | F | $C_r$ | $C_{or}$ |
| mm | mm | mm | mm | mm | mm | mm | mm | kN | |
| **159** | **290** | **220** | **178** | **220** | **3** | **3** | **191** | **1900** | **3580** |
| **159.5** | **290** | **220** | **178** | **220** | **3** | **3** | **191** | **1900** | **3580** |
| **160** | **270** | **85** | **146** | **170** | **3** | **3** | **182** | **1080** | **1830** |
| | **270** | **88** | **146** | **176** | **3** | **3** | **182** | **1080** | **1830** |
| | **280** | **90** | **155** | **180** | **3** | **3** | **190** | **1250** | **2160** |
| | **290** | **220** | **178** | **206** | **3** | **3** | **191** | **1900** | **3580** |
| | **290** | **180** | **152** | **180** | **3** | **3** | **191** | **1870** | **3520** |
| | **290** | **180** | **152** | **180** | **3** | **3** | **191** | **1870** | **3520** |

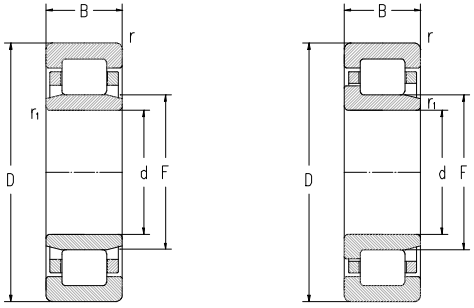
| Designations | Weight | Mounting position |
|---|---|---|
| | kg | |
| **972832K1QT** | **67.5** | Railway locomotive axle box |
| **972832KQT** | **67.3** | Railway locomotive axle box |
| **NNJ5132X2** | **34** | Railway "harmonious" series locomotive axle box |
| **NNUP5132X2** | **33.9** | Railway "harmonious" series locomotive axle box |
| **NNUP5232X3** | **40.8** | Railway "harmonious" series locomotive axle box |
| **972832QT** | **67.2** | Railway locomotive axle box |
| **982832QT** | **56.8** | Railway locomotive axle box |
| **982832Q1T** | **54.4** | Railway locomotive axle box |

d 60~170 mm



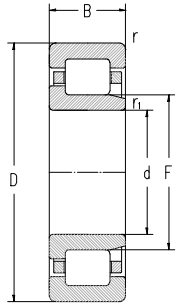

| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | | Designations(New) | Designations(Old) | Weight | Mounting position |
|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $r_{s\,min}$ | $C_r$ | $C_{or}$ | Grease | Oil | | | | |
| mm | mm | mm | mm | kN | | r/min | r/min | | | kg | |
| **60** | 130 | 31 | 2.1 | 82.0 | 52.0 | 5300 | 6300 | **6312Q/P64S0** | **4E312QT** | 2.07 | Locomotive traction motor Railway locomotive traction motor |
| **170** | 260 | 42 | 2.1 | 170 | 171 | 2200 | 2800 | **6034Q/C4S0** | **4G134QT** | 7.94 | Railway locomotive axle box |

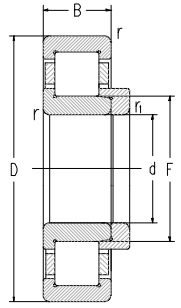
d 80~150 mm





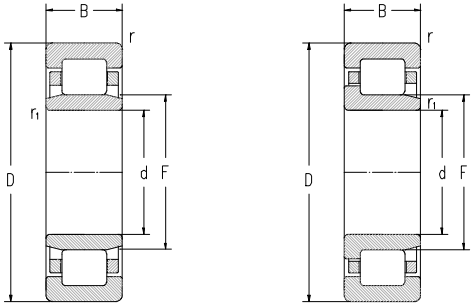




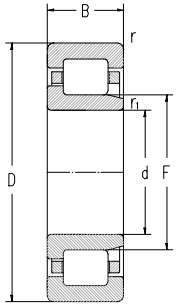

| Principal dimensions | | | | | | Basic load ratings | | Limit speed ratings | | Designations(New) | Designations(Old) | Weight | Mounting position |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $rs_{min}$ | $r1s_{min}$ | F | Cr | Cor | Grease | Oil | | | | |
| mm | mm | mm | mm | mm | mm | kN | | r/min | r/min | | | kg | |
| **80** | 140 | 26 | 2 | 2 | 95 | 135 | 170 | 4000 | 4800 | **NU216Q1** | | 1.74 | Subway gearbox |
| | 170 | 39 | 2.1 | 2.1 | 103 | 204 | 228 | 3200 | 3800 | **NU316Q/P64S0** | **4E32316QT** | 4.45 | Locomotive traction motor |
| | 170 | 58 | 2.1 | 2.1 | 103 | 304 | 380 | 3200 | 3800 | **NU2316Q/P63S0Y** | **3E32616QKT** | 6.23 | Locomotive axle gearbox |
| **85** | 210 | 52 | 4 | 4 | 113 | 400 | 485 | 2900 | 3600 | **NUP417Q/C9S0** | **92417QTU** | 10.4 | Locomotive traction motor |
| **90** | 190 | 43 | 3 | 3 | 115 | 270 | 315 | 2800 | 3400 | **NH318Q/C4S0** | **4G62318QT** | 6.63 | Locomotive traction motor |
| | 190 | 43 | 3 | 3 | 115 | 270 | 315 | 2800 | 3400 | **NH318Q/C9S0** | **62318QTU** | 6.63 | Locomotive traction motor |
| | 190 | 43 | 3 | 3 | 113.5 | 300 | 330 | 2590 | 3190 | **NH318EQ1/YB2** | | 6.64 | Traction motor |
| **95** | 200 | 67 | 3 | 3 | 121.5 | 413 | 530 | 2600 | 3200 | **NU2319Q/C4S0** | **4G32619QT** | 9.86 | Locomotive axle gearbox |
| | 215 | 47 | 3 | 3 | 129.5 | 335 | 370 | 2400 | 3000 | **NH320Q/S0** | **62320QT** | 9.64 | Locomotive traction motor |
| | 215 | 47 | 3 | 3 | 129.5 | 335 | 370 | 2400 | 3000 | **NH320Q/C9S0** | **62320QTU** | 9.64 | Locomotive traction motor |
| **110** | 240 | 50 | 3 | 3 | 143 | 455 | 515 | 2000 | 2600 | **NH322Q/S0** | **62322QT** | 13.0 | Locomotive traction motor |
| | 240 | 80 | 3 | 3 | 143 | 610 | 770 | 2000 | 2600 | **NU2322EQ/S0** | **32622EQT** | 17.6 | Locomotive axle gearbox |
| **120** | 215 | 40 | 2.1 | 2.1 | 143.5 | 375 | 485 | 2400 | 3000 | **NU224EQ/P63S0** | **3E32224EQT** | 6.88 | Locomotive axle gearbox |
| | 310 | 72 | 5 | 5 | 170 | 730 | 855 | 1900 | 2400 | **NU424Q/C4S0** | **4G32424QT** | 28.8 | Locomotive traction motor |
| **130** | 230 | 64 | 3 | 3 | 153.5 | 525 | 735 | 2200 | 2800 | **NU2226EQ/P63S0** | **3E32526EQT** | 11.1 | Locomotive axle gearbox |
| | 280 | 58 | 4 | 4 | 167 | 565 | 680 | 1800 | 2200 | **NU326Q/S0** | **32326QT** | 17.9 | Locomotive main electric generator |
| | 280 | 93 | 4 | 4 | 167 | 780 | 1060 | 1800 | 2200 | | **E32626QTY** | 29.3 | Locomotive main electric generator |
| | 280 | 93 | 4 | 4 | 167 | 780 | 1060 | 1800 | 2200 | | **32626QTY** | 29.3 | Locomotive main electric generator |
| | 340 | 78 | 4.7 | 4.7 | 185 | 890 | 1030 | 1800 | 2200 | **NU426Q/P6S0Y** | **E32426QTY** | 38.8 | Locomotive traction motor |
| | 340 | 78 | 4.7 | 4.7 | 185 | 890 | 1030 | 1800 | 2200 | **NU426Q/P6S0Y1** | **E32426QTY1** | 38.8 | Locomotive traction motor |
| | 340 | 78 | 4.7 | 4.7 | 185 | 890 | 1030 | 1800 | 2200 | **NU426Q/S0Y** | **32426QTY** | 38.8 | Locomotive traction motor |
| **140** | 300 | 62 | 4 | 4 | 180 | 625 | 760 | 1900 | 2400 | **NJ328Q/C4S0** | **4G42328QT** | 22.1 | Locomotive traction motor |
| | 300 | 62 | 4 | 4 | 180 | 625 | 760 | 1900 | 2400 | **NU328Q1/P63S0** | | 21.7 | Locomotive traction motor |
| | 300 | 62 | 4 | 4 | 180 | 680 | 820 | 1800 | 2200 | **NJ328EQ/S0** | **42328EQT** | 23.8 | Locomotive traction motor |
| | 300 | 62 | 4 | 4 | 180 | 680 | 820 | 1800 | 2200 | **NU328E/S0** | **32328ET** | 21.9 | Locomotive traction motor |
| **150** | 270 | 45 | 3 | 3 | 182 | 460 | 610 | 1900 | 2400 | **NU230EQ/P63S0** | **3E32230EQT** | 11.8 | Locomotive axle gearbox |
| | 320 | 65 | 4 | 4 | 193 | 770 | 945 | 1700 | 2000 | **NU330EQ/C4S0** | **4G32330EQT** | 26.2 | Locomotive traction motor |

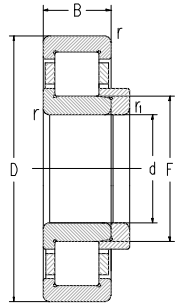
d 150~380 mm





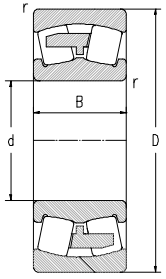


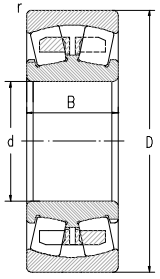


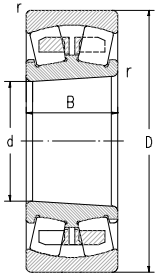




| Principal dimensions | | | | | | Basic load ratings | | Limit speed ratings | | Designations(New) | Designations(Old) | Weight | Mounting position |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | D | B | $rs_{min}$ | $r1s_{min}$ | F | Cr | Cor | Grease | Oil | | | | |
| mm | mm | mm | mm | mm | mm | kN | | r/min | r/min | | | kg | |
| **150** | 320 | 65 | 4 | 4 | 193 | 770 | 945 | 1700 | 2000 | **NU330EQ** | **32330EQ** | 26.2 | Locomotive traction motor |
| | 320 | 65 | 4 | 4 | 193 | 770 | 945 | 1700 | 2000 | **NU330EQ/C9** | **32330EQU** | 26.2 | Locomotive traction motor |
| | 320 | 65 | 4 | 4 | 193 | 770 | 945 | 1700 | 2000 | **NU330EQ/P69S0** | **E32330EQTU** | 26.0 | Locomotive traction motor |
| | 320 | 65 | 4 | 4 | 193 | 770 | 945 | 1700 | 2000 | **NU330EQ/S0** | **32330EQT** | 26.2 | Locomotive traction motor |
| | 320 | 65 | 4 | 4 | 193 | 770 | 945 | 1570 | 1930 | **NU330EQ1/YB2** | | 26.7 | Traction Motor |
| **160** | 340 | 68 | 4 | 4 | 204 | 910 | 1150 | 1500 | 1800 | **NU332EQ/S0** | **32332EQT** | 27.8 | Locomotive traction motor |
| | 340 | 68 | 4 | 4 | 204 | 910 | 1150 | 1500 | 1800 | **NU332EQ** | **32332EQ** | 27.8 | Locomotive traction motor |
| **220** | 340 | 56 | 3 | 3 | 250 | 520 | 780 | 1800 | 2200 | **NU1044Q/P63S0** | **3E32144QT** | 19.4 | Locomotive axle gearbox |
| **379.5** | 480 | 60 | 2.1 | 2.1 | | 550 | 680 | 700 | 890 | **N2876K/P69** | | 26 | Locomotive wheel set hollow shaft |
| | 480 | 60 | 2.1 | 2.1 | 406 | 550 | 680 | 700 | 890 | **NUP2876K/P69** | | 27.1 | Locomotive wheel set hollow shaft |
| **380** | 480 | 60 | 2.1 | 2.1 | | 550 | 680 | 700 | 890 | **N2876/P69** | | 25.9 | Locomotive wheel set hollow shaft |
| | 480 | 60 | 2.1 | 2.1 | 406 | 550 | 680 | 700 | 890 | **NUP2876/P69** | | 27 | Locomotive wheel set hollow shaft |

d 70~280 mm



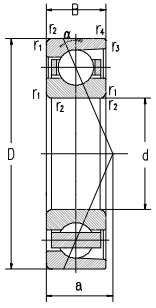



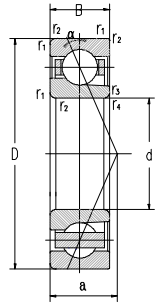




| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|
| d | D | B | $rs_{min}$ | Cr | Cor | Grease | Oil |
| mm | mm | mm | mm | kN | | r/min | r/min |
| **70** | 150 | 51 | 2.1 | 285 | 325 | 2200 | 3000 |
| **75** | 160 | 55 | 2.1 | 330 | 395 | 2200 | 3000 |
| **80** | 170 | 58 | 2.1 | 413 | 455 | 2000 | 2800 |
| **90** | 190 | 64 | 3 | 420 | 410 | 1800 | 2400 |
| **130** | 280 | 93 | 4 | 1060 | 1250 | 1300 | 1700 |
| | 280 | 93 | 4 | 930 | 1210 | 1300 | 1700 |
| | 280 | 93 | 4 | 930 | 1210 | 1300 | 1700 |
| **160** | 270 | 86 | 2.1 | 840 | 1350 | 1300 | 1700 |
| **170** | 320 | 108 | 3.7 | 1160 | 1790 | 950 | 1200 |
| **180** | 300 | 118 | 3 | 1170 | 2030 | 950 | 1300 |
| **240** | 360 | 92 | 3 | 1060 | 2430 | 1000 | 1400 |
| **280** | 380 | 75 | 2.1 | 770 | 1850 | 1000 | 1400 |

| Designations (New) | Designations (Old) | Calculation coefficient | | | | Weight | Mounting position |
|---|---|---|---|---|---|---|---|
| | | e | Y1 | Y2 | Yo | | |
| | | mm | | | | kg | |
| **22314Q/C3S0** | **3G3614QT** | 0.37 | 1.80 | 2.70 | 1.80 | 4.21 | Locomotive axle gearbox |
| **22315Q/C3S0** | **3G3615QT** | 0.39 | 1.75 | 2.61 | 1.71 | 5.29 | Locomotive axle gearbox |
| **22316Q/C3S0** | **3G3616QT** | 0.37 | 1.80 | 2.70 | 1.80 | 6.19 | Locomotive axle gearbox |
| **22318Q/C3S0** | **3G3618QT** | 0.36 | 1.87 | 2.79 | 1.83 | 8.56 | Locomotive traction motor |
| **22326CAQ/S0** | **53626QT** | 0.34 | 1.99 | 2.96 | 1.94 | 18.1 | Locomotive main electric generator |
| **22326Q/C3S0** | **3G3626QT** | 0.36 | 1.87 | 2.79 | 1.83 | 27.2 | Locomotive main electric generator |
| **22326Q/S0** | **3626QT** | 0.36 | 1.87 | 2.79 | 1.83 | 27.2 | Locomotive main electric generator |
| **23132CAQ/C3S0** | **3G3053732QT** | 0.30 | 2.30 | 3.40 | 2.20 | 21.8 | Locomotive axle box |
| | **3G113734T** | 0.36 | 1.87 | 2.79 | 1.83 | 38.8 | Locomotive axle box |
| **24136CA/C3S0** | **3G4053736T** | 0.37 | 1.80 | 2.70 | 1.80 | 33.0 | Locomotive axle box |
| **23048Q/S0** | **3003148QT** | 0.25 | 2.70 | 4.00 | 2.60 | 34.5 | Locomotive axle gearbox |
| **23956CAQ/C3S0Y** | **3G3053956QKT** | 0.18 | 3.80 | 5.66 | 3.72 | 25.7 | Locomotive traction motor journal sticking |

d 120~170 mm

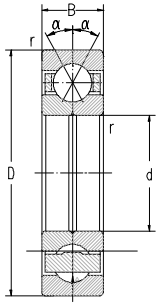



| Principal dimensions | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|
| d | D | B | $r12_{min}$ | $r34_{min}$ | Cr | Cor | Grease | Oil |
| mm | mm | mm | mm | mm | kN | | r/min | r/min |
| **120** | 215 | 40 | 2.1 | 1.3 | 189 | 183 | 3200 | 4500 |
| **140** | 250 | 42 | 3 | 1.1 | 218 | 235 | 2200 | 3000 |
| **160** | 240 | 38 | 2.1 | 1.1 | 160 | 237 | 2000 | 2700 |
| **170** | 260 | 42 | 2.1 | 1.1 | 198 | 227 | 1900 | 2500 |

| Designations (New) | Designations (Old) | Weight | Mounting position |
|---|---|---|---|
| | | kg | |
| **B7224ACQ1/HAS0** | **146224QT** | 6.45 | Locomotive axle box |
| **B7228ACQ/P6S0** | **E146228QT** | 8.7 | Locomotive intermediate gearbox |
| **B7032ACQ/S0** | **146132QT** | 5.74 | Locomotive axle box |
| **7034ACQ/S0** | **46134QT** | 8.27 | Locomotive axle box |

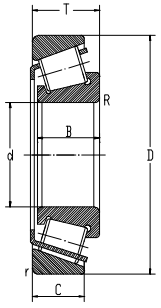
d 75~240 mm




| Principal dimensions | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|
| d | D | B | $r_{min}$ | Cr | Cor | Grease | Oil |
| mm | mm | mm | mm | kN | | r/min | r/min |
| **75** | 130 | 25 | 1.5 | 120 | 122 | 5600 | 7500 |
| **85** | 149 | 28 | 2 | 155 | 160 | 4800 | 6700 |
| **110** | 240 | 50 | 3 | 343 | 405 | 2000 | 2600 |
| **150** | 270 | 45 | 3 | 336 | 470 | 1600 | 2100 |
| **220** | 340 | 56 | 3 | 398 | 650 | 1100 | 1500 |
| **240** | 360 | 56 | 3 | 430 | 750 | 1000 | 1300 |

| Designations (New) | Designations (Old) | Weight | Mounting position |
|---|---|---|---|
| | | kg | |
| **QJ215N2-WTL** | | 1.50 | Subway gearbox |
| **QJ217X1N2-WTL** | | 2.20 | Subway gearbox |
| **QJ322QN2/P63S0** | **3E176322QKT** | 11.7 | Locomotive axle gearbox |
| **QJ230QN2/P63S0** | **3E176230QKT** | 12.0 | Locomotive axle gearbox |
| **QJ1044QN2/P63S0** | **3E176144QKT** | 17.8 | Locomotive axle gearbox |
| **QJ1048QN2/P63S0** | **3E176148QKT** | 20.9 | Locomotive axle gearbox |

d 95~247.175 mm

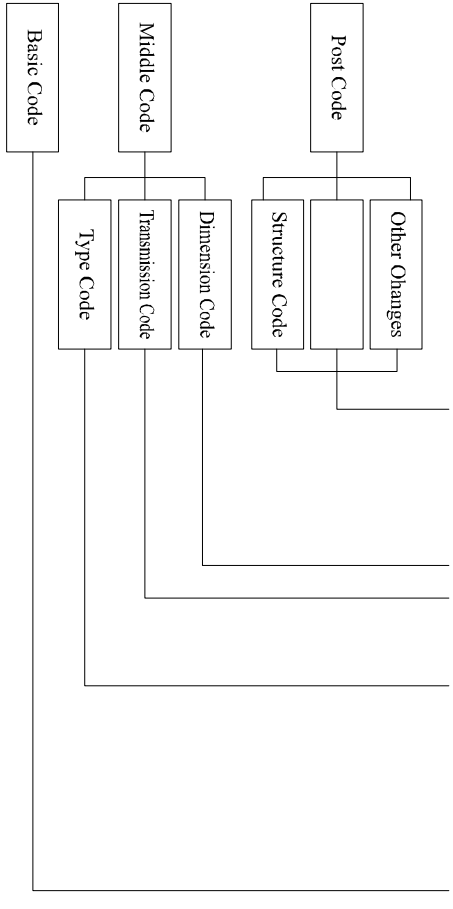



| Principal dimensions | | | | | | | Basic load ratings | | Limit speed ratings | |
|---|---|---|---|---|---|---|---|---|---|---|
| d | D | T | B | C | $R_{min}$ | $r_{min}$ | Cr | Cor | Grease | Oil |
| mm | mm | mm | mm | mm | mm | mm | kN | | r/min | r/min |
| **95** | 170 | 45.5 | 43 | 37 | 3 | 2.5 | 300 | 415 | 1900 | 2800 |
| **210** | 285 | 41 | 40 | 33 | 4 | 3 | 360 | 710 | 1100 | 1400 |
| **215.9** | 285.75 | 46.038 | 46.038 | 34.925 | 3.3 | 3.6 | 370 | 780 | 1000 | 1500 |
| **254** | 324.975 | 39 | 41.5 | 28 | 3.3 | 1.5 | 315 | 800 | 850 | 1080 |
| **254** | 324.975 | 39 | 41.5 | 28 | 3.3 | 1.5 | 315 | 800 | 850 | 1080 |
| **254** | 358.775 | 71.438 | 76.2 | 53.975 | 3.3 | 1.5 | 740 | 1450 | 850 | 1200 |
| **255.6** | 342.9 | 57.15 | 63.5 | 44.45 | 3.3 | 1.5 | 512 | 1170 | 800 | 1020 |
| **257.175** | 358.775 | 71.438 | 76.2 | 53.975 | 3.3 | 1.5 | 730 | 1470 | 850 | 1200 |
| **257.175** | 358.775 | 71.438 | 76.2 | 53.975 | 3.3 | 1.5 | 770 | 1570 | 850 | 1200 |

| Designations | Limit speed ratings | | | | Weight | Mounting position |
|---|---|---|---|---|---|---|
| | e | Y1 | Y2 | Yo | | |
| | mm | | | | kg | |
| **32219N1-WTL** | 0.42 | 1.4 | 0.79 | 40 | 4.18 | Subway gearbox |
| **30642N1-WTL** | 0.32 | 1.9 | 1.04 | 45 | 7.28 | Subway gearbox |
| **KLM742749/KLM742710-WTL** | 0.48 | 1.25 | 0.7 | 61 | 7.66 | Subway gearbox |
| **1-7009 (KJL848849/KJL848811)** | 0.56 | 1.07 | 0.59 | 71 | 8.06 | Railway Locomotive journal sticking box |
| **JL848849/JL848810/YB2** | 0.56 | 1.07 | 0.59 | 71 | 8.06 | Railway Locomotive journal sticking box |
| **M249747/M249710B/YAB** | 0.34 | 1.76 | 0.97 | 65 | 23.6 | Subway gearbox |
| **KM349547/KM349510(1-7008)** | 0.35 | 1.73 | 0.95 | 59 | 16.1 | Railway Locomotive journal sticking box |
| **M249747/M249710/YAB** | 0.34 | 1.76 | 0.97 | 65 | 21.2 | Subway gearbox |
| **M249747/M249710/YAD** | 0.33 | 1.8 | 0.99 | 64 | 21.7 | Subway gearbox |

## 1. Coding of Slewing Bearing

ZWZ slewing bearing code consists of basic code, middle code and post code.




D——double-row groove
X1,X2...——changes of external dimensions
K1,K2...—— changing of install holes
R——change of roller diameter or number
M——change of gear modular

rolling element rotation diameter

B——Toothless
N——Internal tooth
W——External tooth

S——Four-point contact ball type;
SQ means L structure of inner ring or outer ring
J——Cross cylindrical roller type
Y——Three-row cylindrical roller type
L——Six-row cylindrical roller type
A——Parallel spaced cylindrical roller type

H——Slewing bearing

## 2. Modeling of Slewing Bearing

As illustration above, slewing bearing have many types. With reasonable modeling, bearings' property can be sufficiently played and ensure the service life.

### 2.1 Loading of Slewing Bearing

During running, slewing bearing bears combined forces of axial force Fa, radial force Fr and tilting moment M. For different applications, due to machines' different operation modes and structures, above combined loading may be different. Sometimes there may be two forces working, whereas sometimes there only one force working.

Generally, for slewing bearings, there are three installation methods- horizontal installation, vertical installation and hung installation. The loads acting on these three installation modes are as below:

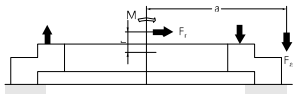


Figure1 horizontal installation

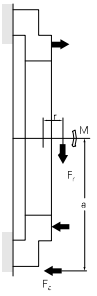


Figure 2 vertical installation

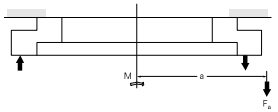


Figure 3 hung installation

### 2.2 Considerations on bearing modeling

#### 2.2.1 External Dimension

External dimensions (ID, OD, assembly height) are pre-conditions for ensuring bearings' strength, rigidity, loading, service life and installation requirements. Loading capacity and service life can be calculated through theoretical calculation. Safety requirements are shown in Table 1.

Generally, under certain loading, service life and safety property, roller bearings' external dimensions are smaller than those of ball bearings, and single row bearings' external dimensions are smaller than those of multi-row bearings.

Regarding calculation of bearings' strength and rigidity, please consult with ZWZ.

#### 2.2.2 Loading Capacity

For bearings whose external dimensions are more or less the same, ratings by the loading capacity, from high to low are: six-row cylindrical roller bearings, three-row cylindrical roller bearings, four-point contact ball bearings and cross roller bearings.

#### 2.2.3 Friction Moment

Ball bearings are better than roller bearings; single row rollers are better than multi-row rollers; the one with cage is better than that without cage. Regarding calculation of bearing starting moment and rotation moment, please consult with ZWZ.

#### 2.2.4 Installation Precision Requirements

For ball bearings, the contact is point contact. They bear small resistance during rotation. Product error, installation clearance and supporting base distortion have small effect to bearing internal contact of balls and raceway. Under condition of the same loading, point contact stress is higher than linear contact. So the loading capacity is smaller than that of linear contact.

For roller bearings, they are linear contact. Roller bearings' contact stress is lower than

that of ball bearings. Their loading capacity is bigger than that of ball bearings. But friction resistance caused by linear contact movement is higher than that of point contact. Meanwhile, for roller bearings, they have higher requirements on manufacture precision, installation precision, supporting base's manufacture precision and rigidity. As a result, for occasion of insufficient supporting base rigidity and bad installation environment, roller bearings are not supposed to be used for good.

#### 2.2.5 Rigidity

The pre-condition of bearing loading calculation is to presume enough rigidity of the bearing. Bearings' rigidity refers to the elastic distortion caused by contact of rings and rolling elements under certain loading. Generally, rigidity of roller bearings is higher than that of ball bearings. Proper pre-tension (like minus clearance, etc.) and enhancing supporting base's rigidity can improve bearings' rigidity.

#### 2.2.6 Liability

Generally, slewing bearings bear high loads. Under preconditions of sufficient loading capacity and service life, it should maintain certain safety parameter shown in Table 1, so that bearings' liability during usage can be ensured.

### 2.3 Slewing Bearing Loading Curve

In product catalogue, each bearing has a loading curve chart. The curve can help customers choose slewing bearing type preliminarily. There are 2 type curves. One is static loading curve that shows max. loads when bearing stays still and the other one is limit loading curve of slewing bearing bolt (10.9 curve), which is determined when bolt holding length is 5 times bolt nominal diameter and the pre-tension is 70 % that of bolt material yield limit.

Table 1 Bearing application safety factor

| Equipment | | | Static load safety parameter fs | Service life load parameter fl |
|---|---|---|---|---|
| Marine crane, automobile crane, grabbing deck crane, turntable ( continuous rotation is required during operating) | | | 1.10 | 1.0 |
| Tower crane for construction | Bearings are installed on tower | Mf≤0.5M | 1.25 | 1.0 |
| | | 0.5M<Mf<0.8M | | 1.15 |
| | | Mf≥0.8M | | 1.25 |
| | Bearings are installed on base | | | 1.0 |
| Port gantry crane, marine crane | | | | 1.15 |

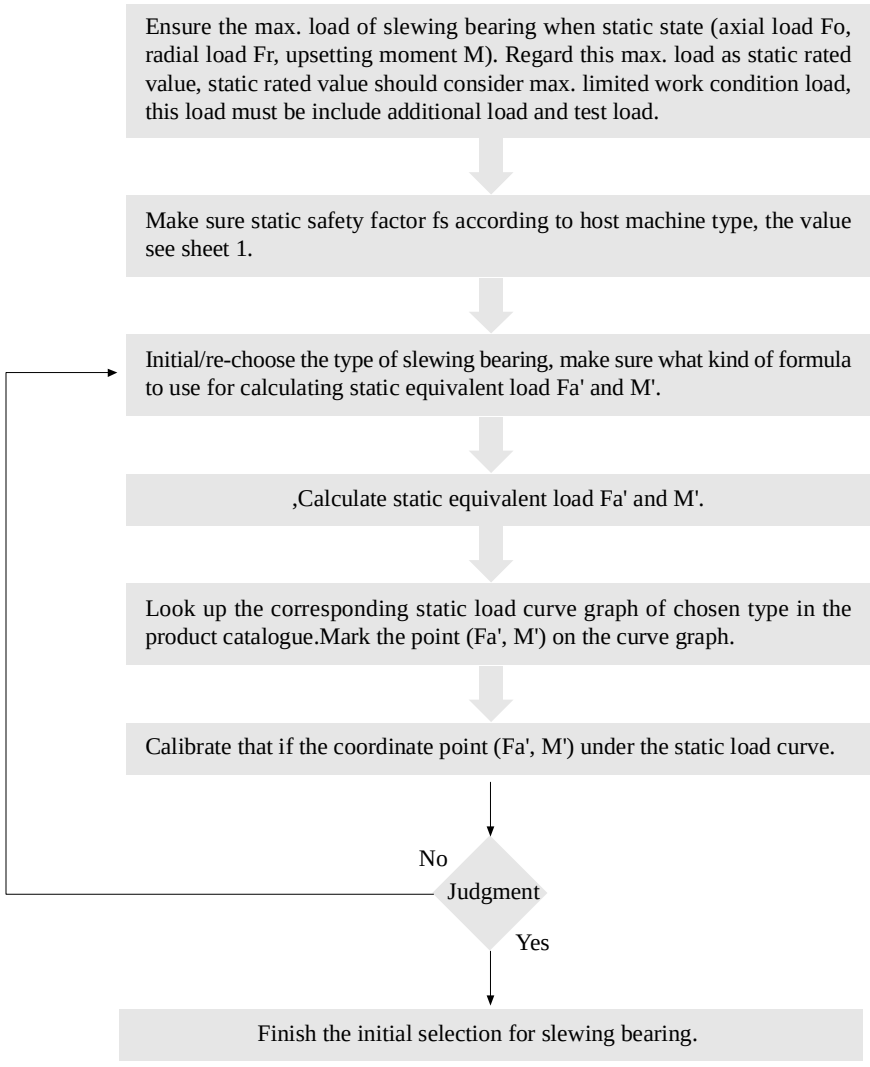
| Equipment | Static load safety parameter fs | Service life load parameter fl |
|---|---|---|
| Crane for metallurgy factory | 1.45 | 1.5 |
| Automobile crane ( grabbing type or heavy load manual operated)<br>Slewing crane (grab or magnet)<br>Wheel crane (grab or magnet)<br>Bridge crane (grab or magnet)<br>Floating crane (grab or magnet) | | 1.7 |
| Rope excavator<br>Stacker reclaimer<br>Belt cargo conveyor | | 2.15 |
| Railway crane | 1.0 | For the slewing bearings are working under significant change conditions and rotating continuously or intermittently, the dynamic life calculation is needful. |
| Mini cargo conveyor | 1.1 | |
| Pulling shovel | 1.25 | |
| Hydraulic tunneller<br>Four-point contact ball slewing bearings are adopted | 1.25 | |
| Other slewing bearings are adopted<br>Bucket capacity<1.5M$^3$ | 1.45 | |
| Bucket capacity≥1.5M$^3$ | 1.75 | |
| Ladle car | 1.75 | |

Note: Fl is the dynamic safety parameter. It is used considering dynamic loading curve (dynamic loading curve is not shown in the catalogue). It is conclusion from experience and experiments. If bearings are chosen according to service life, please contact with ZWZ technical department.

## 2.4 Slewing Bearing Type Selection Method

### 2.4.1 Static Type Selection

(1) Type selection calculation flow




(2) Static equivalent load calculation

Table 2 Static equivalent load calculation

| Slewing bearing structure type \ Calculation method | Type selection according to static working condition |
|---|---|
| Four-point contact ball slewing bearing (a=45° ) | M'=Mofs<br>When Fr≤0.44Fa, Fa'=(Fa+2.3Fr)·fs<br>When Fr＞0.44Fa, please contact with ZWZ about Fa' calculation<br>M'=Mofs |
| Double row angular contact thrust ball slewing bearing | M'=Mofs<br>When Fr≤10%Fa, Fa'=Fa·fs<br>When Fr＞10%Fa, please contact with ZWZ about Fa' calculation<br>M'=Mofs |
| Crossed cylindrical roller slewing bearing | M'=Mofs<br>When Fr≤0.44Fa, Fa'=(Fa+2.3Fr)ofs<br>When Fr≥0.44Fa, please contact with ZWZ about Fa' calculation<br>M'=Mofs |
| Three-row cylindrical roller combined slewing bearing | Fa'=Fa·fs<br>M'=Mofs<br>Radial load Fr is accommodated by one row of rollers which bear the radial load |

### 2.4.2 Dynamic Type Selection

For those applications that the slewing bearings need continuous operation, high-speed rotation and specific requirements for the lifespan, please contact with ZWZ technical department.

### 2.4.3 Bolt load carrying capacity calculation and verification

1) Regard the limit load of slewing bearing as the load of selected bolts;
2) Check whether the load is under the bolt load curve;
3) If the bolt load capacity is insufficient, re-select slewing bearing or contact with ZWZ technical department.

## 2.5 Type Selection Parameter

In order to guarantee the bearing satisfy the application requirements, before customers decide to choose ZWZ product, please fill out relevant information about type selection in Table 3.

Table 3 Type selection sheet

| Type Selection Sheet | | | | | | | |
|---|---|---|---|---|---|---|---|
| Machine name | | | | Machine type | | | |
| Work condition | | Axial load (kN) | Radial load (kN) | Tilting torque (kN.m) | Rotation speed (rpm) | Work time (%) | |
| Load | Static Max.: | | | | | | |
| | Test: | | | | | | |
| | ..... | | | | | | |
| | Dynamic Max.: | | | | | | |
| | Test: | | | | | | |
| | Overload: | | | | | | |
| | ..... | | | | | | |
| | Vibration, impact level | Mild: Moderate: Severe: | | | | | |
| Use | Lifetime(h) | | | | | | |
| | Installation method | Horizontal: seat type, hung type Vertical: Other: | | | | | |
| | Use method | Continuous: Interval: Pushing: Other: | | | | | |
| | Rotating parts | Outer ring: Inner ring: | | | | | |
| | Lubrication method | Grease: Oil: Other: | | | | | |
| | Seal | Machine setting: Bearing setting: | | | | | |
| | Bearing drive circumferential force | N | | | | | |
| | Environment condition | Humidity(%): Temperature (℃): Contamination: | | | | | |
| | Bearing working temperature | ℃ | | | | | |



## 3. Installation and Maintenance

### 3.1 Assembly and Store

1) Slewing bearings shall be assembled and disassembled carefully.

2) Slewing bearings shall be kept horizontally in dry, ventilated and flat area. Separated from chemical materials and other corrosive matters when stored.

3) When several slewing bearings are overlapped with each other, at least three wooden pillows with equal height should be put between bearings along the circle direction, and the location of the upper and lower pillows should be identical.

4) Lift installation should apply ringbolt and be dealt with horizontally. Impact is forbidden, especially in radial direction.

5) ZWZ slewing bearings have already been anti-rusted when leaving the factory. In normal maintenance, the preventive period is one year. If expired the anti-rust term, and need to be stored for longer, the slewing bearing should be anti-rusted again.

### 3.2 Requirements for Assembling the Holders

1) There must be enough and equal radial and horizontal stability.

2) After welding assembled holders, they should have stress relief heat treatment, and should be machined reserving the fixed convex (concave) platform's flange plate, in order to avoid radial displacement.

3) The flatness (including the angular deviation with horizontal plane) of assembled holders should be controlled in limits (see Table 4).

Table 4 the flatness of mounting bracket

| Raceway center diameter(mm) | | Flatness (mm) | | |
|---|---|---|---|---|
| Over | To | Single row four-point contact ball slewing bearing | Double-row ball slewing bearing | Cylindrical roller slewing bearing |
| - | 1000 | 0.15 | 0.20 | 0.10 |
| 1000 | 1500 | 0.19 | 0.25 | 0.12 |
| 1500 | 2000 | 0.22 | 0.30 | 0.15 |
| 2000 | 2500 | 0.25 | 0.35 | 0.17 |
| 2500 | 4000 | 0.30 | 0.40 | 0.20 |
| 4000 | 6000 | 0.40 | 0.50 | 0.30 |
| 6000 | 8000 | 0.50 | 0.60 | 0.40 |

4) The maximum flatness of the assembled holder is allowed just once in 180°, several wave type peaks are forbidden that means increasing or decreasing uniformly among 0°～90°～180°, shown as Figure 4.

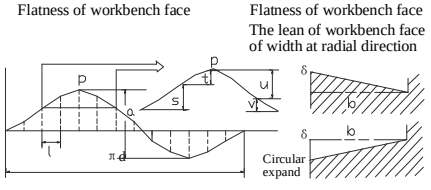



Figure 4 Flatness Requirement

5*Assembled holders should have good rigidness. With the biggest permissible load, flexural deformation should be controlled in the range listed in Table 5.

Table 5 Maximum bending of holder flatness

| Raceway center diameter(mm) | -1000 | >1000 - 1500 | >1500 - 2000 | >2000 - 2500 | >2500 - 3000 | >3000 - 3500 | >3500 - 4000 | >4000 - 4500 | >4500 - 5000 | >5000 - 5500 | >5500 - 6000 | >6000 - 7000 | >7000 - 8000 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Maximum bending of holder flatness (mm) | 0.6 | 0.8 | 1.0 | 1.3 | 1.6 | 2.0 | 2.5 | 3.0 | 3.6 | 4.2 | 4.8 | 5.8 | 7.0 |

3.3 Requirements for Bolt Preload

Preload should be assured when tightening the bolt, in normal maintenance, the preload should be 70% of the yield limit. Please see Table 6 for preload torque or preload.

Table 6 Bolt preload and preload torque

| Bolt strength grade | | | 8.8 | | | 10.9 | | | 12.9 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Yield limit N/mm² | | | M≤16 640<br>M>16 660 | | | 940 | | | 1100 | | |
| Bolt diameter | Thread stress area mm² | Thread cross-sectional area mm² | Preload for bolt installation FM N | Theoretical preload torque MA Nm | Torsional moment NmM M,=0.9MA | Preload for bolt installation FM N | Theoretical preload torque MA Nm | Torsional moment NmM M,=0.9MA | Preload for bolt installation FM N | Theoretical preload torque MA Nm | Torsional moment NmM M,=0.9MA |
| M5 | 14.2 | 12.7 | 6400 | 6.1 | 5.5 | 9300 | 8.9 | 8.0 | 10900 | 10.4 | 9.3 |
| M6 | 20.1 | 17.9 | 9000 | 10.4 | 9.3 | 13200 | 15.5 | 13.9 | 15400 | 18 | 16.2 |
| M8 | 36.6 | 32.8 | 16500 | 25 | 22.5 | 24200 | 37 | 33 | 28500 | 43 | 38 |
| M10 | 58 | 52.3 | 26000 | 51 | 45 | 38500 | 75 | 67 | 45000 | 87 | 78 |
| M12 | 84.3 | 76.2 | 38500 | 87 | 78 | 56000 | 120 | 117 | 66000 | 150 | 135 |
| M14 | 115 | 105 | 53000 | 140 | 126 | 77000 | 205 | 184 | 90000 | 240 | 216 |
| M16 | 157 | 144 | 72000 | 215 | 193 | 106000 | 310 | 279 | 124000 | 370 | 333 |
| M18 | 193 | 175 | 91000 | 300 | 270 | 129000 | 430 | 387 | 151000 | 510 | 459 |
| M20 | 245 | 225 | 117000 | 430 | 387 | 166000 | 620 | 558 | 194000 | 720 | 648 |
| M22 | 303 | 282 | 146000 | 580 | 522 | 208000 | 830 | 747 | 243000 | 970 | 873 |
| M24 | 353 | 324 | 168000 | 740 | 666 | 239000 | 1060 | 954 | 280000 | 1240 | 1116 |
| M27 | 459 | 427 | 221000 | 1100 | 990 | 315000 | 1550 | 1395 | 370000 | 1850 | 1665 |
| M30 | 561 | 519 | 270000 | 1500 | 1350 | 385000 | 2100 | 1890 | 450000 | 2500 | 2250 |
| M33 | 694 | 647 | 335000 | | | 480000 | | | 560000 | | |
| M36 | 817 | 759 | 395000 | | | 560000 | | | 660000 | | |
| M39 | 976 | 913 | 475000 | | | 670000 | | | 790000 | | |
| M42 | 1120 | 1045 | 542000 | Need bolt hydraulic compact and tense device | | 772000 | Need bolt hydraulic compact and tense device | | 904000 | Need bolt hydraulic compact and tense device | |
| M45 | 1300 | 1224 | 635000 | | | 905000 | | | 1059000 | | |
| M48 | 1470 | 1377 | 714000 | | | 1018000 | | | 1191000 | | |
| M52 | 1760 | 1652 | 857000 | | | 1221000 | | | 1429000 | | |
| M56 | 2030 | 1905 | 989000 | | | 1408000 | | | 1648000 | | |
| M60 | 2360 | 2227 | 1156000 | | | 1647000 | | | 1927000 | | |



3.4 Bearing Assembly

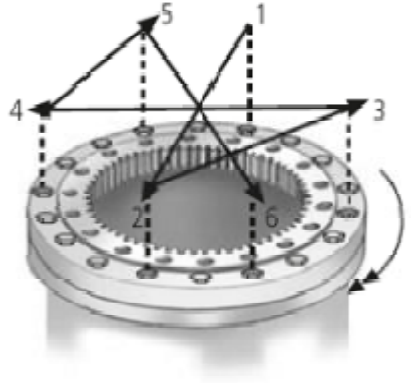
Before assembling, the fitting surface and holder surface should be cleaned with no contamination, burr or any other matter.

3.4.1 Bearing Fixed Position

Slewing bearing rings have quenching soft zone, marked with "S", when assembling, the soft zone should be placed in none load area or not frequently loaded area.

3.4.2 Bolt Installation and Tightening

For the slewing bearings with gears, the none-gear ring should be firstly bolt fastened. Before installing the bolt, put a little lubrication oil in the bolt thread to make all the bolts have equal friction resistance. Fasten the bolts in the way of "star" program (see Figure 5), then we can get equal fasten effect in the circle. There are 3 circulates when tightening the bolt, each circulate respectively use 30%, 70% and 100% of the total tightening force. After each circulate, turn the ring several circles, then continue to the next circulate.




3.4.3 Gear vice lateral clearance adjustment

During installation for slewing bearing with gears, move the pinion to adjust the meshing clearance. There is one biggest gear run-out point on the addendum (3 marked gears with green paint), meshing clearance δ of this place is 0.03~0.04m (m is module of the gear), see Figure 3-3 for inspection method. Turn the bearing more than circulate, check the meshing clearance of other parts and meshing clearance should not lower than δ.



Graph 6 side play inspection method

3.5 Bearing Lubrication and Maintenance

3.5.1 Bearing Relubricating

The slewing bearings have already been filled with special lubrication grease according to the working condition when leaving the factory. During rotation, grease should be supplemented, and the raceway should be filled with grease each time. When filling the grease, turn the bearing slowly to ensure the grease is filled equally. See Table 7 for lubrication interval.

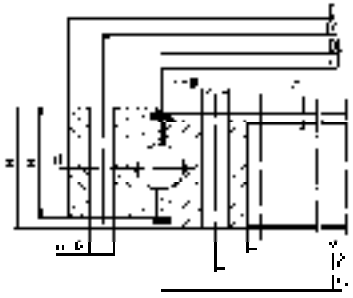
Table 7 Re-lubrication period

| Working condition | Lubrication interval |
|---|---|
| Running time h is less than 5 hours each week | Half a year |
| Running time h is more than 100 hours each week | Re-lubricate every 2 weeks |
| Running time h is between 5 hours and 100 hours each week | T=-0.25h+27<br>T: Re-lubrication interval, week<br>h: Running time each week, hour |

### 3.5.2 Bolt Inspection

Preload for bolt must be ensured enough when slewing bearing is working. In the first 100 hours for the first bearing rotation, preload for bolt should be checked, and should be checked every 500 hours in following rotation.

