FAG




# Bearing Housings

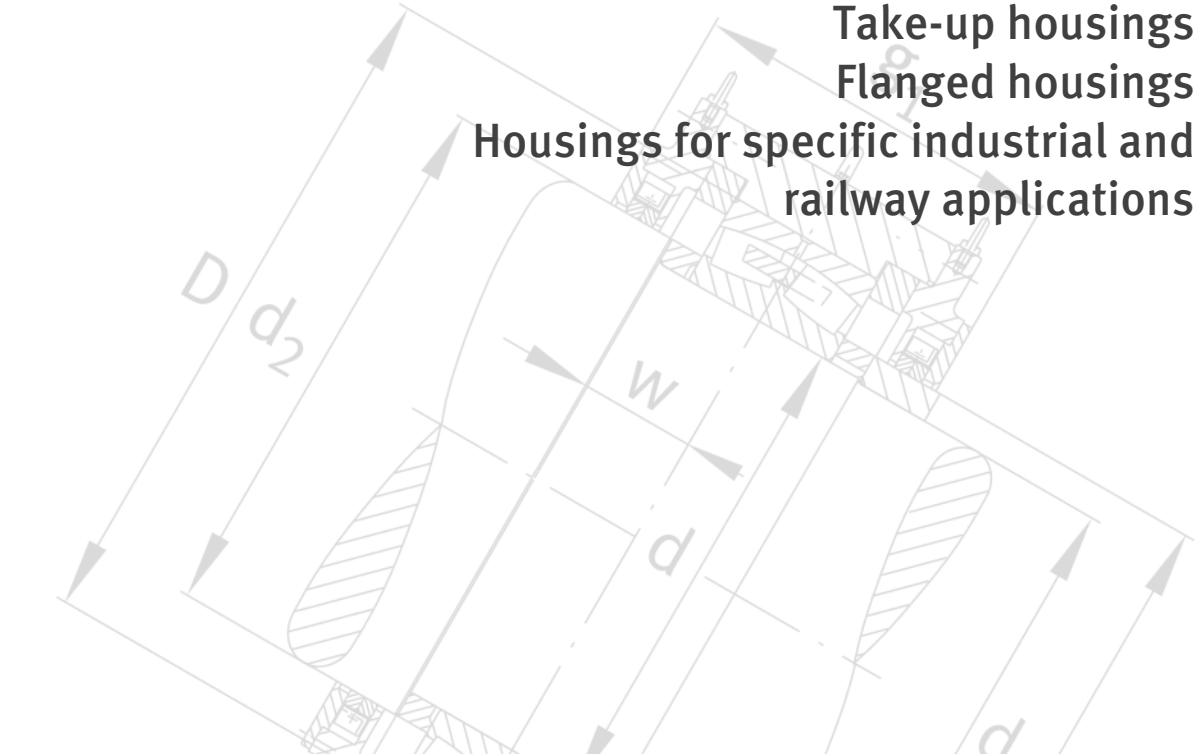
Split plummer block housings
Unsplit plummer block housings
Take-up housings
Flanged housings
Housings for specific industrial and railway applications

SCHAEFFLER




# Bearing Housings

## Split plummer block housings
## Unsplit plummer block housings
## Take-up housings
## Flanged housings
## Housings for specific industrial and railway applications



All data have been prepared with a great deal of care and checked for their accuracy. However, no liability can be assumed for any incorrect or incomplete data. We reserve the right to make technical modifications.

© Schaeffler Technologies AG & Co. KG
Issued: 2015, November

Reproduction in whole or in part without our authorisation is prohibited.

# Foreword

## Schaeffler Technologies

Schaeffler Technologies with its brands INA and FAG is a leading worldwide supplier of rolling bearings, spherical plain bearings, plain bearings, linear products, accessories specific to bearings and comprehensive maintenance products and services. Schaeffler has approximately 40 000 catalogue products manufactured as standard, providing an extremely wide portfolio that gives secure coverage of applications from 60 industrial market sectors.

The central factors responsible for this success are our outstanding strength in innovation, our global focus on local customer proximity, highly developed manufacturing methods, extremely high quality standards in all processes and our ability to transform specific customer requirements quickly and accurately into cost-effective solutions. Against this background of expertise, knowledge and experience together with our wide range of catalogue items, we see ourselves as a high performance, customer focussed partner.

## Research and development

As a company looking to the future, we are especially active in the field of research and development. The key areas in this respect include not only research into fundamental principles, materials technology, tribology and calculation but also extensive inspection and test methods as well as activities to optimise manufacturing technology. This is oriented towards ensuring the continuous development, improvement and application of our products in the long term.

We carry out research and development on a global basis. Our development centres are linked with each other worldwide and are thus in a position to exchange current information on a very short timescale as well as access and communicate the most recent data. This ensures that a uniform level of knowledge and information is available worldwide.

In addition to continued development of standard products, we work closely in research and development activities with our customers where specific customer solutions are required. They can thus benefit from the best product for their application, with the maximum possible performance capacity at a cost-effective price.

# Foreword

## Worldwide presence

Through a closely knit network of development and manufacturing sites, sales companies and an international distribution structure, we are represented throughout the world. This global presence ensures effective linkage between the major markets in Europe, India, South East Asia/Pacific Region, East Asia, North and South America. As a result, we have an on-site presence with service and technical advice in close proximity to the customer.

We take orders from throughout the world and make deliveries worldwide too. Furthermore, we support our customers worldwide in resolving their bearing arrangement requirements, respond to technical queries and develop specific bearing arrangement solutions in local partnership with our customers.

## Together we move the world

For us, technical progress means never standing still. In partnership with you, we are continually working on new solutions so that your vision and our technical ideas can continue to become a reality, to your benefit.

With our products and our knowledge, we can together continue to fulfil the challenges of your market in relation to rolling bearing arrangements. To this end, this catalogue is an important instrument.

## Housings catalogue GK 1

Catalogue GK 1, Bearing Housings, describes the range of standard housings and gives essential information on housings for specific industrial and railway applications.

The catalogue contains all the information necessary for the selection of standard housings. The suitable housing can be selected and configured for a wide variety of different applications, for example in relation to the required bearing arrangement type, lubrication or housing seals. Through the allocation of the suitable bearing to each housing, extensive geometrical data and a large amount of other information, this catalogue is a comprehensive tool for providing information and facilitating advisory work.

## Standard housings

The standard housings comprise split and unsplit plummer block housings, take-up housings and flanged housings.

In the case of split plummer block housings, the upper section of the housing can be removed. This gives significantly simpler mounting and maintenance. Unsplit plummer block housings are used where the bearing arrangement is subjected to very high loads.

Take-up housings were developed specifically for tensioner drum bearing arrangements in belt conveyor plant. There is a yoke-shaped drawbar eye for attachment to the tensioning device.

Flanged housings have a flange perpendicular to the shaft axis and thus offer the ideal adjacent construction for numerous machines and pieces of equipment where the use of plummer block housings would be too demanding.

## Special housings

Special housings are used in particularly challenging applications where not all the requirements can be fulfilled by the use of standard housings. Apart from specific industrial applications, these are principally applications from the railway sector.

Special housings are developed in close cooperation and consultation with the customer. Schaeffler uses its comprehensive know-how of rolling bearing technology in order to ensure that every housing is optimally matched to the specific application.

This catalogue contains selected examples giving an insight into the diverse areas of application and possibilities of housings for specific industrial and railway applications.

# Foreword

## Current level of technology

The data in the catalogue represent the current level of technology and manufacture as of November, 2015.

Any data in earlier publications that do not correspond to the data in this catalogue are therefore invalid.

## Definition of the Attention symbol

This catalogue predominantly gives descriptions of standard housings. Since these are used in numerous applications, we cannot make a judgement as to whether any malfunctions will cause harm to persons or property.

### Follow instructions

It is always and fundamentally the responsibility of the designer and user to ensure that all specifications are observed and that all necessary information is communicated to the end user. This applies in particular to applications in which product failure and malfunction may constitute a hazard to human beings.



If guidelines marked with the Attention symbol are not observed, damage or malfunctions in the product or the adjacent construction may occur.

## ***medias®*** *professional* **electronic information system**

***medias®*** *professional*, the proven selection and information system, presents the INA and FAG catalogue products in electronic format. As with the printed catalogue, this gives our customers product information on both brands in a single data source. This saves time and gives easier handling.

***medias®*** *professional* is available online in several languages, is easy to navigate and is particularly clear thank to the use of numerous pictures, diagrams and models. There are also highly representative application examples, classified by market sector.

Datasheets on the bearings and bearing housings can be generated as PDF files. It includes a lubricant database and also the web2CAD link for direct download and inclusion of 3D models.

***medias®*** *professional* focusses on the individual bearing. The complete shaft can be simulated and any influences on the bearings arising from its deformation can be determined using the calculation program BEARINX. This program can also be made available to direct customers as BEARINX-online via the Internet (for conditions, see the INA/FAG homepage).



**http://medias.schaeffler.com**

## Selection wizard for bearing housings in ***medias***® *professional*

The selection wizard for bearing housings in ***medias***® *professional* gives comprehensive assistance in the selection of housings and housing units. It takes account of the environmental conditions and the requirements placed on the bearing arrangement as well as the characteristics of the housings and the bearings suitable for the housings. Once the specified data has been inputted, the software generates detailed lists of results that also contain information on further accessories.

In conclusion, ***medias***® *professional* is a comprehensive, reliable system to help you help yourself answer many questions on rolling bearing technology by electronic means, quickly and at any location.

**http://bit.ly/HousingSelectionEN**

## ***medias***® interchange

***medias***® interchange is available online and assists in the selection process where rolling bearings or housings from other manufacturers are to be replaced by products of the INA and FAG brands.

If a rolling bearing and housing designation is entered in ***medias***® interchange, this will indicate the manufacturer and INA or FAG designations. A traffic light system will quickly indicate whether and to what extent the INA or FAG part is interchangeable. Green indicates fully interchangeable, yellow indicates conditional interchangeability and red indicates non-interchangeable.

**http://bit.ly/InterchangeEN**

## Other technical publications

This catalogue contains split and unsplit plummer block housings as well as take-up housings and flanged housings. In addition, it also gives an overview of housings for specific industrial and railway applications, on which detailed information is provided in a series of other technical publications.

Furthermore, we develop and manufacture many other products and systems that are of significant interest in terms of technical progress and cost-effectiveness for rotary and linear bearing arrangements as well as for the automotive sector. These are covered in separate technical publications that can be obtained upon request.

**www.medien.schaeffler.com**

# Foreword

## Catalogue SG 1 for Insert Bearings and Housing Units

In addition to the bearing housings described in Catalogue GK 1, which are predominantly for spherical roller bearings, barrel roller bearings and self-aligning ball bearings with a tapered or cylindrical bore, Schaeffler also offers a wide range of housing units with insert bearings. The insert bearings are based on single row deep groove ball bearings.

Insert bearings and housing units are robust, ready-to-fit machine elements for the design of economical bearing arrangements. These products are available in many different series, have proven effective over many years and predominantly comprise a housing fitted with an insert bearing. The housing bore and the bearing outer ring have a spherical profile and are matched to each other. This allows the bearing ring in the housing to adapt to static angular misalignment of the shaft.

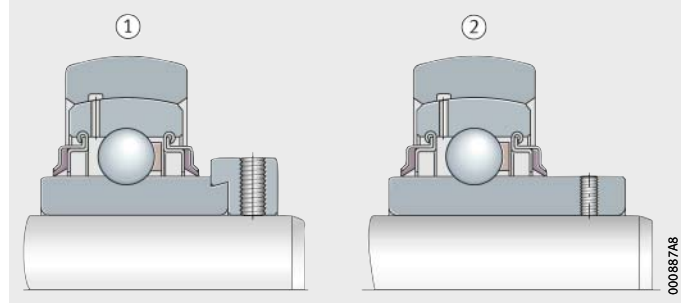
Due to their special method of location, principally by means of an eccentric locking collar or grub screws, the insert bearings can be easily located on the shaft, *Figure 1* and *Figure 2*. They are particularly easy to fit when they are used in combination with drawn shafts. The insert bearings are fitted with multi-piece seals that effectively protect the rolling element set against contamination and moisture, even under difficult and critical operating conditions.

**Further information**

- The complete catalogue range can be found in Catalogue SG 1, Insert Bearings and Housing Units.
- Download and ordering: http://medien.schaeffler.de.

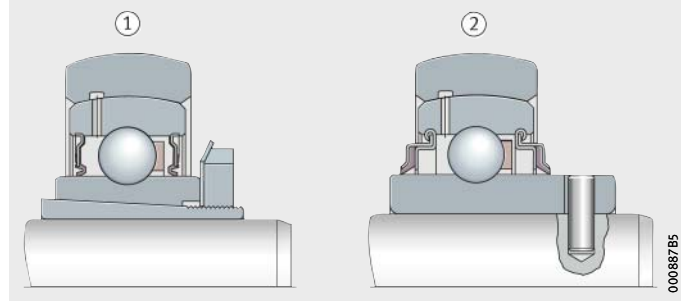
## Insert bearings

The outer rings of the insert bearings have a spherical or cylindrical outside surface. The insert bearings are available with a metric or inch size bore. Black Series insert bearings with a Durotect B coating have basic anti-corrosion protection. Corrosion-resistant insert bearings are available in a high-grade steel version or with the Corrotect coating.




① Eccentric locking collar
② Grub screws in inner ring

*Figure 1*
Location variants of insert bearings




① Adapter sleeve and locknut
② Drive slot

*Figure 2*
Location variants of insert bearings

## Housing units

Housing units are available as plummer block, flanged and take-up housing units in numerous different designs. The units are ready-to-fit and comprise cast iron or sheet steel housings in which insert bearings are integrated, *Figure 3* to *Figure 6*.

**PASE**

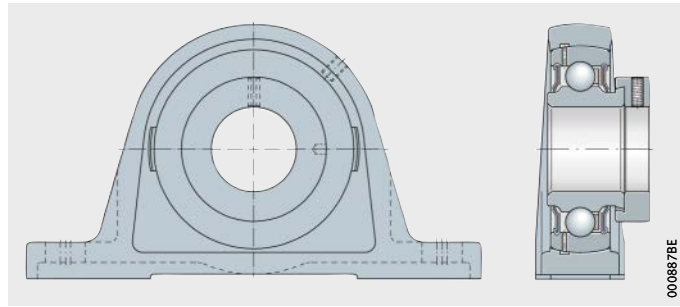



*Figure 3*
Plummer block housing unit with cast iron housing

**PCJT**

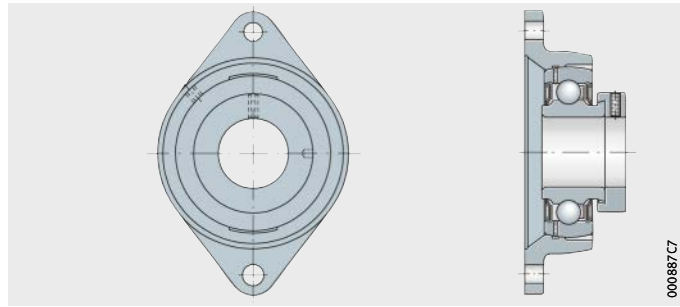



*Figure 4*
Flanged housing unit with cast iron housing

**PB**

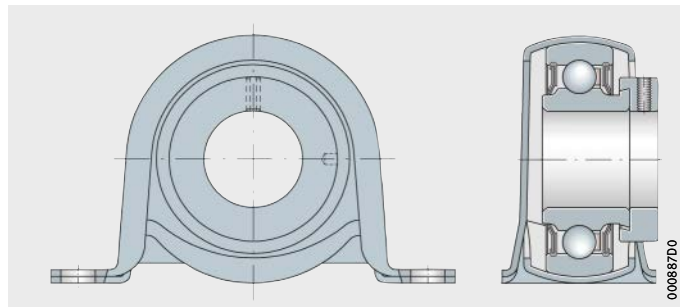



*Figure 5*
Plummer block housing unit with sheet steel housing

**GRA**

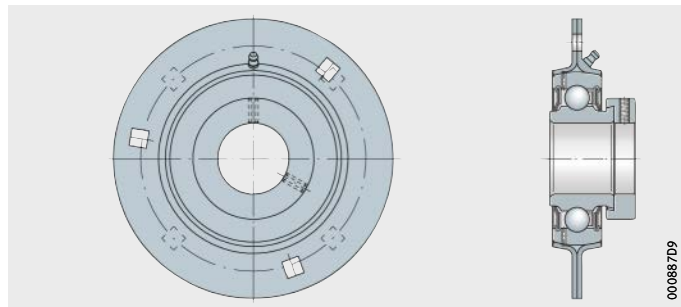



*Figure 6*
Flanged bearing unit with sheet steel housing

# Contents


| | Page |
|---|---|
| Product index | 12 |
| Tab index | 17 |
| Technical principles | 18 |
| Split plummer block housings | 49 |
| Split plummer block housings SNV | 52 |
| Split plummer block housings S30 | 130 |
| Split plummer block housings SNS | 146 |
| Split plummer block housings RLE | 214 |
| Split plummer block housings KPG, KPGZ | 228 |
| Split plummer block housings LOE | 246 |
| Unsplit plummer block housings | 265 |
| Plummer block housing units VRE3 | 268 |
| Unsplit plummer block housings BNM | 290 |
| Unsplit plummer block housings BND | 300 |
| Take-up housings SPA | 334 |
| Flanged housings | 353 |
| Flanged housings F112 | 356 |
| Flanged housings F5 | 364 |
| Housings for specific industrial and railway applications | 379 |
| Housings for special industrial applications | 380 |
| Housings for railway applications | 390 |
| Mounting and maintenance | 405 |
| Addresses | 430 |

# Product index


| | | Page |
|---|---|---|
| **BDK** | Cover, for split plummer block housings SNS, Bolt-on design | 149 |
| **BND..-AF** | Plummer block housing, unsplit, closed on one side, with cover, locating bearing design | 302 |
| **BND..-AL** | Plummer block housing, unsplit, closed on one side, with cover, non-locating bearing design | 302 |
| **BND..-BF** | Plummer block housing, unsplit, for through shaft, with cover, locating bearing design | 302 |
| **BND..-BL** | Plummer block housing, unsplit, for through shaft, with cover, non-locating bearing design | 302 |
| **BNM..-AF** | Plummer block housing, unsplit, closed on one side, with cover, locating bearing design | 292 |
| **BNM..-AL** | Plummer block housing, unsplit, closed on one side, with cover, non-locating bearing design | 292 |
| **BNM..-BF** | Plummer block housing, unsplit, for through shaft, locating bearing design | 292 |
| **BNM..-BL** | Plummer block housing, unsplit, for through shaft, non-locating bearing design | 292 |
| **BTAC** | Bolt-on seal, for split plummer block housings SNS | 149 |
| **DH** | Double lip seal, for split plummer block housings SNV | 55 |
| **DHV** | V ring seal, for split plummer block housings SNV | 55 |
| **DK** | Cover, for split plummer block housings S30 | 132 |
| **DKV** | Cover, plastic, for split plummer block housings SNV | 55 |
| **DKVT** | Cover, steel and fluoro rubber FKM, for split plummer block housings SNV | 55 |

| | | Page |
|---|---|---|
| **F5..-A** | Flanged housing, closed on one side, with cover | 366 |
| **F5..-B** | Flanged housing, for continuous shaft | 366 |
| **F112** | Flanged housing | 358 |
| **FE** | Locating ring, for flanged housings F5 | 367 |
| **FRM** | Locating ring, for split plummer block housings SNV | 55 |
| **FRM** | Locating ring, for split plummer block housings S30 | 132 |
| **FRM** | Locating ring, for flanged housings F5 | 367 |
| **FSV** | Felt seal, for split plummer block housings SNV | 55 |
| **KPG** | Plummer block housing, split, with high-pressure packing, for bearings with tapered bore | 230 |
| **KPGZ** | Plummer block housing, split, with high-pressure packing, for bearings with cylindrical bore | 230 |
| **LOE..-AF** | Plummer block housing, split, closed on one side, with cover, locating bearing design | 248 |
| **LOE..-AL** | Plummer block housing, split, closed on one side, with cover, non-locating bearing design | 248 |
| **LOE..-BF** | Plummer block housing, split, for through shaft, locating bearing design | 248 |
| **LOE..-BL** | Plummer block housing, split, for through shaft, non-locating bearing design | 248 |
| **NDK** | Cover, for split plummer block housings SNS | 149 |
| **NFR** | Locating ring, for split plummer block housings SNS | 149 |
| **NTC** | Taconite seal, for split plummer block housings SNS | 149 |
| **NTS** | Labyrinth seal, for split plummer block housings SNS | 149 |
| **NTSG** | Labyrinth seal, split, for split plummer block housings SNS | 149 |

# Product index


| | | Page |
|---|---|---|
| **RLE..-AF** | Plummer block housing, split, closed on one side, with cover, locating bearing design | 216 |
| **RLE..-AL** | Plummer block housing, split, closed on one side, with cover, non-locating bearing design | 216 |
| **RLE..-BF** | Plummer block housing, split, for through shaft, locating bearing design | 216 |
| **RLE..-BL** | Plummer block housing, split, for through shaft, non-locating bearing design | 216 |
| **S30..-N-FZ-AB** | Plummer block housing, split | 132 |
| **SNV** | Plummer block housing, split | 54 |
| **SNS..-B** | Plummer block housing, split, for Bolt-on seal | 148 |
| **SNS..-H** | Plummer block housing, split, main design for labyrinth and Taconite seal | 148 |
| **SNS..-Z** | Plummer block housing, split, additional design for labyrinth and Taconite seal | 148 |
| **SPA..-AF** | Take-up housing, unsplit, closed on one side, with cover, locating bearing design | 336 |
| **SPA..-AL** | Plummer block housing, unsplit, closed on one side, with cover, non-locating bearing design | 336 |
| **SPA..-BF** | Take-up housing, unsplit, for through shaft, locating bearing design | 336 |
| **SPA..-BL** | Take-up housing, unsplit, for through shaft, non-locating bearing design | 336 |
| **TCV** | Taconite seal, for split plummer block housings SNV | 54 |
| **TSV** | Labyrinth seal, for split plummer block housings SNV | 54 |
| **VR3** | Plummer block housing, unsplit | 270 |
| **VRE3** | Plummer block housing unit, unsplit, with bearings and shaft | 270 |
| **VRW3** | Shaft, for unsplit plummer block housings VR3 | 270 |

00087869



0008408F







00085602



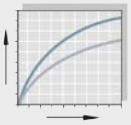








00085846



## Technical principles





## Split plummer block housings

- SNV
- S30
- SNS
- RLE
- KPG, KPGZ
- LOE



## Unsplit plummer block housings

- VRE3
- BNM
- BND



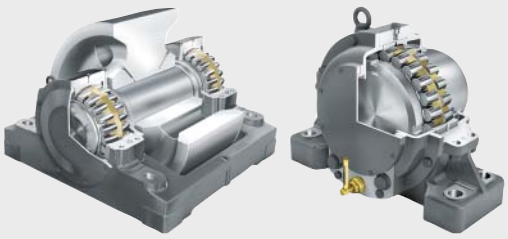
## Take-up housings

- SPA



## Flanged housings

- F112
- F5



## Housings for specific industrial and railway applications

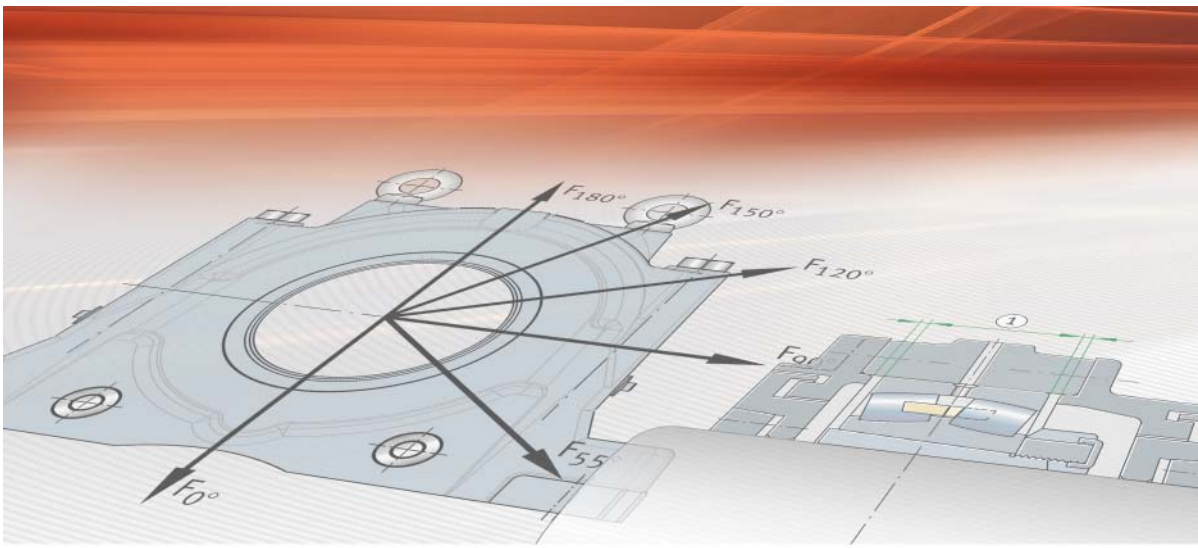


## Mounting and maintenance



## Addresses

FAG




# Technical principles

Standard housings
Materials and anti-corrosion protection
Design of bearing arrangements
Sealing
Lubrication
Load carrying capacity
Mounting and dismounting
Special solutions

# Technical principles


Page

**Standard housings**

Available designs ... 20

Housing concepts ... 22

**Materials and anti-corrosion protection**

Materials ... 23
- Flake graphite cast iron ... 23
- Spheroidal graphite cast iron ... 23
- Cast steel ... 24

Anti-corrosion protection ... 24

**Design of bearing arrangements**

Locating and non-locating bearing arrangements ... 25
- Axial length compensation ... 25
- Transmission of axial forces ... 25
- Locating and non-locating bearing concepts ... 25

**Sealing**

Functions of the sealing arrangement ... 28

Seals ... 28
- Contact seals ... 28
- Non-contact seals ... 29
- Combined seals ... 30

Covers ... 30

**Lubrication**

Principles ... 31
- Functions of the lubricant ... 31
- Housing selection and type of lubrication ... 32

Housings for grease lubrication ... 33
- Initial greasing ... 33
- Relubrication ... 34
- Greases ... 34

Housings for oil lubrication ... 35
- Lubrication methods ... 35
- Oil selection ... 36

**Load carrying capacity**

Load carrying capacity of split and unsplit plummer block housings ... 37
- Rupture loads ... 37
- Permissible load ... 38

**Mounting and dismounting**

Fundamental specifications ... 39
- Cleanliness ... 39
- Eye bolts ... 39

Location of housings ... 41
- Surface quality of the mounting surface ... 41
- Level of mounting surfaces ... 41
- Tightening torques for foot screws ... 42
- Horizontal location ... 43

Location of bearings on the shaft ... 44
- Bearing seats on the shaft ... 44
- Hydraulic method ... 44
- Spherical roller bearings with tapered bore and adapter sleeve ... 44

Maintenance ... 46
- Regular maintenance work ... 46

**Special solutions**

Special solutions for standard housings ... 47
- Special solutions and additional services ... 47
- Special solutions for plummer block housings SNV ... 48

# Standard housings

## Available designs

| Standard housings | | | Split plummer block housings | | |
|---|---|---|---|---|---|
| | | | SNV | S30 | SNS |
| Shaft diameter | over | mm | 20 | 110 | 115 |
| | | *inch* | *3/4* | – | *4 7/16* |
| | incl. | mm | 160 | 150 | 530 |
| | | *inch* | *5 1/2* | – | *19 1/2* |
| **Bearing type** | | | | | |
| Self-aligning ball bearings | | | ● | – | – |
| Spherical roller bearings | | | ● | ● | ● |
| Barrel roller bearings | | | ● | – | – |
| Cylindrical roller bearings | | | – | – | – |
| Deep groove ball bearings | | | ● | – | – |
| Angular contact ball bearings | | | – | – | – |
| Spherical roller bearings, split | | | ● | ● | ● |
| **Mounting method** | | | | | |
| On adapter sleeve | | | ● | ● | ● |
| On withdrawal sleeve | | | – | – | – |
| On adjustment sleeve | | | – | – | – |
| On cylindrical seat | | | ● | ● | ● |
| **Lubrication** | | | | | |
| Grease | | | ● | ● | ● |
| Oil | | | ● | – | ● |
| **Seal** | | | | | |
| Labyrinth seal | | | ■ | – | ■ |
| Taconite seal | | | ■ | – | ■ |
| Double lip seal | | | ■ | – | – |
| V ring seal | | | ■ | – | – |
| Felt seal | | | ■ | ■ | – |
| Bolt-on seal | | | – | – | ■ |
| Split labyrinth seal | | | – | – | ■ |
| Split Taconite seal | | | – | – | ■ |
| High-pressure packing | | | – | – | – |

● Suitable
■ Available design

| | | | | | Unsplit plummer block housings | | | Take-up housings | Flanged housings | |
|---|---|---|---|---|---|---|---|---|---|---|
| RLE | KPG | KPGZ | LOE | | VRE3 | BNM | BND | SPA | F112 | F5 |
| 180 | 470 | 500 | 50 | | 25 | 150 | 60 | 50 | 20 | 20 |
| – | – | – | – | | – | – | – | – | – | – |
| 500 | 1250 | 1320 | 240 | | 120 | 400 | 420 | 400 | 60 | 100 |
| – | – | – | – | | – | – | – | – | – | – |
| | | | | | | | | | | |
| – | – | – | – | | – | – | – | – | ● | ● |
| ● | ● | ● | ● | | – | ● | ● | ● | – | ● |
| – | – | – | – | | – | – | – | – | – | ● |
| – | – | – | – | | ● | – | – | – | – | – |
| – | – | – | – | | ● | – | – | – | – | – |
| – | – | – | – | | ● | – | – | – | – | – |
| – | ● | ● | – | | | – | – | – | – | – |
| | | | | | | | | | | |
| – | – | – | ● | | – | – | ● | ● | – | ● |
| ● | – | – | – | | – | ● | – | – | – | – |
| – | ● | – | – | | – | – | – | – | – | – |
| ● | – | ● | ● | | ● | – | ● | – | ● | – |
| | | | | | | | | | | |
| ● | ● | ● | – | | ● | ● | ● | ● | ● | ● |
| – | – | – | ● | | – | – | – | – | – | – |
| | | | | | | | | | | |
| ■ | – | – | ■ | | – | ■ | ■ | ■ | – | – |
| – | – | – | – | | – | – | ■ | ■ | – | – |
| – | – | – | – | | – | – | – | – | – | – |
| – | – | – | – | | ■ | – | – | – | – | – |
| – | – | – | – | | ■ | – | – | – | ■ | ■ |
| – | – | – | – | | – | – | – | – | – | – |
| – | – | – | – | | – | – | – | – | – | – |
| – | – | – | – | | – | – | – | – | – | – |
| – | ■ | ■ | – | | – | – | – | – | – | – |

# Standard housings

## Housing concepts

FAG standard housings are subdivided, in accordance with their fundamental design, into:

- split plummer block housings
- unsplit plummer block housings
- take-up housings
- flanged housings.

In the case of split plummer block housings, the housing body is split into an upper section and a lower section. This gives significantly simpler mounting and maintenance. The two halves of a housing form a matched pair and must not be interchanged with parts from other housings.

In the case of unsplit plummer block housings, the housing body is a single piece, so the bearing seat is free from parting lines. The housings are used where the bearings are subjected to very high loads.

The unsplit plummer block housings also include plummer block housing units VRE3. These are made available as completely assembled and greased bearing arrangement units comprising a housing, seals, bearings and shaft.

Take-up housings SPA were developed specifically for tensioner drum bearing arrangements in belt conveyor plant. The housings are unsplit. There is a yoke-shaped drawbar eye for attachment to the tensioning device.

Flanged housings have a flange perpendicular to the shaft axis and thus offer the ideal adjacent construction for numerous machines and pieces of equipment where the use of plummer block housings would be too demanding.

## Materials

Depending on the housing series, the standard material used for FAG standard housings is flake graphite cast iron, spheroidal graphite cast iron or cast steel.

The material is generally indicated by a suffix in the housing designation. This indication is omitted in the case of some housings where these are only available in one material variant.

Suffixes:

- L for flake graphite cast iron
- D for spheroidal graphite cast iron
- S for cast steel.

By agreement, housings made from other materials are also available. The material should be selected on the basis of a careful analysis of the application and the associated requirements.

### Flake graphite cast iron

For standard housings made from flake graphite cast iron, cast iron in accordance with DIN EN 1561 is generally used. In these cast materials with a iron/carbon/silicon base, the graphite inclusions are present in lamellar form. Under tensile load, these act as internal notches. The tensile strength of flake graphite cast iron is therefore limited and its ductility is comparatively low. The compressive strength of this alloy is, however, higher than the tensile strength by a factor of 4 and these alloys also have good inherent stability.

Flake graphite cast iron is therefore used in the case of housings with simple requirements. Furthermore, flake graphite cast iron represents the most economical variant of the cast materials available for use in housings.

### Spheroidal graphite cast iron

For standard housings made from spheroidal graphite cast iron, cast iron in accordance with DIN EN 1563 is generally used.
Due to an addition of magnesium or, more rarely cerium or calcium, the graphite inclusions adopt a spheroidal form during casting.
As a result, the tensile strength and ductility are higher than those of the grades with a lamellar graphite form.

Spheroidal graphite cast iron is therefore used in the case of housings with an increased profile of requirements. The costs of spheroidal graphite cast iron are between those for flake graphite cast iron and cast steel.

### Cast steel

For standard housings made from cast steel, steel in accordance with DIN EN 10293 is generally used. Both unalloyed and alloyed steels are suitable for casting. The unalloyed cast steel used for housings combines moderate to high strength values with high elongation at fracture.

Cast steel is therefore used in the case of housings with high requirements for mechanical properties as well as a requirement for high ductility.

The costs of cast steel are higher than the costs for flake graphite cast iron or spheroidal graphite cast iron. It is therefore recommended that it should be checked whether the material is really necessary in relation to the requirements of the specific application.

### Anti-corrosion protection

All outer surfaces of standard housings not machined by chip-forming methods and the locating surfaces on the lower housing section have a universal paint coating. The coating can be finished using all synthetic resin, polyurethane, acrylic, epoxy resin, chlorinated rubber, nitrocellulose and acid-hardening hammer tone finishes.

Inner and outer surfaces machined by chip-forming methods are provided with anti-corrosion protection that can be easily removed. It is recommended that only volatile solvents and lint-free cloths should be used.

If there are particular requirements relating to paint coating and anti-corrosion protection, special solutions are possible. If particular specifications are presented by the customer, we check their feasibility and these can be implemented if the result is positive.

## Locating and non-locating bearing arrangements

The guidance and support of a rotating shaft generally requires at least two bearings arranged at a certain distance from each other. There are various possibilities for achieving this arrangement. In many cases, the locating/non-locating bearing arrangement is used in which one bearing position has a locating bearing arrangement and the other has a non-locating bearing arrangement.

In addition, the adjusted bearing arrangement and the floating bearing arrangement are frequently used arrangements.

## Axial length compensation

On a shaft supported by two radial bearings, the distances between the bearing seats on the shaft and in the housing frequently do not coincide as a result of manufacturing tolerances. The distances may also change as a result of temperature increases during operation. These differences in distance are compensated in the non-locating bearing.

There are bearing types in which, due to the internal construction, the inner ring and outer ring cannot be displaced relative to each other. As a result, no axial length compensation between the shaft and housing can occur within the bearing. Examples include spherical roller bearings, barrel roller bearings and deep groove ball bearings. These bearings can only function as a non-locating bearing if the inner ring or outer ring has a fit that allows displacement. In the case of bearing housings, this means that the outer ring must be capable of displacement in the housing. The tolerance of the bearing seat in the housing is designed accordingly and is described in the information on accuracy for the specific housing series.

## Transmission of axial forces

If axial forces must be transmitted, a locating bearing is necessary. The locating bearing also gives axial guidance of the shaft. In order to prevent axial preload, shafts with more than two bearings have only one locating bearing.

## Locating and non-locating bearing concepts

In order to achieve locating bearing arrangements as well as non-locating bearing arrangements, one of the following concepts is applied in each housing series:

- housings in a locating bearing design and non-locating bearing design, see page 26
- housings with locating rings, see page 27.

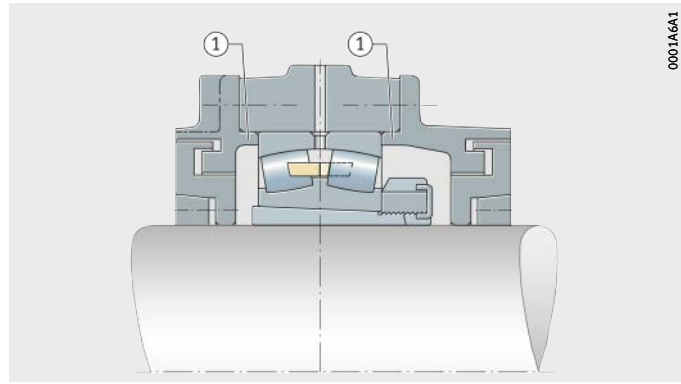
A special case here is the unsplit plummer block housings VR3, where two bearing positions are integrated in one housing. Complete plummer block housing units VRE3 can be ordered that, depending on their design, contain a locating/non-locating bearing arrangement, an adjusted bearing arrangement or a floating bearing arrangement.

### Housings in locating bearing design and non-locating bearing design

In this housing concept for the implementation of a locating or non-locating bearing arrangement, the housing must be ordered as necessary in a locating bearing design or a non-locating bearing design. This applies to the housings RLE, KPG, KPGZ, LOE, BNM, BND and SPA.

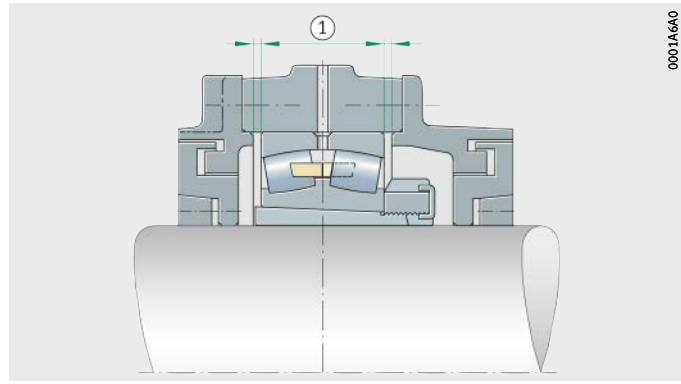
In the case of the locating bearing design, the bearings are axially clamped between the covers on the housings, *Figure 1*. In the case of the non-locating bearing design, the covers have shorter centring collars. As a result, the bearing can be axially displaced, *Figure 2*.

When ordering, the designation indicates whether the housing should be supplied in a locating or non-locating bearing design.




① Centring collars on covers for axial location of the bearing

*Figure 1*
Housing
in locating bearing design




① Bearing can be axially displaced

*Figure 2*
Housing
in non-locating bearing design

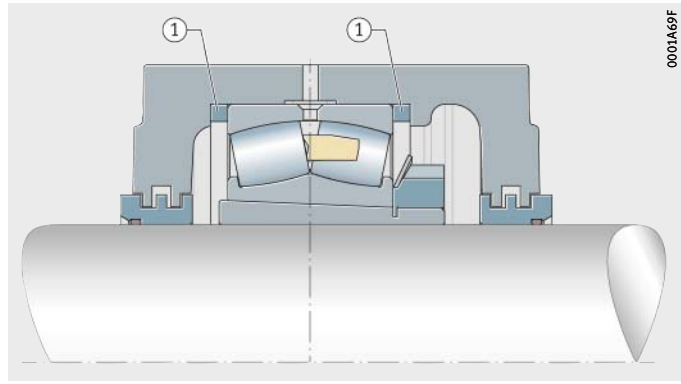
### Housings with locating rings

In this housing concept for the implementation of a locating or non-locating bearing arrangement, locating rings are available as accessories that can be used to set the locating bearing function, *Figure 3*. This applies to the housings SNV, S30, SNS and F5.

In the case of these housings, the bearing seats are designed such that the bearing is capable of axial displacement and therefore acts as a non-locating bearing if locating rings are not inserted, *Figure 4*.

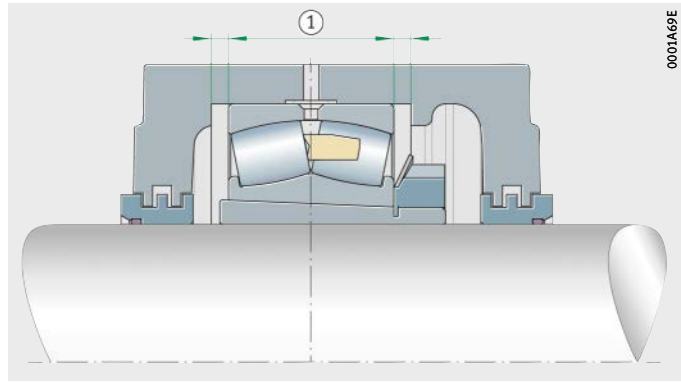
Once locating rings are inserted, the bearings are axially located. The locating rings are generally inserted in the housing on both sides of the bearing. Normally, an even number of locating rings is specified in order to achieve concentric seating of the bearing in the housing. In some cases, a single locating ring is sufficient.

The number of locating rings required is given in the dimension tables. Locating rings must be ordered separately.




① Locating rings give axial location of the bearing

*Figure 3*
Locating bearing arrangement, as a result of inserted locating rings




① Bearing can be axially displaced

*Figure 4*
Non-locating bearing arrangement, no locating bearing rings inserted

# Sealing

## Functions of the sealing arrangement

The sealing arrangement has a considerable influence on the operating life of a bearing arrangement. Its function is to retain the lubricant in the bearing and prevent the ingress of contaminants into the bearing.

Contaminants may have various effects:

- A large quantity of very small, abrasive particles causes wear in the bearing. The increase in clearance or noise brings the operating life of the bearing to an end.
- Large, overrolled hard particles reduce the fatigue life since pitting occurs at the indentation points under high bearing loads.

## Seals

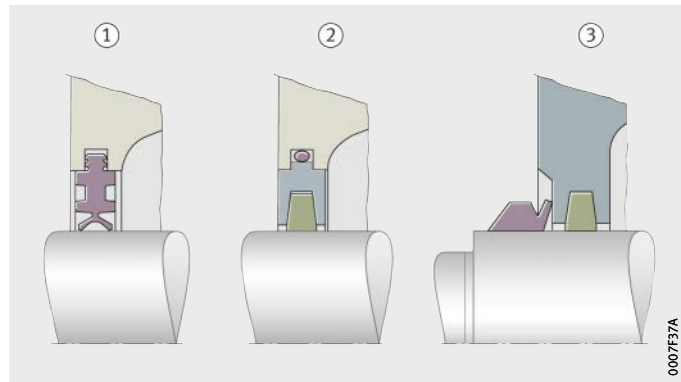
The rolling bearings normally used in bearing housings are spherical roller bearings, barrel roller bearings and deep groove ball bearings, which do not have their own sealing arrangement. The bearing position must therefore be sealed by means of the housing.

In order to seal the housing against the shaft, there are contact seals, non-contact seals and combinations of these are available, depending on the operating conditions.

## Contact seals

Contact seals are normally in contact with the running surface under radial contact force. The contact force should be kept small to avoid an excessive increase in frictional torque and temperature. The frictional torque and temperature as well as the wear of the seal are also affected by the lubrication of the seal at the running surface, the roughness of the running surface and the sliding velocity.

In bearing housings, the contact seals used are mainly double lip seals, felt seals and felt seals with a V ring, *Figure 1*.




① Double lip seal
② Felt seal
③ Felt seal with V ring

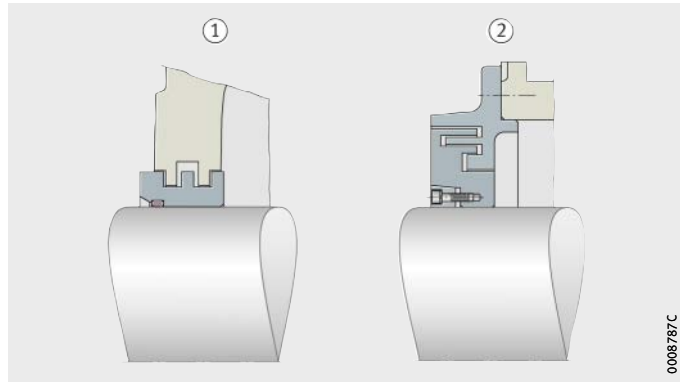
*Figure 1*
Examples of contact seals

## Non-contact seals

With non-contact seals, there is no friction in the lubricant gap other than that due to lubricant friction itself. The seals do not undergo wear and remain capable of operation for a long period. Since they generate no heat, non-contact seals are also suitable for very high speeds.

In the case of these seals, the lubricant in the lubrication gap makes an important contribution to the sealing action. There is a possibility of separate relubrication in the case of some seals.

In bearing housings, the seals used are mainly radial labyrinths, axial labyrinths and combinations of these types, *Figure 2*.

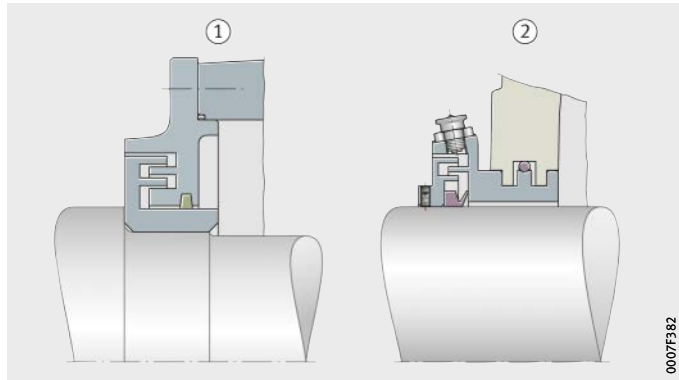



① Radial labyrinth
② Axial labyrinth

*Figure 2*
Examples of non-contact seals

## Combined seals

Where high requirements for sealing action are present, combined seals comprising contact sealing elements and non-contact sealing elements are often used, *Figure 3*. The combination of a labyrinth seal that can be relubricated with a V ring is also known as a Taconite seal. This seal is characterised by particularly good sealing action against dust and abrasive particles.




① Labyrinth and felt seal
② Taconite seal

*Figure 3*
Example of combined seals

## Covers

Where the shaft does not pass fully through the housing, one side of the housing is closed by means of a cover. In split housings, the cover is generally inserted in the lower half of the housing and the upper half of the housing is then set in place. In the case of unsplit housings, the cover is flange mounted on the housing.

The maximum operating temperatures of the covers are dependent on the materials used. In the case of some housings, it is possible to select from different designs.

Where a continuous shaft is present, many housings are also fitted with covers. These covers are not closed but are of a ring-shaped design and are sealed against the shaft.

# Lubrication

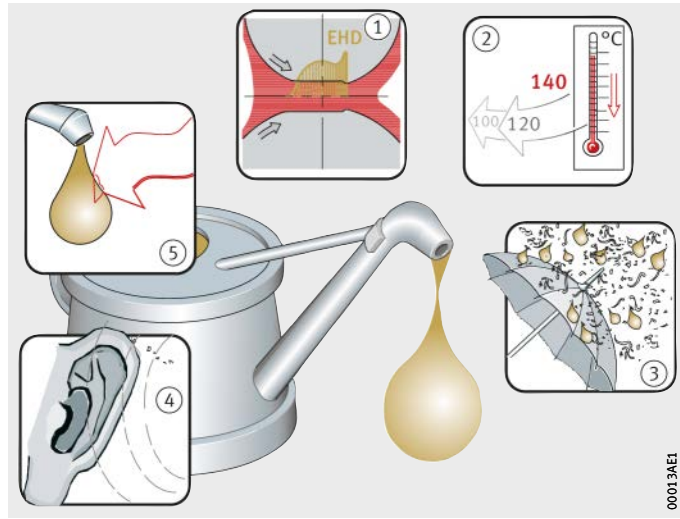
## Principles

Lubrication is an essential precondition for the reliable function and long operating life of rolling bearings.

## Functions of the lubricant

The lubricant should, *Figure 1*:

- form a lubricant film on the contact surfaces that is sufficiently capable of supporting loads and therefore prevent wear and premature fatigue ①
- dissipate heat in the case of oil lubrication ②
- provide additional sealing for the bearing against external solid and fluid contaminants in the case of grease lubrication ③
- provide damping of running noise ④
- protect the bearing against corrosion ⑤.




① Formation of a lubricant film capable of supporting loads
② Heat dissipation in the case of oil lubrication
③ Sealing of the bearing against external contaminants in the case of grease lubrication
④ Damping of running noise
⑤ Protection against corrosion

*Figure 1*
Functions of the lubricant

# Lubrication

## Housing selection and type of lubrication

The design of a bearing housing determines how the bearing position can be supplied with lubricant. This affects both the type of lubricant and the possibilities for replacing the lubricant after a certain operating duration.

Before a bearing housing is selected, the type of lubrication must be defined for the bearing, which means whether the bearing is to be lubricated with grease or oil. The following criteria must be taken into consideration.

### Criteria for grease lubrication

Grease lubrication requires less work in design terms than oil lubrication. As a result, grease lubrication is normally used in preference.

The advantages of grease lubrication are as follows:

- less design work for feed systems than in the case of oil lubrication
- sealing action outwards due to a grease collar or grease-filled labyrinths
- reservoir effect due to storage of grease in the housing
- long operating life with little maintenance work (lifetime lubrication possible in certain circumstances).

### Criteria for oil lubrication

In contrast to grease lubrication, oil lubrication allows the direct dissipation of heat from the bearing by means of the lubricant, especially at high speeds and loads. The best cooling action is achieved through the use of recirculating oil lubrication in conjunction with additional cooling of the oil.

The advantages of oil lubrication are as follows:

- the possibility of heat dissipation from the bearing
- flushing out of contaminant and wear particles
- good lubricant distribution and supply to contact areas
- very low friction losses when using minimal quantity lubrication.

### FAG standard housings

Most FAG standard housings are designed for grease lubrication, while some are designed for oil lubrication, see table, page 20. There are also housing series that can be supplied in either a design for grease lubrication or a design for oil lubrication.

## Housings for grease lubrication

In the case of FAG standard housings, grease lubrication is the most frequently used type of lubrication.

Where grease lubrication is applied, bearings can be operated in many applications with lifetime lubrication, which means that the grease quantity introduced at the time of mounting is sufficient for the entire bearing rating life in conjunction with suitable seals. If greater strain is present, the grease must be refreshed by means of targeted relubrication.

## Initial greasing

The greasing of bearings and housings at the time of mounting is described as initial greasing.

### Grease quantities

For initial greasing, the basic rule is that the bearing should be filled with grease to 100% and the free volume of the housing to 60%. The free volume is the space that remains in the housing once the bearing, shaft and seals have been fitted. In the case of housings with labyrinth or Taconite seals, the labyrinth passages must also be filled with grease.

As a variation from this basic rule, it is recommended in certain applications that the housing and seal cavities should be filled to 100%. One example is plummer block housings SNV in applications with lower speeds and a non-contact seal, where the grease is required to carry out a sealing function.

For plummer block housings BND and take-up housings SPA, the specification is always that the bearing and the free volume in the housing should be filled to 100%.

For many housing series, tables stating the recommended grease quantities for initial greasing are available.

The recommended degree of filling for greasing of the bearing may, as a function of the application and speed, deviate from 100%. A smaller grease quantity is thus recommended for very high speeds. This allows easier initial distribution of the grease as the bearing starts to move and restricts the associated increase in temperature.

# Lubrication

## Relubrication

If relubrication is carried out, additional grease is introduced into the housing at suitable positions. A facility must always be provided so that superfluous grease can exit the housing.

### Positions for relubrication

For each bearing housing, positions for relubrication are provided that are matched to the characteristic of the bearing and housing. For relubrication, lubrication nipples are screwed in here.

Where bearings have a lubrication groove and lubrication holes, the grease can be introduced centrally into the housing if the housing is also provided with a suitable lubrication hole. The grease then travels directly to the raceway of the bearing.

Alternatively, the grease can be introduced into the side of the housing. The grease then travels via the end face of the bearing to the raceway.

For Taconite seals, and in some housings also for labyrinth seals, there are separate positions for relubrication of the seals.

### Egress of superfluous lubricant

If an opened grease outlet hole or non-contact seal is present, there is no risk of overgreasing of the bearing. If the temperature reaches a higher level during relubrication due to the churning energy of the grease, it will return to its initial value after several hours of running once the excess grease has escaped.



In the interests of the environment, controlled metering must be ensured. Any grease that escapes via the grease outlet holes must be collected by means of a suitable device.

### Automatic lubricators

In order to provide bearings with a reliable supply of lubricant for relubrication, the use of automatic lubricators is recommended. These make it possible to dispense a defined grease quantity at appropriate intervals. As part of its industrial services activities, Schaeffler offers suitable lubrication devices such as the lubrication system CONCEPT8, see page 422.

## Greases

In order to achieve a long operating life and high operational security of the bearing arrangement, we recommend the use of the Arcanol rolling bearing greases. These are specifically developed and tested for bearing arrangements. As part of its industrial service activities, Schaeffler offers a comprehensive range of Arcanol greases, see page 419.

### Further information

- TPI 168, Rolling Bearing Greases Arcanol
- TPI 176, Lubrication of Rolling Bearings
- WL 80382, FAG CONCEPT8.

## Housings for oil lubrication

In addition to housings for grease lubrication, Schaeffler also offers housings designed for oil lubrication.

In the case of split housings, the parting line between the upper and lower sections of the housing must be sealed with a thin layer of a commercial sealant (with permanent elasticity). The covers on the housing must also be sealed.

## Lubrication methods

The methods used for oil lubrication of FAG plummer block housings are:

- oil bath lubrication
- recirculating oil lubrication.

### Oil bath lubrication

If oil bath lubrication is used, *Figure 2*, the oil level must reach the centre of the lowest rolling element. If the oil level is higher than this, the bearing temperature may increase at high circumferential velocities as a result of splashing losses. Furthermore, foaming of the oil may occur.

Oil bath lubrication is suitable for speed parameters up to $n \cdot d_M = 300\,000\ min^{-1} \cdot mm$. At $n \cdot d_M < 150\,000\ min^{-1} \cdot mm$, the bearing may be completely immersed.

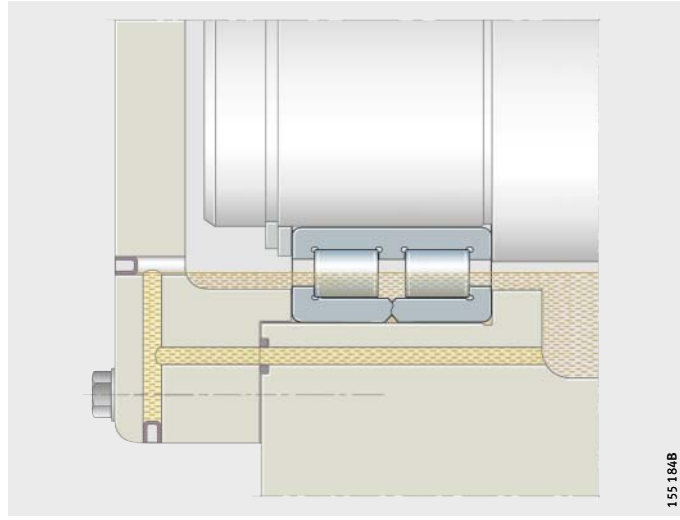
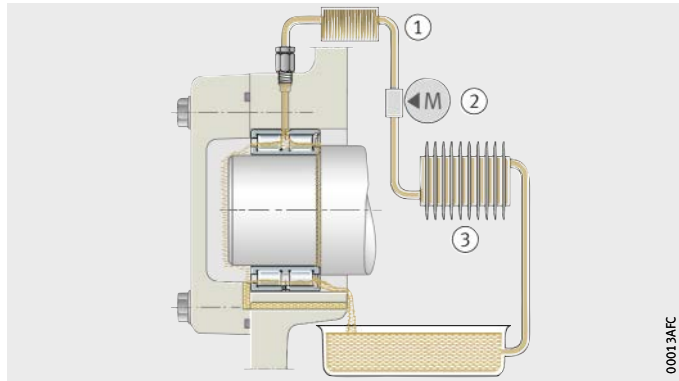



*Figure 2*
Oil bath lubrication (schematic)

When using oil bath lubrication, venting of the housing is absolutely necessary. For example, the filling hole can be closed off using a bleed screw.

**Recirculating oil lubrication**

In recirculating oil lubrication, the oil is subjected to additional cooling, *Figure 3*. It can therefore dissipate heat from the bearing. In addition, contaminant and wear particles can be flushed out of the bearing. It is always recommended that the oil circuit is fitted with a filter.




① Filter
② Pump
③ Cooling system

*Figure 3*
Recirculating oil lubrication (schematic)

## Oil selection

For the lubrication of rolling bearings, mineral oils and synthetic oils are essentially suitable.

Oils with a mineral oil base are used most frequently. They must fulfil at least the requirements according to DIN 51517 or DIN 51524.

Special oils, often synthetic oils, are used under extreme operating conditions or where there are special requirements relating to oil resistance. In these cases, please consult the lubricant manufacturers or the Schaeffler engineering service.

**Further information**

- TPI 176, Lubrication of Rolling Bearings.

## Load carrying capacity of split and unsplit plummer block housings

The permissible load on plummer block housings is dependent on:

- the strength of the housing
- the load carrying capacity of the bearing
- the load direction
- the strength of the connecting screws (in split plummer block housings).

## Rupture loads

Guide values are indicated for the housing rupture load of some housing series. Where housings are available in different material variants, it must be noted that the rupture load is dependent on the housing material.

In the case of split plummer block housings, guide values are also indicated for the maximum load carrying capacity of the screws connecting the upper and lower sections of the housing. The guide values are indicated as a function of the load direction, *Figure 1*. The guide values are valid for purely static loading.

The values in the rupture load table apply if the flatness of the mounting surface in accordance with DIN EN ISO 1101 corresponds to tolerance grade IT7 in accordance with DIN EN ISO 286-1 (measured across the diagonal). A precondition for supporting loads is that the housing base surface is completely and rigidly supported.

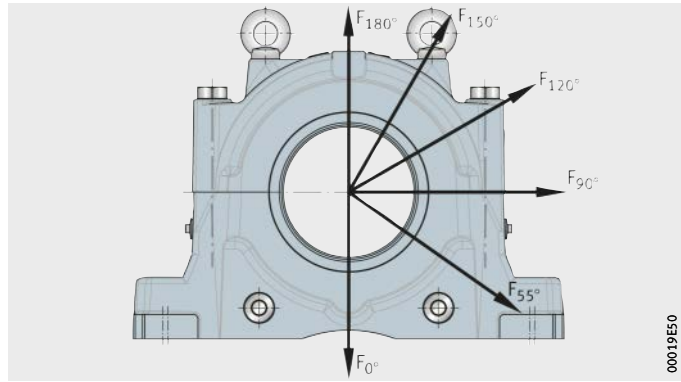



*Figure 1*
Load directions F for the guide values for the housing rupture load and the maximum load carrying capacity of the connecting screws

# Load carrying capacity

## Permissible load

The permissible load on the housing and the connecting screws and eye bolts must not be exceeded.