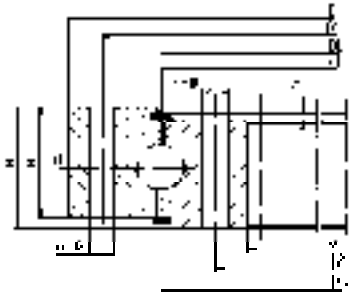
d 360～1540 mm



Note:
1. n1 is the amount of lubricating holes, customer can specify the position of lubricating hole according to using conditions.
2. N-ϕ can change to threaded hole, diameter of thread M, depth of thread 2M.
3. The product in this catalogue are standard products, please contact ZWZ if have other special requirements.

| Bearing designation | Boundary Dimensions | | | Bolt hole dimensions | | | | Structure dimensions | | | | | | Mass |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | D | d | H | D1 | D2 | n | f | D3 | d1 | H1 | h | n1 | M | kg |
| | mm | | | mm | | | mm | mm | | | | | mm | |
| HSB300 | 360 | 240 | 38 | 340 | 260 | 12 | 9 | 298 | 302 | 31 | 7 | 3 | 8 | 12.5 |
| HSB344 | 420 | 266 | 55 | 390 | 294 | 8 | 18 | 343 | 345 | 45 | 10 | 12 | 16 | 25.7 |
| HSB345 | 410 | 285 | 40 | 385 | 305 | 12 | 11 | 344 | 346 | 35 | 5 | 1 | 10 | 16.8 |
| HSB411 | 496 | 338 | 55 | 460 | 364 | 12 | 18.5 | 412 | 410 | 45 | 10 | 2 | 16 | 33.4 |
| HSB413 | 485.521 | 342.9 | 55.88 | 457.2 | 368.3 | 12 | 14 | 410.5 | 457.2 | 44.45 | 11.43 | 0 | 11 | 28.9 |
| HSB414 | 496 | 338 | 55 | 460 | 364 | 12 | 18.5 | 412 | 410 | 45 | 10 | 2 | 16 | 33.5 |
| HSB441 | 520.344 | 355.6 | 50.8 | 492.125 | 387.35 | 12 | 14.275 | 438.65 | 444 | 50.8 | 0 | 0 | 13 | 40.1 |
| HSB445 | 558 | 332 | 72 | 514 | 377 | 20 | 22 | 446 | 444 | 63 | 9 | 3 | 30 | 67 |
| HSB489 | 562 | 396 | 60 | 538 | 440 | 24 | 13.5 | 487.5 | 491 | 50 | 10 | 4 | 12 | 44.9 |
| HSB500 | 600 | 398 | 80 | 566 | 434 | 20 | 18 | 499 | 501 | 70 | 10 | 4 | 16 | 78.2 |
| HSB500X1 | 600 | 398 | 70 | 566 | 434 | 20 | 18 | 499 | 501 | 70 | 10 | 4 | 16 | 80.1 |
| HSB530 | 590 | 460 | 40 | 570 | 488 | 12 | 9 | 527 | 533 | 40 | 0 | 0 | 8 | 30.4 |
| HSB530A | 590 | 460 | 40 | 570 | 488 | 12 | 9 | 527 | 533 | 40 | 0 | 0 | 8 | 30.8 |
| HSB560 | 662 | 458 | 80 | 626 | 494 | 20 | 18 | 561 | 558 | 70 | 10 | 4 | 16 | 87.5 |
| HSB592 | 670 | 517 | 55 | 640 | 544 | 12 | 18 | 590 | 594 | 46 | 9 | 4 | 16 | 47 |
| HSB630 | 732 | 528 | 80 | 696 | 564 | 24 | 18 | 631 | 628 | 70 | 10 | 4 | 16 | 97.7 |
| HSB710 | 812 | 608 | 80 | 776 | 644 | 24 | 18 | 708 | 711 | 70 | 10 | 4 | 16 | 116 |
| HSB710X1 | 812 | 608 | 80 | 776 | 644 | 24 | 18 | 720 | 699 | 70 | 10 | 4 | 16 | 119 |
| HSB710XA | 812 | 608 | 80 | 776 | 644 | 24 | 18 | 708 | 711 | 70 | 10 | 2 | 16 | 118 |
| HSB724 | 819.15 | 628.65 | 50 | 781.05 | 666.75 | 18 | 14.275 | 722 | 726 | 50.8 | 0 | 0 | 13 | 78 |
| HSB741 | 857 | 635 | 56 | 820 | 662 | 16 | 18 | 739 | 743 | 45.5 | 10.5 | 1 | 16 | 86 |
| HSB800 | 922 | 678 | 100 | 878 | 722 | 30 | 22 | 801 | 798 | 90 | 10 | 6 | 20 | 200 |
| HSB844 | 916 | 775 | 56 | 890 | 789 | 20 | 13.5 | 838 | 850 | 46 | 10 | 4 | 12 | 56.5 |
| HSB844X1 | 916 | 772 | 56 | 890 | 798 | 40 | 14.7 | 842 | 846 | 44.5 | 11.5 | 0 | 12 | 58 |
| HSB844K | 916 | 775 | 56 | 890 | 798 | 20 | 13 | 842 | 846 | 46 | 10 | 4 | 12 | 60.8 |
| HSB872.5 | 1060 | 670 | 189 | 1000 | 744 | 20 | 33 | 859.5 | 885.5 | 154 | 10 | 6 | 30 | 575 |
| HSB900 | 1022 | 778 | 100 | 978 | 822 | 30 | 22 | 901 | 898 | 90 | 10 | 6 | 20 | 225 |
| HSB980 | 1090 | 870 | 86 | 1050 | 910 | 44 | 22 | 978 | 982 | 72 | 14 | 4 | 20 | 163 |
| HSB1000 | 1138 | 878 | 100 | 1078 | 922 | 36 | 22 | 998 | 1138 | 90 | 10 | 6 | 20 | 270 |
| HSB1016 | 1117.6 | 914.4 | 50.8 | 1079.5 | 955.675 | 24 | 17.457 | 1014 | 1018 | 50.8 | 0 | 0 | 11 | 116 |
| HSB1078 | 1244 | 881 | 160 | 1180 | 945 | 24 | 26 | 1130 | 1080 | 105 | 10 | 4 | 24 | 577 |
| HSB1094 | 1166 | 1022 | 56 | 1140 | 1048 | 48 | 14 | 1092.5 | 1095.5 | 44.5 | 11.5 | 4 | 12 | 78.2 |
| HSB1120 | 1242 | 998 | 100 | 1198 | 1042 | 36 | 22 | 1121 | 1118 | 90 | 10 | 6 | 20 | 271 |
| HSB1250 | 1390 | 1110 | 110 | 1337 | 1163 | 40 | 26 | 1252 | 1248 | 100 | 10 | 5 | 24 | 399 |
| HSB1270 | 1395.4 | 1144.45 | 88.9 | 1352.55 | 1187.45 | 30 | 17.475 | 1268 | 1272 | 79.25 | 9.65 | 0 | 11 | 282 |
| HSB1400 | 1540 | 1260 | 110 | 1487 | 1313 | 40 | 26 | 1398 | 1402 | 100 | 10 | 5 | 24 | 423 |

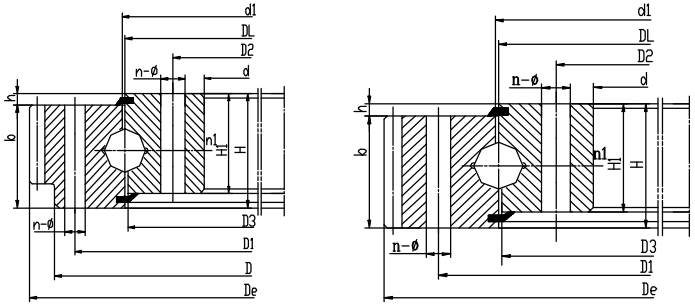
d 1660～3600 mm



Note:
1. n1 is the amount of lubricating holes, customer can specify the position of lubricating hole according to using conditions.
2. N-ϕ can change to threaded hole, diameter of thread M, depth of thread 2M.
3. The product in this catalogue are standard products, please contact ZWZ if have other special requirements.

| Bearing designation | Boundary Dimensions | | | Bolt hole dimensions | | | | Structure dimensions | | | | | | Mass |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | D | d | H | D1 | D2 | n | f | D3 | d1 | H1 | h | n1 | M | kg |
| | mm | | | mm | | | mm | mm | | | | | mm | |
| HSB1542 | 1660 | 1430 | 80 | 1620 | 1467 | 24 | 18 | 1538 | 1546 | 80 | 0 | 3 | 16 | 311 |
| HSB1600 | 1740 | 1460 | 110 | 1687 | 1513 | 45 | 26 | 1602 | 1598 | 100 | 10 | 5 | 24 | 507 |
| HSB1775 | 1927 | 1628 | 130 | 1875 | 1680 | 36 | 26 | 1807 | 1775 | 115 | 15 | 6 | 24 | 708 |
| HSB1800 | 1940 | 1660 | 110 | 1887 | 1713 | 45 | 26 | 1798 | 1802 | 100 | 10 | 5 | 24 | 514 |
| HSB1800X1 | 1940 | 1660 | 110 | 1887 | 1713 | 40 | 26 | 1790 | 1810 | 100 | 10 | 4 | 24 | 547 |
| HSB2000 | 2178 | 1825 | 144 | 2110 | 1891 | 48 | 33 | 2040 | 1958 | 114 | 12 | 8 | 30 | 1012 |
| HSB2021 | 2230 | 1805 | 165 | 2160 | 1880 | 36 | 33 | 2026 | 2016 | 150 | 15 | 4 | 30 | 1440 |
| HSB2030 | 2230 | 1805 | 165 | 2160 | 1880 | 36 | 33 | 2035 | 2023 | 150 | 15 | 4 | 30 | 1440 |
| HSB2135 | 2310 | 1905 | 180 | 2240 | 2030 | 36 | 23 | 2141 | 2131 | 160 | 20 | 4 | 20 | 1580 |
| HSB2185 | 2360 | 1955 | 180 | 2290 | 2080 | 36 | 23 | 2190 | 2180 | 160 | 20 | 4 | 20 | 1620 |
| HSB2220 | 2343.15 | 2095.5 | 87.725 | 2289.175 | 2133.6 | 52 | 17.463 | 2219.2 | 2218.3 | 73.152 | 14.573 | 0 | 11 | 442 |
| HSB2240 | 2418 | 2065 | 144 | 2350 | 2131 | 48 | 33 | 2242 | 2238 | 132 | 12 | 4 | 30 | 1130 |
| HSB2500 | 2678 | 2325 | 144 | 2610 | 2391 | 56 | 33 | 2498 | 2502 | 132 | 12 | 8 | 30 | 1270 |
| HSB2645 | 2820 | 2474 | 225 | 2750 | 2540 | 60 | 32 | 2647 | 2643 | 160 | 65 | 12 | 30 | 1620 |
| HSB2800 | 2978 | 2625 | 144 | 2910 | 2691 | 56 | 33 | 2802 | 2798 | 132 | 12 | 8 | 30 | 1484 |
| HSB2944 | 3136 | 2751 | 135 | 3064 | 2823 | 60 | 33 | 2942 | 2946 | 125 | 28 | 6 | 30 | 1470 |
| HSB3144 | 3271.825 | 3017.2 | 85.725 | 3213.1 | 3067.05 | 60 | 17.463 | 3141.5 | 3143.25 | 76.2 | 15.875 | 0 | 11 | 663 |
| HSB3455 | 3600 | 3300 | 191 | 3560 | 3340 | 40 | 22 | 3455 | 3500 | 142 | 19 | 49 | 20 | 1740 |

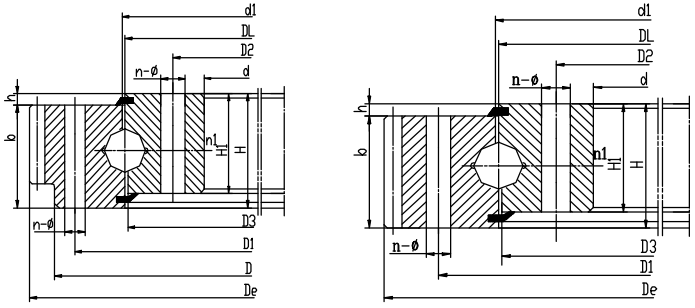
d 256～1584 mm




Note:
1. n1 is the amount of lubricating holes, customer can specify the position of lubricating hole according to using conditions.
2. N-ϕ can change to threaded hole, diameter of thread M, depth of thread 2M.
3. The product in this catalogue are standard products, please contact ZWZ if have other special requirements.

| Bearing designation | Boundary Dimensions | | | | Bolt hole dimensions | | | | Structure dimensions | | | | | | Parameters of gear | | | | Mass |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | De | D | d | H | D1 | D2 | n | ϕ | D3 | d1 | H1 | h | n1 | M | m | Z | b | x | |
| | mm | | | | mm | | | mm | mm | | | | | mm | | | mm | | kg |
| HSW186 | 256 | 234 | 135 | 38 | 216 | 154 | 16 | 11 | 185 | 187 | 30 | 8 | 4 | 10 | 4 | 162 | 26 | 0 | 6.76 |
| HSW400 | 528 | 493 | 307 | 70 | 457 | 343 | 24 | 18 | 396 | 400 | 60 | 10 | 2 | 16 | 6 | 86 | 50 | 0 | 53.8 |
| HSW450 | 576 | 507 | 357 | 70 | 507 | 393 | 24 | 18 | 450 | 450 | 60 | 10 | 2 | 16 | 6 | 94 | 50 | 0 | 61.7 |
| HSW500 | 625 | 600 | 398 | 80 | 566 | 434 | 20 | 18 | 499 | 501 | 70 | 10 | 4 | 16 | 5 | 123 | 60 | 0 | 85.4 |
| HSW500M | 628.8 | 602 | 398 | 80 | 566 | 434 | 20 | 18 | 501 | 498 | 70 | 10 | 4 | 16 | 6 | 102 | 60 | +0.5 | 89 |
| HSW548 | 679.386 | 655 | 425 | 80 | 620 | 475 | 12 | 18 | 548 | 548 | 71 | 9 | 3 | 16 | 4.5 | 147 | 56 | 0 | 110 |
| HSW560 | 688.8 | 662 | 458 | 80 | 626 | 494 | 20 | 18 | 558.5 | 561.5 | 70 | 10 | 4 | 16 | 6 | 112 | 46 | +0.5 | 95.2 |
| HSW630 | 768 | 732 | 528 | 80 | 696 | 564 | 24 | 18 | 630 | 631 | 70 | 10 | 4 | 16 | 6 | 126 | 60 | 0 | 114 |
| HSW644 | 744 | 744 | 572 | 56 | 680 | 600 | 24 | 14 | 642.5 | 645.5 | 44.5 | 11.5 | 4 | 12 | 6 | 122 | 44.5 | 0 | 50.1 |
| HSW710 | 850.8 | 812 | 608 | 80 | 776 | 644 | 24 | 18 | 708 | 711 | 70 | 10 | 4 | 16 | 6 | 139 | 60 | +0.5 | 69.1 |
| HSW800 | 924 | | 710 | 67 | 845 | 744 | 8 | 11 | 799 | 801 | 58 | 9 | 4 | 10 | 6 | 152 | 58 | 0 | 121 |
| HSW800X1 | 966.4 | 922 | 678 | 100 | 878 | 722 | 30 | 22 | 801 | 798 | 90 | 10 | 6 | 20 | 8 | 118 | 80 | +0.5 | 215 |
| HSW862 | 1026.5 | 975 | 745 | 111 | 940 | 784 | 20 | 23 | 860 | 864 | 90 | 21 | 4 | 20 | 8 | 120 | 80 | 0 | 242 |
| HSW900 | 1062.4 | 1022 | 778 | 100 | 978 | 822 | 30 | 22 | 901 | 898 | 90 | 10 | 6 | 20 | 8 | 130 | 80 | -0.5 | 239 |
| HSW944 | 1046.4 | 1046.4 | 873.5 | 56 | 985 | 900 | 44 | 13.5 | 941 | 947 | 45.5 | 10.5 | 4 | 12 | 8 | 129 | 45.5 | 0 | 77 |
| HSW980 | 1110.4 | | 887 | 63 | 1039 | 922 | 30 | 18 | 981 | 979 | 54 | 9 | 5 | 18 | 8 | 136 | 54 | +0.5 | 124 |
| HSW1000 | 1188 | 1000 | 878 | 100 | 1078 | 922 | 36 | 22 | 1000 | 1000 | 90 | 10 | 6 | 20 | 10 | 116 | 80 | +0.5 | 288 |
| HSW1000X1 | 1180 | 1120 | 876 | 90 | 1074 | 926 | 24 | 17.5 | 1000 | 1000 | 80 | 10 | 0 | 16 | 10 | 116 | 70 | 0 | 256 |
| HSW1009 | 1180 | 1125 | 895 | 100 | 1085 | 935 | 10 | 22 | 1004.5 | 1008.5 | 85 | 15 | 4 | 20 | 10 | 116 | 75 | 0 | 262 |
| HSW1052.5 | 1192.626 | 1160 | 930 | 80 | 1125 | 980 | 28 | 18 | 1052.5 | 1052.5 | 70 | 10 | 4 | 16 | 5 | 231 | 55 | 0 | 210 |
| HSW1055 | 1200 | 1200 | 905 | 90 | 1116 | 945 | 30 | 22 | 1056.5 | 1053.5 | 71 | 19 | 6 | 20 | 10 | 118 | 71 | 0.0136 | 227 |
| HSW1055X1 | 1200 | 1200 | 905 | 90 | 1116 | 945 | 30 | 22 | 1056.5 | 1053.5 | 71 | 19 | 6 | 20 | 10 | 118 | 71 | 0 | 227 |
| HSW1094 | 1198.1 | 1198.1 | 1022 | 56 | 1135 | 1048 | 48 | 14 | 1092.5 | 1095.5 | 44.5 | 11.5 | 4 | 12 | 8 | 148 | 44.5 | 0 | 91.6 |
| HSW1120 | 1278 | | 1013 | 79 | 1183 | 1057 | 30 | 22 | 1121 | 1119 | 54 | 9 | 5 | 20 | 10 | 125 | 70 | +0.5 | 182 |
| HSW1120R | 1300 | 1240 | 996 | 90 | 1194 | 1046 | 28 | 24 | 1121 | 1118 | 80 | 10 | 4 | 22 | 10 | 129 | 70 | -0.5 | 272 |
| HSW1120RM | 1308 | 1240 | 996 | 90 | 1194 | 1046 | 28 | 24 | 1121 | 1118 | 80 | 10 | 4 | 22 | 12 | 108 | 70 | -0.5 | 272 |
| HSW1148 | 1314.1 | 1314.1 | 1040 | 80 | 1220 | 1080 | 30 | 17.5 | 1139 | 1157 | 70 | 10 | 0 | 16 | 10 | 125 | 70 | 0 | 225 |
| HSW1162 | 1320 | 1320 | 1045 | 93 | 1236 | 1084 | 36 | 21 | 1166.5 | 1158.5 | 77 | 16 | 4 | 20 | 10 | 130 | 77 | 0 | 276 |
| HSW1180 | 1338 | 1338 | 1068 | 79 | 1248 | 1112 | 36 | 22 | 1181 | 1178 | 63 | 9 | 6 | 22 | 10 | 131 | 70 | +0.5 | 227 |
| HSW1220 | 1435.9 | 1365 | 1075 | 120 | 1310 | 1130 | 36 | 24 | 1221 | 1218 | 105 | 15 | 6 | 22 | 12 | 116 | 90 | +1 | 488 |
| HSW1250 | 1408 | | 1143 | 79 | 1313 | 1187 | 36 | 22 | 1251 | 1249 | 54 | 9 | 6 | 22 | 10 | 138 | 70 | +0.5 | 221 |
| HSW1250R | 1430 | 1370 | 1126 | 90 | 1324 | 1176 | 32 | 24 | 1251 | 1248 | 80 | 10 | 4 | 24 | 10 | 142 | 70 | -0.5 | 302 |
| HSW1250RM | 1440 | 1370 | 1126 | 90 | 1324 | 1176 | 32 | 24 | 1251 | 1248 | 80 | 10 | 4 | 24 | 12 | 119 | 70 | -0.5 | 309 |
| HSW1278 | 1428.266 | 1391 | 1150 | 80 | 1356 | 1200 | 32 | 18 | 1278 | 1278 | 70 | 8 | 4 | 16 | 6 | 228 | 55 | 0 | 261 |
| HSW1320 | 1497.6 | | 1208 | 89 | 1388 | 1252 | 42 | 22 | 1321 | 1318 | 63 | 9 | 6 | 20 | 12 | 122 | 80 | +0.5 | 298 |
| HSW1358 | 1510 | 1510 | 1215 | 90 | 1426 | 1255 | 24 | 22 | 1354 | 1362 | 71 | 19 | 6 | 20 | 10 | 149 | 71 | 0 | 256 |
| HSW1400 | 1584 | 1520 | 1276 | 90 | 1474 | 1326 | 36 | 24 | 1401 | 1398 | 80 | 10 | 6 | 22 | 12 | 131 | 70 | -0.5 | 337 |

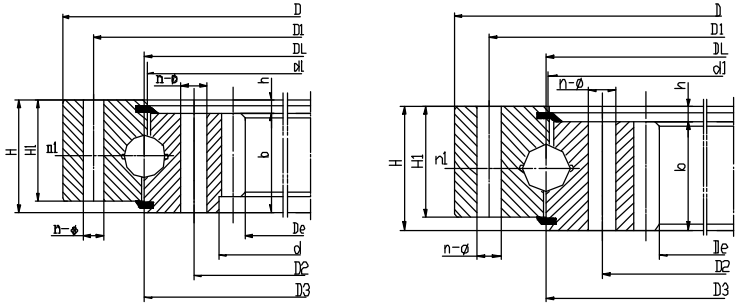
d 1596～3972 mm




Note:
1. n1 is the amount of lubricating holes, customer can specify the position of lubricating hole according to using conditions.
2. N-ϕ can change to threaded hole, diameter of thread M, depth of thread 2M.
3. The product in this catalogue are standard products, please contact ZWZ if have other special requirements.

| Bearing designation | Boundary Dimensions | | | | Bolt hole dimensions | | | | Structure dimensions | | | | | | Parameters of gear | | | | Mass |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | De | D | d | H | D1 | D2 | n | ϕ | D3 | d1 | H1 | h | n1 | M | m | Z | b | x | |
| | mm | | | | mm | | | mm | mm | | | | | mm | | | mm | | kg |
| HSW1400M | 1596 | 1520 | 1276 | 90 | 1474 | 1326 | 36 | 24 | 1401 | 1398 | 80 | 10 | 6 | 22 | 14 | 113 | 70 | -0.5 | 347 |
| HSW1400R | 1608 | 1540 | 1258 | 102 | 1486 | 1314 | 36 | 26 | 1401 | 1398 | 90 | 12 | 6 | 24 | 12 | 133 | 80 | -0.5 | 448 |
| HSW1452 | 1600 | 1600 | 1305 | 90 | 1516 | 1345 | 48 | 22 | 1455 | 1454 | 71 | 19 | 6 | 20 | 10 | 158 | 71 | 0 | 253 |
| HSW1452X1 | 1600 | 1600 | 1305 | 90 | 1516 | 1345 | 48 | 22 | 1456.5 | 1453.5 | 71 | 19 | 6 | 20 | 10 | 158 | 71 | 0 | 262 |
| HSW1454 | 1600 | 1550 | 1305 | 102 | 1505 | 1345 | 24 | 22 | 1450 | 1458 | 78 | 17 | 3 | 20 | 10 | 158 | 65 | 0 | 282 |
| HSW1500 | 1677.6 | | 1388 | 89 | 1568 | 1432 | 48 | 22 | 1501 | 1498 | 63 | 9 | 6 | 20 | 12 | 137 | 80 | +0.5 | 338 |
| HSW1520 | 1690 | 1645 | 1390 | 91 | 1600 | 1440 | 22 | 20 | 1500 | 1521.5 | 91 | 14 | 4 | 18 | 5 | 336 | 47 | 0 | 347 |
| HSW1540 | 1791.1 | 1720 | 1360 | 140 | 1660 | 1420 | 42 | 26 | 1540 | 1540 | 122 | 18 | 6 | 24 | 14 | 124 | 110 | +1.15 | 926 |
| HSW1600X | 1803.2 | | 1466 | 94 | 1682 | 1518 | 40 | 26 | 1601 | 1598 | 81 | 9 | 8 | 24 | 14 | 126 | 85 | +0.5 | 479 |
| HSW1600 | 1812 | 1740 | 1458 | 102 | 1686 | 1514 | 40 | 26 | 1601 | 1598 | 90 | 12 | 5 | 24 | 12 | 150 | 80 | -0.5 | 528 |
| HSW1600M | 1820 | 1740 | 1458 | 102 | 1686 | 1514 | 40 | 26 | 1601 | 1598 | 90 | 12 | 5 | 24 | 14 | 129 | 80 | -0.5 | 534 |
| HSW1600R | 1817.2 | 1740 | 1460 | 110 | 1687 | 1513 | 45 | 26 | 1602 | 1598 | 100 | 10 | 5 | 24 | 14 | 127 | 90 | +0.5 | 584 |
| HSW1618 | 1845 | 1845 | 1506 | 95 | 1728 | 1550 | 40 | 22 | 1617 | 1620 | 86 | 9 | 10 | 20 | 14 | 129 | 67 | +0.5 | 425 |
| HSW1800 | 1934.47 | 1902 | 1680 | 105 | 1848 | 1736 | 24 | 18 | 1801 | 1803 | 90 | 15 | 6 | 16 | 6 | 308 | 90 | 0 | 450 |
| HSW1800M | 2032 | 1940 | 1658 | 102 | 1886 | 1714 | 44 | 26 | 1802 | 1798 | 90 | 12 | 4 | 24 | 16 | 126 | 80 | 0.5 | 607 |
| HSW1800R | 2013.2 | 1940 | 1660 | 110 | 1887 | 1713 | 45 | 26 | 1802 | 1798 | 100 | 10 | 5 | 24 | 14 | 141 | 90 | +0.5 | 652 |
| HSW1824 | 2013.2 | 2013.2 | 1705 | 122 | 1896 | 1749 | 48 | 22 | 1824 | 1821 | 80 | 10 | 24 | 20 | 14 | 141 | 112 | 0.5 | 566 |
| HSW1900 | 2139.2 | | 1729 | 109 | 2005 | 1795 | 36 | 33 | 1902 | 1898 | 99 | 9 | 9 | 30 | 14 | 150 | 100 | +0.5 | 820 |
| HSW1958 | 2152.81 | 2085 | 1820 | 90 | 2045 | 1870 | 36 | 18 | 1958 | 1958 | 70 | 20 | 4 | 16 | 8 | 258 | 60 | 0 | 496 |
| HSW2000 | 2195.2 | 2129 | 1877 | 111 | 2068 | 1927 | 40 | 22 | 2001 | 2003 | 74 | 34 | 10 | 20 | 14 | 154 | 102 | +0.5 | 599 |
| HSW2000M | 2264.4 | 2178 | 1825 | 144 | 2110 | 1891 | 48 | 33 | 2002 | 1998 | 132 | 12 | 8 | 30 | 18 | 123 | 120 | +0.5 | 1169 |
| HSW2028 | 2192.041 | 2150 | 1880 | 105 | 2110 | 1945 | 48 | 18 | 2026 | 2030 | 90 | 15 | 6 | 16 | 7.5 | 270 | 80 | 0 | 635 |
| HSW2100 | 2263.047 | 2220 | 1970 | 105 | 2180 | 2020 | 36 | 22 | 2098 | 2102 | 90 | 15 | 6 | 20 | 8 | 270 | 80 | 0 | 700 |
| HSW2130 | 2380.8 | | 1959 | 109 | 2235 | 2025 | 48 | 33 | 2132 | 2128 | 99 | 9 | 8 | 30 | 16 | 146 | 100 | +0.5 | 931 |
| HSW2240 | 2382 | 2342 | 2130 | 80 | 2306 | 2174 | 48 | 18 | 2238 | 2242 | 70 | 10 | 6 | 16 | 6 | 395 | 30 | 0 | 388 |
| HSW2240M | 2498.4 | 2418 | 2065 | 144 | 2350 | 2131 | 48 | 33 | 2242 | 2238 | 132 | 12 | 8 | 30 | 18 | 136 | 120 | +0.5 | 1294 |
| HSW2355 | 2624.4 | 2541 | 2184 | 130 | 2460 | 2250 | 76 | 33 | 2357 | 2353 | 121 | 9 | 12 | 30 | 18 | 143 | 120 | +0.5 | 1211 |
| HSW2425 | 2568 | 2519 | 2325 | 72 | 2490 | 2365 | 40 | 18 | 2425 | 2425 | 63 | 9 | 8 | 16 | 10 | 255 | 55 | 0 | 450 |
| HSW2500 | 2754 | 2660 | 2325 | 144 | 2610 | 2391 | 36 | 33 | 2498 | 2502 | 132 | 12 | 6 | 30 | 18 | 151 | 120 | 0 | 1462 |
| HSW2500M | 2776 | 2678 | 2325 | 144 | 2610 | 2391 | 56 | 33 | 2502 | 2498 | 132 | 12 | 8 | 30 | 20 | 136 | 120 | +0.5 | 1509 |
| HSW2645 | 2892.8 | | 2474 | 109 | 2750 | 2540 | 60 | 33 | 2647 | 2643 | 99 | 9 | 12 | 30 | 16 | 178 | 100 | +0.5 | 1142 |
| HSW2800 | 3074.4 | 2978 | 2625 | 144 | 2910 | 2691 | 56 | 33 | 2802 | 2798 | 132 | 12 | 8 | 30 | 18 | 168 | 120 | +0.5 | 1696 |
| HSW2800M | 3076 | 2978 | 2625 | 144 | 2910 | 2691 | 56 | 33 | 2802 | 2798 | 132 | 12 | 8 | 30 | 20 | 151 | 120 | +0.5 | 1696 |
| HSW3124 | 3456 | 3340 | 2940 | 183 | 3254 | 2994 | 72 | 26 | 3124 | 3124 | 133 | 43 | 20 | 24 | 24 | 141 | 110 | +0.5 | 2280 |
| HSW3150 | 3476 | 3376 | 2922 | 174 | 3286 | 3014 | 56 | 45 | 3152 | 3147 | 162 | 12 | 8 | 42 | 20 | 171 | 150 | +0.5 | 2873 |
| HSW3150M | 3471.6 | 3376 | 2922 | 174 | 3286 | 3014 | 56 | 45 | 3152 | 3147 | 162 | 12 | 8 | 42 | 22 | 155 | 150 | +0.5 | 2873 |
| HSW3600 | 3972 | 3972 | 3400 | 220 | 3740 | 3460 | 72 | 32 | 3600 | 3604 | 205 | 60 | 20 | 30 | 24 | 163 | 160 | 0.25 | 3830 |

d 300～1224 mm



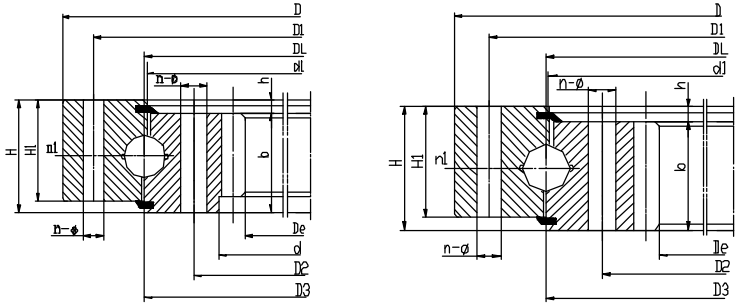




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| Bearing designation | Boundary Dimensions | | | | Bolt hole dimensions | | | | Structure dimensions | | | | | | Parameters of gear | | | | Mass |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | De | D | d | H | D1 | D2 | n | ϕ | D3 | d1 | H1 | h | n1 | M | m | Z | b | x | |
| | mm | | | | mm | | | mm | mm | | | | | mm | | | mm | | kg |
| HSN400 | 300 | 475 | | 55 | 448 | 352 | 16 | 13.5 | 401 | 339 | 46 | 9 | 2 | 14 | 5 | 61 | 46 | +0.5 | 33 |
| HSN450 | 345 | 531 | | 55 | 500 | 400 | 16 | 15.5 | 451 | 449 | 46 | 9 | 2 | 14 | 5 | 70 | 46 | +0.5 | 38 |
| HSN480 | 380 | 573 | 400 | 55 | 538 | 420 | 16 | 16 | 478.5 | 481.5 | 45 | 5 | 2 | 14 | 4 | 96 | 45 | +0.5 | 49 |
| HSN489 | 388 | 562 | 408 | 60 | 538 | 440 | 24 | 13.5 | 487.5 | 490.5 | 50 | 10 | 12 | 22 | 4 | 99 | 43 | 0 | 44.9 |
| HSN500 | 367 | 602 | 398 | 80 | 566 | 434 | 20 | 18 | 501 | 498 | 70 | 10 | 4 | 16 | 5 | 74 | 60 | +0.5 | 90 |
| HSN500M | 368.4 | 602 | 398 | 80 | 566 | 434 | 20 | 18 | 501 | 498 | 70 | 10 | 4 | 16 | 6 | 62 | 60 | +0.5 | 90 |
| HSN560 | 450 | 641 | | 55 | 610 | 510 | 20 | 15.5 | 561 | 559 | 46 | 9 | 4 | 14 | 6 | 76 | 46 | +0.5 | 51 |
| HSN560R | 427 | 662 | 458 | 80 | 626 | 494 | 20 | 18 | 561 | 558 | 70 | 10 | 4 | 16 | 5 | 86 | 60 | +0.5 | 102 |
| HSN560RM | 428.4 | 662 | 458 | 80 | 626 | 494 | 20 | 18 | 561 | 558 | 70 | 10 | 4 | 16 | 6 | 72 | 60 | +0.5 | 102 |
| HSN567.5 | 471.5 | 640 | 496 | 55 | 615 | 520 | 20 | 13.5 | 567.5 | 567.5 | 45 | 10 | 1 | 12 | 5 | 96 | 44.5 | 0.15 | 49.2 |
| HSN630 | 494.4 | 732 | 528 | 80 | 696 | 564 | 24 | 18 | 631 | 628 | 70 | 10 | 4 | 16 | 6 | 83 | 60 | +0.5 | 116 |
| HSN630M | 491.2 | 732 | 528 | 80 | 696 | 564 | 24 | 18 | 631 | 628 | 70 | 10 | 4 | 16 | 8 | 62 | 60 | +0.5 | 116 |
| HSN710 | 594 | 797 | | 55 | 762 | 658 | 24 | 18 | 711 | 709 | 46 | 9 | 4 | 16 | 6 | 100 | 46 | +0.5 | 68 |
| HSN710R | 572.4 | 812 | 608 | 80 | 776 | 644 | 24 | 18 | 711 | 708 | 70 | 10 | 4 | 16 | 6 | 96 | 60 | +0.5 | 132 |
| HSN720 | 582 | 820 | 620 | 80 | 780 | 660 | 18 | 18 | 721 | 719 | 70 | 10 | 12 | 16 | 6 | 99 | 60 | 0 | 125 |
| HSN800 | 635.2 | 922 | 678 | 100 | 878 | 722 | 30 | 22 | 801 | 798 | 90 | 10 | 6 | 20 | 8 | 80 | 80 | +0.5 | 224 |
| HSN800M | 634 | 922 | 678 | 100 | 878 | 722 | 30 | 22 | 801 | 798 | 90 | 10 | 6 | 20 | 10 | 64 | 80 | +0.5 | 224 |
| HSN886 | 752 | 980 | | 63 | 944 | 827 | 36 | 18 | 887 | 885 | 54 | 9 | 4 | 16 | 8 | 95 | 54 | +0.5 | 111 |
| HSN900 | 739.2 | 1022 | 778 | 100 | 978 | 822 | 30 | 22 | 901 | 898 | 90 | 10 | 6 | 20 | 8 | 93 | 80 | +0.5 | 252 |
| HSN900M | 734 | 1022 | 778 | 100 | 978 | 822 | 30 | 22 | 901 | 898 | 90 | 10 | 6 | 20 | 10 | 74 | 80 | +0.5 | 252 |
| HSN1000 | 824 | 1122 | 878 | 100 | 1078 | 922 | 36 | 22 | 1001 | 998 | 90 | 10 | 6 | 20 | 10 | 83 | 80 | +0.5 | 292 |
| HSN1000M | 820.8 | 1122 | 878 | 100 | 1078 | 922 | 36 | 22 | 1001 | 998 | 90 | 10 | 6 | 20 | 12 | 69 | 80 | +0.5 | 292 |
| HSN1077 | 930 | 1169 | | 63 | 1134 | 1017 | 36 | 18 | 1078 | 1076 | 54 | 9 | 6 | 16 | 10 | 94 | 54 | +0.5 | 140 |
| HSN1050 | 888.6 | 1170 | 920 | 98 | 1125 | 975 | 40 | 22 | 1040 | 1052 | 80 | 10 | 2 | 20 | 8 | 150 | 60 | 0 | 248 |
| HSN1086S | 920 | 1200 | | 90 | 1158 | 940 | 12 | 20 | 1086 | 1090 | 80 | 10 | 4 | 18 | 10 | 94 | 80 | 0 | 320 |
| HSN1094C | 984 | 1166 | | 56 | 1140 | 1055 | 60 | 13.5 | 1095.5 | 1092.5 | 45 | 11 | 4 | 12 | 8 | 125 | 45 | 0 | 90.5 |
| HSN1120 | 960 | 1232 | | 79 | 1188 | 1052 | 36 | 22 | 1121 | 1118 | 63 | 9 | 6 | 20 | 10 | 97 | 70 | +0.5 | 206 |
| HSN1120R | 944 | 1242 | 998 | 100 | 1198 | 1042 | 36 | 22 | 1121 | 1118 | 90 | 10 | 6 | 20 | 10 | 95 | 80 | +0.5 | 333 |
| HSN1120RM | 940.8 | 1242 | 998 | 100 | 1198 | 1042 | 36 | 22 | 1121 | 1118 | 90 | 10 | 6 | 20 | 12 | 79 | 80 | +0.5 | 333 |
| HSN1220 | 1017.3 | 1365 | | 120 | 1310 | 1130 | 36 | 24 | 1219 | 1221 | 105 | 15 | 6 | 22 | 12 | 86 | 105 | +0.35 | 474 |
| HSN1225 | 1052 | 1360 | | 98 | 1303 | 1147 | 40 | 26 | 1223 | 1227 | 80 | 10 | 4 | 24 | 10 | 106 | 88 | +0.5 | 320 |
| HSN1250 | 1090 | 1362 | | 79 | 1318 | 1182 | 40 | 22 | 1251 | 1248 | 63 | 9 | 8 | 20 | 10 | 110 | 70 | +0.5 | 231 |
| HSN1250R | 1048.8 | 1390 | 1110 | 110 | 1337 | 1163 | 40 | 26 | 1252 | 1248 | 100 | 10 | 5 | 24 | 12 | 88 | 90 | +0.5 | 467 |
| HSN1250RM | 1041.6 | 1390 | 1110 | 110 | 1337 | 1163 | 40 | 26 | 1252 | 1248 | 100 | 10 | 5 | 24 | 14 | 75 | 90 | +0.5 | 467 |
| HSN1535 | 1278 | 1695 | | 165 | 1636 | 1434 | 40 | 30 | 1533 | 1537 | 125 | 25 | 4 | 27 | 18 | 72 | 140 | +0.5 | 930 |
| HSN1400 | 1224 | 1512 | | 89 | 1468 | 1332 | 44 | 22 | 1401 | 1398 | 63 | 9 | 11 | 20 | 12 | 103 | 80 | +0.5 | 296 |

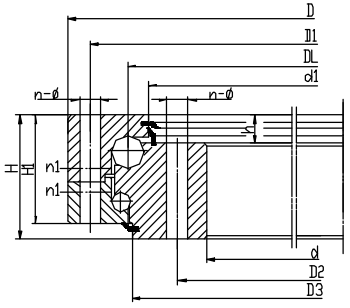
d 1192.8～3564 mm

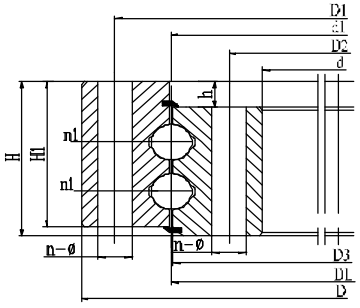



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| Bearing designation | Boundary Dimensions | | | | Bolt hole dimensions | | | | Structure dimensions | | | | | | Parameters of gear | | | | Mass |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | De | D | d | H | D1 | D2 | n | ϕ | D3 | d1 | H1 | h | n1 | M | m | Z | b | x | |
| | mm | | | | mm | | | mm | mm | | | | | mm | | | mm | | kg |
| HSN1400R | 1192.8 | 1540 | 1260 | 110 | 1487 | 1313 | 40 | 26 | 1402 | 1398 | 100 | 10 | 5 | 24 | 12 | 100 | 90 | +0.5 | 529 |
| HSN1400RM | 1195.6 | 1540 | 1260 | 110 | 1487 | 1313 | 40 | 26 | 1402 | 1398 | 100 | 10 | 5 | 24 | 14 | 86 | 90 | +0.5 | 529 |
| HSN1405 | 1235 | 1526 | | 122 | 1481 | 1358 | 40 | 26 | 1403 | 1407 | 97 | 12 | 3 | 24 | 14 | 90 | 110 | 0 | 434 |
| HSN1500 | 1308 | 1634 | | 94 | 1582 | 1418 | 40 | 26 | 1501 | 1498 | 81 | 9 | 8 | 24 | 12 | 110 | 85 | +0.5 | 410 |
| HSN1600 | 1428 | 1712 | | 89 | 1668 | 1532 | 48 | 22 | 1601 | 1598 | 63 | 9 | 8 | 20 | 12 | 120 | 80 | +0.5 | 334 |
| HSN1600R | 1391.6 | 1740 | 1460 | 110 | 1687 | 1513 | 45 | 26 | 1602 | 1598 | 100 | 10 | 5 | 24 | 14 | 100 | 90 | +0.5 | 607 |
| HSN1600RM | 1382.4 | 1740 | 1460 | 110 | 1687 | 1513 | 45 | 26 | 1602 | 1598 | 100 | 10 | 5 | 24 | 16 | 87 | 90 | +0.5 | 620 |
| HSN1700 | 1498 | 1834 | | 94 | 1782 | 1618 | 44 | 26 | 1701 | 1698 | 81 | 9 | 11 | 24 | 14 | 108 | 85 | +0.5 | 475 |
| HSN1728 | 1500.8 | 1905 | 1580 | 117 | 1810 | 1640 | 30 | 22/26 | | | 95 | 9 | 10 | 20/24 | 14 | 108 | 98 | +0.5 | 701 |
| HSN1800 | 1573.6 | 1940 | 1660 | 110 | 1887 | 1713 | 50 | 26 | 1798 | 1802 | 100 | 10 | 5 | 24 | 14 | 113 | 90 | +0.5 | 649 |
| HSN1895 | 1830 | 1960 | | 115 | 1865 | 1925 | 36/34 | | 1990 | 1825 | 64 | 30 | | 24 | 5 | 368 | 39 | 0 | 258 |
| HSN2000 | 1728 | 2178 | 1825 | 144 | 2110 | 1891 | 48 | 33 | 1998 | 2002 | 132 | 12 | 12 | 30 | 16 | 109 | 120 | +0.5 | 1176 |
| HSN2070 | 1910.2 | 2260 | | 140 | 2180 | 1995 | 48 | | 2066 | 2074 | 100 | 40 | 6 | 20 | 10 | 192 | 100 | +0.5 | 862 |
| HSN2211 | 2032 | 2335 | | 124 | 2280 | 2144 | 64 | 22 | 2208 | 2214 | 80 | 20 | 6 | 20 | 14 | 147 | 100 | 0 | 633 |
| HSN2240 | 1984 | 2411 | | 109 | 2345 | 2135 | 48 | 33 | 2242 | 2238 | 99 | 9 | 8 | 30 | 16 | 125 | 100 | +0.5 | 961 |
| HSN2240R | 1990.4 | 2418 | 2065 | 144 | 2350 | 2131 | 48 | 33 | 2242 | 2238 | 132 | 12 | 8 | 30 | 16 | 125 | 120 | +0.5 | 1393 |
| HSN2240RM | 1987.2 | 2418 | 2065 | 144 | 2350 | 2131 | 48 | 33 | 2242 | 2238 | 132 | 12 | 8 | 30 | 18 | 111 | 120 | +0.5 | 1393 |
| HSN2249 | 2023.4 | 2410 | | 132 | 2358 | 2140 | 36 | 22 | 2246 | 2252 | 122 | 9 | 4 | 20 | 14 | 146 | 123 | 0.245 | 1115 |
| HSN2335 | 2230 | 2404 | 2256 | 120 | 2270 | 2410 | 42/40 | | 2470 | 2231.4 | 74 | 18 | | 20 | 5 | 448 | 45 | 0 | 516 |
| HSN2490 | 2240 | 2661 | | 109 | 2595 | 2385 | 54 | 33 | 2492 | 2488 | 99 | 9 | 9 | 30 | 16 | 141 | 100 | +0.5 | 1053 |
| HSN2500 | 2239.2 | 2678 | 2325 | 144 | 2610 | 2391 | 56 | 33 | 2502 | 2498 | 132 | 12 | 8 | 30 | 18 | 125 | 120 | +0.5 | 1580 |
| HSN2500M | 2228 | 2678 | 2325 | 144 | 2610 | 2391 | 56 | 33 | 2502 | 2498 | 132 | 12 | 8 | 30 | 20 | 112 | 120 | +0.5 | 1580 |
| HSN2660 | 2323 | 2880 | | 178 | 2810 | 2510 | 60 | 39 | 2664 | 2656 | 161 | 17 | 4 | 36 | 18 | 131 | 161 | 0 | 2373 |
| HSN2675 | 2590 | 2750 | 2616 | 119 | 2634 | 2744 | 48/38 | | 2784 | 2600 | 72 | 26 | 3 | 20 | 5 | 520 | 45 | 0 | 431 |
| HSN2786 | 2544.38 | 2942 | 2622 | 155 | 2890 | 2683 | 48 | 26 | 2784 | 2789 | 125 | 30 | 24 | 24 | 16 | 160 | 115 | +0.5 | 1410 |
| HSN2796 | 2515.2 | 3000 | 2590 | 152 | 2922 | 2670 | 72 | 39 | 2794 | 2798 | 134 | 20 | 12 | 36 | 16 | 158 | 131 | +0.5 | 2033 |
| HSN2800 | 2502 | 2978 | 2625 | 144 | 2910 | 2691 | 60 | | 2809 | 2791 | 132 | 12 | 8 | 30 | 18 | 141 | 117 | 0 | 1776 |
| HSN2840 | 2622.4 | 2990 | 2735 | 160 | 2945 | 2770 | 48 | 23 | 2835 | 2820 | 135 | 5 | 8 | 20 | 22 | 121 | 144 | 0 | 1442 |
| HSN3150 | 2828 | 3376 | 2922 | 174 | 3286 | 3014 | 56 | 45 | 3152 | 3147 | 162 | 12 | 8 | 42 | 20 | 142 | 150 | +0.5 | 2840 |
| HSN3150M | 2824.8 | 3376 | 2922 | 174 | 3286 | 3014 | 56 | 45 | 3152 | 3147 | 162 | 12 | 8 | 42 | 22 | 129 | 150 | +0.5 | 2840 |
| HSN3803 | 3564 | 3939 | 3651 | 105 | 3895 | 3711 | 60 | 22 | 3807 | 3799 | 82 | 10 | 15 | 20 | 18 | 199 | 90 | +0.5 | 1430 |

d 616～4778 mm

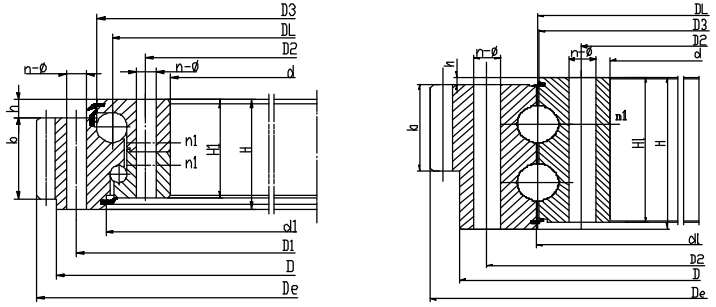



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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | D | d | H | D1 | D2 | n | ϕ | D3 | d1 | H1 | h | n1 | M | kg |
| | mm | | | mm | | | mm | mm | | | | | mm | |
| HSB500D | 616 | 384 | 106 | 580 | 420 | 20 | 18 | 482 | 477 | 96 | 26 | 4 | 16 | 121 |
| HSB560D | 676 | 444 | 106 | 640 | 480 | 20 | 18 | 543 | 537 | 96 | 26 | 4 | 16 | 136 |
| HSB630D | 746 | 514 | 106 | 710 | 550 | 24 | 18 | 613 | 607 | 96 | 26 | 4 | 16 | 152 |
| HSB710D | 826 | 594 | 106 | 790 | 630 | 24 | 18 | 692 | 687 | 96 | 26 | 4 | 16 | 172 |
| HSB800D | 942 | 658 | 124 | 898 | 702 | 30 | 22 | 777 | 771 | 114 | 29 | 6 | 20 | 284 |
| HSB900D | 1042 | 758 | 124 | 998 | 802 | 30 | 22 | 877 | 871 | 114 | 29 | 6 | 20 | 316 |
| HSB1000D | 1142 | 858 | 124 | 1098 | 902 | 36 | 22 | 977 | 971 | 114 | 29 | 6 | 20 | 349 |
| HSB1120D | 1262 | 978 | 124 | 1218 | 1022 | 36 | 22 | 1097 | 1091 | 114 | 29 | 6 | 20 | 394 |
| HSB1250D | 1426 | 1074 | 160 | 1374 | 1126 | 40 | 26 | 1215 | 1214 | 150 | 39 | 5 | 24 | 709 |
| HSB1400D | 1576 | 1224 | 160 | 1524 | 1272 | 40 | 26 | 1365 | 1364 | 150 | 39 | 5 | 24 | 787 |
| HSB1600D | 1776 | 1424 | 160 | 1724 | 1476 | 45 | 26 | 1565 | 1564 | 150 | 39 | 5 | 24 | 899 |
| HSB1783D | 1959 | 1606 | 166 | 1893 | 1672 | 60 | 33 | 1781 | 1785 | 158 | 26 | 10 | 30 | 974 |
| HSB1800D | 1976 | 1624 | 160 | 1924 | 1676 | 45 | 26 | 1765 | 1764 | 150 | 39 | 5 | 24 | 1018 |
| HSB2000D | 2215 | 1785 | 190 | 2149 | 1851 | 48 | 33 | 1965 | 1962 | 178 | 47 | 8 | 30 | 1586 |
| HSB2240D | 2455 | 2025 | 190 | 2389 | 2091 | 48 | 33 | 2206 | 2202 | 178 | 47 | 8 | 30 | 1789 |
| HSB2500D | 2715 | 2285 | 190 | 2649 | 2351 | 56 | 33 | 2465 | 2462 | 178 | 47 | 8 | 30 | 1990 |
| HSB2800D | 3015 | 2585 | 190 | 2949 | 2651 | 56 | 33 | 2765 | 2762 | 178 | 47 | 8 | 30 | 2243 |
| HSB3150D | 3428 | 2872 | 226 | 3338 | 2962 | 56 | 45 | 3104 | 3102 | 214 | 56 | 8 | 42 | 3762 |
| HSB3550D | 3828 | 3272 | 226 | 3738 | 3362 | 56 | 45 | 3504 | 3502 | 214 | 56 | 8 | 42 | 4272 |
| HSB4000D | 4278 | 3722 | 226 | 4188 | 3812 | 60 | 45 | 3954 | 3952 | 214 | 56 | 10 | 42 | 4828 |
| HSB4500D | 4778 | 4222 | 226 | 4688 | 4312 | 60 | 45 | 4454 | 4452 | 214 | 56 | 10 | 42 | 5465 |

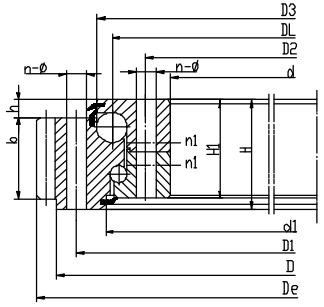
d 644～2552.4 mm

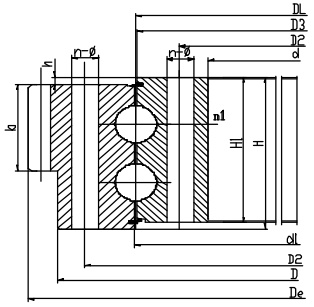



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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | De | D | d | H | D1 | D2 | n | ϕ | D3 | d1 | H1 | h | n1 | M | m | Z | b | x | |
| | mm | | | | mm | | | mm | mm | | | | | mm | | | mm | | kg |
| HSW500D | 644 | 616 | 384 | 106 | 580 | 420 | 20 | 18 | 523 | 518 | 96 | 26 | 4 | 16 | 5 | 126 | 60 | +0.5 | 130 |
| HSW500DM | 646.8 | 616 | 384 | 106 | 580 | 420 | 20 | 18 | 523 | 518 | 96 | 26 | 4 | 16 | 6 | 105 | 60 | +0.5 | 130 |
| HSW560D | 704 | 676 | 444 | 106 | 640 | 480 | 20 | 18 | 583 | 578 | 96 | 26 | 4 | 16 | 5 | 138 | 60 | +0.5 | 146 |
| HSW560DM | 706.8 | 676 | 444 | 106 | 640 | 480 | 20 | 18 | 583 | 578 | 96 | 26 | 4 | 16 | 6 | 115 | 60 | +0.5 | 147 |
| HSW630D | 790.8 | 746 | 514 | 106 | 710 | 550 | 24 | 18 | 653 | 648 | 96 | 26 | 4 | 16 | 6 | 129 | 60 | +0.5 | 173 |
| HSW630DM | 790.4 | 746 | 514 | 106 | 710 | 550 | 24 | 18 | 653 | 648 | 96 | 26 | 4 | 16 | 8 | 96 | 60 | +0.5 | 170 |
| HSW710D | 862.8 | 826 | 594 | 106 | 790 | 630 | 24 | 18 | 733 | 728 | 96 | 26 | 4 | 16 | 6 | 141 | 60 | +0.5 | 190 |
| HSW710DM | 862.4 | 826 | 594 | 106 | 790 | 630 | 24 | 18 | 733 | 728 | 96 | 26 | 4 | 16 | 8 | 105 | 60 | +0.5 | 187 |
| HSW800D | 982.4 | 942 | 658 | 124 | 898 | 702 | 30 | 22 | 829 | 823 | 114 | 29 | 6 | 20 | 8 | 120 | 80 | +0.5 | 305 |
| HSW800DM | 988 | 942 | 658 | 124 | 898 | 702 | 30 | 22 | 829 | 823 | 114 | 29 | 6 | 20 | 10 | 96 | 80 | +0.5 | 307 |
| HSW900D | 1086.4 | 1042 | 758 | 124 | 998 | 802 | 30 | 22 | 929 | 923 | 114 | 29 | 6 | 20 | 8 | 133 | 80 | +0.5 | 349 |
| HSW900DM | 1088 | 1042 | 758 | 124 | 998 | 802 | 30 | 22 | 929 | 923 | 114 | 29 | 6 | 20 | 10 | 106 | 80 | +0.5 | 348 |
| HSW1000D | 1198 | 1142 | 858 | 124 | 1098 | 902 | 36 | 22 | 1029 | 1023 | 114 | 29 | 6 | 20 | 10 | 117 | 80 | +0.5 | 396 |
| HSW1000DM | 1197.6 | 1142 | 858 | 124 | 1098 | 902 | 36 | 22 | 1029 | 1023 | 114 | 29 | 6 | 20 | 12 | 97 | 80 | +0.5 | 391 |
| HSW1120D | 1318 | 1262 | 978 | 124 | 1218 | 1022 | 36 | 22 | 1148 | 1143 | 114 | 29 | 6 | 20 | 10 | 129 | 80 | +0.5 | 445 |
| HSW1120DM | 1317.6 | 1262 | 978 | 124 | 1218 | 1022 | 36 | 22 | 1148 | 1143 | 114 | 29 | 6 | 20 | 12 | 107 | 80 | +0.5 | 439 |
| HSW1250D | 1497.6 | 1426 | 1074 | 160 | 1374 | 1126 | 40 | 26 | 1286 | 1282 | 150 | 39 | 5 | 24 | 12 | 122 | 90 | +0.5 | 740 |
| HSW1250DM | 1495.2 | 1426 | 1074 | 160 | 1374 | 1126 | 40 | 26 | 1286 | 1282 | 150 | 39 | 5 | 24 | 14 | 104 | 90 | +0.5 | 774 |
| HSW1400D | 1641.6 | 1576 | 1224 | 160 | 1524 | 1272 | 40 | 26 | 1440 | 1423 | 150 | 39 | 5 | 24 | 12 | 134 | 90 | +0.5 | 803 |
| HSW1400DM | 1649.2 | 1576 | 1224 | 160 | 1524 | 1272 | 40 | 26 | 1436 | 1432 | 150 | 39 | 5 | 24 | 14 | 115 | 90 | +0.5 | 878 |
| HSW1600D | 1845.2 | 1776 | 1424 | 160 | 1724 | 1476 | 45 | 26 | 1636 | 1635 | 150 | 39 | 5 | 24 | 14 | 129 | 90 | +0.5 | 995 |
| HSW1600DM | 1852.8 | 1776 | 1424 | 160 | 1724 | 1476 | 45 | 26 | 1636 | 1635 | 150 | 39 | 5 | 24 | 16 | 113 | 90 | +0.5 | 1003 |
| HSW1800D | 2060.8 | 1976 | 1624 | 160 | 1924 | 1676 | 45 | 26 | 1840 | 1823 | 150 | 39 | 5 | 24 | 16 | 126 | 90 | +0.5 | 1208 |
| HSW1800DM | 2060.8 | 1976 | 1624 | 160 | 1924 | 1676 | 45 | 26 | 1836 | 1835 | 150 | 39 | 5 | 24 | 16 | 126 | 90 | +0.5 | 1151 |
| HSW2000D | 2300.8 | 2215 | 1785 | 190 | 2149 | 1851 | 48 | 33 | 2038 | 2035 | 178 | 47 | 8 | 30 | 16 | 141 | 120 | +0.5 | 1794 |
| HSW2000DM | 2300.4 | 2215 | 1785 | 190 | 2149 | 1851 | 48 | 33 | 2038 | 2035 | 178 | 47 | 8 | 30 | 18 | 125 | 120 | +0.5 | 1780 |
| HSW2240D | 2540.8 | 2455 | 2025 | 190 | 2389 | 2091 | 48 | 33 | 2278 | 2275 | 178 | 47 | 8 | 30 | 16 | 156 | 120 | +0.5 | 2017 |
| HSW2240DM | 2552.4 | 2455 | 2025 | 190 | 2389 | 2091 | 48 | 33 | 2278 | 2275 | 178 | 47 | 8 | 30 | 18 | 139 | 120 | +0.5 | 2048 |

d 2804.4～4895 mm

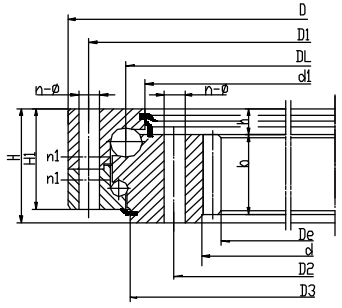


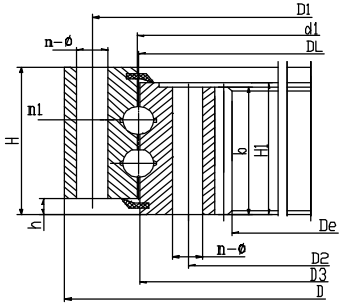




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| Bearing designation | Boundary Dimensions | | | | Bolt hole dimensions | | | | Structure dimensions | | | | | | Parameters of gear | | | | Mass |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | De | D | d | H | D1 | D2 | n | ϕ | D3 | d1 | H1 | h | n1 | M | m | Z | b | x | |
| | mm | | | | mm | | | mm | mm | | | | | mm | | | mm | | kg |
| HSW2500D | 2804.4 | 2715 | 2285 | 190 | 2649 | 2351 | 56 | 33 | 2538 | 2532 | 178 | 47 | 8 | 30 | 18 | 153 | 120 | +0.5 | 2246 |
| HSW2500DM | 2816 | 2715 | 2285 | 190 | 2649 | 2351 | 56 | 33 | 2538 | 2532 | 178 | 47 | 8 | 30 | 20 | 138 | 120 | +0.5 | 2280 |
| HSW2738D | 3004 | 2930 | 2559 | 208 | 2864 | 2625 | 36 | 33 | 2736 | 2740 | 199 | 9 | 12 | 30 | 16 | 185 | 128 | +0.5 | 2480 |
| HSW2800D | 3110.4 | 3015 | 2585 | 190 | 2949 | 2651 | 56 | 33 | 2838 | 2832 | 178 | 47 | 8 | 30 | 18 | 170 | 120 | +0.5 | 2553 |
| HSW2800DM | 3116 | 3015 | 2585 | 190 | 2949 | 2651 | 56 | 33 | 2838 | 2832 | 178 | 47 | 8 | 30 | 20 | 153 | 120 | +0.5 | 2563 |
| HSW3150 | 3536 | 3428 | 2872 | 226 | 3338 | 2962 | 56 | 45 | 3198 | 3196 | 214 | 56 | 8 | 42 | 20 | 174 | 150 | +0.5 | 4428 |
| HSW3150DM | 3537.6 | 3428 | 2872 | 226 | 3338 | 2962 | 56 | 45 | 3198 | 3196 | 214 | 56 | 8 | 42 | 22 | 158 | 150 | +0.5 | 4414 |
| HSW3400D | 3700 | 3605 | 3240 | 214 | 3530 | 3295 | 52 | 33 | 3436 | 3440 | 178 | 44 | 8 | 30 | 20 | 183 | 160 | 0 | 2770 |
| HSW3550D | 3936 | 3828 | 3272 | 226 | 3738 | 3362 | 56 | 45 | 3598 | 3596 | 214 | 56 | 8 | 42 | 20 | 194 | 150 | +0.5 | 5012 |
| HSW3550DM | 3933.6 | 3828 | 3272 | 226 | 3738 | 3362 | 56 | 45 | 3598 | 3596 | 214 | 56 | 8 | 42 | 22 | 176 | 150 | +0.5 | 4967 |
| HSW4000DM | 4395.6 | 4278 | 3722 | 226 | 4188 | 3812 | 60 | 45 | 4048 | 4046 | 214 | 56 | 10 | 42 | 22 | 197 | 150 | +0.5 | 5706 |
| HSW4000DM | 4395 | 4278 | 3722 | 226 | 4188 | 3812 | 60 | 45 | 4048 | 4046 | 214 | 56 | 10 | 42 | 25 | 173 | 150 | +0.5 | 5656 |
| HSW4500D | 4867.2 | 4754 | 4256 | 200 | 4642 | 4358 | 84 | 39 | 4502 | 4498 | 190 | 10 | 7 | 36 | 24 | 200 | 180 | +0.5 | 5380 |
| HSW4500DM | 4895 | 4778 | 4222 | 226 | 4688 | 4312 | 60 | 45 | 4548 | 4546 | 214 | 56 | 10 | 42 | 25 | 193 | 150 | +0.5 | 6385 |

d 257～1933.2 mm

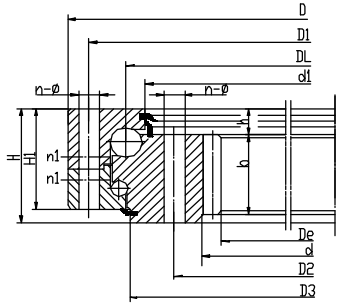


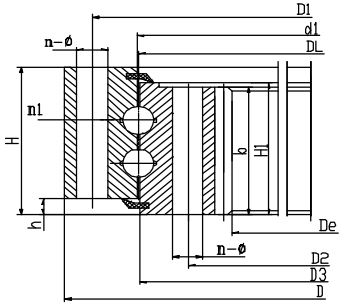




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| Bearing designation | Boundary Dimensions | | | | Bolt hole dimensions | | | | Structure dimensions | | | | | | Parameters of gear | | | | Mass |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | De | D | d | H | D1 | D2 | n | ϕ | D3 | d1 | H1 | h | n1 | M | m | Z | b | x | |
| | mm | | | | mm | | | mm | mm | | | | | mm | | | mm | | kg |
| HSN500D | 257 | 616 | 384 | 106 | 580 | 420 | 20 | 18 | 482 | 477 | 96 | 26 | 4 | 16 | 5 | 72 | 60 | +0.5 | 126 |
| HSN500DM | 350.4 | 616 | 384 | 106 | 580 | 420 | 20 | 18 | 482 | 477 | 96 | 26 | 4 | 16 | 6 | 59 | 60 | +0.5 | 128 |
| HSN560D | 417 | 676 | 444 | 106 | 640 | 480 | 20 | 18 | 542 | 537 | 96 | 26 | 4 | 16 | 5 | 84 | 60 | +0.5 | 143 |
| HSN560DM | 410.4 | 676 | 444 | 106 | 640 | 480 | 20 | 18 | 542 | 537 | 96 | 26 | 4 | 16 | 6 | 69 | 60 | +0.5 | 144 |
| HSN630D | 482.4 | 746 | 514 | 106 | 710 | 550 | 24 | 18 | 612 | 607 | 96 | 26 | 4 | 16 | 6 | 81 | 60 | +0.5 | 160 |
| HSN630DM | 475.2 | 746 | 514 | 106 | 710 | 550 | 24 | 18 | 612 | 607 | 96 | 26 | 4 | 16 | 8 | 60 | 60 | +0.5 | 162 |
| HSN710D | 560.4 | 826 | 594 | 106 | 790 | 630 | 24 | 18 | 692 | 687 | 96 | 26 | 4 | 16 | 6 | 94 | 60 | +0.5 | 183 |
| HSN710DM | 555.2 | 826 | 594 | 106 | 790 | 630 | 24 | 18 | 692 | 687 | 96 | 26 | 4 | 16 | 8 | 70 | 60 | +0.5 | 184 |
| HSN762D | 640 | 850 | 640 | 93 | 820 | 705 | 36 | 17.5 | 760 | 764 | 83 | 10 | 4 | 16 | 8 | 81 | 83 | 0.5 | 140 |
| HSN800D | 619.2 | 942 | 658 | 124 | 898 | 702 | 30 | 22 | 777 | 771 | 114 | 29 | 6 | 20 | 8 | 78 | 80 | +0.5 | 300 |
| HSN800DM | 614 | 942 | 658 | 124 | 898 | 702 | 30 | 22 | 777 | 771 | 114 | 29 | 6 | 20 | 10 | 62 | 80 | +0.5 | 301 |
| HSN900D | 715.2 | 1042 | 758 | 124 | 998 | 802 | 30 | 22 | 877 | 871 | 114 | 29 | 6 | 20 | 8 | 90 | 80 | +0.5 | 337 |
| HSN900DM | 714 | 1042 | 758 | 124 | 998 | 802 | 30 | 22 | 877 | 871 | 114 | 29 | 6 | 20 | 10 | 72 | 80 | +0.5 | 335 |
| HSN1000D | 814 | 1142 | 858 | 124 | 1098 | 902 | 36 | 22 | 977 | 971 | 114 | 29 | 6 | 20 | 10 | 82 | 80 | +0.5 | 371 |
| HSN1000DM | 796.8 | 1142 | 858 | 124 | 1098 | 902 | 36 | 22 | 977 | 971 | 114 | 29 | 6 | 20 | 12 | 67 | 80 | +0.5 | 383 |
| HSN1120D | 924 | 1262 | 978 | 124 | 1218 | 1022 | 36 | 22 | 1097 | 1091 | 114 | 29 | 6 | 20 | 10 | 93 | 80 | +0.5 | 429 |
| HSN1120DM | 916.8 | 1262 | 978 | 124 | 1218 | 1022 | 36 | 22 | 1097 | 1091 | 114 | 29 | 6 | 20 | 12 | 77 | 80 | +0.5 | 432 |
| HSN1250D | 1012.8 | 1426 | 1074 | 160 | 1374 | 1126 | 40 | 26 | 1215 | 1214 | 150 | 39 | 5 | 24 | 12 | 85 | 90 | +0.5 | 746 |
| HSN1250DM | 1013.6 | 1426 | 1074 | 160 | 1374 | 1126 | 40 | 26 | 1215 | 1214 | 150 | 39 | 5 | 24 | 14 | 73 | 90 | +0.5 | 741 |
| HSN1400D | 1156.8 | 1576 | 1224 | 160 | 1524 | 1272 | 40 | 26 | 1365 | 1364 | 150 | 39 | 5 | 24 | 12 | 97 | 90 | +0.5 | 850 |
| HSN1400DM | 1153.6 | 1576 | 1224 | 160 | 1524 | 1272 | 40 | 26 | 1365 | 1364 | 150 | 39 | 5 | 24 | 14 | 83 | 90 | +0.5 | 850 |
| HSN1600D | 1349.6 | 1776 | 1424 | 160 | 1724 | 1476 | 45 | 26 | 1565 | 1564 | 150 | 39 | 5 | 24 | 14 | 97 | 90 | +0.5 | 979 |
| HSN1600DM | 1350.4 | 1776 | 1424 | 160 | 1724 | 1476 | 45 | 26 | 1565 | 1564 | 150 | 39 | 5 | 24 | 16 | 85 | 90 | +0.5 | 972 |
| HSN1800D | 1545.6 | 1976 | 1624 | 160 | 1924 | 1676 | 45 | 26 | 1765 | 1764 | 150 | 39 | 5 | 24 | 14 | 111 | 90 | +0.5 | 1117 |
| HSN1800DM | 1542.4 | 1976 | 1624 | 160 | 1924 | 1676 | 45 | 26 | 1765 | 1764 | 150 | 39 | 5 | 24 | 16 | 97 | 90 | +0.5 | 1116 |
| HSN2000D | 1702.4 | 2215 | 1785 | 190 | 2149 | 1851 | 48 | 33 | 1965 | 1962 | 178 | 47 | 8 | 30 | 16 | 107 | 120 | +0.5 | 1733 |
| HSN2000DM | 1699.2 | 2215 | 1785 | 190 | 2149 | 1851 | 48 | 33 | 1965 | 1962 | 178 | 47 | 8 | 30 | 18 | 95 | 120 | +0.5 | 1732 |
| HSN2240D | 1942.4 | 2455 | 2025 | 190 | 2389 | 2091 | 48 | 33 | 2206 | 2202 | 178 | 47 | 8 | 30 | 16 | 122 | 120 | +0.5 | 1956 |
| HSN2240DM | 1933.2 | 2455 | 2025 | 190 | 2389 | 2091 | 48 | 33 | 2206 | 2202 | 178 | 47 | 8 | 30 | 18 | 108 | 120 | +0.5 | 1973 |

d 2203.2～4110 mm

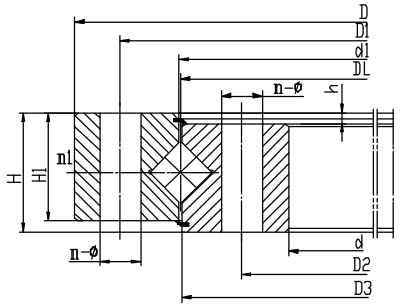



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| Bearing designation | Boundary Dimensions | | | | Bolt hole dimensions | | | | Structure dimensions | | | | | | Parameters of gear | | | | Mass |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | De | D | d | H | D1 | D2 | n | ϕ | D3 | d1 | H1 | h | n1 | M | m | Z | b | x | |
| | mm | | | | mm | | | mm | mm | | | | | mm | | | mm | | kg |
| HSN2500D | 2203.2 | 2715 | 2285 | 190 | 2649 | 2351 | 56 | 33 | 2465 | 2462 | 178 | 47 | 8 | 30 | 18 | 123 | 120 | +0.5 | 2164 |
| HSN2500DM | 2188 | 2715 | 2285 | 190 | 2649 | 2351 | 56 | 33 | 2465 | 2462 | 178 | 47 | 8 | 30 | 20 | 110 | 120 | +0.5 | 2204 |
| HSN2800D | 2491.2 | 3015 | 2585 | 190 | 2949 | 2651 | 56 | 33 | 2765 | 2762 | 178 | 47 | 8 | 30 | 18 | 139 | 120 | +0.5 | 2486 |
| HSN2800DM | 2488 | 3015 | 2585 | 190 | 2949 | 2651 | 56 | 33 | 2765 | 2762 | 178 | 47 | 8 | 30 | 20 | 125 | 120 | +0.5 | 2485 |
| HSN3150D | 2768 | 3428 | 2872 | 226 | 3338 | 2962 | 56 | 45 | 3104 | 3102 | 214 | 56 | 8 | 42 | 20 | 139 | 150 | +0.5 | 4137 |
| HSN3150DM | 2758.8 | 3428 | 2872 | 226 | 3338 | 2962 | 56 | 45 | 3104 | 3102 | 214 | 56 | 8 | 42 | 22 | 126 | 150 | +0.5 | 4167 |
| HSN3310D | 3000 | 3500 | | 240 | 3435 | 3190 | 88 | 37 | 3255 | 3262 | 214 | 50 | 16 | 33 | 24 | 126 | 190 | +0.5 | 3380 |
| HSN3550D | 3168 | 3828 | 3272 | 226 | 3738 | 3362 | 56 | 45 | 3504 | 3502 | 214 | 56 | 8 | 42 | 20 | 159 | 150 | +0.5 | 4700 |
| HSN3550DM | 3176.8 | 3828 | 3272 | 226 | 3738 | 3362 | 56 | 45 | 3504 | 3502 | 214 | 56 | 8 | 42 | 22 | 145 | 150 | +0.5 | 4627 |
| HSN4000D | 3616.8 | 4278 | 3722 | 226 | 4188 | 3812 | 60 | 45 | 3954 | 3952 | 214 | 56 | 10 | 42 | 22 | 165 | 150 | +0.5 | 5298 |
| HSN4000DM | 3610 | 4278 | 3722 | 226 | 4188 | 3812 | 60 | 45 | 3954 | 3952 | 214 | 56 | 10 | 42 | 25 | 145 | 150 | +0.5 | 5309 |
| HSN4500D | 4122.8 | 4778 | 4222 | 226 | 4688 | 4312 | 60 | 45 | 4454 | 4452 | 214 | 56 | 10 | 42 | 22 | 188 | 150 | +0.5 | 5952 |
| HSN4500DM | 4110 | 4778 | 4222 | 226 | 4688 | 4312 | 60 | 45 | 4454 | 4452 | 214 | 56 | 10 | 42 | 25 | 165 | 150 | +0.5 | 6011 |

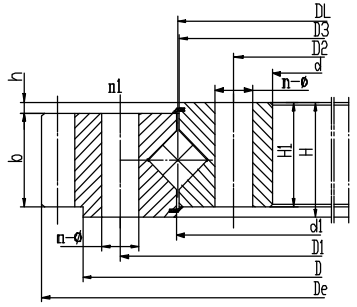
d 480～3376 mm




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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | D | d | H | D1 | D2 | n | ϕ | D3 | d1 | H1 | h | n1 | M | kg |
| | mm | | | mm | | | mm | mm | | | | | mm | |
| HJB430 | 480 | 380 | 26 | 462 | 398 | 20 | | 429.4 | 430.6 | 26 | 0 | 2 | 8/10 | 12.2 |
| HJB440.3 | 480 | 400 | 35 | | 439 | 12 | 4.5 | 439 | 441.5 | 35 | 0 | 4 | 3 | 14.7 |
| HJB500 | 602 | 398 | 75 | 566 | 434 | 20 | 18 | 498 | 502 | 65 | 10 | 4 | 16 | 77 |
| HJB550/P4-NTW | 600 | 500 | 40 | | 516.5 | 12 | 4.3 | 548 | 552 | 40 | 0 | 4 | 6 | 26.1 |
| HJB560 | 662 | 458 | 75 | 626 | 494 | 20 | 18 | 558 | 562 | 65 | 10 | 4 | 16 | 87 |
| HJB630 | 732 | 528 | 75 | 696 | 564 | 24 | 18 | 628 | 632 | 65 | 10 | 4 | 16 | 95 |
| HJB640 | 700 | 600 | 40 | 683 | | 10 | | 639 | 641 | 40 | 10 | 2 | 3 | 26.6 |
| HJB675 | 816 | 573 | 90 | 753 | 604 | 18 | 22 | 673 | 677 | 73 | 20 | 4 | 8 | 142 |
| HJB675X1 | 816 | 571 | 90 | 753 | 604 | 36 | 22 | 675 | 675 | 73 | 23 | 4 | 20 | 126 |
| HJB675X2 | 816 | 573 | 90 | 753 | 604 | 18 | 22 | 673 | 677 | 73 | 20 | 4 | 20 | 142 |
| HJB710 | 812 | 608 | 75 | 776 | 644 | 24 | 18 | 708 | 712 | 65 | 10 | 4 | 16 | 111 |
| HJB780-NTW | 880 | 680 | 80 | 846 | 714 | 4 | 16 | 778 | 782 | 80 | 0 | 4 | 14 | 149 |
| HJB800 | 922 | 678 | 82 | 878 | 722 | 30 | 22 | 798 | 802 | 72 | 10 | 6 | 20 | 152 |
| HJB900 | 1022 | 778 | 82 | 978 | 822 | 30 | 22 | 898 | 902 | 72 | 10 | 6 | 20 | 186 |
| HJB1000 | 1122 | 878 | 82 | 1078 | 922 | 36 | 22 | 998 | 1002 | 72 | 10 | 6 | 20 | 204 |
| HJB1114 | 1250 | 1000 | 110 | 1200 | | 12 | | 1112 | 1116 | 110 | 0 | 4 | 10 | 355 |
| HJB1120 | 1242 | 998 | 82 | 1198 | 1042 | 36 | 22 | 1118 | 1122 | 72 | 10 | 6 | 20 | 233 |
| HJB1135 | 1270 | 1000 | 100 | 1220 | 1050 | 36 | 19 | 1132 | 1138 | 85 | 15 | 2 | 16 | 296 |
| HJB1250 | 1400 | 1060 | 120 | | | 12 | | | | 120 | 0 | | 24 | 599 |
| HJB1400 | 1540 | 1260 | 91 | 1487 | 1313 | 40 | 26 | 1398 | 1402 | 81 | 10 | 5 | 24 | 369 |
| HJB1520 | 1720 | 1320 | 134 | | 1390 | 12 | 26 | 1516 | 1524 | 134 | 0 | 8 | 24 | 967 |
| HJB1520K | 1720 | 1320 | 134 | | 1390 | 12 | 26 | 1516 | 1524 | 134 | 0 | 4 | 24 | 967 |
| HJB1600 | 1740 | 1460 | 91 | 1687 | 1513 | 45 | 26 | 1598 | 1602 | 81 | 10 | 5 | 24 | 425 |
| HJB1635 | 1770 | 1500 | 120 | | | | | 1625 | 1645 | 120 | 0 | 6 | | 618 |
| HJB1800 | 1940 | 1660 | 91 | 1887 | 1713 | 45 | 26 | 1798 | 1802 | 81 | 10 | 5 | 24 | 456 |
| HJB2000 | 2178 | 1825 | 112 | 2110 | 1891 | 48 | 33 | 1997 | 2003 | 100 | 12 | 8 | 30 | 815 |
| HJB2240 | 2418 | 2065 | 112 | 2350 | 2131 | 48 | 33 | 2237 | 2243 | 100 | 12 | 8 | 30 | 944 |
| HJB2500 | 2678 | 2325 | 112 | 2610 | 2391 | 56 | 33 | 2497 | 2503 | 100 | 12 | 8 | 30 | 1026 |
| HJB2745 | 2980 | 2500 | 180 | 2910 | 2590 | 48 | 33 | 2743 | 2747 | 170 | 10 | 6 | 30 | 2880 |
| HJB2800K | 2978 | 2625 | 112 | 2910 | 2691 | 16 | 33 | 2799 | 2801 | 100 | 12 | 4 | 30 | 1170 |
| HJB3150 | 3376 | 2922 | 134 | 3286 | 3014 | 56 | 45 | 3147 | 3153 | 122 | 12 | 8 | 42 | 2097 |

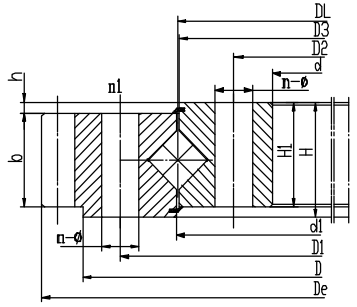
d 629～2013.2 mm




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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | De | D | d | H | D1 | D2 | n | ϕ | D3 | d1 | H1 | h | n1 | M | m | Z | b | x | |
| | mm | | | | mm | | | mm | mm | | | | | mm | | | mm | | kg |
| HJW500 | 629 | 602 | 398 | 75 | 566 | 434 | 20 | 18 | 498 | 502 | 65 | 10 | 4 | 16 | 5 | 123 | 60 | +0.5 | 84 |
| HJW500M | 628.8 | 602 | 398 | 75 | 566 | 434 | 20 | 18 | 498 | 502 | 65 | 10 | 4 | 16 | 6 | 102 | 60 | +0.5 | 84 |
| HJW560 | 689 | 662 | 458 | 75 | 626 | 494 | 20 | 18 | 558 | 562 | 65 | 10 | 4 | 16 | 5 | 135 | 60 | +0.5 | 92 |
| HJW560M | 688.8 | 662 | 458 | 75 | 626 | 494 | 20 | 18 | 558 | 562 | 65 | 10 | 4 | 16 | 6 | 112 | 60 | +0.5 | 92 |
| HJW630 | 772.8 | 732 | 528 | 75 | 696 | 564 | 24 | 18 | 628 | 632 | 65 | 10 | 4 | 16 | 6 | 126 | 60 | +0.5 | 111 |
| HJW630M | 774.4 | 732 | 528 | 75 | 696 | 564 | 24 | 18 | 628 | 632 | 65 | 10 | 4 | 16 | 8 | 94 | 60 | +0.5 | 111 |
| HJW710 | 852 | 812 | 610 | 74 | 776 | 644 | 24 | 13.5 | 708 | 712 | 36.5 | 10 | 4 | 10 | 6 | 140 | 54 | 0 | 125 |
| HJW710M | 854.4 | 812 | 608 | 75 | 776 | 644 | 24 | 18 | 708 | 712 | 65 | 10 | 4 | 16 | 8 | 104 | 60 | +0.5 | 125 |
| HJW800 | 966.4 | 922 | 678 | 82 | 878 | 722 | 30 | 22 | 798 | 802 | 72 | 10 | 6 | 20 | 8 | 118 | 65 | +0.5 | 179 |
| HJW800M | 968 | 922 | 678 | 82 | 878 | 722 | 30 | 22 | 798 | 802 | 72 | 10 | 6 | 20 | 10 | 94 | 65 | +0.5 | 179 |
| HJW823 | 979 | 853 | 715 | 100 | 893 | 753 | 28 | 22 | 821 | 825 | 84 | 21 | 4 | 20 | 10 | 94 | 63 | 1.1 | 193 |
| HJW900 | 1062.4 | 1022 | 778 | 82 | 978 | 822 | 30 | 22 | 898 | 902 | 72 | 10 | 6 | 20 | 8 | 130 | 65 | +0.5 | 189 |
| HJW900M | 1068 | 1022 | 778 | 82 | 978 | 822 | 30 | 22 | 898 | 902 | 72 | 10 | 6 | 20 | 10 | 104 | 65 | +0.5 | 200 |
| HJW1000 | 1188 | 1122 | 878 | 82 | 1078 | 922 | 36 | 22 | 998 | 1002 | 72 | 10 | 6 | 20 | 10 | 116 | 65 | +0.5 | 242 |
| HJW1000M | 1185.6 | 1122 | 878 | 82 | 1078 | 922 | 36 | 22 | 998 | 1002 | 72 | 10 | 6 | 20 | 12 | 96 | 65 | +0.5 | 242 |
| HJW1025 | 1180 | 1150 | 885 | 115 | 1115 | 935 | 16 | 18 | 1021 | 1029 | 100 | 15 | 4 | 16 | 5 | 234 | 80 | 0 | 333 |
| HJW1120 | 1272 | 1242 | 998 | 82 | 1198 | 1042 | 8 | 20 | 1118 | 1122 | 66 | 16 | 4 | 20 | 6 | 210 | 65 | 0 | 249 |
| HJW1120M | 1305.6 | 1242 | 998 | 82 | 1198 | 1042 | 36 | 22 | 1118 | 1122 | 72 | 10 | 6 | 20 | 12 | 106 | 65 | +0.5 | 261 |
| HJW1250 | 1449.6 | 1390 | 1110 | 91 | 1337 | 1163 | 40 | 26 | 1248 | 1252 | 81 | 10 | 5 | 24 | 12 | 118 | 75 | +0.5 | 362 |
| HJW1250M | 1453.2 | 1390 | 1110 | 91 | 1337 | 1163 | 40 | 26 | 1248 | 1252 | 81 | 10 | 5 | 24 | 14 | 101 | 75 | +0.5 | 362 |
| HJW1262 | 1477 | 1400 | 1100 | 140 | 1352 | 1160 | 26 | 22 | 1260 | 1264 | 126 | 21 | 4 | 20 | 14 | 104 | 90 | -0.24 | 607 |
| HJW1400 | 1605.6 | 1540 | 1260 | 91 | 1487 | 1313 | 40 | 26 | 1398 | 1402 | 81 | 10 | 5 | 24 | 12 | 131 | 75 | +0.5 | 417 |
| HJW1400M | 1607.2 | 1540 | 1260 | 91 | 1487 | 1313 | 40 | 26 | 1398 | 1402 | 81 | 10 | 5 | 24 | 14 | 112 | 75 | +0.5 | 411 |
| HJW1600 | 1817.2 | 1740 | 1460 | 91 | 1687 | 1513 | 45 | 26 | 1598 | 1602 | 81 | 10 | 5 | 24 | 14 | 127 | 75 | +0.5 | 488 |
| HJW1600M | 1820.8 | 1740 | 1460 | 91 | 1687 | 1513 | 45 | 26 | 1598 | 1602 | 81 | 10 | 5 | 24 | 16 | 111 | 75 | +0.5 | 484 |
| HJW1800 | 2013.2 | 1940 | 1660 | 91 | 1887 | 1713 | 45 | 26 | 1798 | 1802 | 81 | 10 | 5 | 24 | 14 | 141 | 75 | +0.5 | 530 |

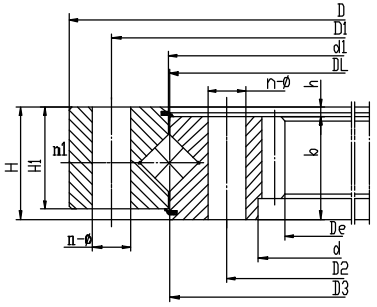
d 2012.8～4100 mm




Note:
1. n1 is the amount of lubricating holes, customer can specify the position of lubricating hole according to using conditions.
2. N-ϕ can change to threaded hole, diameter of thread M, depth of thread 2M.
3. The product in this catalogue are standard products, please contact ZWZ if have other special requirements.

| Bearing designation | Boundary Dimensions | | | | Bolt hole dimensions | | | | Structure dimensions | | | | | | Parameters of gear | | | | Mass |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | De | D | d | H | D1 | D2 | n | ϕ | D3 | d1 | H1 | h | n1 | M | m | Z | b | x | |
| | mm | | | | mm | | | mm | mm | | | | | | | | mm | | kg |
| HJW1800M | 2012.8 | 1940 | 1660 | 91 | 1887 | 1713 | 45 | 26 | 1798 | 1802 | 81 | 10 | 5 | 24 | 16 | 123 | 75 | +0.5 | 530 |
| HJW2000 | 2268.8 | 2178 | 1825 | 112 | 2110 | 1891 | 48 | 33 | 1998 | 2002 | 100 | 12 | 8 | 30 | 16 | 139 | 90 | +0.5 | 922 |
| HJW2000M | 2264.4 | 2178 | 1825 | 112 | 2110 | 1891 | 48 | 33 | 1997 | 2003 | 100 | 12 | 8 | 30 | 18 | 123 | 90 | +0.5 | 935 |
| HJW2240 | 2498.4 | 2418 | 2065 | 112 | 2350 | 2131 | 48 | 33 | 2237 | 2243 | 100 | 12 | 8 | 30 | 16 | 136 | 90 | +0.5 | 1000 |
| HJW2240M | 2498.4 | 2418 | 2065 | 112 | 2350 | 2131 | 48 | 33 | 2237 | 2243 | 100 | 12 | 8 | 30 | 18 | 136 | 90 | +0.5 | 1008 |
| HJW2500 | 2768.4 | 2678 | 2325 | 112 | 2610 | 2391 | 56 | 33 | 2497 | 2503 | 100 | 12 | 8 | 30 | 18 | 151 | 90 | +0.5 | 1147 |
| HJW2500M | 2776 | 2678 | 2325 | 112 | 2610 | 2391 | 56 | 33 | 2497 | 2502 | 100 | 12 | 8 | 30 | 20 | 136 | 90 | +0.5 | 1185 |
| HJW2800 | 3074.4 | 2978 | 2625 | 112 | 2910 | 2691 | 56 | 33 | 2797 | 2803 | 100 | 12 | 8 | 30 | 18 | 168 | 90 | +0.5 | 1320 |
| HJW2800M | 3076 | 2978 | 2625 | 112 | 2910 | 2691 | 56 | 33 | 2798 | 2802 | 100 | 12 | 8 | 30 | 20 | 151 | 90 | +0.5 | 1470 |
| HJW3150 | 3476 | 3376 | 2922 | 134 | 3286 | 3014 | 56 | 45 | 3147 | 3153 | 122 | 12 | 8 | 42 | 20 | 171 | 110 | +0.5 | 2222 |
| HJW3150M | 3471.6 | 3376 | 2922 | 134 | 3286 | 3014 | 56 | 45 | 3147 | 3153 | 122 | 12 | 8 | 42 | 22 | 155 | 110 | +0.5 | 2222 |
| HJW3580 | 4100 | 3970 | 3230 | 240 | 3820 | 3350 | 54/52 | 37 | 3578 | 3582 | 220 | 20 | 16 | 33 | 25 | 162 | 200 | 0 | 7587 |

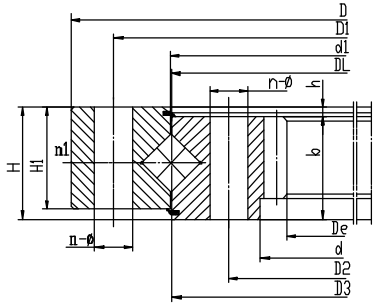
d 367～1735.2 mm




Note:
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3. The product in this catalogue are standard products, please contact ZWZ if have other special requirements.