### Safety factors

When determining the permissible load, safety factors must be applied. For general machine building, a safety factor of 6 is normally applied to the housing rupture load. For split plummer block housings SNS, a safety factor of 5 is sufficient.

### Axial load

Where axial load is present or a radial load does not act vertically, it is recommended that the housing should be secured horizontally by means of stops or dowels, see page 43.

If the housing is subjected to axial load, the permissible axial load of the bearing fitted must be taken into consideration. If the bearing is located on the shaft using an adapter sleeve, the axial retaining force of the bearing and adapter sleeve must also be taken into consideration.

### Connecting screws

Where split plummer block housings are used, the guide values for the maximum load carrying capacity of the connecting screws must also be observed. Depending on the application, these may be the limiting factor for the load carrying capacity of the housing.

### Eye bolts

If the eye bolts provided are used to lift housings or housing components, their permissible load must be observed, see section Eye bolts, page 39.

## Fundamental specifications

The correct mounting of rolling bearings and housings has a decisive influence on the achievable bearing life. Careful attention must therefore be paid to the following guidelines.

In the interests of the user, the applicable legal regulations and other directives relating to environmental protection and occupational safety must be observed.

## Cleanliness

Cleanliness is a fundamental precondition for the successful mounting of rolling bearings and housings.

Contamination can shorten the operating life of rolling bearings and must therefore be prevented.

Measures

Measures for ensuring cleanliness are as follows:

- Ensure that the mounting area is clean.
- Clean the mounting surface.
- Clean the housing, seals and cover, paying particular attention to any machining or moulding sand residues.
- Only use volatile solvents and lint-free cloths for cleaning.
- Do not remove rolling bearings and adapter sleeves or withdrawal sleeves from their packaging until immediately before mounting. Do not remove the anti-corrosion protection on these components.

## Eye bolts

On many housings, the housing body is provided with one or two eye bolts to DIN 580. These are intended as locating points for mounting and dismounting of the housing. The load carrying capacity of the eye bolts allows lifting of the housing including, in many cases, a bearing fitted in the housing, but without a shaft. Further relevant information is given in the description of the specific housing.

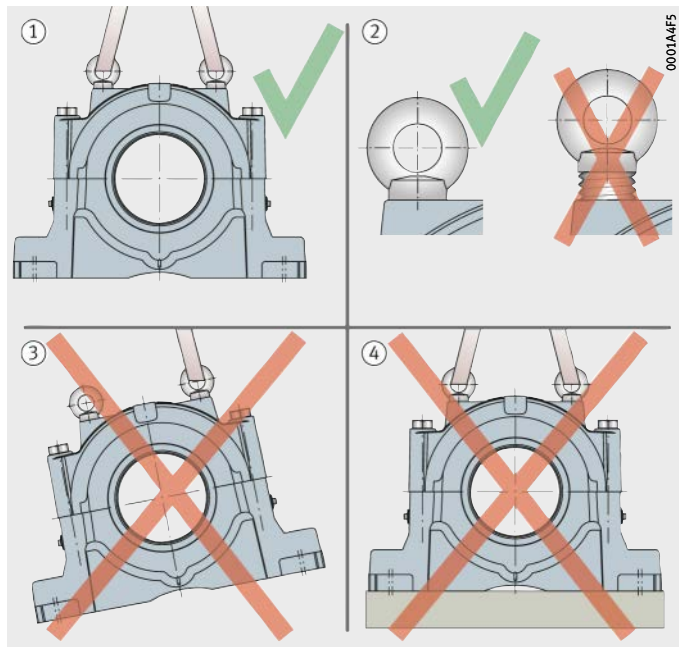
Split plummer block housings KPG and KPGZ have additional eye bolts on the covers. These eye bolts must not be used for lifting of the housing but only for lifting of the covers.

Rupture of the eye bolts due to overload. Severe personal injury or damage to property as a result of the falling housing or housing parts.

Correct usage of eye bolts on the housing body

Specifications for the use of eye bolts as locating points, *Figure 1*:

- Eye bolts must always be screwed fully into the housing.
- If several eye bolts are provided on the housing body, all the eye bolts must be used simultaneously as locating points.
- Only use eye bolts for lifting the housing and, if permitted for this housing, the bearing fitted in the housing. The eye bolts must not be subjected to additional load as a result of parts attached to the housing.




① Correct usage of eye bolts as locating points
② Screw in eye bolts completely
③ Always use all eye bolts simultaneously
④ Do not apply additional load as a result of attached parts

*Figure 1*
Correct usage of eye bolts on the housing body

## Location of housings

The essential preconditions for the secure location of bearing housings are suitable mounting surfaces, the correct selection and use of foot screws as well as, in certain cases, additional horizontal location of the housing.

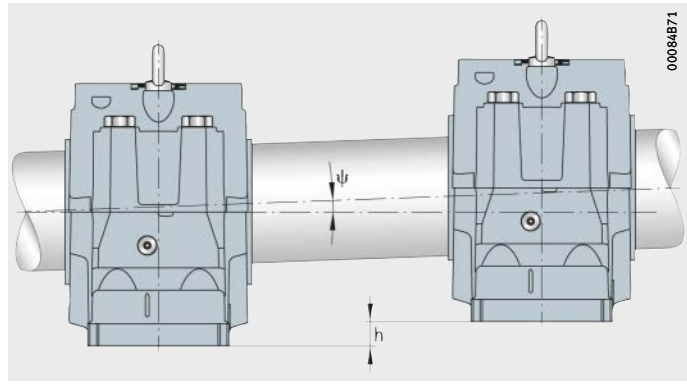
## Surface quality of the mounting surface

The requirements for the surface on which the housing is to be mounted are as follows:

- sufficiently robust to withstand the static and dynamic loads occurring in operation over the long term
- surface roughness: Ramax 12,5
- flatness of the mounting surface in accordance with DIN EN ISO 1101 corresponding to tolerance grade IT7 in accordance with DIN EN ISO 286-1 (measured across the diagonal).
- free from colour.

## Level of mounting surfaces

A difference in level between the mounting surfaces of bearing housings will lead to misalignment of the shaft, *Figure 2*.




ψ = misalignment of shaft
h = difference in level between mounting surfaces

*Figure 2*
Misalignment of the shaft

The permissible misalignment is dependent on the housing and seal variant. Differences in level must be compensated such that the permissible misalignment is not exceeded. Levelling shims can be used for this purpose.

In addition, it must be ensured that the bearings mounted can compensate the misalignments present.

## Tightening torques for foot screws

Foot screws are used for screw mounting the housing to the mounting surface. They are not included in the scope of delivery of the housings.

The following table contains tightening torques for metric coarse pitch threads in accordance with DIN 13, DIN 962 and DIN ISO 965-2 as well as head contact dimensions in accordance with DIN EN ISO 4014, DIN EN ISO 4017, DIN EN ISO 4032, DIN EN ISO 4762, DIN 6912, DIN 7984, DIN 7990 and DIN EN ISO 8673.

The maximum tightening torques are valid with 90% utilisation of the yield stress of the screw material 8.8 and a friction factor of 0,14. We recommend that foot screws should be tightened to approx. 70% of these values, see table.

**Tightening torques for foot screws with metric thread in accordance with DIN 13, DIN 962 and DIN ISO 965-2**

| Nominal screw diameter | Maximum tightening torque Nm | Recommended tightening torque Nm |
|---|---|---|
| M6 | 11,3 | 8 |
| M8 | 27,3 | 20 |
| M10 | 54 | 35 |
| M12 | 93 | 65 |
| M16 | 230 | 160 |
| M20 | 464 | 325 |
| M24 | 798 | 550 |
| M30 | 1 597 | 1 100 |
| M36 | 2 778 | 1 950 |
| M42 | 3 991 | 2 750 |
| M48 | 6 021 | 4 250 |
| M56 | 9 650 | 6 750 |
| M64 | 14 416 | 10 000 |
| M72 | 21 081 | 14 500 |
| M80 | 29 314 | 20 500 |
| M90 | 42 525 | 29 500 |
| M100 | 59 200 | 41 000 |

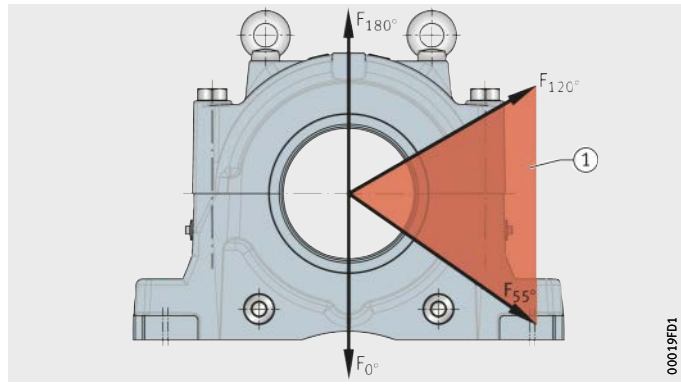
## Horizontal location

In the case of plummer block housings, it may be necessary to supplement the foot screws by additional horizontal location of the housing.

Such horizontal location is necessary if one of the following conditions is fulfilled:

- The load angle is between 55° and 120°, *Figure 3*.
- Axial load is present.

Depending on the housing, the location may be implemented by means of stops in the load direction or pins.




① Load angle range within which horizontal location of the housing is necessary

*Figure 3*
Load directions on a plummer block housing

# Mounting and dismounting

## Location of bearings on the shaft

Complete mounting of a bearing housing also always includes the fitting of the bearing.

## Bearing seats on the shaft

The bearing seats on the shaft must be free from impact marks and burrs and must have adequate dimensional and geometrical accuracy.

The requirements for dimensional and geometrical accuracy of the bearing seats for a tapered bearing bore and location by means of an adapter sleeve, withdrawal sleeve or adjustment sleeve are as follows:

- The diameter is at least in the tolerance class h9 Ⓔ and preferably h8 Ⓔ.
- The cylindricity in accordance with DIN EN ISO 1101 is within IT5/2.

The requirements for dimensional and geometrical accuracy of the bearing seats for a cylindrical bearing bore and direct seating of the bearing on the shaft are dependent on the operating conditions.

## Hydraulic method

The mounting and dismounting of large bearings requires high mounting forces and is made easier by using the hydraulic method.

The sleeves that can be used for the hydraulic method are as follows:

- adapter sleeves with oil slots on the tapered outside surface and a pump connector on the thread side. These adapter sleeves have the suffix HG.
- withdrawal sleeves with oil slots on the tapered outside surface and two pump connectors on the thread side offset from each other by 90°. These withdrawal sleeves have the suffix H.

For a shaft diameter of or more than 150 mm, we recommend use of the hydraulic method in order to facilitate mounting.

## Spherical roller bearings with tapered bore and adapter sleeve

The bearings used frequently in FAG bearing housings are spherical roller bearings with a tapered bore that are located on the shaft using an adapter sleeve.

The adapter sleeve is slid onto the shaft first and the bearing is then slid onto the taper of the adapter sleeve. As a result, the radial internal clearance of the bearing is reduced. At the same time, a radial preload occurs between the bearing inner ring, adapter sleeve and shaft, ensuring the rigid seating of the bearing on the shaft.

FAG hydraulic nuts can be used to aid the pressing-on operation. The reduction in the radial internal clearance is determined in the case of spherical roller bearings by measurement of the residual clearance using feeler gauges or by measurement of the drive-up distance.

The values given for the reduction in the radial internal clearance and the drive-up distance on the taper lead to rigid seating of the bearing on the shaft, see table, page 45.

## Reduction in the radial internal clearance and drive-up distance on the taper 1:12

| Nominal bearing bore diameter d | | Reduction in radial internal clearance | | Drive-up distance on taper 1:12 | | | | Minimum radial internal clearance after mounting, control value for | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Shaft | | Sleeve | | Group N | Group 3 | Group 4 |
| mm | | mm | | mm | | mm | | mm | mm | mm |
| over | incl. | min. | max. | min. | max. | min. | max. | min. | min. | min. |
| 24 | 30 | 0,015 | 0,02 | 0,3 | 0,35 | 0,3 | 0,4 | 0,015 | 0,02 | 0,035 |
| 30 | 40 | 0,02 | 0,025 | 0,35 | 0,4 | 0,35 | 0,45 | 0,015 | 0,025 | 0,04 |
| 40 | 50 | 0,025 | 0,03 | 0,4 | 0,45 | 0,45 | 0,5 | 0,02 | 0,03 | 0,05 |
| 50 | 65 | 0,03 | 0,04 | 0,45 | 0,6 | 0,5 | 0,7 | 0,025 | 0,035 | 0,055 |
| 65 | 80 | 0,04 | 0,05 | 0,6 | 0,75 | 0,7 | 0,85 | 0,025 | 0,04 | 0,07 |
| 80 | 100 | 0,045 | 0,06 | 0,7 | 0,9 | 0,75 | 1 | 0,035 | 0,05 | 0,08 |
| 100 | 120 | 0,05 | 0,07 | 0,7 | 1,1 | 0,8 | 1,2 | 0,05 | 0,065 | 0,1 |
| 120 | 140 | 0,065 | 0,09 | 1,1 | 1,4 | 1,2 | 1,5 | 0,055 | 0,08 | 0,11 |
| 140 | 160 | 0,075 | 0,1 | 1,2 | 1,6 | 1,3 | 1,7 | 0,055 | 0,09 | 0,13 |
| 160 | 180 | 0,08 | 0,11 | 1,3 | 1,7 | 1,4 | 1,9 | 0,06 | 0,1 | 0,15 |
| 180 | 200 | 0,09 | 0,13 | 1,4 | 2 | 1,5 | 2,2 | 0,07 | 0,1 | 0,16 |
| 200 | 225 | 0,1 | 0,14 | 1,6 | 2,2 | 1,7 | 2,4 | 0,08 | 0,12 | 0,18 |
| 225 | 250 | 0,11 | 0,15 | 1,7 | 2,4 | 1,8 | 2,6 | 0,09 | 0,13 | 0,2 |
| 250 | 280 | 0,12 | 0,17 | 1,9 | 2,6 | 2 | 2,9 | 0,1 | 0,14 | 0,22 |
| 280 | 315 | 0,13 | 0,19 | 2 | 3 | 2,2 | 3,2 | 0,11 | 0,15 | 0,24 |
| 315 | 355 | 0,15 | 0,21 | 2,4 | 3,4 | 2,6 | 3,6 | 0,12 | 0,17 | 0,26 |
| 355 | 400 | 0,17 | 0,23 | 2,6 | 3,6 | 2,9 | 3,9 | 0,13 | 0,19 | 0,29 |
| 400 | 450 | 0,2 | 0,26 | 3,1 | 4,1 | 3,4 | 4,4 | 0,13 | 0,2 | 0,31 |
| 450 | 500 | 0,21 | 0,28 | 3,3 | 4,4 | 3,6 | 4,8 | 0,16 | 0,23 | 0,35 |
| 500 | 560 | 0,24 | 0,32 | 3,7 | 5 | 4,1 | 5,4 | 0,17 | 0,25 | 0,36 |
| 560 | 630 | 0,26 | 0,35 | 4 | 5,4 | 4,4 | 5,9 | 0,2 | 0,29 | 0,41 |
| 630 | 710 | 0,3 | 0,4 | 4,6 | 6,2 | 5,1 | 6,8 | 0,21 | 0,31 | 0,45 |
| 710 | 800 | 0,34 | 0,45 | 5,3 | 7 | 5,8 | 7,6 | 0,23 | 0,35 | 0,51 |
| 800 | 900 | 0,37 | 0,5 | 5,7 | 7,8 | 6,3 | 8,5 | 0,27 | 0,39 | 0,57 |
| 900 | 1000 | 0,41 | 0,55 | 6,3 | 8,5 | 7 | 9,4 | 0,3 | 0,43 | 0,64 |
| 1000 | 1120 | 0,45 | 0,6 | 6,8 | 9 | 7,6 | 10,2 | 0,32 | 0,48 | 0,7 |
| 1120 | 1250 | 0,49 | 0,65 | 7,4 | 9,8 | 8,3 | 11 | 0,34 | 0,54 | 0,77 |
| 1250 | 1400 | 0,55 | 0,72 | 8,3 | 10,8 | 9,3 | 12,1 | 0,36 | 0,59 | 0,84 |

### Further information

- Detailed information on mounting of bearings:
  MH 1, Mounting Handbook.
- Online help and calculation tool for the mounting of bearings:
  http://mountingmanager.schaeffler.com.
- Products and services for mounting:
  Catalogue IS 1, Mounting and Maintenance of Rolling Bearings.
- Questions about the mounting operation:
  industrial-services@schaeffler.com.

## Maintenance

Careful maintenance of a housing in conjunction with monitoring of the operating condition of the bearing position makes a significant contribution towards achieving a long operating life and reliable operation.

Regular maintenance must be carried out and the intervals for the various maintenance operations are dependent on the ambient and operating conditions.



Only carry out maintenance operations when the machine is at a standstill.

Take precautions to prevent unintentional startup of the machine.

## Regular maintenance work

Regular maintenance operations on bearing housings are as follows:

- checking of the alignment of the housing
- retightening of the foot screws and connecting screws. This should be carried out more frequently at first after commissioning and at longer intervals later
- inspection of the housing for damage. Any indications such as conspicuous noises or unusual escape of grease must also be noted
- relubrication of the seals. Some seals are equipped for this purpose with lubrication nipples. If the ambient air contains high levels of dust, the seals must be relubricated more frequently
- relubrication of the bearings fitted. The grease is introduced into the housing via lubrication nipples and thus travels to the bearing. During relubrication, it must be possible for excess grease to escape via non-contact seals or opened grease outlet holes
- cleaning of the housing to remove baked-on material and other coarse contaminants.



If cleaning is not carried out correctly, contamination or moisture may enter the housing.

In the area of the seals in particular, do not use compressed air, steam cleaners or comparable cleaning methods.

## Special solutions for standard housings

FAG standard housings are designed as split and unsplit plummer block housings, as take-up housings and as flanged housings. These housings offer versatile configuration possibilities and thus cover a wide spectrum of applications.

In addition, it is possible to supply other non-standard variants of these housings or to expand the scope of delivery where:

- special technical requirements are present
- the customer has particular specifications that must be fulfilled.

## Special solutions and additional services

The special solutions and additional services described below are available by agreement.

**Tolerance class of bearing seat**

Tolerance class of bearing seat in accordance with customer specification, for example:

- G6
- H6
- F7
- G7
- K7
- N7.

**High temperature seals**

High temperature seals instead of felt seals, giving expanded operating limits:

- temperature resistance up to +300 °C
- circumferential velocity up to 20 m/s.

**Coating colour**

Coating colour other than the standard coating of the housing, such as:

- RAL 1015, light ivory
- RAL 3000, flame red
- RAL 5015, sky blue
- RAL 5018, turquoise blue
- RAL 7043, traffic grey B.

**Lubrication nipples**

Supply of lubrication nipples or parts for closing off relubrication holes, where these deviate from the standard scope of delivery.

# Special solutions

**Long term packaging**

Long term packaging of housings allows a storage time from 3 up to 10 years, depending on the preservation selected and the climatic conditions. The storage regulations must be observed.

Long term packaging is available for housings with a mass of 30 kg or heavier.

**Acceptance inspection of products**

Acceptance inspection of products by the customer can be carried out directly on site. The acceptance documents and inspection certificates can be prepared in accordance with FAG specifications or customer specifications.

**Acceptance inspection certificate**

Preparation of an acceptance inspection certificate 3.1 in accordance with DIN EN 10204.

## Special solutions for plummer block housings SNV

Special solutions available specifically for split plummer block housings SNV include:

- housing design for oil lubrication
- additional holes for fixing screws and pins.

FAG



# Split plummer block housings

SNV
S30
SNS
RLE
KPG, KPGZ
LOE

# Split plummer block housings


**Split plummer block housings SNV** ..... **52**

Plummer block housings SNV are suitable for a wide range of applications. The main dimensions correspond to ISO 113 and DIN 736 to DIN 739. They can be fitted with spherical roller bearings, barrel roller bearings and self-aligning ball bearings.

**Split plummer block housings S30** ..... **130**

Plummer block housings S30 are suitable for a wide range of applications and their main dimensions correspond to ISO 113. They can be fitted with spherical roller bearings 230 with a tapered bore and adapter sleeve and with a cylindrical bore.

**Split plummer block housings SNS** ..... **146**

Plummer block housings SNS are highly robust housings and ideally suitable for aggressive environmental conditions such as those in mining applications. The main dimensions conform to ISO 113. They can be fitted with spherical roller bearings with a tapered bore and adapter sleeve and with a cylindrical bore.

**Split plummer block housings RLE** ..... **214**

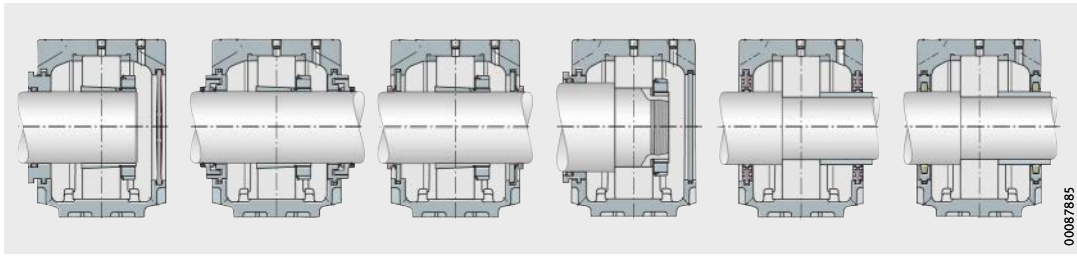
Split plummer block housings RLE were developed specifically for the bearing arrangements of back-up rollers. Suitable bearings are spherical roller bearings 241 with a tapered bore and withdrawal sleeve and with a cylindrical bore.

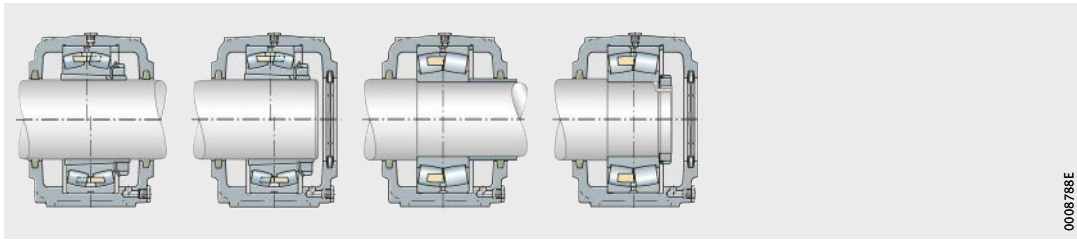
**Split plummer block housings KPG, KPGZ** ..... **228**

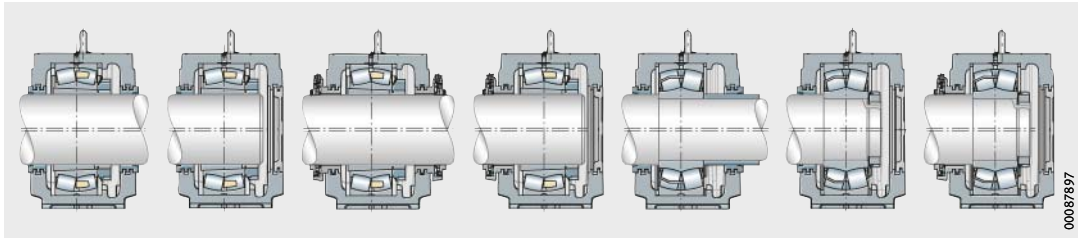
Split plummer block housings KPG and KPGZ are used in trunnion bearing arrangements on converters for steel production. The housings are matched to spherical roller bearings 249 with a tapered bore and adjustment sleeve (KPG) and with a cylindrical bore (KPGZ).

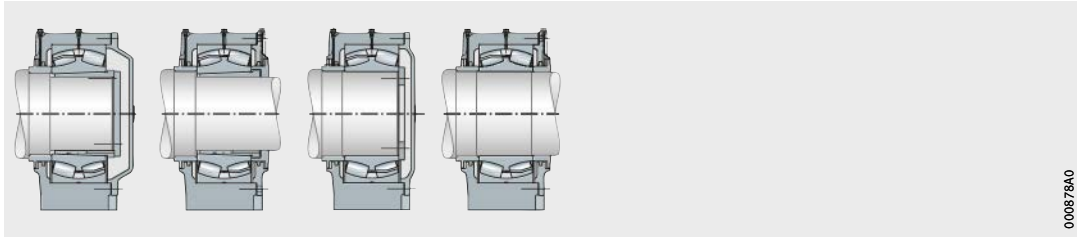
**Split plummer block housings LOE** ..... **246**

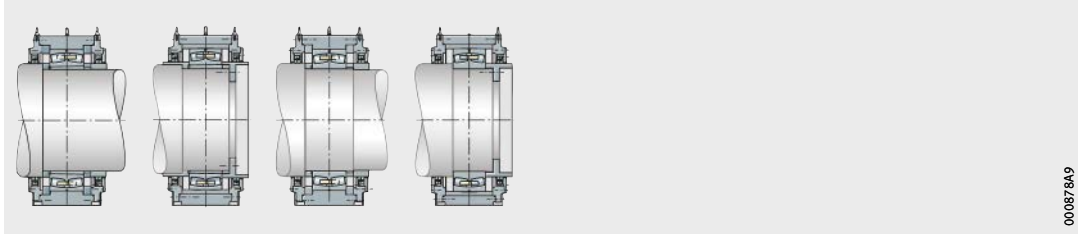
These housings are designed for oil lubrication and are particularly suitable for bearing arrangements running at high speeds. Where necessary, housings with an integrated cooling coil can be ordered. Spherical roller bearings with a tapered bore and adapter sleeve are fitted.

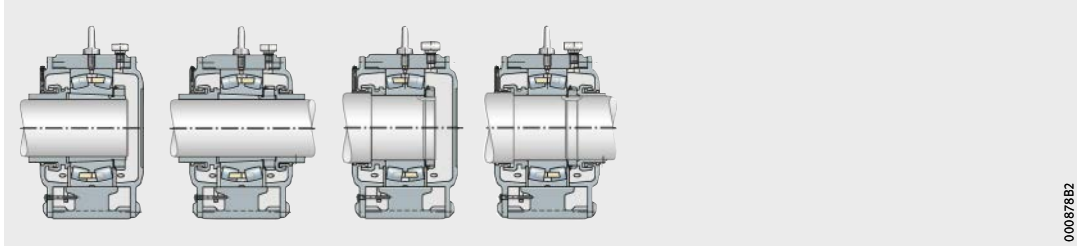

00087885


0008788E


00087897


000878A0


000878A9


000878B2

FAG



# Split plummer block housings SNV

# Split plummer block housings SNV


| | | Page |
|---|---|---|
| **Product overview** | Split plummer block housings SNV | 54 |
| **Features** | Modular concept | 56 |
| | Dimensions and interchangeability | 56 |
| | Suitable bearings | 56 |
| | Housing materials and anti-corrosion protection | 57 |
| | Locating and non-locating bearings | 57 |
| | Seals and covers | 58 |
| | Housing configurations | 62 |
| | Lubrication | 64 |
| | Designation structure | 71 |
| | Ordering examples | 74 |
| **Design and safety guidelines** | Load carrying capacity | 75 |
| | Eye bolts | 77 |
| | Foot screws | 77 |
| **Accuracy** | | 77 |
| **Dimension tables** | Plummer block housings SNV, split, for bearings with tapered bore and adapter sleeve, metric shaft | 78 |
| | Plummer block housings SNV, split, for bearings with cylindrical bore, metric shaft | 88 |
| | Plummer block housings SNV, split, for bearings with tapered bore and adapter sleeve, inch size shaft | 102 |

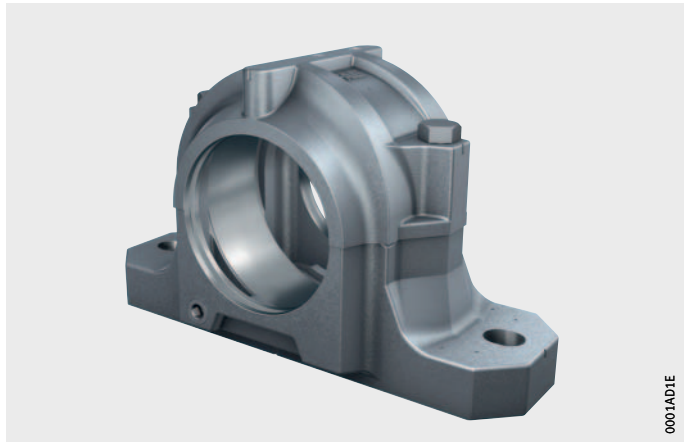







**Plummer block housings**
Split

SNV
(SNV052 to SNV200)




SNV
(SNV215 to SNV340)




**Accessories**
Labyrinth seals
Taconite seals

TSV




TCV









**Double lip seals**
**V ring seals**

**DH**




**DHV**




**Felt seals**

**FSV**

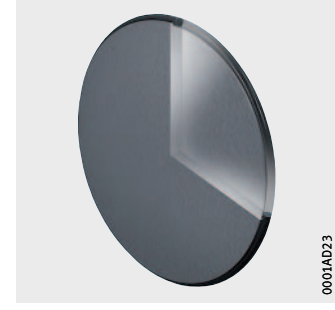



**Covers**
Plastic, usable up to +120 °C
Steel and FKM, usable up to +200 °C

**DKV**




**DKVT**




**Locating rings**

**FRM**



# Split plummer block housings SNV

## Features

Split FAG plummer block housings SNV and the associated bearings form bearing arrangement units that can be matched, through the appropriate selection of accessories, to a wide range of applications. Applications include agricultural machinery, the paper processing industry, mining, materials processing, the steel industry and power stations.

## Modular concept

The housings are designed in accordance with a modular concept. Each housing can be fitted with rolling bearings of various diameter and width series if they have the correct outside diameter for the housing.

Depending on their design, the bearings can be located either directly on the shaft or by means of an adapter sleeve. This gives different shaft diameters for the same bearing size. The spacings between the shaft and housing body are compensated by means of appropriately matched seals.

## Dimensions and interchangeability

The dimensions of the housings SNV correspond to ISO 113 and DIN 736 to DIN 739. The housings SNV are interchangeable with the existing housings SN and SNE.

## Suitable bearings

Split plummer block housings SNV are suitable for fitting with spherical roller bearings, barrel roller bearings and self-aligning ball bearings with a tapered or cylindrical bore as well as deep groove ball bearings, see table. The range of shaft diameters is 20 mm to 160 mm and $^3/_4$ inch to $5^1/_2$ inch.

### Bearing types and sizes

| Bearing type | Size |
|---|---|
| **Spherical roller bearings** | 21307..-K to 21322..-K |
| ■ with tapered bore and adapter sleeve | 22205..-K to 22232..-K |
| | 22308..-K to 22332..-K |
| | 23218..-K to 23232..-K |
| ■ with cylindrical bore | 21304 to 21322 |
| | 22205 to 22232 |
| | 22308 to 22332 |
| | 23218 to 23232 |
| **Self-aligning ball bearings** | 1205-K to 1222-K |
| ■ with tapered bore and adapter sleeve | 1305-K to 1320-K |
| | 2205-K to 2220-K |
| | 2305-K to 2320-K |
| ■ with cylindrical bore | 1205 to 1222 |
| | 1305 to 1320 |
| | 2205 to 2220 |
| | 2304 to 2320 |

## Bearing types and sizes (continued)

| Bearing type | Size |
|---|---|
| **Barrel roller bearings** | 20205-K to 20232-K |
| ■ with tapered bore and adapter sleeve | 20305-K to 20332-K |
| ■ with cylindrical bore | 20205 to 20232 |
| | 20305 to 20330 |
| **Deep groove ball bearings** | 6205 to 6232 |
| ■ with cylindrical bore | 6304 to 6332 |







## Split spherical roller bearings

Unsplit spherical roller bearings with an adapter sleeve can be replaced by split spherical roller bearings. This gives a considerable reduction in the work associated with bearing replacement in numerous applications.

In order to ensure selection of the correct combination of housing and bearing, please contact us.

## Further information

■ WL 43165, Split Spherical Roller Bearings.

## Housing materials and anti-corrosion protection

The standard material for the housing bodies is flake graphite cast iron EN-GJL-HB215 in accordance with DIN EN 1561 (suffix L). By agreement, housing bodies made from spheroidal graphite cast iron EN-GJS-400-15 in accordance with DIN EN 1563 (suffix D) are available.

All outer surfaces not machined by chip-forming methods have a universal paint coating (colour RAL 7031, bluish-grey). The coating can be finished using all synthetic resin, polyurethane, acrylic, epoxy resin, chlorinated rubber, nitrocellulose and acid-hardening hammer tone finishes.

Inner and outer surfaces machined by chip-forming methods are provided with anti-corrosion protection that can be easily removed. It is recommended that only volatile solvents and lint-free cloths should be used.

## Locating and non-locating bearings

The bearing seats in the housing are machined such that the bearings are movable in the housing and can thus function as non-locating bearings. Locating bearing arrangements can be achieved by the insertion of one locating ring FRM on each side of the bearing outer ring. The bearing is thus seated in the centre of the housing. Locating rings must be ordered separately.

## Seals and covers

For sealing of the bearing housings, the standard seals available are the labyrinth seal, the Taconite seal, the double lip seal, the V ring seal and the felt seal. These seals are matched to the rectangular section annular slots on both sides of the housings. They are principally suitable for grease lubrication.

The seals must be ordered separately. They are supplied individually. If a continuous shaft is present, two seals must be ordered.

Special seals are also available by agreement.

### Labyrinth seals TSV

Labyrinth seals TSV give non-contact sealing. They are therefore suitable for high circumferential velocities. The O ring made from fluoro rubber FKM pressed between the labyrinth ring and shaft is suitable for temperatures up to +200 °C.

The labyrinth seal allows shaft misalignment of up to 0,5° in both directions.

If necessary, the labyrinth can be relubricated. For this purpose, a lubrication hole must be made in the upper housing section for each labyrinth seal. The optimum positions are indicated by cast-in pilot holes.

### Taconite seals TCV

Taconite seals TCV are combined seals comprising a labyrinth seal and a V ring. These seals are suitable for extreme operating conditions in relation to contamination and dust. The V ring is made from NBR and is suitable for temperatures up to +100 °C.

The Taconite seal allows shaft misalignment of up to 0,5° on both sides.

### Double lip seals DH

The seal lips of the double lip seal DH slide on the rotating shaft. The outer seal lip prevents ingress of contamination into the bearing. This effect is supported by the grease inserted between the seal lips. The inner lip prevents lubricant from escaping from the housing.

The seal is made from acrylonitrile butadiene rubber NBR and is suitable for circumferential velocities of up to 13 m/s. For continuous operation, a maximum circumferential velocity of 6 m/s is recommended.

The seal is suitable for temperatures from –40 °C to +100 °C. It allows shaft misalignment of up to 0,5° in both directions.



The double lip seal DH is a two-piece seal. It can be easily inserted in the annular slots in the housing. The parting joint of the seal halves should be in the same plane as the parting joint of the housing.

The contact running area on the shaft for the seal lips should have a roughness Ra 3,2.



**V ring seal DHV**

In the case of V ring seals DHV, the seal lip is in axial contact with the sliding surface which is located in the rectangular section annular slot of the housing.



The seal is made from NBR and is suitable, when using grease lubrication, for circumferential velocities of up to 12 m/s. If circumferential velocities of more than 8 m/s are present, axial location is necessary. The seal allows shaft misalignment of up to 0,5° in both directions.

**Felt seals FSV**

The seals are suitable for circumferential velocities of up to 5 m/s and, after running-in, up to 15 m/s. They can be used at temperatures up to +100 °C. By agreement, aramide packing is available for high temperatures.

The permissible shaft misalignment is 0,5° in both directions.

Felt seals FSV are particularly suitable for grease lubrication. They comprise an adapter holding the inserted, oil-impregnated felt strip and the adapter is secured against rotation by an O ring in the annular slot in the housing.

**Covers DKV**

Covers are used in the case of housings closed on one side. The covers fit in the rectangular section annular slots in the housings. Covers DKV are made from plastic and are suitable for long term temperatures of up to +120 °C.

The covers must be ordered separately.

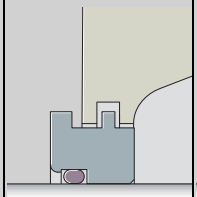
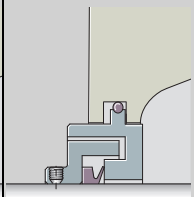
**Cover DKVT**

Covers DKVT are made from steel, flake graphite cast iron or spheroidal graphite cast iron and are suitable for temperatures of up to +200 °C. They are supplied by agreement.

**Characteristics and operating limits**

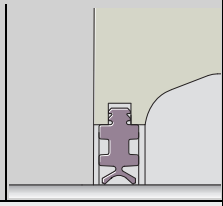
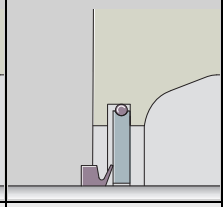
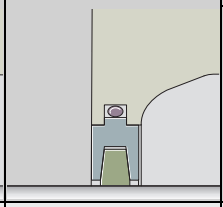
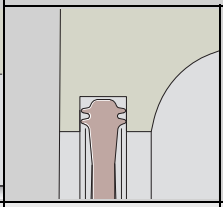
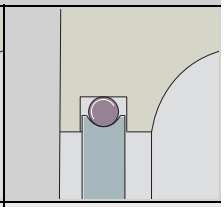
The characteristics and operating limits of the standard seals and covers are compared in an overview, see table, page 60.

## Standard seals and covers for plummer block housings SNV

| Seals and covers | | Labyrinth seal | Taconite seal |
|---|---|---|---|
| | |  |  |
| Designation | | **TSV** | **TCV** |
| Material | | Steel, FKM | Steel, NBR |
| Pieces per pack | | 1 | 1 |
| **Suitability for sealing against** | | | |
| Dust | | + | ++ |
| Fine solid particles | | + | ++ |
| Coarse solid particles | | + | ++ |
| Slivers | | ++ | ++ |
| Spray liquids | | – | ++ |
| **Operating limits** | | | |
| Long term temperature | °C | –20 to +200 (due to FKM) | –30 to +100 (due to NBR) |
| | °F | –4 to +390 (due to FKM) | –22 to +210 (due to NBR) |
| Circumferential velocity | m/s | No restriction | ≦ 12 |
| Misalignment | ° | ≦ 0,5 | ≦ 0,5 |
| Low friction | | ++ | + |
| Axial shaft displacement (suitability as non-locating bearing) | | + | + |
| Vertical arrangement | | – | – |
| Suitability for grease relubrication | | + | + |
| Suitability for oil lubrication | | – | – |
| Compatibility with sunlight | | ++ | ++ |
| **Preconditions** | | | |
| Tolerance class[1] of shaft diameter | | h8 (h9) | h8 (h9) |
| Shaft roughness | µm | Ra3,2 | Ra3,2 |

++ Highly suitable
\+ Suitable
(+) Suitable with restrictions
– Not suitable

[1] The envelope condition Ⓔ applies here.

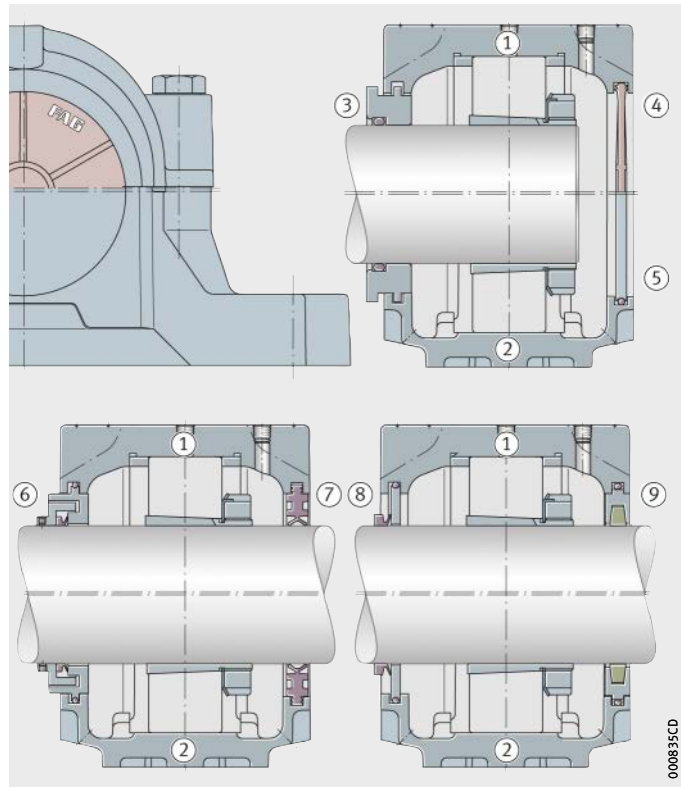
| | Double lip seal | V ring seal | Felt seal | Cover | |
|---|---|---|---|---|---|
| |  |  |  |  |  |
| | **DH** | **DHV** | **FSV** | **DKV** | **DKVT** |
| | NBR | Steel, NBR | Steel, felt, NBR | Plastic | Steel or cast iron, FKM |
| | 1 | 1 | 1 | 1 | 1 |
| | | | | | |
| | ++ | + | + | + | + |
| | ++ | + | – | + | + |
| | + | – | – | + | + |
| | + | – | + | + | + |
| | + | + | – | + | + |
| | | | | | |
| | –40 to +100<br>(due to NBR) | –30 to +100<br>(due to NBR) | –30 to +100<br>(due to NBR) | –40 to +120 | –20 to +200<br>(due to FKM) |
| | –40 to +21<br>(due to NBR) | –22 to +210<br>(due to NBR) | –22 to +210<br>(due to NBR) | –40 to +250 | –4 to +390<br>(due to FKM) |
| | max. 13 (duration 6) | max. 12 | 5 (after running-in 15) | Not applicable | Not applicable |
| | ≦ 0,5 | ≦ 0,5 | ≦ 0,5 | Not applicable | Not applicable |
| | ++ | ++ | – | Not applicable | Not applicable |
| | ++ | (+) | ++ | Not applicable | Not applicable |
| | + | (+) | – | + | + |
| | ++ | (+) | – | + | ++ |
| | (+) | – | – | – | ++ |
| | + | – | ++ | (+) | ++ |
| | | | | | |
| | h8 (h9) | h8 (h9) | h8 (h9) | Not applicable | Not applicable |
| | Ra3,2 | Ra3,2 | Ra3,2 | Not applicable | Not applicable |

## Housing configurations

The modular structure of plummer block housings SNV facilitates numerous possible combinations, *Figure 1* and *Figure 2*, page 63.

On the basis of the standard components, the following features can be varied in the housing configuration:

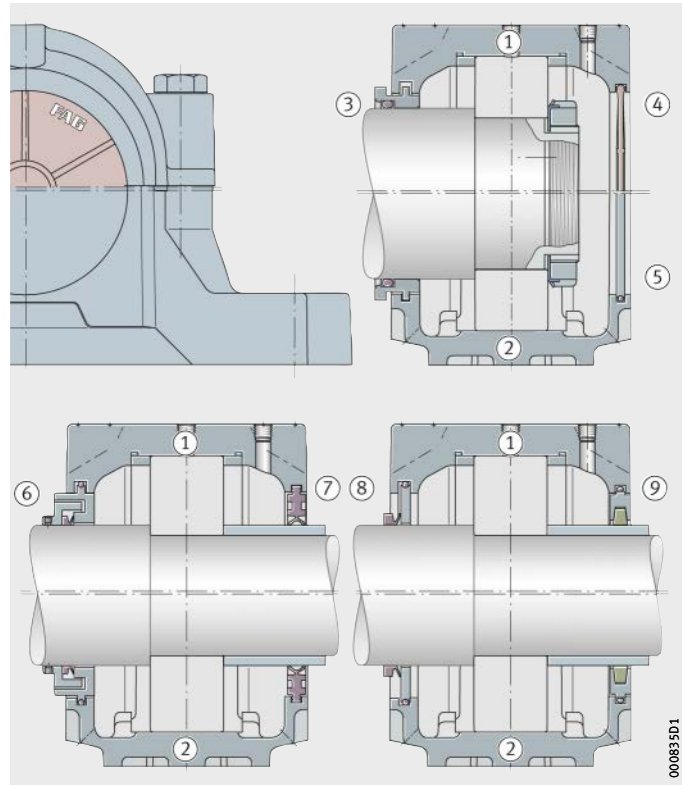
- location of bearings with a tapered bore by means of an adapter sleeve on a shaft of constant diameter or of bearings with a cylindrical bore directly on a stepped shaft
- sealing of the housing by means of a labyrinth seal, Taconite seal, double lip seal, V ring seal or felt seal
- continuous shaft or a housing closed on one side
- cover made from plastic (DKV) or cover made from steel or cast iron (DKVT)
- design of the bearing arrangement as a locating bearing arrangement or a non-locating bearing arrangement.
- spherical roller bearing in a split or unsplit design.




① Locating bearing
② Non-locating bearing

③ Labyrinth seal TSV
④ Cover DKV
⑤ Cover DKVT
⑥ Taconite seal TCV
⑦ Double lip seal DH
⑧ V ring seal DHV
⑨ Felt seal FSV

*Figure 1*
Plummer block housings SNV for bearings with tapered bore and adapter sleeve (overview of combinations)



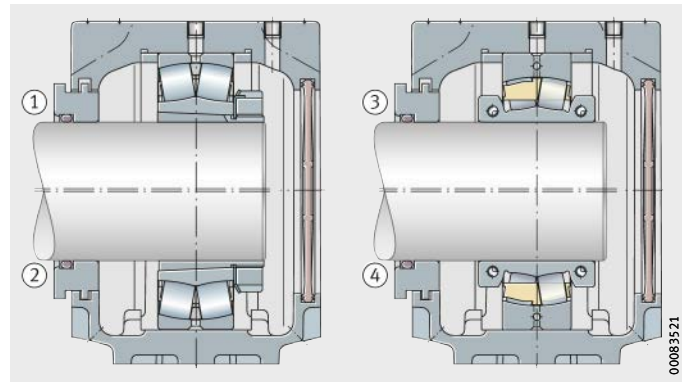

① Locating bearing
② Non-locating bearing

③ Labyrinth seal TSV
④ Cover DKV
⑤ Cover DKVT
⑥ Taconite seal TCV
⑦ Double lip seal DH
⑧ V ring seal DHV
⑨ Felt seal FSV

*Figure 2*
Plummer block housings SNV for bearings with cylindrical bore (overview of combinations)

**Mounting of split spherical roller bearings**

In the case of plummer block housings SNV, an unsplit spherical roller bearing with a tapered bore and adapter sleeve can be replaced by a split spherical roller bearing, *Figure 3*.




① Locating bearing with unsplit bearing
② Non-locating bearing with unsplit bearing
③ Locating bearing with split bearing
④ Non-locating bearing with split bearing

*Figure 3*
Plummer block housings SNV with split and unsplit spherical roller bearing

## Lubrication

Split plummer block housings SNV are principally intended for grease lubrication. The housings can, however, also be supplied in a design for oil lubrication.

### Greases

In the case of bearing operating temperatures $<$ +100 °C, bearing loads P/C $<$ 0,3 and a bearing-specific speed parameter $k_f \cdot n \cdot d_M < 700\,000\ min^{-1} \cdot mm$ ($k_f$ = 1 for self-aligning ball bearings and deep groove ball bearings, $k_f$ = 8 to 10,5 for spherical roller bearings), the most suitable grease is Arcanol MULTITOP, a lithium soap grease of NLGI grade 2 with particularly effective EP additives.

Due to their favourable flow behaviour, greases of NLGI grade 2, such as Arcanol MULTITOP and Arcanol MULTI2, are more suitable for relubrication than greases of higher consistency grades.







## Grease quantities

For initial greasing, the basic rule is that the bearing should be filled with grease to 100% and the free volume of the housing to 60%. This is the basis for the recommended grease quantities, see table. The free volume is the space that remains in the housing once the bearing, adapter sleeve, shaft and seals have been fitted.

For relubrication, minimum quantities of grease are recommended.

## Recommended grease quantities for initial greasing and relubrication

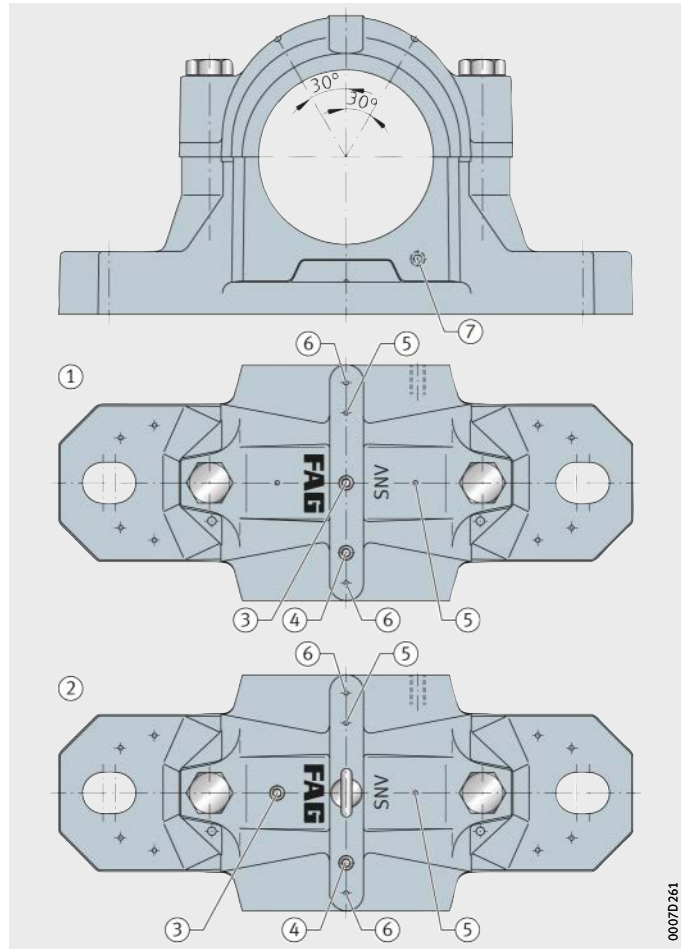
| Housing | Grease quantity | |
|---|---|---|
| | Initial greasing<br>≈ g | Relubrication (minimum quantity)<br>≈ g |
| SNV052-F | 30 | 5 |
| SNV062-F | 45 | 5 |
| SNV072-F | 65 | 10 |
| SNV080-F | 80 | 10 |
| SNV085-F | 105 | 10 |
| SNV090-F | 130 | 10 |
| SNV100-F | 180 | 15 |
| SNV110-F | 210 | 15 |
| SNV120-F | 270 | 20 |
| SNV125-F | 290 | 20 |
| SNV130-F | 330 | 20 |
| SNV140-F | 440 | 25 |
| SNV150-F | 500 | 30 |
| SNV160-F | 650 | 40 |
| SNV170-F | 700 | 45 |
| SNV180-F | 900 | 55 |
| SNV190-F | 950 | 60 |
| SNV200-F | 1 200 | 70 |
| SNV215-F | 1 400 | 80 |
| SNV230-F | 1 600 | 85 |
| SNV240-F | 1 700 | 90 |
| SNV250-F | 2 000 | 100 |
| SNV260-F | 2 000 | 120 |
| SNV270-F | 2 500 | 130 |
| SNV280-F | 2 600 | 140 |
| SNV290-F | 3 000 | 150 |
| SNV300-F | 3 100 | 160 |
| SNV320-F | 3 700 | 200 |
| SNV340-F | 4 500 | 240 |

For a speed parameter $n \cdot d_M < 50\,000\ min^{-1} \cdot mm$ and a non-contact seal (labyrinth seal TSV), where the grease should also perform a sealing function, the housing and seal cavities should be filled to 100%.

**Relubrication**

Where relubrication is carried out on bearings with a circumferential lubrication groove, the grease is introduced into the housing via the central lubrication hole, *Figure 4*, ③. In this type of relubrication, the grease acts directly on the bearing raceway.

Where relubrication is carried out on bearings without a circumferential lubrication groove, the grease is introduced laterally into the housing, *Figure 4*, ④. In this case, the housing cavities on the side with the lubrication nipple must be filled completely with grease so that the relubrication grease can act immediately on the bearing.




① SNV052-F to SNV200-F
② SNV215-F to SNV340-F

③ Central lubrication hole, for bearings with lubrication groove
④ Lateral lubrication hole, for bearings without lubrication groove
⑤ Marked positions for further lubrication holes for lubrication of the bearing
⑥ Marked positions for further lubrication holes for lubrication of seals
⑦ Grease outlet hole

*Figure 4*
Positions for relubrication







In both cases, the lubrication hole present (threaded hole M10×1) is prepared by removing the screw plug and permanently inserting one of the lubrication nipples supplied at this point. As an alternative to the lubrication holes already present, lubrication holes may be introduced at other positions as indicated by the cast-in pilot holes, *Figure 4*, page 66, ⑤.

Lubrication holes can be introduced at further marked positions for the relubrication of labyrinth seals, *Figure 4*, page 66, ⑥.

For relubrication, minimum quantities of grease are recommended, see table, page 65. In order to prevent overgreasing, the screw plug in the grease outlet hole in the lower housing section must be removed while relubrication is being carried out, *Figure 4*, page 66, ⑦. This allows superfluous grease to escape. This must be observed in particular when using double lip seals DH. Otherwise, there is a risk that the double lip seal with be pressed out of the housing.

The grease outlet hole must then be closed off again using the screw plug.

If unfavourable environmental conditions are present, there is therefore a risk of contaminant ingress into the housing when the grease outlet holes are opened.

Dimensions

The lubrication and grease outlet holes are closed off using screw plugs to DIN 906.

Lubrication nipples with a dust cap are supplied as followed:

- button head lubrication nipples to DIN 3404-M10×1
- taper type lubrication nipples to DIN 71412-AM10×1.

The size of the grease outlet hole is dependent on the size of the housing, see table.

**Dimensions of threaded holes**

| Housing | Thread for | |
|---|---|---|
| | grease outlet hole | relubrication hole |
| SNV052-F – SNV090-F | M10×1 | M10×1 |
| SNV100-F – SNV125-F | M14×1,5 | |
| SNV130-F – SNV340-F | M20×1,5 | |

### Oil lubrication

Split plummer block housings SNV are suitable not only for grease lubrication but also for oil bath lubrication and recirculating oil lubrication. The housings have a large internal cavity with oil collector pockets in the lower section. Due to the housing geometry, it is possible to introduce connection holes for oil inlet, oil outlet, an oil sight glass and a temperature sensor.

### Dimensions of connection holes for oil lubrication

The recommended dimensions, see tables and *Figure 5*, page 69, are valid for oil bath lubrication and recirculating oil lubrication.

If recirculating oil lubrication is used, the hole $M_2$ is intended for the oil inlet function. If oil bath lubrication is used, a venting device can be installed for venting of the housing.

If oil bath lubrication is used, the hole $M_4$ is intended for the oil sight glass. If recirculating oil lubrication is used, the hole can be used for the oil outlet.

### Recommended dimensions of connnection holes for oil inlet and oil outlet

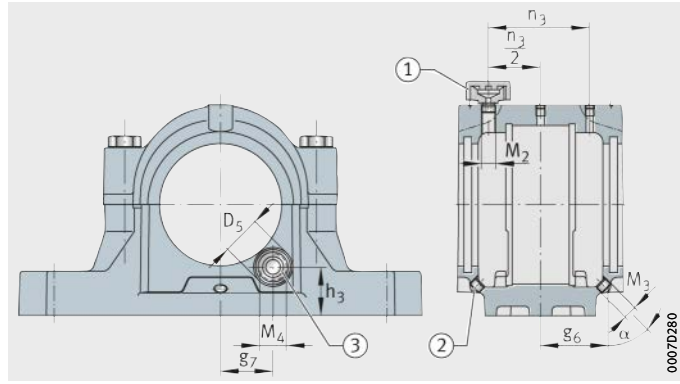
| Housing | Connection for | | | | |
|---|---|---|---|---|---|
| | oil inlet | | oil outlet | | |
| | $M_2$ | $n_3/2$ mm | $M_3$ | $\alpha$ ° | g6 mm |
| SNV100-F | G1/4 | 31 | M10×1 | 50 | 44 |
| SNV110-F | G1/4 | 33,5 | M10×1 | 50 | 46 |
| SNV120-F | G1/4 | 35,5 | M10×1 | 50 | 49 |
| SNV125-F | G1/4 | 28,5 | M10×1 | 50 | 49 |
| SNV130-F | G1/4 | 38 | M10×1 | 50 | 51,5 |
| SNV140-F | G1/4 | 40,5 | M10×1 | 60 | 57,5 |
| SNV150-F | G1/4 | 42,5 | M10×1 | 60 | 60 |
| SNV160-F | G1/4 | 45 | M10×1 | 60 | 62,5 |
| SNV170-F | G1/4 | 46,5 | M10×1 | 60 | 64 |
| SNV180-F | G1/4 | 19,5 | M10×1 | 60 | 69 |
| SNV190-F | G1/4 | 49,5 | M10×1 | 60 | 68,5 |
| SNV200-F | G1/4 | 55,5 | M10×1 | 60 | 77,5 |
| SNV215-F | G1/4 | 58,5 | M10×1 | 60 | 80 |
| SNV230-F | G1/4 | 61 | M10×1 | 60 | 83 |
| SNV240-F | G1/4 | 60 | M10×1 | 60 | 81,5 |
| SNV250-F | G1/4 | 65,5 | M10×1 | 60 | 89 |
| SNV260-F | G1/4 | 62,5 | M10×1 | 60 | 84 |
| SNV270-F | G1/4 | 71,5 | M10×1 | 60 | 86,5 |
| SNV280-F | G1/4 | 68 | M10×1 | 60 | 92,5 |
| SNV290-F | G1/4 | 76 | M10×1 | 60 | 102,5 |
| SNV300-F | G1/4 | 73 | M10×1 | 60 | 99,5 |
| SNV320-F | G1/4 | 77 | M10×1 | 60 | 105,5 |
| SNV340-F | G1/4 | 81 | M10×1 | 60 | 109,5 |





## Recommended dimensions of connection holes for oil sight glass

| Housing | Connection for oil sight glass | | | |
|---|---|---|---|---|
| | $M_4$ | $g_7$ mm | $h_3$ | $D_5$ |
| SNV100-F | G3/8 | 33 | 31 | 24 |
| SNV110-F | G3/8 | 35 | 28 | 24 |
| SNV120-F | G3/8 | 38 | 35 | 24 |
| SNV125-F | G3/8 | 44 | 24 | 24 |
| SNV130-F | G1/2 | 43 | 28,5 | 30 |
| SNV140-F | G1/2 | 45 | 40 | 30 |
| SNV150-F | G1/2 | 47 | 38 | 30 |
| SNV160-F | G1/2 | 50 | 39 | 30 |
| SNV170-F | G3/4 | 55 | 46 | 36 |
| SNV180-F | G3/4 | 57 | 43 | 36 |
| SNV190-F | G3/4 | 48 | 45 | 36 |
| SNV200-F | G3/4 | 62 | 50 | 36 |
| SNV215-F | G3/4 | 67 | 58 | 36 |
| SNV230-F | G3/4 | 70 | 60 | 36 |
| SNV240-F | G3/4 | 61 | 60 | 36 |
| SNV250-F | G3/4 | 75 | 55 | 36 |
| SNV260-F | G3/4 | 65 | 65 | 36 |
| SNV270-F | G3/4 | 81 | 55 | 36 |
| SNV280-F | G3/4 | 70 | 60 | 36 |
| SNV290-F | G3/4 | 87 | 58 | 36 |
| SNV300-F | G3/4 | 75 | 70 | 36 |
| SNV320-F | G3/4 | 80 | 73 | 36 |
| SNV340-F | G3/4 | 95 | 75 | 36 |




① Venting device
② Screw plug
③ Oil sight glass

*Figure 5*
Dimensions of connection holes

**Design for oil lubrication**

Plummer block housings SNV can be supplied by agreement in a design for oil lubrication. Housings of this design already have the connection holes for oil inlet, oil outlet and an oil sight glass to the recommended dimensions.