| Bearing designation | Boundary Dimensions | | | | Bolt hole dimensions | | | | Structure dimensions | | | | | | Parameters of gear | | | | Mass |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | De | D | d | H | D1 | D2 | n | ϕ | D3 | d1 | H1 | h | n1 | M | m | Z | b | x | |
| | mm | | | | mm | | | mm | mm | | | | | mm | | | mm | | kg |
| HJN500 | 367 | 602 | 398 | 75 | 566 | 434 | 20 | 18 | 498 | 502 | 65 | 10 | 4 | 16 | 5 | 74 | 60 | +0.5 | 85 |
| HJN500M | 368.4 | 602 | 398 | 75 | 566 | 434 | 20 | 18 | 498 | 502 | 65 | 10 | 4 | 16 | 6 | 62 | 60 | +0.5 | 85 |
| HJN560 | 427 | 662 | 458 | 75 | 626 | 494 | 20 | 18 | 558 | 562 | 65 | 10 | 4 | 16 | 5 | 86 | 60 | +0.5 | 96 |
| HJN560M | 428.4 | 662 | 458 | 75 | 626 | 494 | 20 | 18 | 558 | 562 | 65 | 10 | 4 | 16 | 6 | 72 | 60 | +0.5 | 96 |
| HJN630 | 494.4 | 732 | 528 | 75 | 696 | 564 | 24 | 18 | 628 | 632 | 65 | 10 | 4 | 16 | 6 | 83 | 60 | +0.5 | 110 |
| HJN630M | 491.2 | 732 | 528 | 75 | 696 | 564 | 24 | 18 | 628 | 632 | 65 | 10 | 4 | 16 | 8 | 62 | 60 | +0.5 | 110 |
| HJN710 | 572.4 | 812 | 608 | 82 | 776 | 644 | 24 | 18 | 708 | 712 | 65 | 10 | 4 | 16 | 6 | 96 | 60 | +0.5 | 126 |
| HJN710M | 571.2 | 812 | 608 | 82 | 776 | 644 | 24 | 18 | 708 | 712 | 65 | 10 | 4 | 16 | 8 | 72 | 60 | +0.5 | 122 |
| HJN800 | 635.2 | 922 | 678 | 82 | 878 | 722 | 30 | 22 | 798 | 802 | 72 | 10 | 6 | 20 | 8 | 80 | 65 | +0.5 | 186 |
| HJN800M | 634 | 922 | 678 | 82 | 878 | 722 | 30 | 22 | 798 | 802 | 72 | 10 | 6 | 20 | 10 | 64 | 65 | +0.5 | 186 |
| HJN817 | 685 | 920 | 712 | 70 | 880 | 751 | 30 | 22 | 815 | 819 | 60 | 10 | 5 | 20 | 5 | 139 | 53 | 0 | 115 |
| HJN900 | 739.2 | 1022 | 778 | 82 | 978 | 822 | 30 | 22 | 898 | 902 | 72 | 10 | 6 | 20 | 8 | 93 | 65 | +0.5 | 208 |
| HJN900M | 734 | 1022 | 778 | 82 | 978 | 822 | 30 | 22 | 898 | 902 | 72 | 10 | 6 | 20 | 10 | 74 | 65 | +0.5 | 208 |
| HJN1000 | 824 | 1122 | 878 | 82 | 1078 | 922 | 36 | 22 | 998 | 1002 | 72 | 10 | 6 | 20 | 10 | 83 | 65 | +0.5 | 220 |
| HJN1000M | 820.8 | 1122 | 878 | 82 | 1078 | 922 | 36 | 22 | 998 | 1002 | 72 | 10 | 6 | 20 | 12 | 69 | 65 | +0.5 | 220 |
| HJN1094S | 920 | 1216 | 920 | 100 | 1172 | 1013 | 12 | 22 | 1092 | 1096 | 90 | 10 | 4 | 20 | 10 | 94 | 90 | 0 | 393 |
| HJN1120 | 944 | 1242 | 998 | 82 | 1198 | 1042 | 36 | 22 | 1118 | 1122 | 72 | 10 | 6 | 20 | 10 | 95 | 65 | +0.5 | 273 |
| HJN1120M | 940.8 | 1242 | 998 | 82 | 1198 | 1042 | 36 | 22 | 1118 | 1122 | 72 | 10 | 6 | 20 | 12 | 79 | 65 | +0.5 | 273 |
| HJN1250 | 1048.8 | 1390 | 1110 | 91 | 1337 | 1163 | 40 | 26 | 1248 | 1252 | 81 | 10 | 5 | 24 | 12 | 88 | 75 | +0.5 | 386 |
| HJN1250M | 1041.6 | 1390 | 1110 | 91 | 1337 | 1163 | 40 | 26 | 1248 | 1252 | 81 | 10 | 5 | 24 | 14 | 75 | 75 | +0.5 | 390 |
| HJN1400 | 1192.8 | 1540 | 1260 | 91 | 1487 | 1313 | 40 | 26 | 1398 | 1402 | 81 | 10 | 5 | 24 | 12 | 100 | 75 | +0.5 | 441 |
| HJN1400M | 1195.6 | 1540 | 1260 | 91 | 1487 | 1313 | 40 | 26 | 1398 | 1402 | 81 | 10 | 5 | 24 | 14 | 86 | 75 | +0.5 | 441 |
| HJN1600 | 1391.6 | 1740 | 1460 | 91 | 1687 | 1513 | 45 | 26 | 1598 | 1602 | 81 | 10 | 5 | 24 | 14 | 100 | 75 | +0.5 | 502 |
| HJN1600M | 1382.4 | 1740 | 1460 | 91 | 1687 | 1513 | 45 | 26 | 1598 | 1602 | 81 | 10 | 5 | 24 | 16 | 87 | 75 | +0.5 | 517 |
| HJN1800 | 1573.6 | 1940 | 1660 | 91 | 1887 | 1713 | 45 | 26 | 1798 | 1802 | 81 | 10 | 5 | 24 | 14 | 113 | 75 | +0.5 | 605 |
| HJN1800M | 1574.4 | 1940 | 1660 | 91 | 1887 | 1713 | 45 | 26 | 1798 | 1802 | 81 | 10 | 5 | 24 | 16 | 99 | 75 | +0.5 | 605 |
| HJN2000 | 1734.4 | 2178 | 1825 | 112 | 2110 | 1891 | 48 | 33 | 1998 | 2002 | 100 | 12 | 8 | 30 | 16 | 109 | 90 | +0.5 | 893 |
| HJN2000M | 1735.2 | 2178 | 1825 | 112 | 2110 | 1891 | 48 | 33 | 1997 | 2003 | 100 | 12 | 8 | 30 | 18 | 97 | 90 | +0.5 | 977 |

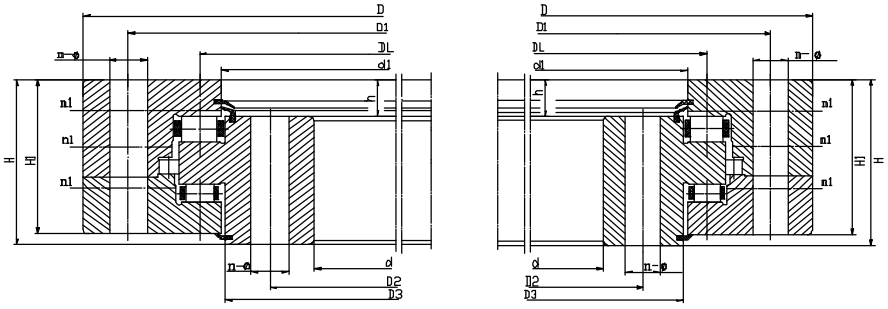
d 1990.4～2824.8 mm




Note:
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| Bearing designation | Boundary Dimensions | | | | Bolt hole dimensions | | | | Structure dimensions | | | | | | Parameters of gear | | | | Mass |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | De | D | d | H | D1 | D2 | n | ϕ | D3 | d1 | H1 | h | n1 | M | m | Z | b | x | |
| | mm | | | | mm | | | mm | mm | | | | | mm | | | mm | | kg |
| HJN2240 | 1990.4 | 2418 | 2065 | 112 | 2350 | 2131 | 48 | 33 | 2237 | 2243 | 100 | 12 | 8 | 30 | 16 | 125 | 90 | +0.5 | 1000 |
| HJN2240M | 1987.2 | 2418 | 2065 | 112 | 2350 | 2131 | 48 | 33 | 2237 | 2243 | 100 | 12 | 8 | 30 | 18 | 111 | 90 | +0.5 | 1072 |
| HJN2460 | 2154.5 | 2670 | 2240 | 160 | 2600 | 2320 | 54 | 35 | 2457 | 2463 | 140 | 20 | 6 | 33 | 16 | 136 | 120 | 0.3 | 1852 |
| HJN2500 | 2239.2 | 2678 | 2325 | 112 | 2610 | 2391 | 56 | 33 | 2497 | 2503 | 100 | 12 | 8 | 30 | 18 | 125 | 90 | +0.5 | 1211 |
| HJN2500M | 2228 | 2678 | 2325 | 112 | 2610 | 2391 | 56 | 33 | 2497 | 2503 | 100 | 12 | 8 | 30 | 20 | 112 | 90 | +0.5 | 1211 |
| HJN2800 | 2527.2 | 2978 | 2625 | 112 | 2910 | 2691 | 56 | 33 | 2797 | 2803 | 100 | 12 | 8 | 30 | 18 | 141 | 90 | +0.5 | 1396 |
| HJN2800M | 2528 | 2978 | 2625 | 112 | 2910 | 2691 | 56 | 33 | 2797 | 2803 | 100 | 12 | 8 | 30 | 20 | 127 | 90 | +0.5 | 1396 |
| HJN3150 | 2828 | 3376 | 2922 | 134 | 3286 | 3014 | 56 | 45 | 3147 | 3153 | 122 | 12 | 8 | 42 | 20 | 142 | 110 | +0.5 | 2344 |
| HJN3150M | 2824.8 | 3376 | 2922 | 134 | 3286 | 3014 | 56 | 45 | 3147 | 3153 | 122 | 12 | 8 | 42 | 22 | 129 | 110 | +0.5 | 2344 |

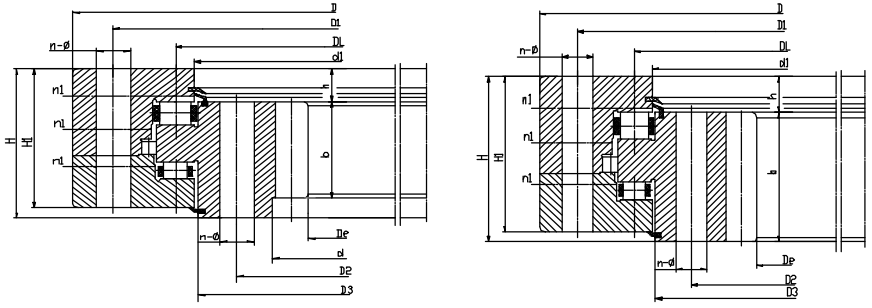
d 634～5335 mm




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| Bearing designation | Boundary Dimensions | | | Bolt hole dimensions | | | | Structure dimensions | | | | | | Mass |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | D | d | H | D1 | D2 | n | ϕ | D3 | d1 | H1 | h | n1 | M | kg |
| | mm | | | mm | | | mm | mm | | | | | mm | |
| HYB500 | 634 | 366 | 148 | 598 | 402 | 24 | 18 | 474 | 463 | 138 | 32 | 4 | 16 | 191 |
| HYB560 | 694 | 426 | 148 | 658 | 462 | 24 | 18 | 534 | 523 | 138 | 32 | 4 | 16 | 214 |
| HYB630 | 764 | 496 | 148 | 728 | 532 | 28 | 18 | 604 | 593 | 138 | 32 | 4 | 16 | 240 |
| HYB710 | 844 | 576 | 148 | 808 | 612 | 28 | 18 | 684 | 673 | 138 | 32 | 4 | 16 | 272 |
| HYB800 | 964 | 636 | 182 | 920 | 680 | 36 | 22 | 770 | 759 | 172 | 40 | 4 | 20 | 459 |
| HYB900 | 1064 | 736 | 182 | 1020 | 780 | 36 | 22 | 870 | 859 | 172 | 40 | 4 | 20 | 519 |
| HYB1000 | 1164 | 836 | 182 | 1120 | 880 | 40 | 22 | 970 | 959 | 172 | 40 | 5 | 20 | 577 |
| HYB1120 | 1284 | 956 | 182 | 1240 | 1000 | 40 | 22 | 1090 | 1079 | 172 | 40 | 5 | 20 | 650 |
| HYB1150 | 1310 | 1000 | 140 | 1250 | 1055 | 36 | 26 | 1120 | 1310 | 130 | 0 | 4 | 24 | 531 |
| HYB1250 | 1445 | 1055 | 220 | 1393 | 1107 | 45 | 26 | 1210 | 1200 | 210 | 50 | 5 | 24 | 1030 |
| HYB1400 | 1595 | 1205 | 220 | 1543 | 1257 | 45 | 26 | 1363 | 1350 | 210 | 50 | 5 | 24 | 1170 |
| HYB1600 | 1795 | 1405 | 220 | 1743 | 1457 | 48 | 26 | 1563 | 1550 | 210 | 50 | 6 | 24 | 1341 |
| HYB1705 | 1910 | 1500 | 182 | 1844 | 1566 | 48 | 33 | 1749 | 1755 | 162 | 10 | 24 | 30 | 1226 |
| HYB1800 | 1995 | 1605 | 220 | 1943 | 1657 | 48 | 26 | 1763 | 1750 | 210 | 50 | 6 | 24 | 1510 |
| HYB1825 | 2020 | 1655 | 136 | 1950 | 1725 | 36/40 | 33 | 1880 | 1865 | 123 | 13 | 5 | 30 | 870 |
| HYB1835 | 2020 | 1655 | 156 | 1950 | 1725 | 36/40 | 33 | 1882 | 1877 | 123 | 19 | 6 | 30 | 955 |
| HYB2000 | 2221 | 1779 | 231 | 2155 | 1845 | 60 | 33 | 1967 | 1945 | 219 | 54 | 6 | 30 | 1949 |
| HYB2240 | 2461 | 2019 | 231 | 3395 | 2085 | 60 | 33 | 2207 | 2185 | 219 | 54 | 6 | 30 | 2197 |
| HYB2400 | 2650 | 2190 | 154 | 2560 | 2280 | 60 | 39 | 2446 | 2442 | 121 | 14 | 6 | 36 | 1580 |
| HYB2500 | 2721 | 2279 | 231 | 2655 | 2345 | 72 | 33 | 2555 | 2533 | 219 | 12 | 8 | 30 | 2391 |
| HYB2500C | 2721 | 2279 | 231 | 2655 | 2345 | 72 | 33 | 2555 | 2533 | 177 | 12 | 8 | 30 | 2391 |
| HYB2800 | 3021 | 2579 | 231 | 2955 | 2645 | 72 | 33 | 2867 | 2833 | 219 | 54 | 8 | 30 | 2924 |
| HYB3150 | 3432 | 2868 | 270 | 3342 | 2958 | 72 | 45 | 3104 | 3090 | 258 | 65 | 8 | 42 | 4551 |
| HYB3175 | 3395 | 2965 | 184 | 3328 | 3038 | 64 | 33 | 3221 | 3206 | 154 | 10.5 | 8 | 30 | 2523 |
| HYB3550 | 3832 | 3268 | 270 | 3742 | 3358 | 72 | 45 | 3504 | 3490 | 258 | 65 | 8 | 42 | 5178 |
| HYB4000 | 4243 | 3762 | 270 | 4165 | 3840 | 72 | 39 | 4050 | 4037 | 217 | 55 | 9 | 36 | 4580 |
| HYB4500 | 4850 | 4235 | 268 | 4700 | 4325 | 68 | 45 | 4560 | 4546 | 203 | 10 | 11 | 42 | 7150 |
| HYB5000 | 5290 | 4735 | 268 | 5200 | 4825 | 78 | 39 | 5064 | 5048 | 203 | 10 | 12 | 36 | 7280 |
| HYB5055 | 5335 | 4785 | 275 | 5245 | 4875 | 90 | 45 | 5101 | 5130 | 210 | 17 | 15 | 42 | 7376 |

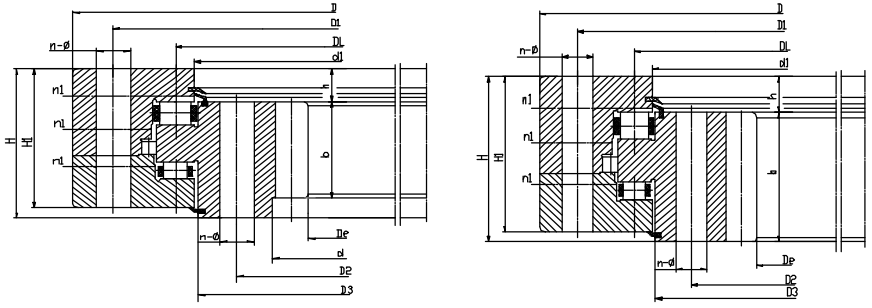
d 337～1702.4 mm



Note:
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| Bearing designation | Boundary Dimensions | | | | Bolt hole dimensions | | | | Structure dimensions | | | | | | Parameters of gear | | | | Mass |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | De | D | d | H | D1 | D2 | n | ϕ | D3 | d1 | H1 | h | n1 | M | m | Z | b | x | |
| | mm | | | | mm | | | mm | mm | | | | | mm | | | mm | | kg |
| HYN500 | 337 | 634 | 366 | 148 | 598 | 402 | 24 | 18 | 474 | 463 | 138 | 32 | 4 | 16 | 5 | 68 | 80 | +0.5 | 198 |
| HYN500M | 338.4 | 634 | 366 | 148 | 598 | 402 | 24 | 18 | 474 | 463 | 138 | 32 | 4 | 16 | 6 | 57 | 80 | +0.5 | 198 |
| HYN560 | 397 | 694 | 426 | 148 | 658 | 462 | 24 | 18 | 534 | 523 | 138 | 32 | 4 | 16 | 5 | 80 | 80 | +0.5 | 222 |
| HYN560M | 398.4 | 694 | 426 | 148 | 658 | 462 | 24 | 18 | 534 | 523 | 138 | 32 | 4 | 16 | 6 | 67 | 80 | +0.5 | 220 |
| HYN630 | 458.4 | 764 | 496 | 148 | 728 | 532 | 28 | 18 | 604 | 593 | 138 | 32 | 4 | 16 | 6 | 77 | 80 | +0.5 | 253 |
| HYN630M | 459.2 | 764 | 496 | 148 | 728 | 532 | 28 | 18 | 604 | 593 | 138 | 32 | 4 | 16 | 8 | 58 | 80 | +0.5 | 251 |
| HYN710 | 536.4 | 844 | 567 | 148 | 808 | 612 | 28 | 18 | 684 | 673 | 138 | 32 | 4 | 16 | 6 | 90 | 80 | +0.5 | 288 |
| HYN710M | 539.2 | 844 | 567 | 148 | 808 | 612 | 28 | 18 | 684 | 673 | 138 | 32 | 4 | 16 | 8 | 68 | 80 | +0.5 | 284 |
| HYN800 | 595.2 | 964 | 636 | 182 | 920 | 680 | 36 | 22 | 770 | 759 | 172 | 40 | 4 | 20 | 8 | 75 | 120 | +0.5 | 483 |
| HYN800M | 594 | 964 | 636 | 182 | 920 | 680 | 36 | 22 | 770 | 759 | 172 | 40 | 4 | 20 | 10 | 60 | 120 | +0.5 | 481 |
| HYN900 | 691.2 | 1064 | 736 | 182 | 1020 | 780 | 36 | 22 | 870 | 859 | 172 | 40 | 4 | 20 | 8 | 87 | 120 | +0.5 | 551 |
| HYN900M | 694 | 1064 | 736 | 182 | 1020 | 780 | 36 | 22 | 870 | 859 | 172 | 40 | 4 | 20 | 10 | 70 | 120 | +0.5 | 545 |
| HYN1000 | 784 | 1164 | 836 | 182 | 1120 | 880 | 40 | 22 | 970 | 959 | 172 | 40 | 5 | 20 | 10 | 79 | 120 | +0.5 | 618 |
| HYN1000M | 784.8 | 1164 | 836 | 182 | 1120 | 880 | 40 | 22 | 970 | 959 | 172 | 40 | 5 | 20 | 12 | 66 | 120 | +0.5 | 613 |
| HYN1120 | 904 | 1284 | 956 | 182 | 1240 | 100 | 40 | 22 | 1090 | 1079 | 172 | 40 | 5 | 20 | 10 | 91 | 120 | +0.5 | 698 |
| HYN1120M | 904.8 | 1284 | 956 | 182 | 1240 | 1000 | 40 | 22 | 1090 | 1079 | 172 | 40 | 5 | 20 | 12 | 76 | 120 | +0.5 | 691 |
| HYN1250 | 988.8 | 1445 | 1055 | 220 | 1393 | 1107 | 45 | 26 | 1213 | 1200 | 210 | 50 | 5 | 24 | 12 | 83 | 150 | +0.5 | 1123 |
| HYN1250M | 985.6 | 1445 | 1055 | 220 | 1393 | 1107 | 45 | 26 | 1213 | 1200 | 210 | 50 | 5 | 24 | 14 | 71 | 150 | +0.5 | 1122 |
| HYN1400 | 1144.8 | 1595 | 1205 | 220 | 1543 | 1257 | 45 | 26 | 1363 | 1350 | 210 | 50 | 5 | 24 | 12 | 96 | 150 | +0.5 | 1254 |
| HYN1400M | 1139.6 | 1595 | 1205 | 220 | 1543 | 1257 | 45 | 26 | 1363 | 1350 | 210 | 50 | 5 | 24 | 14 | 82 | 150 | +0.5 | 1258 |
| HYN1600 | 1335.6 | 1795 | 1405 | 220 | 1743 | 1457 | 48 | 26 | 1563 | 1500 | 210 | 50 | 6 | 24 | 14 | 96 | 150 | +0.5 | 1454 |
| HYN1600M | 1334.4 | 1795 | 1405 | 220 | 1743 | 1457 | 48 | 26 | 1563 | 1500 | 210 | 50 | 6 | 24 | 16 | 84 | 150 | +0.5 | 1448 |
| HYN1800 | 1531.6 | 1995 | 1605 | 220 | 1943 | 1657 | 48 | 26 | 1763 | 1750 | 210 | 50 | 6 | 24 | 14 | 110 | 150 | +0.5 | 1658 |
| HYN1800M | 1526.4 | 1995 | 1605 | 220 | 1943 | 1657 | 48 | 26 | 1763 | 1750 | 210 | 50 | 6 | 24 | 16 | 96 | 150 | +0.5 | 1663 |
| HYN1992 | 1740 | 2180 | | 153 | 2115 | 1870 | 66 | 33 | 1966 | 1948 | 141 | 33 | 8 | 30 | 12 | 146 | 120 | 0.5 | 1280 |
| HYN2000 | 1760 | 2147 | | 132 | 2095 | 1895 | 54 | 26 | 1968 | 1969 | 123 | 26 | 5 | 24 | 16 | 111 | 106 | +0.5 | 902 |
| HYN2000R | 1728 | 2181 | | 147 | 2115 | 1875 | 44 | 33 | 1974 | 1963 | 138 | 30 | 7 | 30 | 16 | 109 | 117 | +0.5 | 1202 |
| HYN2000R1 | 1702.4 | 2221 | 1779 | 231 | 2155 | 1845 | 60 | 33 | 1967 | 1945 | 219 | 54 | 6 | 30 | 16 | 107 | 160 | +0.5 | 2114 |

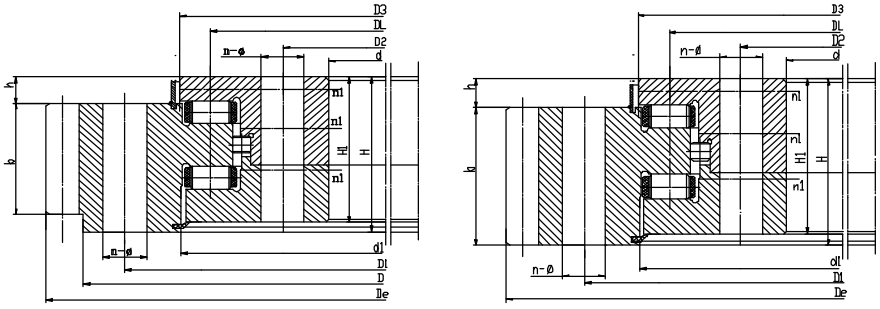
d 1699.2～4110 mm



Note:
1. n1 is the amount of lubricating holes, customer can specify the position of lubricating hole according to using conditions.
2. N-ϕ can change to threaded hole, diameter of thread M, depth of thread 2M.
3. The product in this catalogue are standard products, please contact ZWZ if have other special requirements.

| Bearing designation | Boundary Dimensions | | | | Bolt hole dimensions | | | | Structure dimensions | | | | | | Parameters of gear | | | | Mass |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | De | D | d | H | D1 | D2 | n | ϕ | D3 | d1 | H1 | h | n1 | M | m | Z | b | x | |
| | mm | | | | mm | | | mm | mm | | | | | mm | | | mm | | kg |
| HYN2000R1M | 1699.2 | 2221 | 1779 | 231 | 2155 | 1845 | 60 | 33 | 1967 | 1945 | 219 | 54 | 6 | 30 | 18 | 95 | 160 | +0.5 | 2112 |
| HYN2138 | 1820 | 2320 | 1910 | 160 | 2255 | 1990 | 30/40 | 37.5 | 2144 | 2105 | 140 | 20 | 4 | 36 | 14 | 132 | 110 | 0 | 1500 |
| HYN2230 | 1862 | 2540 | 1945 | 265 | 2436 | 2020 | 72/68 | 45 | 2166 | 2150 | 253 | 60 | 9 | 42 | 16 | 117 | 165 | +0.5 | 3530 |
| HYN2240 | 1944 | 2421 | | 147 | 2355 | 2115 | 48 | 33 | 2214 | 2203 | 138 | 30 | 8 | 30 | 18 | 109 | 117 | +0.5 | 1406 |
| HYN2240R | 1908 | 2458 | | 181 | 2380 | 2085 | 40 | 39 | 2210 | 2199 | 172 | 42 | 8 | 36 | 18 | 107 | 139 | +0.5 | 2010 |
| HYN2240R1 | 1924.4 | 2461 | 2019 | 231 | 2395 | 2085 | 60 | 33 | 2207 | 2185 | 219 | 54 | 6 | 30 | 16 | 121 | 160 | +0.5 | 2447 |
| HYN2240R1M | 1933.2 | 2461 | 2019 | 231 | 2395 | 2085 | 60 | 33 | 2207 | 2185 | 219 | 54 | 6 | 30 | 18 | 108 | 160 | +0.5 | 2407 |
| HYN2500 | 2185.2 | 2721 | | 241 | 2655 | 2341 | 24/72 | 39 | 2460 | 2443 | 229 | 54 | 4 | 36 | 18 | 122 | 170 | +0.5 | 2817 |
| HYN2500R | 2178 | 2718 | | 181 | 2640 | 2345 | 44 | 39 | 2470 | 2459 | 172 | 42 | 7 | 36 | 18 | 122 | 139 | +0.5 | 2210 |
| HYN2500R1 | 2185.2 | 2721 | 2279 | 231 | 2655 | 2345 | 72 | 33 | 2467 | 2445 | 219 | 54 | 8 | 30 | 18 | 122 | 160 | +0.5 | 2862 |
| HYN2500R1M | 2188 | 2721 | 2279 | 231 | 2655 | 2345 | 72 | 33 | 2467 | 2445 | 219 | 54 | 8 | 30 | 20 | 110 | 160 | +0.5 | 2834 |
| HYN2800 | 2500 | 2981 | | 147 | 2915 | 2675 | 60 | 33 | 2774 | 2763 | 138 | 30 | 10 | 30 | 20 | 126 | 117 | +0.5 | 1767 |
| HYN2800R | 2460 | 3018 | | 181 | 2940 | 2645 | 48 | 39 | 2770 | 2759 | 172 | 42 | 8 | 36 | 20 | 124 | 139 | +0.5 | 2542 |
| HYN2800R1 | 2460 | 3038 | | 220 | 2960 | 2635 | 48 | 39 | 2763 | 2750 | 210 | 50 | 8 | 36 | 20 | 124 | 170 | +0.5 | 3213 |
| HYN2800R2 | 2491.2 | 3021 | 2579 | 231 | 2955 | 2645 | 72 | 33 | 2767 | 2745 | 219 | 54 | 8 | 30 | 18 | 139 | 160 | +0.5 | 3211 |
| HYN2800R2M | 2488 | 3021 | 2579 | 231 | 2955 | 2645 | 72 | 33 | 2767 | 2745 | 219 | 54 | 8 | 30 | 20 | 125 | 160 | +0.5 | 3209 |
| HYN3150 | 2820 | 3368 | | 181 | 3290 | 2995 | 56 | 39 | 3120 | 3109 | 172 | 42 | 7 | 36 | 20 | 142 | 139 | +0.5 | 2807 |
| HYN3150R | 2794 | 3368 | | 220 | 3310 | 2985 | 56 | 39 | 3113 | 3100 | 210 | 50 | 7 | 36 | 22 | 128 | 170 | +0.5 | 3683 |
| HYN3150R1 | 2768 | 3432 | 2868 | 270 | 3342 | 2958 | 72 | 45 | 3104 | 3090 | 258 | 65 | 8 | 42 | 20 | 139 | 180 | +0.5 | 4954 |
| HYN3150R1M | 2758.8 | 3432 | 2868 | 270 | 3342 | 2958 | 72 | 45 | 3104 | 3090 | 258 | 65 | 8 | 42 | 22 | 126 | 180 | +0.5 | 4988 |
| HYN3474 | 3140 | 3240 | 3240 | 173 | 3600 | 3310 | 100 | 33 | 3447 | 3434 | 152 | 30 | 10 | 30 | 20 | 158 | 140 | +0.5 | 2640 |
| HYN3550 | 3190 | 3768 | | 181 | 3690 | 3395 | 66 | 39 | 3520 | 3509 | 172 | 42 | 8 | 36 | 22 | 146 | 139 | +0.5 | 3302 |
| HYN3550R | 3190 | 3788 | | 220 | 3710 | 3385 | 66 | 39 | 3513 | 3500 | 210 | 50 | 8 | 36 | 22 | 146 | 170 | +0.5 | 4171 |
| HYN3550R1 | 3168 | 3832 | 3268 | 270 | 3742 | 3358 | 72 | 45 | 3504 | 3490 | 258 | 65 | 8 | 42 | 20 | 159 | 180 | +0.5 | 5638 |
| HYN3550R1M | 3154.8 | 3832 | 3268 | 270 | 3742 | 3358 | 72 | 45 | 3504 | 3490 | 258 | 65 | 8 | 42 | 22 | 144 | 180 | +0.5 | 5706 |
| HYN4000 | 3652 | 4218 | | 181 | 4140 | 3845 | 72 | 39 | 3970 | 3959 | 172 | 42 | 9 | 36 | 22 | 167 | 139 | +0.5 | 3664 |
| HYN4000R | 3624 | 4238 | | 220 | 4160 | 3835 | 72 | 39 | 3963 | 3950 | 210 | 50 | 9 | 36 | 24 | 152 | 170 | +0.5 | 4810 |
| HYN4000R1 | 3616.8 | 4282 | 3718 | 270 | 4192 | 3808 | 80 | 45 | 3954 | 3940 | 258 | 65 | 8 | 42 | 22 | 165 | 180 | +0.5 | 6257 |
| HYN4000R1M | 3610 | 4282 | 3718 | 270 | 4192 | 3808 | 80 | 45 | 3954 | 3940 | 258 | 65 | 8 | 42 | 25 | 145 | 180 | +0.5 | 6268 |
| HYN4500 | 4092 | 4765 | | 281 | 4675 | 4300 | 72 | 45 | 4454 | 4440 | 258 | 65 | 12 | 42 | 22 | 187 | 170 | +0.5 | 7740 |
| HYN4500R | 4122.8 | 4782 | 4218 | 270 | 4692 | 4308 | 80 | 45 | 4454 | 4440 | 258 | 65 | 8 | 42 | 22 | 188 | 180 | +0.5 | 7040 |
| HYN4500RM | 4110 | 4782 | 4218 | 270 | 4692 | 4308 | 80 | 45 | 4454 | 4440 | 258 | 65 | 8 | 42 | 25 | 165 | 180 | +0.5 | 7108 |

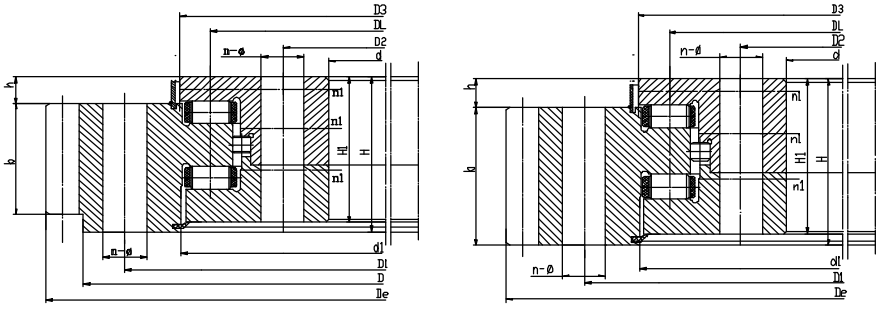
d 664～2300.8 mm




Note:
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| Bearing designation | Boundary Dimensions | | | | Bolt hole dimensions | | | | Structure dimensions | | | | | | Parameters of gear | | | | Mass |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | De | D | d | H | D1 | D2 | n | ϕ | D3 | d1 | H1 | h | n1 | M | m | Z | b | x | |
| | mm | | | | mm | | | mm | mm | | | | | mm | | | mm | | kg |
| HYW500 | 664 | 634 | 366 | 148 | 598 | 402 | 24 | 18 | 537 | 526 | 138 | 32 | 4 | 16 | 5 | 130 | 80 | +0.5 | 200 |
| HYW500M | 664.8 | 634 | 366 | 148 | 598 | 402 | 24 | 18 | 537 | 526 | 138 | 32 | 4 | 16 | 6 | 108 | 80 | +0.5 | 200 |
| HYW560 | 724 | 694 | 426 | 148 | 658 | 462 | 24 | 18 | 597 | 586 | 138 | 32 | 4 | 16 | 5 | 142 | 80 | +0.5 | 224 |
| HYW560M | 724.8 | 694 | 426 | 148 | 658 | 462 | 24 | 18 | 597 | 586 | 138 | 32 | 4 | 16 | 6 | 118 | 80 | +0.5 | 224 |
| HYW630 | 808.8 | 764 | 496 | 148 | 728 | 532 | 28 | 18 | 667 | 656 | 138 | 32 | 4 | 16 | 6 | 132 | 80 | +0.5 | 262 |
| HYW630M | 806.4 | 764 | 496 | 148 | 728 | 532 | 28 | 18 | 667 | 656 | 138 | 32 | 4 | 16 | 8 | 98 | 80 | +0.5 | 257 |
| HYW710 | 886.8 | 844 | 567 | 148 | 808 | 612 | 28 | 18 | 747 | 736 | 138 | 32 | 4 | 16 | 6 | 145 | 80 | +0.5 | 295 |
| HYW710M | 886.4 | 844 | 567 | 148 | 808 | 612 | 28 | 18 | 747 | 736 | 138 | 32 | 4 | 16 | 8 | 108 | 80 | +0.5 | 291 |
| HYW800 | 1006.4 | 964 | 636 | 182 | 920 | 680 | 36 | 22 | 841 | 830 | 172 | 40 | 4 | 20 | 8 | 123 | 120 | +0.5 | 490 |
| HYW800M | 1008 | 964 | 636 | 182 | 920 | 680 | 36 | 22 | 841 | 830 | 172 | 40 | 4 | 20 | 10 | 98 | 120 | +0.5 | 487 |
| HYW900 | 1102.4 | 1064 | 736 | 182 | 1020 | 780 | 36 | 22 | 941 | 930 | 172 | 40 | 4 | 20 | 8 | 135 | 120 | +0.5 | 549 |
| HYW900M | 1108 | 1064 | 736 | 182 | 1020 | 780 | 36 | 22 | 941 | 930 | 172 | 40 | 4 | 20 | 10 | 108 | 120 | +0.5 | 562 |
| HYW1000 | 1218 | 1164 | 836 | 182 | 1120 | 880 | 40 | 22 | 1041 | 1030 | 172 | 40 | 5 | 20 | 10 | 119 | 120 | +0.5 | 631 |
| HYW1000M | 1221.6 | 1164 | 836 | 182 | 1120 | 880 | 40 | 22 | 1041 | 1030 | 172 | 40 | 5 | 20 | 12 | 99 | 120 | +0.5 | 631 |
| HYW1120 | 1338 | 1284 | 956 | 182 | 1240 | 100 | 40 | 22 | 1161 | 1150 | 172 | 40 | 5 | 20 | 10 | 131 | 120 | +0.5 | 710 |
| HYW1120M | 1341.6 | 1284 | 956 | 182 | 1240 | 1000 | 40 | 22 | 1161 | 1150 | 172 | 40 | 5 | 20 | 12 | 109 | 120 | +0.5 | 710 |
| HYW1250 | 1509.6 | 1445 | 1055 | 220 | 1393 | 1107 | 45 | 26 | 1300 | 1287 | 210 | 50 | 5 | 24 | 12 | 123 | 150 | +0.5 | 1137 |
| HYW1250M | 1509.2 | 1445 | 1055 | 220 | 1393 | 1107 | 45 | 26 | 1300 | 1287 | 210 | 50 | 5 | 24 | 14 | 105 | 150 | +0.5 | 1126 |
| HSW1358 | 1510 | 1470 | 1215 | 90 | 1426 | 1255 | 24 | 22 | 1362 | 1354 | 71 | 19 | 6 | 20 | 10 | 149 | 71 | 0 | 256 |
| HYW1400 | 1665.6 | 1595 | 1205 | 220 | 1543 | 1257 | 45 | 26 | 1450 | 1437 | 210 | 50 | 5 | 24 | 12 | 136 | 150 | +0.5 | 1299 |
| HYW1400M | 1663.2 | 1595 | 1205 | 220 | 1543 | 1257 | 45 | 26 | 1450 | 1437 | 210 | 50 | 5 | 24 | 14 | 116 | 150 | +0.5 | 1281 |
| HYW1600 | 1873.2 | 1795 | 1405 | 220 | 1743 | 1457 | 48 | 26 | 1650 | 1637 | 210 | 50 | 6 | 24 | 14 | 131 | 150 | +0.5 | 1501 |
| HYW1600M | 1868.8 | 1795 | 1405 | 220 | 1743 | 1457 | 48 | 26 | 1650 | 1637 | 210 | 50 | 6 | 24 | 16 | 114 | 150 | +0.5 | 1471 |
| HYW1800 | 2069.2 | 1995 | 1605 | 220 | 1943 | 1657 | 48 | 26 | 1850 | 1837 | 210 | 50 | 6 | 24 | 14 | 145 | 150 | +0.5 | 1682 |
| HYW1800M | 2076.8 | 1995 | 1605 | 220 | 1943 | 1657 | 48 | 26 | 1850 | 1837 | 210 | 50 | 6 | 24 | 16 | 127 | 150 | +0.5 | 1697 |
| HYW1898 | 2169.6 | 2113 | 1690 | 181 | 2049 | 1762 | 54 | 36 | 1941 | 1930 | 172 | 32 | 6 | 34 | 12 | 178 | 100 | +0.5 | 1470 |
| HYW2000 | 2236.8 | | 1853 | 132 | 2105 | 1905 | 54 | 26 | 2030 | 2032 | 123 | 26 | 5 | 24 | 16 | 137 | 106 | +0.5 | 912 |
| HYW2000R | 2268.8 | | 1819 | 147 | 2125 | 1885 | 44 | 33 | 2036 | 2026 | 138 | 30 | 7 | 30 | 16 | 139 | 117 | +0.5 | 1216 |
| HYW2000R1 | 2300.8 | 2221 | 1779 | 231 | 2155 | 1845 | 60 | 33 | 2055 | 2033 | 219 | 54 | 6 | 30 | 16 | 141 | 160 | +0.5 | 2147 |

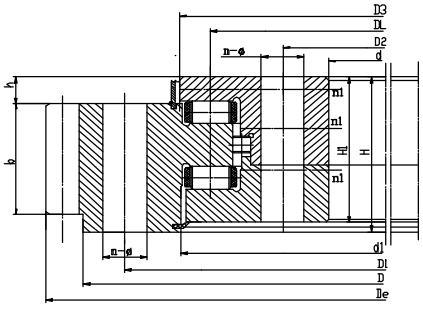
d 2300.4～3936 mm

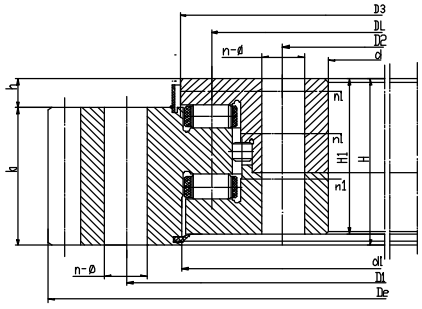



Note:
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| Bearing designation | Boundary Dimensions | | | | Bolt hole dimensions | | | | Structure dimensions | | | | | | Parameters of gear | | | | Mass |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | De | D | d | H | D1 | D2 | n | ϕ | D3 | d1 | H1 | h | n1 | M | m | Z | b | x | |
| | mm | | | | mm | | | mm | mm | | | | | mm | | | mm | | kg |
| HYW2000R1M | 2300.4 | 2221 | 1779 | 231 | 2366 | 1845 | 60 | 33 | 2055 | 2033 | 219 | 54 | 6 | 30 | 18 | 125 | 160 | +0.5 | 2129 |
| HYW2240 | 2556.8 | 2461 | 2019 | 231 | 2395 | 2085 | 60 | 33 | 2298 | 2276 | 219 | 54 | 9 | 30 | 16 | 157 | 160 | +0.5 | 2478 |
| HYW2240R | 2552.4 | | 2022 | 181 | 2395 | 2100 | 40 | 39 | 2281 | 2270 | 172 | 42 | 8 | 36 | 18 | 139 | 139 | +0.5 | 1975 |
| HYW2240R1 | 2556.8 | 2461 | 2019 | 231 | 2395 | 2085 | 60 | 33 | 2295 | 2273 | 219 | 54 | 6 | 30 | 16 | 157 | 160 | +0.5 | 2501 |
| HYW2240R1M | 2552.4 | 2461 | 2019 | 231 | 2625 | 2085 | 60 | 33 | 2295 | 2273 | 219 | 54 | 6 | 30 | 18 | 139 | 160 | +0.5 | 2461 |
| HYW2250 | 2481.6 | 2425 | 2071 | 155 | 2376 | 2137 | 72 | 33 | 2287 | 2276 | 146 | 28 | 6 | 30 | 12 | 204 | 127 | +0.5 | 1240 |
| HYW2250X1 | 2534 | 2492 | 2050 | 159 | 2394 | 2128 | 70 | 39 | 2291 | 2279 | 149 | 33 | 7 | 36 | 14 | 178 | 100 | +0.5 | 1500 |
| HYW2500 | 2822.4 | 2721 | 2279 | 231 | 2655 | 2345 | 72 | 33 | 2555 | 2533 | 219 | 54 | 8 | 30 | 18 | 154 | 177 | +0.5 | 2410 |
| HYW2500R | 2822.4 | | 2282 | 181 | 2655 | 2360 | 44 | 39 | 2541 | 2530 | 172 | 42 | 7 | 36 | 18 | 154 | 139 | +0.5 | 2260 |
| HYW2500R1 | 2822.4 | 2721 | 2279 | 231 | 2655 | 2345 | 72 | 33 | 2555 | 2533 | 219 | 54 | 8 | 30 | 18 | 154 | 160 | +0.5 | 2786 |
| HYW2500M | 2816 | 2721 | 2279 | 231 | 2925 | 2345 | 72 | 33 | 2555 | 2533 | 219 | 54 | 8 | 30 | 20 | 138 | 160 | +0.5 | 2731 |
| HYW2555 | 2996 | 2905 | 2236 | 315 | 2802 | 2348 | 64 | 56 | 2643 | 2606 | 305 | 50 | 8 | 52 | 20 | 147 | 200 | +0.5 | 5515 |
| HYW2555X1 | 2998.7 | 2905 | 2236 | 270 | 2802 | 2348 | 80 | 45 | 2639 | 2596 | 260 | 50 | 8 | 42 | 20 | 147 | 180 | +0.5 | 4758 |
| HYW2800 | 3110.4 | 3021 | 2579 | 231 | 2955 | 2645 | 72 | 33 | 2855 | 2833 | 219 | 54 | 8 | 30 | 18 | 170 | 160 | +0.5 | 2914 |
| HYW2800R | 3136 | | 2582 | 181 | 2965 | 2660 | 48 | 39 | 2841 | 2830 | 172 | 42 | 8 | 36 | 20 | 154 | 139 | +0.5 | 2576 |
| HYW2800R1 | 3136 | | 2562 | 220 | 2965 | 2640 | 48 | 39 | 2850 | 2837 | 210 | 50 | 8 | 36 | 20 | 154 | 170 | +0.5 | 3267 |
| HYW2800R2 | 3110.4 | 3021 | 2579 | 231 | 2955 | 2645 | 72 | 33 | 2855 | 2833 | 219 | 54 | 8 | 30 | 18 | 170 | 160 | +0.5 | 3067 |
| HYW2800M | 3116 | 3021 | 2579 | 231 | 2955 | 2645 | 72 | 33 | 2855 | 2833 | 219 | 54 | 8 | 30 | 20 | 153 | 160 | +0.5 | 3079 |
| HYW2800X1 | 3148.8 | 3065 | 2546 | 223 | 2975 | 2636 | 60 | 45 | 2860 | 2839 | 210 | 53 | 10 | 42 | 16 | 194 | 140 | +0.5 | 3400 |
| HYW2825 | 3168 | | 2575 | 240 | 3005 | 2655 | 48 | 36 | 2875 | 2865 | 210 | 50 | 8 | 30 | 18 | 174 | 190 | 0 | 3657 |
| HYW2960 | 3375.2 | 3285 | 2632 | 320 | 3189 | 2738 | 72 | 56 | 3044 | 3012 | 311 | 65 | 9 | 54 | 20 | 166 | 200 | +0.5 | 6280 |
| HYW3150 | 3476 | | 2932 | 181 | 3305 | 3010 | 56 | 39 | 3191 | 3180 | 172 | 42 | 7 | 36 | 20 | 171 | 139 | +0.5 | 2828 |
| HYW3150R | 3515.6 | | 2912 | 220 | 3315 | 2990 | 56 | 39 | 3200 | 3187 | 210 | 50 | 7 | 36 | 22 | 157 | 170 | +0.5 | 3812 |
| HYW3150R1 | 3536 | 3432 | 2868 | 270 | 3342 | 2958 | 72 | 45 | 3213 | 3916 | 258 | 65 | 8 | 42 | 20 | 174 | 180 | +0.5 | 5025 |
| HYW3150M | 3537.6 | 3432 | 2868 | 270 | 3342 | 2958 | 72 | 45 | 3213 | 3916 | 258 | 65 | 8 | 42 | 22 | 158 | 180 | +0.5 | 5009 |
| HYW3550 | 3970 | 3820 | 3268 | 270 | 3742 | 3358 | 72 | 45 | 3613 | 3596 | 258 | 65 | 8 | 42 | 25 | 156 | 200 | +0.5 | 5894 |
| HYW3550R | 3911.6 | | 3312 | 220 | 3715 | 3390 | 66 | 39 | 3600 | 3587 | 210 | 50 | 8 | 36 | 22 | 175 | 170 | +0.5 | 4255 |
| HYW3550R1 | 3936 | 3832 | 3268 | 270 | 3742 | 3358 | 72 | 45 | 3613 | 3596 | 258 | 65 | 8 | 42 | 20 | 194 | 180 | +0.5 | 5713 |

d 3911.6～5491.2 mm




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| Bearing designation | Boundary Dimensions | | | | Bolt hole dimensions | | | | Structure dimensions | | | | | | Parameters of gear | | | | Mass |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | De | D | d | H | D1 | D2 | n | ϕ | D3 | d1 | H1 | h | n1 | M | m | Z | b | x | |
| | mm | | | | mm | | | mm | mm | | | | | mm | | | mm | | kg |
| HYW3550M | 3911.6 | 3811 | 3312 | 220 | 3715 | 3390 | 66 | 39 | 3600 | 3587 | 210 | 50 | 8 | 36 | 22 | 176 | 180 | +0.5 | 5661 |
| HYW3580 | 3931.2 | | 3340 | 212 | 3735 | 3441 | 108 | 33 | 3642 | 3608 | 180 | 42 | 10 | 30 | 24 | 161 | 170 | +0.5 | 3850 |
| HYW3580K | 3931.2 | | 3340 | 212 | 3735 | 3441 | 120/108 | 33 | 3642 | 3608 | 180 | 42 | 10 | 30 | 24 | 161 | 170 | +0.5 | 3840 |
| HYW3580X1 | 3931.2 | | 3340 | 211 | 3735 | 3441 | 108 | 39 | 3642 | 3608 | 180 | 41 | 10 | 30 | 24 | 161 | 170 | +0.5 | 3860 |
| HYW3586 | 3931.2 | | 3340 | 222 | 3735 | 3441 | 144/120 | 33 | 3650 | 3619 | 210 | 52 | 10 | 30 | 24 | 161 | 170 | +0.5 | 4686 |
| HYW3590 | 3902.6 | | 3370 | 192 | 3754 | 3448 | 96 | 39 | 3655 | 3619 | 180 | 44 | 12 | 36 | 16 | 240 | 148 | +1.0 | 3460 |
| HYW3698 | 4076 | 3982 | 3415 | 270 | 3892 | 3508 | 80 | 45 | 3766 | 3746 | 258 | 65 | 8 | 42 | 20 | 201 | 180 | +0.5 | 5770 |
| HYW3905 | 4266 | 4173 | 3650 | 222 | 4085 | 3740 | 90 | 45 | 3974 | 3943 | 210 | 50 | 8 | 42 | 20 | 210 | 172 | +0.75 | 5475 |
| HYW3905X1 | 4266 | 4173 | 3650 | 222 | 4085 | 3740 | 90 | 45 | 3974 | 3943 | 210 | 50 | 8 | 42 | 20 | 210 | 172 | +0.7496 | 4780 |
| HYW3925 | 4370 | | 3663 | 280 | 4148 | 3748 | 80 | 45 | 3995 | 3972 | 270 | 58 | 10 | 42 | 25 | 172 | 220 | +0.5 | 7150 |
| HYW4000 | 4395.6 | 4282 | 3718 | 270 | 4192 | 3808 | 80 | 45 | 4062 | 4046 | 258 | 65 | 8 | 42 | 22 | 197 | 180 | +0.5 | 6396 |
| HYW4000R | 4363.2 | | 3762 | 220 | 4165 | 3840 | 72 | 39 | 4050 | 4037 | 210 | 50 | 9 | 36 | 24 | 179 | 170 | +0.5 | 4805 |
| HYW4000R1 | 4395.6 | 4282 | 3718 | 270 | 4192 | 3808 | 80 | 45 | 4063 | 4046 | 258 | 65 | 8 | 42 | 22 | 197 | 180 | +0.5 | 6508 |
| HYW4000M | 4400 | 4282 | 3718 | 270 | 4192 | 3808 | 80 | 45 | 4062 | 4046 | 258 | 65 | 8 | 42 | 25 | 173 | 180 | +0.5 | 6486 |
| HYW4150 | 4527.6 | 4423 | 3870 | 240 | 4340 | 3960 | 80 | 45 | 4224 | 4175 | 230 | 55 | 8 | 42 | 22 | 203 | 180 | +0.5 | 5910 |
| HYW4170 | 4579.2 | | 3905 | 265 | 4345 | 4000 | 144/120 | 39 | 4245 | 4236 | 252 | 75 | 8 | 36 | 24 | 188 | 190 | +0.5 | 6292 |
| HYW4500 | 4867.2 | | 4262 | 220 | 4665 | 4340 | 84 | 39 | 4550 | 4537 | 210 | 50 | 14 | 36 | 24 | 200 | 170 | +0.5 | 5410 |
| HYW4500R | 4880 | 4782 | 4218 | 270 | 4692 | 4308 | 80 | 45 | 4565 | 4553 | 258 | 60 | 16 | 42 | 20 | 242 | 185 | +0.5 | 7240 |
| HYW4500RX1 | 4901.6 | 4782 | 4218 | 270 | 4692 | 4308 | 80 | 45 | 4563 | 4553 | 258 | 60 | 16 | 42 | 22 | 220 | 180 | +0.5 | 7440 |
| HYW4500M | 4895 | 4782 | 4218 | 270 | 4692 | 4308 | 80 | 45 | 4565 | 4553 | 258 | 65 | 16 | 42 | 25 | 193 | 185 | +0.5 | 7239 |
| HYW4630 | 5160 | 5060 | 4375 | 275 | 4820 | 4455 | 88 | 45 | 4710 | 4678 | 258 | 70 | 11 | 42 | 20 | 256 | 177 | 0 | 8640 |
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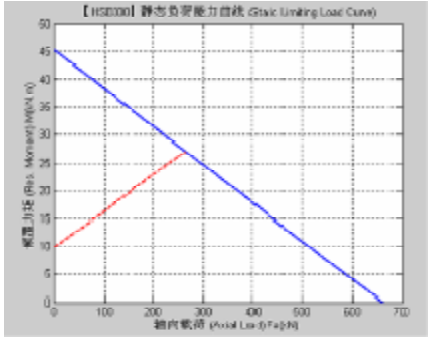