The scope of delivery of the design for oil lubrication includes:

- 1 oil sight glass OSGL
- 1 venting device VENT
- 2 screw plugs VSB.

Housings with connection holes according to individual customer specifications can also be supplied once their feasibility has been checked.

**Sealing of the shaft**

When using the double lip seal DH, a certain amount of oil leakage must be expected, which is unavoidable with seals that are split and not spring-loaded.

In order to limit oil leakage to a small quantity, the shaft in the seal area should have the following characteristics:

- hardness at least 55 HRC
- ground free from spiral marks with a surface roughness of Ra 0,2 µm to Ra 0,5 µm.

A technically oiltight design is only possible with a spring-loaded, unsplit rotary shaft seal.

**Sealing of the housing body**

The parting line between the upper and lower sections of the housing must be sealed with a thin layer of a commercial sealant (with permanent elasticity). In the case of a housing closed on one side, the base of the groove in which the cover is inserted must be brushed with sealant.

**Guidelines on oil bath lubrication**

When using oil bath lubrication, a minimum oil level must be ensured. This corresponds to the dimension h3, see table, page 69, and *Figure 5*, page 69.



When using oil bath lubrication, venting of the housing is absolutely necessary. For example, the filling hole can be closed off using a bleed screw.

## Designation structure

The designation structure for split plummer block housings SNV and accessories is shown in the tables and *Figure 6* to *Figure 9*, page 73.







### Designation structure of plummer block housings SNV

| Feature | | Code | Description |
|---|---|---|---|
| ① | Series | SNV | Split plummer block housings SNV |
| ② | Bearing outside diameter | 340 | Outside diameter 340 mm |
| ③ | Housing design | F | Threaded holes for grease relubrication and grease outlet |
| ④ | Housing material | L | Flake graphite cast iron (standard) |
| | | D | Spheroidal graphite cast iron |




*Figure 6*
Designation structure of plummer block housings SNV, example

## Designation structure of standard seals

| Feature | | Code | Description |
|---|---|---|---|
| ① | Series | TSV | Labyrinth seal |
| | | TCV | Taconite seal |
| | | DH | Double lip seal |
| | | DHV | V-ring seal |
| | | FSV | Felt seal |
| ② | Diameter series of bearing, bearing bore | 2 | Bearings of diameter series 2, cylindrical bearing bore |
| | | 3 | Bearings of diameter series 3, cylindrical bearing bore |
| | | 5 | Bearings of diameter series 2, tapered bearing bore and adapter sleeve |
| | | 6 | Bearings of diameter series 3, tapered bearing bore and adapter sleeve |
| ③ | Bore code of bearing | 08 | Bore diameter (8 · 5) mm = 40 mm |
| ④ | Shaft diameter | No further indications | Standard shaft diameter of dimension series |
| | | X105 | Inch size shaft diameter: 1 inch + 5 · $^{1}/_{16}$ inch = $1\,^{5}/_{16}$ inch |




*Figure 7*
Designation structure of standard seals, examples

## Designation structure of covers

| Feature | | Code | Description |
|---|---|---|---|
| ① | Series | DKV | Cover made from plastic |
| | | DKVT | Cover made from steel and FKM |
| ② | Housing size | 080 | Cover suitable for housing SNV080 |




*Figure 8*
Designation structure of covers, examples

## Designation structure of locating rings

| Feature | | Code | Description |
|---|---|---|---|
| ① | Series | FRM | Locating ring |
| ② | Outside diameter | 80 | Outside diameter 80 mm |
| ③ | Width | 10,5 | Width 10,5 mm |




*Figure 9*
Designation structure of locating rings, example

## Ordering examples

When a split plummer block housing SNV is ordered, the housing designation only describes the housing body. The other components such as seals, covers or locating rings must be ordered separately in the specific design required. The rolling bearing and, if necessary, the adapter sleeve must also be ordered separately.

Plummer block housings SNV with a bearing fitted give non-locating bearing arrangements. These can be converted into locating bearing arrangements through the additional insertion of locating rings FRM.

The ordering examples show the construction of orders for selected housing combinations and the appropriate bearings. The allocation of housings, bearings and accessories for all housing sizes is shown in the dimension tables.

**Example 1** Plummer block housing SNV made from flake graphite cast iron, closed on one side, self-aligning ball bearing 2210-K-TVH-C3 as locating bearing, location by means of an adapter sleeve on a shaft diameter of 45 mm, double lip seal.

| | | | |
|---|---|---|---|
| Order | 1 | plummer block housing | SNV090-F-L |
| | 1 | self-aligning ball bearing | 2210-K-TVH-C3 |
| | 1 | adapter sleeve | H310 |
| | 2 | locating rings | FRM90/9 |
| | 1 | cover | DKV090 |
| | 1 | double lip seal | DH510 |

**Example 2** Plummer block housing SNV made from flake graphite cast iron, for continuous shaft, split spherical roller bearing 222SM70-TVPA as locating bearing, double lip seal.

| | | | |
|---|---|---|---|
| Order | 1 | plummer block housing | SNV140-F-L |
| | 1 | split spherical roller bearing | 222SM70-TVPA |
| | 2 | locating rings | FRM140/12,5 |
| | 2 | double lip seals | DH516 |

**Example 3** Plummer block housing SNV made from spheroidal graphite cast iron, closed on one side, spherical roller bearing 23218-E1-TVPB as non-locating bearing, felt seal.

| | | | |
|---|---|---|---|
| Order | 1 | plummer block housing | SNV160-F-D |
| | 1 | spherical roller bearing | 23218-E1-TVPB |
| | 1 | shaft nut | KM18 |
| | 1 | tab washer | MB18 |
| | 1 | cover | DKV160 |
| | 1 | felt seal | FSV218 |

## Design and safety guidelines
## Load carrying capacity

Guide values have been determined for the rupture load of plummer block housings SNV and the maximum load carrying capacity of connecting screws for the upper and lower housing sections, *Figure 10* and table, page 76. The guide values are valid for purely static loading.

The guide values for housing rupture load are valid for the standard housing material flake graphite cast iron (suffix L). For spheroidal graphite cast iron (suffix D) a factor of 1,6 should be applied.

The guide values in the table, page 76, are only valid if the flatness of the mounting surface in accordance with DIN EN ISO 1101 corresponds to the tolerance grade IT8 in accordance with DIN EN ISO 286-1 (measured across the diagonal). A precondition for supporting loads is that the housing base surface is completely and rigidly supported.

When determining the permissible static load, safety factors must be applied:

- safety factor of 6 relative to the housing rupture load
- safety factor of 3 relative to the maximum load carrying capacity of the connecting screws.

The housing must not be subjected to an axial load of more than $^{2}/_{3}$ of the housing rupture load $F_{180°}$.

If the housing is subjected to axial load, the permissible axial load of the bearing fitted must be taken into consideration. If the bearing is located on the shaft using an adapter sleeve, the axial retaining force of the bearing and adapter sleeve must also be taken into consideration.

If the load direction is between 55° and 120° or axial load is present, we recommend that the housings should be secured in the load direction by means of stops or dowels.

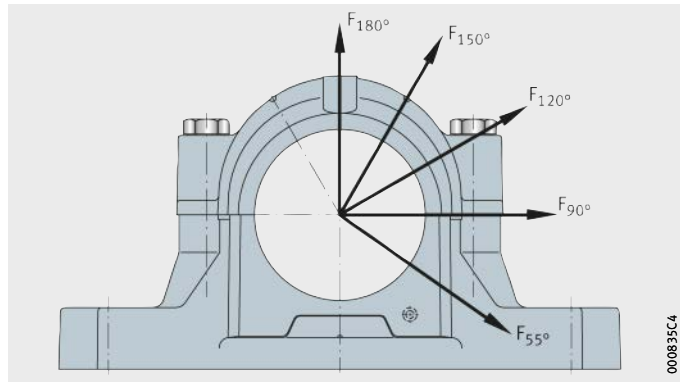



*Figure 10*
Load directions F
for the guide values
for the housing rupture load and
the maximum load carrying capacity
of the connecting screws

| Housing Designation | Housing rupture load in load direction F Housing made from flake graphite cast iron | | | | | Connecting screws | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Thread to DIN 13 | Tightening torque[1] | Maximum load carrying capacity of both screws with contact between parting surfaces in load direction | | |
| | 55° kN | 90° kN | 120° kN | 150° kN | 180° kN | Material 8.8 | Nm | 120° kN | 150° kN | 180° kN |
| SNV052-F-L | 160 | 95 | 70 | 60 | 80 | M10 | 51 | 60 | 35 | 30 |
| SNV062-F-L | 170 | 100 | 80 | 65 | 85 | M10 | 51 | 60 | 35 | 30 |
| SNV072-F-L | 190 | 110 | 85 | 80 | 95 | M10 | 51 | 60 | 35 | 30 |
| SNV080-F-L | 210 | 130 | 95 | 85 | 105 | M10 | 51 | 60 | 35 | 30 |
| SNV085-F-L | 225 | 140 | 100 | 90 | 120 | M10 | 51 | 60 | 35 | 30 |
| SNV090-F-L | 265 | 160 | 120 | 105 | 130 | M10 | 51 | 60 | 35 | 30 |
| SNV100-F-L | 280 | 170 | 125 | 120 | 140 | M12 | 87 | 80 | 45 | 40 |
| SNV110-F-L | 300 | 180 | 130 | 125 | 150 | M12 | 87 | 80 | 45 | 40 |
| SNV120-F-L | 335 | 200 | 150 | 130 | 170 | M12 | 87 | 80 | 45 | 40 |
| SNV125-F-L | 335 | 200 | 150 | 130 | 170 | M12 | 87 | 80 | 45 | 40 |
| SNV130-F-L | 400 | 250 | 180 | 150 | 200 | M12 | 87 | 80 | 45 | 40 |
| SNV140-F-L | 425 | 265 | 190 | 170 | 210 | M12 | 87 | 80 | 45 | 40 |
| SNV150-F-L | 475 | 280 | 200 | 180 | 235 | M12 | 87 | 80 | 45 | 40 |
| SNV160-F-L | 530 | 335 | 250 | 210 | 265 | M16 | 215 | 180 | 100 | 90 |
| SNV170-F-L | 560 | 355 | 265 | 225 | 280 | M16 | 215 | 180 | 100 | 90 |
| SNV180-F-L | 630 | 375 | 280 | 250 | 300 | M20 | 430 | 260 | 150 | 130 |
| SNV190-F-L | 630 | 375 | 280 | 250 | 300 | M20 | 430 | 260 | 150 | 130 |
| SNV200-F-L | 670 | 400 | 315 | 280 | 335 | M20 | 430 | 260 | 150 | 130 |
| SNV215-F-L | 800 | 450 | 355 | 315 | 400 | M20 | 430 | 260 | 150 | 130 |
| SNV230-F-L | 900 | 530 | 400 | 355 | 450 | M24 | 740 | 360 | 210 | 180 |
| SNV240-F-L | 1 000 | 600 | 450 | 400 | 500 | M24 | 740 | 360 | 210 | 180 |
| SNV250-F-L | 1 060 | 630 | 475 | 425 | 530 | M24 | 740 | 360 | 210 | 180 |
| SNV260-F-L | 1 180 | 710 | 530 | 475 | 600 | M24 | 740 | 360 | 210 | 180 |
| SNV270-F-L | 1 180 | 710 | 530 | 475 | 600 | M24 | 740 | 360 | 210 | 180 |
| SNV280-F-L | 1 320 | 750 | 600 | 530 | 630 | M24 | 740 | 360 | 210 | 180 |
| SNV290-F-L | 1 400 | 850 | 630 | 560 | 710 | M24 | 740 | 360 | 210 | 180 |
| SNV300-F-L | 1 500 | 900 | 670 | 600 | 750 | M24 | 740 | 360 | 210 | 180 |
| SNV320-F-L | 1 700 | 1 000 | 750 | 670 | 850 | M24 | 740 | 360 | 210 | 180 |
| SNV340-F-L | 1 900 | 1 120 | 850 | 750 | 950 | M30 | 1 450 | 640 | 370 | 320 |

Housings made from spheroidal graphite cast iron (suffix D) have a housing rupture load 1,6 times higher than that of housings made from flake graphite cast iron.

[1] The tightening torques are maximum values with 90% utilisation of the yield stress of the screw material and a friction coefficient of 0,14. We recommend tightening the screws to 70% of these values.

## Eye bolts



In the case of housings of size SNV215 and larger, the upper housing section has an eye bolt in accordance with DIN 580. This is intended as a locating point for mounting and dismounting of the housing. The load carrying capacity of the eye bolt allows lifting of the housing including a bearing fitted in the housing.



The eye bolt must always be screwed fully into the housing.

The eye bolt must not be subjected to a mass greater than that of the housing together with the bearing fitted in the housing.

## Foot screws



Foot screws are used for screw mounting of the housing to the mounting surface. They are not included in the scope of delivery of the housings.

The appropriate screw size for each housing is stated, see dimension tables.

The associated tightening torques are stated for screws with a metric thread in accordance with DIN 13, DIN 962 and DIN ISO 965-2, see table, page 42.

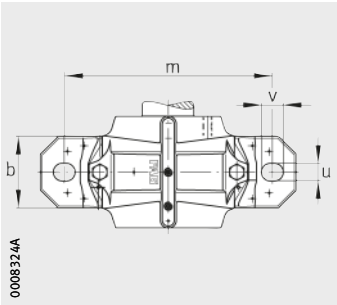
## Accuracy

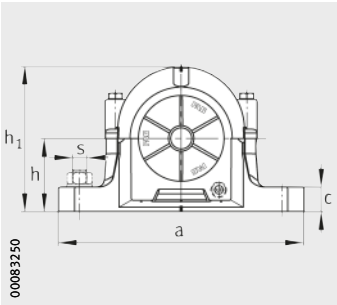
The bearing seat in split plummer block housings SNV is machined to the tolerance class G7. The tolerance indicated is valid in the delivered condition, i. e. before the screws connecting the upper and lower sections are loosened.

By agreement, the housings can also be supplied with other tolerance classes for the bearing seat, see section Tolerance class of bearing seat, page 47.

# Plummer block housings

SNV, split
For bearings with tapered bore and adapter sleeve
Metric shaft

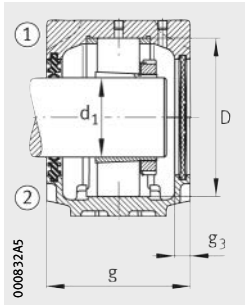


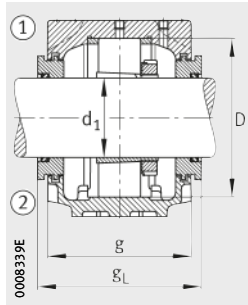

**Dimension table** · Dimensions in mm

| Shaft | Housing Dimensions | | | | | | | | | | | | | Bearing and accessories | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_1$ | h | $h_1$ | g | b | c | a | m | v | u | s | | D | $g_3$ | Bearing | Adapter sleeve |
| mm | | | | | | | | | | mm | *inch* | | | | |
| **20** | 40 | 75 | 70 | 46 | 19 | 165 | 130 | 20 | 15 | M12 | *1/2* | 52 | 10,5 | **1205-K** | H205 |
| **20** | 50 | 91 | 75 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | *1/2* | 62 | 10,5 | **1305-K** | H305 |
| **20** | 40 | 75 | 70 | 46 | 19 | 165 | 130 | 20 | 15 | M12 | *1/2* | 52 | 10,5 | **20205-K** | H205 |
| **20** | 40 | 75 | 70 | 46 | 19 | 165 | 130 | 20 | 15 | M12 | *1/2* | 52 | 10,5 | **2205-K** | H305 |
| **20** | 40 | 75 | 70 | 46 | 19 | 165 | 130 | 20 | 15 | M12 | *1/2* | 52 | 10,5 | **22205..-K** | H305 |
| **20** | 50 | 91 | 75 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | *1/2* | 62 | 10,5 | **2305-K** | H2305 |
| **25** | 50 | 91 | 75 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | *1/2* | 62 | 10,5 | **1206-K** | H206 |
| **25** | 50 | 97 | 80 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | *1/2* | 72 | 10,5 | **1306-K** | H306 |
| **25** | 50 | 91 | 75 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | *1/2* | 62 | 10,5 | **20206-K** | H206 |
| **25** | 50 | 91 | 75 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | *1/2* | 62 | 10,5 | **2206-K** | H306 |
| **25** | 50 | 91 | 75 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | *1/2* | 62 | 10,5 | **22206..-K** | H306 |
| **25** | 50 | 97 | 80 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | *1/2* | 72 | 10,5 | **2306-K** | H2306 |
| **30** | 50 | 97 | 80 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | *1/2* | 72 | 10,5 | **1207-K** | H207 |
| **30** | 60 | 112 | 85 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | *1/2* | 80 | 10,5 | **1307-K** | H307 |
| **30** | 50 | 97 | 80 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | *1/2* | 72 | 10,5 | **20207-K** | H207 |
| **30** | 60 | 112 | 85 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | *1/2* | 80 | 10,5 | **21307..-K** | H307 |
| **30** | 50 | 97 | 80 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | *1/2* | 72 | 10,5 | **2207-K** | H307 |
| **30** | 50 | 97 | 80 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | *1/2* | 72 | 10,5 | **22207..-K** | H307 |
| **35** | 60 | 112 | 85 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | *1/2* | 80 | 10,5 | **2307-K** | H2307 |
| **35** | 60 | 112 | 85 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | *1/2* | 80 | 10,5 | **1208-K** | H208 |
| **35** | 60 | 117 | 100 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | *1/2* | 90 | 12,5 | **1308-K** | H308 |
| **35** | 60 | 112 | 85 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | *1/2* | 80 | 10,5 | **20208-K** | H208 |
| **35** | 60 | 117 | 100 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | *1/2* | 90 | 12,5 | **21308..-K** | H308 |
| **35** | 60 | 112 | 85 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | *1/2* | 80 | 10,5 | **2208-K** | H308 |
| **35** | 60 | 112 | 85 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | *1/2* | 80 | 10,5 | **22208..-K** | H308 |
| **35** | 60 | 117 | 100 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | *1/2* | 90 | 12,5 | **22308..-K** | H2308 |
| **35** | 60 | 117 | 100 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | *1/2* | 90 | 12,5 | **2308-K** | H2308 |

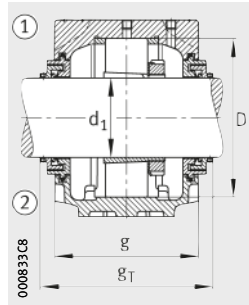
① Locating bearing; ② Non-locating bearing



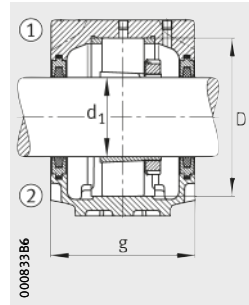

Double lip seal DH
Cover DKV




Labyrinth seal TSV




Taconite seal TCV




Felt seal FSV



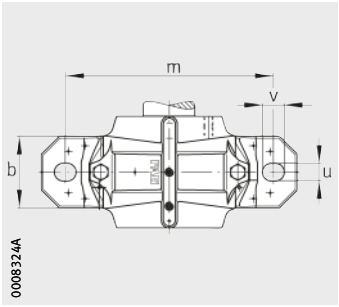


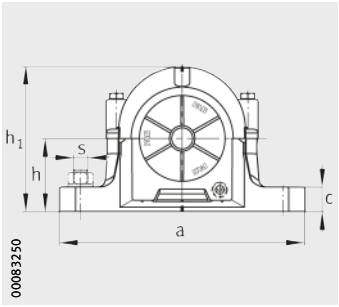


| | | | | | | | | | | Housing | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Locating ring<br><br>Quantity 2 | Felt seal | Double lip seal | Labyrinth seal | | Taconite seal | | V ring seal | | Cover | Mass<br>m<br>≈ kg | Designation |
| | | | | $g_L$<br>mm | | $g_T$<br>mm | | $g_V$<br>mm | | | |
| FRM52/6 | FSV505 | DH505 | TSV505 | 83 | – | – | DHV505 | 76 | DKV052 | 1,3 | **SNV052-F-L** |
| FRM62/6,5 | FSV605 | DH605 | TSV605 | 88 | – | – | DHV605 | 81 | DKV062 | 1,9 | **SNV062-F-L** |
| FRM52/6 | FSV505 | DH505 | TSV505 | 83 | – | – | DHV505 | 76 | DKV052 | 1,3 | **SNV052-F-L** |
| FRM52/4,5 | FSV505 | DH505 | TSV505 | 83 | – | – | DHV505 | 76 | DKV052 | 1,3 | **SNV052-F-L** |
| FRM52/4,5 | FSV505 | DH505 | TSV505 | 83 | – | – | DHV505 | 76 | DKV052 | 1,3 | **SNV052-F-L** |
| FRM62/3 | FSV605 | DH605 | TSV605 | 88 | – | – | DHV605 | 81 | DKV062 | 1,9 | **SNV062-F-L** |
| FRM62/7 | FSV506 | DH506 | TSV506 | 88 | – | – | DHV506 | 81 | DKV062 | 1,9 | **SNV062-F-L** |
| FRM72/7 | FSV606 | DH606 | TSV606 | 93 | TCV606 | 117 | DHV606 | 86 | DKV072 | 2 | **SNV072-F-L** |
| FRM62/7 | FSV506 | DH506 | TSV506 | 88 | – | – | DHV506 | 81 | DKV062 | 1,9 | **SNV062-F-L** |
| FRM62/5 | FSV506 | DH506 | TSV506 | 88 | – | – | DHV506 | 81 | DKV062 | 1,9 | **SNV062-F-L** |
| FRM62/5 | FSV506 | DH506 | TSV506 | 88 | – | – | DHV506 | 81 | DKV062 | 1,9 | **SNV062-F-L** |
| FRM72/3 | FSV606 | DH606 | TSV606 | 93 | TCV606 | 117 | DHV606 | 86 | DKV072 | 2 | **SNV072-F-L** |
| FRM72/8 | FSV507 | DH507 | TSV507 | 93 | – | – | DHV507 | 86 | DKV072 | 2 | **SNV072-F-L** |
| FRM80/9 | FSV607 | DH607 | TSV607 | 98 | TCV607 | 122 | DHV607 | 91 | DKV080 | 2,9 | **SNV080-F-L** |
| FRM72/8 | FSV507 | DH507 | TSV507 | 93 | – | – | DHV507 | 86 | DKV072 | 2 | **SNV072-F-L** |
| FRM80/9 | FSV607 | DH607 | TSV607 | 98 | TCV607 | 122 | DHV607 | 91 | DKV080 | 2,9 | **SNV080-F-L** |
| FRM72/5 | FSV507 | DH507 | TSV507 | 93 | – | – | DHV507 | 86 | DKV072 | 2 | **SNV072-F-L** |
| FRM72/5 | FSV507 | DH507 | TSV507 | 93 | – | – | DHV507 | 86 | DKV072 | 2 | **SNV072-F-L** |
| FRM80/4 | FSV607 | DH607 | TSV607 | 98 | TCV607 | 122 | DHV607 | 91 | DKV080 | 2,9 | **SNV080-F-L** |
| FRM80/10,5 | FSV508 | DH508 | TSV508 | 98 | TCV508 | 122 | DHV508 | 91 | DKV080 | 2,9 | **SNV080-F-L** |
| FRM90/9 | FSV608 | DH608 | TSV608 | 114 | TCV608 | 136 | DHV608 | 104 | DKV090 | 3,1 | **SNV090-F-L** |
| FRM80/10,5 | FSV508 | DH508 | TSV508 | 98 | TCV508 | 122 | DHV508 | 91 | DKV080 | 2,9 | **SNV080-F-L** |
| FRM90/9 | FSV608 | DH608 | TSV608 | 114 | TCV608 | 136 | DHV608 | 104 | DKV090 | 3,1 | **SNV090-F-L** |
| FRM80/8 | FSV508 | DH508 | TSV508 | 98 | TCV508 | 122 | DHV508 | 91 | DKV080 | 2,9 | **SNV080-F-L** |
| FRM80/8 | FSV508 | DH508 | TSV508 | 98 | TCV508 | 122 | DHV508 | 91 | DKV080 | 2,9 | **SNV080-F-L** |
| FRM90/4 | FSV608 | DH608 | TSV608 | 114 | TCV608 | 136 | DHV608 | 104 | DKV090 | 3,1 | **SNV090-F-L** |
| FRM90/4 | FSV608 | DH608 | TSV608 | 114 | TCV608 | 136 | DHV608 | 104 | DKV090 | 3,1 | **SNV090-F-L** |

# Plummer block housings

SNV, split
For bearings with tapered bore and adapter sleeve
Metric shaft

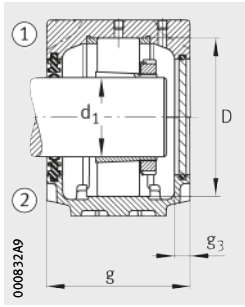


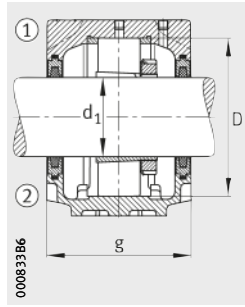

**Dimension table** (continued) · Dimensions in mm

| Shaft | Housing Dimensions | | | | | | | | | | | | | Bearing and accessories | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_1$ | h | $h_1$ | g | b | c | a | m | v | u | s | | D | $g_3$ | Bearing | Adapter sleeve |
| mm | | | | | | | | | | mm | *inch* | | | | |
| **40** | 60 | 114 | 87 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | 1/2 | 85 | 12,5 | **1209-K** | H209 |
| **40** | 70 | 133 | 105 | 70 | 28 | 255 | 210 | 23 | 18 | M16 | 5/8 | 100 | 12,5 | **1309-K** | H309 |
| **40** | 60 | 114 | 87 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | 1/2 | 85 | 12,5 | **20209-K** | H209 |
| **40** | 70 | 133 | 105 | 70 | 28 | 255 | 210 | 23 | 18 | M16 | 5/8 | 100 | 12,5 | **21309..-K** | H309 |
| **40** | 60 | 114 | 87 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | 1/2 | 85 | 12,5 | **2209-K** | H309 |
| **40** | 60 | 114 | 87 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | 1/2 | 85 | 12,5 | **22209..-K** | H309 |
| **40** | 70 | 133 | 105 | 70 | 28 | 255 | 210 | 23 | 18 | M16 | 5/8 | 100 | 12,5 | **22309..-K** | H2309 |
| **40** | 70 | 133 | 105 | 70 | 28 | 255 | 210 | 23 | 18 | M16 | 5/8 | 100 | 12,5 | **2309-K** | H2309 |
| **45** | 60 | 117 | 100 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | 1/2 | 90 | 12,5 | **1210-K** | H210 |
| **45** | 70 | 139 | 110 | 70 | 30 | 255 | 210 | 23 | 18 | M16 | 5/8 | 110 | 12,5 | **1310-K** | H310 |
| **45** | 60 | 117 | 100 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | 1/2 | 90 | 12,5 | **20210-K** | H210 |
| **45** | 70 | 139 | 110 | 70 | 30 | 255 | 210 | 23 | 18 | M16 | 5/8 | 110 | 12,5 | **21310..-K** | H310 |
| **45** | 60 | 117 | 100 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | 1/2 | 90 | 12,5 | **2210-K** | H310 |
| **45** | 60 | 117 | 100 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | 1/2 | 90 | 12,5 | **22210..-K** | H310 |
| **45** | 70 | 139 | 110 | 70 | 30 | 255 | 210 | 23 | 18 | M16 | 5/8 | 110 | 12,5 | **22310..-K** | H2310 |
| **45** | 70 | 139 | 110 | 70 | 30 | 255 | 210 | 23 | 18 | M16 | 5/8 | 110 | 12,5 | **2310-K** | H2310 |
| **50** | 70 | 133 | 105 | 70 | 28 | 255 | 210 | 23 | 18 | M16 | 5/8 | 100 | 12,5 | **1211-K** | H211 |
| **50** | 80 | 155 | 115 | 80 | 30 | 275 | 230 | 23 | 18 | M16 | 5/8 | 120 | 12,5 | **1311-K** | H311 |
| **50** | 70 | 133 | 105 | 70 | 28 | 255 | 210 | 23 | 18 | M16 | 5/8 | 100 | 12,5 | **20211-K** | H211 |
| **50** | 80 | 155 | 115 | 80 | 30 | 275 | 230 | 23 | 18 | M16 | 5/8 | 120 | 12,5 | **20311-K** | H311 |
| **50** | 80 | 155 | 115 | 80 | 30 | 275 | 230 | 23 | 18 | M16 | 5/8 | 120 | 12,5 | **21311..-K** | H311 |
| **50** | 70 | 133 | 105 | 70 | 28 | 255 | 210 | 23 | 18 | M16 | 5/8 | 100 | 12,5 | **2211-K** | H311 |
| **50** | 70 | 133 | 105 | 70 | 28 | 255 | 210 | 23 | 18 | M16 | 5/8 | 100 | 12,5 | **22211..-K** | H311 |
| **50** | 80 | 155 | 115 | 80 | 30 | 275 | 230 | 23 | 18 | M16 | 5/8 | 120 | 12,5 | **22311..-K** | H2311 |
| **50** | 80 | 155 | 115 | 80 | 30 | 275 | 230 | 23 | 18 | M16 | 5/8 | 120 | 12,5 | **2311-K** | H2311 |
| **55** | 70 | 139 | 110 | 70 | 30 | 255 | 210 | 23 | 18 | M16 | 5/8 | 110 | 12,5 | **1212-K** | H212 |
| **55** | 80 | 161 | 120 | 80 | 30 | 280 | 230 | 23 | 18 | M16 | 5/8 | 130 | 12,5 | **1312-K** | H312 |
| **55** | 70 | 139 | 110 | 70 | 30 | 255 | 210 | 23 | 18 | M16 | 5/8 | 110 | 12,5 | **20212-K** | H212 |
| **55** | 80 | 161 | 120 | 80 | 30 | 280 | 230 | 23 | 18 | M16 | 5/8 | 130 | 12,5 | **20312-K** | H312 |
| **55** | 80 | 161 | 120 | 80 | 30 | 280 | 230 | 23 | 18 | M16 | 5/8 | 130 | 12,5 | **21312..-K** | H312 |
| **55** | 70 | 139 | 110 | 70 | 30 | 255 | 210 | 23 | 18 | M16 | 5/8 | 110 | 12,5 | **2212-K** | H312 |
| **55** | 70 | 139 | 110 | 70 | 30 | 255 | 210 | 23 | 18 | M16 | 5/8 | 110 | 12,5 | **22212..-K** | H312 |
| **55** | 80 | 161 | 120 | 80 | 30 | 280 | 230 | 23 | 18 | M16 | 5/8 | 130 | 12,5 | **22312..-K** | H2312 |
| **55** | 80 | 161 | 120 | 80 | 30 | 280 | 230 | 23 | 18 | M16 | 5/8 | 130 | 12,5 | **2312-K** | H2312 |

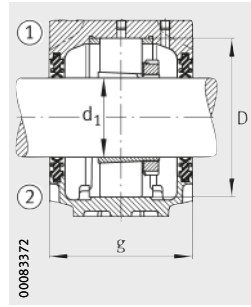
① Locating bearing; ② Non-locating bearing



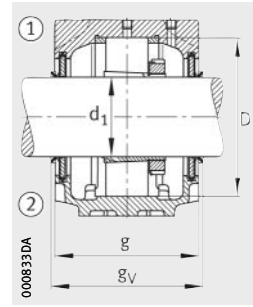

Double lip seal DH
Cover DKVT




Felt seal FSV




Double lip seal DH




V ring seal DHV



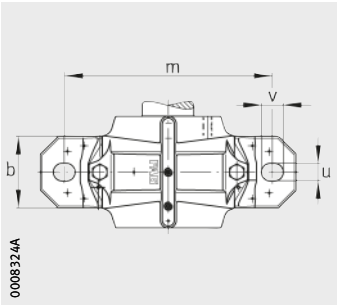


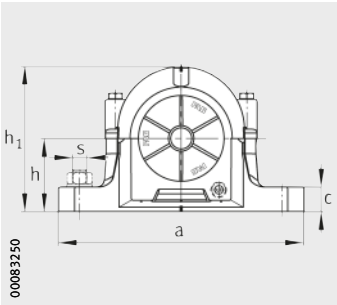


| | | | | | | | | | | Housing | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Locating ring<br><br>Quantity 2 | Felt seal | Double lip seal | Labyrinth seal | $g_L$<br>mm | Taconite seal | $g_T$<br>mm | V ring seal | $g_V$<br>mm | Cover | Mass<br>m<br>≈ kg | Designation |
| FRM85/6 | FSV509 | DH509 | TSV509 | 101 | TCV509 | 125 | DHV509 | 93 | DKV085 | 2,8 | **SNV085-F-L** |
| FRM100/9,5 | FSV609 | DH609 | TSV609 | 119 | TCV609 | 143 | DHV609 | 111 | DKV100 | 4,3 | **SNV100-F-L** |
| FRM85/6 | FSV509 | DH509 | TSV509 | 101 | TCV509 | 125 | DHV509 | 93 | DKV085 | 2,8 | **SNV085-F-L** |
| FRM100/9,5 | FSV609 | DH609 | TSV609 | 119 | TCV609 | 143 | DHV609 | 111 | DKV100 | 4,3 | **SNV100-F-L** |
| FRM85/4 | FSV509 | DH509 | TSV509 | 101 | TCV509 | 125 | DHV509 | 93 | DKV085 | 2,8 | **SNV085-F-L** |
| FRM85/4 | FSV509 | DH509 | TSV509 | 101 | TCV509 | 125 | DHV509 | 93 | DKV085 | 2,8 | **SNV085-F-L** |
| FRM100/4 | FSV609 | DH609 | TSV609 | 119 | TCV609 | 143 | DHV609 | 111 | DKV100 | 4,3 | **SNV100-F-L** |
| FRM100/4 | FSV609 | DH609 | TSV609 | 119 | TCV609 | 143 | DHV609 | 111 | DKV100 | 4,3 | **SNV100-F-L** |
| FRM90/10,5 | FSV510 | DH510 | TSV510 | 114 | TCV510 | 138 | DHV510 | 106 | DKV090 | 3,1 | **SNV090-F-L** |
| FRM110/10,5 | FSV610 | DH610 | TSV610 | 124 | TCV610 | 148 | DHV610 | 116 | DKV110 | 4,9 | **SNV110-F-L** |
| FRM90/10,5 | FSV510 | DH510 | TSV510 | 114 | TCV510 | 138 | DHV510 | 106 | DKV090 | 3,1 | **SNV090-F-L** |
| FRM110/10,5 | FSV610 | DH610 | TSV610 | 124 | TCV610 | 148 | DHV610 | 116 | DKV110 | 4,9 | **SNV110-F-L** |
| FRM90/9 | FSV510 | DH510 | TSV510 | 114 | TCV510 | 138 | DHV510 | 106 | DKV090 | 3,1 | **SNV090-F-L** |
| FRM90/9 | FSV510 | DH510 | TSV510 | 114 | TCV510 | 138 | DHV510 | 106 | DKV090 | 3,1 | **SNV090-F-L** |
| FRM110/4 | FSV610 | DH610 | TSV610 | 124 | TCV610 | 148 | DHV610 | 116 | DKV110 | 4,9 | **SNV110-F-L** |
| FRM110/4 | FSV610 | DH610 | TSV610 | 124 | TCV610 | 148 | DHV610 | 116 | DKV110 | 4,9 | **SNV110-F-L** |
| FRM100/11,5 | FSV511 | DH511 | TSV511 | 119 | TCV511 | 143 | DHV511 | 111 | DKV100 | 4,3 | **SNV100-F-L** |
| FRM120/11 | FSV611 | DH611 | TSV611 | 129 | TCV611 | 153 | DHV611 | 121 | DKV120 | 6,1 | **SNV120-F-L** |
| FRM100/11,5 | FSV511 | DH511 | TSV511 | 119 | TCV511 | 143 | DHV511 | 111 | DKV100 | 4,3 | **SNV100-F-L** |
| FRM120/11 | FSV611 | DH611 | TSV611 | 129 | TCV611 | 153 | DHV611 | 121 | DKV120 | 6,1 | **SNV120-F-L** |
| FRM120/11 | FSV611 | DH611 | TSV611 | 129 | TCV611 | 153 | DHV611 | 121 | DKV120 | 6,1 | **SNV120-F-L** |
| FRM100/9,5 | FSV511 | DH511 | TSV511 | 119 | TCV511 | 143 | DHV511 | 111 | DKV100 | 4,3 | **SNV100-F-L** |
| FRM100/9,5 | FSV511 | DH511 | TSV511 | 119 | TCV511 | 143 | DHV511 | 111 | DKV100 | 4,3 | **SNV100-F-L** |
| FRM120/4 | FSV611 | DH611 | TSV611 | 129 | TCV611 | 153 | DHV611 | 121 | DKV120 | 6,1 | **SNV120-F-L** |
| FRM120/4 | FSV611 | DH611 | TSV611 | 129 | TCV611 | 153 | DHV611 | 121 | DKV120 | 6,1 | **SNV120-F-L** |
| FRM110/13 | FSV512 | DH512 | TSV512 | 124 | TCV512 | 148 | DHV512 | 116 | DKV110 | 4,9 | **SNV110-F-L** |
| FRM130/12,5 | FSV612 | DH612 | TSV612 | 134 | TCV612 | 158 | DHV612 | 126 | DKV130 | 6,8 | **SNV130-F-L** |
| FRM110/13 | FSV512 | DH512 | TSV512 | 124 | TCV512 | 148 | DHV512 | 116 | DKV110 | 4,9 | **SNV110-F-L** |
| FRM130/12,5 | FSV612 | DH612 | TSV612 | 134 | TCV612 | 158 | DHV612 | 126 | DKV130 | 6,8 | **SNV130-F-L** |
| FRM130/12,5 | FSV612 | DH612 | TSV612 | 134 | TCV612 | 158 | DHV612 | 126 | DKV130 | 6,8 | **SNV130-F-L** |
| FRM110/10 | FSV512 | DH512 | TSV512 | 124 | TCV512 | 148 | DHV512 | 116 | DKV110 | 4,9 | **SNV110-F-L** |
| FRM110/10 | FSV512 | DH512 | TSV512 | 124 | TCV512 | 148 | DHV512 | 116 | DKV110 | 4,9 | **SNV110-F-L** |
| FRM130/5 | FSV612 | DH612 | TSV612 | 134 | TCV612 | 158 | DHV612 | 126 | DKV130 | 6,8 | **SNV130-F-L** |
| FRM130/5 | FSV612 | DH612 | TSV612 | 134 | TCV612 | 158 | DHV612 | 126 | DKV130 | 6,8 | **SNV130-F-L** |

# Plummer block housings

SNV, split
For bearings with tapered bore and adapter sleeve
Metric shaft

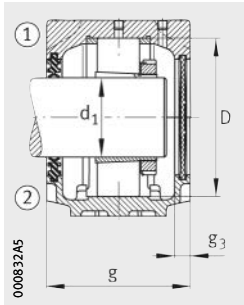


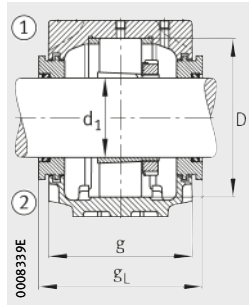

**Dimension table** (continued) · Dimensions in mm

| Shaft | Housing Dimensions | | | | | | | | | | | | | Bearing and accessories | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_1$ | h | $h_1$ | g | b | c | a | m | v | u | s | | D | $g_3$ | Bearing | Adapter sleeve |
| mm | | | | | | | | | | mm | *inch* | | | | |
| **60** | 80 | 155 | 115 | 80 | 30 | 275 | 230 | 23 | 18 | M16 | *5/8* | 120 | 12,5 | **1213-K** | H213 |
| **60** | 95 | 183 | 135 | 90 | 32 | 315 | 260 | 27 | 22 | M20 | *3/4* | 140 | 15 | **1313-K** | H313 |
| **60** | 80 | 155 | 115 | 80 | 30 | 275 | 230 | 23 | 18 | M16 | *5/8* | 120 | 12,5 | **20213-K** | H213 |
| **60** | 95 | 183 | 135 | 90 | 32 | 315 | 260 | 27 | 22 | M20 | *3/4* | 140 | 15 | **20313-K** | H313 |
| **60** | 95 | 183 | 135 | 90 | 32 | 315 | 260 | 27 | 22 | M20 | *3/4* | 140 | 15 | **21313..-K** | H313 |
| **60** | 80 | 155 | 115 | 80 | 30 | 275 | 230 | 23 | 18 | M16 | *5/8* | 120 | 12,5 | **2213-K** | H313 |
| **60** | 80 | 155 | 115 | 80 | 30 | 275 | 230 | 23 | 18 | M16 | *5/8* | 120 | 12,5 | **22213..-K** | H313 |
| **60** | 95 | 183 | 135 | 90 | 32 | 315 | 260 | 27 | 22 | M20 | *3/4* | 140 | 15 | **22313..-K** | H2313 |
| **60** | 95 | 183 | 135 | 90 | 32 | 315 | 260 | 27 | 22 | M20 | *3/4* | 140 | 15 | **2313-K** | H2313 |
| **65** | 80 | 161 | 120 | 80 | 30 | 280 | 230 | 23 | 18 | M16 | *5/8* | 130 | 12,5 | **1215-K** | H215 |
| **65** | 100 | 201 | 145 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | *3/4* | 160 | 15 | **1315-K** | H315 |
| **65** | 80 | 161 | 120 | 80 | 30 | 280 | 230 | 23 | 18 | M16 | *5/8* | 130 | 12,5 | **20215-K** | H215 |
| **65** | 100 | 201 | 145 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | *3/4* | 160 | 15 | **21315..-K** | H315 |
| **65** | 80 | 161 | 120 | 80 | 30 | 280 | 230 | 23 | 18 | M16 | *5/8* | 130 | 12,5 | **2215-K** | H315 |
| **65** | 80 | 161 | 120 | 80 | 30 | 280 | 230 | 23 | 18 | M16 | *5/8* | 130 | 12,5 | **22215..-K** | H315 |
| **65** | 100 | 201 | 145 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | *3/4* | 160 | 15 | **22315..-K** | H2315 |
| **65** | 100 | 201 | 145 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | *3/4* | 160 | 15 | **2315-K** | H2315 |
| **70** | 95 | 183 | 135 | 90 | 32 | 315 | 260 | 27 | 22 | M20 | *3/4* | 140 | 15 | **1216-K** | H216 |
| **70** | 112 | 219 | 150 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | *3/4* | 170 | 16 | **1316-K** | H316 |
| **70** | 95 | 183 | 135 | 90 | 32 | 315 | 260 | 27 | 22 | M20 | *3/4* | 140 | 15 | **20216-K** | H216 |
| **70** | 112 | 219 | 150 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | *3/4* | 170 | 16 | **21316..-K** | H316 |
| **70** | 95 | 183 | 135 | 90 | 32 | 315 | 260 | 27 | 22 | M20 | *3/4* | 140 | 15 | **2216-K** | H316 |
| **70** | 95 | 183 | 135 | 90 | 32 | 315 | 260 | 27 | 22 | M20 | *3/4* | 140 | 15 | **22216..-K** | H316 |
| **70** | 112 | 219 | 150 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | *3/4* | 170 | 16 | **22316..-K** | H2316 |
| **70** | 112 | 219 | 150 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | *3/4* | 170 | 16 | **2316-K** | H2316 |
| **75** | 95 | 189 | 140 | 90 | 32 | 320 | 260 | 27 | 22 | M20 | *3/4* | 150 | 15 | **1217-K** | H217 |
| **75** | 112 | 223 | 160 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | *7/8* | 180 | 16 | **1317-K** | H317 |
| **75** | 95 | 189 | 140 | 90 | 32 | 320 | 260 | 27 | 22 | M20 | *3/4* | 150 | 15 | **20217-K** | H217 |
| **75** | 112 | 223 | 160 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | *7/8* | 180 | 16 | **21317..-K** | H317 |
| **75** | 95 | 189 | 140 | 90 | 32 | 320 | 260 | 27 | 22 | M20 | *3/4* | 150 | 15 | **2217-K** | H317 |
| **75** | 95 | 189 | 140 | 90 | 32 | 320 | 260 | 27 | 22 | M20 | *3/4* | 150 | 15 | **22217..-K** | H317 |
| **75** | 112 | 223 | 160 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | *7/8* | 180 | 16 | **22317..-K** | H2317 |
| **75** | 112 | 223 | 160 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | *7/8* | 180 | 16 | **2317-K** | H2317 |

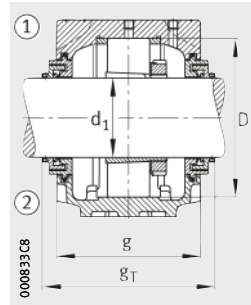
① Locating bearing; ② Non-locating bearing



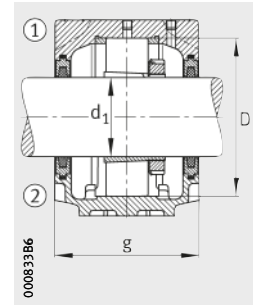

Double lip seal DH
Cover DKV




Labyrinth seal TSV




Taconite seal TCV




Felt seal FSV



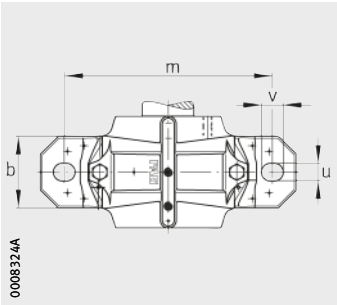


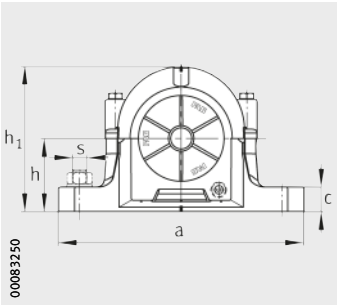


| | | | | | | | | | | Housing | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Locating ring<br><br>Quantity 2 | Felt seal | Double lip seal | Labyrinth seal | | Taconite seal | | V ring seal | | Cover | Mass<br>m<br>≈ kg | Designation |
| | | | | $g_L$<br>mm | | $g_T$<br>mm | | $g_V$<br>mm | | | |
| FRM120/14 | FSV513 | DH513 | TSV513 | 129 | TCV513 | 153 | DHV513 | 121 | DKV120 | 6,1 | **SNV120-F-L** |
| FRM140/12,5 | FSV613 | DH613 | TSV613 | 150,3 | TCV613 | 172 | DHV613 | 139 | DKV140 | 9,3 | **SNV140-F-L** |
| FRM120/14 | FSV513 | DH513 | TSV513 | 129 | TCV513 | 153 | DHV513 | 121 | DKV120 | 6,1 | **SNV120-F-L** |
| FRM140/12,5 | FSV613 | DH613 | TSV613 | 150,3 | TCV613 | 172 | DHV613 | 139 | DKV140 | 9,3 | **SNV140-F-L** |
| FRM140/12,5 | FSV613 | DH613 | TSV613 | 150,3 | TCV613 | 172 | DHV613 | 139 | DKV140 | 9,3 | **SNV140-F-L** |
| FRM120/10 | FSV513 | DH513 | TSV513 | 129 | TCV513 | 153 | DHV513 | 121 | DKV120 | 6,1 | **SNV120-F-L** |
| FRM120/10 | FSV513 | DH513 | TSV513 | 129 | TCV513 | 153 | DHV513 | 121 | DKV120 | 6,1 | **SNV120-F-L** |
| FRM140/5 | FSV613 | DH613 | TSV613 | 150,3 | TCV613 | 172 | DHV613 | 139 | DKV140 | 9,3 | **SNV140-F-L** |
| FRM140/5 | FSV613 | DH613 | TSV613 | 150,3 | TCV613 | 172 | DHV613 | 139 | DKV140 | 9,3 | **SNV140-F-L** |
| FRM130/15,5 | FSV515 | DH515 | TSV515 | 134 | TCV515 | 158 | DHV515 | 126 | DKV130 | 6,8 | **SNV130-F-L** |
| FRM160/14 | FSV615 | DH615 | TSV615 | 160,3 | TCV615 | 182 | DHV615 | 149 | DKV160 | 12,8 | **SNV160-F-L** |
| FRM130/15,5 | FSV515 | DH515 | TSV515 | 134 | TCV515 | 158 | DHV515 | 126 | DKV130 | 6,8 | **SNV130-F-L** |
| FRM160/14 | FSV615 | DH615 | TSV615 | 160,3 | TCV615 | 182 | DHV615 | 149 | DKV160 | 12,8 | **SNV160-F-L** |
| FRM130/12,5 | FSV515 | DH515 | TSV515 | 134 | TCV515 | 158 | DHV515 | 126 | DKV130 | 6,8 | **SNV130-F-L** |
| FRM130/12,5 | FSV515 | DH515 | TSV515 | 134 | TCV515 | 158 | DHV515 | 126 | DKV130 | 6,8 | **SNV130-F-L** |
| FRM160/5 | FSV615 | DH615 | TSV615 | 160,3 | TCV615 | 182 | DHV615 | 149 | DKV160 | 12,8 | **SNV160-F-L** |
| FRM160/5 | FSV615 | DH615 | TSV615 | 160,3 | TCV615 | 182 | DHV615 | 149 | DKV160 | 12,8 | **SNV160-F-L** |
| FRM140/16 | FSV516 | DH516 | TSV516 | 150,3 | TCV516 | 176 | DHV516 | 143 | DKV140 | 9,3 | **SNV140-F-L** |
| FRM170/14,5 | FSV616 | DH616 | TSV616 | 167,3 | TCV616 | 193 | DHV616 | 158 | DKV170 | 14,4 | **SNV170-F-L** |
| FRM140/16 | FSV516 | DH516 | TSV516 | 150,3 | TCV516 | 176 | DHV516 | 143 | DKV140 | 9,3 | **SNV140-F-L** |
| FRM170/14,5 | FSV616 | DH616 | TSV616 | 167,3 | TCV616 | 193 | DHV616 | 158 | DKV170 | 14,4 | **SNV170-F-L** |
| FRM140/12,5 | FSV516 | DH516 | TSV516 | 150,3 | TCV516 | 176 | DHV516 | 143 | DKV140 | 9,3 | **SNV140-F-L** |
| FRM140/12,5 | FSV516 | DH516 | TSV516 | 150,3 | TCV516 | 176 | DHV516 | 143 | DKV140 | 9,3 | **SNV140-F-L** |
| FRM170/5 | FSV616 | DH616 | TSV616 | 167,3 | TCV616 | 193 | DHV616 | 158 | DKV170 | 14,4 | **SNV170-F-L** |
| FRM170/5 | FSV616 | DH616 | TSV616 | 167,3 | TCV616 | 193 | DHV616 | 158 | DKV170 | 14,4 | **SNV170-F-L** |
| FRM150/16,5 | FSV517 | DH517 | TSV517 | 155,3 | TCV517 | 181 | DHV517 | 148 | DKV150 | 9,9 | **SNV150-F-L** |
| FRM180/14,5 | FSV617 | DH617 | TSV617 | 177,3 | TCV617 | 203 | DHV617 | 168 | DKV180 | 17 | **SNV180-F-L** |
| FRM150/16,5 | FSV517 | DH517 | TSV517 | 155,3 | TCV517 | 181 | DHV517 | 148 | DKV150 | 9,9 | **SNV150-F-L** |
| FRM180/14,5 | FSV617 | DH617 | TSV617 | 177,3 | TCV617 | 203 | DHV617 | 168 | DKV180 | 17 | **SNV180-F-L** |
| FRM150/12,5 | FSV517 | DH517 | TSV517 | 155,3 | TCV517 | 181 | DHV517 | 148 | DKV150 | 9,9 | **SNV150-F-L** |
| FRM150/12,5 | FSV517 | DH517 | TSV517 | 155,3 | TCV517 | 181 | DHV517 | 148 | DKV150 | 9,9 | **SNV150-F-L** |
| FRM180/5 | FSV617 | DH617 | TSV617 | 177,3 | TCV617 | 203 | DHV617 | 168 | DKV180 | 17 | **SNV180-F-L** |
| FRM180/5 | FSV617 | DH617 | TSV617 | 177,3 | TCV617 | 203 | DHV617 | 168 | DKV180 | 17 | **SNV180-F-L** |

# Plummer block housings

SNV, split
For bearings with tapered bore and adapter sleeve
Metric shaft



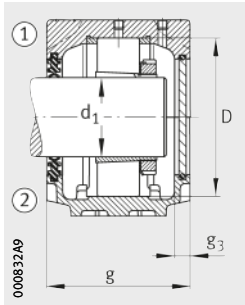




**Dimension table** (continued) · Dimensions in mm

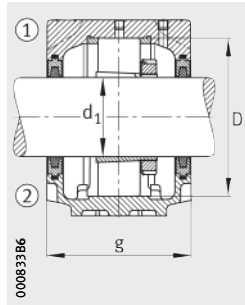
| Shaft | Housing Dimensions | | | | | | | | | | | | | Bearing and accessories | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_1$ | h | $h_1$ | g | b | c | a | m | v | u | s | | D | $g_3$ | Bearing | Adapter sleeve |
| mm | | | | | | | | | | mm | *inch* | | | | |
| **80** | 100 | 201 | 145 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | 3/4 | 160 | 15 | **1218-K** | H218 |
| **80** | 112 | 229 | 155 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | 7/8 | 190 | 15 | **1318-K** | H318 |
| **80** | 100 | 201 | 145 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | 3/4 | 160 | 15 | **20218-K** | H218 |
| **80** | 112 | 229 | 155 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | 7/8 | 190 | 15 | **20318-K** | H318 |
| **80** | 112 | 229 | 155 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | 7/8 | 190 | 15 | **21318..-K** | H318 |
| **80** | 100 | 201 | 145 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | 3/4 | 160 | 15 | **2218-K** | H318 |
| **80** | 100 | 201 | 145 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | 3/4 | 160 | 15 | **22218..-K** | H318 |
| **80** | 112 | 229 | 155 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | 7/8 | 190 | 15 | **22318..-K** | H2318 |
| **80** | 112 | 229 | 155 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | 7/8 | 190 | 15 | **2318-K** | H2318 |
| **80** | 100 | 201 | 145 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | 3/4 | 160 | 15 | **23218..-K** | H2318 |
| **85** | 112 | 219 | 150 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | 3/4 | 170 | 16 | **1219-K** | H219 |
| **85** | 125 | 248 | 175 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | 7/8 | 200 | 16 | **1319-K** | H319 |
| **85** | 125 | 248 | 175 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | 7/8 | 200 | 16 | **21319..-K** | H319 |
| **85** | 112 | 219 | 150 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | 3/4 | 170 | 16 | **2219-K** | H319 |
| **85** | 112 | 219 | 150 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | 3/4 | 170 | 16 | **22219..-K** | H319 |
| **85** | 125 | 248 | 175 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | 7/8 | 200 | 16 | **22319..-K** | H2319 |
| **85** | 125 | 248 | 175 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | 7/8 | 200 | 16 | **2319-K** | H2319 |
| **90** | 112 | 223 | 160 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | 7/8 | 180 | 16 | **1220-K** | H220 |
| **90** | 140 | 271 | 180 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | 7/8 | 215 | 16 | **1320-K** | H320 |
| **90** | 112 | 223 | 160 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | 7/8 | 180 | 16 | **20220-K** | H220 |
| **90** | 140 | 271 | 180 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | 7/8 | 215 | 16 | **20320-K** | H320 |
| **90** | 140 | 271 | 180 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | 7/8 | 215 | 16 | **21320..-K** | H320 |
| **90** | 112 | 223 | 160 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | 7/8 | 180 | 16 | **2220-K** | H320 |
| **90** | 112 | 223 | 160 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | 7/8 | 180 | 16 | **22220..-K** | H320 |
| **90** | 140 | 271 | 180 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | 7/8 | 215 | 16 | **22320..-K** | H2320 |
| **90** | 140 | 271 | 180 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | 7/8 | 215 | 16 | **2320-K** | H2320 |
| **90** | 112 | 223 | 160 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | 7/8 | 180 | 16 | **23220..-K** | H2320 |

① Locating bearing; ② Non-locating bearing

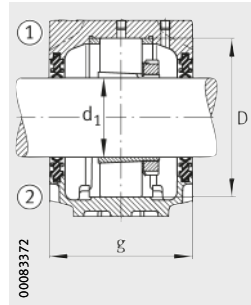
1) Housing with eye bolt.