Figure A-1

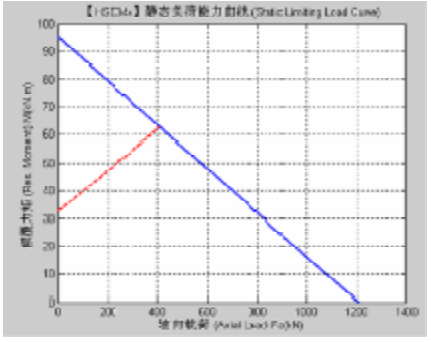


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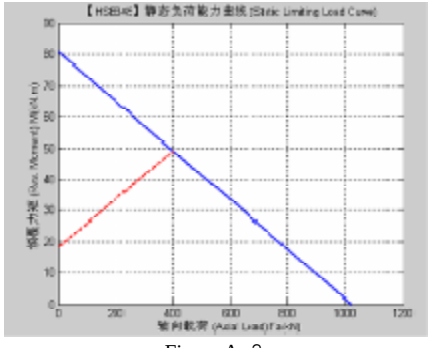


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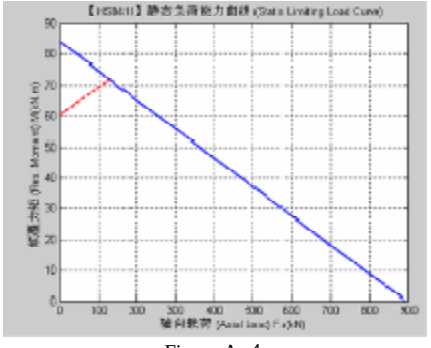


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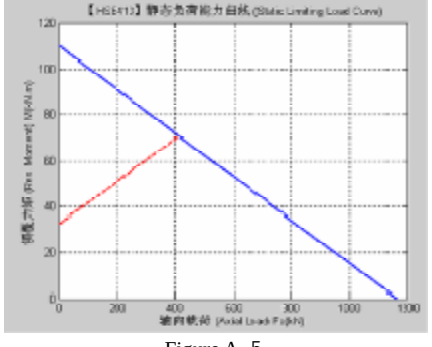


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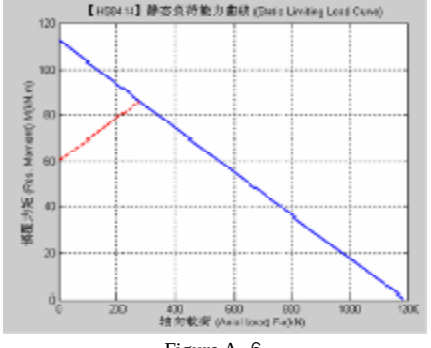


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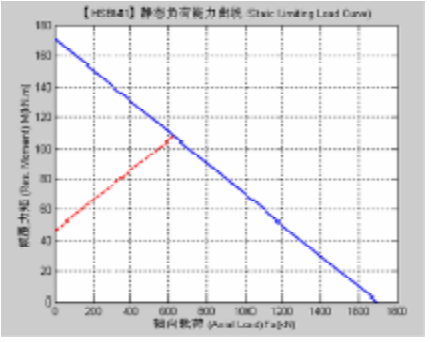


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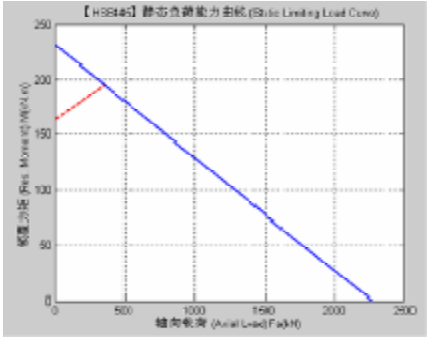


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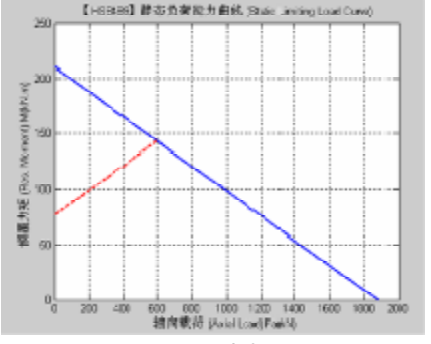


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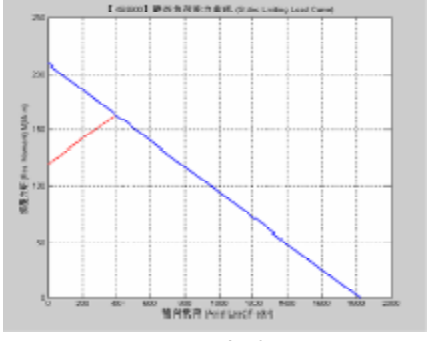


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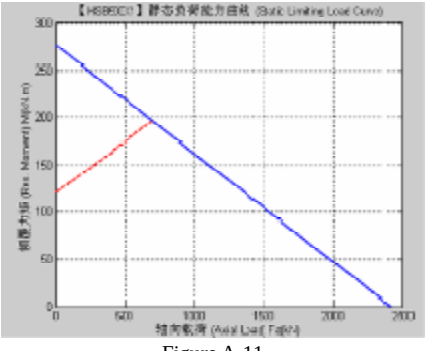


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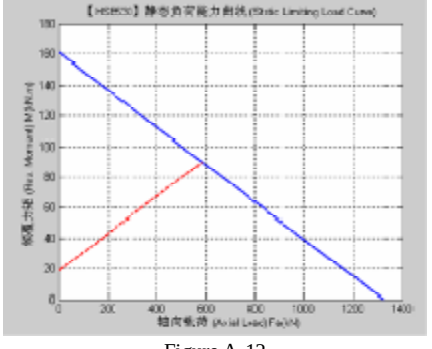


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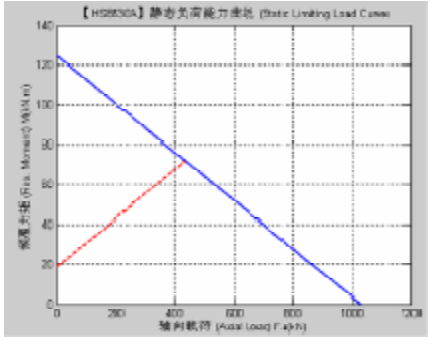


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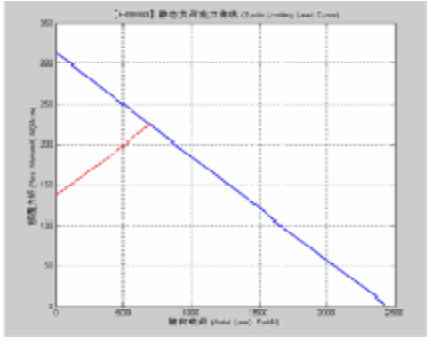


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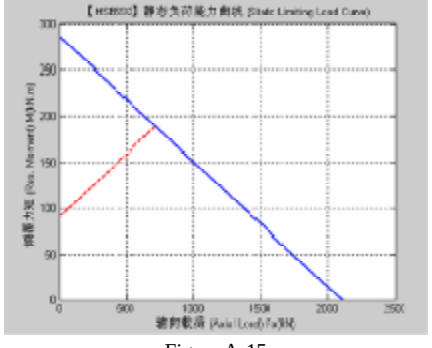


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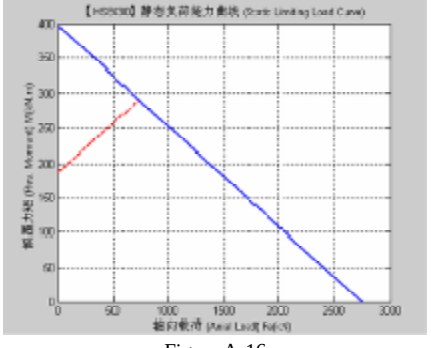


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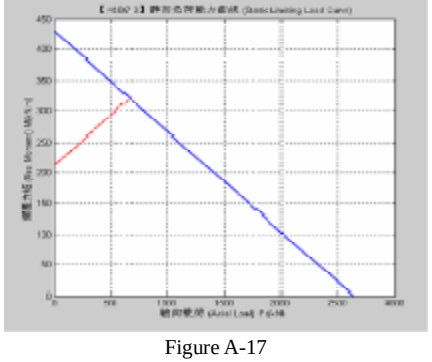


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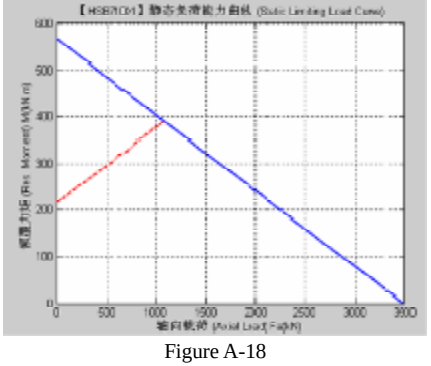


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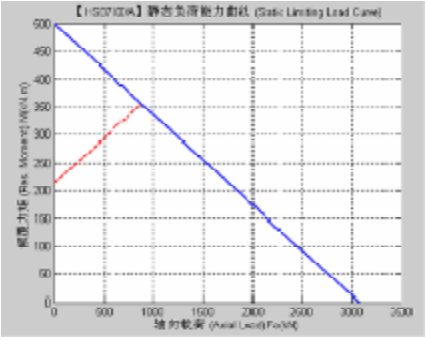


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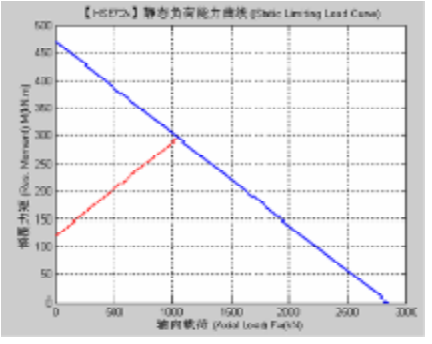


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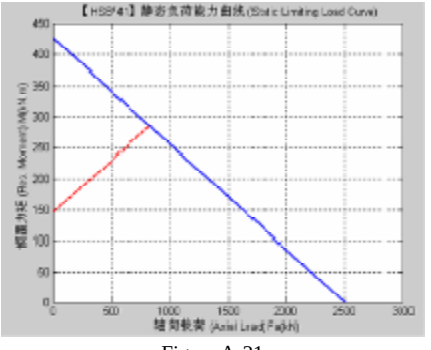


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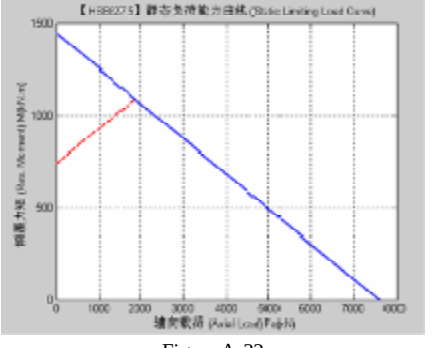


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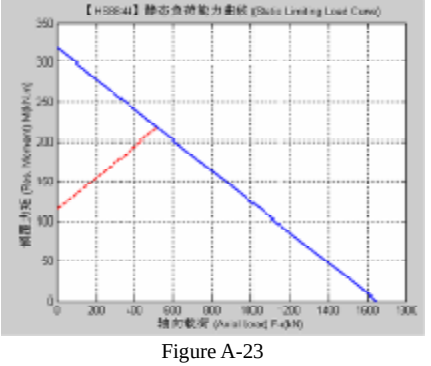


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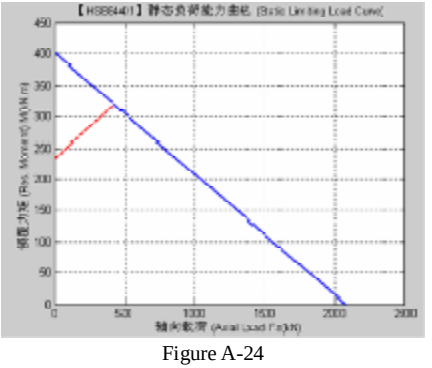


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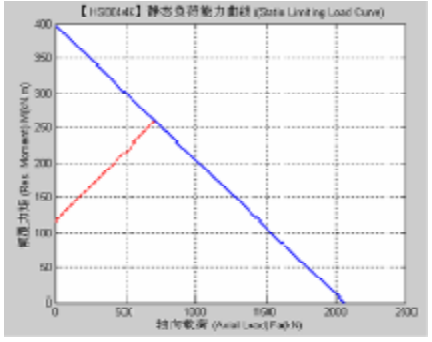


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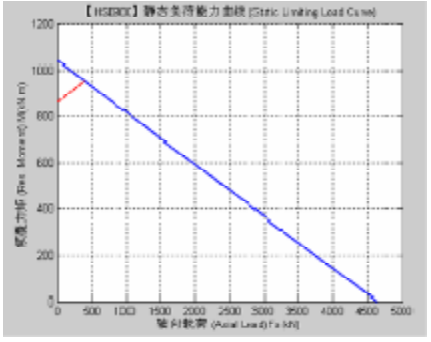


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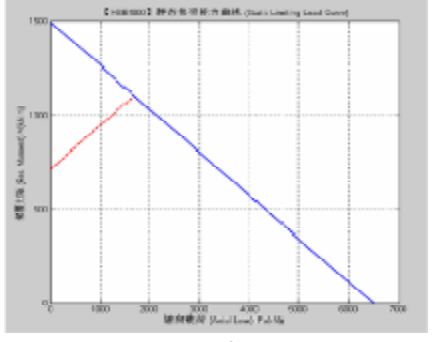


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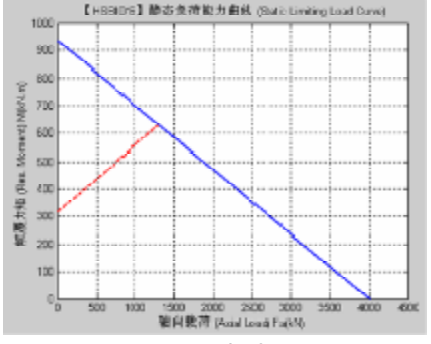


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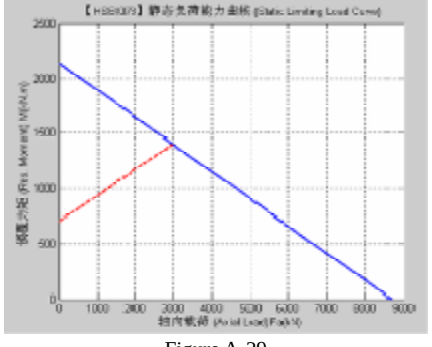


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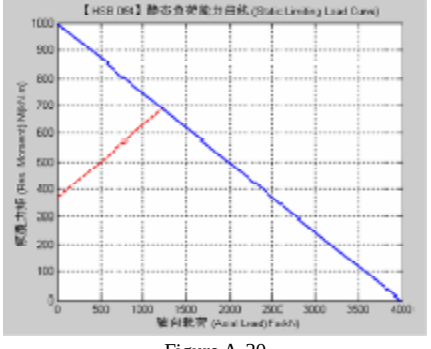


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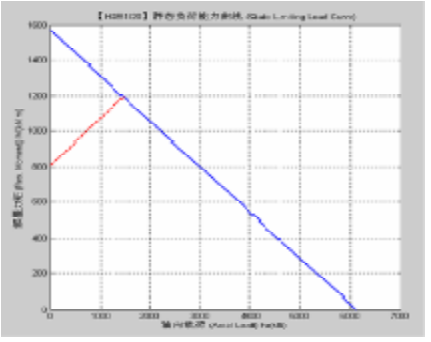


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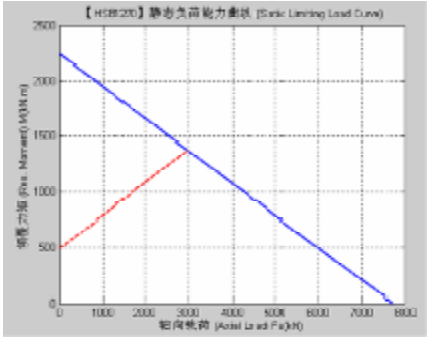


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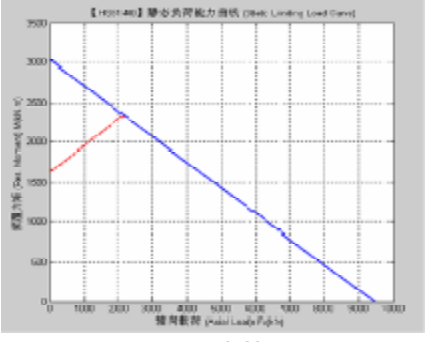


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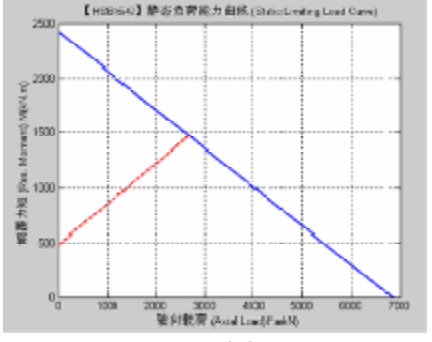


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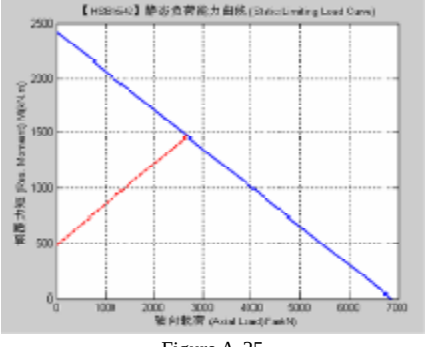


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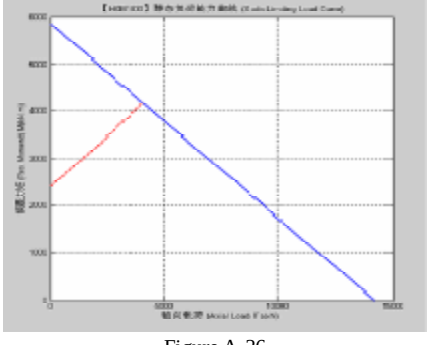


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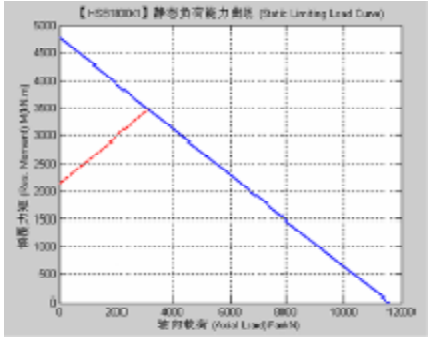


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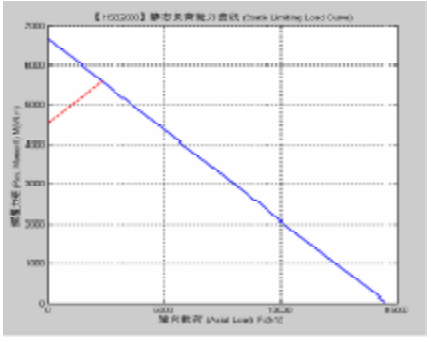


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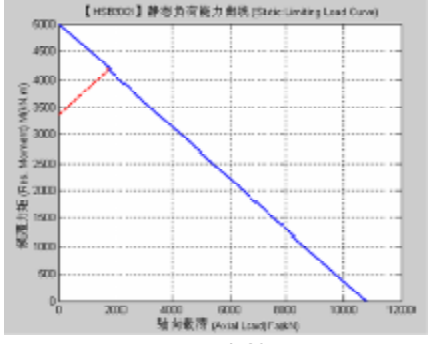


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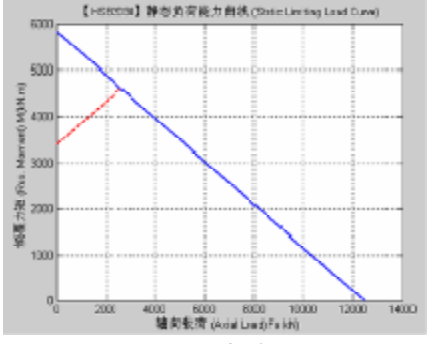


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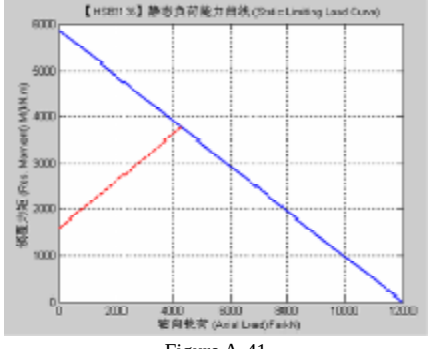


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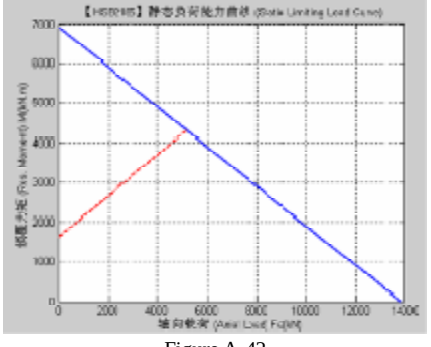


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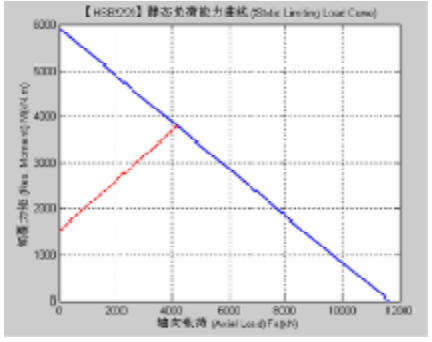


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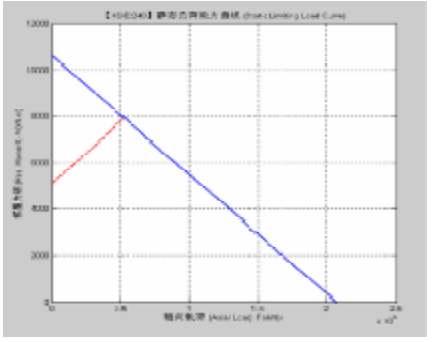


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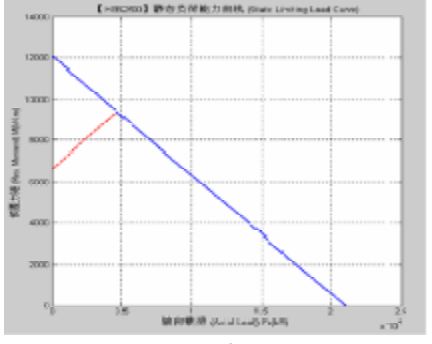


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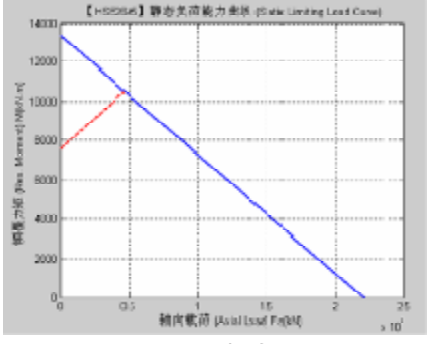


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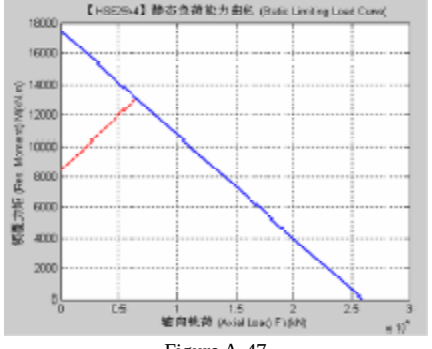


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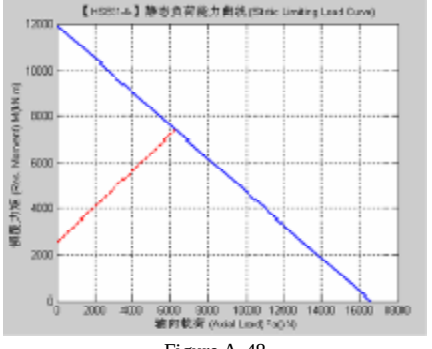


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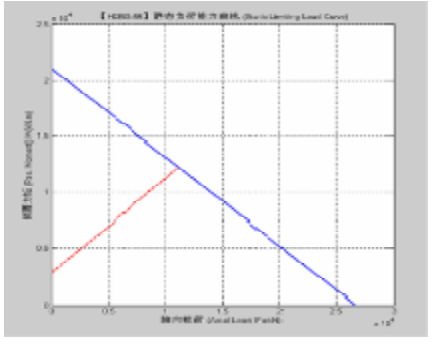


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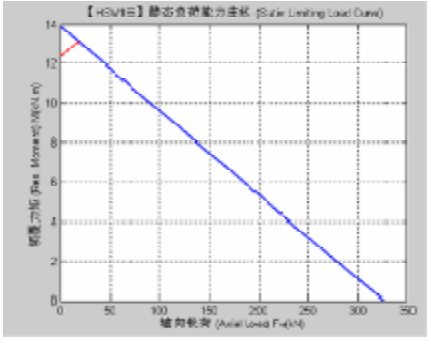


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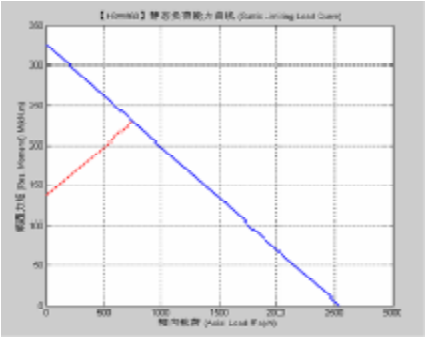


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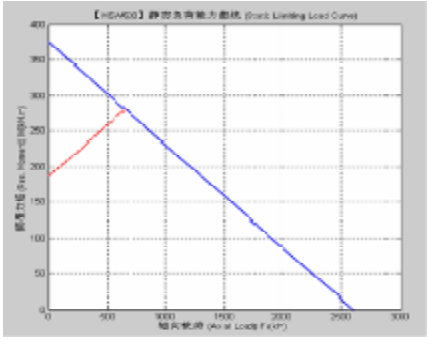


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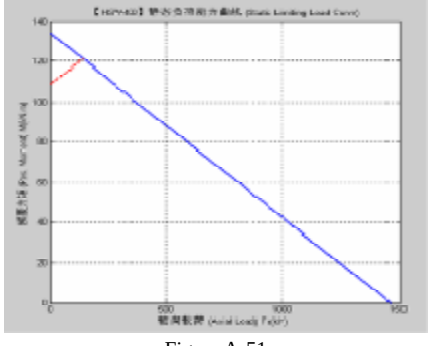


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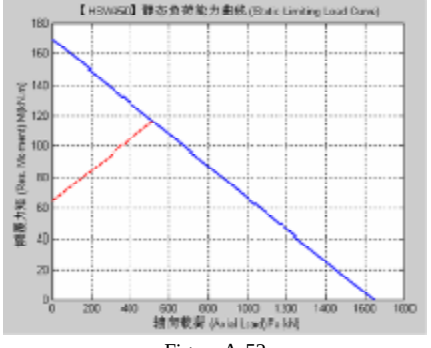


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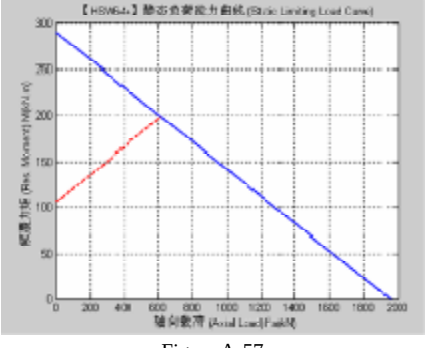


Figure A-57

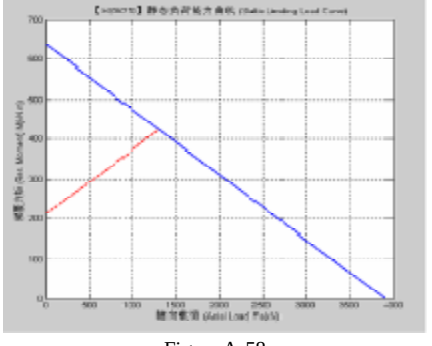


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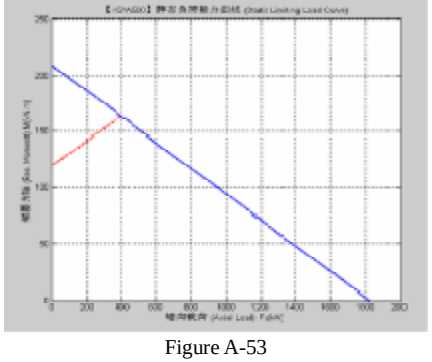


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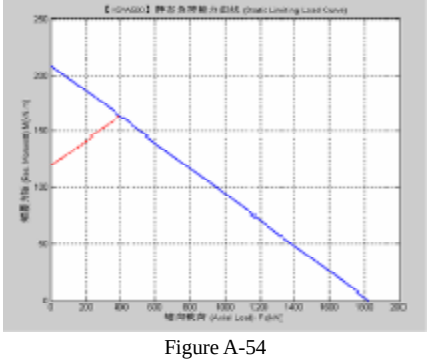


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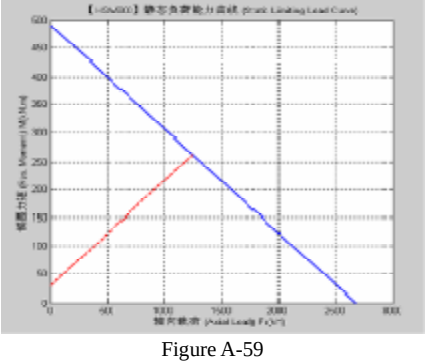


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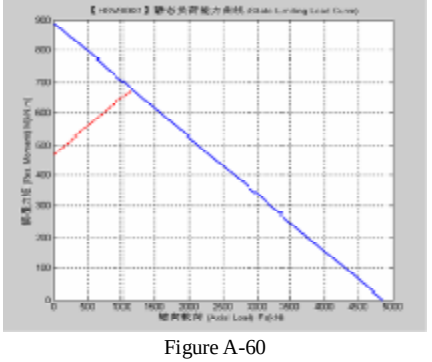


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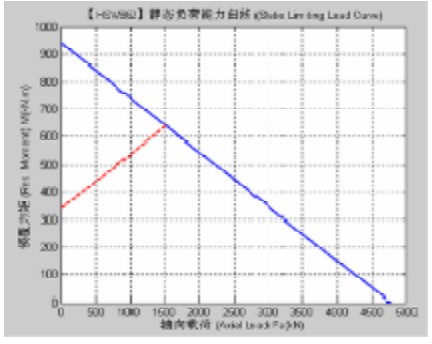


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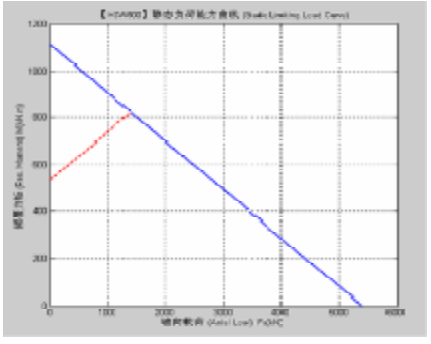


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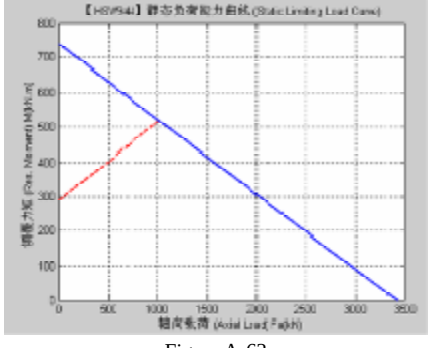


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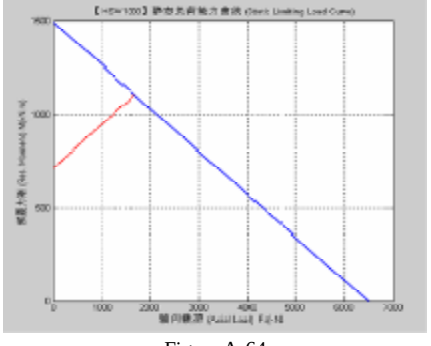


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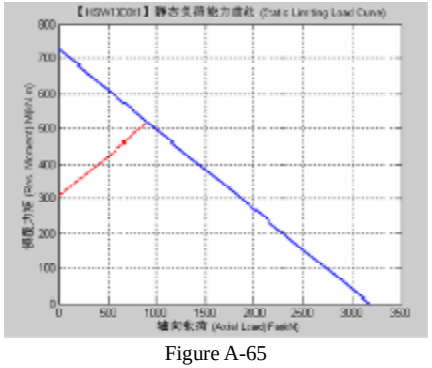


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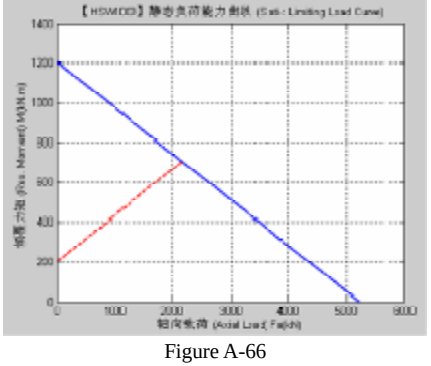


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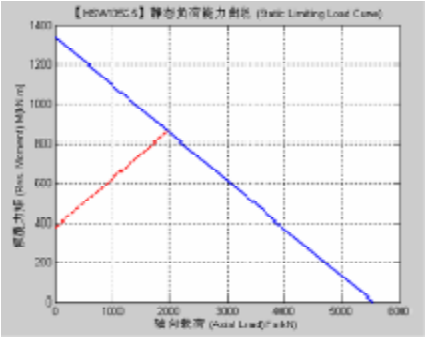


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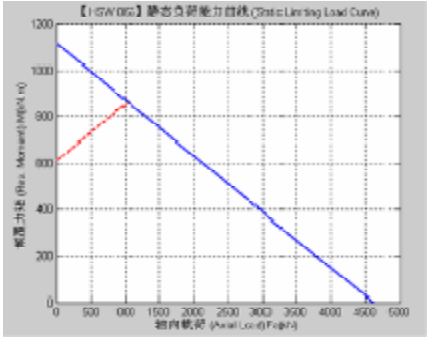


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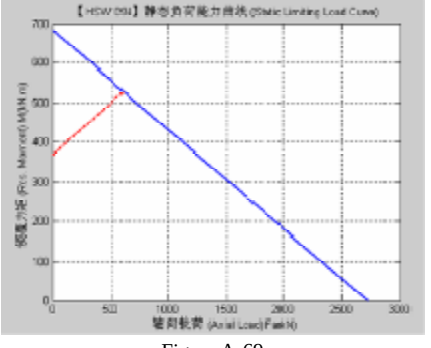


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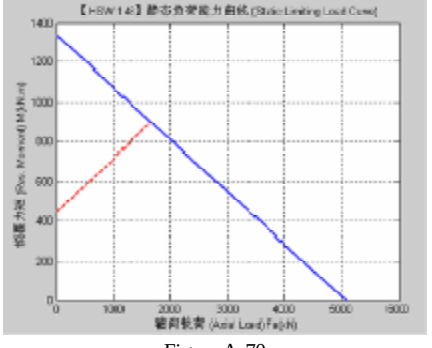


Figure A-70

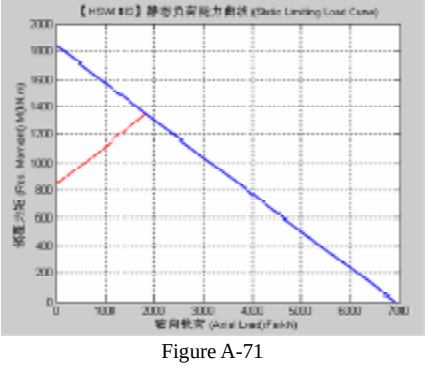


Figure A-71

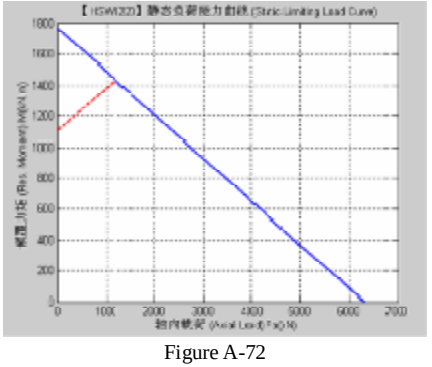


Figure A-72

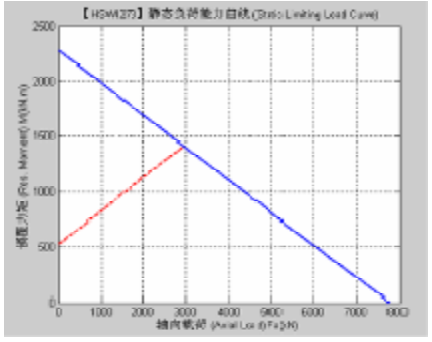


Figure A-73

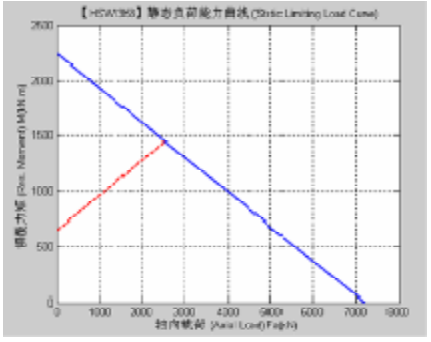


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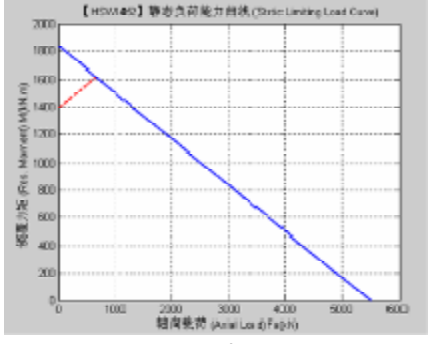


Figure A-75

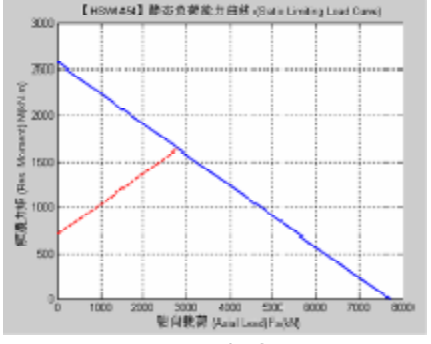


Figure A-76

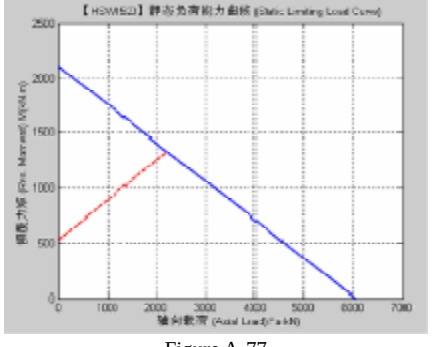


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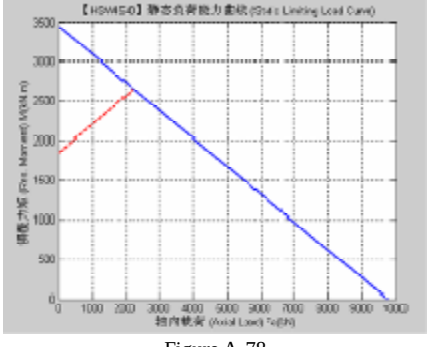