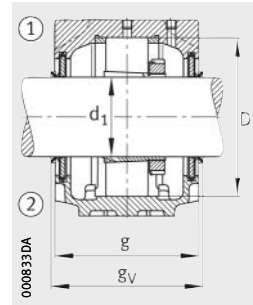

Double lip seal DH
Cover DKVT




Felt seal FSV




Double lip seal DH




V ring seal DHV



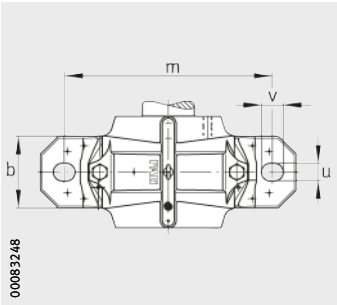


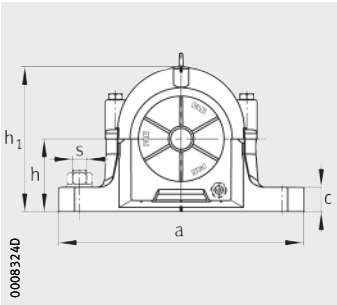


| | | | | | | | | | | Housing | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Locating ring<br><br>Quantity 2 | Felt seal | Double lip seal | Labyrinth seal | | Taconite seal | | V ring seal | | Cover | Mass<br>m<br>≈ kg | Designation |
| | | | | $g_L$<br>mm | | $g_T$<br>mm | | $g_V$<br>mm | | | |
| FRM160/17,5 | FSV518 | DH518 | TSV518 | 160,3 | TCV518 | 186 | DHV518 | 153 | DKV160 | 12,8 | **SNV160-F-L** |
| FRM190/15,5 | FSV518 | DH518 | TSV518 | 170,3 | TCV518 | 178 | DHV518 | 163 | DKV160 | 22 | **SNV190-F-L** |
| FRM160/17,5 | FSV518 | DH518 | TSV518 | 160,3 | TCV518 | 186 | DHV518 | 153 | DKV160 | 12,8 | **SNV160-F-L** |
| FRM190/15,5 | FSV518 | DH518 | TSV518 | 170,3 | TCV518 | 178 | DHV518 | 163 | DKV160 | 22 | **SNV190-F-L** |
| FRM190/15,5 | FSV518 | DH518 | TSV518 | 170,3 | TCV518 | 178 | DHV518 | 163 | DKV160 | 22 | **SNV190-F-L** |
| FRM160/12,5 | FSV518 | DH518 | TSV518 | 160,3 | TCV518 | 186 | DHV518 | 153 | DKV160 | 12,8 | **SNV160-F-L** |
| FRM160/12,5 | FSV518 | DH518 | TSV518 | 160,3 | TCV518 | 186 | DHV518 | 153 | DKV160 | 12,8 | **SNV160-F-L** |
| FRM190/5 | FSV518 | DH518 | TSV518 | 170,3 | TCV518 | 178 | DHV518 | 163 | DKV160 | 22 | **SNV190-F-L** |
| FRM190/5 | FSV518 | DH518 | TSV518 | 170,3 | TCV518 | 178 | DHV518 | 163 | DKV160 | 22 | **SNV190-F-L** |
| FRM160/6,3 | FSV518 | DH518 | TSV518 | 160,3 | TCV518 | 186 | DHV518 | 153 | DKV160 | 12,8 | **SNV160-F-L** |
| FRM170/18 | FSV519 | DH519 | TSV519 | 167,3 | TCV519 | 193 | DHV519 | 158 | DKV170 | 14,4 | **SNV170-F-L** |
| FRM200/17,5 | FSV619 | DH619 | TSV619 | 192,3 | TCV619 | 218 | DHV619 | 183 | DKV200 | 21 | **SNV200-F-L** |
| FRM200/17,5 | FSV619 | DH619 | TSV619 | 192,3 | TCV619 | 218 | DHV619 | 183 | DKV200 | 21 | **SNV200-F-L** |
| FRM170/12,5 | FSV519 | DH519 | TSV519 | 167,3 | TCV519 | 193 | DHV519 | 158 | DKV170 | 14,4 | **SNV170-F-L** |
| FRM170/12,5 | FSV519 | DH519 | TSV519 | 167,3 | TCV519 | 193 | DHV519 | 158 | DKV170 | 14,4 | **SNV170-F-L** |
| FRM200/6,5 | FSV619 | DH619 | TSV619 | 192,3 | TCV619 | 218 | DHV619 | 183 | DKV200 | 21 | **SNV200-F-L** |
| FRM200/6,5 | FSV619 | DH619 | TSV619 | 192,3 | TCV619 | 218 | DHV619 | 183 | DKV200 | 21 | **SNV200-F-L** |
| FRM180/18 | FSV520 | DH520 | TSV520 | 177,3 | TCV520 | 203 | DHV520 | 168 | DKV180 | 17 | **SNV180-F-L** |
| FRM215/19,5 | FSV620 | DH620 | TSV620 | 197,3 | TCV620 | 224 | DHV620 | 188 | DKV215 | 24,5 | **SNV215-F-L**[1)] |
| FRM180/18 | FSV520 | DH520 | TSV520 | 177,3 | TCV520 | 203 | DHV520 | 168 | DKV180 | 17 | **SNV180-F-L** |
| FRM215/19,5 | FSV620 | DH620 | TSV620 | 197,3 | TCV620 | 224 | DHV620 | 188 | DKV215 | 24,5 | **SNV215-F-L**[1)] |
| FRM215/19,5 | FSV620 | DH620 | TSV620 | 197,3 | TCV620 | 224 | DHV620 | 188 | DKV215 | 24,5 | **SNV215-F-L**[1)] |
| FRM180/12 | FSV520 | DH520 | TSV520 | 177,3 | TCV520 | 203 | DHV520 | 168 | DKV180 | 17 | **SNV180-F-L** |
| FRM180/12 | FSV520 | DH520 | TSV520 | 177,3 | TCV520 | 203 | DHV520 | 168 | DKV180 | 17 | **SNV180-F-L** |
| FRM215/6,5 | FSV620 | DH620 | TSV620 | 197,3 | TCV620 | 224 | DHV620 | 188 | DKV215 | 24,5 | **SNV215-F-L**[1)] |
| FRM215/6,5 | FSV620 | DH620 | TSV620 | 197,3 | TCV620 | 224 | DHV620 | 188 | DKV215 | 24,5 | **SNV215-F-L**[1)] |
| FRM180/4,85 | FSV520 | DH520 | TSV520 | 177,3 | TCV520 | 203 | DHV520 | 168 | DKV180 | 17 | **SNV180-F-L** |

# Plummer block housings

SNV, split
For bearings with tapered bore and adapter sleeve
Metric shaft



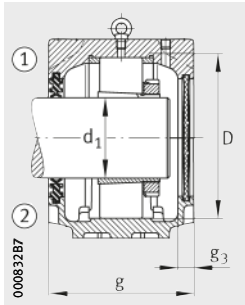




**Dimension table** (continued) · Dimensions in mm

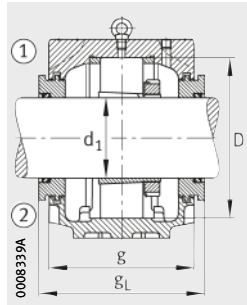
| Shaft | Housing Dimensions | | | | | | | | | | | | | Bearing and accessories | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_1$ | h | $h_1$ | g | b | c | a | m | v | u | s | | D | $g_3$ | Bearing | Adapter sleeve |
| mm | | | | | | | | | | mm | *inch* | | | | |
| **100** | 125 | 248 | 175 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | *7/8* | 200 | 16 | **1222-K** | H222 |
| **100** | 150 | 298 | 185 | 130 | 50 | 450 | 390 | 35 | 28 | M24 | *1* | 240 | 18 | **1322-K** | H322 |
| **100** | 125 | 248 | 175 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | *7/8* | 200 | 16 | **20222-K** | H222 |
| **100** | 150 | 298 | 185 | 130 | 50 | 450 | 390 | 35 | 28 | M24 | *1* | 240 | 18 | **21322..-K** | H322 |
| **100** | 125 | 248 | 175 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | *7/8* | 200 | 16 | **22222..-K** | H322 |
| **100** | 125 | 248 | 175 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | *7/8* | 200 | 16 | **2222-K** | H322 |
| **100** | 150 | 298 | 185 | 130 | 50 | 450 | 390 | 35 | 28 | M24 | *1* | 240 | 18 | **22322..-K** | H2322 |
| **100** | 125 | 248 | 175 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | *7/8* | 200 | 16 | **23222..-K** | H2322 |
| **100** | 150 | 298 | 185 | 130 | 50 | 450 | 390 | 35 | 28 | M24 | *1* | 240 | 18 | **2322-K** | H2322 |
| **110** | 140 | 271 | 180 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | *7/8* | 215 | 16 | **20224-K** | H3024 |
| **110** | 140 | 271 | 180 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | *7/8* | 215 | 16 | **22224..-K** | H3124 |
| **110** | 160 | 321 | 190 | 160 | 60 | 530 | 450 | 42 | 35 | M30 | *1 1/4* | 260 | 18 | **22324..-K** | H2324 |
| **110** | 140 | 271 | 180 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | *7/8* | 215 | 16 | **23224..-K** | H2324 |
| **115** | 150 | 291 | 190 | 130 | 50 | 445 | 380 | 35 | 28 | M24 | *1* | 230 | 18 | **20226-K** | H3026 |
| **115** | 150 | 291 | 190 | 130 | 50 | 445 | 380 | 35 | 28 | M24 | *1* | 230 | 18 | **22226..-K** | H3126 |
| **115** | 170 | 344 | 205 | 160 | 60 | 550 | 470 | 42 | 35 | M30 | *1 1/4* | 280 | 18 | **22326..-K** | H2326 |
| **115** | 150 | 291 | 190 | 130 | 50 | 445 | 380 | 35 | 28 | M24 | *1* | 230 | 18 | **23226..-K** | H2326 |
| **125** | 150 | 304 | 200 | 150 | 50 | 500 | 420 | 42 | 35 | M30 | *1 1/4* | 250 | 18 | **20228-K** | H3028 |
| **125** | 150 | 304 | 200 | 150 | 50 | 500 | 420 | 42 | 35 | M30 | *1 1/4* | 250 | 18 | **22228..-K** | H3128 |
| **125** | 180 | 366 | 215 | 170 | 65 | 620 | 520 | 42 | 35 | M30 | *1 1/4* | 300 | 18 | **22328..-K** | H2328 |
| **125** | 150 | 304 | 200 | 150 | 50 | 500 | 420 | 42 | 35 | M30 | *1 1/4* | 250 | 18 | **23228..-K** | H2328 |
| **135** | 160 | 328 | 215 | 160 | 60 | 530 | 450 | 42 | 35 | M30 | *1 1/4* | 270 | 18 | **20230-K** | H3030 |
| **135** | 160 | 328 | 215 | 160 | 60 | 530 | 450 | 42 | 35 | M30 | *1 1/4* | 270 | 18 | **22230..-K** | H3130 |
| **135** | 190 | 386 | 225 | 180 | 65 | 650 | 560 | 42 | 35 | M30 | *1 1/4* | 320 | 18 | **22330..-K** | H2330 |
| **135** | 160 | 328 | 215 | 160 | 60 | 530 | 450 | 42 | 35 | M30 | *1 1/4* | 270 | 18 | **23230..-K** | H2330 |
| **140** | 170 | 351 | 225 | 160 | 60 | 550 | 470 | 42 | 35 | M30 | *1 1/4* | 290 | 18 | **20232-K** | H3032(-HG) |
| **140** | 170 | 351 | 225 | 160 | 60 | 550 | 470 | 42 | 35 | M30 | *1 1/4* | 290 | 18 | **22232..-K** | H3132(-HG) |
| **140** | 200 | 406 | 235 | 190 | 70 | 680 | 580 | 50 | 42 | M36 | *1 1/2* | 340 | 18 | **22332-K** | H2332(-HG) |
| **140** | 170 | 351 | 225 | 160 | 60 | 550 | 470 | 42 | 35 | M30 | *1 1/4* | 290 | 18 | **23232..-K** | H2332(-HG) |

① Locating bearing; ② Non-locating bearing

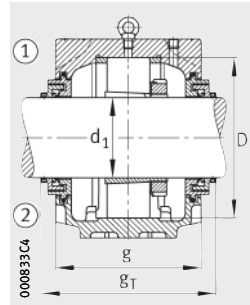
1) Housing without eye bolt.



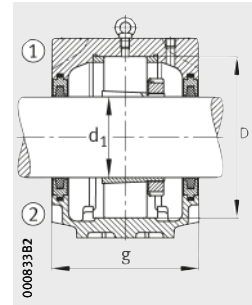

Double lip seal DH
Cover DKV




Labyrinth seal TSV




Taconite seal TCV




Felt seal FSV



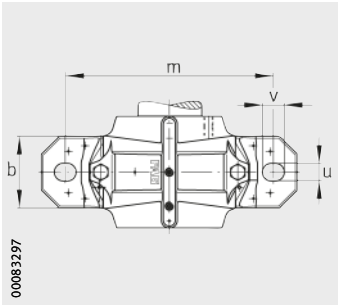


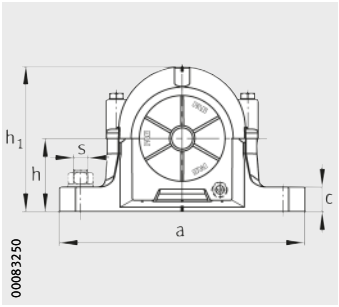


| | | | | | | | | | | Housing | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Locating ring<br><br>Quantity 2 | Felt seal | Double lip seal | Labyrinth seal | | Taconite seal | | V ring seal | | Cover | Mass<br>m<br>≈ kg | Designation |
| | | | | $g_L$<br>mm | | $g_T$<br>mm | | $g_V$<br>mm | | | |
| FRM200/21 | FSV522 | DH522 | TSV522 | 195,3 | TCV522 | 218 | DHV522 | 183 | DKV200 | 21 | **SNV200-F-L**[1)] |
| FRM240/20 | FSV522 | DH522 | TSV522 | 203,3 | TCV522 | 226 | DHV522 | 191 | DKV200 | 32 | **SNV240-F-L** |
| FRM200/21 | FSV522 | DH522 | TSV522 | 195,3 | TCV522 | 218 | DHV522 | 183 | DKV200 | 21 | **SNV200-F-L**[1)] |
| FRM240/20 | FSV522 | DH522 | TSV522 | 203,3 | TCV522 | 226 | DHV522 | 191 | DKV200 | 32 | **SNV240-F-L** |
| FRM200/13,5 | FSV522 | DH522 | TSV522 | 195,3 | TCV522 | 218 | DHV522 | 183 | DKV200 | 21 | **SNV200-F-L**[1)] |
| FRM200/13,5 | FSV522 | DH522 | TSV522 | 195,3 | TCV522 | 218 | DHV522 | 183 | DKV200 | 21 | **SNV200-F-L**[1)] |
| FRM240/5 | FSV522 | DH522 | TSV522 | 203,3 | TCV522 | 226 | DHV522 | 191 | DKV200 | 32 | **SNV240-F-L** |
| FRM200/5,1 | FSV522 | DH522 | TSV522 | 195,3 | TCV522 | 218 | DHV522 | 183 | DKV200 | 21 | **SNV200-F-L**[1)] |
| FRM240/5 | FSV522 | DH522 | TSV522 | 203,3 | TCV522 | 226 | DHV522 | 191 | DKV200 | 32 | **SNV240-F-L** |
| FRM215/23 | FSV524 | DH524 | TSV524 | 200,3 | TCV524 | 227 | DHV524 | 191 | DKV215 | 24,5 | **SNV215-F-L** |
| FRM215/14 | FSV524 | DH524 | TSV524 | 200,3 | TCV524 | 227 | DHV524 | 191 | DKV215 | 24,5 | **SNV215-F-L** |
| FRM260/5 | FSV524 | DH524 | TSV524 | 208,3 | TCV524 | 235 | DHV524 | 199 | DKV215 | 48 | **SNV260-F-L** |
| FRM215/5 | FSV524 | DH524 | TSV524 | 200,3 | TCV524 | 227 | DHV524 | 191 | DKV215 | 24,5 | **SNV215-F-L** |
| FRM230/25 | FSV526 | DH526 | TSV526 | 208,3 | TCV526 | 235 | DHV526 | 199 | DKV230 | 30 | **SNV230-F-L** |
| FRM230/13 | FSV526 | DH526 | TSV526 | 208,3 | TCV526 | 235 | DHV526 | 199 | DKV230 | 30 | **SNV230-F-L** |
| FRM280/5 | FSV526 | DH526 | TSV526 | 223,3 | TCV526 | 250 | DHV526 | 214 | DKV230 | 55 | **SNV280-F-L** |
| FRM230/5 | FSV526 | DH526 | TSV526 | 208,3 | TCV526 | 235 | DHV526 | 199 | DKV230 | 30 | **SNV230-F-L** |
| FRM250/28 | FSV528 | DH528 | TSV528 | 218,3 | TCV528 | 245 | DHV528 | 209 | DKV250 | 38 | **SNV250-F-L** |
| FRM250/15 | FSV528 | DH528 | TSV528 | 218,3 | TCV528 | 245 | DHV528 | 209 | DKV250 | 38 | **SNV250-F-L** |
| FRM300/5 | FSV528 | DH528 | TSV528 | 233,3 | TCV528 | 260 | DHV528 | 224 | DKV250 | 70 | **SNV300-F-L** |
| FRM250/5 | FSV528 | DH528 | TSV528 | 218,3 | TCV528 | 245 | DHV528 | 209 | DKV250 | 38 | **SNV250-F-L** |
| FRM270/30,5 | FSV530 | DH530 | TSV530 | 233,3 | TCV530 | 260 | DHV530 | 224 | DKV270 | 45,5 | **SNV270-F-L** |
| FRM270/16,5 | FSV530 | DH530 | TSV530 | 233,3 | TCV530 | 260 | DHV530 | 224 | DKV270 | 45,5 | **SNV270-F-L** |
| FRM320/5 | FSV530 | DH530 | TSV530 | 243,3 | TCV530 | 270 | DHV530 | 234 | DKV270 | 95 | **SNV320-F-L** |
| FRM270/5 | FSV530 | DH530 | TSV530 | 233,3 | TCV530 | 260 | DHV530 | 224 | DKV270 | 45,5 | **SNV270-F-L** |
| FRM290/33 | FSV532 | DH532 | TSV532 | 243,3 | TCV532 | 270 | DHV532 | 234 | DKV290 | 53,8 | **SNV290-F-L** |
| FRM290/17 | FSV532 | DH532 | TSV532 | 243,3 | TCV532 | 270 | DHV532 | 234 | DKV290 | 53,8 | **SNV290-F-L** |
| FRM340/5 | FSV532 | DH532 | TSV532 | 253,3 | TCV532 | 298 | DHV532 | 244 | DKV290 | 115 | **SNV340-F-L** |
| FRM290/5 | FSV532 | DH532 | TSV532 | 243,3 | TCV532 | 270 | DHV532 | 234 | DKV290 | 53,8 | **SNV290-F-L** |

# Plummer block housings

SNV, split
For bearings
with cylindrical bore
Metric shaft

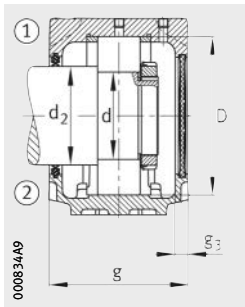


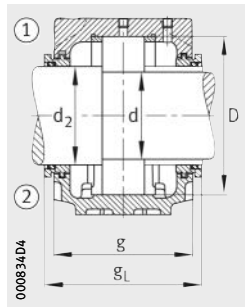

**Dimension table** · Dimensions in mm

| Shaft | | Housing Dimensions | | | | | | | | | | | | | Bearing and accessories | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | $d_2$ | h | $h_1$ | g | b | c | a | m | v | u | s | | D | $g_3$ | Bearing | Lock-nut | Tab washer |
| | | | | | | | | | | | mm | *inch* | | | | | |
| **20** | 25 | 40 | 75 | 70 | 46 | 19 | 165 | 130 | 20 | 15 | M12 | 1/2 | 52 | 10,5 | **1304** | KM4 | MB4 |
| **20** | 25 | 40 | 75 | 70 | 46 | 19 | 165 | 130 | 20 | 15 | M12 | 1/2 | 52 | 10,5 | **2304** | KM4 | MB4 |
| **20** | 25 | 40 | 75 | 70 | 46 | 19 | 165 | 130 | 20 | 15 | M12 | 1/2 | 52 | 10,5 | **20304** | KM4 | MB4 |
| **20** | 25 | 40 | 75 | 70 | 46 | 19 | 165 | 130 | 20 | 15 | M12 | 1/2 | 52 | 10,5 | **21304** | KM4 | MB4 |
| **25** | 30 | 40 | 75 | 70 | 46 | 19 | 165 | 130 | 20 | 15 | M12 | 1/2 | 52 | 10,5 | **1205** | KM5 | MB5 |
| **25** | 30 | 50 | 91 | 75 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | 1/2 | 62 | 10,5 | **1305** | KM5 | MB5 |
| **25** | 30 | 40 | 75 | 70 | 46 | 19 | 165 | 130 | 20 | 15 | M12 | 1/2 | 52 | 10,5 | **2205** | KM5 | MB5 |
| **25** | 30 | 50 | 91 | 75 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | 1/2 | 62 | 10,5 | **2305** | KM5 | MB5 |
| **25** | 30 | 40 | 75 | 70 | 46 | 19 | 165 | 130 | 20 | 15 | M12 | 1/2 | 52 | 10,5 | **20205** | KM5 | MB5 |
| **25** | 30 | 50 | 91 | 75 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | 1/2 | 62 | 10,5 | **20305** | KM5 | MB5 |
| **25** | 30 | 50 | 91 | 75 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | 1/2 | 62 | 10,5 | **21305** | KM5 | MB5 |
| **25** | 30 | 40 | 75 | 70 | 46 | 19 | 165 | 130 | 20 | 15 | M12 | 1/2 | 52 | 10,5 | **22205** | KM5 | MB5 |
| **30** | 35 | 50 | 91 | 75 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | 1/2 | 62 | 10,5 | **1206** | KM6 | MB6 |
| **30** | 35 | 50 | 97 | 80 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | 1/2 | 72 | 10,5 | **1306** | KM6 | MB6 |
| **30** | 35 | 50 | 91 | 75 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | 1/2 | 62 | 10,5 | **2206** | KM6 | MB6 |
| **30** | 35 | 50 | 97 | 80 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | 1/2 | 72 | 10,5 | **2306** | KM6 | MB6 |
| **30** | 35 | 50 | 91 | 75 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | 1/2 | 62 | 10,5 | **20206** | KM6 | MB6 |
| **30** | 35 | 50 | 97 | 80 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | 1/2 | 72 | 10,5 | **20306** | KM6 | MB6 |
| **30** | 35 | 50 | 97 | 80 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | 1/2 | 72 | 10,5 | **21306** | KM6 | MB6 |
| **30** | 35 | 50 | 91 | 75 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | 1/2 | 62 | 10,5 | **22206** | KM6 | MB6 |
| **35** | 45 | 50 | 97 | 80 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | 1/2 | 72 | 10,5 | **1207** | KM7 | MB7 |
| **35** | 45 | 60 | 112 | 85 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | 1/2 | 80 | 10,5 | **1307** | KM7 | MB7 |
| **35** | 45 | 50 | 97 | 80 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | 1/2 | 72 | 10,5 | **2207** | KM7 | MB7 |
| **35** | 45 | 60 | 112 | 85 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | 1/2 | 80 | 10,5 | **2307** | KM7 | MB7 |
| **35** | 45 | 50 | 97 | 80 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | 1/2 | 72 | 10,5 | **20207** | KM7 | MB7 |
| **35** | 45 | 60 | 112 | 85 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | 1/2 | 80 | 10,5 | **20307** | KM7 | MB7 |
| **35** | 45 | 60 | 112 | 85 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | 1/2 | 80 | 10,5 | **21307** | KM7 | MB7 |
| **35** | 45 | 50 | 97 | 80 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | 1/2 | 72 | 10,5 | **22207** | KM7 | MB7 |

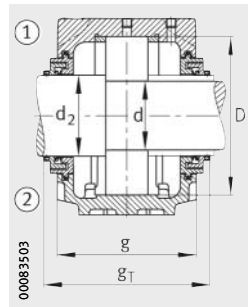
① Locating bearing; ② Non-locating bearing



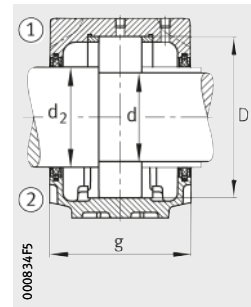

Double lip seal DH
Cover DKV




Labyrinth seal TSV




Taconite seal TCV




Felt seal FSV



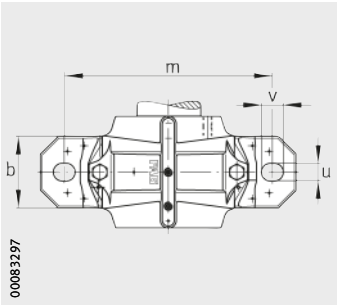


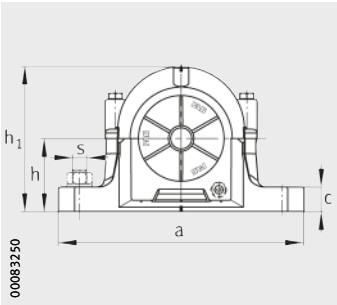


| | | | | | | | | | Housing | |
|---|---|---|---|---|---|---|---|---|---|---|
| Locating ring<br><br>Quantity 2 | Felt seal | Double lip seal | Labyrinth seal | $g_L$ mm | V ring seal | $g_V$ mm | Taconite seal | $g_T$ mm | Cover | Mass<br>m<br>≈ kg | Designation |
| FRM52/6 | – | DH304 | TSV304 | 95 | DHV304 | 76 | – | – | DKV052 | 1,3 | SNV052-F-L |
| FRM52/3 | – | DH304 | TSV304 | 95 | DHV304 | 76 | – | – | DKV052 | 1,3 | SNV052-F-L |
| FRM52/6 | – | DH304 | TSV304 | 95 | DHV304 | 76 | – | – | DKV052 | 1,3 | SNV052-F-L |
| FRM52/6 | – | DH304 | TSV304 | 95 | DHV304 | 76 | – | – | DKV052 | 1,3 | SNV052-F-L |
| FRM52/6 | – | DH205 | TSV205 | 95 | – | – | – | – | DKV052 | 1,3 | SNV052-F-L |
| FRM62/6,5 | FSV305 | DH305 | TSV305 | 100 | DHV305 | 81 | – | – | DKV062 | 1,9 | SNV062-F-L |
| FRM52/4,5 | – | DH205 | TSV205 | 95 | – | – | – | – | DKV052 | 1,3 | SNV052-F-L |
| FRM62/3 | FSV305 | DH305 | TSV305 | 100 | DHV305 | 81 | – | – | DKV062 | 1,9 | SNV062-F-L |
| FRM52/6 | – | DH205 | TSV205 | 95 | – | – | – | – | DKV052 | 1,3 | SNV052-F-L |
| FRM62/6,5 | FSV305 | DH305 | TSV305 | 100 | DHV305 | 81 | – | – | DKV062 | 1,9 | SNV062-F-L |
| FRM62/6,5 | FSV305 | DH305 | TSV305 | 100 | DHV305 | 81 | – | – | DKV062 | 1,9 | SNV062-F-L |
| FRM52/4,5 | – | DH205 | TSV205 | 95 | – | – | – | – | DKV052 | 1,3 | SNV052-F-L |
| FRM62/7 | – | DH206 | TSV206 | 100 | – | – | – | – | DKV062 | 1,9 | SNV062-F-L |
| FRM72/7 | FSV306 | DH306 | TSV306 | 93 | DHV306 | 86 | – | – | DKV072 | 2 | SNV072-F-L |
| FRM62/5 | – | DH206 | TSV206 | 100 | – | – | – | – | DKV062 | 1,9 | SNV062-F-L |
| FRM72/3 | FSV306 | DH306 | TSV306 | 93 | DHV306 | 86 | – | – | DKV072 | 2 | SNV072-F-L |
| FRM62/7 | – | DH206 | TSV206 | 100 | – | – | – | – | DKV062 | 1,9 | SNV062-F-L |
| FRM72/7 | FSV306 | DH306 | TSV306 | 93 | DHV306 | 86 | – | – | DKV072 | 2 | SNV072-F-L |
| FRM72/7 | FSV306 | DH306 | TSV306 | 93 | DHV306 | 86 | – | – | DKV072 | 2 | SNV072-F-L |
| FRM62/5 | – | DH206 | TSV206 | 100 | – | – | – | – | DKV062 | 1,9 | SNV062-F-L |
| FRM72/8 | – | DH207 | TSV207 | 107 | – | – | – | – | DKV072 | 2 | SNV072-F-L |
| FRM80/9 | FSV307 | DH307 | TSV307 | 98 | DHV307 | 93 | – | – | DKV080 | 2,9 | SNV080-F-L |
| FRM72/5 | – | DH207 | TSV207 | 107 | – | – | – | – | DKV072 | 2 | SNV072-F-L |
| FRM80/4 | FSV307 | DH307 | TSV307 | 98 | DHV307 | 93 | – | – | DKV080 | 2,9 | SNV080-F-L |
| FRM72/8 | – | DH207 | TSV207 | 107 | – | – | – | – | DKV072 | 2 | SNV072-F-L |
| FRM80/9 | FSV307 | DH307 | TSV307 | 98 | DHV307 | 93 | – | – | DKV080 | 2,9 | SNV080-F-L |
| FRM80/9 | FSV307 | DH307 | TSV307 | 98 | DHV307 | 93 | – | – | DKV080 | 2,9 | SNV080-F-L |
| FRM72/5 | – | DH207 | TSV207 | 107 | – | – | – | – | DKV072 | 2 | SNV072-F-L |

# Plummer block housings

SNV, split
For bearings
with cylindrical bore
Metric shaft

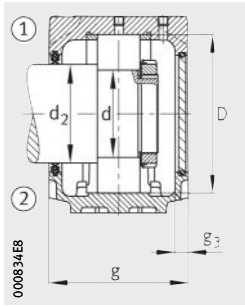


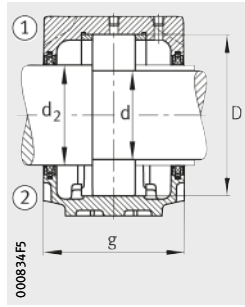

**Dimension table** (continued) · Dimensions in mm

| Shaft | | Housing Dimensions | | | | | | | | | | | | | Bearing and accessories | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | $d_2$ | h | $h_1$ | g | b | c | a | m | v | u | s | | D | $g_3$ | Bearing | Lock-nut | Tab washer |
| | | | | | | | | | | | mm | *inch* | | | | | |
| **40** | 50 | 60 | 112 | 85 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | *1/2* | 80 | 10,5 | **1208** | KM8 | MB8 |
| **40** | 50 | 60 | 117 | 100 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | *1/2* | 90 | 12,5 | **1308** | KM8 | MB8 |
| **40** | 50 | 60 | 112 | 85 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | *1/2* | 80 | 10,5 | **2208** | KM8 | MB8 |
| **40** | 50 | 60 | 117 | 100 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | *1/2* | 90 | 12,5 | **2308** | KM8 | MB8 |
| **40** | 50 | 60 | 112 | 85 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | *1/2* | 80 | 10,5 | **20208** | KM8 | MB8 |
| **40** | 50 | 60 | 117 | 100 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | *1/2* | 90 | 12,5 | **20308** | KM8 | MB8 |
| **40** | 50 | 60 | 117 | 100 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | *1/2* | 90 | 12,5 | **21308** | KM8 | MB8 |
| **40** | 50 | 60 | 112 | 85 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | *1/2* | 80 | 10,5 | **22208** | KM8 | MB8 |
| **40** | 50 | 60 | 117 | 100 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | *1/2* | 90 | 12,5 | **22308** | KM8 | MB8 |
| **45** | 55 | 60 | 114 | 87 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | *1/2* | 85 | 12,5 | **1209** | KM9 | MB9 |
| **45** | 55 | 70 | 133 | 105 | 70 | 28 | 255 | 210 | 23 | 18 | M16 | *5/8* | 100 | 12,5 | **1309** | KM9 | MB9 |
| **45** | 55 | 60 | 114 | 87 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | *1/2* | 85 | 12,5 | **2209** | KM9 | MB9 |
| **45** | 55 | 70 | 133 | 105 | 70 | 28 | 255 | 210 | 23 | 18 | M16 | *5/8* | 100 | 12,5 | **2309** | KM9 | MB9 |
| **45** | 55 | 60 | 114 | 87 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | *1/2* | 85 | 12,5 | **20209** | KM9 | MB9 |
| **45** | 55 | 70 | 133 | 105 | 70 | 28 | 255 | 210 | 23 | 18 | M16 | *5/8* | 100 | 12,5 | **20309** | KM9 | MB9 |
| **45** | 55 | 70 | 133 | 105 | 70 | 28 | 255 | 210 | 23 | 18 | M16 | *5/8* | 100 | 12,5 | **21309** | KM9 | MB9 |
| **45** | 55 | 60 | 114 | 87 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | *1/2* | 85 | 12,5 | **22209** | KM9 | MB9 |
| **45** | 55 | 70 | 133 | 105 | 70 | 28 | 255 | 210 | 23 | 18 | M16 | *5/8* | 100 | 12,5 | **22309** | KM9 | MB9 |
| **50** | 60 | 60 | 117 | 100 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | *1/2* | 90 | 12,5 | **1210** | KM10 | MB10 |
| **50** | 60 | 70 | 139 | 110 | 70 | 30 | 255 | 210 | 23 | 18 | M16 | *5/8* | 110 | 12,5 | **1310** | KM10 | MB10 |
| **50** | 60 | 60 | 117 | 100 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | *1/2* | 90 | 12,5 | **2210** | KM10 | MB10 |
| **50** | 60 | 70 | 139 | 110 | 70 | 30 | 255 | 210 | 23 | 18 | M16 | *5/8* | 110 | 12,5 | **2310** | KM10 | MB10 |
| **50** | 60 | 60 | 117 | 100 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | *1/2* | 90 | 12,5 | **20210** | KM10 | MB10 |
| **50** | 60 | 70 | 139 | 110 | 70 | 30 | 255 | 210 | 23 | 18 | M16 | *5/8* | 110 | 12,5 | **20310** | KM10 | MB10 |
| **50** | 60 | 70 | 139 | 110 | 70 | 30 | 255 | 210 | 23 | 18 | M16 | *5/8* | 110 | 12,5 | **21310** | KM10 | MB10 |
| **50** | 60 | 60 | 117 | 100 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | *1/2* | 90 | 12,5 | **22210** | KM10 | MB10 |
| **50** | 60 | 70 | 139 | 110 | 70 | 30 | 255 | 210 | 23 | 18 | M16 | *5/8* | 110 | 12,5 | **22310** | KM10 | MB10 |

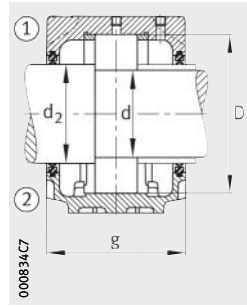
① Locating bearing; ② Non-locating bearing



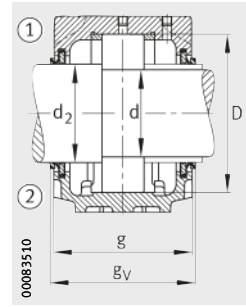

Double lip seal DH
Cover DKVT




Felt seal FSV




Double lip seal DH




V ring seal DHV



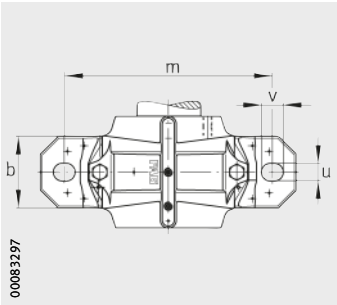


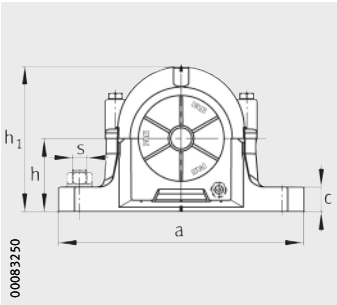


| | | | | | | | | | Housing | |
|---|---|---|---|---|---|---|---|---|---|---|
| Locating ring<br><br>Quantity 2 | Felt seal | Double lip seal | Labyrinth seal | $g_L$<br>mm | V ring seal | $g_V$<br>mm | Taconite seal | $g_T$<br>mm | Cover | Mass<br>m<br>≈ kg | Designation |
| FRM80/10,5 | FSV208 | DH208 | TSV208 | 98 | DHV208 | 93 | – | – | DKV080 | 2,9 | **SNV080-F-L** |
| FRM90/9 | FSV308 | DH308 | TSV308 | 114 | DHV308 | 106 | – | – | DKV090 | 3,1 | **SNV090-F-L** |
| FRM80/8 | FSV208 | DH208 | TSV208 | 98 | DHV208 | 93 | – | – | DKV080 | 2,9 | **SNV080-F-L** |
| FRM90/4 | FSV308 | DH308 | TSV308 | 114 | DHV308 | 106 | – | – | DKV090 | 3,1 | **SNV090-F-L** |
| FRM80/10,5 | FSV208 | DH208 | TSV208 | 98 | DHV208 | 93 | – | – | DKV080 | 2,9 | **SNV080-F-L** |
| FRM90/9 | FSV308 | DH308 | TSV308 | 114 | DHV308 | 106 | – | – | DKV090 | 3,1 | **SNV090-F-L** |
| FRM90/9 | FSV308 | DH308 | TSV308 | 114 | DHV308 | 106 | – | – | DKV090 | 3,1 | **SNV090-F-L** |
| FRM80/8 | FSV208 | DH208 | TSV208 | 98 | DHV208 | 93 | – | – | DKV080 | 2,9 | **SNV080-F-L** |
| FRM90/4 | FSV308 | DH308 | TSV308 | 114 | DHV308 | 106 | – | – | DKV090 | 3,1 | **SNV090-F-L** |
| FRM85/6 | FSV209 | DH209 | TSV209 | 101 | DHV209 | 93 | – | – | DKV085 | 2,8 | **SNV085-F-L** |
| FRM100/9,5 | FSV309 | DH309 | TSV309 | 119 | DHV309 | 111 | – | – | DKV100 | 4,3 | **SNV100-F-L** |
| FRM85/4 | FSV209 | DH209 | TSV209 | 101 | DHV209 | 93 | – | – | DKV085 | 2,8 | **SNV085-F-L** |
| FRM100/4 | FSV309 | DH309 | TSV309 | 119 | DHV309 | 111 | – | – | DKV100 | 4,3 | **SNV100-F-L** |
| FRM85/6 | FSV209 | DH209 | TSV209 | 101 | DHV209 | 93 | – | – | DKV085 | 2,8 | **SNV085-F-L** |
| FRM100/9,5 | FSV309 | DH309 | TSV309 | 119 | DHV309 | 111 | – | – | DKV100 | 4,3 | **SNV100-F-L** |
| FRM100/9,5 | FSV309 | DH309 | TSV309 | 119 | DHV309 | 111 | – | – | DKV100 | 4,3 | **SNV100-F-L** |
| FRM85/4 | FSV209 | DH209 | TSV209 | 101 | DHV209 | 93 | – | – | DKV085 | 2,8 | **SNV085-F-L** |
| FRM100/4 | FSV309 | DH309 | TSV309 | 119 | DHV309 | 111 | – | – | DKV100 | 4,3 | **SNV100-F-L** |
| FRM90/10,5 | FSV210 | DH210 | TSV210 | 114 | DHV210 | 106 | – | – | DKV090 | 3,1 | **SNV090-F-L** |
| FRM110/10,5 | FSV310 | DH310 | TSV310 | 124 | DHV310 | 116 | – | – | DKV110 | 4,9 | **SNV110-F-L** |
| FRM90/9 | FSV210 | DH210 | TSV210 | 114 | DHV210 | 106 | – | – | DKV090 | 3,1 | **SNV090-F-L** |
| FRM110/4 | FSV310 | DH310 | TSV310 | 124 | DHV310 | 116 | – | – | DKV110 | 4,9 | **SNV110-F-L** |
| FRM90/10,5 | FSV210 | DH210 | TSV210 | 114 | DHV210 | 106 | – | – | DKV090 | 3,1 | **SNV090-F-L** |
| FRM110/10,5 | FSV310 | DH310 | TSV310 | 124 | DHV310 | 116 | – | – | DKV110 | 4,9 | **SNV110-F-L** |
| FRM110/10,5 | FSV310 | DH310 | TSV310 | 124 | DHV310 | 116 | – | – | DKV110 | 4,9 | **SNV110-F-L** |
| FRM90/9 | FSV210 | DH210 | TSV210 | 114 | DHV210 | 106 | – | – | DKV090 | 3,1 | **SNV090-F-L** |
| FRM110/4 | FSV310 | DH310 | TSV310 | 124 | DHV310 | 116 | – | – | DKV110 | 4,9 | **SNV110-F-L** |

# Plummer block housings

SNV, split
For bearings
with cylindrical bore
Metric shaft

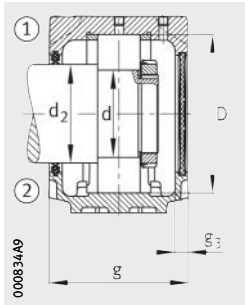


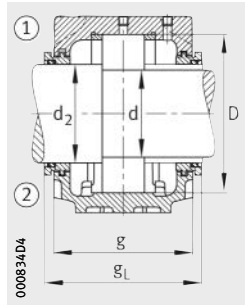

**Dimension table** (continued) · Dimensions in mm

| Shaft | | Housing Dimensions | | | | | | | | | | | | | Bearing and accessories | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | $d_2$ | h | $h_1$ | g | b | c | a | m | v | u | s | | D | $g_3$ | Bearing | Lock-nut | Tab washer |
| | | | | | | | | | | | mm | *inch* | | | | | |
| **55** | 65 | 70 | 133 | 105 | 70 | 28 | 255 | 210 | 23 | 18 | M16 | 5/8 | 100 | 12,5 | **1211** | KM11 | MB11 |
| **55** | 65 | 80 | 155 | 115 | 80 | 30 | 275 | 230 | 23 | 18 | M16 | 5/8 | 120 | 12,5 | **1311** | KM11 | MB11 |
| **55** | 65 | 70 | 133 | 105 | 70 | 28 | 255 | 210 | 23 | 18 | M16 | 5/8 | 100 | 12,5 | **2211** | KM11 | MB11 |
| **55** | 65 | 80 | 155 | 115 | 80 | 30 | 275 | 230 | 23 | 18 | M16 | 5/8 | 120 | 12,5 | **2311** | KM11 | MB11 |
| **55** | 65 | 70 | 133 | 105 | 70 | 28 | 255 | 210 | 23 | 18 | M16 | 5/8 | 100 | 12,5 | **20211** | KM11 | MB11 |
| **55** | 65 | 80 | 155 | 115 | 80 | 30 | 275 | 230 | 23 | 18 | M16 | 5/8 | 120 | 12,5 | **20311** | KM11 | MB11 |
| **55** | 65 | 80 | 155 | 115 | 80 | 30 | 275 | 230 | 23 | 18 | M16 | 5/8 | 120 | 12,5 | **21311** | KM11 | MB11 |
| **55** | 65 | 70 | 133 | 105 | 70 | 28 | 255 | 210 | 23 | 18 | M16 | 5/8 | 100 | 12,5 | **22211** | KM11 | MB11 |
| **55** | 65 | 80 | 155 | 115 | 80 | 30 | 275 | 230 | 23 | 18 | M16 | 5/8 | 120 | 12,5 | **22311** | KM11 | MB11 |
| **60** | 70 | 70 | 139 | 110 | 70 | 30 | 255 | 210 | 23 | 18 | M16 | 5/8 | 110 | 12,5 | **1212** | KM12 | MB12 |
| **60** | 70 | 80 | 161 | 120 | 80 | 30 | 280 | 230 | 23 | 18 | M16 | 5/8 | 130 | 12,5 | **1312** | KM12 | MB12 |
| **60** | 70 | 70 | 139 | 110 | 70 | 30 | 255 | 210 | 23 | 18 | M16 | 5/8 | 110 | 12,5 | **2212** | KM12 | MB12 |
| **60** | 70 | 80 | 161 | 120 | 80 | 30 | 280 | 230 | 23 | 18 | M16 | 5/8 | 130 | 12,5 | **2312** | KM12 | MB12 |
| **60** | 70 | 70 | 139 | 110 | 70 | 30 | 255 | 210 | 23 | 18 | M16 | 5/8 | 110 | 12,5 | **20212** | KM12 | MB12 |
| **60** | 70 | 80 | 161 | 120 | 80 | 30 | 280 | 230 | 23 | 18 | M16 | 5/8 | 130 | 12,5 | **20312** | KM12 | MB12 |
| **60** | 70 | 80 | 161 | 120 | 80 | 30 | 280 | 230 | 23 | 18 | M16 | 5/8 | 130 | 12,5 | **21312** | KM12 | MB12 |
| **60** | 70 | 70 | 139 | 110 | 70 | 30 | 255 | 210 | 23 | 18 | M16 | 5/8 | 110 | 12,5 | **22212** | KM12 | MB12 |
| **60** | 70 | 80 | 161 | 120 | 80 | 30 | 280 | 230 | 23 | 18 | M16 | 5/8 | 130 | 12,5 | **22312** | KM12 | MB12 |
| **65** | 75 | 80 | 155 | 115 | 80 | 30 | 275 | 230 | 23 | 18 | M16 | 5/8 | 120 | 12,5 | **1213** | KM13 | MB13 |
| **65** | 75 | 95 | 183 | 135 | 90 | 32 | 315 | 260 | 27 | 22 | M20 | 3/4 | 140 | 15 | **1313** | KM13 | MB13 |
| **65** | 75 | 80 | 155 | 115 | 80 | 30 | 275 | 230 | 23 | 18 | M16 | 5/8 | 120 | 12,5 | **2213** | KM13 | MB13 |
| **65** | 75 | 95 | 183 | 135 | 90 | 32 | 315 | 260 | 27 | 22 | M20 | 3/4 | 140 | 15 | **2313** | KM13 | MB13 |
| **65** | 75 | 80 | 155 | 115 | 80 | 30 | 275 | 230 | 23 | 18 | M16 | 5/8 | 120 | 12,5 | **20213** | KM13 | MB13 |
| **65** | 75 | 95 | 183 | 135 | 90 | 32 | 315 | 260 | 27 | 22 | M20 | 3/4 | 140 | 15 | **20313** | KM13 | MB13 |
| **65** | 75 | 95 | 183 | 135 | 90 | 32 | 315 | 260 | 27 | 22 | M20 | 3/4 | 140 | 15 | **21313** | KM13 | MB13 |
| **65** | 75 | 80 | 155 | 115 | 80 | 30 | 275 | 230 | 23 | 18 | M16 | 5/8 | 120 | 12,5 | **22213** | KM13 | MB13 |
| **65** | 75 | 95 | 183 | 135 | 90 | 32 | 315 | 260 | 27 | 22 | M20 | 3/4 | 140 | 15 | **22313** | KM13 | MB13 |

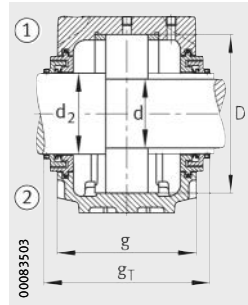
① Locating bearing; ② Non-locating bearing



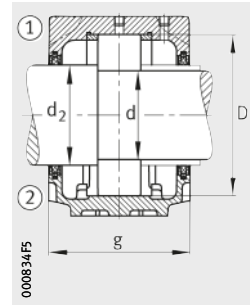

Double lip seal DH
Cover DKV




Labyrinth seal TSV




Taconite seal TCV




Felt seal FSV



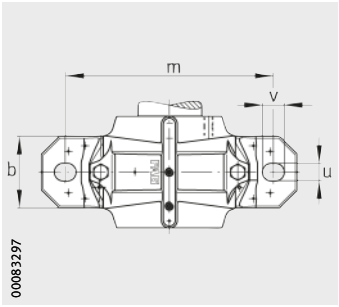


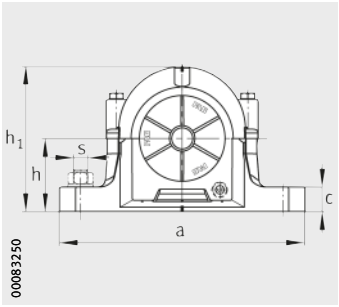


| | | | | | | | | | | Housing | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Locating ring | Felt seal | Double lip seal | Labyrinth seal | | V ring seal | | Taconite seal | | Cover | Mass | Designation |
| Quantity 2 | | | | $g_L$ mm | | $g_V$ mm | | $g_T$ mm | | m ≈ kg | |
| FRM100/11,5 | FSV211 | DH211 | TSV211 | 119 | DHV211 | 111 | – | – | DKV100 | 4,3 | **SNV100-F-L** |
| FRM120/11 | FSV311 | DH311 | TSV311 | 129 | DHV311 | 121 | – | – | DKV120 | 6,1 | **SNV120-F-L** |
| FRM100/9,5 | FSV211 | DH211 | TSV211 | 119 | DHV211 | 111 | – | – | DKV100 | 4,3 | **SNV100-F-L** |
| FRM120/4 | FSV311 | DH311 | TSV311 | 129 | DHV311 | 121 | – | – | DKV120 | 6,1 | **SNV120-F-L** |
| FRM100/11,5 | FSV211 | DH211 | TSV211 | 119 | DHV211 | 111 | – | – | DKV100 | 4,3 | **SNV100-F-L** |
| FRM120/11 | FSV311 | DH311 | TSV311 | 129 | DHV311 | 121 | – | – | DKV120 | 6,1 | **SNV120-F-L** |
| FRM120/11 | FSV311 | DH311 | TSV311 | 129 | DHV311 | 121 | – | – | DKV120 | 6,1 | **SNV120-F-L** |
| FRM100/9,5 | FSV211 | DH211 | TSV211 | 119 | DHV211 | 111 | – | – | DKV100 | 4,3 | **SNV100-F-L** |
| FRM120/4 | FSV311 | DH311 | TSV311 | 129 | DHV311 | 121 | – | – | DKV120 | 6,1 | **SNV120-F-L** |
| FRM110/13 | FSV212 | DH212 | TSV212 | 124 | DHV212 | 120 | – | – | DKV110 | 4,9 | **SNV110-F-L** |
| FRM130/12,5 | FSV312 | DH312 | TSV312 | 134 | DHV312 | 130 | TCV312 | 158 | DKV130 | 6,8 | **SNV130-F-L** |
| FRM110/10 | FSV212 | DH212 | TSV212 | 124 | DHV212 | 120 | – | – | DKV110 | 4,9 | **SNV110-F-L** |
| FRM130/5 | FSV312 | DH312 | TSV312 | 134 | DHV312 | 130 | TCV312 | 158 | DKV130 | 6,8 | **SNV130-F-L** |
| FRM110/13 | FSV212 | DH212 | TSV212 | 124 | DHV212 | 120 | – | – | DKV110 | 4,9 | **SNV110-F-L** |
| FRM130/12,5 | FSV312 | DH312 | TSV312 | 134 | DHV312 | 130 | TCV312 | 158 | DKV130 | 6,8 | **SNV130-F-L** |
| FRM130/12,5 | FSV312 | DH312 | TSV312 | 134 | DHV312 | 130 | TCV312 | 158 | DKV130 | 6,8 | **SNV130-F-L** |
| FRM110/10 | FSV212 | DH212 | TSV212 | 124 | DHV212 | 120 | – | – | DKV110 | 4,9 | **SNV110-F-L** |
| FRM130/5 | FSV312 | DH312 | TSV312 | 134 | DHV312 | 130 | TCV312 | 158 | DKV130 | 6,8 | **SNV130-F-L** |
| FRM120/14 | FSV213 | DH213 | TSV213 | 129 | DHV213 | 125 | – | – | DKV120 | 6,1 | **SNV120-F-L** |
| FRM140/12,5 | FSV313 | DH313 | TSV313 | 150,3 | DHV313 | 142,5 | TCV313 | 175,5 | DKV140 | 9,3 | **SNV140-F-L** |
| FRM120/10 | FSV213 | DH213 | TSV213 | 129 | DHV213 | 125 | – | – | DKV120 | 6,1 | **SNV120-F-L** |
| FRM140/5 | FSV313 | DH313 | TSV313 | 150,3 | DHV313 | 142,5 | TCV313 | 175,5 | DKV140 | 9,3 | **SNV140-F-L** |
| FRM120/14 | FSV213 | DH213 | TSV213 | 129 | DHV213 | 125 | – | – | DKV120 | 6,1 | **SNV120-F-L** |
| FRM140/12,5 | FSV313 | DH313 | TSV313 | 150,3 | DHV313 | 142,5 | TCV313 | 175,5 | DKV140 | 9,3 | **SNV140-F-L** |
| FRM140/12,5 | FSV313 | DH313 | TSV313 | 150,3 | DHV313 | 142,5 | TCV313 | 175,5 | DKV140 | 9,3 | **SNV140-F-L** |
| FRM120/10 | FSV213 | DH213 | TSV213 | 129 | DHV213 | 125 | – | – | DKV120 | 6,1 | **SNV120-F-L** |
| FRM140/5 | FSV313 | DH313 | TSV313 | 150,3 | DHV313 | 142,5 | TCV313 | 175,5 | DKV140 | 9,3 | **SNV140-F-L** |

# Plummer block housings

SNV, split
For bearings
with cylindrical bore
Metric shaft

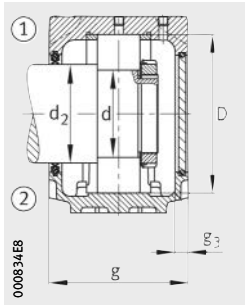


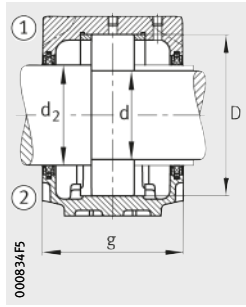

**Dimension table** (continued) · Dimensions in mm

| Shaft | | Housing Dimensions | | | | | | | | | | | | | Bearing and accessories | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | $d_2$ | h | $h_1$ | g | b | c | a | m | v | u | s | | D | $g_3$ | Bearing | Lock-nut | Tab washer |
| | | | | | | | | | | | mm | *inch* | | | | | |
| **70** | 80 | 80 | 158 | 105 | 80 | 30 | 275 | 230 | 23 | 18 | M16 | *5/8* | 125 | 15 | **1214** | KM14 | MB14 |
| **70** | 80 | 95 | 189 | 140 | 90 | 32 | 320 | 260 | 27 | 22 | M20 | *3/4* | 150 | 15 | **1314** | KM14 | MB14 |
| **70** | 80 | 80 | 158 | 105 | 80 | 30 | 275 | 230 | 23 | 18 | M16 | *5/8* | 125 | 15 | **2214** | KM14 | MB14 |
| **70** | 80 | 95 | 189 | 140 | 90 | 32 | 320 | 260 | 27 | 22 | M20 | *3/4* | 150 | 15 | **2314** | KM14 | MB14 |
| **70** | 80 | 80 | 158 | 105 | 80 | 30 | 275 | 230 | 23 | 18 | M16 | *5/8* | 125 | 15 | **20214** | KM14 | MB14 |
| **70** | 80 | 95 | 189 | 140 | 90 | 32 | 320 | 260 | 27 | 22 | M20 | *3/4* | 150 | 15 | **20314** | KM14 | MB14 |
| **70** | 80 | 95 | 189 | 140 | 90 | 32 | 320 | 260 | 27 | 22 | M20 | *3/4* | 150 | 15 | **21314** | KM14 | MB14 |
| **70** | 80 | 80 | 158 | 105 | 80 | 30 | 275 | 230 | 23 | 18 | M16 | *5/8* | 125 | 15 | **22214** | KM14 | MB14 |
| **70** | 80 | 95 | 189 | 140 | 90 | 32 | 320 | 260 | 27 | 22 | M20 | *3/4* | 150 | 15 | **22314** | KM14 | MB14 |
| **75** | 85 | 80 | 161 | 120 | 80 | 30 | 280 | 230 | 23 | 18 | M16 | *5/8* | 130 | 12,5 | **1215** | KM15 | MB15 |
| **75** | 85 | 100 | 201 | 145 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | *3/4* | 160 | 15 | **1315** | KM15 | MB15 |
| **75** | 85 | 80 | 161 | 120 | 80 | 30 | 280 | 230 | 23 | 18 | M16 | *5/8* | 130 | 12,5 | **2215** | KM15 | MB15 |
| **75** | 85 | 100 | 201 | 145 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | *3/4* | 160 | 15 | **2315** | KM15 | MB15 |
| **75** | 85 | 80 | 161 | 120 | 80 | 30 | 280 | 230 | 23 | 18 | M16 | *5/8* | 130 | 12,5 | **20215** | KM15 | MB15 |
| **75** | 85 | 100 | 201 | 145 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | *3/4* | 160 | 15 | **20315** | KM15 | MB15 |
| **75** | 85 | 100 | 201 | 145 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | *3/4* | 160 | 15 | **21315** | KM15 | MB15 |
| **75** | 85 | 80 | 161 | 120 | 80 | 30 | 280 | 230 | 23 | 18 | M16 | *5/8* | 130 | 12,5 | **22215** | KM15 | MB15 |
| **75** | 85 | 100 | 201 | 145 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | *3/4* | 160 | 15 | **22315** | KM15 | MB15 |
| **80** | 90 | 95 | 183 | 135 | 90 | 32 | 315 | 260 | 27 | 22 | M20 | *3/4* | 140 | 15 | **1216** | KM16 | MB16 |
| **80** | 90 | 112 | 219 | 150 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | *3/4* | 170 | 16 | **1316** | KM16 | MB16 |
| **80** | 90 | 95 | 183 | 135 | 90 | 32 | 315 | 260 | 27 | 22 | M20 | *3/4* | 140 | 15 | **2216** | KM16 | MB16 |
| **80** | 90 | 112 | 219 | 150 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | *3/4* | 170 | 16 | **2316** | KM16 | MB16 |
| **80** | 90 | 95 | 183 | 135 | 90 | 32 | 315 | 260 | 27 | 22 | M20 | *3/4* | 140 | 15 | **20216** | KM16 | MB16 |
| **80** | 90 | 112 | 219 | 150 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | *3/4* | 170 | 16 | **20316** | KM16 | MB16 |
| **80** | 90 | 112 | 219 | 150 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | *3/4* | 170 | 16 | **21316** | KM16 | MB16 |
| **80** | 90 | 95 | 183 | 135 | 90 | 32 | 315 | 260 | 27 | 22 | M20 | *3/4* | 140 | 15 | **22216** | KM16 | MB16 |
| **80** | 90 | 112 | 219 | 150 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | *3/4* | 170 | 16 | **22316** | KM16 | MB16 |

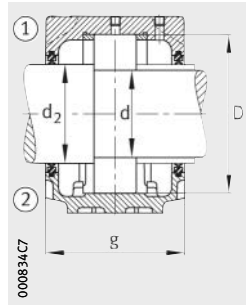
① Locating bearing; ② Non-locating bearing



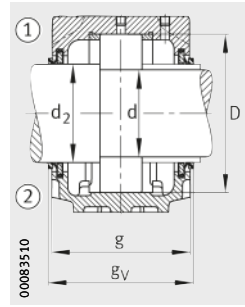

Double lip seal DH
Cover DKVT




Felt seal FSV




Double lip seal DH




V ring seal DHV



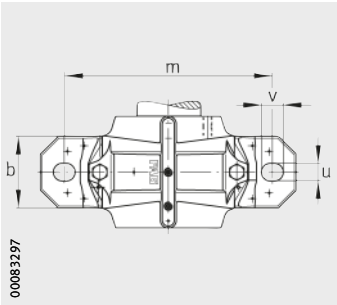


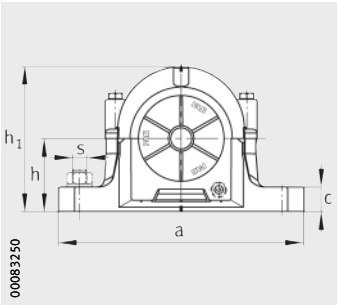


| | | | | | | | | | | Housing | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Locating ring<br><br>Quantity 2 | Felt seal | Double lip seal | Labyrinth seal | $g_L$<br>mm | V ring seal | $g_V$<br>mm | Taconite seal | $g_T$<br>mm | Cover | Mass<br>m<br>≈ kg | Designation |
| FRM125/7,5 | FSV214 | DH214 | TSV214 | 120,3 | DHV214 | 110 | TCV214 | 143 | DKV150 | 6,5 | **SNV125-F-L** |
| FRM150/13 | FSV214 | DH214 | TSV214 | 155,3 | DHV214 | 147,5 | TCV214 | 180,5 | DKV150 | 9,9 | **SNV150-F-L** |
| FRM125/4 | FSV214 | DH214 | TSV214 | 120,3 | DHV214 | 110 | TCV214 | 143 | DKV150 | 6,5 | **SNV125-F-L** |
| FRM150/5 | FSV214 | DH214 | TSV214 | 155,3 | DHV214 | 147,5 | TCV214 | 180,5 | DKV150 | 9,9 | **SNV150-F-L** |
| FRM125/7,5 | FSV214 | DH214 | TSV214 | 120,3 | DHV214 | 110 | TCV214 | 143 | DKV150 | 6,5 | **SNV125-F-L** |
| FRM150/13 | FSV214 | DH214 | TSV214 | 155,3 | DHV214 | 147,5 | TCV214 | 180,5 | DKV150 | 9,9 | **SNV150-F-L** |
| FRM150/13 | FSV214 | DH214 | TSV214 | 155,3 | DHV214 | 147,5 | TCV214 | 180,5 | DKV150 | 9,9 | **SNV150-F-L** |
| FRM125/4 | FSV214 | DH214 | TSV214 | 120,3 | DHV214 | 110 | TCV214 | 143 | DKV150 | 6,5 | **SNV125-F-L** |
| FRM150/5 | FSV214 | DH214 | TSV214 | 155,3 | DHV214 | 147,5 | TCV214 | 180,5 | DKV150 | 9,9 | **SNV150-F-L** |
| FRM130/15,5 | FSV215 | DH215 | TSV215 | 134 | DHV215 | 130 | – | – | DKV130 | 6,8 | **SNV130-F-L** |
| FRM160/14 | FSV315 | DH315 | TSV315 | 160,3 | DHV315 | 152,5 | TCV315 | 185,5 | DKV160 | 12,8 | **SNV160-F-L** |
| FRM130/12,5 | FSV215 | DH215 | TSV215 | 134 | DHV215 | 130 | – | – | DKV130 | 6,8 | **SNV130-F-L** |
| FRM160/5 | FSV315 | DH315 | TSV315 | 160,3 | DHV315 | 152,5 | TCV315 | 185,5 | DKV160 | 12,8 | **SNV160-F-L** |
| FRM130/15,5 | FSV215 | DH215 | TSV215 | 134 | DHV215 | 130 | – | – | DKV130 | 6,8 | **SNV130-F-L** |
| FRM160/14 | FSV315 | DH315 | TSV315 | 160,3 | DHV315 | 152,5 | TCV315 | 185,5 | DKV160 | 12,8 | **SNV160-F-L** |
| FRM160/14 | FSV315 | DH315 | TSV315 | 160,3 | DHV315 | 152,5 | TCV315 | 185,5 | DKV160 | 12,8 | **SNV160-F-L** |
| FRM130/12,5 | FSV215 | DH215 | TSV215 | 134 | DHV215 | 130 | – | – | DKV130 | 6,8 | **SNV130-F-L** |
| FRM160/5 | FSV315 | DH315 | TSV315 | 160,3 | DHV315 | 152,5 | TCV315 | 185,5 | DKV160 | 12,8 | **SNV160-F-L** |
| FRM140/16 | FSV216 | DH216 | TSV216 | 150,3 | DHV216 | 142,5 | – | – | DKV140 | 9,3 | **SNV140-F-L** |
| FRM170/14,5 | FSV316 | DH316 | TSV316 | 167,3 | DHV316 | 157,5 | TCV316 | 192,5 | DKV170 | 14,4 | **SNV170-F-L** |
| FRM140/12,5 | FSV216 | DH216 | TSV216 | 150,3 | DHV216 | 142,5 | – | – | DKV140 | 9,3 | **SNV140-F-L** |
| FRM170/5 | FSV316 | DH316 | TSV316 | 167,3 | DHV316 | 157,5 | TCV316 | 192,5 | DKV170 | 14,4 | **SNV170-F-L** |
| FRM140/16 | FSV216 | DH216 | TSV216 | 150,3 | DHV216 | 142,5 | – | – | DKV140 | 9,3 | **SNV140-F-L** |
| FRM170/14,5 | FSV316 | DH316 | TSV316 | 167,3 | DHV316 | 157,5 | TCV316 | 192,5 | DKV170 | 14,4 | **SNV170-F-L** |
| FRM170/14,5 | FSV316 | DH316 | TSV316 | 167,3 | DHV316 | 157,5 | TCV316 | 192,5 | DKV170 | 14,4 | **SNV170-F-L** |
| FRM140/12,5 | FSV216 | DH216 | TSV216 | 150,3 | DHV216 | 142,5 | – | – | DKV140 | 9,3 | **SNV140-F-L** |
| FRM170/5 | FSV316 | DH316 | TSV316 | 167,3 | DHV316 | 157,5 | TCV316 | 192,5 | DKV170 | 14,4 | **SNV170-F-L** |

# Plummer block housings

SNV, split
For bearings
with cylindrical bore
Metric shaft

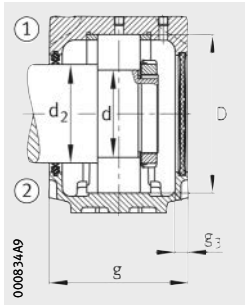


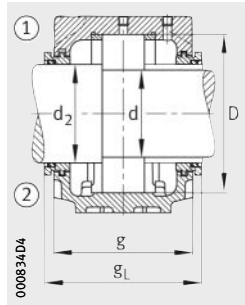

**Dimension table** (continued) · Dimensions in mm

| Shaft | | Housing Dimensions | | | | | | | | | | | | | Bearing and accessories | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | $d_2$ | h | $h_1$ | g | b | c | a | m | v | u | s | | D | $g_3$ | Bearing | Lock-nut | Tab washer |
| | | | | | | | | | | | mm | *inch* | | | | | |
| **85** | 95 | 95 | 189 | 140 | 90 | 32 | 320 | 260 | 27 | 22 | M20 | 3/4 | 150 | 15 | **1217** | KM17 | MB17 |
| **85** | 95 | 112 | 223 | 160 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | 7/8 | 180 | 16 | **1317** | KM17 | MB17 |
| **85** | 95 | 95 | 189 | 140 | 90 | 32 | 320 | 260 | 27 | 22 | M20 | 3/4 | 150 | 15 | **2217** | KM17 | MB17 |
| **85** | 95 | 112 | 223 | 160 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | 7/8 | 180 | 16 | **2317** | KM17 | MB17 |
| **85** | 95 | 95 | 189 | 140 | 90 | 32 | 320 | 260 | 27 | 22 | M20 | 3/4 | 150 | 15 | **20217** | KM17 | MB17 |
| **85** | 95 | 112 | 223 | 160 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | 7/8 | 180 | 16 | **20317** | KM17 | MB17 |
| **85** | 95 | 112 | 223 | 160 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | 7/8 | 180 | 16 | **21317** | KM17 | MB17 |
| **85** | 95 | 95 | 189 | 140 | 90 | 32 | 320 | 260 | 27 | 22 | M20 | 3/4 | 150 | 15 | **22217** | KM17 | MB17 |
| **85** | 95 | 112 | 223 | 160 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | 7/8 | 180 | 16 | **22317** | KM17 | MB17 |
| **90** | 100 | 100 | 201 | 145 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | 3/4 | 160 | 15 | **1218** | KM18 | MB18 |
| **90** | 105 | 112 | 229 | 155 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | 7/8 | 190 | 15 | **1318** | KM18 | MB18 |
| **90** | 100 | 100 | 201 | 145 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | 3/4 | 160 | 15 | **2218** | KM18 | MB18 |
| **90** | 105 | 112 | 229 | 155 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | 7/8 | 190 | 15 | **2318** | KM18 | MB18 |
| **90** | 100 | 100 | 201 | 145 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | 3/4 | 160 | 15 | **20218** | KM18 | MB18 |
| **90** | 105 | 112 | 229 | 155 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | 7/8 | 190 | 15 | **20318** | KM18 | MB18 |
| **90** | 105 | 112 | 229 | 155 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | 7/8 | 190 | 15 | **21318** | KM18 | MB18 |
| **90** | 100 | 100 | 201 | 145 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | 3/4 | 160 | 15 | **22218** | KM18 | MB18 |
| **90** | 105 | 112 | 229 | 155 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | 7/8 | 190 | 15 | **22318** | KM18 | MB18 |
| **90** | 100 | 100 | 201 | 145 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | 3/4 | 160 | 15 | **23218** | KM18 | MB18 |
| **95** | 110 | 112 | 219 | 150 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | 3/4 | 170 | 16 | **1219** | KM19 | MB19 |
| **95** | 110 | 125 | 248 | 175 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | 7/8 | 200 | 16 | **1319** | KM19 | MB19 |
| **95** | 110 | 112 | 219 | 150 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | 3/4 | 170 | 16 | **2219** | KM19 | MB19 |
| **95** | 110 | 125 | 248 | 175 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | 7/8 | 200 | 16 | **2319** | KM19 | MB19 |
| **95** | 110 | 112 | 219 | 150 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | 3/4 | 170 | 16 | **20219** | KM19 | MB19 |
| **95** | 110 | 125 | 248 | 175 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | 7/8 | 200 | 16 | **20319** | KM19 | MB19 |
| **95** | 110 | 125 | 248 | 175 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | 7/8 | 200 | 16 | **21319** | KM19 | MB19 |
| **95** | 110 | 112 | 219 | 150 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | 3/4 | 170 | 16 | **22219** | KM19 | MB19 |
| **95** | 110 | 125 | 248 | 175 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | 7/8 | 200 | 16 | **22319** | KM19 | MB19 |

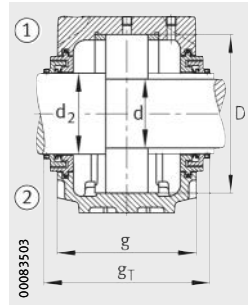
① Locating bearing; ② Non-locating bearing



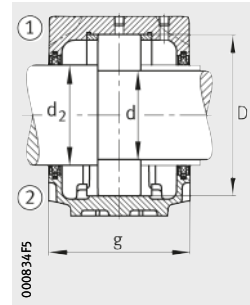

Double lip seal DH
Cover DKV




Labyrinth seal TSV




Taconite seal TCV




Felt seal FSV



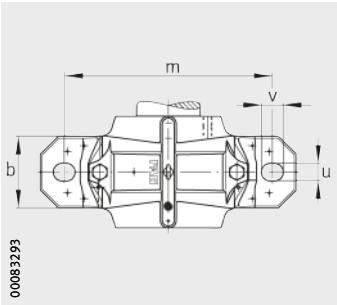


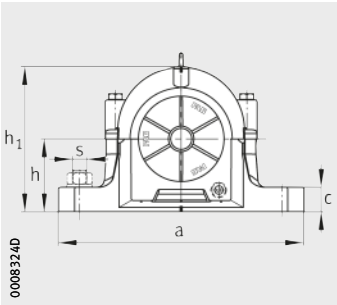


| | | | | | | | | | | Housing | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Locating ring | Felt seal | Double lip seal | Labyrinth seal | | V ring seal | | Taconite seal | | Cover | Mass | Designation |
| Quantity 2 | | | | $g_L$ mm | | $g_V$ mm | | $g_T$ mm | | m ≈ kg | |
| FRM150/16,5 | FSV217 | DH217 | TSV217 | 155,3 | DHV217 | 137,5 | – | – | DKV150 | 9,9 | **SNV150-F-L** |
| FRM180/14,5 | FSV317 | DH317 | TSV317 | 177,3 | DHV317 | 167,5 | TCV317 | 202,5 | DKV180 | 17 | **SNV180-F-L** |
| FRM150/12,5 | FSV217 | DH217 | TSV217 | 155,3 | DHV217 | 137,5 | – | – | DKV150 | 9,9 | **SNV150-F-L** |
| FRM180/5 | FSV317 | DH317 | TSV317 | 177,3 | DHV317 | 167,5 | TCV317 | 202,5 | DKV180 | 17 | **SNV180-F-L** |
| FRM150/16,5 | FSV217 | DH217 | TSV217 | 155,3 | DHV217 | 137,5 | – | – | DKV150 | 9,9 | **SNV150-F-L** |
| FRM180/14,5 | FSV317 | DH317 | TSV317 | 177,3 | DHV317 | 167,5 | TCV317 | 202,5 | DKV180 | 17 | **SNV180-F-L** |
| FRM180/14,5 | FSV317 | DH317 | TSV317 | 177,3 | DHV317 | 167,5 | TCV317 | 202,5 | DKV180 | 17 | **SNV180-F-L** |
| FRM150/12,5 | FSV217 | DH217 | TSV217 | 155,3 | DHV217 | 137,5 | – | – | DKV150 | 9,9 | **SNV150-F-L** |
| FRM180/5 | FSV317 | DH317 | TSV317 | 177,3 | DHV317 | 167,5 | TCV317 | 202,5 | DKV180 | 17 | **SNV180-F-L** |
| FRM160/17,5 | FSV218 | DH218 | TSV218 | 160,3 | DHV218 | 152,5 | – | – | DKV160 | 12,8 | **SNV160-F-L** |
| FRM190/15,5 | FSV318 | DH318 | TSV318 | 170,3 | DHV318 | 162,5 | – | – | DKV160 | 22 | **SNV190-F-L** |
| FRM160/12,5 | FSV218 | DH218 | TSV218 | 160,3 | DHV218 | 152,5 | – | – | DKV160 | 12,8 | **SNV160-F-L** |
| FRM190/5 | FSV318 | DH318 | TSV318 | 170,3 | DHV318 | 162,5 | – | – | DKV160 | 22 | **SNV190-F-L** |
| FRM160/17,5 | FSV218 | DH218 | TSV218 | 160,3 | DHV218 | 152,5 | – | – | DKV160 | 12,8 | **SNV160-F-L** |
| FRM190/15,5 | FSV318 | DH318 | TSV318 | 170,3 | DHV318 | 162,5 | – | – | DKV160 | 22 | **SNV190-F-L** |
| FRM190/15,5 | FSV318 | DH318 | TSV318 | 170,3 | DHV318 | 162,5 | – | – | DKV160 | 22 | **SNV190-F-L** |
| FRM160/12,5 | FSV218 | DH218 | TSV218 | 160,3 | DHV218 | 152,5 | – | – | DKV160 | 12,8 | **SNV160-F-L** |
| FRM190/5 | FSV318 | DH318 | TSV318 | 170,3 | DHV318 | 162,5 | – | – | DKV160 | 22 | **SNV190-F-L** |
| FRM160/6,3 | FSV218 | DH218 | TSV218 | 160,3 | DHV218 | 152,5 | – | – | DKV160 | 12,8 | **SNV160-F-L** |
| FRM170/18 | FSV219 | DH219 | TSV219 | 167,3 | DHV219 | 160,5 | – | – | DKV170 | 14,4 | **SNV170-F-L** |
| FRM200/17,5 | FSV319 | DH319 | TSV319 | 192,3 | DHV319 | 185,5 | TCV319 | 217,5 | DKV200 | 21 | **SNV200-F-L** |
| FRM170/12,5 | FSV219 | DH219 | TSV219 | 167,3 | DHV219 | 160,5 | – | – | DKV170 | 14,4 | **SNV170-F-L** |
| FRM200/6,5 | FSV319 | DH319 | TSV319 | 192,3 | DHV319 | 185,5 | TCV319 | 217,5 | DKV200 | 21 | **SNV200-F-L** |
| FRM170/18 | FSV219 | DH219 | TSV219 | 167,3 | DHV219 | 160,5 | – | – | DKV170 | 14,4 | **SNV170-F-L** |
| FRM200/17,5 | FSV319 | DH319 | TSV319 | 192,3 | DHV319 | 185,5 | TCV319 | 217,5 | DKV200 | 21 | **SNV200-F-L** |
| FRM200/17,5 | FSV319 | DH319 | TSV319 | 192,3 | DHV319 | 185,5 | TCV319 | 217,5 | DKV200 | 21 | **SNV200-F-L** |
| FRM170/12,5 | FSV219 | DH219 | TSV219 | 167,3 | DHV219 | 160,5 | – | – | DKV170 | 14,4 | **SNV170-F-L** |
| FRM200/6,5 | FSV319 | DH319 | TSV319 | 192,3 | DHV319 | 185,5 | TCV319 | 217,5 | DKV200 | 21 | **SNV200-F-L** |

# Plummer block housings

SNV, split
For bearings
with cylindrical bore
Metric shaft



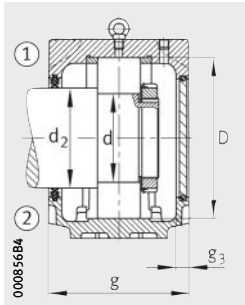




**Dimension table** (continued) · Dimensions in mm

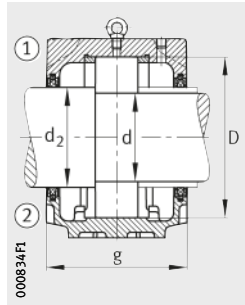
| Shaft | | Housing Dimensions | | | | | | | | | | | | | Bearing and accessories | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | $d_2$ | h | $h_1$ | g | b | c | a | m | v | u | s | | D | $g_3$ | Bearing | Lock-nut | Tab washer |
| | | | | | | | | | | | mm | *inch* | | | | | |
| **100** | 115 | 112 | 223 | 160 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | *7/8* | 180 | 16 | **1220** | KM20 | MB20 |
| **100** | 115 | 140 | 271 | 180 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | *7/8* | 215 | 16 | **1320** | KM20 | MB20 |
| **100** | 115 | 112 | 223 | 160 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | *7/8* | 180 | 16 | **2220** | KM20 | MB20 |
| **100** | 115 | 140 | 271 | 180 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | *7/8* | 215 | 16 | **2320** | KM20 | MB20 |
| **100** | 115 | 112 | 223 | 160 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | *7/8* | 180 | 16 | **20220** | KM20 | MB20 |
| **100** | 115 | 140 | 271 | 180 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | *7/8* | 215 | 16 | **20320** | KM20 | MB20 |
| **100** | 115 | 140 | 271 | 180 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | *7/8* | 215 | 16 | **21320** | KM20 | MB20 |
| **100** | 115 | 112 | 223 | 160 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | *7/8* | 180 | 16 | **22220** | KM20 | MB20 |
| **100** | 115 | 140 | 271 | 180 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | *7/8* | 215 | 16 | **22320** | KM20 | MB20 |
| **100** | 115 | 112 | 223 | 160 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | *7/8* | 180 | 16 | **23220** | KM20 | MB20 |
| **110** | 125 | 125 | 248 | 175 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | *7/8* | 200 | 16 | **1222** | KM22 | MB22 |
| **110** | 125 | 150 | 298 | 185 | 130 | 50 | 450 | 390 | 35 | 28 | M24 | *1* | 240 | 18 | **1322** | KM22 | MB22 |
| **110** | 125 | 125 | 248 | 175 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | *7/8* | 200 | 16 | **2222** | KM22 | MB22 |
| **110** | 125 | 150 | 298 | 185 | 130 | 50 | 450 | 390 | 35 | 28 | M24 | *1* | 240 | 18 | **2322** | KM22 | MB22 |
| **110** | 125 | 125 | 248 | 175 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | *7/8* | 200 | 16 | **20222** | KM22 | MB22 |
| **110** | 125 | 150 | 298 | 185 | 130 | 50 | 450 | 390 | 35 | 28 | M24 | *1* | 240 | 18 | **20322** | KM22 | MB22 |
| **110** | 125 | 150 | 298 | 185 | 130 | 50 | 450 | 390 | 35 | 28 | M24 | *1* | 240 | 18 | **21322** | KM22 | MB22 |
| **110** | 125 | 125 | 248 | 175 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | *7/8* | 200 | 16 | **22222** | KM22 | MB22 |
| **110** | 125 | 150 | 298 | 185 | 130 | 50 | 450 | 390 | 35 | 28 | M24 | *1* | 240 | 18 | **22322** | KM22 | MB22 |
| **110** | 125 | 125 | 248 | 175 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | *7/8* | 200 | 16 | **23222** | KM22 | MB22 |
| **120** | 135 | 140 | 271 | 180 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | *7/8* | 215 | 16 | **20224** | KM24 | MB24 |
| **120** | 135 | 160 | 321 | 190 | 160 | 60 | 530 | 450 | 42 | 35 | M30 | *1 1/4* | 260 | 18 | **20324** | KM24 | MB24 |
| **120** | 135 | 140 | 271 | 180 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | *7/8* | 215 | 16 | **22224** | KM24 | MB24 |
| **120** | 135 | 160 | 321 | 190 | 160 | 60 | 530 | 450 | 42 | 35 | M30 | *1 1/4* | 260 | 18 | **22324** | KM24 | MB24 |
| **120** | 135 | 140 | 271 | 180 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | *7/8* | 215 | 16 | **23224** | KM24 | MB24 |
| **130** | 145 | 150 | 291 | 190 | 130 | 50 | 445 | 380 | 35 | 28 | M24 | *1* | 230 | 18 | **20226** | KM26 | MB26 |
| **130** | 150 | 170 | 344 | 205 | 160 | 60 | 550 | 470 | 42 | 35 | M30 | *1 1/4* | 280 | 18 | **20326** | KM26 | MB26 |
| **130** | 145 | 150 | 291 | 190 | 130 | 50 | 445 | 380 | 35 | 28 | M24 | *1* | 230 | 18 | **22226** | KM26 | MB26 |
| **130** | 150 | 170 | 344 | 205 | 160 | 60 | 550 | 470 | 42 | 35 | M30 | *1 1/4* | 280 | 18 | **22326** | KM26 | MB26 |
| **130** | 145 | 150 | 291 | 190 | 130 | 50 | 445 | 380 | 35 | 28 | M24 | *1* | 230 | 18 | **23226** | KM26 | MB26 |

① Locating bearing; ② Non-locating bearing

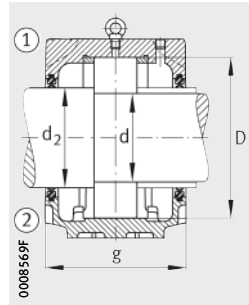
1) Housing without eye bolt.



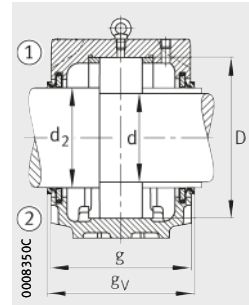

Double lip seal DH
Cover DKVT




Felt seal FSV




Double lip seal DH




V ring seal DHV



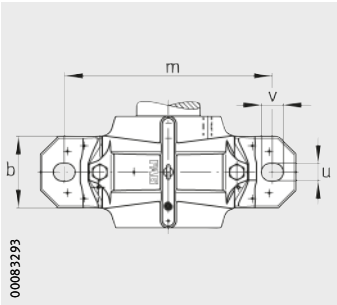


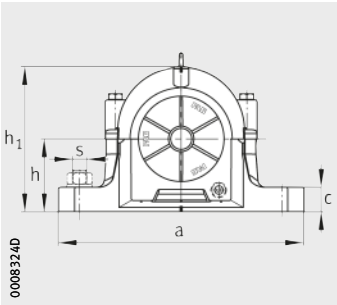


| | | | | | | | | | | Housing | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Locating ring | Felt seal | Double lip seal | Labyrinth seal | | V ring seal | | Taconite seal | | Cover | Mass | Designation |
| | | | | $g_L$ | | $g_V$ | | $g_T$ | | m | |
| Quantity 2 | | | | mm | | mm | | mm | | ≈ kg | |
| FRM180/18 | FSV220 | DH220 | TSV220 | 177,3 | DHV220 | 170,5 | – | – | DKV180 | 17 | **SNV180-F-L**[1)] |
| FRM215/19,5 | FSV320 | DH320 | TSV320 | 197,3 | DHV320 | 190,5 | TCV320 | 226,5 | DKV215 | 24,5 | **SNV215-F-L** |
| FRM180/12 | FSV220 | DH220 | TSV220 | 177,3 | DHV220 | 170,5 | – | – | DKV180 | 17 | **SNV180-F-L**[1)] |
| FRM215/6,5 | FSV320 | DH320 | TSV320 | 197,3 | DHV320 | 190,5 | TCV320 | 226,5 | DKV215 | 24,5 | **SNV215-F-L** |
| FRM180/18 | FSV220 | DH220 | TSV220 | 177,3 | DHV220 | 170,5 | – | – | DKV180 | 17 | **SNV180-F-L**[1)] |
| FRM215/19,5 | FSV320 | DH320 | TSV320 | 197,3 | DHV320 | 190,5 | TCV320 | 226,5 | DKV215 | 24,5 | **SNV215-F-L** |
| FRM215/19,5 | FSV320 | DH320 | TSV320 | 197,3 | DHV320 | 190,5 | TCV320 | 226,5 | DKV215 | 24,5 | **SNV215-F-L** |
| FRM180/12 | FSV220 | DH220 | TSV220 | 177,3 | DHV220 | 170,5 | – | – | DKV180 | 17 | **SNV180-F-L**[1)] |
| FRM215/6,5 | FSV320 | DH320 | TSV320 | 197,3 | DHV320 | 190,5 | TCV320 | 226,5 | DKV215 | 24,5 | **SNV215-F-L** |
| FRM180/4,85 | FSV220 | DH220 | TSV220 | 177,3 | DHV220 | 170,5 | – | – | DKV180 | 17 | **SNV180-F-L**[1)] |
| FRM200/21 | FSV222 | DH222 | TSV222 | 195,3 | DHV222 | 185,5 | – | – | DKV200 | 21 | **SNV200-F-L**[1)] |
| FRM240/20 | FSV222 | DH222 | TSV222 | 203,3 | DHV222 | 193,5 | – | – | DKV200 | 32 | **SNV240-F-L** |
| FRM200/13,5 | FSV222 | DH222 | TSV222 | 195,3 | DHV222 | 185,5 | – | – | DKV200 | 21 | **SNV200-F-L**[1)] |
| FRM240/5 | FSV222 | DH222 | TSV222 | 203,3 | DHV222 | 193,5 | – | – | DKV200 | 32 | **SNV240-F-L** |
| FRM200/21 | FSV222 | DH222 | TSV222 | 195,3 | DHV222 | 185,5 | – | – | DKV200 | 21 | **SNV200-F-L**[1)] |
| FRM240/20 | FSV222 | DH222 | TSV222 | 203,3 | DHV222 | 193,5 | – | – | DKV200 | 32 | **SNV240-F-L** |
| FRM240/20 | FSV222 | DH222 | TSV222 | 203,3 | DHV222 | 193,5 | – | – | DKV200 | 32 | **SNV240-F-L** |
| FRM200/13,5 | FSV222 | DH222 | TSV222 | 195,3 | DHV222 | 185,5 | – | – | DKV200 | 21 | **SNV200-F-L**[1)] |
| FRM240/5 | FSV222 | DH222 | TSV222 | 203,3 | DHV222 | 193,5 | – | – | DKV200 | 32 | **SNV240-F-L** |
| FRM200/5,1 | FSV222 | DH222 | TSV222 | 195,3 | DHV222 | 185,5 | – | – | DKV200 | 21 | **SNV200-F-L**[1)] |
| FRM215/23 | FSV224 | DH224 | TSV224 | 200,3 | DHV224 | 190,5 | – | – | DKV215 | 24,5 | **SNV215-F-L** |
| FRM260/20,5 | FSV224 | DH224 | TSV224 | 208,3 | DHV224 | 198,5 | – | – | DKV215 | 48 | **SNV260-F-L** |
| FRM215/14 | FSV224 | DH224 | TSV224 | 200,3 | DHV224 | 190,5 | – | – | DKV215 | 24,5 | **SNV215-F-L** |
| FRM260/5 | FSV224 | DH224 | TSV224 | 208,3 | DHV224 | 198,5 | – | – | DKV215 | 48 | **SNV260-F-L** |
| FRM215/5 | FSV224 | DH224 | TSV224 | 200,3 | DHV224 | 190,5 | – | – | DKV215 | 24,5 | **SNV215-F-L** |
| FRM230/25 | FSV226 | DH226 | TSV226 | 208,3 | DHV226 | 198,5 | – | – | DKV230 | 30 | **SNV230-F-L** |
| FRM280/22,5 | FSV326 | DH326 | TSV326 | 223,3 | DHV326 | 213,5 | – | – | DKV230 | 55 | **SNV280-F-L** |
| FRM230/13 | FSV226 | DH226 | TSV226 | 208,3 | DHV226 | 198,5 | – | – | DKV230 | 30 | **SNV230-F-L** |
| FRM280/5 | FSV326 | DH326 | TSV326 | 223,3 | DHV326 | 213,5 | – | – | DKV230 | 55 | **SNV280-F-L** |
| FRM230/5 | FSV226 | DH226 | TSV226 | 208,3 | DHV226 | 198,5 | – | – | DKV230 | 30 | **SNV230-F-L** |

# Plummer block housings

SNV, split
For bearings
with cylindrical bore
Metric shaft

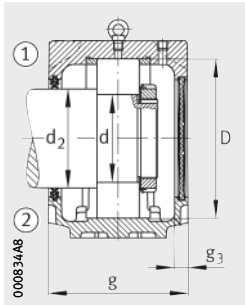


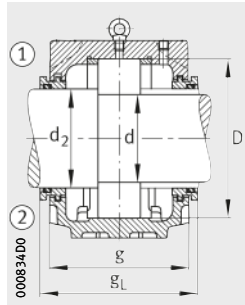

**Dimension table** (continued) · Dimensions in mm

| Shaft | | Housing Dimensions | | | | | | | | | | | | | Bearing and accessories | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | $d_2$ | h | $h_1$ | g | b | c | a | m | v | u | s | | D | $g_3$ | Bearing | Lock-nut | Tab washer |
| | | | | | | | | | | | mm | *inch* | | | | | |
| **140** | 155 | 150 | 304 | 200 | 150 | 50 | 500 | 420 | 42 | 35 | M30 | $1^1/_4$ | 250 | 18 | **20228** | KM28 | MB28 |
| **140** | 160 | 180 | 366 | 215 | 170 | 65 | 620 | 520 | 42 | 35 | M30 | $1^1/_4$ | 300 | 18 | **20328** | KM28 | MB28 |
| **140** | 155 | 150 | 304 | 200 | 150 | 50 | 500 | 420 | 42 | 35 | M30 | $1^1/_4$ | 250 | 18 | **22228** | KM28 | MB28 |
| **140** | 160 | 180 | 366 | 215 | 170 | 65 | 620 | 520 | 42 | 35 | M30 | $1^1/_4$ | 300 | 18 | **22328** | KM28 | MB28 |
| **140** | 155 | 150 | 304 | 200 | 150 | 50 | 500 | 420 | 42 | 35 | M30 | $1^1/_4$ | 250 | 18 | **23228** | KM28 | MB28 |
| **150** | 165 | 160 | 328 | 215 | 160 | 60 | 530 | 450 | 42 | 35 | M30 | $1^1/_4$ | 270 | 18 | **20230** | KM30 | MB30 |
| **150** | 170 | 190 | 386 | 225 | 180 | 65 | 650 | 560 | 42 | 35 | M30 | $1^1/_4$ | 320 | 18 | **20330** | KM30 | MB30 |
| **150** | 165 | 160 | 328 | 215 | 160 | 60 | 530 | 450 | 42 | 35 | M30 | $1^1/_4$ | 270 | 18 | **22230** | KM30 | MB30 |
| **150** | 170 | 190 | 386 | 225 | 180 | 65 | 650 | 560 | 42 | 35 | M30 | $1^1/_4$ | 320 | 18 | **22330** | KM30 | MB30 |
| **150** | 165 | 160 | 328 | 215 | 160 | 60 | 530 | 450 | 42 | 35 | M30 | $1^1/_4$ | 270 | 18 | **23230** | KM30 | MB30 |
| **160** | 175 | 170 | 351 | 225 | 160 | 60 | 550 | 470 | 42 | 35 | M30 | $1^1/_4$ | 290 | 18 | **20232** | KM32 | MB32 |
| **160** | 175 | 170 | 351 | 225 | 160 | 60 | 550 | 470 | 42 | 35 | M30 | $1^1/_4$ | 290 | 18 | **22232** | KM32 | MB32 |
| **160** | 180 | 200 | 406 | 235 | 190 | 70 | 680 | 580 | 50 | 42 | M36 | $1^1/_4$ | 340 | 18 | **22332** | KM32 | MB32 |
| **160** | 175 | 170 | 351 | 225 | 160 | 60 | 550 | 470 | 42 | 35 | M30 | $1^1/_4$ | 290 | 18 | **23232** | KM32 | MB32 |

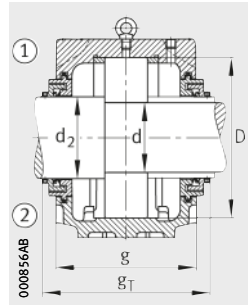
① Locating bearing; ② Non-locating bearing



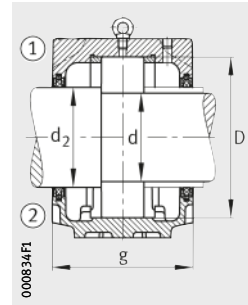

Double lip seal DH
Cover DKV




Labyrinth seal TSV




Taconite seal TCV




Felt seal FSV



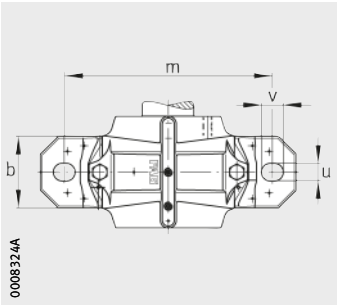


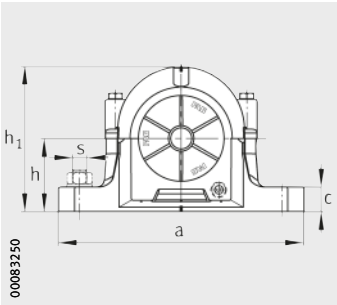


| | | | | | | | | | | Housing | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Locating ring<br><br>Quantity 2 | Felt seal | Double lip seal | Labyrinth seal | | V ring seal | | Taconite seal | | Cover | Mass<br><br>m<br>≈ kg | Designation |
| | | | | $g_L$<br>mm | | $g_V$<br>mm | | $g_T$<br>mm | | | |
| FRM250/28 | FSV228 | DH228 | TSV228 | 218,3 | DHV228 | 211,5 | – | – | DKV250 | 38 | **SNV250-F-L** |
| FRM300/25 | FSV328 | DH328 | TSV328 | 233,3 | DHV328 | 226,5 | – | – | DKV250 | 70 | **SNV300-F-L** |
| FRM250/15 | FSV228 | DH228 | TSV228 | 218,3 | DHV228 | 211,5 | – | – | DKV250 | 38 | **SNV250-F-L** |
| FRM300/5 | FSV328 | DH328 | TSV328 | 233,3 | DHV328 | 226,5 | – | – | DKV250 | 70 | **SNV300-F-L** |
| FRM250/5 | FSV228 | DH228 | TSV228 | 218,3 | DHV228 | 211,5 | – | – | DKV250 | 38 | **SNV250-F-L** |
| FRM270/30,5 | FSV230 | DH230 | TSV230 | 233,3 | DHV230 | 228,5 | – | – | DKV270 | 45,5 | **SNV270-F-L** |
| FRM320/26,5 | FSV330 | DH330 | TSV330 | 243,3 | DHV330 | 236,5 | – | – | DKV270 | 95 | **SNV320-F-L** |
| FRM270/16,5 | FSV230 | DH230 | TSV230 | 233,3 | DHV230 | 228,5 | – | – | DKV270 | 45,5 | **SNV270-F-L** |
| FRM320/5 | FSV330 | DH330 | TSV330 | 243,3 | DHV330 | 236,5 | – | – | DKV270 | 95 | **SNV320-F-L** |
| FRM270/5 | FSV230 | DH230 | TSV230 | 233,3 | DHV230 | 228,5 | – | – | DKV270 | 45,5 | **SNV270-F-L** |
| FRM290/33 | FSV232 | DH232 | TSV232 | 243,3 | DHV232 | 236,5 | – | – | DKV290 | 53,8 | **SNV290-F-L** |
| FRM290/17 | FSV232 | DH232 | TSV232 | 243,3 | DHV232 | 236,5 | – | – | DKV290 | 53,8 | **SNV290-F-L** |
| FRM340/5 | FSV332 | DH332 | TSV332 | 253,3 | DHV332 | 246,5 | – | – | DKV290 | 115 | **SNV340-F-L** |
| FRM290/5 | FSV232 | DH232 | TSV232 | 243,3 | DHV232 | 236,5 | – | – | DKV290 | 53,8 | **SNV290-F-L** |

# Plummer block housings

SNV, split
For bearings with tapered bore and adapter sleeve
Inch size shaft

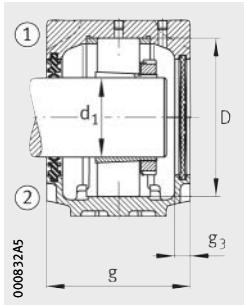


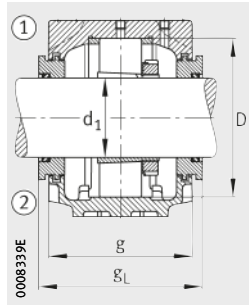

**Dimension table** · Dimensions in mm and *inch*

| Shaft | | Housing Dimensions | | | | | | | | | | | | | Bearing and accessories | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_1$ | | h | $h_1$ | g | b | c | a | m | v | u | s | | D | $g_3$ | Bearing | Adapter sleeve | Locating ring |
| *inch* | mm | | | | | | | | | | mm | *inch* | | | | | Quantity 2 |
| **12/16** | 19,05 | 40 | 75 | 70 | 46 | 19 | 165 | 130 | 20 | 15 | M12 | 1/2 | 52 | 10,5 | **1205-K** | H205X012 | FRM52/6 |
| **12/16** | 19,05 | 50 | 91 | 75 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | 1/2 | 62 | 10,5 | **1305-K** | H305X012 | FRM62/6,5 |
| **12/16** | 19,05 | 40 | 75 | 70 | 46 | 19 | 165 | 130 | 20 | 15 | M12 | 1/2 | 52 | 10,5 | **20205-K** | H205X012 | FRM52/6 |
| **12/16** | 19,05 | 40 | 75 | 70 | 46 | 19 | 165 | 130 | 20 | 15 | M12 | 1/2 | 52 | 10,5 | **2205-K** | H305X012 | FRM52/4,5 |
| **12/16** | 19,05 | 40 | 75 | 70 | 46 | 19 | 165 | 130 | 20 | 15 | M12 | 1/2 | 52 | 10,5 | **22205..-K** | H305X012 | FRM52/4,5 |
| **12/16** | 19,05 | 50 | 91 | 75 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | 1/2 | 62 | 10,5 | **2305-K** | H2305X012 | FRM62/3 |
| **13/16** | 20,638 | 40 | 75 | 70 | 46 | 19 | 165 | 130 | 20 | 15 | M12 | 1/2 | 52 | 10,5 | **1205-K** | H205X013 | FRM52/6 |
| **13/16** | 20,638 | 40 | 75 | 70 | 46 | 19 | 165 | 130 | 20 | 15 | M12 | 1/2 | 52 | 10,5 | **20205-K** | H205X013 | FRM52/6 |
| **13/16** | 20,638 | 40 | 75 | 70 | 46 | 19 | 165 | 130 | 20 | 15 | M12 | 1/2 | 52 | 10,5 | **2205-K** | H305X013 | FRM52/4,5 |
| **13/16** | 20,638 | 40 | 75 | 70 | 46 | 19 | 165 | 130 | 20 | 15 | M12 | 1/2 | 52 | 10,5 | **22205..-K** | H305X013 | FRM52/4,5 |
| **14/16** | 22,225 | 50 | 91 | 75 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | 1/2 | 62 | 10,5 | **1206-K** | H206X014 | FRM62/7 |
| **14/16** | 22,225 | 50 | 97 | 80 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | 1/2 | 72 | 10,5 | **1306-K** | H306X014 | FRM72/7 |
| **14/16** | 22,225 | 50 | 91 | 75 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | 1/2 | 62 | 10,5 | **20206-K** | H206X014 | FRM62/7 |
| **14/16** | 22,225 | 50 | 91 | 75 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | 1/2 | 62 | 10,5 | **2206-K** | H306X014 | FRM62/5 |
| **14/16** | 22,225 | 50 | 91 | 75 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | 1/2 | 62 | 10,5 | **22206..-K** | H306X014 | FRM62/5 |
| **14/16** | 22,225 | 50 | 97 | 80 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | 1/2 | 72 | 10,5 | **2306-K** | H2306X014 | FRM72/3 |
| **15/16** | 23,813 | 50 | 91 | 75 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | 1/2 | 62 | 10,5 | **1206-K** | H206X015 | FRM62/7 |
| **15/16** | 23,813 | 50 | 97 | 80 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | 1/2 | 72 | 10,5 | **1306-K** | H306X015 | FRM72/7 |
| **15/16** | 23,813 | 50 | 91 | 75 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | 1/2 | 62 | 10,5 | **20206-K** | H206X015 | FRM62/7 |
| **15/16** | 23,813 | 50 | 91 | 75 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | 1/2 | 62 | 10,5 | **2206-K** | H306X015 | FRM62/5 |
| **15/16** | 23,813 | 50 | 91 | 75 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | 1/2 | 62 | 10,5 | **22206..-K** | H306X015 | FRM62/5 |
| **15/16** | 23,813 | 50 | 97 | 80 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | 1/2 | 72 | 10,5 | **2306-K** | H2306X015 | FRM72/3 |
| **1** | 25,4 | 50 | 91 | 75 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | 1/2 | 62 | 10,5 | **1206-K** | H206X100 | FRM62/7 |
| **1** | 25,4 | 50 | 97 | 80 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | 1/2 | 72 | 10,5 | **1306-K** | H306X100 | FRM72/7 |
| **1** | 25,4 | 50 | 91 | 75 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | 1/2 | 62 | 10,5 | **20206-K** | H206X100 | FRM62/7 |
| **1** | 25,4 | 50 | 91 | 75 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | 1/2 | 62 | 10,5 | **2206-K** | H306X100 | FRM62/5 |
| **1** | 25,4 | 50 | 91 | 75 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | 1/2 | 62 | 10,5 | **22206..-K** | H306X100 | FRM62/5 |
| **1** | 25,4 | 50 | 97 | 80 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | 1/2 | 72 | 10,5 | **2306-K** | H2306X100 | FRM72/3 |

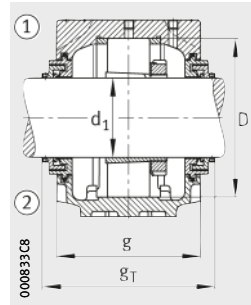
① Locating bearing; ② Non-locating bearing



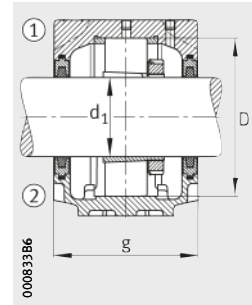

Double lip seal DH
Cover DKV




Labyrinth seal TSV




Taconite seal TCV




Felt seal FSV



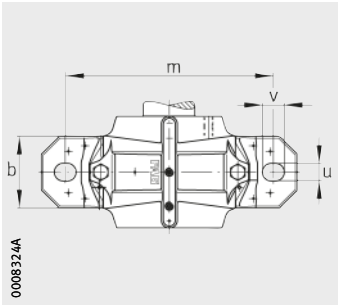


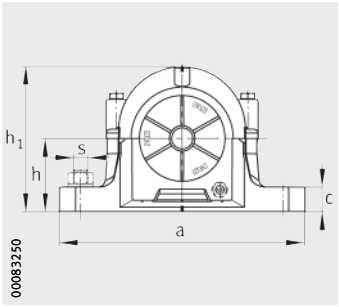


| | | | | | | | | | | Housing |
|---|---|---|---|---|---|---|---|---|---|---|
| Felt seal | Double lip seal | Labyrinth seal | | Taconite seal | | V ring seal | | Cover | Mass m ≈ kg | Designation |
| | | | $g_L$ mm | | $g_T$ mm | | $g_V$ mm | | | |
| FSV505X012 | DH505X012 | TSV505X012 | 83 | – | – | DHV505X012 | 76 | DKV052 | 1,3 | **SNV052-F-L** |
| FSV605X012 | DH605X012 | TSV605X012 | 88 | – | – | DHV605X012 | 81 | DKV062 | 1,9 | **SNV062-F-L** |
| FSV505X012 | DH505X012 | TSV505X012 | 83 | – | – | DHV505X012 | 76 | DKV052 | 1,3 | **SNV052-F-L** |
| FSV505X012 | DH505X012 | TSV505X012 | 83 | – | – | DHV505X012 | 76 | DKV052 | 1,3 | **SNV052-F-L** |
| FSV505X012 | DH505X012 | TSV505X012 | 83 | – | – | DHV505X012 | 76 | DKV052 | 1,3 | **SNV052-F-L** |
| FSV605X012 | DH605X012 | TSV605X012 | 88 | – | – | DHV605X012 | 81 | DKV062 | 1,9 | **SNV062-F-L** |
| FSV505 | DH505 | TSV505X013 | 83 | – | – | DHV505 | 76 | DKV052 | 1,3 | **SNV052-F-L** |
| FSV505 | DH505 | TSV505X013 | 83 | – | – | DHV505 | 76 | DKV052 | 1,3 | **SNV052-F-L** |
| FSV505 | DH505 | TSV505X013 | 83 | – | – | DHV505 | 76 | DKV052 | 1,3 | **SNV052-F-L** |
| FSV505 | DH505 | TSV505X013 | 83 | – | – | DHV505 | 76 | DKV052 | 1,3 | **SNV052-F-L** |
| FSV506X014 | DH506X014 | TSV506X014 | 88 | – | – | DHV506X014 | 81 | DKV062 | 1,9 | **SNV062-F-L** |
| FSV606X014 | DH606X014 | TSV606X014 | 93 | TCV606X014 | 117 | DHV606X014 | 86 | DKV072 | 2 | **SNV072-F-L** |
| FSV506X014 | DH506X014 | TSV506X014 | 88 | – | – | DHV506X014 | 81 | DKV062 | 1,9 | **SNV062-F-L** |
| FSV506X014 | DH506X014 | TSV506X014 | 88 | – | – | DHV506X014 | 81 | DKV062 | 1,9 | **SNV062-F-L** |
| FSV506X014 | DH506X014 | TSV506X014 | 88 | – | – | DHV506X014 | 81 | DKV062 | 1,9 | **SNV062-F-L** |
| FSV606X014 | DH606X014 | TSV606X014 | 93 | TCV606X014 | 117 | DHV606X014 | 86 | DKV072 | 2 | **SNV072-F-L** |
| FSV506X015 | DH506X014 | TSV506X015 | 88 | – | – | DHV506X015 | 81 | DKV062 | 1,9 | **SNV062-F-L** |
| FSV606X015 | DH606X014 | TSV606X015 | 93 | TCV606X015 | 117 | DHV606X015 | 86 | DKV072 | 2 | **SNV072-F-L** |
| FSV506X015 | DH506X014 | TSV506X015 | 88 | – | – | DHV506X015 | 81 | DKV062 | 1,9 | **SNV062-F-L** |
| FSV506X015 | DH506X014 | TSV506X015 | 88 | – | – | DHV506X015 | 81 | DKV062 | 1,9 | **SNV062-F-L** |
| FSV506X015 | DH506X014 | TSV506X015 | 88 | – | – | DHV506X015 | 81 | DKV062 | 1,9 | **SNV062-F-L** |
| FSV606X015 | DH606X014 | TSV606X015 | 93 | TCV606X015 | 117 | DHV606X015 | 86 | DKV072 | 2 | **SNV072-F-L** |
| FSV506 | DH506 | TSV506X100 | 88 | – | – | DHV506 | 81 | DKV062 | 1,9 | **SNV062-F-L** |
| FSV606 | DH606 | TSV606X100 | 93 | TCV606 | 117 | DHV606 | 86 | DKV072 | 2 | **SNV072-F-L** |
| FSV506 | DH506 | TSV506X100 | 88 | – | – | DHV506 | 81 | DKV062 | 1,9 | **SNV062-F-L** |
| FSV506 | DH506 | TSV506X100 | 88 | – | – | DHV506 | 81 | DKV062 | 1,9 | **SNV062-F-L** |
| FSV506 | DH506 | TSV506X100 | 88 | – | – | DHV506 | 81 | DKV062 | 1,9 | **SNV062-F-L** |
| FSV606 | DH606 | TSV606X100 | 93 | TCV606 | 117 | DHV606 | 86 | DKV072 | 2 | **SNV072-F-L** |

# Plummer block housings

SNV, split
For bearings with tapered bore and adapter sleeve
Inch size shaft

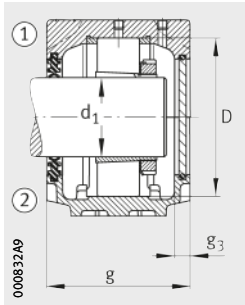


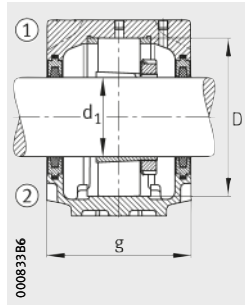

**Dimension table** (continued) · Dimensions in mm and *inch*

| Shaft | | Housing Dimensions | | | | | | | | | | | | | Bearing and accessories | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_1$ | | h | $h_1$ | g | b | c | a | m | v | u | s | | D | $g_3$ | Bearing | Adapter sleeve | Locating ring |
| *inch* | mm | | | | | | | | | | mm | *inch* | | | | | Quantity 2 |
| ***1 2/16*** | 28,575 | 50 | 97 | 80 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | *1/2* | 72 | 10,5 | **1207-K** | H207X102 | FRM72/8 |
| ***1 2/16*** | 28,575 | 60 | 112 | 85 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | *1/2* | 80 | 10,5 | **1307-K** | H307X102 | FRM80/9 |
| ***1 2/16*** | 28,575 | 50 | 97 | 80 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | *1/2* | 72 | 10,5 | **20207-K** | H207X102 | FRM72/8 |
| ***1 2/16*** | 28,575 | 60 | 112 | 85 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | *1/2* | 80 | 10,5 | **21307..-K** | H307X102 | FRM80/9 |
| ***1 2/16*** | 28,575 | 50 | 97 | 80 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | *1/2* | 72 | 10,5 | **2207-K** | H307X102 | FRM72/5 |
| ***1 2/16*** | 28,575 | 50 | 97 | 80 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | *1/2* | 72 | 10,5 | **22207..-K** | H307X102 | FRM72/5 |
| ***1 2/16*** | 28,575 | 60 | 112 | 85 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | *1/2* | 80 | 10,5 | **2307-K** | H2307X102 | FRM80/4 |
| ***1 3/16*** | 30,163 | 50 | 97 | 80 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | *1/2* | 72 | 10,5 | **1207-K** | H207X103 | FRM72/8 |
| ***1 3/16*** | 30,163 | 60 | 112 | 85 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | *1/2* | 80 | 10,5 | **1307-K** | H307X103 | FRM80/9 |
| ***1 3/16*** | 30,163 | 50 | 97 | 80 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | *1/2* | 72 | 10,5 | **20207-K** | H207X103 | FRM72/8 |
| ***1 3/16*** | 30,163 | 60 | 112 | 85 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | *1/2* | 80 | 10,5 | **21307..-K** | H307X103 | FRM80/9 |
| ***1 3/16*** | 30,163 | 50 | 97 | 80 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | *1/2* | 72 | 10,5 | **2207-K** | H307X103 | FRM72/5 |
| ***1 3/16*** | 30,163 | 50 | 97 | 80 | 52 | 22 | 185 | 150 | 20 | 15 | M12 | *1/2* | 72 | 10,5 | **22207..-K** | H307X103 | FRM72/5 |
| ***1 3/16*** | 30,163 | 60 | 112 | 85 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | *1/2* | 80 | 10,5 | **2307-K** | H2307X103 | FRM80/4 |
| ***1 4/16*** | 31,75 | 60 | 112 | 85 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | *1/2* | 80 | 10,5 | **1208-K** | H208X104 | FRM80/10,5 |
| ***1 4/16*** | 31,75 | 60 | 117 | 100 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | *1/2* | 90 | 12,5 | **1308-K** | H308X104 | FRM90/9 |
| ***1 4/16*** | 31,75 | 60 | 112 | 85 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | *1/2* | 80 | 10,5 | **20208-K** | H208X104 | FRM80/10,5 |
| ***1 4/16*** | 31,75 | 60 | 117 | 100 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | *1/2* | 90 | 12,5 | **21308..-K** | H308X104 | FRM90/9 |
| ***1 4/16*** | 31,75 | 60 | 112 | 85 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | *1/2* | 80 | 10,5 | **2208-K** | H308X104 | FRM80/8 |
| ***1 4/16*** | 31,75 | 60 | 112 | 85 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | *1/2* | 80 | 10,5 | **22208..-K** | H308X104 | FRM80/8 |
| ***1 4/16*** | 31,75 | 60 | 117 | 100 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | *1/2* | 90 | 12,5 | **22308..-K** | H2308X104 | FRM90/4 |
| ***1 4/16*** | 31,75 | 60 | 117 | 100 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | *1/2* | 90 | 12,5 | **2308-K** | H2308X104 | FRM90/4 |
| ***1 5/16*** | 33,338 | 60 | 112 | 85 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | *1/2* | 80 | 10,5 | **1208-K** | H208X105 | FRM80/10,5 |
| ***1 5/16*** | 33,338 | 60 | 117 | 100 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | *1/2* | 90 | 12,5 | **1308-K** | H308X105 | FRM90/9 |
| ***1 5/16*** | 33,338 | 60 | 112 | 85 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | *1/2* | 80 | 10,5 | **20208-K** | H208X105 | FRM80/10,5 |
| ***1 5/16*** | 33,338 | 60 | 117 | 100 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | *1/2* | 90 | 12,5 | **21308..-K** | H308X105 | FRM90/9 |
| ***1 5/16*** | 33,338 | 60 | 112 | 85 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | *1/2* | 80 | 10,5 | **2208-K** | H308X105 | FRM80/8 |
| ***1 5/16*** | 33,338 | 60 | 112 | 85 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | *1/2* | 80 | 10,5 | **22208..-K** | H308X105 | FRM80/8 |
| ***1 5/16*** | 33,338 | 60 | 117 | 100 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | *1/2* | 90 | 12,5 | **22308..-K** | H2308X105 | FRM90/4 |
| ***1 5/16*** | 33,338 | 60 | 117 | 100 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | *1/2* | 90 | 12,5 | **2308-K** | H2308X105 | FRM90/4 |

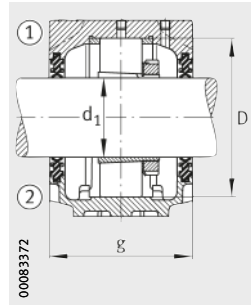
① Locating bearing; ② Non-locating bearing



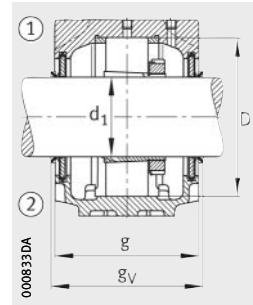

Double lip seal DH
Cover DKVT




Felt seal FSV




Double lip seal DH




V ring seal DHV



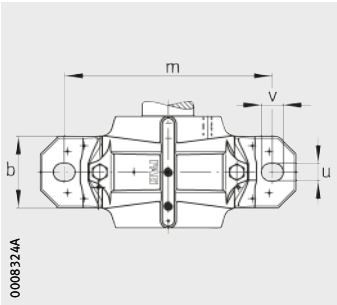


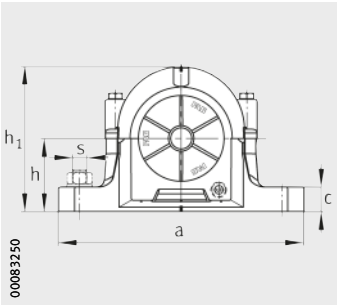


| | | | | | | | | | | Housing | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Felt seal | Double lip seal | Labyrinth seal | | Taconite seal | | V ring seal | | Cover | Mass m ≈ kg | Designation |
| | | | $g_L$ mm | | $g_T$ mm | | $g_V$ mm | | | |
| FSV507X102 | DH507X102 | TSV507X102 | 93 | – | – | DHV507X102 | 86 | DKV072 | 2 | **SNV072-F-L** |
| FSV607X102 | DH607X102 | TSV607X102 | 98 | TCV607X102 | 122 | DHV607X102 | 91 | DKV080 | 2,9 | **SNV080-F-L** |
| FSV507X102 | DH507X102 | TSV507X102 | 93 | – | – | DHV507X102 | 86 | DKV072 | 2 | **SNV072-F-L** |
| FSV607X102 | DH607X102 | TSV607X102 | 98 | TCV607X102 | 122 | DHV607X102 | 91 | DKV080 | 2,9 | **SNV080-F-L** |
| FSV507X102 | DH507X102 | TSV507X102 | 93 | – | – | DHV507X102 | 86 | DKV072 | 2 | **SNV072-F-L** |
| FSV507X102 | DH507X102 | TSV507X102 | 93 | – | – | DHV507X102 | 86 | DKV072 | 2 | **SNV072-F-L** |
| FSV607X102 | DH607X102 | TSV607X102 | 98 | TCV607X102 | 122 | DHV607X102 | 91 | DKV080 | 2,9 | **SNV080-F-L** |
| FSV507 | DH507 | TSV507 | 93 | – | – | DHV507 | 86 | DKV072 | 2 | **SNV072-F-L** |
| FSV607 | DH607 | TSV607 | 98 | TCV607 | 122 | DHV607 | 91 | DKV080 | 2,9 | **SNV080-F-L** |
| FSV507 | DH507 | TSV507 | 93 | – | – | DHV507 | 86 | DKV072 | 2 | **SNV072-F-L** |
| FSV607 | DH607 | TSV607 | 98 | TCV607 | 122 | DHV607 | 91 | DKV080 | 2,9 | **SNV080-F-L** |
| FSV507 | DH507 | TSV507 | 93 | – | – | DHV507 | 86 | DKV072 | 2 | **SNV072-F-L** |
| FSV507 | DH507 | TSV507 | 93 | – | – | DHV507 | 86 | DKV072 | 2 | **SNV072-F-L** |
| FSV607 | DH607 | TSV607 | 98 | TCV607 | 122 | DHV607 | 91 | DKV080 | 2,9 | **SNV080-F-L** |
| FSV508X104 | DH508X104 | TSV508X104 | 98 | TCV508X104 | 122 | DHV508X104 | 91 | DKV080 | 2,9 | **SNV080-F-L** |
| FSV608X104 | DH608X104 | TSV608X104 | 114 | TCV608X104 | 136 | DHV608X104 | 104 | DKV090 | 3,1 | **SNV090-F-L** |
| FSV508X104 | DH508X104 | TSV508X104 | 98 | TCV508X104 | 122 | DHV508X104 | 91 | DKV080 | 2,9 | **SNV080-F-L** |
| FSV608X104 | DH608X104 | TSV608X104 | 114 | TCV608X104 | 136 | DHV608X104 | 104 | DKV090 | 3,1 | **SNV090-F-L** |
| FSV508X104 | DH508X104 | TSV508X104 | 98 | TCV508X104 | 122 | DHV508X104 | 91 | DKV080 | 2,9 | **SNV080-F-L** |
| FSV508X104 | DH508X104 | TSV508X104 | 98 | TCV508X104 | 122 | DHV508X104 | 91 | DKV080 | 2,9 | **SNV080-F-L** |
| FSV608X104 | DH608X104 | TSV608X104 | 114 | TCV608X104 | 136 | DHV608X104 | 104 | DKV090 | 3,1 | **SNV090-F-L** |
| FSV608X104 | DH608X104 | TSV608X104 | 114 | TCV608X104 | 136 | DHV608X104 | 104 | DKV090 | 3,1 | **SNV090-F-L** |
| FSV508X105 | DH508X104 | TSV508X105 | 98 | TCV508X105 | 122 | DHV508X105 | 91 | DKV080 | 2,9 | **SNV080-F-L** |
| FSV608X105 | DH608X104 | TSV608X105 | 114 | TCV608X105 | 136 | DHV608X105 | 104 | DKV090 | 3,1 | **SNV090-F-L** |
| FSV508X105 | DH508X104 | TSV508X105 | 98 | TCV508X105 | 122 | DHV508X105 | 91 | DKV080 | 2,9 | **SNV080-F-L** |
| FSV608X105 | DH608X104 | TSV608X105 | 114 | TCV608X105 | 136 | DHV608X105 | 104 | DKV090 | 3,1 | **SNV090-F-L** |
| FSV508X105 | DH508X104 | TSV508X105 | 98 | TCV508X105 | 122 | DHV508X105 | 91 | DKV080 | 2,9 | **SNV080-F-L** |
| FSV508X105 | DH508X104 | TSV508X105 | 98 | TCV508X105 | 122 | DHV508X105 | 91 | DKV080 | 2,9 | **SNV080-F-L** |
| FSV608X105 | DH608X104 | TSV608X105 | 114 | TCV608X105 | 136 | DHV608X105 | 104 | DKV090 | 3,1 | **SNV090-F-L** |
| FSV608X105 | DH608X104 | TSV608X105 | 114 | TCV608X105 | 136 | DHV608X105 | 104 | DKV090 | 3,1 | **SNV090-F-L** |