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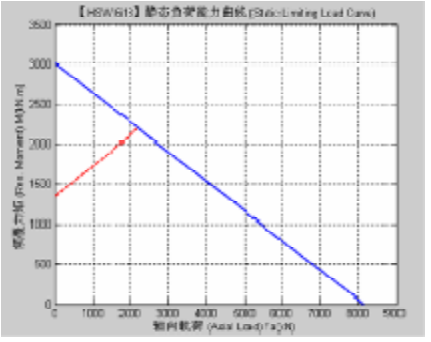


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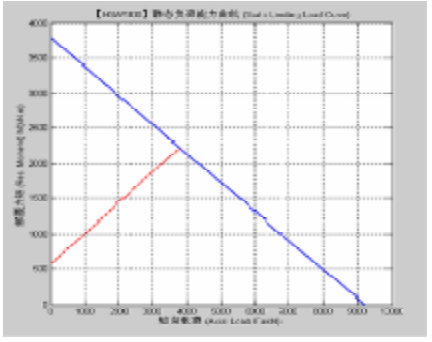


Figure A-80

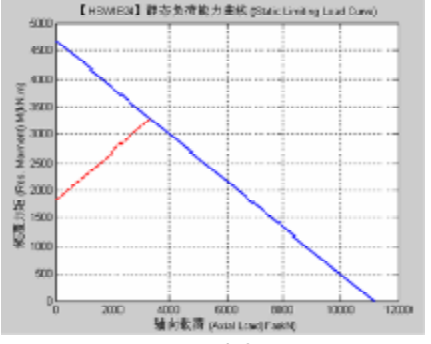


Figure A-81

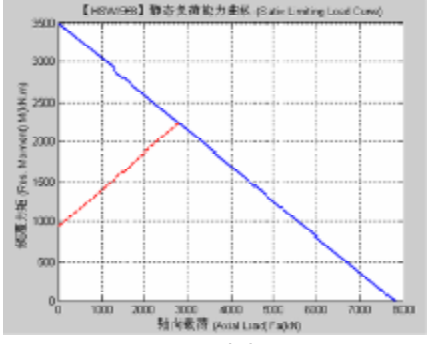


Figure A-82

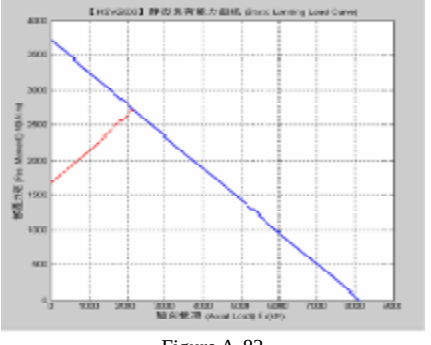


Figure A-83

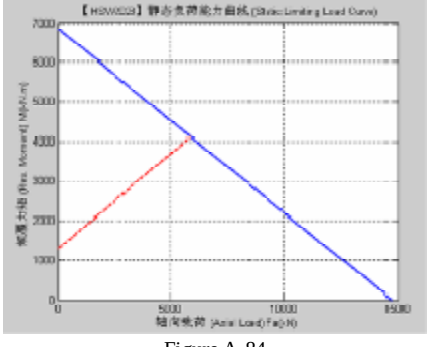


Figure A-84

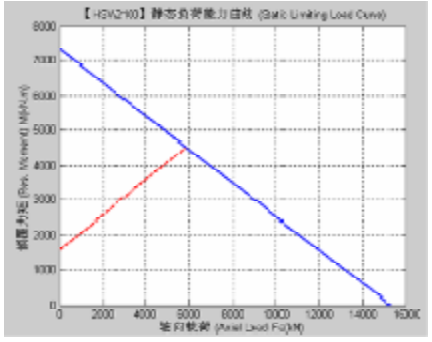


Figure A-85

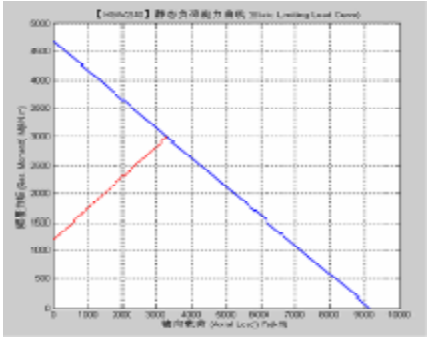


Figure A-86

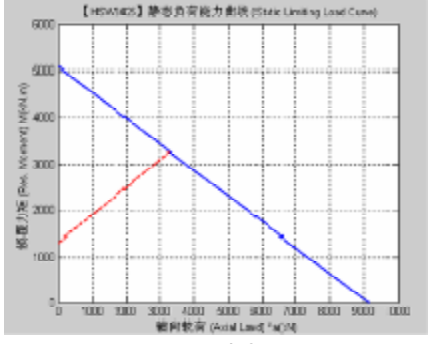


Figure A-87

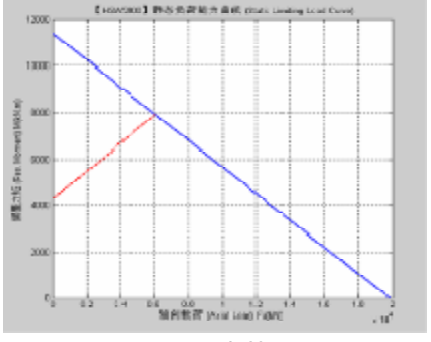


Figure A-88

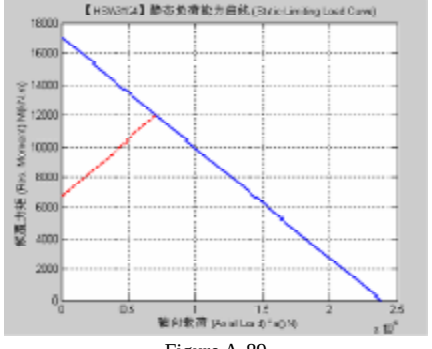


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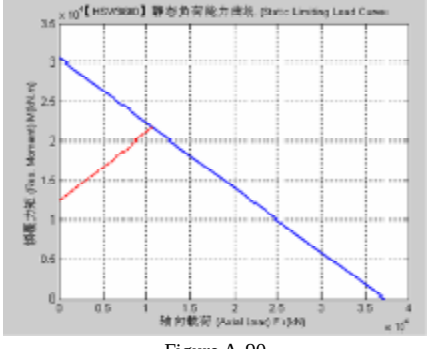


Figure A-90

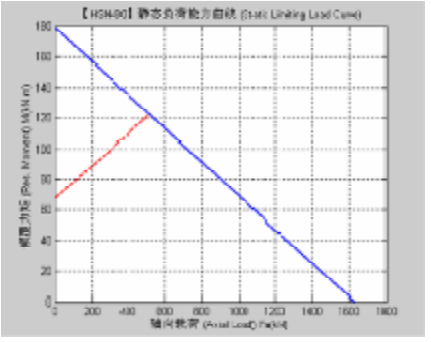


Figure A-91

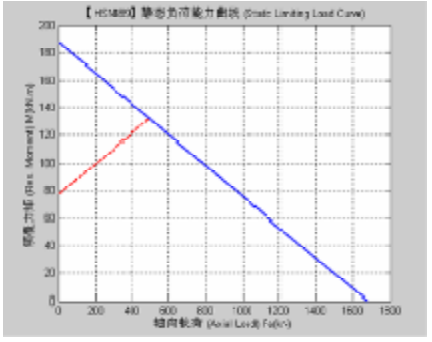


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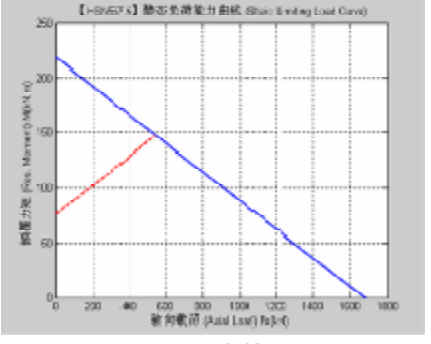


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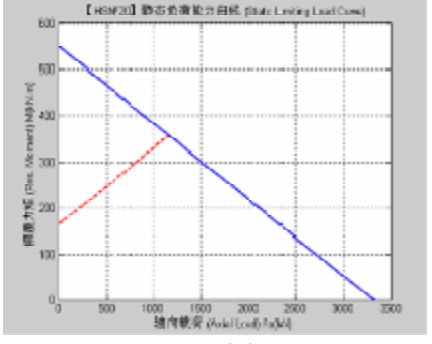


Figure A-94

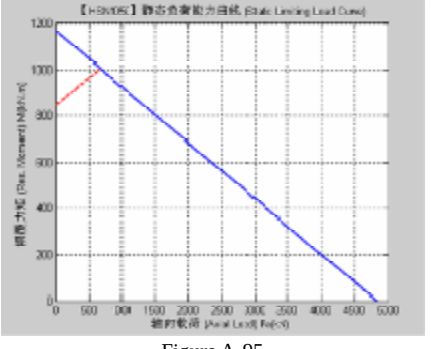


Figure A-95

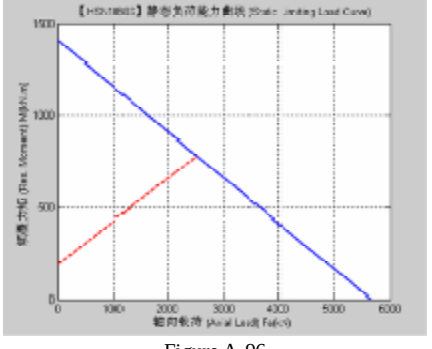


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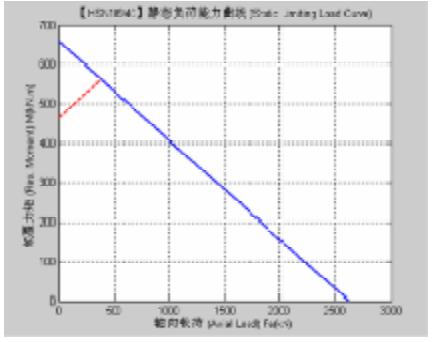


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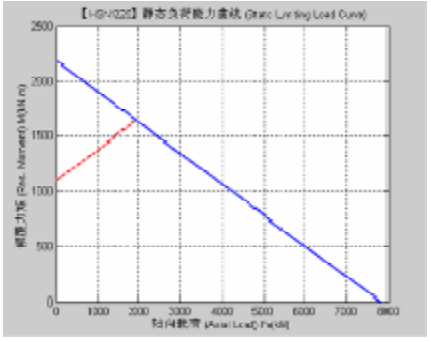


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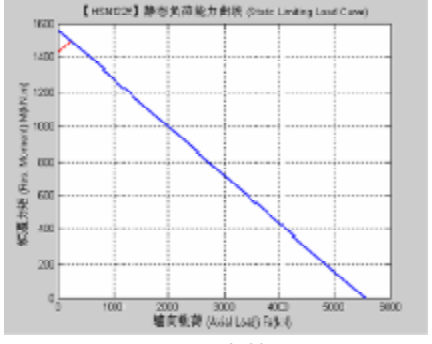


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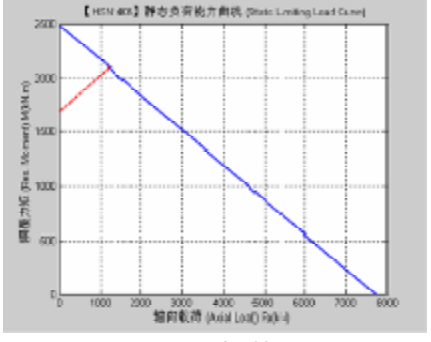


Figure A-100

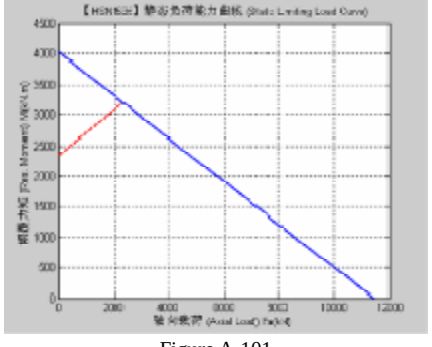


Figure A-101

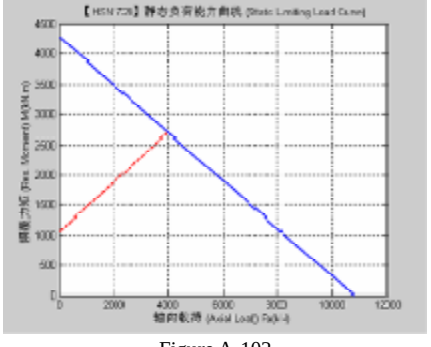


Figure A-102

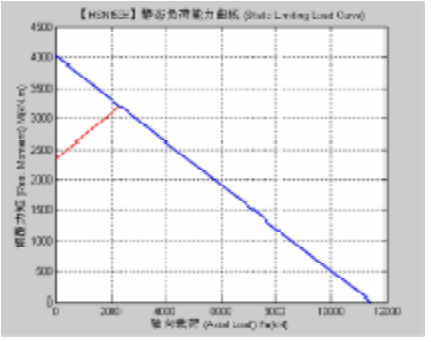


Figure A-103

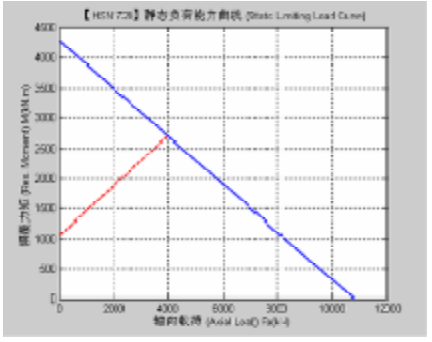


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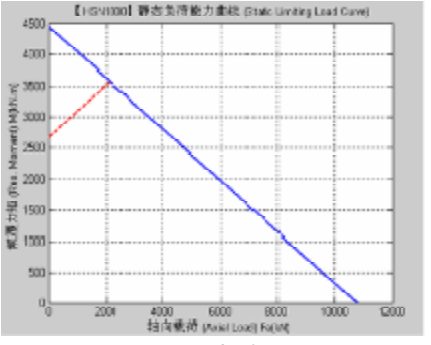


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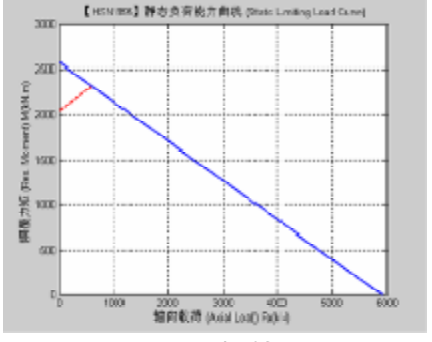


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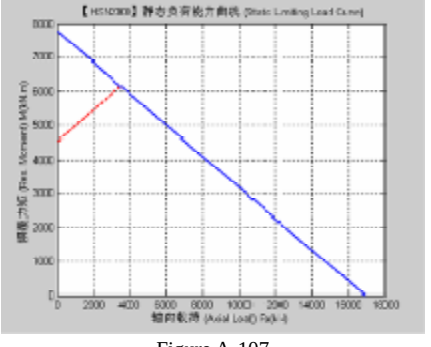


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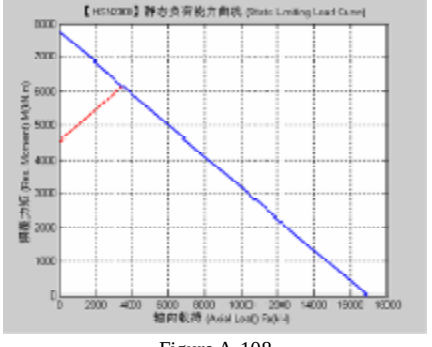


Figure A-108

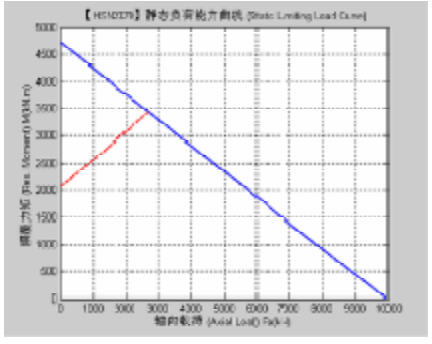


Figure A-109

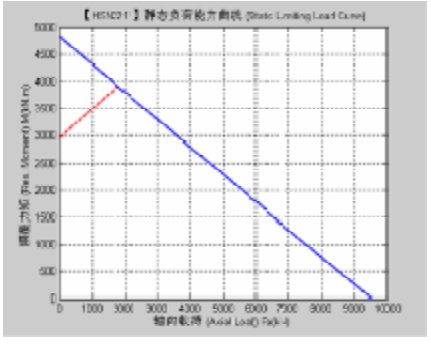


Figure A-110

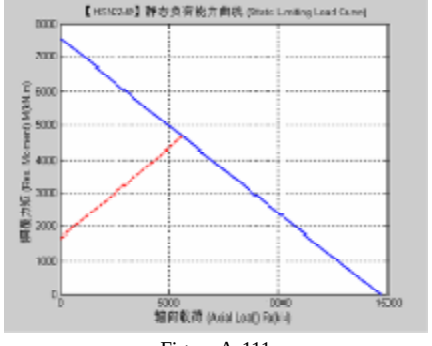


Figure A-111

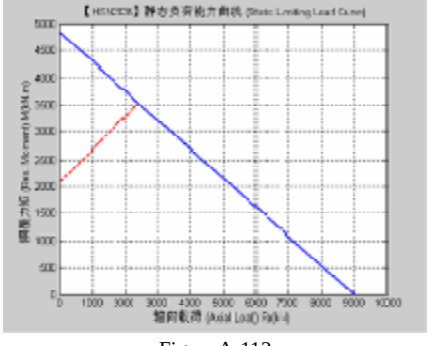


Figure A-112

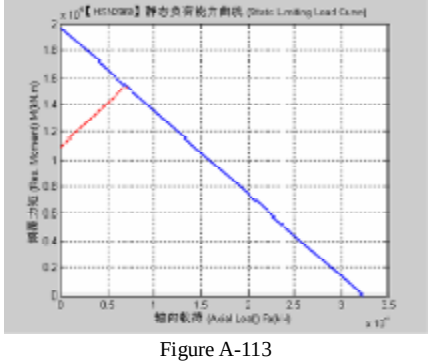


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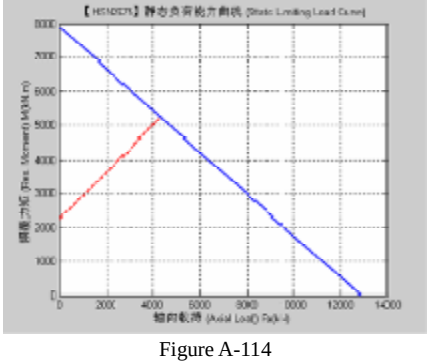


Figure A-114

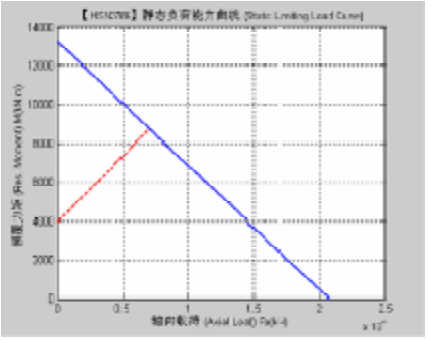


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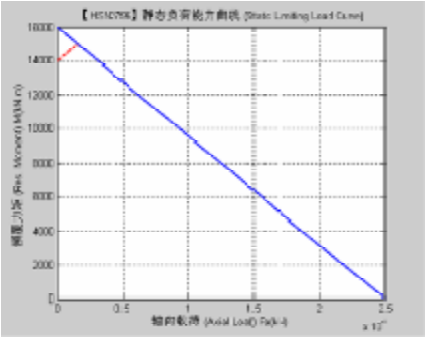


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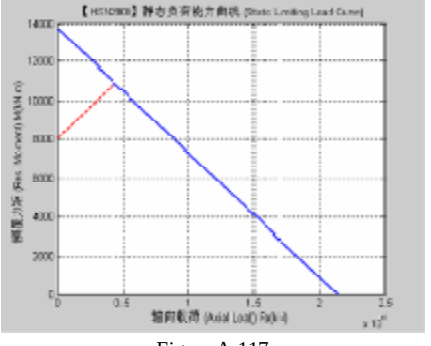


Figure A-117

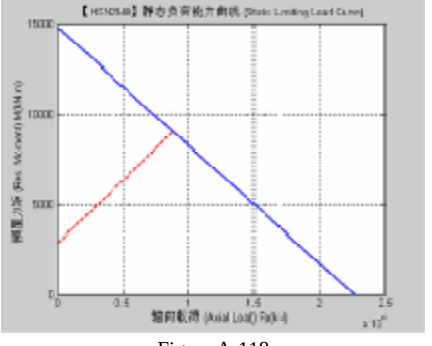


Figure A-118

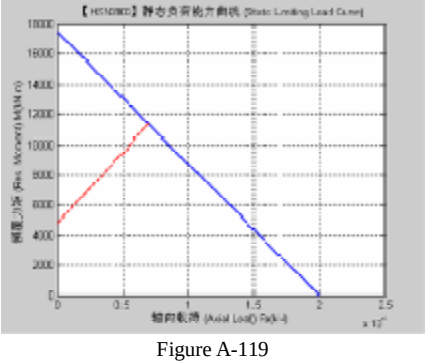


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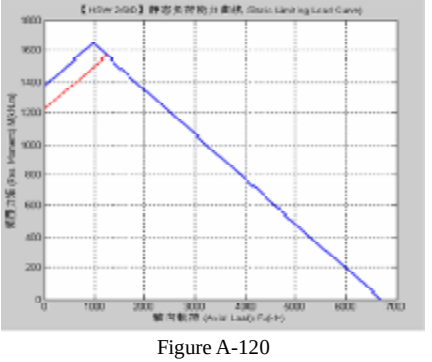


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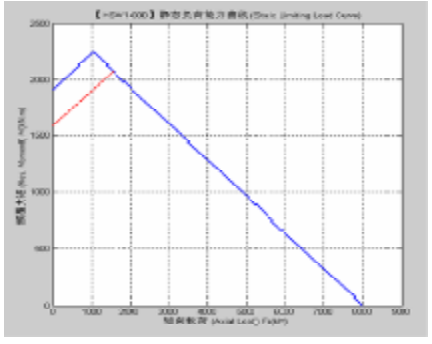


Figure A-121

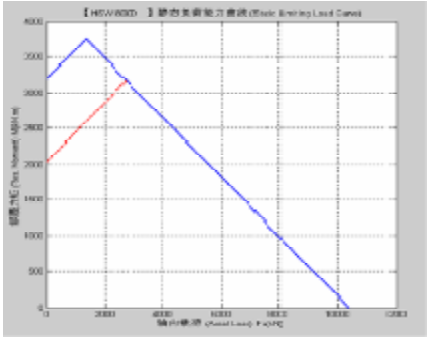


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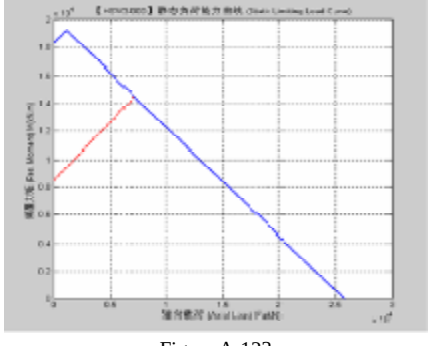


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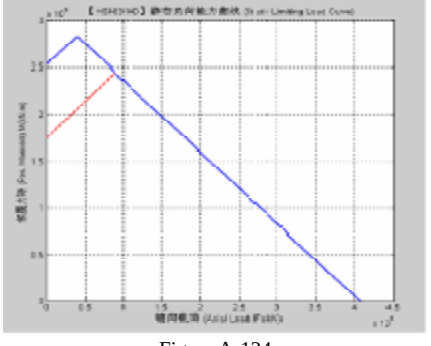


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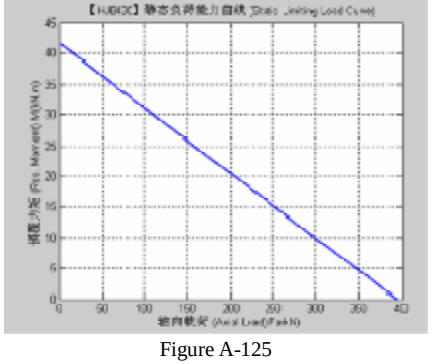


Figure A-125

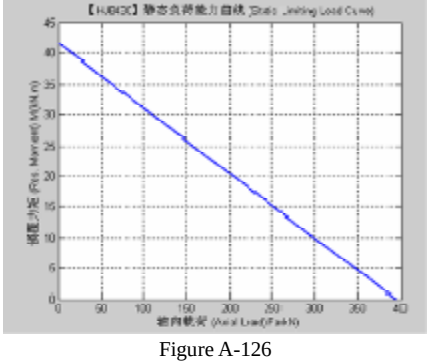


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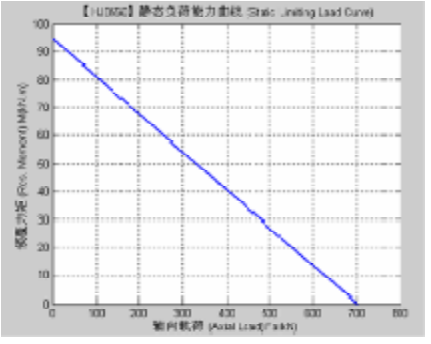


Figure A-127

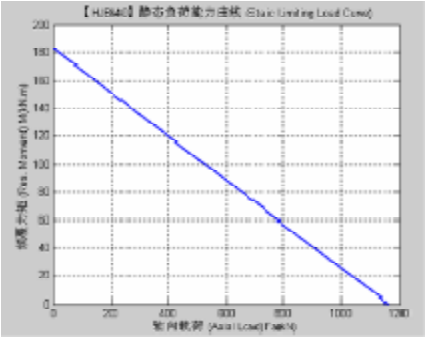


Figure A-128

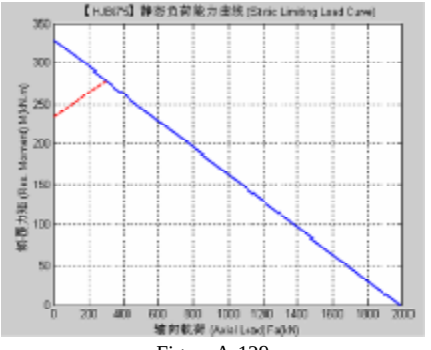


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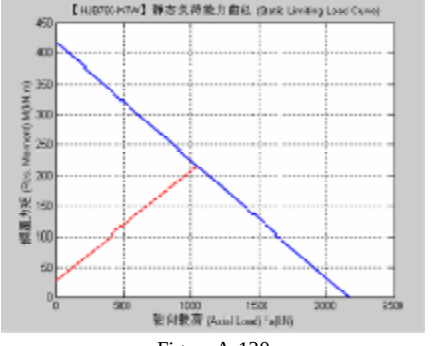


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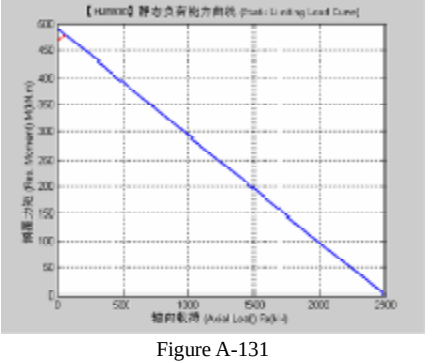


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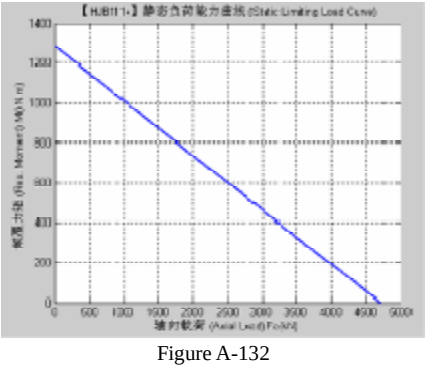


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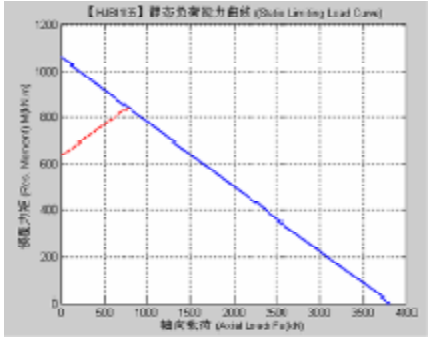


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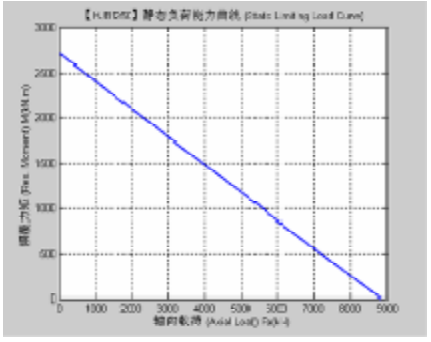


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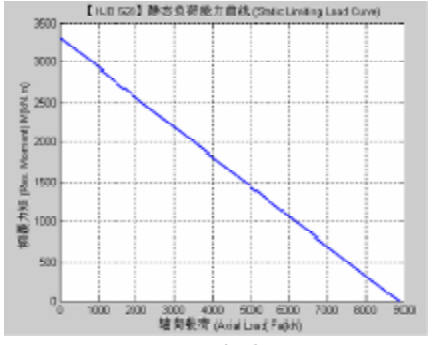


Figure A-135

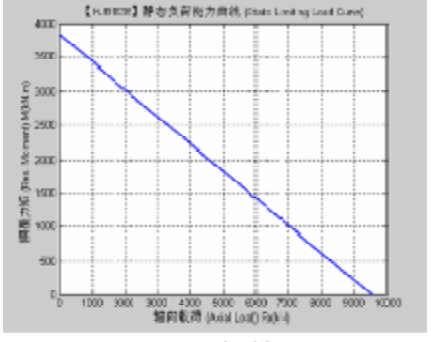


Figure A-136

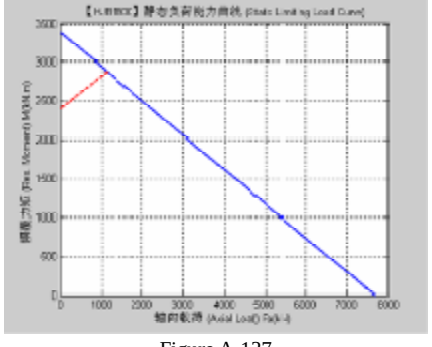


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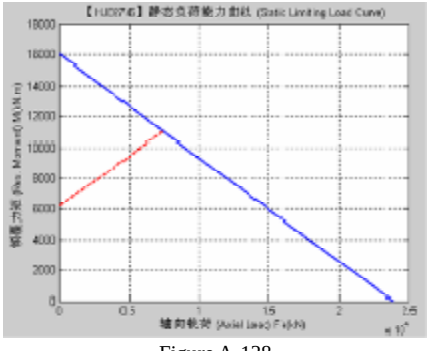


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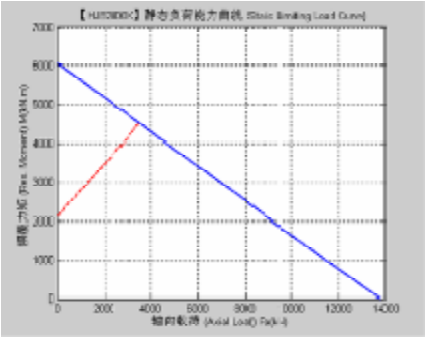


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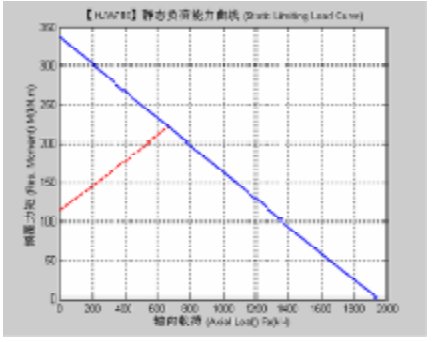


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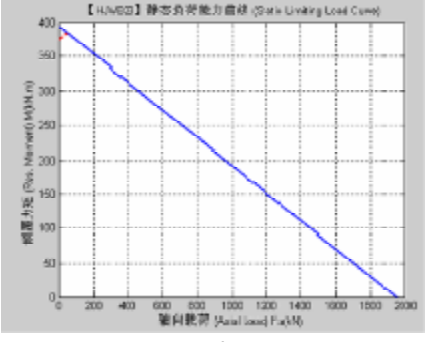


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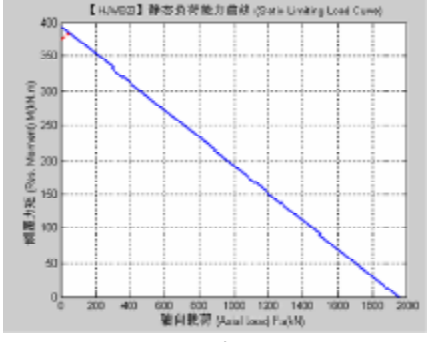


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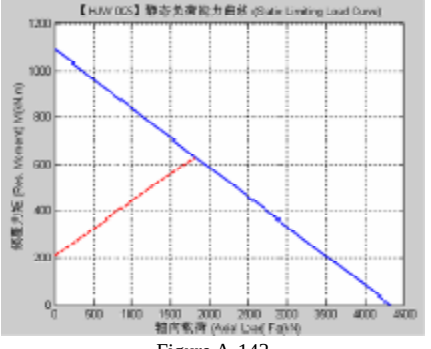


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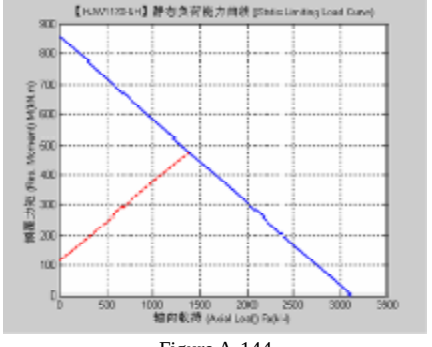


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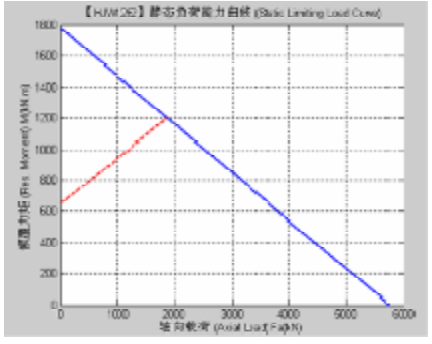


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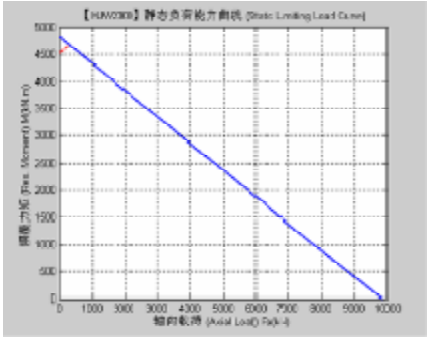


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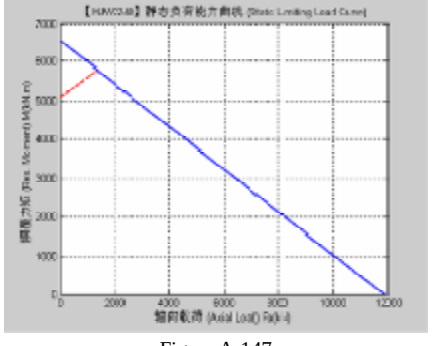


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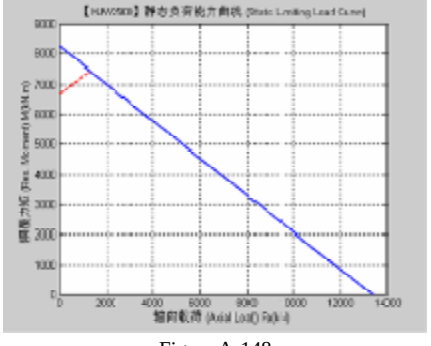


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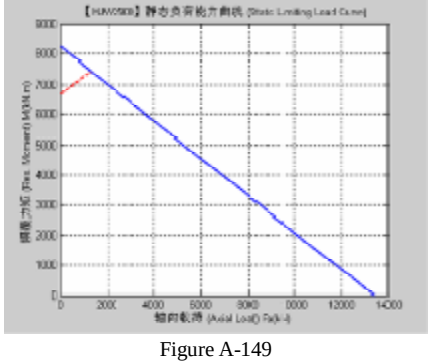


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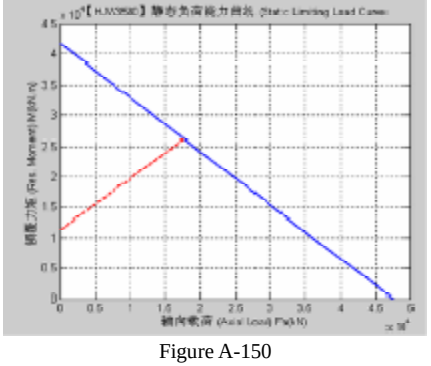


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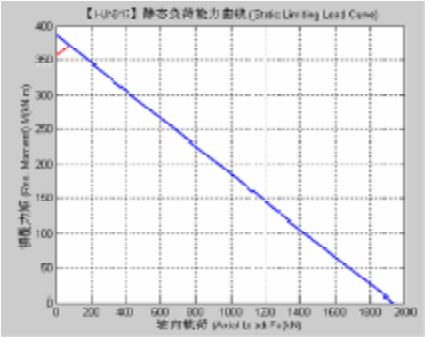


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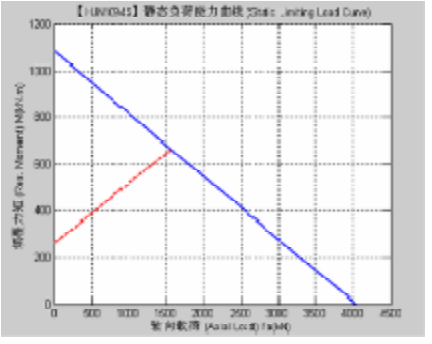


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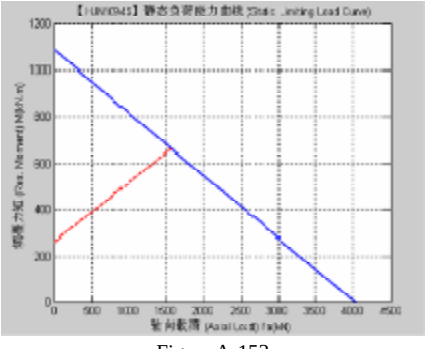


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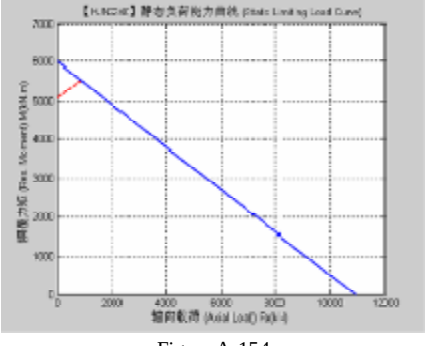


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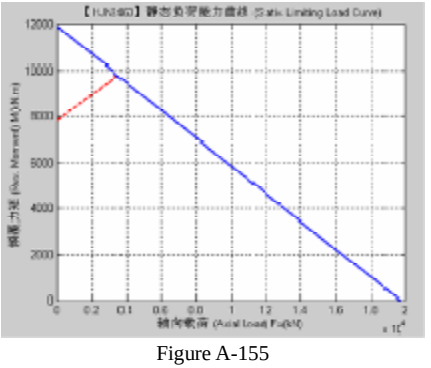


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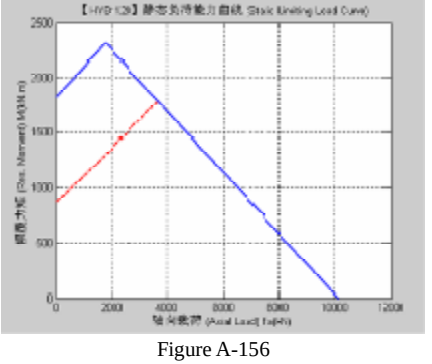


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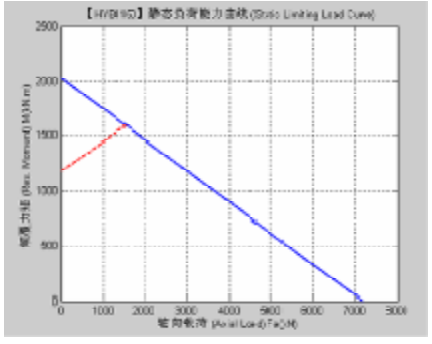


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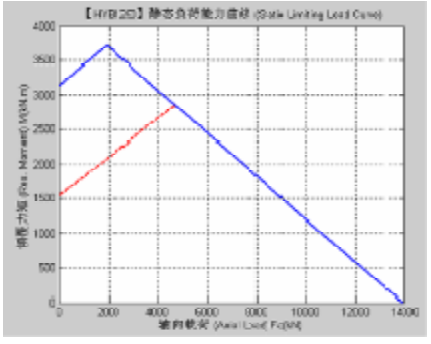


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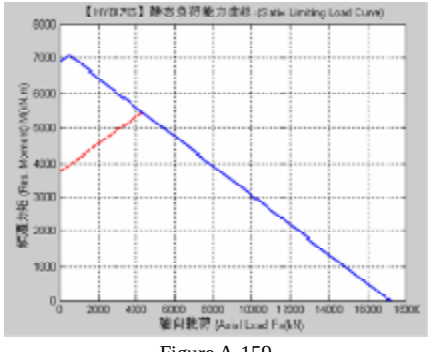


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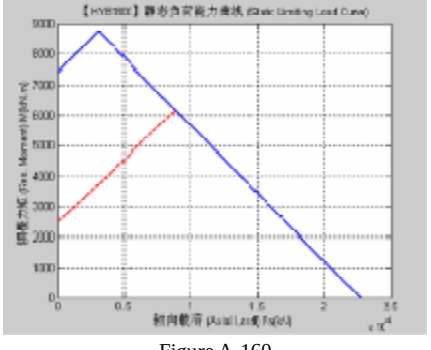


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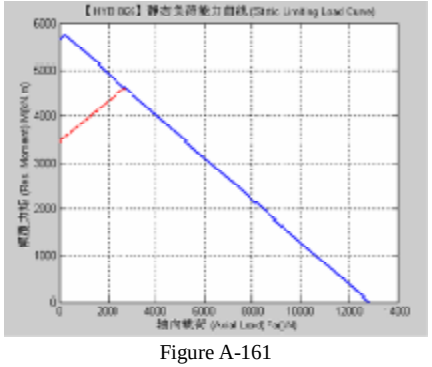


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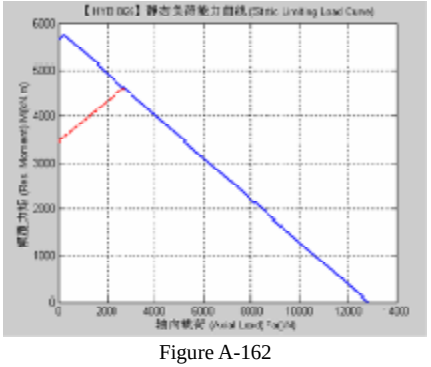


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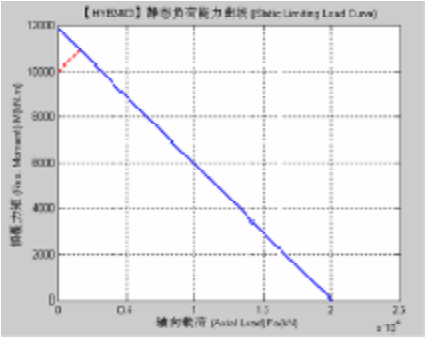


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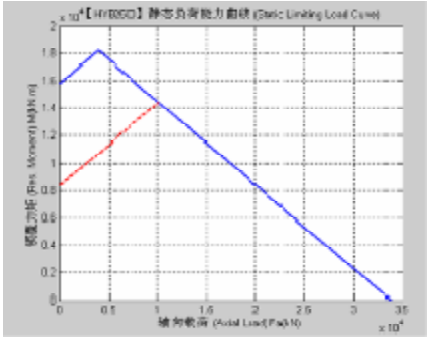


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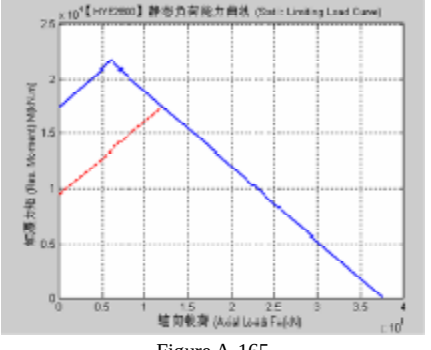