# Plummer block housings

SNV, split
For bearings with tapered bore and adapter sleeve
Inch size shaft

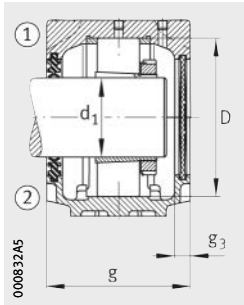


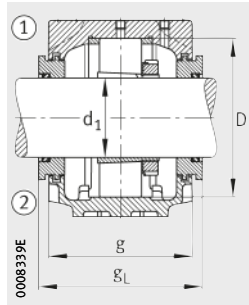

**Dimension table** (continued) · Dimensions in mm and *inch*

| Shaft | | Housing Dimensions | | | | | | | | | | | | | Bearing and accessories | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_1$ | | h | $h_1$ | g | b | c | a | m | v | u | s | | D | $g_3$ | Bearing | Adapter sleeve | Locating ring |
| *inch* | mm | | | | | | | | | | mm | *inch* | | | | | Quantity 2 |
| $^{16}/_{16}$ | 34,925 | 60 | 112 | 85 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | $^{1}/_{2}$ | 80 | 10,5 | **1208-K** | H208X106 | FRM80/10,5 |
| $^{16}/_{16}$ | 34,925 | 60 | 117 | 100 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | $^{1}/_{2}$ | 90 | 12,5 | **1308-K** | H308X106 | FRM90/9 |
| $^{16}/_{16}$ | 34,925 | 60 | 112 | 85 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | $^{1}/_{2}$ | 80 | 10,5 | **20208-K** | H208X106 | FRM80/10,5 |
| $^{16}/_{16}$ | 34,925 | 60 | 117 | 100 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | $^{1}/_{2}$ | 90 | 12,5 | **21308..-K** | H308X106 | FRM90/9 |
| $^{16}/_{16}$ | 34,925 | 60 | 112 | 85 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | $^{1}/_{2}$ | 80 | 10,5 | **2208-K** | H308X106 | FRM80/8 |
| $^{16}/_{16}$ | 34,925 | 60 | 112 | 85 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | $^{1}/_{2}$ | 80 | 10,5 | **22208..-K** | H308X106 | FRM80/8 |
| $^{16}/_{16}$ | 34,925 | 60 | 117 | 100 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | $^{1}/_{2}$ | 90 | 12,5 | **22308..-K** | H2308X106 | FRM90/4 |
| $^{16}/_{16}$ | 34,925 | 60 | 117 | 100 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | $^{1}/_{2}$ | 90 | 12,5 | **2308-K** | H2308X106 | FRM90/4 |
| $^{17}/_{16}$ | 36,513 | 60 | 114 | 87 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | $^{1}/_{2}$ | 85 | 12,5 | **1209-K** | H209X107 | FRM85/6 |
| $^{17}/_{16}$ | 36,513 | 70 | 133 | 105 | 70 | 28 | 255 | 210 | 23 | 18 | M16 | $^{5}/_{8}$ | 100 | 12,5 | **1309-K** | H309X107 | FRM100/9,5 |
| $^{17}/_{16}$ | 36,513 | 60 | 114 | 87 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | $^{1}/_{2}$ | 85 | 12,5 | **20209-K** | H209X107 | FRM85/6 |
| $^{17}/_{16}$ | 36,513 | 70 | 133 | 105 | 70 | 28 | 255 | 210 | 23 | 18 | M16 | $^{5}/_{8}$ | 100 | 12,5 | **21309..-K** | H309X107 | FRM100/9,5 |
| $^{17}/_{16}$ | 36,513 | 60 | 114 | 87 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | $^{1}/_{2}$ | 85 | 12,5 | **2209-K** | H309X107 | FRM85/4 |
| $^{17}/_{16}$ | 36,513 | 60 | 114 | 87 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | $^{1}/_{2}$ | 85 | 12,5 | **22209..-K** | H309X107 | FRM85/4 |
| $^{17}/_{16}$ | 36,513 | 70 | 133 | 105 | 70 | 28 | 255 | 210 | 23 | 18 | M16 | $^{5}/_{8}$ | 100 | 12,5 | **22309..-K** | H2309X107 | FRM100/4 |
| $^{17}/_{16}$ | 36,513 | 70 | 133 | 105 | 70 | 28 | 255 | 210 | 23 | 18 | M16 | $^{5}/_{8}$ | 100 | 12,5 | **2309-K** | H2309X107 | FRM100/4 |
| $^{18}/_{16}$ | 38,1 | 60 | 114 | 87 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | $^{1}/_{2}$ | 85 | 12,5 | **1209-K** | H209X108 | FRM85/6 |
| $^{18}/_{16}$ | 38,1 | 70 | 133 | 105 | 70 | 28 | 255 | 210 | 23 | 18 | M16 | $^{5}/_{8}$ | 100 | 12,5 | **1309-K** | H309X108 | FRM100/9,5 |
| $^{18}/_{16}$ | 38,1 | 60 | 114 | 87 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | $^{1}/_{2}$ | 85 | 12,5 | **20209-K** | H209X108 | FRM85/6 |
| $^{18}/_{16}$ | 38,1 | 70 | 133 | 105 | 70 | 28 | 255 | 210 | 23 | 18 | M16 | $^{5}/_{8}$ | 100 | 12,5 | **21309..-K** | H309X108 | FRM100/9,5 |
| $^{18}/_{16}$ | 38,1 | 60 | 114 | 87 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | $^{1}/_{2}$ | 85 | 12,5 | **2209-K** | H309X108 | FRM85/4 |
| $^{18}/_{16}$ | 38,1 | 60 | 114 | 87 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | $^{1}/_{2}$ | 85 | 12,5 | **22209..-K** | H309X108 | FRM85/4 |
| $^{18}/_{16}$ | 38,1 | 70 | 133 | 105 | 70 | 28 | 255 | 210 | 23 | 18 | M16 | $^{5}/_{8}$ | 100 | 12,5 | **22309..-K** | H2309X108 | FRM100/4 |
| $^{18}/_{16}$ | 38,1 | 70 | 133 | 105 | 70 | 28 | 255 | 210 | 23 | 18 | M16 | $^{5}/_{8}$ | 100 | 12,5 | **2309-K** | H2309X108 | FRM100/4 |
| $^{19}/_{16}$ | 39,688 | 70 | 133 | 105 | 70 | 28 | 255 | 210 | 23 | 18 | M16 | $^{5}/_{8}$ | 100 | 12,5 | **1309-K** | H309X109 | FRM100/9,5 |
| $^{19}/_{16}$ | 39,688 | 70 | 133 | 105 | 70 | 28 | 255 | 210 | 23 | 18 | M16 | $^{5}/_{8}$ | 100 | 12,5 | **21309..-K** | H309X109 | FRM100/9,5 |
| $^{19}/_{16}$ | 39,688 | 70 | 133 | 105 | 70 | 28 | 255 | 210 | 23 | 18 | M16 | $^{5}/_{8}$ | 100 | 12,5 | **22309..-K** | H2309X109 | FRM100/4 |
| $^{19}/_{16}$ | 39,688 | 70 | 133 | 105 | 70 | 28 | 255 | 210 | 23 | 18 | M16 | $^{5}/_{8}$ | 100 | 12,5 | **2309-K** | H2309X109 | FRM100/4 |

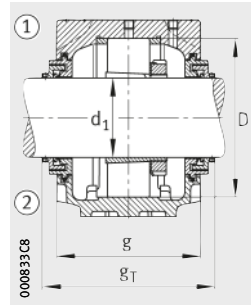
① Locating bearing; ② Non-locating bearing



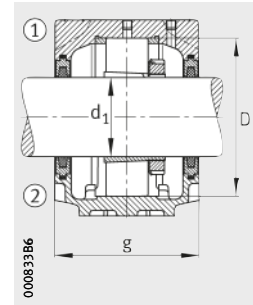

Double lip seal DH
Cover DKV




Labyrinth seal TSV




Taconite seal TCV




Felt seal FSV



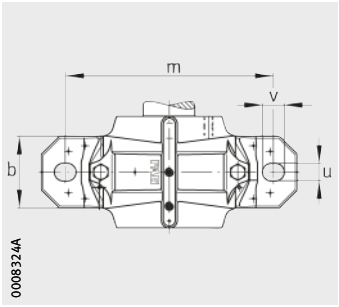


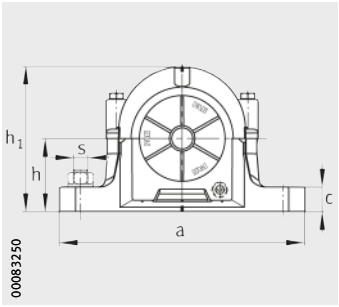


| | | | | | | | | | | Housing | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Felt seal | Double lip seal | Labyrinth seal | | Taconite seal | | V ring seal | | Cover | | Mass m ≈ kg | Designation |
| | | | $g_L$ mm | | $g_T$ mm | | $g_V$ mm | | | | |
| FSV508 | DH508 | TSV508 | 98 | TCV508 | 122 | DHV508 | 91 | DKV080 | | 2,9 | **SNV080-F-L** |
| FSV608 | DH608 | TSV608 | 114 | TCV608 | 136 | DHV608 | 104 | DKV090 | | 3,1 | **SNV090-F-L** |
| FSV508 | DH508 | TSV508 | 98 | TCV508 | 122 | DHV508 | 91 | DKV080 | | 2,9 | **SNV080-F-L** |
| FSV608 | DH608 | TSV608 | 114 | TCV608 | 136 | DHV608 | 104 | DKV090 | | 3,1 | **SNV090-F-L** |
| FSV508 | DH508 | TSV508 | 98 | TCV508 | 122 | DHV508 | 91 | DKV080 | | 2,9 | **SNV080-F-L** |
| FSV508 | DH508 | TSV508 | 98 | TCV508 | 122 | DHV508 | 91 | DKV080 | | 2,9 | **SNV080-F-L** |
| FSV608 | DH608 | TSV608 | 114 | TCV608 | 136 | DHV608 | 104 | DKV090 | | 3,1 | **SNV090-F-L** |
| FSV608 | DH608 | TSV608 | 114 | TCV608 | 136 | DHV608 | 104 | DKV090 | | 3,1 | **SNV090-F-L** |
| FSV509X107 | DH509X107 | TSV509X107 | 101 | TCV509X107 | 123 | DHV509X107 | 91 | DKV085 | | 2,8 | **SNV085-F-L** |
| FSV609X107 | DH609X107 | TSV609X107 | 119 | TCV609X107 | 141 | DHV609X107 | 109 | DKV100 | | 4,3 | **SNV100-F-L** |
| FSV509X107 | DH509X107 | TSV509X107 | 101 | TCV509X107 | 123 | DHV509X107 | 91 | DKV085 | | 2,8 | **SNV085-F-L** |
| FSV609X107 | DH609X107 | TSV609X107 | 119 | TCV609X107 | 141 | DHV609X107 | 109 | DKV100 | | 4,3 | **SNV100-F-L** |
| FSV509X107 | DH509X107 | TSV509X107 | 101 | TCV509X107 | 123 | DHV509X107 | 91 | DKV085 | | 2,8 | **SNV085-F-L** |
| FSV509X107 | DH509X107 | TSV509X107 | 101 | TCV509X107 | 123 | DHV509X107 | 91 | DKV085 | | 2,8 | **SNV085-F-L** |
| FSV609X107 | DH609X107 | TSV609X107 | 119 | TCV609X107 | 141 | DHV609X107 | 109 | DKV100 | | 4,3 | **SNV100-F-L** |
| FSV609X107 | DH609X107 | TSV609X107 | 119 | TCV609X107 | 141 | DHV609X107 | 109 | DKV100 | | 4,3 | **SNV100-F-L** |
| FSV509X108 | DH509X107 | TSV509X108 | 101 | TCV509X108 | 125 | DHV509X108 | 93 | DKV085 | | 2,8 | **SNV085-F-L** |
| FSV609X108 | DH609X107 | TSV609X108 | 119 | TCV609X108 | 143 | DHV609X108 | 111 | DKV100 | | 4,3 | **SNV100-F-L** |
| FSV509X108 | DH509X107 | TSV509X108 | 101 | TCV509X108 | 125 | DHV509X108 | 93 | DKV085 | | 2,8 | **SNV085-F-L** |
| FSV609X108 | DH609X107 | TSV609X108 | 119 | TCV609X108 | 143 | DHV609X108 | 111 | DKV100 | | 4,3 | **SNV100-F-L** |
| FSV509X108 | DH509X107 | TSV509X108 | 101 | TCV509X108 | 125 | DHV509X108 | 93 | DKV085 | | 2,8 | **SNV085-F-L** |
| FSV509X108 | DH509X107 | TSV509X108 | 101 | TCV509X108 | 125 | DHV509X108 | 93 | DKV085 | | 2,8 | **SNV085-F-L** |
| FSV609X108 | DH609X107 | TSV609X108 | 119 | TCV609X108 | 143 | DHV609X108 | 111 | DKV100 | | 4,3 | **SNV100-F-L** |
| FSV609X108 | DH609X107 | TSV609X108 | 119 | TCV609X108 | 143 | DHV609X108 | 111 | DKV100 | | 4,3 | **SNV100-F-L** |
| FSV609 | DH609 | TSV609 | 119 | TCV609 | 141 | DHV609 | 109 | DKV100 | | 4,3 | **SNV100-F-L** |
| FSV609 | DH609 | TSV609 | 119 | TCV609 | 141 | DHV609 | 109 | DKV100 | | 4,3 | **SNV100-F-L** |
| FSV609 | DH609 | TSV609 | 119 | TCV609 | 141 | DHV609 | 109 | DKV100 | | 4,3 | **SNV100-F-L** |
| FSV609 | DH609 | TSV609 | 119 | TCV609 | 141 | DHV609 | 109 | DKV100 | | 4,3 | **SNV100-F-L** |

# Plummer block housings

SNV, split
For bearings with tapered bore and adapter sleeve
Inch size shaft

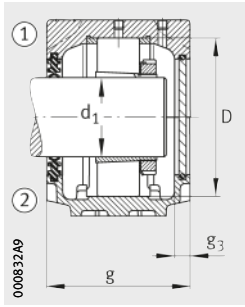


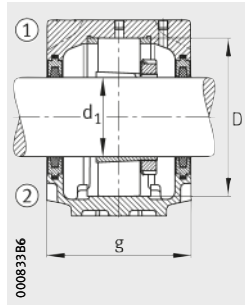

**Dimension table** (continued) · Dimensions in mm and *inch*

| Shaft | | Housing Dimensions | | | | | | | | | | | | | Bearing and accessories | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_1$ | | h | $h_1$ | g | b | c | a | m | v | u | s | | D | $g_3$ | Bearing | Adapter sleeve | Locating ring |
| *inch* | mm | | | | | | | | | | mm | *inch* | | | | | Quantity 2 |
| $1^{10}/_{16}$ | 41,275 | 60 | 117 | 100 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | $^1/_2$ | 90 | 12,5 | **1210-K** | H210X110 | FRM90/10,5 |
| $1^{10}/_{16}$ | 41,275 | 70 | 139 | 110 | 70 | 30 | 255 | 210 | 23 | 18 | M16 | $^5/_8$ | 110 | 12,5 | **1310-K** | H310X110 | FRM110/10,5 |
| $1^{10}/_{16}$ | 41,275 | 60 | 117 | 100 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | $^1/_2$ | 90 | 12,5 | **20210-K** | H210X110 | FRM90/10,5 |
| $1^{10}/_{16}$ | 41,275 | 70 | 139 | 110 | 70 | 30 | 255 | 210 | 23 | 18 | M16 | $^5/_8$ | 110 | 12,5 | **21310..-K** | H310X110 | FRM110/10,5 |
| $1^{10}/_{16}$ | 41,275 | 60 | 117 | 100 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | $^1/_2$ | 90 | 12,5 | **2210-K** | H310X110 | FRM90/9 |
| $1^{10}/_{16}$ | 41,275 | 60 | 117 | 100 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | $^1/_2$ | 90 | 12,5 | **22210..-K** | H310X110 | FRM90/9 |
| $1^{10}/_{16}$ | 41,275 | 70 | 139 | 110 | 70 | 30 | 255 | 210 | 23 | 18 | M16 | $^5/_8$ | 110 | 12,5 | **22310..-K** | H2310X110 | FRM110/4 |
| $1^{10}/_{16}$ | 41,275 | 70 | 139 | 110 | 70 | 30 | 255 | 210 | 23 | 18 | M16 | $^5/_8$ | 110 | 12,5 | **2310-K** | H2310X110 | FRM110/4 |
| $1^{11}/_{16}$ | 42,863 | 60 | 117 | 100 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | $^1/_2$ | 90 | 12,5 | **1210-K** | H210X111 | FRM90/10,5 |
| $1^{11}/_{16}$ | 42,863 | 70 | 139 | 110 | 70 | 30 | 255 | 210 | 23 | 18 | M16 | $^5/_8$ | 110 | 12,5 | **1310-K** | H310X111 | FRM110/10,5 |
| $1^{11}/_{16}$ | 42,863 | 60 | 117 | 100 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | $^1/_2$ | 90 | 12,5 | **20210-K** | H210X111 | FRM90/10,5 |
| $1^{11}/_{16}$ | 42,863 | 70 | 139 | 110 | 70 | 30 | 255 | 210 | 23 | 18 | M16 | $^5/_8$ | 110 | 12,5 | **21310..-K** | H310X111 | FRM110/10,5 |
| $1^{11}/_{16}$ | 42,863 | 60 | 117 | 100 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | $^1/_2$ | 90 | 12,5 | **2210-K** | H310X111 | FRM90/9 |
| $1^{11}/_{16}$ | 42,863 | 60 | 117 | 100 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | $^1/_2$ | 90 | 12,5 | **22210..-K** | H310X111 | FRM90/9 |
| $1^{11}/_{16}$ | 42,863 | 70 | 139 | 110 | 70 | 30 | 255 | 210 | 23 | 18 | M16 | $^5/_8$ | 110 | 12,5 | **22310..-K** | H2310X111 | FRM110/4 |
| $1^{11}/_{16}$ | 42,863 | 70 | 139 | 110 | 70 | 30 | 255 | 210 | 23 | 18 | M16 | $^5/_8$ | 110 | 12,5 | **2310-K** | H2310X111 | FRM110/4 |
| $1^{12}/_{16}$ | 44,45 | 60 | 117 | 100 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | $^1/_2$ | 90 | 12,5 | **1210-K** | H210X112 | FRM90/10,5 |
| $1^{12}/_{16}$ | 44,45 | 70 | 139 | 110 | 70 | 30 | 255 | 210 | 23 | 18 | M16 | $^5/_8$ | 110 | 12,5 | **1310-K** | H310X112 | FRM110/10,5 |
| $1^{12}/_{16}$ | 44,45 | 60 | 117 | 100 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | $^1/_2$ | 90 | 12,5 | **20210-K** | H210X112 | FRM90/10,5 |
| $1^{12}/_{16}$ | 44,45 | 70 | 139 | 110 | 70 | 30 | 255 | 210 | 23 | 18 | M16 | $^5/_8$ | 110 | 12,5 | **21310..-K** | H310X112 | FRM110/10,5 |
| $1^{12}/_{16}$ | 44,45 | 60 | 117 | 100 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | $^1/_2$ | 90 | 12,5 | **2210-K** | H310X112 | FRM90/9 |
| $1^{12}/_{16}$ | 44,45 | 60 | 117 | 100 | 60 | 25 | 205 | 170 | 20 | 15 | M12 | $^1/_2$ | 90 | 12,5 | **22210..-K** | H310X112 | FRM90/9 |
| $1^{12}/_{16}$ | 44,45 | 70 | 139 | 110 | 70 | 30 | 255 | 210 | 23 | 18 | M16 | $^5/_8$ | 110 | 12,5 | **22310..-K** | H2310X112 | FRM110/4 |
| $1^{12}/_{16}$ | 44,45 | 70 | 139 | 110 | 70 | 30 | 255 | 210 | 23 | 18 | M16 | $^5/_8$ | 110 | 12,5 | **2310-K** | H2310X112 | FRM110/4 |
| $1^{14}/_{16}$ | 47,625 | 70 | 133 | 105 | 70 | 28 | 255 | 210 | 23 | 18 | M16 | $^5/_8$ | 100 | 12,5 | **1211-K** | H211X114 | FRM100/11,5 |
| $1^{14}/_{16}$ | 47,625 | 80 | 155 | 115 | 80 | 30 | 275 | 230 | 23 | 18 | M16 | $^5/_8$ | 120 | 12,5 | **1311-K** | H311X114 | FRM120/11 |
| $1^{14}/_{16}$ | 47,625 | 70 | 133 | 105 | 70 | 28 | 255 | 210 | 23 | 18 | M16 | $^5/_8$ | 100 | 12,5 | **20211-K** | H211X114 | FRM100/11,5 |
| $1^{14}/_{16}$ | 47,625 | 80 | 155 | 115 | 80 | 30 | 275 | 230 | 23 | 18 | M16 | $^5/_8$ | 120 | 12,5 | **20311-K** | H311X114 | FRM120/11 |
| $1^{14}/_{16}$ | 47,625 | 80 | 155 | 115 | 80 | 30 | 275 | 230 | 23 | 18 | M16 | $^5/_8$ | 120 | 12,5 | **21311..-K** | H311X114 | FRM120/11 |
| $1^{14}/_{16}$ | 47,625 | 70 | 133 | 105 | 70 | 28 | 255 | 210 | 23 | 18 | M16 | $^5/_8$ | 100 | 12,5 | **2211-K** | H311X114 | FRM100/9,5 |
| $1^{14}/_{16}$ | 47,625 | 70 | 133 | 105 | 70 | 28 | 255 | 210 | 23 | 18 | M16 | $^5/_8$ | 100 | 12,5 | **22211..-K** | H311X114 | FRM100/9,5 |
| $1^{14}/_{16}$ | 47,625 | 80 | 155 | 115 | 80 | 30 | 275 | 230 | 23 | 18 | M16 | $^5/_8$ | 120 | 12,5 | **22311..-K** | H2311X114 | FRM120/4 |
| $1^{14}/_{16}$ | 47,625 | 80 | 155 | 115 | 80 | 30 | 275 | 230 | 23 | 18 | M16 | $^5/_8$ | 120 | 12,5 | **2311-K** | H2311X114 | FRM120/4 |

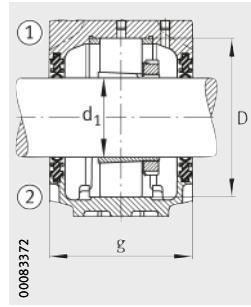
① Locating bearing; ② Non-locating bearing



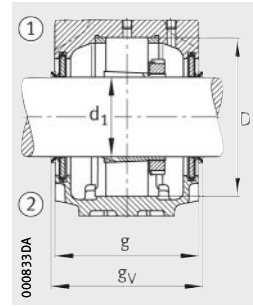

Double lip seal DH
Cover DKVT




Felt seal FSV




Double lip seal DH




V ring seal DHV



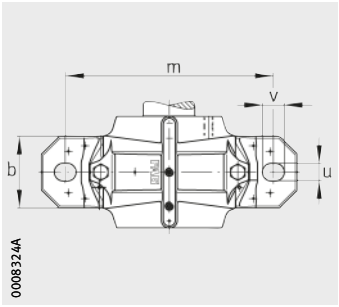


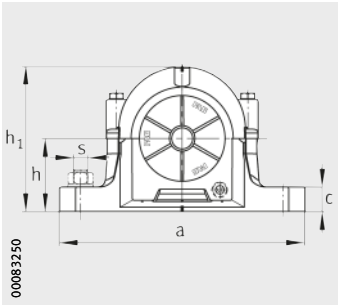


| | | | | | | | | | Housing | |
|---|---|---|---|---|---|---|---|---|---|---|
| Felt seal | Double lip seal | Labyrinth seal | | Taconite seal | | V ring seal | | Cover | Mass m ≈ kg | Designation |
| | | | $g_L$ mm | | $g_T$ mm | | $g_V$ mm | | | |
| FSV510X110 | DH510X110 | TSV510X110 | 114 | TCV510X110 | 138 | DHV510X110 | 106 | DKV090 | 3,1 | **SNV090-F-L** |
| FSV610X110 | DH610X110 | TSV610X110 | 124 | TCV610X110 | 148 | DHV610X110 | 116 | DKV110 | 4,9 | **SNV110-F-L** |
| FSV510X110 | DH510X110 | TSV510X110 | 114 | TCV510X110 | 138 | DHV510X110 | 106 | DKV090 | 3,1 | **SNV090-F-L** |
| FSV610X110 | DH610X110 | TSV610X110 | 124 | TCV610X110 | 148 | DHV610X110 | 116 | DKV110 | 4,9 | **SNV110-F-L** |
| FSV510X110 | DH510X110 | TSV510X110 | 114 | TCV510X110 | 138 | DHV510X110 | 106 | DKV090 | 3,1 | **SNV090-F-L** |
| FSV510X110 | DH510X110 | TSV510X110 | 114 | TCV510X110 | 138 | DHV510X110 | 106 | DKV090 | 3,1 | **SNV090-F-L** |
| FSV610X110 | DH610X110 | TSV610X110 | 124 | TCV610X110 | 148 | DHV610X110 | 116 | DKV110 | 4,9 | **SNV110-F-L** |
| FSV610X110 | DH610X110 | TSV610X110 | 124 | TCV610X110 | 148 | DHV610X110 | 116 | DKV110 | 4,9 | **SNV110-F-L** |
| FSV510X111 | DH510X110 | TSV510X111 | 114 | TCV510X111 | 138 | DHV510X111 | 106 | DKV090 | 3,1 | **SNV090-F-L** |
| FSV610X111 | DH610X110 | TSV610X111 | 124 | TCV610X111 | 148 | DHV610X111 | 116 | DKV110 | 4,9 | **SNV110-F-L** |
| FSV510X111 | DH510X110 | TSV510X111 | 114 | TCV510X111 | 138 | DHV510X111 | 106 | DKV090 | 3,1 | **SNV090-F-L** |
| FSV610X111 | DH610X110 | TSV610X111 | 124 | TCV610X111 | 148 | DHV610X111 | 116 | DKV110 | 4,9 | **SNV110-F-L** |
| FSV510X111 | DH510X110 | TSV510X111 | 114 | TCV510X111 | 138 | DHV510X111 | 106 | DKV090 | 3,1 | **SNV090-F-L** |
| FSV510X111 | DH510X110 | TSV510X111 | 114 | TCV510X111 | 138 | DHV510X111 | 106 | DKV090 | 3,1 | **SNV090-F-L** |
| FSV610X111 | DH610X110 | TSV610X111 | 124 | TCV610X111 | 148 | DHV610X111 | 116 | DKV110 | 4,9 | **SNV110-F-L** |
| FSV610X111 | DH610X110 | TSV610X111 | 124 | TCV610X111 | 148 | DHV610X111 | 116 | DKV110 | 4,9 | **SNV110-F-L** |
| FSV510 | DH510 | TSV510X112 | 114 | TCV510 | 138 | DHV510 | 106 | DKV090 | 3,1 | **SNV090-F-L** |
| FSV610 | DH610 | TSV610X112 | 124 | TCV610 | 148 | DHV610 | 116 | DKV110 | 4,9 | **SNV110-F-L** |
| FSV510 | DH510 | TSV510X112 | 114 | TCV510 | 138 | DHV510 | 106 | DKV090 | 3,1 | **SNV090-F-L** |
| FSV610 | DH610 | TSV610X112 | 124 | TCV610 | 148 | DHV610 | 116 | DKV110 | 4,9 | **SNV110-F-L** |
| FSV510 | DH510 | TSV510X112 | 114 | TCV510 | 138 | DHV510 | 106 | DKV090 | 3,1 | **SNV090-F-L** |
| FSV510 | DH510 | TSV510X112 | 114 | TCV510 | 138 | DHV510 | 106 | DKV090 | 3,1 | **SNV090-F-L** |
| FSV610 | DH610 | TSV610X112 | 124 | TCV610 | 148 | DHV610 | 116 | DKV110 | 4,9 | **SNV110-F-L** |
| FSV610 | DH610 | TSV610X112 | 124 | TCV610 | 148 | DHV610 | 116 | DKV110 | 4,9 | **SNV110-F-L** |
| FSV511X114 | DH511X114 | TSV511X114 | 119 | TCV511X114 | 143 | DHV511X114 | 111 | DKV100 | 4,3 | **SNV100-F-L** |
| FSV611X114 | DH611X114 | TSV611X114 | 129 | TCV611X114 | 153 | DHV611X114 | 121 | DKV120 | 6,1 | **SNV120-F-L** |
| FSV511X114 | DH511X114 | TSV511X114 | 119 | TCV511X114 | 143 | DHV511X114 | 111 | DKV100 | 4,3 | **SNV100-F-L** |
| FSV611X114 | DH611X114 | TSV611X114 | 129 | TCV611X114 | 153 | DHV611X114 | 121 | DKV120 | 6,1 | **SNV120-F-L** |
| FSV611X114 | DH611X114 | TSV611X114 | 129 | TCV611X114 | 153 | DHV611X114 | 121 | DKV120 | 6,1 | **SNV120-F-L** |
| FSV511X114 | DH511X114 | TSV511X114 | 119 | TCV511X114 | 143 | DHV511X114 | 111 | DKV100 | 4,3 | **SNV100-F-L** |
| FSV511X114 | DH511X114 | TSV511X114 | 119 | TCV511X114 | 143 | DHV511X114 | 111 | DKV100 | 4,3 | **SNV100-F-L** |
| FSV611X114 | DH611X114 | TSV611X114 | 129 | TCV611X114 | 153 | DHV611X114 | 121 | DKV120 | 6,1 | **SNV120-F-L** |
| FSV611X114 | DH611X114 | TSV611X114 | 129 | TCV611X114 | 153 | DHV611X114 | 121 | DKV120 | 6,1 | **SNV120-F-L** |

# Plummer block housings

SNV, split
For bearings with tapered bore and adapter sleeve
Inch size shaft

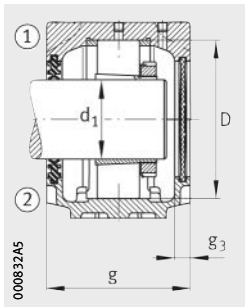


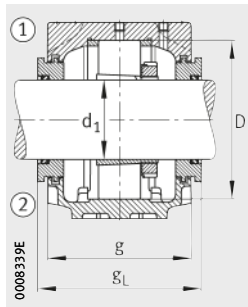

**Dimension table** (continued) · Dimensions in mm and *inch*

| Shaft | | Housing Dimensions | | | | | | | | | | | | | Bearing and accessories | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_1$ | | h | $h_1$ | g | b | c | a | m | v | u | s | | D | $g_3$ | Bearing | Adapter sleeve | Locating ring |
| *inch* | mm | | | | | | | | | | mm | *inch* | | | | | Quantity 2 |
| **1 15/16** | 49,213 | 70 | 133 | 105 | 70 | 28 | 255 | 210 | 23 | 18 | M16 | 5/8 | 100 | 12,5 | **1211-K** | H211X115 | FRM100/11,5 |
| **1 15/16** | 49,213 | 80 | 155 | 115 | 80 | 30 | 275 | 230 | 23 | 18 | M16 | 5/8 | 120 | 12,5 | **1311-K** | H311X115 | FRM120/11 |
| **1 15/16** | 49,213 | 70 | 133 | 105 | 70 | 28 | 255 | 210 | 23 | 18 | M16 | 5/8 | 100 | 12,5 | **20211-K** | H211X115 | FRM100/11,5 |
| **1 15/16** | 49,213 | 80 | 155 | 115 | 80 | 30 | 275 | 230 | 23 | 18 | M16 | 5/8 | 120 | 12,5 | **20311-K** | H311X115 | FRM120/11 |
| **1 15/16** | 49,213 | 80 | 155 | 115 | 80 | 30 | 275 | 230 | 23 | 18 | M16 | 5/8 | 120 | 12,5 | **21311..-K** | H311X115 | FRM120/11 |
| **1 15/16** | 49,213 | 70 | 133 | 105 | 70 | 28 | 255 | 210 | 23 | 18 | M16 | 5/8 | 100 | 12,5 | **2211-K** | H311X115 | FRM100/9,5 |
| **1 15/16** | 49,213 | 70 | 133 | 105 | 70 | 28 | 255 | 210 | 23 | 18 | M16 | 5/8 | 100 | 12,5 | **22211..-K** | H311X115 | FRM100/9,5 |
| **1 15/16** | 49,213 | 80 | 155 | 115 | 80 | 30 | 275 | 230 | 23 | 18 | M16 | 5/8 | 120 | 12,5 | **22311..-K** | H2311X115 | FRM120/4 |
| **1 15/16** | 49,213 | 80 | 155 | 115 | 80 | 30 | 275 | 230 | 23 | 18 | M16 | 5/8 | 120 | 12,5 | **2311-K** | H2311X115 | FRM120/4 |
| **2** | 50,8 | 70 | 133 | 105 | 70 | 28 | 255 | 210 | 23 | 18 | M16 | 5/8 | 100 | 12,5 | **1211-K** | H211X200 | FRM100/11,5 |
| **2** | 50,8 | 80 | 155 | 115 | 80 | 30 | 275 | 230 | 23 | 18 | M16 | 5/8 | 120 | 12,5 | **1311-K** | H311X200 | FRM120/11 |
| **2** | 50,8 | 70 | 133 | 105 | 70 | 28 | 255 | 210 | 23 | 18 | M16 | 5/8 | 100 | 12,5 | **20211-K** | H211X200 | FRM100/11,5 |
| **2** | 50,8 | 80 | 155 | 115 | 80 | 30 | 275 | 230 | 23 | 18 | M16 | 5/8 | 120 | 12,5 | **20311-K** | H311X200 | FRM120/11 |
| **2** | 50,8 | 80 | 155 | 115 | 80 | 30 | 275 | 230 | 23 | 18 | M16 | 5/8 | 120 | 12,5 | **21311..-K** | H311X200 | FRM120/11 |
| **2** | 50,8 | 70 | 133 | 105 | 70 | 28 | 255 | 210 | 23 | 18 | M16 | 5/8 | 100 | 12,5 | **2211-K** | H311X200 | FRM100/9,5 |
| **2** | 50,8 | 70 | 133 | 105 | 70 | 28 | 255 | 210 | 23 | 18 | M16 | 5/8 | 100 | 12,5 | **22211..-K** | H311X200 | FRM100/9,5 |
| **2** | 50,8 | 80 | 155 | 115 | 80 | 30 | 275 | 230 | 23 | 18 | M16 | 5/8 | 120 | 12,5 | **22311..-K** | H2311X200 | FRM120/4 |
| **2** | 50,8 | 80 | 155 | 115 | 80 | 30 | 275 | 230 | 23 | 18 | M16 | 5/8 | 120 | 12,5 | **2311-K** | H2311X200 | FRM120/4 |
| **2 2/16** | 53,975 | 70 | 139 | 110 | 70 | 30 | 255 | 210 | 23 | 18 | M16 | 5/8 | 110 | 12,5 | **1212-K** | H212X202 | FRM110/13 |
| **2 2/16** | 53,975 | 80 | 161 | 120 | 80 | 30 | 280 | 230 | 23 | 18 | M16 | 5/8 | 130 | 12,5 | **1312-K** | H312X202 | FRM130/12,5 |
| **2 2/16** | 53,975 | 70 | 139 | 110 | 70 | 30 | 255 | 210 | 23 | 18 | M16 | 5/8 | 110 | 12,5 | **20212-K** | H212X202 | FRM110/13 |
| **2 2/16** | 53,975 | 80 | 161 | 120 | 80 | 30 | 280 | 230 | 23 | 18 | M16 | 5/8 | 130 | 12,5 | **20312-K** | H312X202 | FRM130/12,5 |
| **2 2/16** | 53,975 | 80 | 161 | 120 | 80 | 30 | 280 | 230 | 23 | 18 | M16 | 5/8 | 130 | 12,5 | **21312..-K** | H312X202 | FRM130/12,5 |
| **2 2/16** | 53,975 | 70 | 139 | 110 | 70 | 30 | 255 | 210 | 23 | 18 | M16 | 5/8 | 110 | 12,5 | **2212-K** | H312X202 | FRM110/10 |
| **2 2/16** | 53,975 | 70 | 139 | 110 | 70 | 30 | 255 | 210 | 23 | 18 | M16 | 5/8 | 110 | 12,5 | **22212..-K** | H312X202 | FRM110/10 |
| **2 2/16** | 53,975 | 80 | 161 | 120 | 80 | 30 | 280 | 230 | 23 | 18 | M16 | 5/8 | 130 | 12,5 | **22312..-K** | H2312X202 | FRM130/5 |
| **2 2/16** | 53,975 | 80 | 161 | 120 | 80 | 30 | 280 | 230 | 23 | 18 | M16 | 5/8 | 130 | 12,5 | **2312-K** | H2312X202 | FRM130/5 |

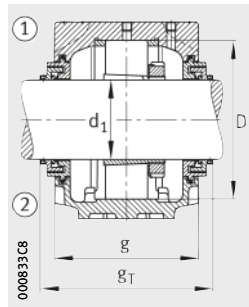
① Locating bearing; ② Non-locating bearing



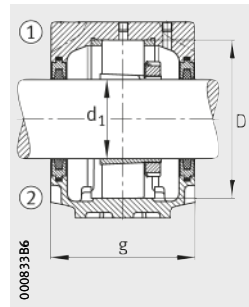

Double lip seal DH
Cover DKV




Labyrinth seal TSV




Taconite seal TCV




Felt seal FSV



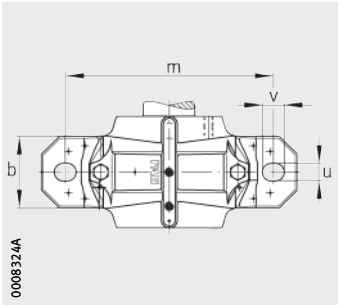


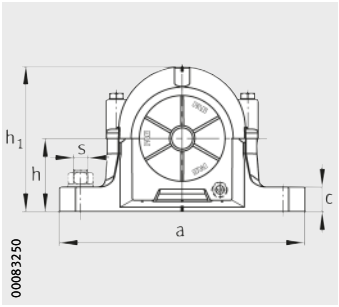


| | | | | | | | | | Housing | |
|---|---|---|---|---|---|---|---|---|---|---|
| Felt seal | Double lip seal | Labyrinth seal | | Taconite seal | | V ring seal | | Cover | Mass m ≈ kg | Designation |
| | | | $g_L$ mm | | $g_T$ mm | | $g_V$ mm | | | |
| FSV511X115 | DH511 | TSV511X115 | 119 | TCV511X115 | 143 | DHV511X115 | 111 | DKV100 | 4,3 | **SNV100-F-L** |
| FSV611X115 | DH611 | TSV611X115 | 129 | TCV611X115 | 153 | DHV611X115 | 121 | DKV120 | 6,1 | **SNV120-F-L** |
| FSV511X115 | DH511 | TSV511X115 | 119 | TCV511X115 | 143 | DHV511X115 | 111 | DKV100 | 4,3 | **SNV100-F-L** |
| FSV611X115 | DH611 | TSV611X115 | 129 | TCV611X115 | 153 | DHV611X115 | 121 | DKV120 | 6,1 | **SNV120-F-L** |
| FSV611X115 | DH611 | TSV611X115 | 129 | TCV611X115 | 153 | DHV611X115 | 121 | DKV120 | 6,1 | **SNV120-F-L** |
| FSV511X115 | DH511 | TSV511X115 | 119 | TCV511X115 | 143 | DHV511X115 | 111 | DKV100 | 4,3 | **SNV100-F-L** |
| FSV511X115 | DH511 | TSV511X115 | 119 | TCV511X115 | 143 | DHV511X115 | 111 | DKV100 | 4,3 | **SNV100-F-L** |
| FSV611X115 | DH611 | TSV611X115 | 129 | TCV611X115 | 153 | DHV611X115 | 121 | DKV120 | 6,1 | **SNV120-F-L** |
| FSV611X115 | DH611 | TSV611X115 | 129 | TCV611X115 | 153 | DHV611X115 | 121 | DKV120 | 6,1 | **SNV120-F-L** |
| FSV511 | DH511 | TSV511X200 | 119 | TCV511X200 | 143 | DHV511 | 111 | DKV100 | 4,3 | **SNV100-F-L** |
| FSV611 | DH611 | TSV611X200 | 129 | TCV611X200 | 153 | DHV611 | 121 | DKV120 | 6,1 | **SNV120-F-L** |
| FSV511 | DH511 | TSV511X200 | 119 | TCV511X200 | 143 | DHV511 | 111 | DKV100 | 4,3 | **SNV100-F-L** |
| FSV611 | DH611 | TSV611X200 | 129 | TCV611X200 | 153 | DHV611 | 121 | DKV120 | 6,1 | **SNV120-F-L** |
| FSV611 | DH611 | TSV611X200 | 129 | TCV611X200 | 153 | DHV611 | 121 | DKV120 | 6,1 | **SNV120-F-L** |
| FSV511 | DH511 | TSV511X200 | 119 | TCV511X200 | 143 | DHV511 | 111 | DKV100 | 4,3 | **SNV100-F-L** |
| FSV511 | DH511 | TSV511X200 | 119 | TCV511X200 | 143 | DHV511 | 111 | DKV100 | 4,3 | **SNV100-F-L** |
| FSV611 | DH611 | TSV611X200 | 129 | TCV611X200 | 153 | DHV611 | 121 | DKV120 | 6,1 | **SNV120-F-L** |
| FSV611 | DH611 | TSV611X200 | 129 | TCV611X200 | 153 | DHV611 | 121 | DKV120 | 6,1 | **SNV120-F-L** |
| FSV512X202 | DH512 | TSV512X202 | 124 | TCV512X202 | 148 | DHV512 | 116 | DKV110 | 4,9 | **SNV110-F-L** |
| FSV612X202 | DH612 | TSV612X202 | 134 | TCV612X202 | 158 | DHV612 | 126 | DKV130 | 6,8 | **SNV130-F-L** |
| FSV512X202 | DH512 | TSV512X202 | 124 | TCV512X202 | 148 | DHV512 | 116 | DKV110 | 4,9 | **SNV110-F-L** |
| FSV612X202 | DH612 | TSV612X202 | 134 | TCV612X202 | 158 | DHV612 | 126 | DKV130 | 6,8 | **SNV130-F-L** |
| FSV612X202 | DH612 | TSV612X202 | 134 | TCV612X202 | 158 | DHV612 | 126 | DKV130 | 6,8 | **SNV130-F-L** |
| FSV512X202 | DH512 | TSV512X202 | 124 | TCV512X202 | 148 | DHV512 | 116 | DKV110 | 4,9 | **SNV110-F-L** |
| FSV512X202 | DH512 | TSV512X202 | 124 | TCV512X202 | 148 | DHV512 | 116 | DKV110 | 4,9 | **SNV110-F-L** |
| FSV612X202 | DH612 | TSV612X202 | 134 | TCV612X202 | 158 | DHV612 | 126 | DKV130 | 6,8 | **SNV130-F-L** |
| FSV612X202 | DH612 | TSV612X202 | 134 | TCV612X202 | 158 | DHV612 | 126 | DKV130 | 6,8 | **SNV130-F-L** |

# Plummer block housings

SNV, split
For bearings with tapered bore and adapter sleeve
Inch size shaft

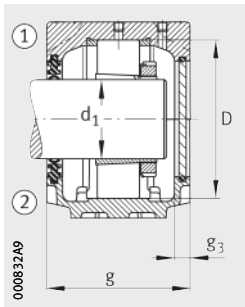


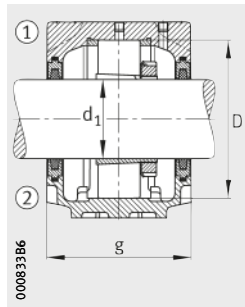

**Dimension table** (continued) · Dimensions in mm and *inch*

| Shaft | | Housing Dimensions | | | | | | | | | | | | | Bearing and accessories | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_1$ | | h | $h_1$ | g | b | c | a | m | v | u | s | | D | $g_3$ | Bearing | Adapter sleeve | Locating ring |
| *inch* | mm | | | | | | | | | | mm | *inch* | | | | | Quantity 2 |
| *2 3/16* | 55,563 | 80 | 155 | 115 | 80 | 30 | 275 | 230 | 23 | 18 | M16 | *5/8* | 120 | 12,5 | **1213-K** | H213X203 | FRM120/14 |
| *2 3/16* | 55,563 | 95 | 183 | 135 | 90 | 32 | 315 | 260 | 27 | 22 | M20 | *3/4* | 140 | 15 | **1313-K** | H313X203 | FRM140/12,5 |
| *2 3/16* | 55,563 | 80 | 155 | 115 | 80 | 30 | 275 | 230 | 23 | 18 | M16 | *5/8* | 120 | 12,5 | **20213-K** | H213X203 | FRM120/14 |
| *2 3/16* | 55,563 | 95 | 183 | 135 | 90 | 32 | 315 | 260 | 27 | 22 | M20 | *3/4* | 140 | 15 | **20313-K** | H313X203 | FRM140/12,5 |
| *2 3/16* | 55,563 | 95 | 183 | 135 | 90 | 32 | 315 | 260 | 27 | 22 | M20 | *3/4* | 140 | 15 | **21313..-K** | H313X203 | FRM140/12,5 |
| *2 3/16* | 55,563 | 80 | 155 | 115 | 80 | 30 | 275 | 230 | 23 | 18 | M16 | *5/8* | 120 | 12,5 | **2213-K** | H313X203 | FRM120/10 |
| *2 3/16* | 55,563 | 80 | 155 | 115 | 80 | 30 | 275 | 230 | 23 | 18 | M16 | *5/8* | 120 | 12,5 | **22213..-K** | H313X203 | FRM120/10 |
| *2 3/16* | 55,563 | 95 | 183 | 135 | 90 | 32 | 315 | 260 | 27 | 22 | M20 | *3/4* | 140 | 15 | **22313..-K** | H2313X203 | FRM140/5 |
| *2 3/16* | 55,563 | 95 | 183 | 135 | 90 | 32 | 315 | 260 | 27 | 22 | M20 | *3/4* | 140 | 15 | **2313-K** | H2313X203 | FRM140/5 |
| *2 4/16* | 57,15 | 80 | 155 | 115 | 80 | 30 | 275 | 230 | 23 | 18 | M16 | *5/8* | 120 | 12,5 | **1213-K** | H213X204 | FRM120/14 |
| *2 4/16* | 57,15 | 95 | 183 | 135 | 90 | 32 | 315 | 260 | 27 | 22 | M20 | *3/4* | 140 | 15 | **1313-K** | H313X204 | FRM140/12,5 |
| *2 4/16* | 57,15 | 80 | 155 | 115 | 80 | 30 | 275 | 230 | 23 | 18 | M16 | *5/8* | 120 | 12,5 | **20213-K** | H213X204 | FRM120/14 |
| *2 4/16* | 57,15 | 95 | 183 | 135 | 90 | 32 | 315 | 260 | 27 | 22 | M20 | *3/4* | 140 | 15 | **20313-K** | H313X204 | FRM140/12,5 |
| *2 4/16* | 57,15 | 95 | 183 | 135 | 90 | 32 | 315 | 260 | 27 | 22 | M20 | *3/4* | 140 | 15 | **21313..-K** | H313X204 | FRM140/12,5 |
| *2 4/16* | 57,15 | 80 | 155 | 115 | 80 | 30 | 275 | 230 | 23 | 18 | M16 | *5/8* | 120 | 12,5 | **2213-K** | H313X204 | FRM120/10 |
| *2 4/16* | 57,15 | 80 | 155 | 115 | 80 | 30 | 275 | 230 | 23 | 18 | M16 | *5/8* | 120 | 12,5 | **22213..-K** | H313X204 | FRM120/10 |
| *2 4/16* | 57,15 | 95 | 183 | 135 | 90 | 32 | 315 | 260 | 27 | 22 | M20 | *3/4* | 140 | 15 | **22313..-K** | H2313X204 | FRM140/5 |
| *2 4/16* | 57,15 | 95 | 183 | 135 | 90 | 32 | 315 | 260 | 27 | 22 | M20 | *3/4* | 140 | 15 | **2313-K** | H2313X204 | FRM140/5 |
| *2 6/16* | 60,325 | 80 | 155 | 115 | 80 | 30 | 275 | 230 | 23 | 18 | M16 | *5/8* | 120 | 12,5 | **1213-K** | H213X206 | FRM120/14 |
| *2 6/16* | 60,325 | 95 | 183 | 135 | 90 | 32 | 315 | 260 | 27 | 22 | M20 | *3/4* | 140 | 15 | **1313-K** | H313X206 | FRM140/12,5 |
| *2 6/16* | 60,325 | 80 | 155 | 115 | 80 | 30 | 275 | 230 | 23 | 18 | M16 | *5/8* | 120 | 12,5 | **20213-K** | H213X206 | FRM120/14 |
| *2 6/16* | 60,325 | 95 | 183 | 135 | 90 | 32 | 315 | 260 | 27 | 22 | M20 | *3/4* | 140 | 15 | **20313-K** | H313X206 | FRM140/12,5 |
| *2 6/16* | 60,325 | 95 | 183 | 135 | 90 | 32 | 315 | 260 | 27 | 22 | M20 | *3/4* | 140 | 15 | **21313..-K** | H313X206 | FRM140/12,5 |
| *2 6/16* | 60,325 | 80 | 155 | 115 | 80 | 30 | 275 | 230 | 23 | 18 | M16 | *5/8* | 120 | 12,5 | **2213-K** | H313X206 | FRM120/10 |
| *2 6/16* | 60,325 | 80 | 155 | 115 | 80 | 30 | 275 | 230 | 23 | 18 | M16 | *5/8* | 120 | 12,5 | **22213..-K** | H313X206 | FRM120/10 |
| *2 6/16* | 60,325 | 95 | 183 | 135 | 90 | 32 | 315 | 260 | 27 | 22 | M20 | *3/4* | 140 | 15 | **22313..-K** | H2313X206 | FRM140/5 |
| *2 6/16* | 60,325 | 95 | 183 | 135 | 90 | 32 | 315 | 260 | 27 | 22 | M20 | *3/4* | 140 | 15 | **2313-K** | H2313X206 | FRM140/5 |

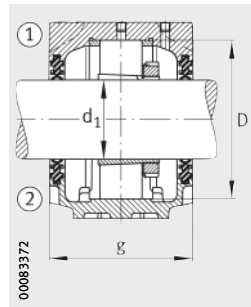
① Locating bearing; ② Non-locating bearing



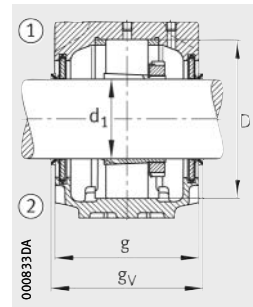

Double lip seal DH
Cover DKVT




Felt seal FSV




Double lip seal DH




V ring seal DHV



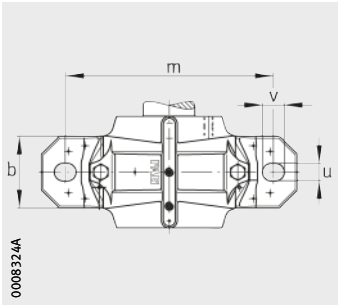


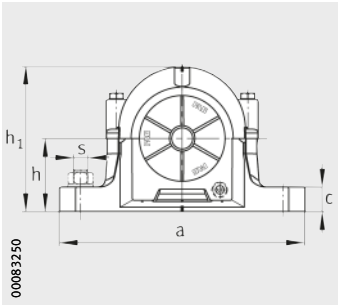


| | | | | | | | | | Housing | |
|---|---|---|---|---|---|---|---|---|---|---|
| Felt seal | Double lip seal | Labyrinth seal | | Taconite seal | | V ring seal | | Cover | Mass m ≈ kg | Designation |
| | | | $g_L$ mm | | $g_T$ mm | | $g_V$ mm | | | |
| FSV513X203 | DH513X203 | TSV513X203 | 129 | TCV513X203 | 153 | DHV513X203 | 121 | DKV120 | 6,1 | **SNV120-F-L** |
| FSV613X203 | DH613X203 | TSV613X203 | 150,3 | TCV613X203 | 172 | DHV613X203 | 139 | DKV140 | 9,3 | **SNV140-F-L** |
| FSV513X203 | DH513X203 | TSV513X203 | 129 | TCV513X203 | 153 | DHV513X203 | 121 | DKV120 | 6,1 | **SNV120-F-L** |
| FSV613X203 | DH613X203 | TSV613X203 | 150,3 | TCV613X203 | 172 | DHV613X203 | 139 | DKV140 | 9,3 | **SNV140-F-L** |
| FSV613X203 | DH613X203 | TSV613X203 | 150,3 | TCV613X203 | 172 | DHV613X203 | 139 | DKV140 | 9,3 | **SNV140-F-L** |
| FSV513X203 | DH513X203 | TSV513X203 | 129 | TCV513X203 | 153 | DHV513X203 | 121 | DKV120 | 6,1 | **SNV120-F-L** |
| FSV513X203 | DH513X203 | TSV513X203 | 129 | TCV513X203 | 153 | DHV513X203 | 121 | DKV120 | 6,1 | **SNV120-F-L** |
| FSV613X203 | DH613X203 | TSV613X203 | 150,3 | TCV613X203 | 172 | DHV613X203 | 139 | DKV140 | 9,3 | **SNV140-F-L** |
| FSV613X203 | DH613X203 | TSV613X203 | 150,3 | TCV613X203 | 172 | DHV613X203 | 139 | DKV140 | 9,3 | **SNV140-F-L** |
| FSV513X204 | DH513X203 | TSV513X204 | 129 | TCV513X204 | 153 | DHV513X204 | 121 | DKV120 | 6,1 | **SNV120-F-L** |
| FSV613X204 | DH613X203 | TSV613X204 | 150,3 | TCV613X204 | 172 | DHV613X204 | 139 | DKV140 | 9,3 | **SNV140-F-L** |
| FSV513X204 | DH513X203 | TSV513X204 | 129 | TCV513X204 | 153 | DHV513X204 | 121 | DKV120 | 6,1 | **SNV120-F-L** |
| FSV613X204 | DH613X203 | TSV613X204 | 150,3 | TCV613X204 | 172 | DHV613X204 | 139 | DKV140 | 9,3 | **SNV140-F-L** |
| FSV613X204 | DH613X203 | TSV613X204 | 150,3 | TCV613X204 | 172 | DHV613X204 | 139 | DKV140 | 9,3 | **SNV140-F-L** |
| FSV513X204 | DH513X203 | TSV513X204 | 129 | TCV513X204 | 153 | DHV513X204 | 121 | DKV120 | 6,1 | **SNV120-F-L** |
| FSV513X204 | DH513X203 | TSV513X204 | 129 | TCV513X204 | 153 | DHV513X204 | 121 | DKV120 | 6,1 | **SNV120-F-L** |
| FSV613X204 | DH613X203 | TSV613X204 | 150,3 | TCV613X204 | 172 | DHV613X204 | 139 | DKV140 | 9,3 | **SNV140-F-L** |
| FSV613X204 | DH613X203 | TSV613X204 | 150,3 | TCV613X204 | 172 | DHV613X204 | 139 | DKV140 | 9,3 | **SNV140-F-L** |
| FSV513 | DH513 | TSV513 | 129 | TCV513 | 153 | DHV513 | 121 | DKV120 | 6,1 | **SNV120-F-L** |
| FSV613 | DH613 | TSV613 | 150,3 | TCV613 | 172 | DHV613 | 139 | DKV140 | 9,3 | **SNV140-F-L** |
| FSV513 | DH513 | TSV513 | 129 | TCV513 | 153 | DHV513 | 121 | DKV120 | 6,1 | **SNV120-F-L** |
| FSV613 | DH613 | TSV613 | 150,3 | TCV613 | 172 | DHV613 | 139 | DKV140 | 9,3 | **SNV140-F-L** |
| FSV613 | DH613 | TSV613 | 150,3 | TCV613 | 172 | DHV613 | 139 | DKV140 | 9,3 | **SNV140-F-L** |
| FSV513 | DH513 | TSV513 | 129 | TCV513 | 153 | DHV513 | 121 | DKV120 | 6,1 | **SNV120-F-L** |
| FSV513 | DH513 | TSV513 | 129 | TCV513 | 153 | DHV513 | 121 | DKV120 | 6,1 | **SNV120-F-L** |
| FSV613 | DH613 | TSV613 | 150,3 | TCV613 | 172 | DHV613 | 139 | DKV140 | 9,3 | **SNV140-F-L** |
| FSV613 | DH613 | TSV613 | 150,3 | TCV613 | 172 | DHV613 | 139 | DKV140 | 9,3 | **SNV140-F-L** |