Figure A-165

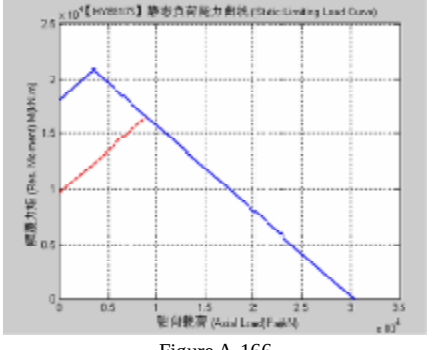


Figure A-166

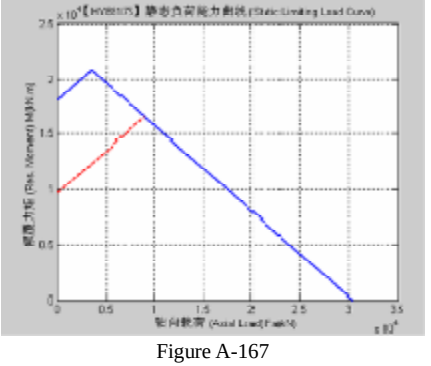


Figure A-167

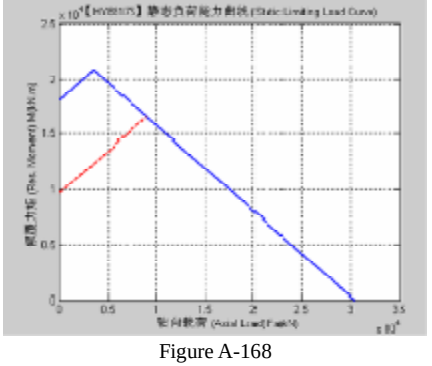


Figure A-168

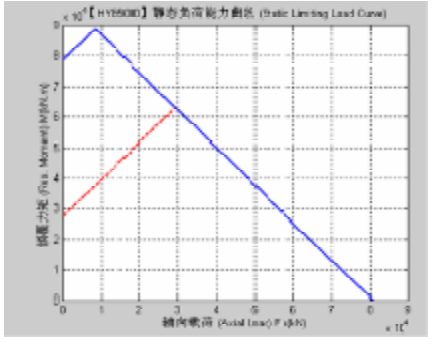


Figure A-169

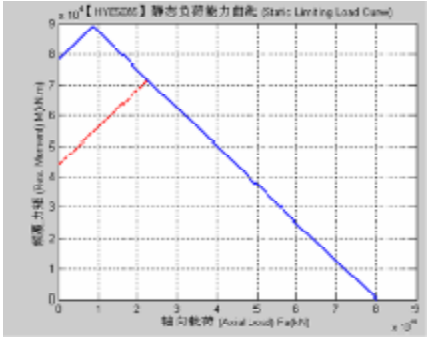


Figure A-170

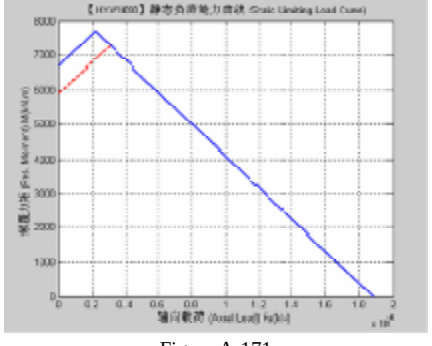


Figure A-171

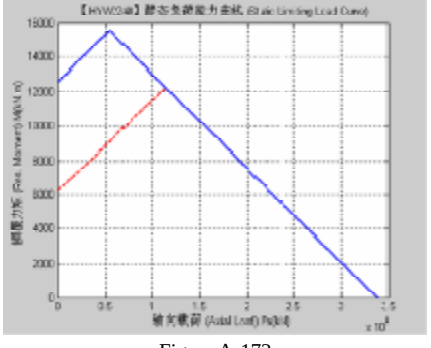


Figure A-172

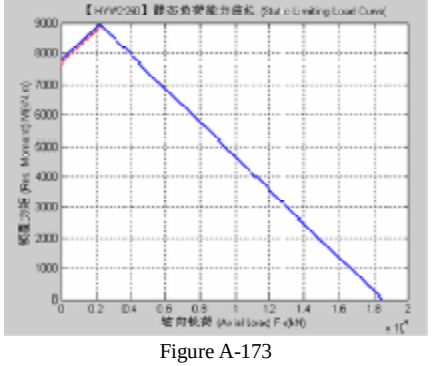


Figure A-173

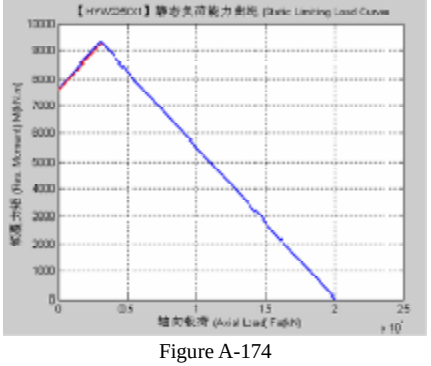


Figure A-174

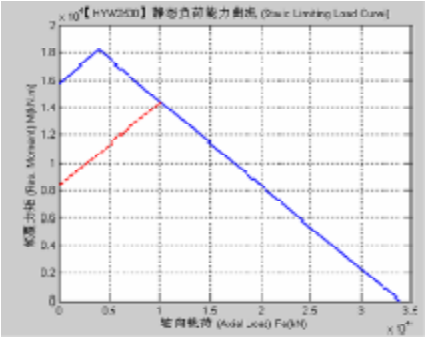


Figure A-175

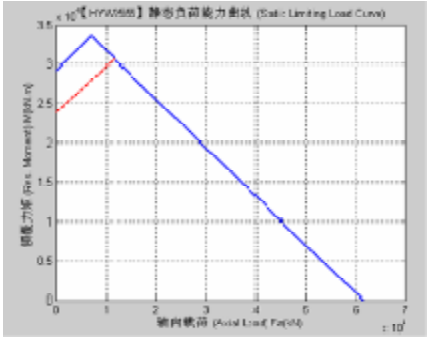


Figure A-176

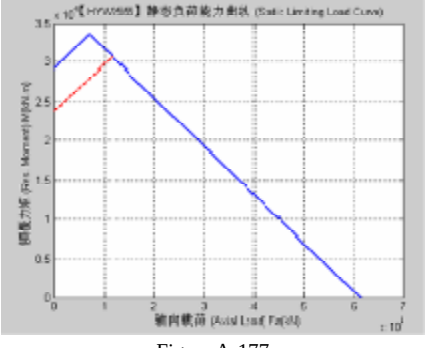


Figure A-177

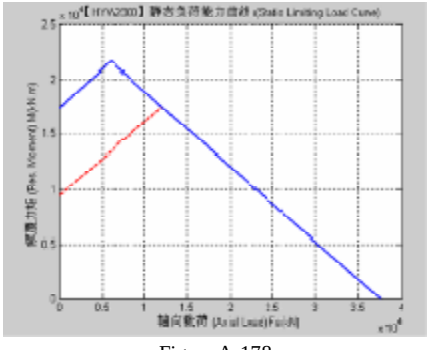


Figure A-178

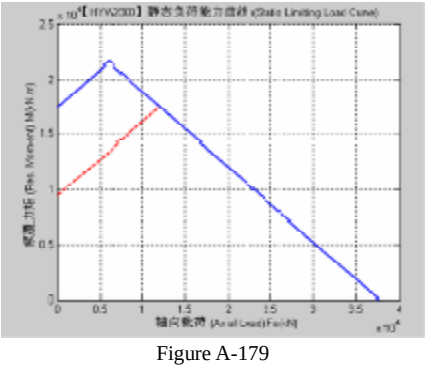


Figure A-179

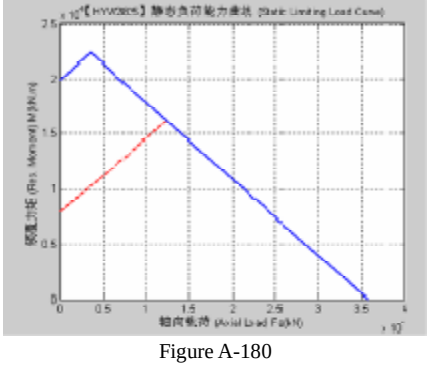


Figure A-180

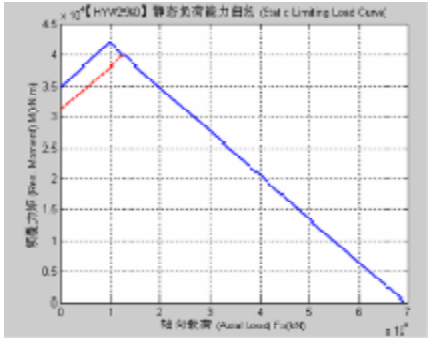


Figure A-181

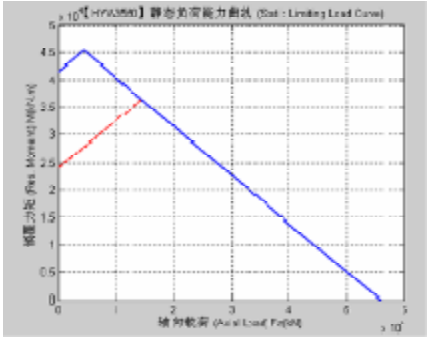


Figure A-182

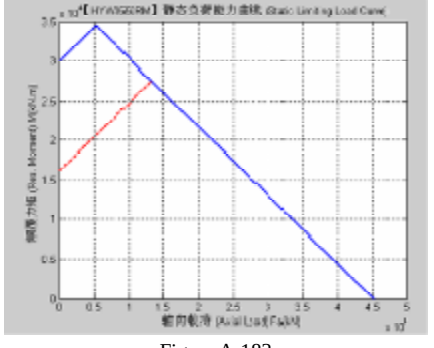


Figure A-183

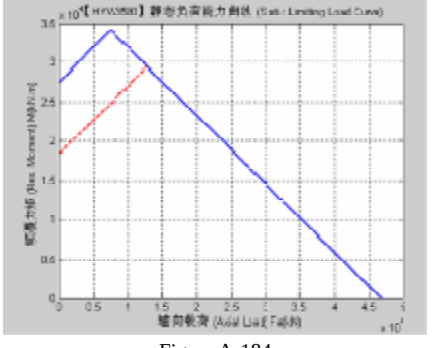


Figure A-184

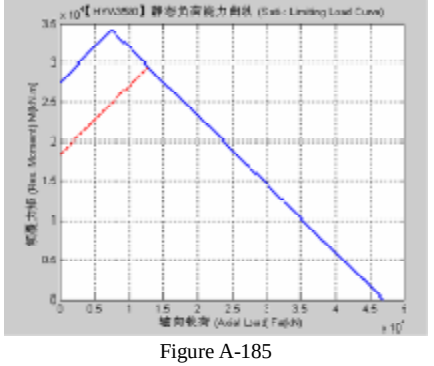


Figure A-185

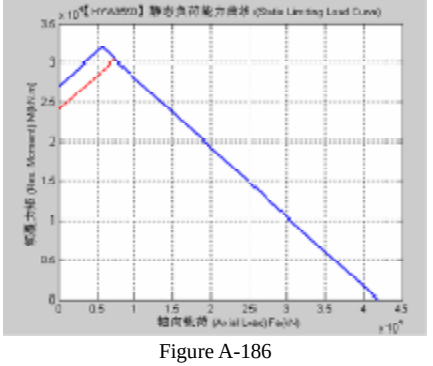


Figure A-186

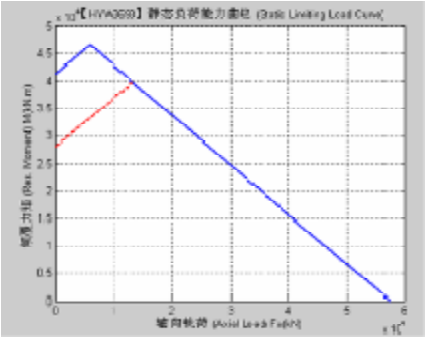


Figure A-187

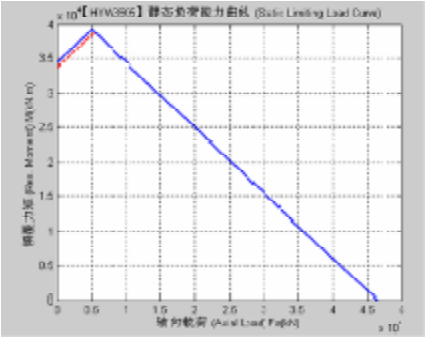


Figure A-188

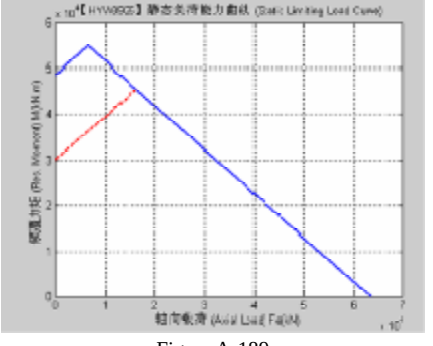


Figure A-189

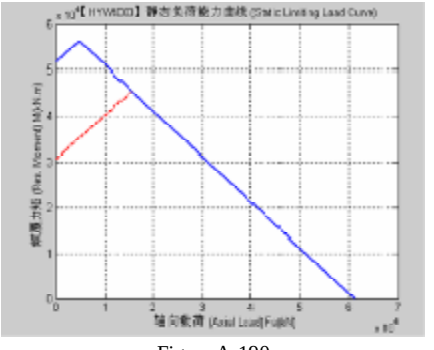


Figure A-190

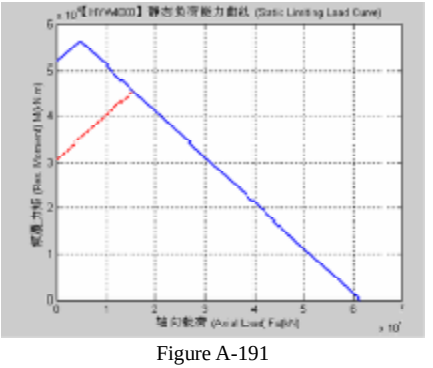


Figure A-191

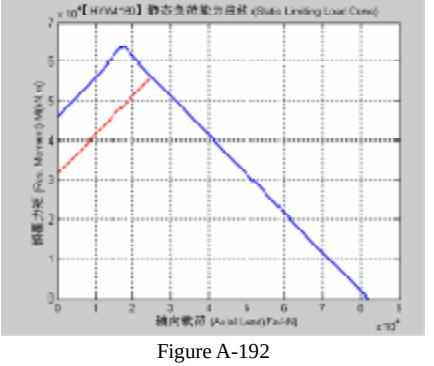


Figure A-192

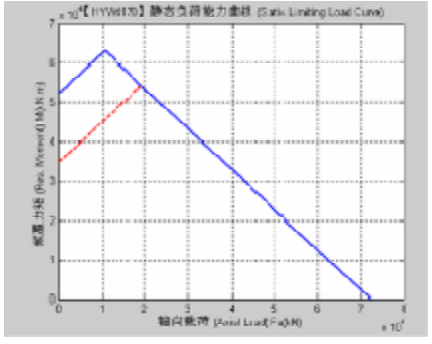


Figure A-193

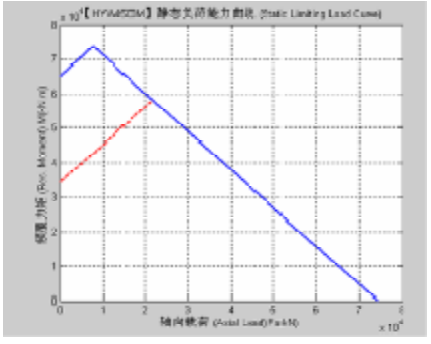


Figure A-194

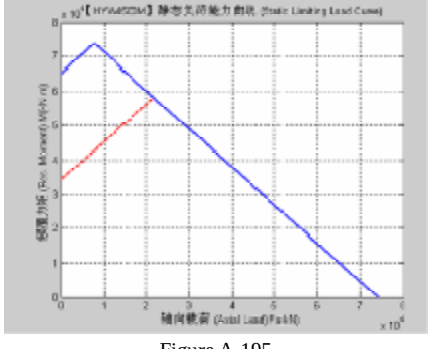


Figure A-195

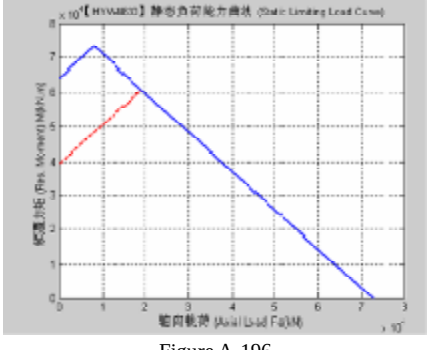


Figure A-196

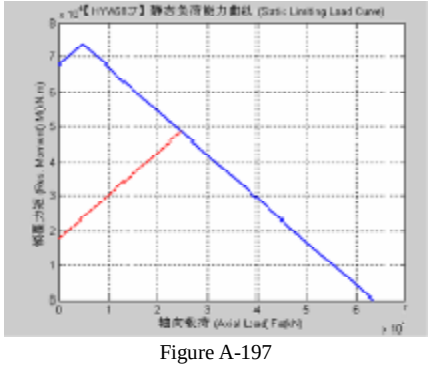


Figure A-197

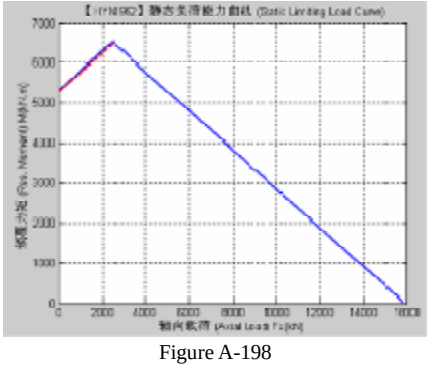


Figure A-198

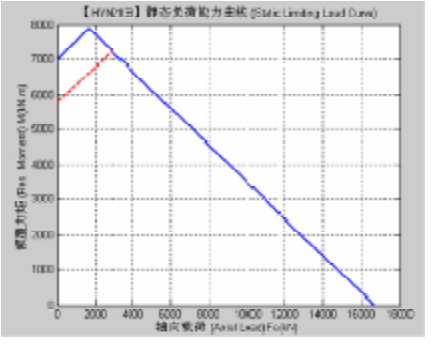


Figure A-199

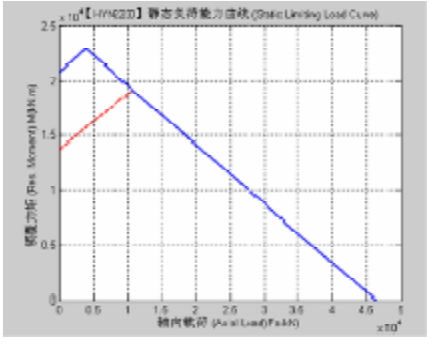


Figure A-200

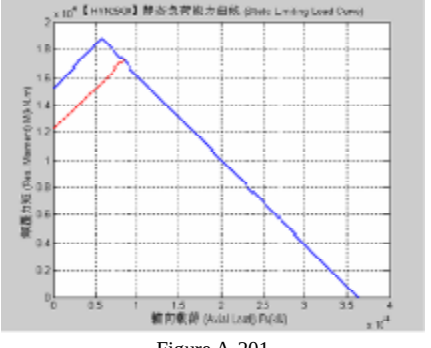


Figure A-201

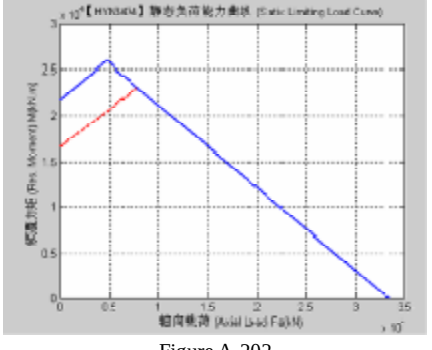


Figure A-202

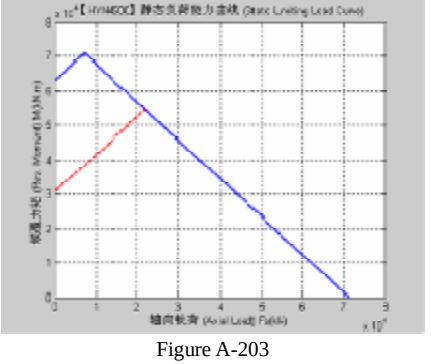


Figure A-203

## Concise Comparison of New and Old Bearing Code System

This comparison is according to the type, structure, diameter series, width series as index,organized accordingly. Compares the bearing old and new designations which comply with boundary dimensions comply with standard requirement.

"0" Deep groove ball bearing

| Series | | Example | |
|---|---|---|---|
| Old designation | New Designation | Old designation | New Designation |
| 0000 type Deep groove ball bearing | | | |
| 1000800 | 61800 | 1000838 | 61838 |
| 1000900 | 61900 | 1000918 | 61918 |
| 7000100 | 16000 | 7000115 | 16015 |
| 100 | 6000 | 116 | 6016 |
| 200 | 6200 | 208 | 6208 |
| 3000200 | 63200 | 3000210 | 63210 |
| 300 | 6300 | 309 | 6309 |
| 400 | 6400 | 422 | 6422 |
| 50000 type Deep groove ball bearing outer ring with snap groove | | | |
| 50100 | 6100N | 50106 | 6106N |
| 50200 | 6200N | 50218 | 6218N |
| 50300 | 6300N | 50310 | 6310N |
| 50400 | 6400N | 50420 | 6420N |
| 60000 type Deep groove ball bearing one side shield | | | |
| 1060900 | 61900-Z | 1060905 | 61905-Z |
| 60100 | 6000-Z | 60120 | 6020-Z |
| 60200 | 6200-Z | 60203 | 6203-Z |
| 60300 | 6300-Z | 60308 | 6308-Z |
| 80000 type Deep groove ball bearing double side shield | | | |
| 80100 | 6000-2Z | 80115 | 6015-2Z |
| 80200 | 6200-2Z | 80205 | 6205-2Z |
| 80300 | 6300-2Z | 80308 | 6308-2Z |
| 150000 type Deep groove ball bearing one side shield, other side with snap groove | | | |
| 150200 | 6200-ZN | 150215 | 6215-ZN |
| 150300 | 6300-ZN | 150310 | 6310-ZN |
| 150400 | 6400-ZN | 150404 | 6404-ZN |

"0" Deep groove ball bearing

| Series | | Example | |
|---|---|---|---|
| Old designation | New Designation | Old designation | New Designation |
| 160000Type Deep groove ball bearing one side with sealing ring | | | |
| 160100 | 6000-RS | 160112 | 6012-RS |
| 160200 | 6200-RS | 160212 | 6212-RS |
| 160300 | 6300-RS | 160308 | 6308-RS |
| 160500 | 62200-RS | 160505 | 62205-RS |
| 180000Type Deep groove ball bearing double side with sealing ring | | | |
| 180100 | 6000-2RS | 180112 | 6012-2RS |
| 180200 | 6200-2RS | 180216 | 6216-2RS |
| 3180200 | 63200-2RS | 3180210 | 63210-2RS |
| 180300 | 6300-2RS | 180311 | 6311-2RS |
| 180500 | 62200-2RS | 180516 | 62216-2RS |
| 180600 | 62300-2RS | 180609 | 62309-2RS |
| 250000 Type Deep groove ball bearing double side with shield outer ring with snap groove | | | |
| 250200 | 6200-2ZN | 250211 | 6211-2ZN |
| 350000 Type Deep groove ball bearing ons side with sealing ring, other side outer ring with snap groove. | | | |
| 350500 | 62200-RSN | 350505 | 62205-RSN |
| 370000 Type Deep groove ball bearing with filling slot | | | |
| 370200 | 200 | 370213 | 213 |
| 370300 | 300 | 370310 | 310 |
| 370400 | 400 | 370401 | 401 |
| 370000Type Deep groove ball bearing with filling slot | | | |
| 370200 | 200 | 370213 | 213 |
| 370300 | 300 | 370310 | 310 |
| 370400 | 400 | 370401 | 401 |

"1" Self-aligning ball bearing

| Series | | Example | |
|---|---|---|---|
| Old designation | New Designation | Old designation | New Designation |
| 1000 type Self-aligning ball bearing | | | |
| 1200 | 1200 | 1212 | 1212 |
| 1300 | 1300 | 1314 | 1314 |
| 1400 | 1400 | 1412 | 1412 |
| 1500 | 2200 | 1520 | 2220 |
| 1600 | 2300 | 1615 | 2300 |
| 111000 type Self-aligning ball bearing with tapered bore | | | |
| 111200 | 1200K | 111214 | 1214K |
| 111300 | 1300K | 111316 | 1316K |
| 111500 | 2200K | 111518 | 2218K |
| 111600 | 2300K | 111618 | 2318K |
| 11000 type Self-aligning ball bearing with adapter sleeve | | | |
| 1060900 | 61900-Z | 1060905 | 61905-Z |
| 60100 | 6000-Z | 60120 | 6020-Z |
| 60200 | 6200-Z | 60203 | 6203-Z |
| 60300 | 6300-Z | 60308 | 6308-Z |

| 80000 type Deep groove ball bearing with double side shield | |
|---|---|
| Old designation | New Designation |
| 11204 | 1205K+H205 |
| 11205 | 1206K+H206 |
| 11206 | 1207K+H207 |
| 11207 | 1208K+H208 |
| 11209 | 1210K+H210 |
| 11210 | 1211K+H211 |
| 11211 | 1212K+H212 |
| 11212 | 1213K+H213 |
| 11305 | 1306K+H306 |
| 11609 | 2310K+H2310 |



"2" Cylindrical roller bearing

| Series | | Example | |
|---|---|---|---|
| Old designation | New Designation | Old designation | New Designation |
| 32000 Type Cylindrical roller bearing outer ring with double flange, inner ring without flange | | | |
| 1032900 | NU 1900 | 1032948 | NU 1948 |
| 2032900 | NU 2900 | 2032944 | NU 2944 |
| 32100 | NU 1000 | 32124 | NU 1024 |
| 3032100 | NU 3000 | 3032134 | NU 3034 |
| 3032200 | NU 3200 | 3032224 | NU 3224 |
| 32300 | NU 300 | 32316 | NU 316 |
| 3032300 | NU 3300 | 3032315H | NU 3315 M |
| 32400 | NU 400 | 32426 | NU 426 |
| 32500 | NU 2200 | 32538 | NU 2238 |
| 32600 | NU 2300 | 32636 | NU 2336 |
| 332000 Type Cylindrical roller bearing with tapered bore | | | |
| 332100 | NU 1000 K | 332180 | NU 1080 K |
| 2000Type Cylindrical roller bearing outer ring without flange | | | |
| 2002800 | N 2800 | 20028/530 | N 28/530 |
| 1002900 | N 1900 | 1002934 | N 1934 |
| 7002100 | N 0000 | 7002158 | N 0058 |
| 2100 | N 1000 | 2152 | N 1052 |
| 2200 | N 200 | 2244 | N 244 |
| 2300 | N 300 | 2324 | N 324 |
| 2400 | N 400 | 2418 | N 418 |
| 2500 | N 2200 | 2526 | N 2226 |
| 2600 | N 2300 | 2640 | N 2340 |
| 12000Type Cylindrical roller bearing outer ring with single flange | | | |
| 1012900 | NF 1900 | 1012936 | NF 1936 |
| 2012800 | NF 2800 | 20128/530 | NF 28/530 |
| 12100 | NF1000 | 12121 | NF1021 |
| 12200 | NF 200 | 12220 | NF 220 |
| 12300 | NF 300 | 12328 | NF 328 |
| 12400 | NF 400 | 12410 | NF 410 |
| 12500 | NF 2200 | 12526 | NF 2226 |
| 12600 | NF 2300 | 12630 | NF 2330 |

"2" Cylindrical roller bearing

| Series | | Example | |
|---|---|---|---|
| Old designation | New Designation | Old designation | New Designation |
| 22000 type Cylindrical roller bearing outer ring with single rib and with loose rib | | | |
| 3022800 | NFP 3800 | 30228/630 | NFP 38/630 |
| 22300 | NFP 300 | 22317 | NFP 317 |
| 42000 type Cylindrical roller bearing inner ring with single flange | | | |
| 42100 | NJ 1000 | 42144 | NJ 1044 |
| 42200 | NJ 200 | 42236 | NJ 236 |
| 42300 | NJ 300 | 42330 | NJ 330 |
| 42400 | NJ 400 | 42428 | NJ 428 |
| 42500 | NJ 2200 | 42544 | NJ 2244 |
| 42600 | NJ 2300 | 42636 | NJ 2336 |
| 52000 type Cylindrical roller bearing inner ring without flange, with separate thrust collar | | | |
| 52200 | NU 200+HJ 200 | 52244 | NU 200+HJ 244 |
| 52300 | NU 300+HJ 300 | 52340 | NU 300+HJ 340 |
| 52600 | NU 2300+HJ 2300 | 52632 | NU 2300+HJ 2332 |
| 62000 type Cylindrical roller bearing inner ring with single flange and separate thrust collar | | | |
| 62200 | NJ 200+HJ 200 | 62218 | NJ 200+HJ 218 |
| 62300 | NJ 300+HJ 300 | 62322 | NJ 300+HJ 322 |
| 62400 | NJ 400+HJ 400 | 62419 | NJ 400+HJ 419 |
| 62600 | NJ 2300+HJ 2300 | 62613 | NJ 2300+HJ 2313 |
| 262000 type Cylindrical roller bearing outer ring with snap groove, inner ring with single flange. | | | |
| 4262900 | NJ 4900 N | 4262992 | NJ 4992 N |
| 262300 | NJ 300 N | 262314 E | NJ 314 N |
| 92000 type Cylindrical roller bearing inner ring with single flange and loose rib | | | |
| 1092900 | NUP 1900 | 10929/710 | NUP 19/710 |
| 92100 | NUP 1000 | 92154 | NUP 1054 |
| 92200 | NUP 200 | 92232 | NUP 232 |
| 92300 | NUP 300 | 92328 | NUP 328 |
| 92400 | NUP 400 | 92417 | NUP 417 |
| 92500 | NUP 2200 | 92513 | NUP 2213 |
| 92600 | NUP 2300 | 92626 | NUP 2326 |



"2" Cylindrical roller bearing

| Series | | Example | |
|---|---|---|---|
| Old designation | New Designation | Old designation | New Designation |
| 192000 type Cylindrical roller bearing outer ring with snap groove, inner ring with single flange and loose rib | | | |
| 192200 | NUP 2200 N | 192213 | NUP 2213 N |
| 192300 | NUP 300 N | 192314 | NUP 314 N |
| 102000 type Cylindrical roller bearing outer ring without flange inner ring with double | | | |
| 102100 | NCL 1000 | 102110 | NCL 1010 |
| 202000 type Cylindrical roller bearing outer ring without flange have snap groove | | | |
| 3202700 | N 3200 N | 3202776 | N 3276 N |
| 3202200 | N 3200 N | 3202244 | N 3244 N |
| 202300 | N 300 N | 202330 EH | N 330 N |
| 292000 type Cylindrical roller bearing without inner ring | | | |
| 1292900 | RNU 1900 | 1292934 | RNU 1934 |
| 292100 | RNU 1000 | 292136 | RNU 1036 |
| 292200 | RNU 200 | 292224 | RNU 224 |
| 292300 | RNU 300 | 292320 | RNU 320 |
| 292500 | RNU 2200 | 292518 | RNU 2218 |
| 292600 | RNU 2300 | 292615 | RNU 2315 |
| 392000 type Cylindrical roller bearing outer ring with double flange and snap groove but without inner ring | | | |
| 392200 | RNU 200 N | 392224 | RNU 224 N |
| 392300 | RNU 300 N | 392322 | RNU 322 N |
| 392600 | RNU 2300 N | 392620 | RNU 2320 N |
| 402000 type Cylindrical roller bearing with wide outer ring and single flange. | | | |
| 402300 | NF 300 WC | 402310 | NF 310 WC |
| 502000 type Cylindrical roller bearing without outer ring. | | | |
| 502100 | RN 1000 | 502118 | RN 1018 |
| 502200 | RN 200 | 502222 | RN 222 |
| 502300 | RN 300 | 502330 | RN 330 |
| 502400 | RN 400 | 502408 | RN 408 |
| 502600 | RN 2300 | 502606 | RN 2306 |

"2" Cylindrical roller bearing

| Series | | Example | |
|---|---|---|---|
| Old designation | New Designation | Old designation | New Designation |
| 372000 type Cylindrical roller bearing outer ring with double snap groove double end sealed double inner ring without cage. | | | |
| 5372100 | NNF 5000-2LSNV | 5372126 NNF | 5026-2LSNV |
| 472000 type Double-row cylindrical roller bearing inner ring without flange roller arrangement in parallel | | | |
| 4472900 | NU 4900 A | 4472992 H | NU 4992 A |
| 182000 type Double-row cylindrical roller bearing with tapered bore. | | | |
| 3182900<br>4182900<br>3182100 | NN 3900 K<br>NN 4900 K<br>NN 3000 K | 3182980<br>4182952<br>3182117 | NN 3980 K<br>NN 4952 K<br>NN 3017 K |
| 62000 type Cylindrical roller bearing inner ring with single flange and separate thrust collar | | | |
| 62200<br>62300<br>62400<br>62600 | NJ 200+HJ 200<br>NJ 300+HJ 300<br>NJ 400+HJ 400<br>NJ 2300+HJ 2300 | 62218<br>62322<br>62419<br>62613 | NJ 200+HJ 218<br>NJ 300+HJ 322<br>NJ 400+HJ 419<br>NJ 2300+HJ 2313 |
| 282000 type Double-row cylindrical roller bearing | | | |
| 3282900<br>3282100 | NN 3900<br>NN 3000 | 32829/560<br>3282140 | NN 39/560<br>NN 3040 |
| 482000 type Double-row cylindrical roller bearing inner ring without flange tapered bore. | | | |
| 3482100<br>4482100<br>4482900 | NNU 3000<br>NNU 4000<br>NNU 4900 | 3482124<br>4482120<br>4482932 | NNU 3024<br>NNU 4020<br>NNU 4932 |

"3" Spherical roller bearing

| Series | | Example | |
|---|---|---|---|
| Old designation | New Designation | Old designation | New Designation |
| 53000 type symmetrical roller type spherical roller bearing | | | |
| 3053900<br>3053100<br>4053100<br>3053700<br>4053700<br>3053200<br>53300<br>53500<br>53600 | 23900<br>23000<br>24000<br>23100<br>24100<br>23200<br>21300<br>22200<br>22300 | 3053956<br>3053140<br>4053184 K<br>3053740<br>4053756<br>3053230<br>53317<br>53522<br>53624 | 23956<br>23040<br>24084/W33<br>23140<br>24156<br>23230<br>21317<br>22222<br>22324 |
| 153000 type symmetrical roller tapered bore spherical roller bearing | | | |
| 3153100<br>3153200<br>153500<br>153600<br>153300<br>3153700 | 23000<br>23200<br>22200<br>22300<br>21300<br>23100 | 3153126<br>3153284<br>153524<br>153616<br>153322<br>3153776 | 23026<br>23284<br>22224<br>22316<br>21322<br>23176 |
| 453000 type symmetrical roller type tapered bore (1:30) spherical roller bearing | | | |
| 4453700<br>4453100 | 24100 K30<br>24000 K30 | 4453772 K<br>4453176 K | 24172 K30/W33<br>24076 K30/W33 |

"6" Angular contact ball bearing

| Series | | Example | |
|---|---|---|---|
| Old designation | New Designation | Old designation | New Designation |
| 36000 type Angular contact ball bearing(nominal contact angle =15° ) | | | |
| 36100<br>36200<br>36300<br>36400 | 7000 C<br>7200 C<br>7300 C<br>7400 C | 36126<br>36219<br>36318<br>36409 | 7029 C<br>7219 C<br>7318 C<br>7409 C |

"6" Angular contact ball bearing

| Series | | Example | |
|---|---|---|---|
| Old designation | New Designation | Old designation | New Designation |
| 46000 type Angular contact ball bearing (nominal contact angle =25° ) | | | |
| 46100 | 7000 AC | 46140 | 7040 AC |
| 46200 | 7200 AC | 46220 | 7220 AC |
| 46300 | 7300 AC | 46319 | 7319 AC |
| 46400 | 7400 AC | 46416 | 7416 AC |
| 66000 type Angular contact ball bearing (nominal contact angle =40° ) | | | |
| 66100 | 7000 B | 66118 | 7018 B |
| 66200 | 7200 B | 66207 | 7207 B |
| 66300 | 7300 B | 66324 | 7324 B |
| 66400 | 7400 B | 66412 | 7412 B |
| 116000 type Four-point contact ball bearing with split outer ring | | | |
| 116100 | QJF 000 | 116134 | QJF 034 |
| 116200 | QJF 200 | 116240 | QJF 240 |
| 116300 | QJF 300 | 116330 | QJF 330 |
| 176000 type Four-point contact ball bearing with split inner ring | | | |
| 176100 | QJ 000 | 176136 | QJ 036 |
| 176200 | QJ 200 | 176222 | QJ 222 |
| 176300 | QJ 300 | 176317 | QJ 317 |
| 276000 type Three-point contact ball bearing with split inner ring | | | |
| 276200 | QJS 200 | 276214L | QJS 214 |
| 276300 | QJS 300 | 276308 | QJS 308 |
| 136000 type Angular contact ball bearing lock catch on the inner ring (nominal contact angle =15° ) | | | |
| 136100 | B7000 C | 136108 | B7008 C |
| 136200 | B7200 C | 136205 | B7205 C |
| 136300 | B7300 C | 136318 | B7318 C |
| 146000 type Angular contact ball bearing lock catch on the inner ring (nominal contact angle =25° ) | | | |
| 146100 | B7000 AC | 146122J | B7022 AC |
| 146200 | B7200 AC | 146234 | B7234 AC |
| 146300 | B7300 AC | 146313 | B7313 AC |



"6" Angular contact ball bearing

| Series | | Example | |
|---|---|---|---|
| Old designation | New Designation | Old designation | New Designation |
| 166000 type Angular contact ball bearing lock catch on the inner ring (nominal contact angle =40° ) | | | |
| 166200 | B7200 B | 166203 | B7203 B |
| 166300 | B7300 B | 166322 | B7322 B |
| 426000 type Angular contact ball bearing without cage | | | |
| 1426800 | 71800 BV | 1426816 | 71816 BV |
| 7426800 | 7800 BV | 7426819 | 7819 BV |
| 236000 type Angular contact ball bearing back-to-back paired arrangement (nominal contact angle =15° ) | | | |
| 236100 | 7000 C/DB | 236108 | 7008 C/DB |
| 236200 | 7200 C/DB | 236214 | 7214 C/DB |
| 236300 | 7300 C/DB | 236309 | 7309 C/DB |
| 246000 type Angular contact ball bearing back-to-back paired arrangement (nominal contact angle =25° ) | | | |
| 246100 | 7000 AC/DB | 246130 | 7030 AC/DB |
| 246200 | 7200 AC/DB | 246220 | 7220 AC/DB |
| 246300 | 7300 AC/DB | 246322 | 7322 AC/DB |
| 246400 | 7400 AC/DB | 246407J | 7407 AC/DB |
| 266000 type Angular contact ball bearing back-to-back paired arrangement(nominal contact angle =40° ) | | | |
| 266300 | 7300 B/DF | 266311 | 7311 B/DB |
| 336000 type Angular contact ball bearing face-to-face paired arrangement (nominal contact angle =15° ) | | | |
| 336200 | 7200 C/DF | 336240 | 7240 C/DF |
| 336300 | 7300 C/DF | 336310 | 7310 C/DF |
| 346000 type Angular contact ball bearing face-to-face paired arrangement (nominal contact angle =25° ) | | | |
| 346100 | 7000 AC/DF | 346120 | 7020 AC/DF |
| 346200 | 7200 AC/DF | 346240 | 7240 AC/DF |
| 346300 | 7300 AC/DF | 346330 | 7330 AC/DF |
| 366000 type Angular contact ball bearing face-to-face paired arrangement (nominal contact angle =40° ) | | | |
| 366300 | 7300B/DF | 366310 | 7310 B/DF |

"6" Angular contact ball bearing

| Series | | Example | |
|---|---|---|---|
| Old designation | New Designation | Old designation | New Designation |
| 436000 type Angular contact ball bearing tandem paired arrangement (nominal contact angle =15° ). | | | |
| 436100<br>436200<br>436300 | 7000 C/DT<br>7200 C/DT<br>7300 C/DT | 436120<br>436214<br>436307 | 7020 C/DT<br>7214 C/DT<br>7307 C/DT |
| 446000 type Angular contact ball bearing tandem paired arrangement (nominal contact angle =25° ). | | | |
| 446100<br>446200<br>446300 | 7000 AC/DT<br>7200 AC/DT<br>7300 AC/DT | 446113<br>446210<br>446328 | 7013 AC/DT<br>7210 AC/DT<br>7328 AC/DT |
| 466000 type Angular contact ball bearing tandem paired arrangement (nominal contact angle =45° ). | | | |
| 466300 | 7300 B/DT | 466336 | 7336 B/DT |
| 546000 type Angular contact ball bearing back-to back paired arrangement lock catch on the inner ring(nominal contact angle =25° ). | | | |
| 546300 | B7300 AC/DB | 546322H | B7322 AC/DB |
| 736000 type Angular contact ball bearing tandem paired arrangement lock catch on the inner ring (nominal contact angle =15° ). | | | |
| 736100 | B7000 C/DT | 736106 | B7006C/DT |
| 836000 type Angular contact ball bearing with triple set tandem arrangement (nominal contact angle =15° ). | | | |
| 836200 | 7200 C/TT | 836207 | 7207 C/TT |
| 56000 type Double-row angular contact ball bearing with ball filling slot.(nominal contact angle =25° ). | | | |
| 3056200<br>3056300 | 3056200<br>3056300 | 3056209<br>3056316 | 3209<br>3316 |
| 86000, 286000 type Double inner ring double-row angular-contact ball bearing. | | | |
| 3086200<br>3086300<br>3286300 | 3200 D<br>3300 D<br>3300 D | 3086215<br>3086315<br>3286307 | 3215 D<br>3315 D<br>3307 D |

"7" Tapered roller bearing

| Series | | Example | |
|---|---|---|---|
| Old designation | New Designation | Old designation | New Designation |
| 7000 type Tapered roller bearing | | | |
| 1007700<br>3007700<br>1007800<br>1007900<br>2007900<br>2007100<br>3007100<br>7200<br>3007200<br>7300<br>7500<br>7600 | 31700<br>33100<br>31800<br>31900<br>32900<br>32000<br>33000<br>30200<br>33200<br>30300<br>32200<br>32300 | 1007760<br>3007718<br>10078/850<br>1007996<br>2007952<br>2007134<br>3007119<br>7236<br>3007213<br>7352<br>7532<br>7626 | 31760<br>33118<br>318/850<br>31996<br>32952<br>32034<br>33019<br>30236<br>33213<br>30352<br>32232<br>32326 |
| 27000 type Steep angle tapered roller bearing | | | |
| 27300 | 31300 | 27317 | 31317 |
| 67000 type Tapered roller bearing outer ring with cup flange | | | |
| 7067800<br>67500 | 30800R<br>32200R | 70678/800<br>67518 | 308/800R<br>32218R |
| 97000 type Double-row tapered roller bearing with double inner ring | | | |
| 1097900<br>2097900<br>97100<br>2097100<br>1097700<br>2097700<br>97200<br>97500 | 351900<br>352900<br>351000<br>352000<br>351100<br>352100<br>350200<br>352200 | 10979/1200<br>2097930<br>97172<br>2097136<br>1097760<br>2097752<br>97210<br>97536 | 3519/1200<br>352930<br>351072<br>352036<br>351160<br>352152<br>350210<br>352236 |
| 87000 type Double-row tapered roller bearing tandem arrangement with double outer ring | | | |
| 87500 | 372200 | 87518 | 372218 |

"7" Tapered roller bearing

| Series | | Example | |
|---|---|---|---|
| Old designation | New Designation | Old designation | New Designation |
| 77000 type Four-row tapered roller bearing | | | |
| 1077900 | 381900 | 1077992 | 381992 |
| 2077900 | 382900 | 2077930 | 382930 |
| 77100 | 381000 | 771/600 | 3810/600 |
| 2077100 | 382000 | 2077148 | 382048 |
| 1077700 | 381100 | 1077772 | 381172 |

"8" Thrust ball bearing

| Series | | Example | |
|---|---|---|---|
| Old designation | New Designation | Old designation | New Designation |
| 8000 type Thrust ball bearing | | | |
| 8100 | 51100 | 8128 | 51128 |
| 8200 | 51200 | 8252 | 51252 |
| 8300 | 51300 | 8338 | 51338 |
| 8400 | 51400 | 8430 | 51430 |
| 708000 type Thrust ball bearing without cage | | | |
| 7708100 | 57100 V | 7708172 | 57172 V |
| 9708100 | 59100 V | 97081/750 | 591/750 V |
| 18000 type Thrust ball bearing with aligning washer | | | |
| 18200 | 53200 U | 18230 | 53230 U |
| 18300 | 53300 U | 18330 | 53330 U |
| 18400 | 53400 U | 18430 | 53430 U |
| 28000 type Thrust ball bearing with aligning housing washer | | | |
| 28300 | 53300 | 28320 | 53320 |
| 28400 | 53400 | 28417 | 53417 |

"8" Thrust ball bearing

| Series | | Example | |
|---|---|---|---|
| Old designation | New Designation | Old designation | New Designation |
| 168000 type Thrust angular contact ball bearing | | | |
| 1168900 | 561000 | 11689/900 | 5610/900 |
| 168100 | 561100 | 1681/800 | 5611/800 |
| 9168200 | 569200 | 91682/530 | 5692/530 |
| 9168300 | 569300 | 9168306 | 569306 |
| 9168400 | 569400 | 9168406 | 569406 |
| 268000 type Double direction thrust angular contact ball bearing | | | |
| 2268100 | 234400 | 2268134 | 234434 |
| 108000 type Thrust ball bearing without shaft washer | | | |
| 108100 | KOW-51100 | 108107 | KOW-51107 |
| 38000 type Double direction thrust ball bearing | | | |
| 38200 | 52200 | 38240 | 52240 |
| 38300 | 52300 | 38322 | 52322 |
| 38400 | 52400 | 38430 | 52430 |
| 48000 type Double direction thrust ball bearing with aligning washer | | | |
| 48200 | 54200 U | 48226 | 54226 U |
| 48300 | 54300 U | 48324 | 54324 U |
| 58000 type Double direction thrust ball bearing with spherical housing washer | | | |
| 58300 | 54300 | 58320 | 54320 |

"9" thrust roller bearing

| Series | | Example | |
|---|---|---|---|
| Old designation | New Designation | Old designation | New Designation |
| 9000 type Cylindrical roller thrust bearing | | | |
| 9009100 | 89100 | 9009107 | 89107 |
| 9100 | 81100 | 9124 | 81124 |
| 9200 | 81200 | 9226 | 81226 |

"9" thrust roller bearing

| Series | | Example | |
|---|---|---|---|
| Old designation | New Designation | Old designation | New Designation |
| 209000 type Cylindrical roller thrust bearing without housing washer | | | |
| 209100 | KIW-81100 | 209130 | KIW-81130 |
| 19000 type Thrust tapered roller bearing | | | |
| 9019400 | 99400 | 9019456 | 99456 |
| 39000 type Thrust spherical roller bearing | | | |
| 9039200<br>9039300<br>9039400 | 29200<br>29300<br>29400 | 90392/630<br>9039330<br>9039434 | 292/630<br>29330<br>29434 |
| 549000 type Double row thrust cylindrical roller bearing. | | | |
| 7549100<br>549100<br>7549200<br>9549200<br>9549300 | 87100<br>81100 A<br>87200<br>89200<br>89300 | 75491/1180<br>549/1800<br>75492/900<br>9549272 H<br>9549320 | 871/180<br>811/1800 A<br>872/900<br>89272<br>89320 |

## Inch-mm Conversion Table

| inch | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fraction | Decimal | mm | | | | | | | | | | |
| 0 | 0.000000 | 0.000 | 25.400 | 50.800 | 76.200 | 101.600 | 127.000 | 152.400 | 177.800 | 203.200 | 228.600 | 254.000 |
| 1/64 | 0.015625 | 0.397 | 25.797 | 51.197 | 76.597 | 101.997 | 127.397 | 152.797 | 178.197 | 203.597 | 228.997 | 254.397 |
| 1/32 | 0.031250 | 0.794 | 26.194 | 51.594 | 76.994 | 102.394 | 127.794 | 153.194 | 178.594 | 203.994 | 229.394 | 254.794 |
| 3/64 | 0.046875 | 0.191 | 26.591 | 51.991 | 77.391 | 102.791 | 128.191 | 153.591 | 178.991 | 204.391 | 229.791 | 255.191 |
| 1/16 | 0.062500 | 1.588 | 26.988 | 52.388 | 77.788 | 103.188 | 128.588 | 153.988 | 179.388 | 204.788 | 230.188 | 255.588 |
| 5/64 | 0.078125 | 1.984 | 27.384 | 52.784 | 78.184 | 103.584 | 128.984 | 154.384 | 179.784 | 205.184 | 230.584 | 255.984 |
| 3/32 | 0.093750 | 2.381 | 27.781 | 53.181 | 78.581 | 103.981 | 129.381 | 154.781 | 180.181 | 205.581 | 230.981 | 256.381 |
| 7/64 | 0.109375 | 2.778 | 28.178 | 53.578 | 78.978 | 104.378 | 129.778 | 155.178 | 180.578 | 205.978 | 231.378 | 256.778 |



## Inch-mm Conversion Table

| inch | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fraction | Decimal | mm | | | | | | | | | | |
| 1/8 | 0.125000 | 3.175 | 28.575 | 53.975 | 53.975 | 104.775 | 130.175 | 155.575 | 180.975 | 206.375 | 231.775 | 257.175 |
| 9/64 | 0.140625 | 3.572 | 28.972 | 54.372 | 54.372 | 105.172 | 130.572 | 155.972 | 181.372 | 206.772 | 232.172 | 257.572 |
| 5/32 | 0.156250 | 3.969 | 29.369 | 57.769 | 57.769 | 105.569 | 130.969 | 156.369 | 181.769 | 207.169 | 232.569 | 257.969 |
| 11/64 | 0.171875 | 4.366 | 29.766 | 55.166 | 55.166 | 105.966 | 131.366 | 156.766 | 182.166 | 207.566 | 232.966 | 258.366 |
| 3/16 | 0.187500 | 4.762 | 30.162 | 55.562 | 55.562 | 106.362 | 131.762 | 157.162 | 182.562 | 207.962 | 233.362 | 258.762 |
| 13/64 | 0.203125 | 5.159 | 30.559 | 55.959 | 55.959 | 106.759 | 132.159 | 157.559 | 182.959 | 208.359 | 233.759 | 259.159 |
| 7/32 | 0.218750 | 5.556 | 30.956 | 56.356 | 56.356 | 107.156 | 132.556 | 157.956 | 183.356 | 208.756 | 234.156 | 259.556 |
| 15/64 | 0.234375 | 5.953 | 31.353 | 56.753 | 56.753 | 107.553 | 132.953 | 158.353 | 183.753 | 209.153 | 234.553 | 259.953 |
| 1/4 | 0.250000 | 6.350 | 31.750 | 57.150 | 57.150 | 107.950 | 133.350 | 158.750 | 184.150 | 209.550 | 234.950 | 260.350 |
| 17/64 | 0.265625 | 6.747 | 32.147 | 57.547 | 57.547 | 108.347 | 133.747 | 159.147 | 184.547 | 209.947 | 235.347 | 260.747 |
| 9/32 | 0.281250 | 7.144 | 32.544 | 57.944 | 57.944 | 108.744 | 134.144 | 159.544 | 184.944 | 210.344 | 235.744 | 261.144 |
| 19/64 | 0.296875 | 7.541 | 32.941 | 58.341 | 58.341 | 109.141 | 134.541 | 159.941 | 185.341 | 210.741 | 236.141 | 261.541 |
| 5/16 | 0.312500 | 7.938 | 33.338 | 58.738 | 58.738 | 109.538 | 134.938 | 160.338 | 185.738 | 211.138 | 236.538 | 261.938 |
| 21/64 | 0.328125 | 8.334 | 33.734 | 59.134 | 59.134 | 109.934 | 135.334 | 160.734 | 186.134 | 211.534 | 236.934 | 262.334 |
| 13/32 | 0.343750 | 8.731 | 34.131 | 59.531 | 59.531 | 110.331 | 135.731 | 161.131 | 186.531 | 211.931 | 237.331 | 262.731 |
| 23/64 | 0.359375 | 9.128 | 34.528 | 59.928 | 59.928 | 110.728 | 136.128 | 161.528 | 186.928 | 212.328 | 237.728 | 263.128 |

| inch | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fraction | Decimal | mm | | | | | | | | | | |
| 3/8 | 0.375000 | 9.525 | 34.925 | 60.325 | 85.725 | 111.125 | 136.525 | 161.925 | 187.325 | 212.725 | 238.125 | 263.525 |
| 25/64 | 0.390625 | 9.922 | 35.322 | 60.722 | 86.122 | 111.522 | 136.922 | 162.322 | 187.722 | 213.122 | 238.522 | 263.922 |
| 13/32 | 0.406250 | 10.319 | 35.719 | 61.119 | 86.519 | 111.919 | 137.319 | 162.719 | 188.119 | 213.519 | 238.919 | 264.319 |
| 27/64 | 0.421875 | 10.716 | 36.116 | 61.516 | 86.916 | 112.316 | 137.716 | 163.116 | 188.516 | 213.916 | 239.316 | 264.716 |
| 7/16 | 0.437500 | 11.112 | 36.512 | 61.912 | 87.312 | 112.712 | 138.112 | 163.512 | 188.912 | 214.312 | 239.712 | 256.112 |
| 29/64 | 0.453125 | 11.509 | 36.909 | 62.309 | 87.709 | 113.109 | 138.509 | 163.909 | 189.309 | 214.709 | 240.109 | 265.509 |
| 15/32 | 0.468750 | 11.906 | 37.306 | 62.706 | 88.106 | 113.506 | 138.906 | 164.306 | 189.706 | 215.106 | 240.506 | 265.906 |
| 31/64 | 0.484375 | 12.303 | 37.703 | 63.103 | 88.503 | 113.903 | 139.303 | 164.703 | 190.103 | 215.503 | 240.903 | 266.303 |

## Inch-mm Conversion Table

| inch | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fraction | Decimal | mm | | | | | | | | | | |
| 1/2 | 0.50000 | 12.700 | 12.700 | 63.500 | 88.900 | 114.300 | 139.700 | 165.100 | 190.500 | 215.900 | 241.300 | 266.700 |
| 33/64 | 0.515625 | 13.097 | 13.097 | 63.897 | 89.297 | 114.697 | 140.097 | 165.497 | 190.897 | 216.297 | 241.697 | 267.097 |
| 17/32 | 0.531250 | 13.494 | 13.494 | 64.294 | 89.694 | 115.094 | 140.494 | 165.894 | 191.294 | 216.694 | 242.094 | 267.494 |
| 35/64 | 0.546875 | 13.891 | 13.891 | 64.691 | 90.091 | 115.491 | 140.891 | 166.291 | 191.691 | 217.091 | 242.491 | 267.891 |
| 5/8 | 0.625000 | 15.875 | 15.875 | 66.675 | 92.075 | 117.475 | 142.875 | 168.275 | 193.675 | 219.075 | 244.475 | 269.875 |
| 41/64 | 0.640625 | 16.272 | 16.272 | 67.072 | 92.472 | 117.872 | 143.272 | 168.672 | 194.072 | 219.072 | 244.872 | 270.272 |
| 21/32 | 0.656250 | 16.669 | 16.669 | 67.469 | 92.869 | 118.269 | 143.669 | 169.069 | 194.469 | 219.869 | 245.269 | 270.669 |
| 43/64 | 0.671875 | 17.066 | 17.066 | 67.866 | 93.266 | 118.666 | 144.066 | 169.466 | 194.866 | 220.266 | 245.666 | 271.066 |
| 11/16 | 0.687500 | 17.462 | 17.462 | 68.262 | 93.662 | 119.062 | 144.462 | 169.862 | 195.262 | 220.662 | 246.062 | 271.462 |
| 45/64 | 0.703125 | 17.859 | 17.859 | 68.659 | 94.059 | 119.459 | 144.859 | 170.259 | 195.659 | 221.059 | 246.459 | 271.859 |
| 23/32 | 0.718750 | 18.256 | 18.256 | 69.056 | 94.456 | 119.856 | 145.256 | 170.656 | 196.056 | 221.456 | 246.856 | 272.256 |
| 47/64 | 0.734375 | 18.653 | 18.653 | 69.453 | 94.853 | 120.253 | 145.653 | 171.053 | 196.453 | 221.853 | 247.253 | 272.653 |
| 3/4 | 0.750000 | 19.050 | 19.050 | 69.850 | 95.250 | 120.650 | 146.050 | 171.450 | 196.850 | 222.250 | 247.650 | 273.050 |
| 49/64 | 0.765625 | 19.447 | 19.447 | 70.247 | 95.647 | 121.047 | 146.447 | 171.847 | 197.247 | 222.647 | 248.047 | 273.447 |
| 25/32 | 0.781250 | 19.844 | 19.844 | 70.644 | 96.044 | 121.444 | 146.844 | 172.244 | 197.644 | 223.044 | 248.444 | 273.844 |
| 51/64 | 0.796875 | 20.241 | 20.241 | 71.041 | 96.441 | 121.841 | 147.241 | 172.641 | 198.041 | 223.441 | 248.841 | 274.241 |
| 13/16 | 0.812500 | 20.638 | 20.638 | 71.438 | 96.838 | 122.638 | 147.638 | 173.038 | 198.438 | 223.838 | 249.238 | 274.638 |
| 53/64 | 0.828125 | 21.034 | 21.034 | 71.834 | 97.234 | 122.634 | 148.034 | 173.434 | 198.834 | 224.234 | 249.634 | 275.034 |
| 27/32 | 0.843750 | 21.431 | 21.431 | 72.231 | 97.631 | 123.031 | 148.431 | 173.831 | 199.231 | 224.631 | 250.031 | 275.431 |
| 55/64 | 0.859375 | 21.828 | 21.828 | 72.628 | 98.028 | 123.428 | 148.828 | 174.228 | 199.628 | 225.028 | 250.428 | 275.828 |
| 7/8 | 0.875000 | 22.225 | 22.225 | 73.025 | 98.425 | 123.825 | 149.225 | 174.625 | 200.025 | 225.425 | 250.825 | 276.225 |
| 57/64 | 0.890625 | 22.622 | 22.622 | 73.422 | 98.822 | 124.222 | 149.622 | 175.022 | 200.422 | 225.822 | 251.222 | 276.622 |
| 29/32 | 0.906250 | 23.019 | 23.019 | 73.819 | 99.219 | 124.619 | 150.019 | 175.419 | 200.819 | 226.219 | 251.619 | 277.019 |
| 59/64 | 0.921875 | 23.416 | 23.416 | 74.216 | 99.616 | 125.016 | 150.416 | 175.816 | 201.216 | 226.616 | 252.016 | 277.416 |
| 15/16 | 0.937500 | 23.812 | 49.212 | 74.612 | 100.012 | 125.412 | 150.812 | 176.212 | 201.612 | 227.012 | 252.412 | 277.812 |
| 61/64 | 0.953125 | 24.209 | 49.609 | 75.009 | 100.409 | 125.809 | 151.209 | 176.609 | 202.009 | 227.409 | 252.809 | 278.209 |
| 31/32 | 0.968750 | 24.606 | 50.006 | 75.406 | 100.806 | 126.206 | 151.606 | 177.006 | 202.406 | 227.806 | 253.206 | 278.606 |
| 63/64 | 0.984375 | 25.003 | 50.403 | 75.803 | 101.203 | 126.603 | 152.003 | 177.403 | 202.803 | 228.203 | 253.603 | 279.003 |

| inch | | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fraction | Decimal | mm | | | | | | | | | |
| 0 | 0.0000 | 279.400 | 304.800 | 330.200 | 355.600 | 381.000 | 406.400 | 431.800 | 457.200 | 482.600 | 508.000 |
| 1/16 | 0.0625 | 280.988 | 306.388 | 331.788 | 357.188 | 382.588 | 407.988 | 433.388 | 458.788 | 484.188 | 509.588 |
| 1/8 | 0.1250 | 282.575 | 307.975 | 333.375 | 358.775 | 384.175 | 409.575 | 434.975 | 460.375 | 485.775 | 511.175 |
| 3/16 | 0.1875 | 284.162 | 309.562 | 334.926 | 360.362 | 385.762 | 411.162 | 436.562 | 461.962 | 487.362 | 512.762 |
| 1/4 | 0.2500 | 285.750 | 311.150 | 336.550 | 361.950 | 387.350 | 412.750 | 438.150 | 463.550 | 488.950 | 514.350 |
| 5/16 | 0.3125 | 287.338 | 312.738 | 338.138 | 363.538 | 388.938 | 414.338 | 439.738 | 465.138 | 490.538 | 515.938 |
| 3/8 | 0.3750 | 288.925 | 314.325 | 339.725 | 365.125 | 390.525 | 415.925 | 441.325 | 466.725 | 492.125 | 517.525 |
| 7/16 | 0.4375 | 290.512 | 315.912 | 341.312 | 366.712 | 392.112 | 417.512 | 442.912 | 468.312 | 493.712 | 519.112 |
| 1/2 | 0.5000 | 292.100 | 317.500 | 342.900 | 368.300 | 393.700 | 419.100 | 444.500 | 469.900 | 495.300 | 520.700 |
| 9/16 | 0.5625 | 293.688 | 319.088 | 344.488 | 369.888 | 395.288 | 420.688 | 446.088 | 471.488 | 496.888 | 522.288 |
| 5/8 | 0.6250 | 295.275 | 320.675 | 346.075 | 371.475 | 396.875 | 422.275 | 447.675 | 473.075 | 498.475 | 523.875 |
| 11/16 | 0.6875 | 296.862 | 322.262 | 347.662 | 373.062 | 398.462 | 423.862 | 449.262 | 474.662 | 500.062 | 525.462 |
| 3/4 | 0.7500 | 298.450 | 323.850 | 349.250 | 374.650 | 400.050 | 425.450 | 450.850 | 476.250 | 501.650 | 527.050 |
| 13/16 | 0.8125 | 300.038 | 325.438 | 350.838 | 376.238 | 401.638 | 427.038 | 452.438 | 477.838 | 503.238 | 528.638 |
| 7/8 | 0.8750 | 301.625 | 327.025 | 352.425 | 377.825 | 403.225 | 428.625 | 454.025 | 479.425 | 504.825 | 530.225 |
| 15/16 | 0.9375 | 303.212 | 328.612 | 354.012 | 379.412 | 404.812 | 430.212 | 455.612 | 481.012 | 506.412 | 531.812 |

| inch | | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fraction | Decimal | mm | | | | | | | | | |
| 0 | 0.0000 | 533.400 | 558.800 | 584.200 | 609.600 | 635.000 | 660.400 | 685.800 | 711.200 | 736.600 | 762.000 |
| 1/16 | 0.0625 | 534.988 | 560.388 | 585.788 | 611.188 | 636.588 | 661.988 | 687.388 | 712.788 | 738.188 | 763.588 |
| 1/8 | 0.1250 | 536.575 | 561.975 | 587.375 | 612.775 | 638.175 | 663.575 | 688.975 | 714.375 | 739.775 | 765.175 |
| 3/16 | 0.1875 | 538.162 | 563.562 | 588.962 | 614.362 | 639.762 | 665.162 | 690.562 | 715.962 | 741.362 | 766.762 |
| 1/4 | 0.2500 | 539.750 | 565.150 | 590.550 | 615.950 | 641.350 | 666.750 | 692.150 | 717.550 | 742.950 | 768.350 |
| 5/16 | 0.3125 | 541.338 | 566.738 | 592.138 | 617.538 | 642.938 | 668.338 | 693.738 | 719.138 | 744.538 | 769.938 |
| 3/8 | 0.3750 | 542.925 | 568.325 | 593.725 | 619.125 | 644.525 | 669.925 | 695.325 | 720.725 | 746.125 | 771.525 |
| 7/16 | 0.4375 | 544.512 | 569.912 | 595.312 | 620.712 | 646.112 | 671.512 | 696.912 | 722.312 | 747.712 | 773.112 |
| 1/2 | 0.5000 | 546.100 | 571.500 | 596.900 | 622.300 | 647.700 | 673.100 | 698.500 | 723.900 | 749.300 | 774.700 |
| 9/16 | 0.5625 | 547.688 | 573.088 | 598.488 | 623.888 | 649.288 | 674.688 | 700.088 | 725.488 | 750.888 | 776.288 |
| 5/8 | 0.6250 | 549.275 | 574.675 | 600.075 | 625.475 | 650.875 | 676.275 | 701.675 | 727.075 | 752.475 | 777.875 |
| 11/16 | 0.6875 | 550.862 | 576.262 | 601.662 | 627.062 | 652.462 | 677.862 | 703.262 | 728.662 | 754.062 | 779.462 |
| 3/4 | 0.7500 | 552.450 | 577.850 | 603.250 | 628.650 | 654.050 | 679.450 | 704.850 | 730.250 | 755.650 | 781.050 |
| 13/16 | 0.8125 | 557.038 | 579.438 | 604.838 | 630.238 | 655.638 | 681.038 | 706.438 | 731.838 | 757.238 | 782.638 |
| 7/8 | 0.8750 | 555.625 | 581.025 | 606.425 | 631.825 | 657.225 | 682.625 | 708.025 | 733.425 | 758.825 | 784.225 |
| 15/16 | 0.9375 | 557.212 | 582.612 | 608.012 | 633.412 | 658.812 | 684.212 | 709.612 | 735.012 | 760.412 | 785.812 |

## Inch-mm Conversion Table

| inch | | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fraction | Decimal | mm | | | | | | | | | |
| 0 | 0.0000 | 787.400 | 812.800 | 838.200 | 863.600 | 889.000 | 914.400 | 939.800 | 965.200 | 990.600 | 1016.000 |
| 1/16 | 0.0625 | 788.988 | 814.388 | 839.788 | 865.188 | 890.588 | 915.988 | 941.388 | 966.788 | 992.188 | 1017.588 |
| 1/8 | 0.1250 | 790.575 | 815.975 | 841.375 | 866.775 | 892.175 | 917.575 | 942.975 | 968.375 | 993.775 | 1019.175 |
| 3/16 | 0.1875 | 792.162 | 817.562 | 842.962 | 868.362 | 893.762 | 919.162 | 944.562 | 969.962 | 995.362 | 1020.762 |
| 1/4 | 0.2500 | 793.750 | 819.150 | 844.550 | 869.950 | 895.350 | 920.750 | 946.150 | 971.550 | 996.950 | 1022.350 |
| 5/16 | 0.3125 | 795.338 | 820.738 | 846.138 | 871.538 | 896.938 | 922.338 | 947.738 | 973.138 | 998.538 | 1023.938 |
| 3/8 | 0.3750 | 796.925 | 822.325 | 847.725 | 873.125 | 898.525 | 923.925 | 949.325 | 974.725 | 1000.125 | 1025.525 |
| 7/16 | 0.4375 | 798.512 | 823.912 | 849.312 | 874.712 | 900.112 | 925.512 | 950.912 | 976.312 | 1001.712 | 1027.112 |
| 1/2 | 0.5000 | 800.100 | 825.500 | 850.900 | 876.300 | 901.700 | 927.100 | 952.500 | 977.900 | 1003.300 | 1028.700 |
| 9/16 | 0.5625 | 801.688 | 827.088 | 852.488 | 877.888 | 903.288 | 928.688 | 954.088 | 979.488 | 1004.888 | 1030.288 |
| 5/8 | 0.6250 | 803.275 | 828.675 | 854.075 | 879.475 | 904.875 | 930.275 | 955.675 | 981.075 | 1006.475 | 1031.875 |
| 11/16 | 0.6875 | 804.862 | 830.262 | 855.662 | 881.062 | 906.462 | 931.862 | 957.262 | 982.662 | 1008.062 | 1033.462 |
| 3/4 | 0.7500 | 806.450 | 831.850 | 857.250 | 882.650 | 908.050 | 933.450 | 958.850 | 984.250 | 1009.650 | 1035.050 |
| 13/16 | 0.8125 | 808.038 | 833.438 | 858.838 | 884.238 | 909.638 | 935.038 | 960.438 | 985.838 | 1011.238 | 1036.638 |
| 7/8 | 0.8750 | 809.625 | 835.025 | 860.425 | 885.825 | 911.225 | 936.625 | 962.025 | 987.425 | 1012.825 | 1038.225 |
| 15/16 | 0.9375 | 811.212 | 836.612 | 862.012 | 887.412 | 912.812 | 938.212 | 963.612 | 989.012 | 1014.412 | 1039.812 |

## Basic Tolerance IT

| Basic dimensional classification (mm) | | Tolerance Grade | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| Over | Under | Value of basic tolerance(um) | | | | | | | | | | | Value of basic tolerance(um) | | | | | | |
| - | 3 | 0.8 | 1.2 | 2 | 3 | 4 | 6 | 10 | 14 | 25 | 40 | 60 | 0.10 | 0.14 | 0.26 | 0.40 | 0.60 | 1.00 | 1.40 |
| 3 | 6 | 1 | 1.5 | 2.5 | 4 | 5 | 8 | 12 | 18 | 30 | 48 | 75 | 0.12 | 0.18 | 0.30 | 0.48 | 0.75 | 1.20 | 1.80 |
| 6 | 10 | 1 | 1.5 | 2.5 | 4 | 6 | 9 | 15 | 22 | 36 | 58 | 90 | 0.15 | 0.22 | 0.36 | 0.58 | 0.90 | 1.50 | 2.20 |
| 10 | 18 | 1.2 | 2 | 3 | 5 | 8 | 11 | 18 | 27 | 43 | 70 | 110 | 0.18 | 0.27 | 0.43 | 0.70 | 1.10 | 1.80 | 2.70 |
| 18 | 30 | 1.5 | 2.5 | 4 | 6 | 9 | 13 | 21 | 33 | 52 | 84 | 130 | 0.21 | 0.33 | 0.52 | 0.84 | 1.30 | 2.10 | 3.30 |
| 30 | 50 | 1.5 | 2.5 | 4 | 7 | 11 | 16 | 25 | 39 | 62 | 100 | 160 | 0.25 | 0.39 | 0.62 | 1.00 | 1.60 | 2.50 | 3.90 |
| 50 | 80 | 2 | 3 | 5 | 8 | 13 | 19 | 30 | 46 | 74 | 120 | 190 | 0.30 | 0.46 | 0.74 | 1.20 | 1.90 | 3.00 | 4.60 |
| 80 | 120 | 2.5 | 4 | 6 | 10 | 15 | 22 | 35 | 54 | 87 | 140 | 220 | 0.35 | 0.54 | 0.87 | 1.40 | 2.20 | 3.50 | 5.40 |
| 120 | 180 | 3.5 | 5 | 8 | 12 | 18 | 25 | 40 | 63 | 100 | 160 | 250 | 0.40 | 0.63 | 1.00 | 1.60 | 2.50 | 4.00 | 6.30 |
| 180 | 250 | 4.5 | 7 | 10 | 14 | 20 | 29 | 46 | 72 | 115 | 185 | 290 | 0.46 | 0.72 | 1.15 | 1.85 | 2.90 | 4.60 | 7.20 |
| 250 | 315 | 6 | 8 | 12 | 16 | 23 | 32 | 52 | 81 | 130 | 210 | 320 | 0.52 | 0.81 | 1.30 | 2.10 | 3.20 | 5.20 | 8.10 |
| 315 | 400 | 7 | 9 | 13 | 18 | 25 | 36 | 57 | 89 | 140 | 230 | 360 | 0.57 | 0.89 | 1.40 | 2.30 | 3.60 | 5.70 | 8.90 |
| 400 | 500 | 8 | 10 | 15 | 20 | 27 | 40 | 63 | 97 | 155 | 250 | 400 | 0.63 | 0.97 | 1.55 | 2.50 | 4.00 | 6.30 | 9.70 |
| 500 | 630 | 9 | 11 | 16 | 22 | 30 | 44 | 70 | 110 | 175 | 280 | 440 | 0.70 | 1.10 | 1.75 | 2.80 | 4.40 | 7.00 | 11.00 |
| 630 | 800 | 10 | 13 | 18 | 25 | 35 | 50 | 80 | 125 | 200 | 320 | 500 | 0.80 | 1.25 | 2.00 | 3.20 | 5.00 | 8.00 | 12.50 |
| 800 | 1000 | 11 | 15 | 21 | 29 | 40 | 56 | 90 | 140 | 230 | 360 | 560 | 0.90 | 1.40 | 2.30 | 3.60 | 5.60 | 9.00 | 14.00 |
| 1000 | 1250 | 13 | 18 | 24 | 34 | 46 | 66 | 105 | 165 | 260 | 420 | 660 | 1.05 | 1.65 | 2.60 | 4.20 | 6.60 | 10.50 | 16.50 |
| 1250 | 1600 | 15 | 21 | 29 | 40 | 54 | 78 | 125 | 195 | 310 | 500 | 780 | 1.25 | 1.95 | 3.10 | 5.00 | 7.80 | 12.50 | 19.50 |
| 1600 | 2000 | 18 | 25 | 35 | 48 | 65 | 92 | 150 | 230 | 370 | 600 | 920 | 1.50 | 2.30 | 3.70 | 6.00 | 9.20 | 15.00 | 23.00 |
| 2000 | 2500 | 22 | 30 | 41 | 57 | 77 | 110 | 175 | 280 | 440 | 700 | 1100 | 1.75 | 2.80 | 4.40 | 7.00 | 11.00 | 17.50 | 28.00 |
| 2500 | 3150 | 26 | 36 | 50 | 69 | 93 | 135 | 210 | 330 | 540 | 860 | 1350 | 2.10 | 3.30 | 5.40 | 8.60 | 13.50 | 21.00 | 33.00 |

## Viscosity Conversion Table

| kinematic viscosity $mm^2/s$ | Saybolt universal viscosity SUS(second\) | | Redwood Viscosity R (second) | | Engler viscosity E(˚C) |
|---|---|---|---|---|---|
| | 100˚C | 210˚C | 50˚C | 100˚C | |
| 2 | 32.6 | 32.8 | 30.8 | 31.2 | 1.14 |
| 3 | 36.0 | 36.3 | 33.3 | 33.7 | 1.22 |
| 4 | 39.1 | 39.4 | 35.9 | 36.5 | 1.31 |
| 5 | 42.3 | 42.6 | 38.5 | 39.1 | 1.40 |
| 6 | 45.5 | 45.8 | 41.1 | 41.7 | 1.48 |
| 7 | 48.7 | 49.0 | 43.7 | 44.3 | 1.56 |
| 8 | 52.0 | 52.4 | 46.3 | 47.0 | 1.65 |
| 9 | 55.4 | 55.8 | 49.1 | 50.0 | 1.75 |
| 10 | 58.8 | 59.2 | 52.1 | 52.9 | 1.84 |
| 11 | 62.3 | 62.7 | 55.1 | 56.0 | 1.93 |
| 12 | 65.9 | 66.4 | 58.2 | 59.1 | 2.02 |
| 13 | 69.6 | 70.1 | 61.4 | 62.3 | 2.12 |
| 14 | 73.4 | 73.9 | 64.7 | 65.6 | 2.22 |
| 15 | 77.2 | 77.7 | 68.0 | 69.1 | 2.32 |
| 16 | 81.1 | 81.7 | 71.5 | 72.6 | 2.43 |
| 17 | 85.1 | 85.7 | 75.0 | 76.1 | 2.54 |
| 18 | 89.2 | 89.8 | 78.6 | 79.7 | 2.64 |
| 19 | 93.3 | 94.0 | 82.1 | 83.6 | 2.76 |
| 20 | 97.5 | 98.2 | 85.8 | 87.4 | 2.87 |
| 21 | 102 | 102 | 89.5 | 91.3 | 2.98 |
| 22 | 106 | 107 | 93.3 | 95.1 | 3.10 |
| 23 | 110 | 111 | 97.1 | 98.9 | 3.22 |
| 24 | 115 | 115 | 101 | 103 | 3.34 |
| 25 | 119 | 120 | 105 | 107 | 3.46 |
| 26 | 123 | 124 | 109 | 111 | 3.58 |
| 27 | 128 | 129 | 112 | 115 | 3.70 |
| 28 | 132 | 133 | 116 | 119 | 3.82 |
| 29 | 137 | 138 | 120 | 123 | 3.95 |
| 30 | 141 | 142 | 124 | 127 | 4.07 |
| 31 | 145 | 146 | 128 | 131 | 4.20 |
| 32 | 150 | 150 | 132 | 135 | 4.32 |
| 33 | 154 | 155 | 136 | 139 | 4.45 |
| 34 | 159 | 160 | 140 | 143 | 4.57 |



## Viscosity Conversion Table

| kinematic viscosity $mm^2/s$ | Saybolt universal viscosity SUS(second\) | | Redwood Viscosity R (second) | | Engler viscosity E(˚C) |
|---|---|---|---|---|---|
| | 100˚C | 210˚C | 50˚C | 100˚C | |
| 35 | 163 | 164 | 144 | 147 | 4.70 |
| 36 | 168 | 170 | 148 | 151 | 4.83 |
| 37 | 172 | 173 | 153 | 155 | 4.96 |
| 38 | 177 | 178 | 156 | 159 | 5.08 |
| 39 | 181 | 183 | 160 | 164 | 5.21 |
| 40 | 186 | 187 | 164 | 168 | 5.34 |
| 41 | 190 | 192 | 168 | 172 | 5.47 |
| 42 | 195 | 196 | 172 | 176 | 5.59 |
| 43 | 199 | 201 | 176 | 180 | 5.72 |
| 44 | 204 | 205 | 180 | 185 | 5.85 |
| 45 | 208 | 210 | 184 | 189 | 5.98 |
| 46 | 213 | 215 | 188 | 193 | 6.11 |
| 47 | 218 | 219 | 193 | 197 | 6.24 |
| 48 | 222 | 224 | 197 | 202 | 6.37 |
| 49 | 227 | 228 | 201 | 206 | 6.50 |
| 50 | 231 | 233 | 205 | 210 | 6.63 |
| 55 | 254 | 256 | 225 | 231 | 7.24 |
| 60 | 277 | 279 | 245 | 252 | 7.90 |
| 65 | 300 | 302 | 266 | 273 | 8.55 |
| 70 | 323 | 326 | 286 | 294 | 9.21 |
| 75 | 346 | 349 | 306 | 315 | 9.89 |
| 80 | 371 | 373 | 326 | 336 | 10.5 |
| 85 | 394 | 397 | 347 | 357 | 11.2 |
| 90 | 417 | 420 | 367 | 378 | 11.8 |
| 95 | 440 | 443 | 387 | 399 | 12.5 |
| 100 | 464 | 467 | 408 | 420 | 13.2 |
| 120 | 556 | 560 | 490 | 504 | 15.8 |
| 140 | 649 | 653 | 571 | 588 | 18.4 |
| 160 | 742 | 747 | 653 | 672 | 21.1 |
| 180 | 834 | 840 | 734 | 575 | 23.7 |
| 200 | 927 | 933 | 816 | 841 | 26.3 |
| 250 | 1159 | 1167 | 1020 | 1051 | 32.9 |
| 300 | 1391 | 1400 | 1224 | 1241 | 39.5 |

## Roockwell, Vickers and Brinell Hardness Conversion Table

| Rockwell Hardness | | Superficial Rockwell | | | Vickers Hardness | Brinell hardness | |
|---|---|---|---|---|---|---|---|
| HRC | HRA | HR15N | HR30N | HR45N | HV | HB30D | $d_{10}$、$2d_{10}$ $4d_{2.5}$ mm |
| 70.0 | 86.6 | | | | 1037 | | |
| 69.5 | 86.3 | | | | 1017 | | |
| 69.0 | 86.1 | | | | 997 | | |
| 68.5 | 85.8 | | | | 978 | | |
| 68.0 | 85.5 | | | | 959 | | |
| 67.5 | 85.2 | | | | 941 | | |
| 67.0 | 85.0 | | | | 923 | | |
| 66.5 | 84.7 | | | | 906 | | |
| 66.0 | 84.4 | | | | 889 | | |
| 65.5 | 84.1 | | | | 872 | | |
| 65.0 | 83.9 | 92.2 | 81.3 | 71.7 | 856 | | |
| 64.5 | 83.6 | 92.1 | 81.0 | 71.2 | 840 | | |
| 64.0 | 83.3 | 91.9 | 80.6 | 70.6 | 825 | | |
| 63.5 | 83.1 | 91.8 | 80.2 | 70.1 | 810 | | |
| 63.0 | 82.8 | 91.7 | 79.8 | 69.5 | 795 | | |
| 62.5 | 82.5 | 91.5 | 79.4 | 69.0 | 780 | | |
| 62.0 | 82.2 | 91.4 | 79.0 | 68.4 | 766 | | |
| 61.5 | 82.0 | 91.2 | 78.6 | 67.9 | 752 | | |
| 61.0 | 81.7 | 91.0 | 78.1 | 67.3 | 739 | | |
| 60.5 | 81.4 | 90.8 | 77.7 | 66.8 | 726 | | |
| 60.0 | 81.2 | 90.6 | 77.3 | 66.2 | 713 | | |
| 59.5 | 80.9 | 90.4 | 76.9 | 65.6 | 700 | | |
| 59.0 | 80.6 | 90.2 | 76.5 | 65.1 | 688 | | |
| 58.5 | 80.3 | 90.0 | 76.1 | 64.5 | 676 | | |
| 58.0 | 80.1 | 89.8 | 75.6 | 63.9 | 664 | | |
| 57.5 | 79.8 | 89.6 | 75.2 | 63.4 | 653 | | |
| 57.0 | 79.5 | 89.4 | 74.8 | 62.8 | 642 | | |
| 56.5 | 79.3 | 89.1 | 74.4 | 62.2 | 631 | | |
| 56.0 | 79.0 | 88.9 | 73.9 | 61.7 | 620 | | |
| 55.5 | 78.7 | 88.6 | 73.5 | 61.1 | 609 | | |
| 55.0 | 78.5 | 88.4 | 73.1 | 60.5 | 599 | | |
| 54.5 | 78.2 | 88.1 | 72.6 | 59.9 | 589 | | |
| 54.0 | 77.9 | 87.9 | 72.2 | 59.4 | 579 | | |
| 53.5 | 77.7 | 87.6 | 71.8 | 58.8 | 570 | | |



Roockwell, Vickers and Brinell Hardness Conversion Table

| Rockwell Hardness | | Superficial Rockwell | | | Vickers Hardness | Brinell hardness | |
|---|---|---|---|---|---|---|---|
| HRC | HRA | HR15N | HR30N | HR45N | HV | HB30D | $d_{10}$、$2d_{10}$ $4d_{2.5}$ mm |
| 53.0 | 77.4 | 87.4 | 71.3 | 58.2 | 561 | | |
| 52.5 | 77.1 | 87.1 | 70.9 | 57.6 | 551 | | |
| 52.0 | 76.9 | 86.8 | 70.4 | 57.1 | 543 | | |
| 51.5 | 76.6 | 86.6 | 70.0 | 56.5 | 534 | | |
| 51.0 | 76.3 | 86.3 | 69.5 | 55.9 | 525 | 501 | 2.73 |
| 50.5 | 76.1 | 86.0 | 69.1 | 55.3 | 517 | 494 | 2.75 |
| 50.0 | 75.8 | 85.7 | 68.6 | 54.7 | 509 | 488 | 2.77 |
| 49.5 | 75.5 | 85.5 | 68.2 | 54.2 | 501 | 481 | 2.79 |
| 49.0 | 75.3 | 85.2 | 67.7 | 53.6 | 493 | 474 | 2.81 |
| 48.5 | 75.0 | 84.9 | 67.3 | 53.0 | 485 | 468 | 2.83 |
| 48.0 | 74.7 | 84.6 | 66.8 | 52.4 | 478 | 461 | 2.85 |
| 47.5 | 74.5 | 84.3 | 66.4 | 51.8 | 470 | 455 | 2.87 |
| 47.0 | 74.2 | 84.0 | 65.9 | 51.2 | 463 | 449 | 2.89 |
| 46.5 | 73.9 | 83.7 | 65.5 | 50.7 | 456 | 442 | 2.91 |
| 46.0 | 73.7 | 83.5 | 65.0 | 50.1 | 449 | 436 | 2.93 |
| 45.5 | 73.4 | 83.2 | 64.6 | 49.5 | 443 | 430 | 2.95 |
| 45.0 | 73.2 | 82.9 | 64.1 | 48.9 | 436 | 424 | 2.97 |
| 44.5 | 72.9 | 82.6 | 63.6 | 48.3 | 429 | 418 | 2.99 |
| 44.0 | 72.6 | 82.3 | 63.2 | 47.7 | 423 | 413 | 3.01 |
| 43.5 | 72.4 | 82.0 | 62.7 | 47.1 | 417 | 407 | 3.03 |
| 43.0 | 72.1 | 81.7 | 62.3 | 46.5 | 411 | 401 | 3.05 |
| 42.5 | 71.8 | 81.4 | 61.8 | 45.9 | 405 | 396 | 3.07 |
| 42.0 | 71.6 | 81.1 | 61.3 | 45.4 | 399 | 391 | 3.09 |
| 41.5 | 71.3 | 80.8 | 60.9 | 44.8 | 393 | 385 | 3.11 |
| 41.0 | 71.1 | 80.5 | 60.4 | 44.2 | 388 | 380 | 3.13 |
| 40.5 | 70.8 | 80.2 | 60.0 | 43.6 | 382 | 375 | 3.15 |
| 40.0 | 70.5 | 79.9 | 59.5 | 43.0 | 377 | 370 | 3.17 |
| 39.5 | 70.3 | 79.6 | 59.0 | 42.4 | 372 | 365 | 3.19 |
| 39.0 | 70.0 | 79.3 | 58.6 | 41.8 | 367 | 360 | 3.21 |
| 38.5 | | 79.0 | 58.1 | 41.2 | 362 | 355 | 3.24 |
| 38.0 | | 78.7 | 57.6 | 40.6 | 357 | 350 | 3.26 |
| 37.5 | | 78.4 | 57.2 | 40.0 | 352 | 345 | 3.28 |
| 37.0 | | 78.1 | 56.7 | 39.4 | 347 | 341 | 3.30 |
| 36.5 | | 77.8 | 56.2 | 38.8 | 342 | 336 | 3.32 |
| 36.0 | | 77.5 | 55.8 | 38.2 | 338 | 332 | 3.34 |

## Roockwell, Vickers and Brinell Hardness Conversion Table

| Rockwell Hardness | | Superficial Rockwell | | | Vickers Hardness | Brinell hardness | |
|---|---|---|---|---|---|---|---|
| HRC | HRA | HR15N | HR30N | HR45N | HV | HB30D | $d_{10}$、$2d_{10}$ $4d_{2.5}$ mm |
| 35.5 | | 77.2 | 55.3 | 37.6 | 333 | 327 | 3.37 |
| 35.0 | | 77.0 | 54.8 | 37.0 | 329 | 323 | 3.39 |
| 34.5 | | 76.7 | 54.4 | 36.5 | 324 | 318 | 3.41 |
| 34.0 | | 76.4 | 53.9 | 35.9 | 320 | 314 | 3.43 |
| 33.5 | | 76.1 | 53.4 | 35.3 | 316 | 310 | 3.46 |
| 33.0 | | 75.8 | 53.0 | 34.7 | 312 | 306 | 3.48 |
| 32.5 | | 75.5 | 52.5 | 34.1 | 308 | 302 | 3.50 |
| 32.0 | | 75.2 | 52.0 | 33.5 | 304 | 298 | 3.52 |
| 31.5 | | 74.9 | 51.6 | 32.9 | 300 | 294 | 3.54 |
| 31.0 | | 74.7 | 51.1 | 32.3 | 296 | 291 | 3.56 |
| 30.5 | | 74.4 | 50.6 | 31.7 | 292 | 287 | 3.59 |
| 30.0 | | 74.1 | 50.2 | 31.1 | 289 | 283 | 3.61 |
| 29.5 | | 73.8 | 49.7 | 30.5 | 285 | 280 | 3.63 |
| 29.0 | | 73.5 | 49.2 | 29.9 | 281 | 276 | 3.65 |
| 28.5 | | 73.3 | 48.7 | 29.3 | 278 | 273 | 3.67 |
| 28.0 | | 73.0 | 48.3 | 28.7 | 274 | 269 | 3.70 |
| 27.5 | | 72.7 | 47.8 | 28.1 | 271 | 266 | 3.72 |
| 27.0 | | 72.4 | 47.3 | 27.5 | 268 | 263 | 3.74 |
| 26.5 | | 72.2 | 46.9 | 26.9 | 264 | 260 | 3.76 |
| 26.0 | | 71.9 | 46.4 | 26.3 | 261 | 257 | 3.78 |
| 25.5 | | 71.6 | 45.9 | 25.7 | 258 | 254 | 3.80 |
| 25.0 | | 71.4 | 45.5 | 25.1 | 255 | 251 | 3.83 |
| 24.5 | | 71.1 | 45.0 | 24.5 | 252 | 248 | 3.85 |
| 24.0 | | 70.8 | 44.5 | 23.9 | 249 | 245 | 3.87 |
| 23.5 | | 70.6 | 44.0 | 23.3 | 246 | 242 | 3.89 |
| 23.0 | | 70.3 | 43.6 | 22.7 | 243 | 240 | 3.91 |
| 22.5 | | 70.0 | 43.1 | 22.1 | 240 | 237 | 3.93 |
| 22.0 | | 69.8 | 42.6 | 21.5 | 237 | 234 | 3.95 |
| 21.5 | | 69.5 | 42.2 | 21.0 | 234 | 232 | 3.97 |
| 21.0 | | 69.3 | 41.7 | 20.4 | 231 | 229 | 4.00 |
| 20.5 | | 69.0 | 41.2 | 19.8 | 229 | 227 | 4.02 |
| 20.0 | | 68.8 | 40.7 | 19.2 | 226 | 225 | 4.03 |
| 19.5 | | 68.5 | 40.3 | 18.6 | 223 | 222 | 4.05 |
| 19.0 | | 68.3 | 39.8 | 18.0 | 221 | 220 | 4.07 |
| 18.5 | | 68.0 | 39.3 | 17.4 | 218 | 218 | 4.09 |
| 18.0 | | 67.8 | 38.9 | 16.8 | 216 | 216 | 4.11 |
| 17.5 | | 67.6 | 38.4 | 16.2 | 214 | 214 | 4.13 |
| 17.0 | | 67.3 | 37.9 | 15.6 | 211 | 211 | 4.15 |

## Conversion Table of Leeb and Rockwell Hardness

| Leeb | Rockwell | Leeb | Rockwell | Leeb | Rockwell | Leeb | Rockwell |
|---|---|---|---|---|---|---|---|
| HLD | HRC | HLD | HRC | HLD | HRC | HLD | HRC |
| 756 | 54.0 | 788 | 57.5 | 820 | 60.9 | 852 | 64.2 |
| 758 | 54.2 | 790 | 57.7 | 822 | 61.1 | 854 | 64.4 |
| 760 | 54.4 | 792 | 58.0 | 824 | 61.4 | 856 | 64.6 |
| 762 | 54.7 | 794 | 58.2 | 826 | 61.6 | 858 | 64.8 |
| 764 | 54.9 | 796 | 58.4 | 828 | 61.8 | 860 | 65.0 |
| 766 | 55.1 | 798 | 58.6 | 830 | 62.0 | 862 | 65.3 |
| 768 | 55.3 | 800 | 58.8 | 832 | 62.2 | 864 | 65.5 |
| 770 | 55.6 | 802 | 59.0 | 834 | 62.4 | 866 | 65.7 |
| 772 | 55.8 | 804 | 59.2 | 836 | 62.6 | 868 | 65.9 |
| 774 | 56.0 | 806 | 59.5 | 838 | 62.8 | 870 | 66.1 |
| 776 | 56.2 | 808 | 59.7 | 840 | 63.0 | 872 | 66.3 |
| 778 | 56.4 | 810 | 59.9 | 842 | 63.2 | 874 | 66.5 |
| 780 | 56.7 | 812 | 60.1 | 844 | 63.4 | 876 | 66.7 |
| 782 | 56.9 | 814 | 60.3 | 846 | 63.6 | 878 | 66.9 |
| 784 | 57.1 | 816 | 60.5 | 848 | 63.8 | 880 | 67.1 |
| 786 | 57.3 | 818 | 60.7 | 850 | 64.0 | 882 | 67.3 |

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