# Plummer block housings

SNV, split
For bearings with tapered bore and adapter sleeve
Inch size shaft

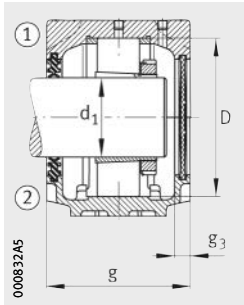


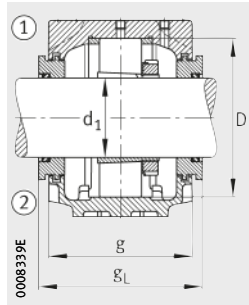

**Dimension table** (continued) · Dimensions in mm and *inch*

| Shaft | | Housing Dimensions | | | | | | | | | | | | | Bearing and accessories | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_1$ | | h | $h_1$ | g | b | c | a | m | v | u | s | | D | $g_3$ | Bearing | Adapter sleeve | Locating ring |
| *inch* | mm | | | | | | | | | | mm | *inch* | | | | | Quantity 2 |
| **2 7/16** | 61,913 | 80 | 161 | 120 | 80 | 30 | 280 | 230 | 23 | 18 | M16 | 5/8 | 130 | 12,5 | **1215-K** | H215X207 | FRM130/15,5 |
| **2 7/16** | 61,913 | 100 | 201 | 145 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | 3/4 | 160 | 15 | **1315-K** | H315X207 | FRM160/14 |
| **2 7/16** | 61,913 | 80 | 161 | 120 | 80 | 30 | 280 | 230 | 23 | 18 | M16 | 5/8 | 130 | 12,5 | **20215-K** | H215X207 | FRM130/15,5 |
| **2 7/16** | 61,913 | 100 | 201 | 145 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | 3/4 | 160 | 15 | **21315..-K** | H315X207 | FRM160/14 |
| **2 7/16** | 61,913 | 80 | 161 | 120 | 80 | 30 | 280 | 230 | 23 | 18 | M16 | 5/8 | 130 | 12,5 | **2215-K** | H315X207 | FRM130/12,5 |
| **2 7/16** | 61,913 | 80 | 161 | 120 | 80 | 30 | 280 | 230 | 23 | 18 | M16 | 5/8 | 130 | 12,5 | **22215..-K** | H315X207 | FRM130/12,5 |
| **2 7/16** | 61,913 | 100 | 201 | 145 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | 3/4 | 160 | 15 | **22315..-K** | H2315X207 | FRM160/5 |
| **2 7/16** | 61,913 | 100 | 201 | 145 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | 3/4 | 160 | 15 | **2315-K** | H2315X207 | FRM160/5 |
| **2 8/16** | 63,5 | 80 | 161 | 120 | 80 | 30 | 280 | 230 | 23 | 18 | M16 | 5/8 | 130 | 12,5 | **1215-K** | H215X208 | FRM130/15,5 |
| **2 8/16** | 63,5 | 100 | 201 | 145 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | 3/4 | 160 | 15 | **1315-K** | H315X208 | FRM160/14 |
| **2 8/16** | 63,5 | 80 | 161 | 120 | 80 | 30 | 280 | 230 | 23 | 18 | M16 | 5/8 | 130 | 12,5 | **20215-K** | H215X208 | FRM130/15,5 |
| **2 8/16** | 63,5 | 100 | 201 | 145 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | 3/4 | 160 | 15 | **21315..-K** | H315X208 | FRM160/14 |
| **2 8/16** | 63,5 | 80 | 161 | 120 | 80 | 30 | 280 | 230 | 23 | 18 | M16 | 5/8 | 130 | 12,5 | **2215-K** | H315X208 | FRM130/12,5 |
| **2 8/16** | 63,5 | 80 | 161 | 120 | 80 | 30 | 280 | 230 | 23 | 18 | M16 | 5/8 | 130 | 12,5 | **22215..-K** | H315X208 | FRM130/12,5 |
| **2 8/16** | 63,5 | 100 | 201 | 145 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | 3/4 | 160 | 15 | **22315..-K** | H2315X208 | FRM160/5 |
| **2 8/16** | 63,5 | 100 | 201 | 145 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | 3/4 | 160 | 15 | **2315-K** | H2315X208 | FRM160/5 |
| **2 10/16** | 66,675 | 80 | 161 | 120 | 80 | 30 | 280 | 230 | 23 | 18 | M16 | 5/8 | 130 | 12,5 | **1215-K** | H215X210 | FRM130/15,5 |
| **2 10/16** | 66,675 | 100 | 201 | 145 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | 3/4 | 160 | 15 | **1315-K** | H315X210 | FRM160/14 |
| **2 10/16** | 66,675 | 80 | 161 | 120 | 80 | 30 | 280 | 230 | 23 | 18 | M16 | 5/8 | 130 | 12,5 | **20215-K** | H215X210 | FRM130/15,5 |
| **2 10/16** | 66,675 | 100 | 201 | 145 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | 3/4 | 160 | 15 | **21315..-K** | H315X210 | FRM160/14 |
| **2 10/16** | 66,675 | 80 | 161 | 120 | 80 | 30 | 280 | 230 | 23 | 18 | M16 | 5/8 | 130 | 12,5 | **2215-K** | H315X210 | FRM130/12,5 |
| **2 10/16** | 66,675 | 80 | 161 | 120 | 80 | 30 | 280 | 230 | 23 | 18 | M16 | 5/8 | 130 | 12,5 | **22215..-K** | H315X210 | FRM130/12,5 |
| **2 10/16** | 66,675 | 100 | 201 | 145 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | 3/4 | 160 | 15 | **22315..-K** | H2315X210 | FRM160/5 |
| **2 10/16** | 66,675 | 100 | 201 | 145 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | 3/4 | 160 | 15 | **2315-K** | H2315X210 | FRM160/5 |
| **2 11/16** | 68,263 | 95 | 183 | 135 | 90 | 32 | 315 | 260 | 27 | 22 | M20 | 3/4 | 140 | 15 | **1216-K** | H216X211 | FRM140/16 |
| **2 11/16** | 68,263 | 112 | 219 | 150 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | 3/4 | 170 | 16 | **1316-K** | H316X211 | FRM170/14,5 |
| **2 11/16** | 68,263 | 95 | 183 | 135 | 90 | 32 | 315 | 260 | 27 | 22 | M20 | 3/4 | 140 | 15 | **20216-K** | H216X211 | FRM140/16 |
| **2 11/16** | 68,263 | 112 | 219 | 150 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | 3/4 | 170 | 16 | **21316..-K** | H316X211 | FRM170/14,5 |
| **2 11/16** | 68,263 | 95 | 183 | 135 | 90 | 32 | 315 | 260 | 27 | 22 | M20 | 3/4 | 140 | 15 | **2216-K** | H316X211 | FRM140/12,5 |
| **2 11/16** | 68,263 | 95 | 183 | 135 | 90 | 32 | 315 | 260 | 27 | 22 | M20 | 3/4 | 140 | 15 | **22216..-K** | H316X211 | FRM140/12,5 |
| **2 11/16** | 68,263 | 112 | 219 | 150 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | 3/4 | 170 | 16 | **22316..-K** | H2316X211 | FRM170/5 |
| **2 11/16** | 68,263 | 112 | 219 | 150 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | 3/4 | 170 | 16 | **2316-K** | H2316X211 | FRM170/5 |

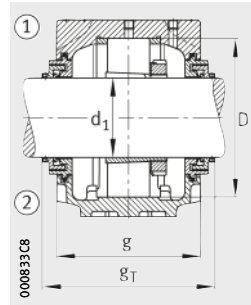
① Locating bearing; ② Non-locating bearing



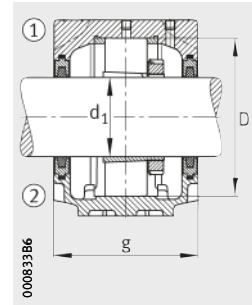

Double lip seal DH
Cover DKV




Labyrinth seal TSV




Taconite seal TCV




Felt seal FSV



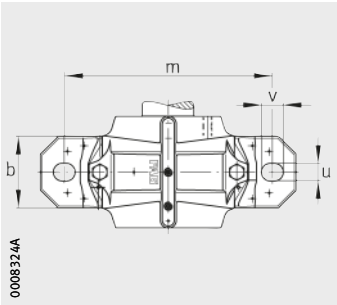


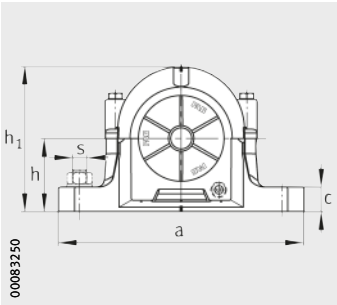


| | | | | | | | | | Housing | |
|---|---|---|---|---|---|---|---|---|---|---|
| Felt seal | Double lip seal | Labyrinth seal | | Taconite seal | | V ring seal | | Cover | Mass m ≈ kg | Designation |
| | | | $g_L$ mm | | $g_T$ mm | | $g_V$ mm | | | |
| FSV515X207 | DH515X207 | TSV515X207 | 134 | TCV515X207 | 158 | DHV515X207 | 126 | DKV130 | 6,8 | **SNV130-F-L** |
| FSV615X207 | DH615X207 | TSV615X207 | 160,3 | TCV615X207 | 182 | DHV615X207 | 149 | DKV160 | 12,8 | **SNV160-F-L** |
| FSV515X207 | DH515X207 | TSV515X207 | 134 | TCV515X207 | 158 | DHV515X207 | 126 | DKV130 | 6,8 | **SNV130-F-L** |
| FSV615X207 | DH615X207 | TSV615X207 | 160,3 | TCV615X207 | 182 | DHV615X207 | 149 | DKV160 | 12,8 | **SNV160-F-L** |
| FSV515X207 | DH515X207 | TSV515X207 | 134 | TCV515X207 | 158 | DHV515X207 | 126 | DKV130 | 6,8 | **SNV130-F-L** |
| FSV515X207 | DH515X207 | TSV515X207 | 134 | TCV515X207 | 158 | DHV515X207 | 126 | DKV130 | 6,8 | **SNV130-F-L** |
| FSV615X207 | DH615X207 | TSV615X207 | 160,3 | TCV615X207 | 182 | DHV615X207 | 149 | DKV160 | 12,8 | **SNV160-F-L** |
| FSV615X207 | DH615X207 | TSV615X207 | 160,3 | TCV615X207 | 182 | DHV615X207 | 149 | DKV160 | 12,8 | **SNV160-F-L** |
| FSV515X208 | DH515X207 | TSV515X208 | 134 | TCV515X208 | 158 | DHV515X208 | 126 | DKV130 | 6,8 | **SNV130-F-L** |
| FSV615X208 | DH615X207 | TSV615X208 | 160,3 | TCV615X208 | 182 | DHV615X208 | 149 | DKV160 | 12,8 | **SNV160-F-L** |
| FSV515X208 | DH515X207 | TSV515X208 | 134 | TCV515X208 | 158 | DHV515X208 | 126 | DKV130 | 6,8 | **SNV130-F-L** |
| FSV615X208 | DH615X207 | TSV615X208 | 160,3 | TCV615X208 | 182 | DHV615X208 | 149 | DKV160 | 12,8 | **SNV160-F-L** |
| FSV515X208 | DH515X207 | TSV515X208 | 134 | TCV515X208 | 158 | DHV515X208 | 126 | DKV130 | 6,8 | **SNV130-F-L** |
| FSV515X208 | DH515X207 | TSV515X208 | 134 | TCV515X208 | 158 | DHV515X208 | 126 | DKV130 | 6,8 | **SNV130-F-L** |
| FSV615X208 | DH615X207 | TSV615X208 | 160,3 | TCV615X208 | 182 | DHV615X208 | 149 | DKV160 | 12,8 | **SNV160-F-L** |
| FSV615X208 | DH615X207 | TSV615X208 | 160,3 | TCV615X208 | 182 | DHV615X208 | 149 | DKV160 | 12,8 | **SNV160-F-L** |
| FSV515X210 | DH515 | TSV515X210 | 134 | TCV515X210 | 158 | DHV515X210 | 126 | DKV130 | 6,8 | **SNV130-F-L** |
| FSV615X210 | DH615 | TSV615X210 | 160,3 | TCV615X210 | 182 | DHV615X210 | 149 | DKV160 | 12,8 | **SNV160-F-L** |
| FSV515X210 | DH515 | TSV515X210 | 134 | TCV515X210 | 158 | DHV515X210 | 126 | DKV130 | 6,8 | **SNV130-F-L** |
| FSV615X210 | DH615 | TSV615X210 | 160,3 | TCV615X210 | 182 | DHV615X210 | 149 | DKV160 | 12,8 | **SNV160-F-L** |
| FSV515X210 | DH515 | TSV515X210 | 134 | TCV515X210 | 158 | DHV515X210 | 126 | DKV130 | 6,8 | **SNV130-F-L** |
| FSV515X210 | DH515 | TSV515X210 | 134 | TCV515X210 | 158 | DHV515X210 | 126 | DKV130 | 6,8 | **SNV130-F-L** |
| FSV615X210 | DH615 | TSV615X210 | 160,3 | TCV615X210 | 182 | DHV615X210 | 149 | DKV160 | 12,8 | **SNV160-F-L** |
| FSV615X210 | DH615 | TSV615X210 | 160,3 | TCV615X210 | 182 | DHV615X210 | 149 | DKV160 | 12,8 | **SNV160-F-L** |
| FSV516X211 | DH516X211 | TSV516X211 | 150,3 | TCV516X211 | 176 | DHV516X211 | 143 | DKV140 | 9,3 | **SNV140-F-L** |
| FSV616X211 | DH616X211 | TSV616X211 | 167,3 | TCV616X211 | 193 | DHV616X211 | 158 | DKV170 | 14,4 | **SNV170-F-L** |
| FSV516X211 | DH516X211 | TSV516X211 | 150,3 | TCV516X211 | 176 | DHV516X211 | 143 | DKV140 | 9,3 | **SNV140-F-L** |
| FSV616X211 | DH616X211 | TSV616X211 | 167,3 | TCV616X211 | 193 | DHV616X211 | 158 | DKV170 | 14,4 | **SNV170-F-L** |
| FSV516X211 | DH516X211 | TSV516X211 | 150,3 | TCV516X211 | 176 | DHV516X211 | 143 | DKV140 | 9,3 | **SNV140-F-L** |
| FSV516X211 | DH516X211 | TSV516X211 | 150,3 | TCV516X211 | 176 | DHV516X211 | 143 | DKV140 | 9,3 | **SNV140-F-L** |
| FSV616X211 | DH616X211 | TSV616X211 | 167,3 | TCV616X211 | 193 | DHV616X211 | 158 | DKV170 | 14,4 | **SNV170-F-L** |
| FSV616X211 | DH616X211 | TSV616X211 | 167,3 | TCV616X211 | 193 | DHV616X211 | 158 | DKV170 | 14,4 | **SNV170-F-L** |

# Plummer block housings

SNV, split
For bearings with tapered bore and adapter sleeve
Inch size shaft

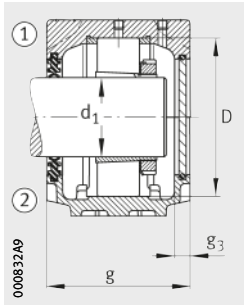


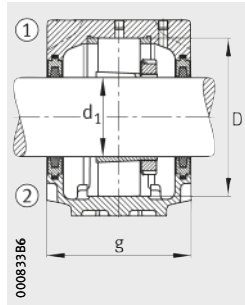

**Dimension table** (continued) · Dimensions in mm and *inch*

| Shaft | | Housing Dimensions | | | | | | | | | | | | | Bearing and accessories | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_1$ | | h | $h_1$ | g | b | c | a | m | v | u | s | | D | $g_3$ | Bearing | Adapter sleeve | Locating ring |
| *inch* | mm | | | | | | | | | | mm | *inch* | | | | | Quantity 2 |
| **$2^{12}/_{16}$** | 69,85 | 95 | 183 | 135 | 90 | 32 | 315 | 260 | 27 | 22 | M20 | $^{3}/_{4}$ | 140 | 15 | **1216-K** | H216X212 | FRM140/16 |
| **$2^{12}/_{16}$** | 69,85 | 112 | 219 | 150 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | $^{3}/_{4}$ | 170 | 16 | **1316-K** | H316X212 | FRM170/14,5 |
| **$2^{12}/_{16}$** | 69,85 | 95 | 183 | 135 | 90 | 32 | 315 | 260 | 27 | 22 | M20 | $^{3}/_{4}$ | 140 | 15 | **20216-K** | H216X212 | FRM140/16 |
| **$2^{12}/_{16}$** | 69,85 | 112 | 219 | 150 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | $^{3}/_{4}$ | 170 | 16 | **21316..-K** | H316X212 | FRM170/14,5 |
| **$2^{12}/_{16}$** | 69,85 | 95 | 183 | 135 | 90 | 32 | 315 | 260 | 27 | 22 | M20 | $^{3}/_{4}$ | 140 | 15 | **2216-K** | H316X212 | FRM140/12,5 |
| **$2^{12}/_{16}$** | 69,85 | 95 | 183 | 135 | 90 | 32 | 315 | 260 | 27 | 22 | M20 | $^{3}/_{4}$ | 140 | 15 | **22216..-K** | H316X212 | FRM140/12,5 |
| **$2^{12}/_{16}$** | 69,85 | 112 | 219 | 150 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | $^{3}/_{4}$ | 170 | 16 | **22316..-K** | H2316X212 | FRM170/5 |
| **$2^{12}/_{16}$** | 69,85 | 112 | 219 | 150 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | $^{3}/_{4}$ | 170 | 16 | **2316-K** | H2316X212 | FRM170/5 |
| **$2^{14}/_{16}$** | 73,025 | 95 | 183 | 135 | 90 | 32 | 315 | 260 | 27 | 22 | M20 | $^{3}/_{4}$ | 140 | 15 | **1216-K** | H216X214 | FRM140/16 |
| **$2^{14}/_{16}$** | 73,025 | 112 | 219 | 150 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | $^{3}/_{4}$ | 170 | 16 | **1316-K** | H316X214 | FRM170/14,5 |
| **$2^{14}/_{16}$** | 73,025 | 95 | 183 | 135 | 90 | 32 | 315 | 260 | 27 | 22 | M20 | $^{3}/_{4}$ | 140 | 15 | **20216-K** | H216X214 | FRM140/16 |
| **$2^{14}/_{16}$** | 73,025 | 112 | 219 | 150 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | $^{3}/_{4}$ | 170 | 16 | **21316..-K** | H316X214 | FRM170/14,5 |
| **$2^{14}/_{16}$** | 73,025 | 95 | 183 | 135 | 90 | 32 | 315 | 260 | 27 | 22 | M20 | $^{3}/_{4}$ | 140 | 15 | **2216-K** | H316X214 | FRM140/12,5 |
| **$2^{14}/_{16}$** | 73,025 | 95 | 183 | 135 | 90 | 32 | 315 | 260 | 27 | 22 | M20 | $^{3}/_{4}$ | 140 | 15 | **22216..-K** | H316X214 | FRM140/12,5 |
| **$2^{14}/_{16}$** | 73,025 | 112 | 219 | 150 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | $^{3}/_{4}$ | 170 | 16 | **22316..-K** | H2316X214 | FRM170/5 |
| **$2^{14}/_{16}$** | 73,025 | 112 | 219 | 150 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | $^{3}/_{4}$ | 170 | 16 | **2316-K** | H2316X214 | FRM170/5 |
| **$2^{15}/_{16}$** | 74,613 | 95 | 189 | 140 | 90 | 32 | 320 | 260 | 27 | 22 | M20 | $^{3}/_{4}$ | 150 | 15 | **1217-K** | H217X215 | FRM150/16,5 |
| **$2^{15}/_{16}$** | 74,613 | 112 | 223 | 160 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | $^{7}/_{8}$ | 180 | 16 | **1317-K** | H317X215 | FRM180/14,5 |
| **$2^{15}/_{16}$** | 74,613 | 95 | 189 | 140 | 90 | 32 | 320 | 260 | 27 | 22 | M20 | $^{3}/_{4}$ | 150 | 15 | **20217-K** | H217X215 | FRM150/16,5 |
| **$2^{15}/_{16}$** | 74,613 | 112 | 223 | 160 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | $^{7}/_{8}$ | 180 | 16 | **21317..-K** | H317X215 | FRM180/14,5 |
| **$2^{15}/_{16}$** | 74,613 | 95 | 189 | 140 | 90 | 32 | 320 | 260 | 27 | 22 | M20 | $^{3}/_{4}$ | 150 | 15 | **2217-K** | H317X215 | FRM150/12,5 |
| **$2^{15}/_{16}$** | 74,613 | 95 | 189 | 140 | 90 | 32 | 320 | 260 | 27 | 22 | M20 | $^{3}/_{4}$ | 150 | 15 | **22217..-K** | H317X215 | FRM150/12,5 |
| **$2^{15}/_{16}$** | 74,613 | 112 | 223 | 160 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | $^{7}/_{8}$ | 180 | 16 | **22317..-K** | H2317X215 | FRM180/5 |
| **$2^{15}/_{16}$** | 74,613 | 112 | 223 | 160 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | $^{7}/_{8}$ | 180 | 16 | **2317-K** | H2317X215 | FRM180/5 |
| **3** | 76,2 | 95 | 189 | 140 | 90 | 32 | 320 | 260 | 27 | 22 | M20 | $^{3}/_{4}$ | 150 | 15 | **1217-K** | H217X300 | FRM150/16,5 |
| **3** | 76,2 | 112 | 223 | 160 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | $^{7}/_{8}$ | 180 | 16 | **1317-K** | H317X300 | FRM180/14,5 |
| **3** | 76,2 | 95 | 189 | 140 | 90 | 32 | 320 | 260 | 27 | 22 | M20 | $^{3}/_{4}$ | 150 | 15 | **20217-K** | H217X300 | FRM150/16,5 |
| **3** | 76,2 | 112 | 223 | 160 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | $^{7}/_{8}$ | 180 | 16 | **21317..-K** | H317X300 | FRM180/14,5 |
| **3** | 76,2 | 95 | 189 | 140 | 90 | 32 | 320 | 260 | 27 | 22 | M20 | $^{3}/_{4}$ | 150 | 15 | **2217-K** | H317X300 | FRM150/12,5 |
| **3** | 76,2 | 95 | 189 | 140 | 90 | 32 | 320 | 260 | 27 | 22 | M20 | $^{3}/_{4}$ | 150 | 15 | **22217..-K** | H317X300 | FRM150/12,5 |
| **3** | 76,2 | 112 | 223 | 160 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | $^{7}/_{8}$ | 180 | 16 | **22317..-K** | H2317X300 | FRM180/5 |
| **3** | 76,2 | 112 | 223 | 160 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | $^{7}/_{8}$ | 180 | 16 | **2317-K** | H2317X300 | FRM180/5 |

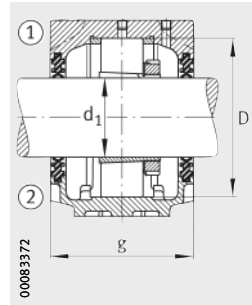
① Locating bearing; ② Non-locating bearing



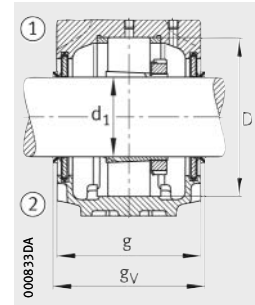

Double lip seal DH
Cover DKVT




Felt seal FSV




Double lip seal DH




V ring seal DHV



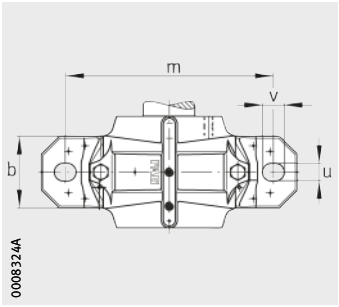


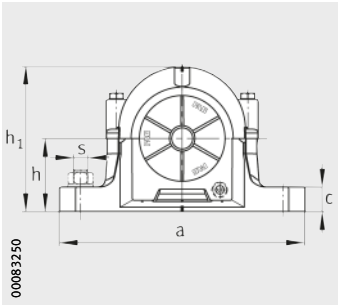


| | | | | | | | | | | Housing |
|---|---|---|---|---|---|---|---|---|---|---|
| Felt seal | Double lip seal | Labyrinth seal | | Taconite seal | | V ring seal | | Cover | Mass m ≈ kg | Designation |
| | | | $g_L$ mm | | $g_T$ mm | | $g_V$ mm | | | |
| FSV516 | DH516 | TSV516 | 150,3 | TCV516 | 176 | DHV516 | 143 | DKV140 | 9,3 | **SNV140-F-L** |
| FSV616 | DH616 | TSV616 | 167,3 | TCV616 | 193 | DHV616 | 158 | DKV170 | 14,4 | **SNV170-F-L** |
| FSV516 | DH516 | TSV516 | 150,3 | TCV516 | 176 | DHV516 | 143 | DKV140 | 9,3 | **SNV140-F-L** |
| FSV616 | DH616 | TSV616 | 167,3 | TCV616 | 193 | DHV616 | 158 | DKV170 | 14,4 | **SNV170-F-L** |
| FSV516 | DH516 | TSV516 | 150,3 | TCV516 | 176 | DHV516 | 143 | DKV140 | 9,3 | **SNV140-F-L** |
| FSV516 | DH516 | TSV516 | 150,3 | TCV516 | 176 | DHV516 | 143 | DKV140 | 9,3 | **SNV140-F-L** |
| FSV616 | DH616 | TSV616 | 167,3 | TCV616 | 193 | DHV616 | 158 | DKV170 | 14,4 | **SNV170-F-L** |
| FSV616 | DH616 | TSV616 | 167,3 | TCV616 | 193 | DHV616 | 158 | DKV170 | 14,4 | **SNV170-F-L** |
| FSV516X214 | DH516X214 | TSV516X214 | 150,3 | TCV516X214 | 176 | DHV516X214 | 143 | DKV140 | 9,3 | **SNV140-F-L** |
| FSV616X214 | DH616X214 | TSV616X214 | 167,3 | TCV616X214 | 193 | DHV616X214 | 158 | DKV170 | 14,4 | **SNV170-F-L** |
| FSV516X214 | DH516X214 | TSV516X214 | 150,3 | TCV516X214 | 176 | DHV516X214 | 143 | DKV140 | 9,3 | **SNV140-F-L** |
| FSV616X214 | DH616X214 | TSV616X214 | 167,3 | TCV616X214 | 193 | DHV616X214 | 158 | DKV170 | 14,4 | **SNV170-F-L** |
| FSV516X214 | DH516X214 | TSV516X214 | 150,3 | TCV516X214 | 176 | DHV516X214 | 143 | DKV140 | 9,3 | **SNV140-F-L** |
| FSV516X214 | DH516X214 | TSV516X214 | 150,3 | TCV516X214 | 176 | DHV516X214 | 143 | DKV140 | 9,3 | **SNV140-F-L** |
| FSV616X214 | DH616X214 | TSV616X214 | 167,3 | TCV616X214 | 193 | DHV616X214 | 158 | DKV170 | 14,4 | **SNV170-F-L** |
| FSV616X214 | DH616X214 | TSV616X214 | 167,3 | TCV616X214 | 193 | DHV616X214 | 158 | DKV170 | 14,4 | **SNV170-F-L** |
| FSV517 | DH517 | TSV517 | 155,3 | TCV517 | 181 | DHV517 | 148 | DKV150 | 9,9 | **SNV150-F-L** |
| FSV617 | DH617 | TSV617 | 177,3 | TCV617 | 203 | DHV617 | 168 | DKV180 | 17 | **SNV180-F-L** |
| FSV517 | DH517 | TSV517 | 155,3 | TCV517 | 181 | DHV517 | 148 | DKV150 | 9,9 | **SNV150-F-L** |
| FSV617 | DH617 | TSV617 | 177,3 | TCV617 | 203 | DHV617 | 168 | DKV180 | 17 | **SNV180-F-L** |
| FSV517 | DH517 | TSV517 | 155,3 | TCV517 | 181 | DHV517 | 148 | DKV150 | 9,9 | **SNV150-F-L** |
| FSV517 | DH517 | TSV517 | 155,3 | TCV517 | 181 | DHV517 | 148 | DKV150 | 9,9 | **SNV150-F-L** |
| FSV617 | DH617 | TSV617 | 177,3 | TCV617 | 203 | DHV617 | 168 | DKV180 | 17 | **SNV180-F-L** |
| FSV617 | DH617 | TSV617 | 177,3 | TCV617 | 203 | DHV617 | 168 | DKV180 | 17 | **SNV180-F-L** |
| FSV517X300 | DH517 | TSV517X300 | 155,3 | TCV517X300 | 181 | DHV517X300 | 148 | DKV150 | 9,9 | **SNV150-F-L** |
| FSV617X300 | DH617 | TSV617X300 | 177,3 | TCV617X300 | 203 | DHV617X300 | 168 | DKV180 | 17 | **SNV180-F-L** |
| FSV517X300 | DH517 | TSV517X300 | 155,3 | TCV517X300 | 181 | DHV517X300 | 148 | DKV150 | 9,9 | **SNV150-F-L** |
| FSV617X300 | DH617 | TSV617X300 | 177,3 | TCV617X300 | 203 | DHV617X300 | 168 | DKV180 | 17 | **SNV180-F-L** |
| FSV517X300 | DH517 | TSV517X300 | 155,3 | TCV517X300 | 181 | DHV517X300 | 148 | DKV150 | 9,9 | **SNV150-F-L** |
| FSV517X300 | DH517 | TSV517X300 | 155,3 | TCV517X300 | 181 | DHV517X300 | 148 | DKV150 | 9,9 | **SNV150-F-L** |
| FSV617X300 | DH617 | TSV617X300 | 177,3 | TCV617X300 | 203 | DHV617X300 | 168 | DKV180 | 17 | **SNV180-F-L** |
| FSV617X300 | DH617 | TSV617X300 | 177,3 | TCV617X300 | 203 | DHV617X300 | 168 | DKV180 | 17 | **SNV180-F-L** |

# Plummer block housings

SNV, split
For bearings with tapered bore and adapter sleeve
Inch size shaft

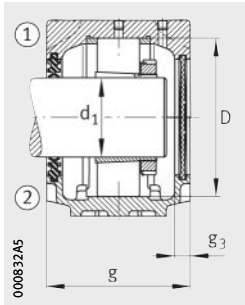


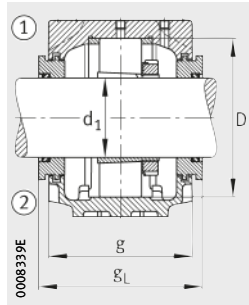

**Dimension table** (continued) · Dimensions in mm and *inch*

| Shaft | | Housing Dimensions | | | | | | | | | | | | | Bearing and accessories | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_1$ | | h | $h_1$ | g | b | c | a | m | v | u | s | | D | $g_3$ | Bearing | Adapter sleeve | Locating ring |
| *inch* | mm | | | | | | | | | | mm | *inch* | | | | | Quantity 2 |
| *3 2/16* | 79,375 | 100 | 201 | 145 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | *3/4* | 160 | 15 | **1218-K** | H218X302 | FRM160/17,5 |
| *3 2/16* | 79,375 | 112 | 229 | 155 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | *7/8* | 190 | 15 | **1318-K** | H318X302 | FRM190/15,5 |
| *3 2/16* | 79,375 | 100 | 201 | 145 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | *3/4* | 160 | 15 | **20218-K** | H218X302 | FRM160/17,5 |
| *3 2/16* | 79,375 | 112 | 229 | 155 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | *7/8* | 190 | 15 | **20318-K** | H318X302 | FRM190/15,5 |
| *3 2/16* | 79,375 | 112 | 229 | 155 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | *7/8* | 190 | 15 | **21318..-K** | H318X302 | FRM190/15,5 |
| *3 2/16* | 79,375 | 100 | 201 | 145 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | *3/4* | 160 | 15 | **2218-K** | H318X302 | FRM160/12,5 |
| *3 2/16* | 79,375 | 100 | 201 | 145 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | *3/4* | 160 | 15 | **22218..-K** | H318X302 | FRM160/12,5 |
| *3 2/16* | 79,375 | 112 | 229 | 155 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | *7/8* | 190 | 15 | **22318..-K** | H2318X302 | FRM190/5 |
| *3 2/16* | 79,375 | 112 | 229 | 155 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | *7/8* | 190 | 15 | **2318-K** | H2318X302 | FRM190/5 |
| *3 2/16* | 79,375 | 100 | 201 | 145 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | *3/4* | 160 | 15 | **23218..-K** | H2318X302 | FRM160/6,3 |
| *3 3/16* | 80,963 | 100 | 201 | 145 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | *3/4* | 160 | 15 | **1218-K** | H218X303 | FRM160/17,5 |
| *3 3/16* | 80,963 | 112 | 229 | 155 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | *7/8* | 190 | 15 | **1318-K** | H318X303 | FRM190/15,5 |
| *3 3/16* | 80,963 | 100 | 201 | 145 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | *3/4* | 160 | 15 | **20218-K** | H218X303 | FRM160/17,5 |
| *3 3/16* | 80,963 | 112 | 229 | 155 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | *7/8* | 190 | 15 | **20318-K** | H318X303 | FRM190/15,5 |
| *3 3/16* | 80,963 | 112 | 229 | 155 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | *7/8* | 190 | 15 | **21318..-K** | H318X303 | FRM190/15,5 |
| *3 3/16* | 80,963 | 100 | 201 | 145 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | *3/4* | 160 | 15 | **2218-K** | H318X303 | FRM160/12,5 |
| *3 3/16* | 80,963 | 100 | 201 | 145 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | *3/4* | 160 | 15 | **22218..-K** | H318X303 | FRM160/12,5 |
| *3 3/16* | 80,963 | 112 | 229 | 155 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | *7/8* | 190 | 15 | **22318..-K** | H2318X303 | FRM190/5 |
| *3 3/16* | 80,963 | 112 | 229 | 155 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | *7/8* | 190 | 15 | **2318-K** | H2318X303 | FRM190/5 |
| *3 3/16* | 80,963 | 100 | 201 | 145 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | *3/4* | 160 | 15 | **23218..-K** | H2318X303 | FRM160/6,3 |
| *3 4/16* | 82,55 | 100 | 201 | 145 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | *3/4* | 160 | 15 | **1218-K** | H218X304 | FRM160/17,5 |
| *3 4/16* | 82,55 | 112 | 229 | 155 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | *7/8* | 190 | 15 | **1318-K** | H318X304 | FRM190/15,5 |
| *3 4/16* | 82,55 | 100 | 201 | 145 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | *3/4* | 160 | 15 | **20218-K** | H218X304 | FRM160/17,5 |
| *3 4/16* | 82,55 | 112 | 229 | 155 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | *7/8* | 190 | 15 | **20318-K** | H318X304 | FRM190/15,5 |
| *3 4/16* | 82,55 | 112 | 229 | 155 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | *7/8* | 190 | 15 | **21318..-K** | H318X304 | FRM190/15,5 |
| *3 4/16* | 82,55 | 100 | 201 | 145 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | *3/4* | 160 | 15 | **2218-K** | H318X304 | FRM160/12,5 |
| *3 4/16* | 82,55 | 100 | 201 | 145 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | *3/4* | 160 | 15 | **22218..-K** | H318X304 | FRM160/12,5 |
| *3 4/16* | 82,55 | 112 | 229 | 155 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | *7/8* | 190 | 15 | **22318..-K** | H2318X304 | FRM190/5 |
| *3 4/16* | 82,55 | 112 | 229 | 155 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | *7/8* | 190 | 15 | **2318-K** | H2318X304 | FRM190/5 |
| *3 4/16* | 82,55 | 100 | 201 | 145 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | *3/4* | 160 | 15 | **23218..-K** | H2318X304 | FRM160/6,3 |

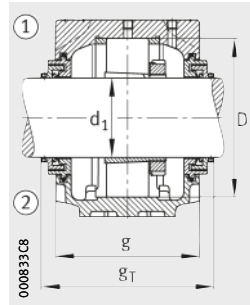
① Locating bearing; ② Non-locating bearing



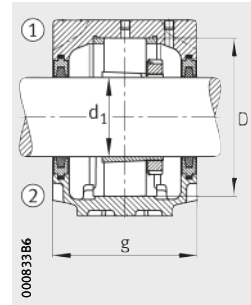

Double lip seal DH
Cover DKV




Labyrinth seal TSV




Taconite seal TCV




Felt seal FSV



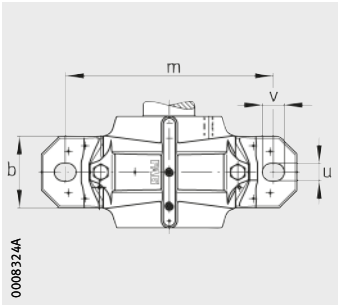


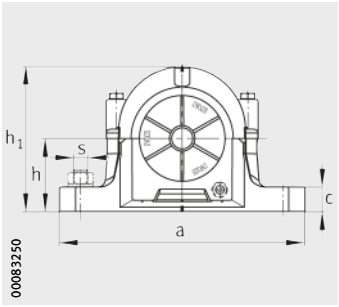


| | | | | | | | | | Housing | |
|---|---|---|---|---|---|---|---|---|---|---|
| Felt seal | Double lip seal | Labyrinth seal | | Taconite seal | | V ring seal | | Cover | Mass m ≈ kg | Designation |
| | | | $g_L$ mm | | $g_T$ mm | | $g_V$ mm | | | |
| FSV518 | DH518 | TSV518X302 | 160,3 | TCV518X302 | 186 | DHV518 | 153 | DKV160 | 12,8 | **SNV160-F-L** |
| FSV518 | DH518 | TSV518X302 | 170,3 | TCV518X302 | 178 | DHV518 | 163 | DKV160 | 22 | **SNV190-F-L** |
| FSV518 | DH518 | TSV518X302 | 160,3 | TCV518X302 | 186 | DHV518 | 153 | DKV160 | 12,8 | **SNV160-F-L** |
| FSV518 | DH518 | TSV518X302 | 170,3 | TCV518X302 | 178 | DHV518 | 163 | DKV160 | 22 | **SNV190-F-L** |
| FSV518 | DH518 | TSV518X302 | 170,3 | TCV518X302 | 178 | DHV518 | 163 | DKV160 | 22 | **SNV190-F-L** |
| FSV518 | DH518 | TSV518X302 | 160,3 | TCV518X302 | 186 | DHV518 | 153 | DKV160 | 12,8 | **SNV160-F-L** |
| FSV518 | DH518 | TSV518X302 | 160,3 | TCV518X302 | 186 | DHV518 | 153 | DKV160 | 12,8 | **SNV160-F-L** |
| FSV518 | DH518 | TSV518X302 | 170,3 | TCV518X302 | 178 | DHV518 | 163 | DKV160 | 22 | **SNV190-F-L** |
| FSV518 | DH518 | TSV518X302 | 170,3 | TCV518X302 | 178 | DHV518 | 163 | DKV160 | 22 | **SNV190-F-L** |
| FSV518 | DH518 | TSV518X302 | 160,3 | TCV518X302 | 186 | DHV518 | 153 | DKV160 | 12,8 | **SNV160-F-L** |
| FSV518X303 | DH518 | TSV518X303 | 160,3 | TCV518X303 | 186 | DHV518X303 | 153 | DKV160 | 12,8 | **SNV160-F-L** |
| FSV518X303 | DH518 | TSV518X303 | 170,3 | TCV518X303 | 178 | DHV518X303 | 163 | DKV160 | 22 | **SNV190-F-L** |
| FSV518X303 | DH518 | TSV518X303 | 160,3 | TCV518X303 | 186 | DHV518X303 | 153 | DKV160 | 12,8 | **SNV160-F-L** |
| FSV518X303 | DH518 | TSV518X303 | 170,3 | TCV518X303 | 178 | DHV518X303 | 163 | DKV160 | 22 | **SNV190-F-L** |
| FSV518X303 | DH518 | TSV518X303 | 170,3 | TCV518X303 | 178 | DHV518X303 | 163 | DKV160 | 22 | **SNV190-F-L** |
| FSV518X303 | DH518 | TSV518X303 | 160,3 | TCV518X303 | 186 | DHV518X303 | 153 | DKV160 | 12,8 | **SNV160-F-L** |
| FSV518X303 | DH518 | TSV518X303 | 160,3 | TCV518X303 | 186 | DHV518X303 | 153 | DKV160 | 12,8 | **SNV160-F-L** |
| FSV518X303 | DH518 | TSV518X303 | 170,3 | TCV518X303 | 178 | DHV518X303 | 163 | DKV160 | 22 | **SNV190-F-L** |
| FSV518X303 | DH518 | TSV518X303 | 170,3 | TCV518X303 | 178 | DHV518X303 | 163 | DKV160 | 22 | **SNV190-F-L** |
| FSV518X303 | DH518 | TSV518X303 | 160,3 | TCV518X303 | 186 | DHV518X303 | 153 | DKV160 | 12,8 | **SNV160-F-L** |
| FSV518X304 | DH518X304 | TSV518X304 | 160,3 | TCV518X304 | 186 | DHV518X304 | 153 | DKV160 | 12,8 | **SNV160-F-L** |
| FSV518X304 | DH518X304 | TSV518X304 | 170,3 | TCV518X304 | 178 | DHV518X304 | 163 | DKV160 | 22 | **SNV190-F-L** |
| FSV518X304 | DH518X304 | TSV518X304 | 160,3 | TCV518X304 | 186 | DHV518X304 | 153 | DKV160 | 12,8 | **SNV160-F-L** |
| FSV518X304 | DH518X304 | TSV518X304 | 170,3 | TCV518X304 | 178 | DHV518X304 | 163 | DKV160 | 22 | **SNV190-F-L** |
| FSV518X304 | DH518X304 | TSV518X304 | 170,3 | TCV518X304 | 178 | DHV518X304 | 163 | DKV160 | 22 | **SNV190-F-L** |
| FSV518X304 | DH518X304 | TSV518X304 | 160,3 | TCV518X304 | 186 | DHV518X304 | 153 | DKV160 | 12,8 | **SNV160-F-L** |
| FSV518X304 | DH518X304 | TSV518X304 | 160,3 | TCV518X304 | 186 | DHV518X304 | 153 | DKV160 | 12,8 | **SNV160-F-L** |
| FSV518X304 | DH518X304 | TSV518X304 | 170,3 | TCV518X304 | 178 | DHV518X304 | 163 | DKV160 | 22 | **SNV190-F-L** |
| FSV518X304 | DH518X304 | TSV518X304 | 170,3 | TCV518X304 | 178 | DHV518X304 | 163 | DKV160 | 22 | **SNV190-F-L** |
| FSV518X304 | DH518X304 | TSV518X304 | 160,3 | TCV518X304 | 186 | DHV518X304 | 153 | DKV160 | 12,8 | **SNV160-F-L** |

# Plummer block housings

SNV, split
For bearings with tapered bore and adapter sleeve
Inch size shaft



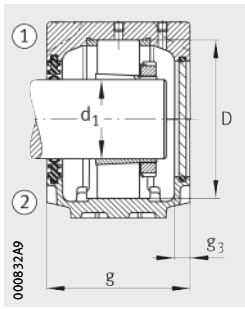




**Dimension table** (continued) · Dimensions in mm and *inch*

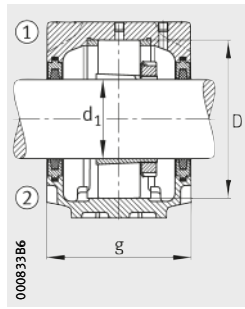
| Shaft $d_1$ | | Housing Dimensions | | | | | | | | | | | | | Bearing and accessories | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | h | $h_1$ | g | b | c | a | m | v | u | s | | D | $g_3$ | Bearing | Adapter sleeve | Locating ring |
| *inch* | mm | | | | | | | | | | mm | *inch* | | | | | Quantity 2 |
| *3 6/16* | 85,725 | 112 | 219 | 150 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | *3/4* | 170 | 16 | **1219-K** | H219X306 | FRM170/18 |
| *3 6/16* | 85,725 | 125 | 248 | 175 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | *7/8* | 200 | 16 | **1319-K** | H319X306 | FRM200/17,5 |
| *3 6/16* | 85,725 | 125 | 248 | 175 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | *7/8* | 200 | 16 | **21319..-K** | H319X306 | FRM200/17,5 |
| *3 6/16* | 85,725 | 112 | 219 | 150 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | *3/4* | 170 | 16 | **2219-K** | H319X306 | FRM170/12,5 |
| *3 6/16* | 85,725 | 112 | 219 | 150 | 100 | 35 | 345 | 290 | 27 | 22 | M20 | *3/4* | 170 | 16 | **22219..-K** | H319X306 | FRM170/12,5 |
| *3 6/16* | 85,725 | 125 | 248 | 175 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | *7/8* | 200 | 16 | **22319..-K** | H2319X306 | FRM200/6,5 |
| *3 6/16* | 85,725 | 125 | 248 | 175 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | *7/8* | 200 | 16 | **2319-K** | H2319X306 | FRM200/6,5 |
| *3 7/16* | 87,313 | 112 | 223 | 160 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | *7/8* | 180 | 16 | **1220-K** | H220X307 | FRM180/18 |
| *3 7/16* | 87,313 | 140 | 271 | 180 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | *7/8* | 215 | 16 | **1320-K** | H320X307 | FRM215/19,5 |
| *3 7/16* | 87,313 | 112 | 223 | 160 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | *7/8* | 180 | 16 | **20220-K** | H220X307 | FRM180/18 |
| *3 7/16* | 87,313 | 140 | 271 | 180 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | *7/8* | 215 | 16 | **20320-K** | H320X307 | FRM215/19,5 |
| *3 7/16* | 87,313 | 140 | 271 | 180 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | *7/8* | 215 | 16 | **21320..-K** | H320X307 | FRM215/19,5 |
| *3 7/16* | 87,313 | 112 | 223 | 160 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | *7/8* | 180 | 16 | **2220-K** | H320X307 | FRM180/12 |
| *3 7/16* | 87,313 | 112 | 223 | 160 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | *7/8* | 180 | 16 | **22220..-K** | H320X307 | FRM180/12 |
| *3 7/16* | 87,313 | 140 | 271 | 180 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | *7/8* | 215 | 16 | **22320..-K** | H2320X307 | FRM215/6,5 |
| *3 7/16* | 87,313 | 140 | 271 | 180 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | *7/8* | 215 | 16 | **2320-K** | H2320X307 | FRM215/6,5 |
| *3 7/16* | 87,313 | 112 | 223 | 160 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | *7/8* | 180 | 16 | **23220..-K** | H2320X307 | FRM180/4,85 |
| *3 8/16* | 88,9 | 112 | 223 | 160 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | *7/8* | 180 | 16 | **1220-K** | H220X308 | FRM180/18 |
| *3 8/16* | 88,9 | 140 | 271 | 180 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | *7/8* | 215 | 16 | **1320-K** | H320X308 | FRM215/19,5 |
| *3 8/16* | 88,9 | 112 | 223 | 160 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | *7/8* | 180 | 16 | **20220-K** | H220X308 | FRM180/18 |
| *3 8/16* | 88,9 | 140 | 271 | 180 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | *7/8* | 215 | 16 | **20320-K** | H320X308 | FRM215/19,5 |
| *3 8/16* | 88,9 | 140 | 271 | 180 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | *7/8* | 215 | 16 | **21320..-K** | H320X308 | FRM215/19,5 |
| *3 8/16* | 88,9 | 112 | 223 | 160 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | *7/8* | 180 | 16 | **2220-K** | H320X308 | FRM180/12 |
| *3 8/16* | 88,9 | 112 | 223 | 160 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | *7/8* | 180 | 16 | **22220..-K** | H320X308 | FRM180/12 |
| *3 8/16* | 88,9 | 140 | 271 | 180 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | *7/8* | 215 | 16 | **22320..-K** | H2320X308 | FRM215/6,5 |
| *3 8/16* | 88,9 | 140 | 271 | 180 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | *7/8* | 215 | 16 | **2320-K** | H2320X308 | FRM215/6,5 |
| *3 8/16* | 88,9 | 112 | 223 | 160 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | *7/8* | 180 | 16 | **23220..-K** | H2320X308 | FRM180/4,85 |

① Locating bearing; ② Non-locating bearing

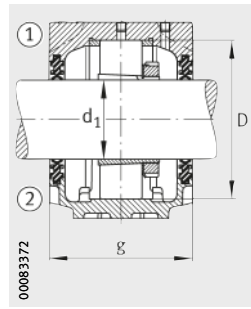
1) Housing with eye bolt.



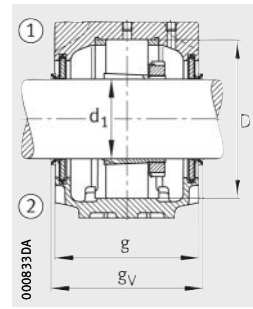

Double lip seal DH
Cover DKVT




Felt seal FSV




Double lip seal DH




V ring seal DHV



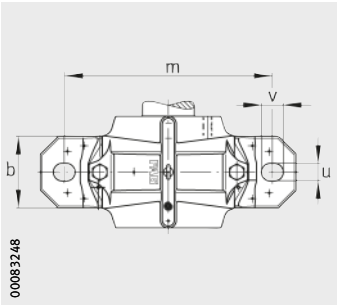


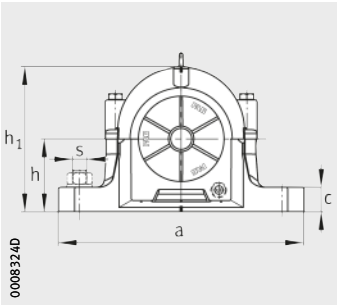


| | | | | | | | | | Housing | |
|---|---|---|---|---|---|---|---|---|---|---|
| Felt seal | Double lip seal | Labyrinth seal | | Taconite seal | | V ring seal | | Cover | Mass m ≈ kg | Designation |
| | | | $g_L$ mm | | $g_T$ mm | | $g_V$ mm | | | |
| FSV519 | DH519 | TSV519X306 | 167,3 | TCV519X306 | 193 | DHV519 | 158 | DKV170 | 14,4 | **SNV170-F-L** |
| FSV619 | DH619 | TSV619X306 | 192,3 | TCV619X306 | 218 | DHV619 | 183 | DKV200 | 21 | **SNV200-F-L** |
| FSV619 | DH619 | TSV619X306 | 192,3 | TCV619X306 | 218 | DHV619 | 183 | DKV200 | 21 | **SNV200-F-L** |
| FSV519 | DH519 | TSV519X306 | 167,3 | TCV519X306 | 193 | DHV519 | 158 | DKV170 | 14,4 | **SNV170-F-L** |
| FSV519 | DH519 | TSV519X306 | 167,3 | TCV519X306 | 193 | DHV519 | 158 | DKV170 | 14,4 | **SNV170-F-L** |
| FSV619 | DH619 | TSV619X306 | 192,3 | TCV619X306 | 218 | DHV619 | 183 | DKV200 | 21 | **SNV200-F-L** |
| FSV619 | DH619 | TSV619X306 | 192,3 | TCV619X306 | 218 | DHV619 | 183 | DKV200 | 21 | **SNV200-F-L** |
| FSV520X307 | DH520X307 | TSV520X307 | 177,3 | TCV520X307 | 203 | DHV520X307 | 168 | DKV180 | 17 | **SNV180-F-L** |
| FSV620X307 | DH620X307 | TSV620X307 | 197,3 | TCV620X307 | 224 | DHV620X307 | 188 | DKV215 | 24,5 | **SNV215-F-L**[1)] |
| FSV520X307 | DH520X307 | TSV520X307 | 177,3 | TCV520X307 | 203 | DHV520X307 | 168 | DKV180 | 17 | **SNV180-F-L** |
| FSV620X307 | DH620X307 | TSV620X307 | 197,3 | TCV620X307 | 224 | DHV620X307 | 188 | DKV215 | 24,5 | **SNV215-F-L**[1)] |
| FSV620X307 | DH620X307 | TSV620X307 | 197,3 | TCV620X307 | 224 | DHV620X307 | 188 | DKV215 | 24,5 | **SNV215-F-L**[1)] |
| FSV520X307 | DH520X307 | TSV520X307 | 177,3 | TCV520X307 | 203 | DHV520X307 | 168 | DKV180 | 17 | **SNV180-F-L** |
| FSV520X307 | DH520X307 | TSV520X307 | 177,3 | TCV520X307 | 203 | DHV520X307 | 168 | DKV180 | 17 | **SNV180-F-L** |
| FSV620X307 | DH620X307 | TSV620X307 | 197,3 | TCV620X307 | 224 | DHV620X307 | 188 | DKV215 | 24,5 | **SNV215-F-L**[1)] |
| FSV620X307 | DH620X307 | TSV620X307 | 197,3 | TCV620X307 | 224 | DHV620X307 | 188 | DKV215 | 24,5 | **SNV215-F-L**[1)] |
| FSV520X307 | DH520X307 | TSV520X307 | 177,3 | TCV520X307 | 203 | DHV520X307 | 168 | DKV180 | 17 | **SNV180-F-L** |
| FSV520X308 | DH520X308 | TSV520X308 | 177,3 | TCV520X308 | 203 | DHV520X308 | 168 | DKV180 | 17 | **SNV180-F-L** |
| FSV620X308 | DH620 | TSV620X308 | 197,3 | TCV620X308 | 224 | DHV620 | 188 | DKV215 | 24,5 | **SNV215-F-L**[1)] |
| FSV520X308 | DH520X308 | TSV520X308 | 177,3 | TCV520X308 | 203 | DHV520X308 | 168 | DKV180 | 17 | **SNV180-F-L** |
| FSV620X308 | DH620 | TSV620X308 | 197,3 | TCV620X308 | 224 | DHV620 | 188 | DKV215 | 24,5 | **SNV215-F-L**[1)] |
| FSV620X308 | DH620 | TSV620X308 | 197,3 | TCV620X308 | 224 | DHV620 | 188 | DKV215 | 24,5 | **SNV215-F-L**[1)] |
| FSV520X308 | DH520X308 | TSV520X308 | 177,3 | TCV520X308 | 203 | DHV520X308 | 168 | DKV180 | 17 | **SNV180-F-L** |
| FSV520X308 | DH520X308 | TSV520X308 | 177,3 | TCV520X308 | 203 | DHV520X308 | 168 | DKV180 | 17 | **SNV180-F-L** |
| FSV620X308 | DH620 | TSV620X308 | 197,3 | TCV620X308 | 224 | DHV620 | 188 | DKV215 | 24,5 | **SNV215-F-L**[1)] |
| FSV620X308 | DH620 | TSV620X308 | 197,3 | TCV620X308 | 224 | DHV620 | 188 | DKV215 | 24,5 | **SNV215-F-L**[1)] |
| FSV520X308 | DH520X308 | TSV520X308 | 177,3 | TCV520X308 | 203 | DHV520X308 | 168 | DKV180 | 17 | **SNV180-F-L** |

# Plummer block housings

SNV, split
For bearings with tapered bore and adapter sleeve
Inch size shaft



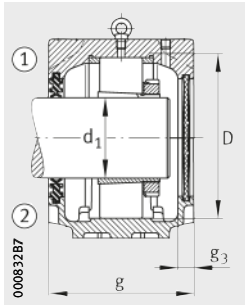




**Dimension table** (continued) · Dimensions in mm and *inch*

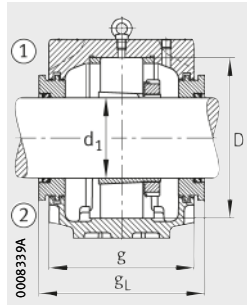
| Shaft $d_1$ | | Housing Dimensions | | | | | | | | | | | | | Bearing and accessories | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | h | $h_1$ | g | b | c | a | m | v | u | s | | D | $g_3$ | Bearing | Adapter sleeve | Locating ring |
| *inch* | mm | | | | | | | | | | mm | *inch* | | | | | Quantity 2 |
| $3^{10}/_{16}$ | 92,075 | 112 | 223 | 160 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | $^{7}/_{8}$ | 180 | 16 | **1220-K** | H220X310 | FRM180/18 |
| $3^{10}/_{16}$ | 92,075 | 140 | 271 | 180 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | $^{7}/_{8}$ | 215 | 16 | **1320-K** | H320X310 | FRM215/19,5 |
| $3^{10}/_{16}$ | 92,075 | 112 | 223 | 160 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | $^{7}/_{8}$ | 180 | 16 | **20220-K** | H220X310 | FRM180/18 |
| $3^{10}/_{16}$ | 92,075 | 140 | 271 | 180 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | $^{7}/_{8}$ | 215 | 16 | **20320-K** | H320X310 | FRM215/19,5 |
| $3^{10}/_{16}$ | 92,075 | 140 | 271 | 180 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | $^{7}/_{8}$ | 215 | 16 | **21320..-K** | H320X310 | FRM215/19,5 |
| $3^{10}/_{16}$ | 92,075 | 112 | 223 | 160 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | $^{7}/_{8}$ | 180 | 16 | **2220-K** | H320X310 | FRM180/12 |
| $3^{10}/_{16}$ | 92,075 | 112 | 223 | 160 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | $^{7}/_{8}$ | 180 | 16 | **22220..-K** | H320X310 | FRM180/12 |
| $3^{10}/_{16}$ | 92,075 | 140 | 271 | 180 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | $^{7}/_{8}$ | 215 | 16 | **22320..-K** | H2320X310 | FRM215/6,5 |
| $3^{10}/_{16}$ | 92,075 | 140 | 271 | 180 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | $^{7}/_{8}$ | 215 | 16 | **2320-K** | H2320X310 | FRM215/6,5 |
| $3^{10}/_{16}$ | 92,075 | 112 | 223 | 160 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | $^{7}/_{8}$ | 180 | 16 | **23220..-K** | H2320X310 | FRM180/4,85 |
| $3^{11}/_{16}$ | 93,663 | 112 | 223 | 160 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | $^{7}/_{8}$ | 180 | 16 | **1220-K** | H220X311 | FRM180/18 |
| $3^{11}/_{16}$ | 93,663 | 140 | 271 | 180 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | $^{7}/_{8}$ | 215 | 16 | **1320-K** | H320X311 | FRM215/19,5 |
| $3^{11}/_{16}$ | 93,663 | 112 | 223 | 160 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | $^{7}/_{8}$ | 180 | 16 | **20220-K** | H220X311 | FRM180/18 |
| $3^{11}/_{16}$ | 93,663 | 140 | 271 | 180 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | $^{7}/_{8}$ | 215 | 16 | **20320-K** | H320X311 | FRM215/19,5 |
| $3^{11}/_{16}$ | 93,663 | 140 | 271 | 180 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | $^{7}/_{8}$ | 215 | 16 | **21320..-K** | H320X311 | FRM215/19,5 |
| $3^{11}/_{16}$ | 93,663 | 112 | 223 | 160 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | $^{7}/_{8}$ | 180 | 16 | **2220-K** | H320X311 | FRM180/12 |
| $3^{11}/_{16}$ | 93,663 | 112 | 223 | 160 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | $^{7}/_{8}$ | 180 | 16 | **22220..-K** | H320X311 | FRM180/12 |
| $3^{11}/_{16}$ | 93,663 | 140 | 271 | 180 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | $^{7}/_{8}$ | 215 | 16 | **22320..-K** | H2320X311 | FRM215/6,5 |
| $3^{11}/_{16}$ | 93,663 | 140 | 271 | 180 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | $^{7}/_{8}$ | 215 | 16 | **2320-K** | H2320X311 | FRM215/6,5 |
| $3^{11}/_{16}$ | 93,663 | 112 | 223 | 160 | 110 | 40 | 380 | 320 | 32 | 26 | M24 | $^{7}/_{8}$ | 180 | 16 | **23220..-K** | H2320X311 | FRM180/4,85 |
| $3^{12}/_{16}$ | 95,25 | 125 | 248 | 175 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | $^{7}/_{8}$ | 200 | 16 | **1222-K** | H222X312 | FRM200/21 |
| $3^{12}/_{16}$ | 95,25 | 150 | 298 | 185 | 130 | 50 | 450 | 390 | 35 | 28 | M24 | *1* | 240 | 18 | **1322-K** | H322X312 | FRM240/20 |
| $3^{12}/_{16}$ | 95,25 | 125 | 248 | 175 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | $^{7}/_{8}$ | 200 | 16 | **20222-K** | H222X312 | FRM200/21 |
| $3^{12}/_{16}$ | 95,25 | 150 | 298 | 185 | 130 | 50 | 450 | 390 | 35 | 28 | M24 | *1* | 240 | 18 | **21322..-K** | H322X312 | FRM240/20 |
| $3^{12}/_{16}$ | 95,25 | 125 | 248 | 175 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | $^{7}/_{8}$ | 200 | 16 | **22222..-K** | H322X312 | FRM200/13,5 |
| $3^{12}/_{16}$ | 95,25 | 150 | 298 | 185 | 130 | 50 | 450 | 390 | 35 | 28 | M24 | *1* | 240 | 18 | **22322..-K** | H2322X312 | FRM240/5 |
| $3^{12}/_{16}$ | 95,25 | 125 | 248 | 175 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | $^{7}/_{8}$ | 200 | 16 | **23222..-K** | H2322X312 | FRM200/5,1 |
| $3^{12}/_{16}$ | 95,25 | 150 | 298 | 185 | 130 | 50 | 450 | 390 | 35 | 28 | M24 | *1* | 240 | 18 | **2322-K** | H2322X312 | FRM240/5 |

① Locating bearing; ② Non-locating bearing

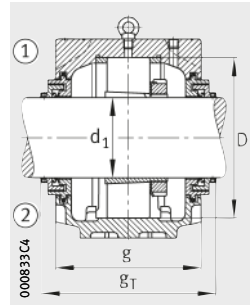
1) Housing without eye bolt.



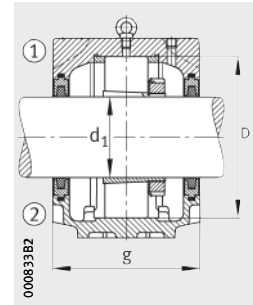

Double lip seal DH
Cover DKV




Labyrinth seal TSV




Taconite seal TCV




Felt seal FSV



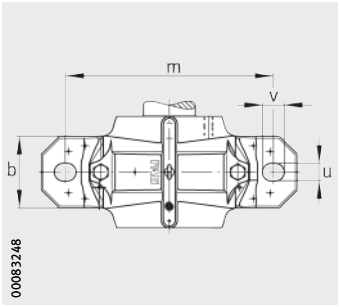


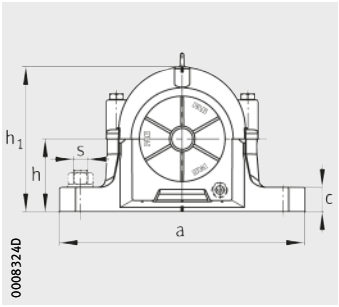


| | | | | | | | | | Housing | |
|---|---|---|---|---|---|---|---|---|---|---|
| Felt seal | Double lip seal | Labyrinth seal | | Taconite seal | | V ring seal | | Cover | Mass m ≈ kg | Designation |
| | | | $g_L$ mm | | $g_T$ mm | | $g_V$ mm | | | |
| FSV520X310 | DH520X310 | TSV520X310 | 177,3 | TCV520X310 | 203 | DHV520X310 | 168 | DKV180 | 17 | **SNV180-F-L**[1)] |
| FSV620X310 | DH620X310 | TSV620X310 | 197,3 | TCV620X310 | 224 | DHV620X310 | 188 | DKV215 | 24,5 | **SNV215-F-L** |
| FSV520X310 | DH520X310 | TSV520X310 | 177,3 | TCV520X310 | 203 | DHV520X310 | 168 | DKV180 | 17 | **SNV180-F-L**[1)] |
| FSV620X310 | DH620X310 | TSV620X310 | 197,3 | TCV620X310 | 224 | DHV620X310 | 188 | DKV215 | 24,5 | **SNV215-F-L** |
| FSV620X310 | DH620X310 | TSV620X310 | 197,3 | TCV620X310 | 224 | DHV620X310 | 188 | DKV215 | 24,5 | **SNV215-F-L** |
| FSV520X310 | DH520X310 | TSV520X310 | 177,3 | TCV520X310 | 203 | DHV520X310 | 168 | DKV180 | 17 | **SNV180-F-L**[1)] |
| FSV520X310 | DH520X310 | TSV520X310 | 177,3 | TCV520X310 | 203 | DHV520X310 | 168 | DKV180 | 17 | **SNV180-F-L**[1)] |
| FSV620X310 | DH620X310 | TSV620X310 | 197,3 | TCV620X310 | 224 | DHV620X310 | 188 | DKV215 | 24,5 | **SNV215-F-L** |
| FSV620X310 | DH620X310 | TSV620X310 | 197,3 | TCV620X310 | 224 | DHV620X310 | 188 | DKV215 | 24,5 | **SNV215-F-L** |
| FSV520X310 | DH520X310 | TSV520X310 | 177,3 | TCV520X310 | 203 | DHV520X310 | 168 | DKV180 | 17 | **SNV180-F-L**[1)] |
| FSV520X311 | DH520X310 | TSV520X311 | 177,3 | TCV520X311 | 203 | DHV520X311 | 168 | DKV180 | 17 | **SNV180-F-L**[1)] |
| FSV620X311 | DH620X310 | TSV620X311 | 197,3 | TCV620X311 | 224 | DHV620X311 | 188 | DKV215 | 24,5 | **SNV215-F-L** |
| FSV520X311 | DH520X310 | TSV520X311 | 177,3 | TCV520X311 | 203 | DHV520X311 | 168 | DKV180 | 17 | **SNV180-F-L**[1)] |
| FSV620X311 | DH620X310 | TSV620X311 | 197,3 | TCV620X311 | 224 | DHV620X311 | 188 | DKV215 | 24,5 | **SNV215-F-L** |
| FSV620X311 | DH620X310 | TSV620X311 | 197,3 | TCV620X311 | 224 | DHV620X311 | 188 | DKV215 | 24,5 | **SNV215-F-L** |
| FSV520X311 | DH520X310 | TSV520X311 | 177,3 | TCV520X311 | 203 | DHV520X311 | 168 | DKV180 | 17 | **SNV180-F-L**[1)] |
| FSV520X311 | DH520X310 | TSV520X311 | 177,3 | TCV520X311 | 203 | DHV520X311 | 168 | DKV180 | 17 | **SNV180-F-L**[1)] |
| FSV620X311 | DH620X310 | TSV620X311 | 197,3 | TCV620X311 | 224 | DHV620X311 | 188 | DKV215 | 24,5 | **SNV215-F-L** |
| FSV620X311 | DH620X310 | TSV620X311 | 197,3 | TCV620X311 | 224 | DHV620X311 | 188 | DKV215 | 24,5 | **SNV215-F-L** |
| FSV520X311 | DH520X310 | TSV520X311 | 177,3 | TCV520X311 | 203 | DHV520X311 | 168 | DKV180 | 17 | **SNV180-F-L**[1)] |
| FSV522X312 | DH522X312 | TSV522X312 | 195,3 | TCV522X312 | 218 | DHV522X312 | 183 | DKV200 | 21 | **SNV200-F-L**[1)] |
| FSV522X312 | DH522X312 | TSV522X312 | 203,3 | TCV522X312 | 226 | DHV522X312 | 191 | DKV200 | 32 | **SNV240-F-L** |
| FSV522X312 | DH522X312 | TSV522X312 | 195,3 | TCV522X312 | 218 | DHV522X312 | 183 | DKV200 | 21 | **SNV200-F-L**[1)] |
| FSV522X312 | DH522X312 | TSV522X312 | 203,3 | TCV522X312 | 226 | DHV522X312 | 191 | DKV200 | 32 | **SNV240-F-L** |
| FSV522X312 | DH522X312 | TSV522X312 | 195,3 | TCV522X312 | 218 | DHV522X312 | 183 | DKV200 | 21 | **SNV200-F-L**[1)] |
| FSV522X312 | DH522X312 | TSV522X312 | 203,3 | TCV522X312 | 226 | DHV522X312 | 191 | DKV200 | 32 | **SNV240-F-L** |
| FSV522X312 | DH522X312 | TSV522X312 | 195,3 | TCV522X312 | 218 | DHV522X312 | 183 | DKV200 | 21 | **SNV200-F-L**[1)] |
| FSV522X312 | DH522X312 | TSV522X312 | 203,3 | TCV522X312 | 226 | DHV522X312 | 191 | DKV200 | 32 | **SNV240-F-L** |

# Plummer block housings

SNV, split
For bearings with tapered bore and adapter sleeve
Inch size shaft



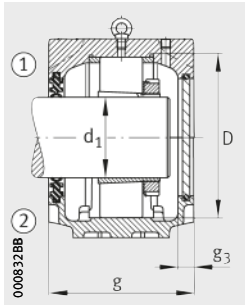




**Dimension table** (continued) · Dimensions in mm and *inch*

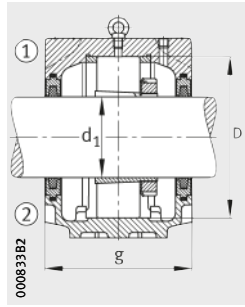
| Shaft | | Housing Dimensions | | | | | | | | | | | | | Bearing and accessories | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_1$ | | h | $h_1$ | g | b | c | a | m | v | u | s | | D | $g_3$ | Bearing | Adapter sleeve | Locating ring |
| *inch* | mm | | | | | | | | | | mm | *inch* | | | | | Quantity 2 |
| $3^{14}/_{16}$ | 98,425 | 125 | 248 | 175 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | $^{7}/_{8}$ | 200 | 16 | **1222-K** | H222X314 | FRM200/21 |
| $3^{14}/_{16}$ | 98,425 | 150 | 298 | 185 | 130 | 50 | 450 | 390 | 35 | 28 | M24 | *1* | 240 | 18 | **1322-K** | H322X314 | FRM240/20 |
| $3^{14}/_{16}$ | 98,425 | 125 | 248 | 175 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | $^{7}/_{8}$ | 200 | 16 | **20222-K** | H222X314 | FRM200/21 |
| $3^{14}/_{16}$ | 98,425 | 150 | 298 | 185 | 130 | 50 | 450 | 390 | 35 | 28 | M24 | *1* | 240 | 18 | **21322..-K** | H322X314 | FRM240/20 |
| $3^{14}/_{16}$ | 98,425 | 125 | 248 | 175 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | $^{7}/_{8}$ | 200 | 16 | **22222..-K** | H322X314 | FRM200/13,5 |
| $3^{14}/_{16}$ | 98,425 | 125 | 248 | 175 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | $^{7}/_{8}$ | 200 | 16 | **2222-K** | H322X314 | FRM200/13,5 |
| $3^{14}/_{16}$ | 98,425 | 150 | 298 | 185 | 130 | 50 | 450 | 390 | 35 | 28 | M24 | *1* | 240 | 18 | **22322..-K** | H2322X314 | FRM240/5 |
| $3^{14}/_{16}$ | 98,425 | 125 | 248 | 175 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | $^{7}/_{8}$ | 200 | 16 | **23222..-K** | H2322X314 | FRM200/5,1 |
| $3^{14}/_{16}$ | 98,425 | 150 | 298 | 185 | 130 | 50 | 450 | 390 | 35 | 28 | M24 | *1* | 240 | 18 | **2322-K** | H2322X314 | FRM240/5 |
| $3^{15}/_{16}$ | 100,013 | 125 | 248 | 175 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | $^{7}/_{8}$ | 200 | 16 | **1222-K** | H222X315 | FRM200/21 |
| $3^{15}/_{16}$ | 100,013 | 150 | 298 | 185 | 130 | 50 | 450 | 390 | 35 | 28 | M24 | *1* | 240 | 18 | **1322-K** | H322X315 | FRM240/20 |
| $3^{15}/_{16}$ | 100,013 | 125 | 248 | 175 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | $^{7}/_{8}$ | 200 | 16 | **20222-K** | H222X315 | FRM200/21 |
| $3^{15}/_{16}$ | 100,013 | 150 | 298 | 185 | 130 | 50 | 450 | 390 | 35 | 28 | M24 | *1* | 240 | 18 | **21322..-K** | H322X315 | FRM240/20 |
| $3^{15}/_{16}$ | 100,013 | 125 | 248 | 175 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | $^{7}/_{8}$ | 200 | 16 | **22222..-K** | H322X315 | FRM200/13,5 |
| $3^{15}/_{16}$ | 100,013 | 125 | 248 | 175 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | $^{7}/_{8}$ | 200 | 16 | **2222-K** | H322X315 | FRM200/13,5 |
| $3^{15}/_{16}$ | 100,013 | 150 | 298 | 185 | 130 | 50 | 450 | 390 | 35 | 28 | M24 | *1* | 240 | 18 | **22322..-K** | H2322X315 | FRM240/5 |
| $3^{15}/_{16}$ | 100,013 | 125 | 248 | 175 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | $^{7}/_{8}$ | 200 | 16 | **23222..-K** | H2322X315 | FRM200/5,1 |
| $3^{15}/_{16}$ | 100,013 | 150 | 298 | 185 | 130 | 50 | 450 | 390 | 35 | 28 | M24 | *1* | 240 | 18 | **2322-K** | H2322X315 | FRM240/5 |
| *4* | 101,6 | 125 | 248 | 175 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | $^{7}/_{8}$ | 200 | 16 | **1222-K** | H222X400 | FRM200/21 |
| *4* | 101,6 | 150 | 298 | 185 | 130 | 50 | 450 | 390 | 35 | 28 | M24 | *1* | 240 | 18 | **1322-K** | H322X400 | FRM240/20 |
| *4* | 101,6 | 125 | 248 | 175 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | $^{7}/_{8}$ | 200 | 16 | **20222-K** | H222X400 | FRM200/21 |
| *4* | 101,6 | 150 | 298 | 185 | 130 | 50 | 450 | 390 | 35 | 28 | M24 | *1* | 240 | 18 | **21322..-K** | H322X400 | FRM240/20 |
| *4* | 101,6 | 125 | 248 | 175 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | $^{7}/_{8}$ | 200 | 16 | **22222..-K** | H322X400 | FRM200/13,5 |
| *4* | 101,6 | 125 | 248 | 175 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | $^{7}/_{8}$ | 200 | 16 | **2222-K** | H322X400 | FRM200/13,5 |
| *4* | 101,6 | 150 | 298 | 185 | 130 | 50 | 450 | 390 | 35 | 28 | M24 | *1* | 240 | 18 | **22322..-K** | H2322X400 | FRM240/5 |
| *4* | 101,6 | 125 | 248 | 175 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | $^{7}/_{8}$ | 200 | 16 | **23222..-K** | H2322X400 | FRM200/5,1 |
| *4* | 101,6 | 150 | 298 | 185 | 130 | 50 | 450 | 390 | 35 | 28 | M24 | *1* | 240 | 18 | **2322-K** | H2322X400 | FRM240/5 |
| $4^{3}/_{16}$ | 106,363 | 140 | 271 | 180 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | $^{7}/_{8}$ | 215 | 16 | **20224-K** | H3024X403 | FRM215/23 |
| $4^{3}/_{16}$ | 106,363 | 140 | 271 | 180 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | $^{7}/_{8}$ | 215 | 16 | **22224..-K** | H3124X403 | FRM215/14 |
| $4^{3}/_{16}$ | 106,363 | 160 | 321 | 190 | 160 | 60 | 530 | 450 | 42 | 35 | M30 | $1^{1}/_{4}$ | 260 | 18 | **22324..-K** | H2324X403 | FRM260/5 |
| $4^{3}/_{16}$ | 106,363 | 140 | 271 | 180 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | $^{7}/_{8}$ | 215 | 16 | **23224..-K** | H2324X403 | FRM215/5 |

① Locating bearing; ② Non-locating bearing

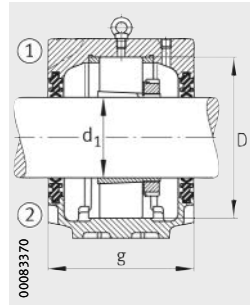
1) Housing without eye bolt.



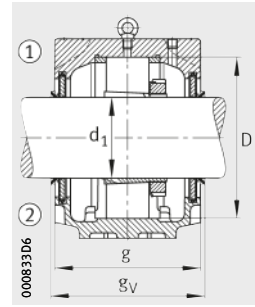

Double lip seal DH
Cover DKVT




Felt seal FSV




Double lip seal DH




V ring seal DHV



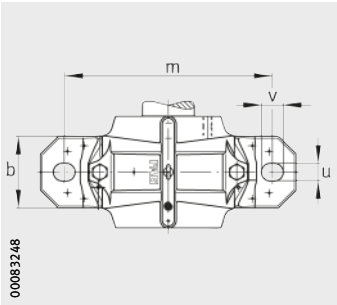


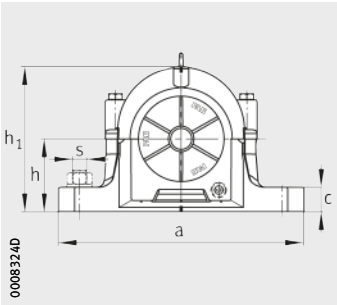


| | | | | | | | | | Housing | |
|---|---|---|---|---|---|---|---|---|---|---|
| Felt seal | Double lip seal | Labyrinth seal | | Taconite seal | | V ring seal | | Cover | Mass m ≈ kg | Designation |
| | | | $g_L$ mm | | $g_T$ mm | | $g_V$ mm | | | |
| FSV522X314 | DH522X314 | TSV522X314 | 195,3 | TCV522X314 | 218 | DHV522X314 | 183 | DKV200 | 21 | **SNV200-F-L**[1)] |
| FSV522X314 | DH522X314 | TSV522X314 | 203,3 | TCV522X314 | 226 | DHV522X314 | 191 | DKV200 | 32 | **SNV240-F-L** |
| FSV522X314 | DH522X314 | TSV522X314 | 195,3 | TCV522X314 | 218 | DHV522X314 | 183 | DKV200 | 21 | **SNV200-F-L**[1)] |
| FSV522X314 | DH522X314 | TSV522X314 | 203,3 | TCV522X314 | 226 | DHV522X314 | 191 | DKV200 | 32 | **SNV240-F-L** |
| FSV522X314 | DH522X314 | TSV522X314 | 195,3 | TCV522X314 | 218 | DHV522X314 | 183 | DKV200 | 21 | **SNV200-F-L**[1)] |
| FSV522X314 | DH522X314 | TSV522X314 | 195,3 | TCV522X314 | 218 | DHV522X314 | 183 | DKV200 | 21 | **SNV200-F-L**[1)] |
| FSV522X314 | DH522X314 | TSV522X314 | 203,3 | TCV522X314 | 226 | DHV522X314 | 191 | DKV200 | 32 | **SNV240-F-L** |
| FSV522X314 | DH522X314 | TSV522X314 | 195,3 | TCV522X314 | 218 | DHV522X314 | 183 | DKV200 | 21 | **SNV200-F-L**[1)] |
| FSV522X314 | DH522X314 | TSV522X314 | 203,3 | TCV522X314 | 226 | DHV522X314 | 191 | DKV200 | 32 | **SNV240-F-L** |
| FSV522 | DH522 | TSV522 | 195,3 | TCV522 | 218 | DHV522 | 183 | DKV200 | 21 | **SNV200-F-L**[1)] |
| FSV522 | DH522 | TSV522 | 203,3 | TCV522 | 226 | DHV522 | 191 | DKV200 | 32 | **SNV240-F-L** |
| FSV522 | DH522 | TSV522 | 195,3 | TCV522 | 218 | DHV522 | 183 | DKV200 | 21 | **SNV200-F-L**[1)] |
| FSV522 | DH522 | TSV522 | 203,3 | TCV522 | 226 | DHV522 | 191 | DKV200 | 32 | **SNV240-F-L** |
| FSV522 | DH522 | TSV522 | 195,3 | TCV522 | 218 | DHV522 | 183 | DKV200 | 21 | **SNV200-F-L**[1)] |
| FSV522 | DH522 | TSV522 | 195,3 | TCV522 | 218 | DHV522 | 183 | DKV200 | 21 | **SNV200-F-L**[1)] |
| FSV522 | DH522 | TSV522 | 203,3 | TCV522 | 226 | DHV522 | 191 | DKV200 | 32 | **SNV240-F-L** |
| FSV522 | DH522 | TSV522 | 195,3 | TCV522 | 218 | DHV522 | 183 | DKV200 | 21 | **SNV200-F-L**[1)] |
| FSV522 | DH522 | TSV522 | 203,3 | TCV522 | 226 | DHV522 | 191 | DKV200 | 32 | **SNV240-F-L** |
| FSV522X400 | DH522 | TSV522X400 | 195,3 | TCV522X400 | 218 | DHV522X400 | 183 | DKV200 | 21 | **SNV200-F-L**[1)] |
| FSV522X400 | DH522 | TSV522X400 | 203,3 | TCV522X400 | 226 | DHV522X400 | 191 | DKV200 | 32 | **SNV240-F-L** |
| FSV522X400 | DH522 | TSV522X400 | 195,3 | TCV522X400 | 218 | DHV522X400 | 183 | DKV200 | 21 | **SNV200-F-L**[1)] |
| FSV522X400 | DH522 | TSV522X400 | 203,3 | TCV522X400 | 226 | DHV522X400 | 191 | DKV200 | 32 | **SNV240-F-L** |
| FSV522X400 | DH522 | TSV522X400 | 195,3 | TCV522X400 | 218 | DHV522X400 | 183 | DKV200 | 21 | **SNV200-F-L**[1)] |
| FSV522X400 | DH522 | TSV522X400 | 195,3 | TCV522X400 | 218 | DHV522X400 | 183 | DKV200 | 21 | **SNV200-F-L**[1)] |
| FSV522X400 | DH522 | TSV522X400 | 203,3 | TCV522X400 | 226 | DHV522X400 | 191 | DKV200 | 32 | **SNV240-F-L** |
| FSV522X400 | DH522 | TSV522X400 | 195,3 | TCV522X400 | 218 | DHV522X400 | 183 | DKV200 | 21 | **SNV200-F-L**[1)] |
| FSV522X400 | DH522 | TSV522X400 | 203,3 | TCV522X400 | 226 | DHV522X400 | 191 | DKV200 | 32 | **SNV240-F-L** |
| FSV524X403 | DH524X403 | TSV524X403 | 200,3 | TCV524X403 | 227 | DHV524X403 | 191 | DKV215 | 24,5 | **SNV215-F-L** |
| FSV524X403 | DH524X403 | TSV524X403 | 200,3 | TCV524X403 | 227 | DHV524X403 | 191 | DKV215 | 24,5 | **SNV215-F-L** |
| FSV524X403 | DH524X403 | TSV524X403 | 208,3 | TCV524X403 | 235 | DHV524X403 | 199 | DKV215 | 48 | **SNV260-F-L** |
| FSV524X403 | DH524X403 | TSV524X403 | 200,3 | TCV524X403 | 227 | DHV524X403 | 191 | DKV215 | 24,5 | **SNV215-F-L** |

# Plummer block housings

SNV, split
For bearings with tapered bore and adapter sleeve
Inch size shaft

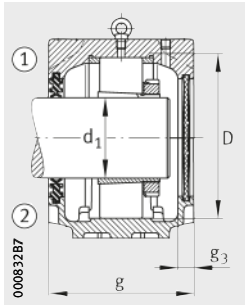


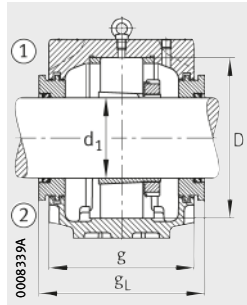

**Dimension table** (continued) · Dimensions in mm and *inch*

| Shaft | | Housing Dimensions | | | | | | | | | | | | | Bearing and accessories | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_1$ | | h | $h_1$ | g | b | c | a | m | v | u | s | | D | $g_3$ | Bearing | Adapter sleeve | Locating ring |
| *inch* | mm | | | | | | | | | | mm | *inch* | | | | | Quantity 2 |
| ***4 4/16*** | 107,95 | 140 | 271 | 180 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | *7/8* | 215 | 16 | **20224-K** | H3024X404 | FRM215/23 |
| ***4 4/16*** | 107,95 | 140 | 271 | 180 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | *7/8* | 215 | 16 | **22224..-K** | H3124X404 | FRM215/14 |
| ***4 4/16*** | 107,95 | 160 | 321 | 190 | 160 | 60 | 530 | 450 | 42 | 35 | M30 | *1 1/4* | 260 | 18 | **22324..-K** | H2324X404 | FRM260/5 |
| ***4 4/16*** | 107,95 | 140 | 271 | 180 | 120 | 45 | 410 | 350 | 32 | 26 | M24 | *7/8* | 215 | 16 | **23224..-K** | H2324X404 | FRM215/5 |
| ***4 7/16*** | 112,713 | 150 | 291 | 190 | 130 | 50 | 445 | 380 | 35 | 28 | M24 | *1* | 230 | 18 | **20226-K** | H3026X407 | FRM230/25 |
| ***4 7/16*** | 112,713 | 150 | 291 | 190 | 130 | 50 | 445 | 380 | 35 | 28 | M24 | *1* | 230 | 18 | **22226..-K** | H3126X407 | FRM230/13 |
| ***4 7/16*** | 112,713 | 170 | 344 | 205 | 160 | 60 | 550 | 470 | 42 | 35 | M30 | *1 1/4* | 280 | 18 | **22326..-K** | H2326X407 | FRM280/5 |
| ***4 7/16*** | 112,713 | 150 | 291 | 190 | 130 | 50 | 445 | 380 | 35 | 28 | M24 | *1* | 230 | 18 | **23226..-K** | H2326X407 | FRM230/5 |
| ***4 8/16*** | 114,3 | 150 | 291 | 190 | 130 | 50 | 445 | 380 | 35 | 28 | M24 | *1* | 230 | 18 | **20226-K** | H3026X408 | FRM230/25 |
| ***4 8/16*** | 114,3 | 150 | 291 | 190 | 130 | 50 | 445 | 380 | 35 | 28 | M24 | *1* | 230 | 18 | **22226..-K** | H3126X408 | FRM230/13 |
| ***4 8/16*** | 114,3 | 170 | 344 | 205 | 160 | 60 | 550 | 470 | 42 | 35 | M30 | *1 1/4* | 280 | 18 | **22326..-K** | H2326X408 | FRM280/5 |
| ***4 8/16*** | 114,3 | 150 | 291 | 190 | 130 | 50 | 445 | 380 | 35 | 28 | M24 | *1* | 230 | 18 | **23226..-K** | H2326X408 | FRM230/5 |
| ***4 12/16*** | 120,65 | 150 | 291 | 190 | 130 | 50 | 445 | 380 | 35 | 28 | M24 | *1* | 230 | 18 | **20226-K** | H3026X412 | FRM230/25 |
| ***4 12/16*** | 120,65 | 150 | 291 | 190 | 130 | 50 | 445 | 380 | 35 | 28 | M24 | *1* | 230 | 18 | **22226..-K** | H3126X412 | FRM230/13 |
| ***4 12/16*** | 120,65 | 170 | 344 | 205 | 160 | 60 | 550 | 470 | 42 | 35 | M30 | *1 1/4* | 280 | 18 | **22326..-K** | H2326X412 | FRM280/5 |
| ***4 12/16*** | 120,65 | 150 | 291 | 190 | 130 | 50 | 445 | 380 | 35 | 28 | M24 | *1* | 230 | 18 | **23226..-K** | H2326X412 | FRM230/5 |
| ***4 15/16*** | 125,413 | 150 | 304 | 200 | 150 | 50 | 500 | 420 | 42 | 35 | M30 | *1 1/4* | 250 | 18 | **20228-K** | H3028X415 | FRM250/28 |
| ***4 15/16*** | 125,413 | 150 | 304 | 200 | 150 | 50 | 500 | 420 | 42 | 35 | M30 | *1 1/4* | 250 | 18 | **22228..-K** | H3128X415 | FRM250/15 |
| ***4 15/16*** | 125,413 | 180 | 366 | 215 | 170 | 65 | 620 | 520 | 42 | 35 | M30 | *1 1/4* | 300 | 18 | **22328..-K** | H2328X415 | FRM300/5 |
| ***4 15/16*** | 125,413 | 150 | 304 | 200 | 150 | 50 | 500 | 420 | 42 | 35 | M30 | *1 1/4* | 250 | 18 | **23228..-K** | H2328X415 | FRM250/5 |
| ***5*** | 127 | 150 | 304 | 200 | 150 | 50 | 500 | 420 | 42 | 35 | M30 | *1 1/4* | 250 | 18 | **20228-K** | H3028X500 | FRM250/28 |
| ***5*** | 127 | 150 | 304 | 200 | 150 | 50 | 500 | 420 | 42 | 35 | M30 | *1 1/4* | 250 | 18 | **22228..-K** | H3128X500 | FRM250/15 |
| ***5*** | 127 | 180 | 366 | 215 | 170 | 65 | 620 | 520 | 42 | 35 | M30 | *1 1/4* | 300 | 18 | **22328..-K** | H2328X500 | FRM300/5 |
| ***5*** | 127 | 150 | 304 | 200 | 150 | 50 | 500 | 420 | 42 | 35 | M30 | *1 1/4* | 250 | 18 | **23228..-K** | H2328X500 | FRM250/5 |

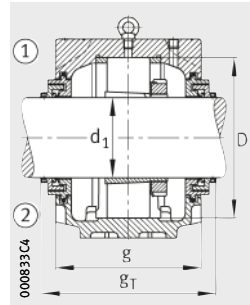
① Locating bearing; ② Non-locating bearing



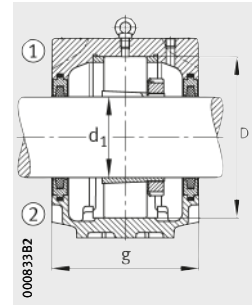

Double lip seal DH
Cover DKV




Labyrinth seal TSV




Taconite seal TCV




Felt seal FSV



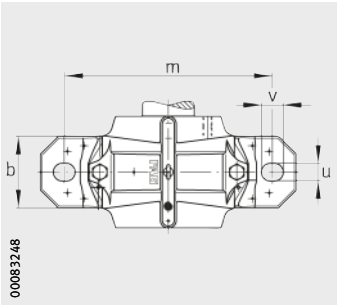


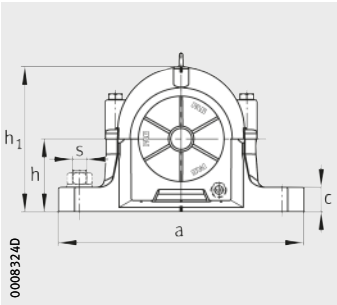


| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Housing | |
| Felt seal | Double lip seal | Labyrinth seal | | Taconite seal | | V ring seal | | Cover | Mass m ≈ kg | Designation |
| | | | $g_L$ mm | | $g_T$ mm | | $g_V$ mm | | | |
| FSV524X404 | DH524X403 | TSV524X404 | 200,3 | TCV524X404 | 227 | DHV524X404 | 191 | DKV215 | 24,5 | **SNV215-F-L** |
| FSV524X404 | DH524X403 | TSV524X404 | 200,3 | TCV524X404 | 227 | DHV524X404 | 191 | DKV215 | 24,5 | **SNV215-F-L** |
| FSV524X404 | DH524X403 | TSV524X404 | 208,3 | TCV524X404 | 235 | DHV524X404 | 199 | DKV215 | 48 | **SNV260-F-L** |
| FSV524X404 | DH524X403 | TSV524X404 | 200,3 | TCV524X404 | 227 | DHV524X404 | 191 | DKV215 | 24,5 | **SNV215-F-L** |
| FSV526X407 | DH526X407 | TSV526X407 | 208,3 | TCV526X407 | 235 | DHV526X407 | 199 | DKV230 | 30 | **SNV230-F-L** |
| FSV526X407 | DH526X407 | TSV526X407 | 208,3 | TCV526X407 | 235 | DHV526X407 | 199 | DKV230 | 30 | **SNV230-F-L** |
| FSV526X407 | DH526X407 | TSV526X407 | 223,3 | TCV526X407 | 250 | DHV526X407 | 214 | DKV230 | 55 | **SNV280-F-L** |
| FSV526X407 | DH526X407 | TSV526X407 | 208,3 | TCV526X407 | 235 | DHV526X407 | 199 | DKV230 | 30 | **SNV230-F-L** |
| FSV526 | DH526 | TSV526X408 | 208,3 | TCV526 | 235 | DHV526 | 199 | DKV230 | 30 | **SNV230-F-L** |
| FSV526 | DH526 | TSV526X408 | 208,3 | TCV526 | 235 | DHV526 | 199 | DKV230 | 30 | **SNV230-F-L** |
| FSV526 | DH526 | TSV526X408 | 223,3 | TCV526 | 250 | DHV526 | 214 | DKV230 | 55 | **SNV280-F-L** |
| FSV526 | DH526 | TSV526X408 | 208,3 | TCV526 | 235 | DHV526 | 199 | DKV230 | 30 | **SNV230-F-L** |
| FSV526X412 | DH526X412 | TSV526X412 | 208,3 | TCV526X412 | 235 | DHV526X412 | 199 | DKV230 | 30 | **SNV230-F-L** |
| FSV526X412 | DH526X412 | TSV526X412 | 208,3 | TCV526X412 | 235 | DHV526X412 | 199 | DKV230 | 30 | **SNV230-F-L** |
| FSV526X412 | DH526X412 | TSV526X412 | 223,3 | TCV526X412 | 250 | DHV526X412 | 214 | DKV230 | 55 | **SNV280-F-L** |
| FSV526X412 | DH526X412 | TSV526X412 | 208,3 | TCV526X412 | 235 | DHV526X412 | 199 | DKV230 | 30 | **SNV230-F-L** |
| FSV528 | DH528 | TSV528X415 | 218,3 | TCV528X415 | 245 | DHV528 | 209 | DKV250 | 38 | **SNV250-F-L** |
| FSV528 | DH528 | TSV528X415 | 218,3 | TCV528X415 | 245 | DHV528 | 209 | DKV250 | 38 | **SNV250-F-L** |
| FSV528 | DH528 | TSV528X415 | 233,3 | TCV528X415 | 260 | DHV528 | 224 | DKV250 | 70 | **SNV300-F-L** |
| FSV528 | DH528 | TSV528X415 | 218,3 | TCV528X415 | 245 | DHV528 | 209 | DKV250 | 38 | **SNV250-F-L** |
| FSV528X500 | DH528 | TSV528X500 | 218,3 | TCV528X500 | 245 | DHV528X500 | 209 | DKV250 | 38 | **SNV250-F-L** |
| FSV528X500 | DH528 | TSV528X500 | 218,3 | TCV528X500 | 245 | DHV528X500 | 209 | DKV250 | 38 | **SNV250-F-L** |
| FSV528X500 | DH528 | TSV528X500 | 233,3 | TCV528X500 | 260 | DHV528X500 | 224 | DKV250 | 70 | **SNV300-F-L** |
| FSV528X500 | DH528 | TSV528X500 | 218,3 | TCV528X500 | 245 | DHV528X500 | 209 | DKV250 | 38 | **SNV250-F-L** |

# Plummer block housings

SNV, split
For bearings with tapered bore and adapter sleeve
Inch size shaft

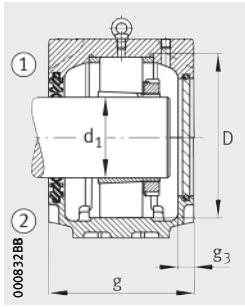


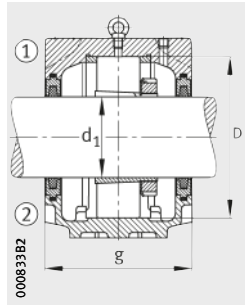

**Dimension table** (continued) · Dimensions in mm and *inch*

| Shaft | | Housing Dimensions | | | | | | | | | | | | | Bearing and accessories | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_1$ | | h | $h_1$ | g | b | c | a | m | v | u | s | | D | $g_3$ | Bearing | Adapter sleeve | Locating ring |
| *inch* | mm | | | | | | | | | | mm | *inch* | | | | | Quantity 2 |
| ***5 3/16*** | 131,763 | 160 | 328 | 215 | 160 | 60 | 530 | 450 | 42 | 35 | M30 | *1 1/4* | 270 | 18 | **20230-K** | H3030X503 | FRM270/30,5 |
| ***5 3/16*** | 131,763 | 160 | 328 | 215 | 160 | 60 | 530 | 450 | 42 | 35 | M30 | *1 1/4* | 270 | 18 | **22230..-K** | H3130X503 | FRM270/16,5 |
| ***5 3/16*** | 131,763 | 190 | 386 | 225 | 180 | 65 | 650 | 560 | 42 | 35 | M30 | *1 1/4* | 320 | 18 | **22330..-K** | H2330X503 | FRM320/5 |
| ***5 3/16*** | 131,763 | 160 | 328 | 215 | 160 | 60 | 530 | 450 | 42 | 35 | M30 | *1 1/4* | 270 | 18 | **23230..-K** | H2330X503 | FRM270/5 |
| ***5 4/16*** | 133,35 | 160 | 328 | 215 | 160 | 60 | 530 | 450 | 42 | 35 | M30 | *1 1/4* | 270 | 18 | **20230-K** | H3030X504 | FRM270/30,5 |
| ***5 4/16*** | 133,35 | 160 | 328 | 215 | 160 | 60 | 530 | 450 | 42 | 35 | M30 | *1 1/4* | 270 | 18 | **22230..-K** | H3130X504 | FRM270/16,5 |
| ***5 4/16*** | 133,35 | 190 | 386 | 225 | 180 | 65 | 650 | 560 | 42 | 35 | M30 | *1 1/4* | 320 | 18 | **22330..-K** | H2330X504 | FRM320/5 |
| ***5 4/16*** | 133,35 | 160 | 328 | 215 | 160 | 60 | 530 | 450 | 42 | 35 | M30 | *1 1/4* | 270 | 18 | **23230..-K** | H2330X504 | FRM270/5 |
| ***5 7/16*** | 138,113 | 170 | 351 | 225 | 160 | 60 | 550 | 470 | 42 | 35 | M30 | *1 1/4* | 290 | 18 | **20232-K** | H3032X507 | FRM290/33 |
| ***5 7/16*** | 138,113 | 170 | 351 | 225 | 160 | 60 | 550 | 470 | 42 | 35 | M30 | *1 1/4* | 290 | 18 | **22232..-K** | H3132X507 | FRM290/17 |
| ***5 7/16*** | 138,113 | 200 | 406 | 235 | 190 | 70 | 680 | 580 | 50 | 42 | M36 | *1 1/4* | 340 | 18 | **22332-K** | H2332X507 | FRM340/5 |
| ***5 7/16*** | 138,113 | 170 | 351 | 225 | 160 | 60 | 550 | 470 | 42 | 35 | M30 | *1 1/4* | 290 | 18 | **23232..-K** | H2332X507 | FRM290/5 |
| ***5 8/16*** | 139,7 | 170 | 351 | 225 | 160 | 60 | 550 | 470 | 42 | 35 | M30 | *1 1/4* | 290 | 18 | **20232-K** | H3032X508 | FRM290/33 |
| ***5 8/16*** | 139,7 | 170 | 351 | 225 | 160 | 60 | 550 | 470 | 42 | 35 | M30 | *1 1/4* | 290 | 18 | **22232..-K** | H3132X508 | FRM290/17 |
| ***5 8/16*** | 139,7 | 200 | 406 | 235 | 190 | 70 | 680 | 580 | 50 | 42 | M36 | *1 1/4* | 340 | 18 | **22332-K** | H2332X508 | FRM340/5 |
| ***5 8/16*** | 139,7 | 170 | 351 | 225 | 160 | 60 | 550 | 470 | 42 | 35 | M30 | *1 1/4* | 290 | 18 | **23232..-K** | H2332X508 | FRM290/5 |

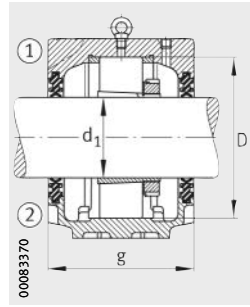
① Locating bearing; ② Non-locating bearing



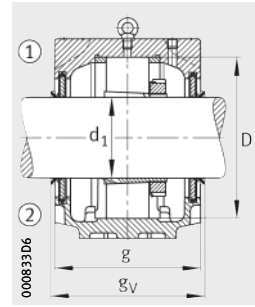

Double lip seal DH
Cover DKVT




Felt seal FSV




Double lip seal DH




V ring seal DHV

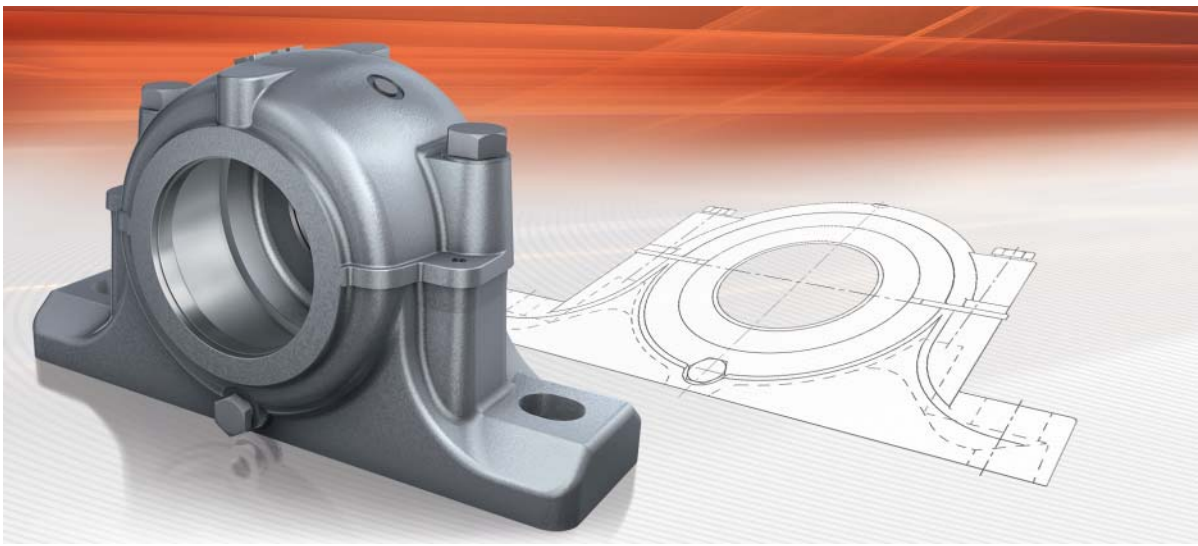






| | | | | | | | | | | Housing |
|---|---|---|---|---|---|---|---|---|---|---|
| Felt seal | Double lip seal | Labyrinth seal | | Taconite seal | | V ring seal | | Cover | Mass m ≈ kg | Designation |
| | | | $g_L$ mm | | $g_T$ mm | | $g_V$ mm | | | |
| FSV530X503 | DH530X503 | TSV530X503 | 233,3 | TCV530X503 | 260 | DHV530X503 | 224 | DKV270 | 45,5 | **SNV270-F-L** |
| FSV530X503 | DH530X503 | TSV530X503 | 233,3 | TCV530X503 | 260 | DHV530X503 | 224 | DKV270 | 45,5 | **SNV270-F-L** |
| FSV530X503 | DH530X503 | TSV530X503 | 243,3 | TCV530X503 | 270 | DHV530X503 | 234 | DKV270 | 95 | **SNV320-F-L** |
| FSV530X503 | DH530X503 | TSV530X503 | 233,3 | TCV530X503 | 260 | DHV530X503 | 224 | DKV270 | 45,5 | **SNV270-F-L** |
| FSV530X504 | DH530X504 | TSV530X504 | 233,3 | TCV530X504 | 260 | DHV530X504 | 224 | DKV270 | 45,5 | **SNV270-F-L** |
| FSV530X504 | DH530X504 | TSV530X504 | 233,3 | TCV530X504 | 260 | DHV530X504 | 224 | DKV270 | 45,5 | **SNV270-F-L** |
| FSV530X504 | DH530X504 | TSV530X504 | 243,3 | TCV530X504 | 270 | DHV530X504 | 234 | DKV270 | 95 | **SNV320-F-L** |
| FSV530X504 | DH530X504 | TSV530X504 | 233,3 | TCV530X504 | 260 | DHV530X504 | 224 | DKV270 | 45,5 | **SNV270-F-L** |
| FSV532X507 | DH532X507 | TSV532X507 | 243,3 | TCV532X507 | 270 | DHV532X507 | 234 | DKV290 | 53,8 | **SNV290-F-L** |
| FSV532X507 | DH532X507 | TSV532X507 | 243,3 | TCV532X507 | 270 | DHV532X507 | 234 | DKV290 | 53,8 | **SNV290-F-L** |
| FSV532X507 | DH532X507 | TSV532X507 | 253,3 | TCV532X507 | 298 | DHV532X507 | 244 | DKV290 | 115 | **SNV340-F-L** |
| FSV532X507 | DH532X507 | TSV532X507 | 243,3 | TCV532X507 | 270 | DHV532X507 | 234 | DKV290 | 53,8 | **SNV290-F-L** |
| FSV532 | DH532 | TSV532 | 243,3 | TCV532 | 270 | DHV532 | 234 | DKV290 | 53,8 | **SNV290-F-L** |
| FSV532 | DH532 | TSV532 | 243,3 | TCV532 | 270 | DHV532 | 234 | DKV290 | 53,8 | **SNV290-F-L** |
| FSV532 | DH532 | TSV532 | 253,3 | TCV532 | 298 | DHV532 | 244 | DKV290 | 115 | **SNV340-F-L** |
| FSV532 | DH532 | TSV532 | 243,3 | TCV532 | 270 | DHV532 | 234 | DKV290 | 53,8 | **SNV290-F-L** |

FAG



# Split plummer block housings S30

# Split plummer block housings S30


| | | Page |
|---|---|---|
| **Product overview** | Split plummer block housings S30 | 132 |
| **Features** | Suitable bearings | 133 |
| | Housing materials and anti-corrosion protection | 133 |
| | Locating and non-locating bearings | 133 |
| | Seals and covers | 134 |
| | Housing configurations | 134 |
| | Lubrication | 136 |
| | Designation structure | 137 |
| | Ordering examples | 139 |
| **Design and safety guidelines** | Load carrying capacity | 140 |
| | Eye bolts | 141 |
| | Foot screws | 141 |
| **Accuracy** | | 141 |
| **Dimension tables** | Plummer block housings S30, split, for spherical roller bearings with tapered bore and adapter sleeve | 142 |
| | Plummer block housings S30, split, for spherical roller bearings with cylindrical bore | 144 |

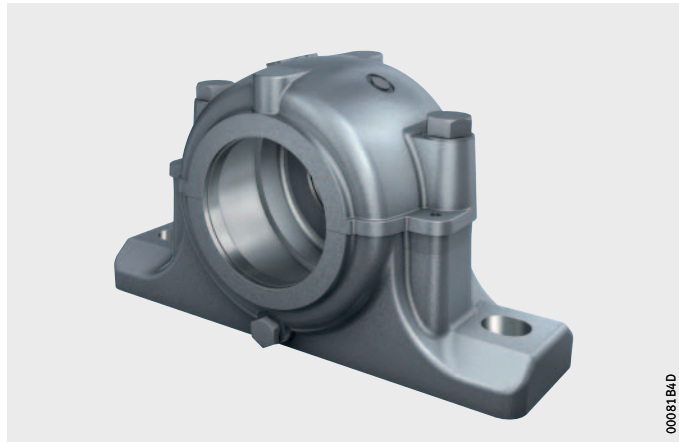






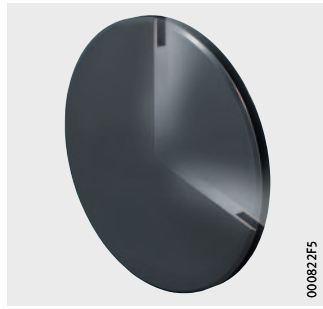

## Plummer block housings
Split

S30..-N-FZ-AB




## Accessories
Covers

DK




Locating rings

FRM



# Split plummer block housings S30

## Features

Split plummer block housings S30 can be used for various applications, such as sintering and pelletising equipment as well as paper processing machinery.



## Suitable bearings

The dimensions of split plummer block housings S30 are matched to spherical roller bearings 230, see table. The range of shaft diameters is between 110 mm and 150 mm.



### Bearing type and sizes

| Bearing type | Size |
|---|---|
| **Spherical roller bearings** | 23024..-K to 23034..-K |
| ■ with tapered bore and adapter sleeve | |
| ■ with cylindrical bore | 23024 to 23034 |



### Split spherical roller bearings

Unsplit spherical roller bearings with an adapter sleeve can be replaced by split spherical roller bearings. This gives a considerable reduction in the work associated with bearing replacement in numerous applications.

In order to ensure selection of the correct combination of housing and bearing, please contact us.

### Further information

■ WL 43165, Split Spherical Roller Bearings.

## Housing materials and anti-corrosion protection

The standard material for the housing bodies is flake graphite cast iron (suffix L). By agreement, housing bodies made from spheroidal graphite cast iron (suffix D) or cast steel (suffix S) are available.

All outer surfaces not machined by chip-forming methods have a universal paint coating (colour RAL 7031, bluish-grey). The coating can be finished using all synthetic resin, polyurethane, acrylic, epoxy resin, chlorinated rubber, nitrocellulose and acid-hardening hammer tone finishes.

Inner and outer surfaces machined by chip-forming methods are provided with anti-corrosion protection that can be easily removed. It is recommended that only volatile solvents and lint-free cloths should be used.

## Locating and non-locating bearings

The bearing seats in the housing are machined such that the bearings are movable in the housing and can thus function as non-locating bearings. Locating bearing arrangements can be achieved by the insertion of a locating ring FRM adjacent to the bearing outer ring. Locating rings must be ordered separately.

## Seals and covers

Plummer block housings S30 are sealed by means of felt seals, *Figure 1*. The felt seals allow shaft misalignment of up to 0,5° in both directions and are suitable for grease lubrication.

The oil-soaked felt strips must be inserted in the associated slots in the housing. In the case of a housing closed on one side, 2 felt strips are inserted, while 4 felt strips are necessary in the case of a continuous shaft.

In the case of a housing closed on one side, a cover DK is inserted in the slots instead of the felt strips. Covers DK are made from polyamide. They must be ordered separately.

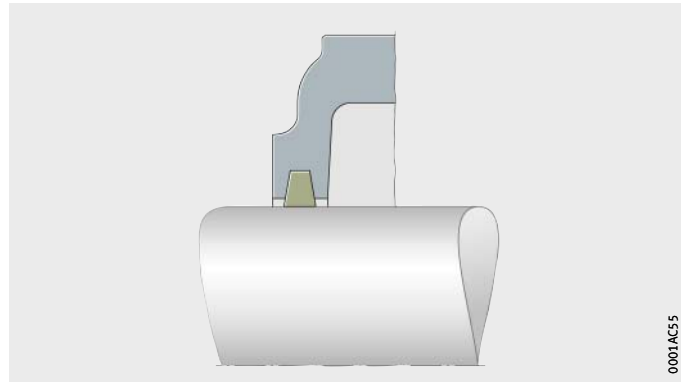


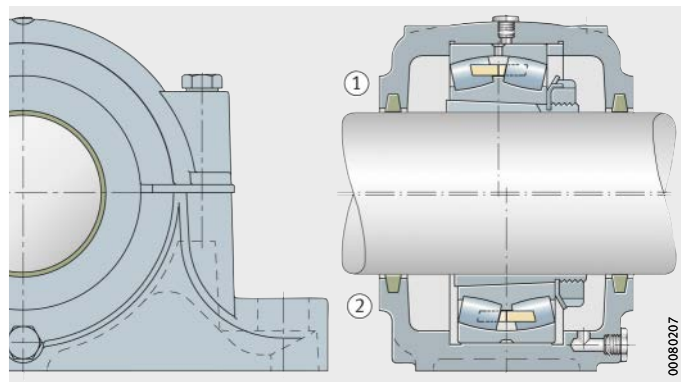

*Figure 1*
Felt seal
for plummer block housing S30

## Housing configurations

The modular structure of plummer block housings S30 facilitates numerous possible combinations, *Figure 2* to *Figure 5*, page 135.

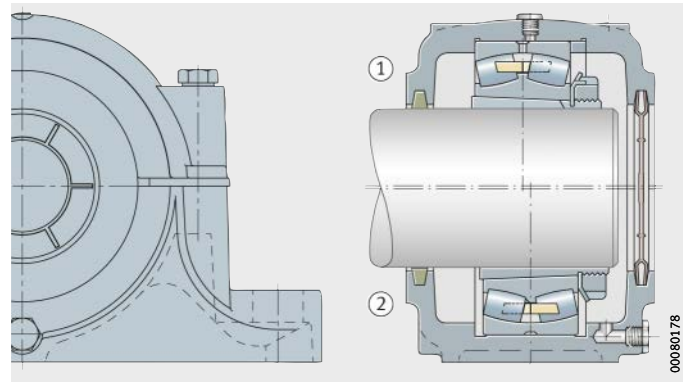
On the basis of the standard components, the following features can be varied in the housing configuration:

- location of bearings with a tapered bore by means of an adapter sleeve on a shaft of constant diameter or of bearings with a cylindrical bore directly on a stepped shaft
- continuous shaft or a housing closed on one side
- design of the bearing arrangement as a locating bearing arrangement or a non-locating bearing arrangement
- spherical roller bearing in a split or unsplit design.



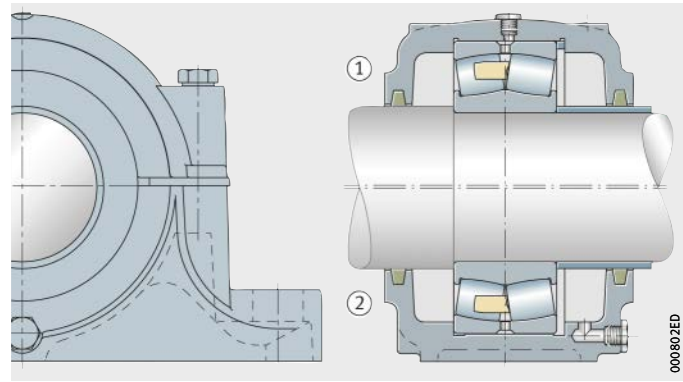

① Locating bearing
② Non-locating bearing

*Figure 2*
Plummer block housing S30, split,
for bearings with tapered bore and
adapter sleeve



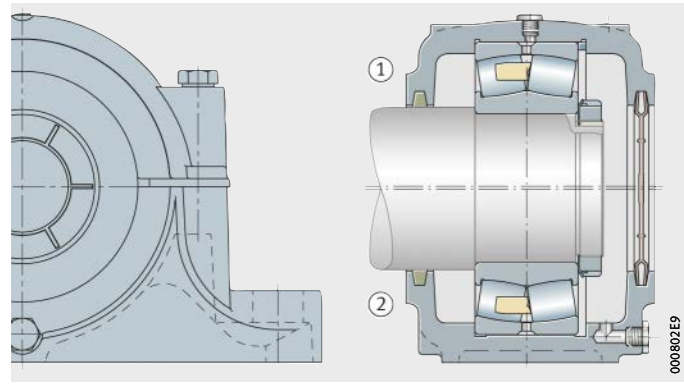

① Locating bearing
② Non-locating bearing

*Figure 3*
Plummer block housing S30
for bearings with tapered bore and adapter sleeve
(felt seal and cover DK)




① Locating bearing
② Non-locating bearing

*Figure 4*
Plummer block housing S30
for bearings with cylindrical bore
(felt seals on both sides)

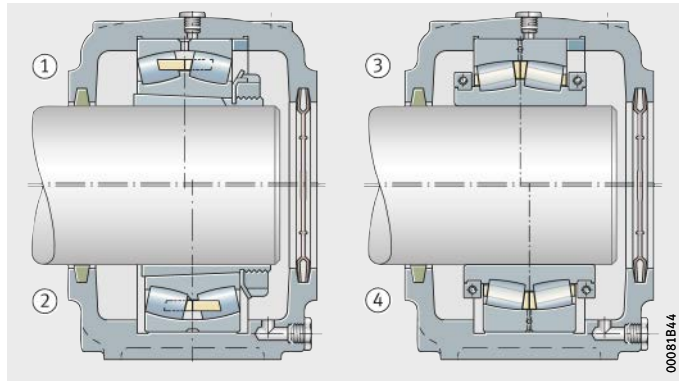



① Locating bearing
② Non-locating bearing

*Figure 5*
Plummer block housing S30
for bearings with cylindrical bore
(felt seal and cover DK)

### Mounting of split spherical roller bearings

In the case of plummer block housings S30, an unsplit spherical roller bearing with a tapered bore and adapter sleeve can be replaced by a split spherical roller bearing, *Figure 6*.




① Locating bearing with unsplit bearing
② Non-locating bearing with unsplit bearing
③ Locating bearing with split bearing
④ Non-locating bearing with split bearing

*Figure 6*
Plummer block housings S30 with split and unsplit spherical roller bearing

## Lubrication

Split plummer block housings S30 are designed for grease lubrication.

### Grease quantities

For initial greasing, the basic rule is that the bearing should be filled with grease to 100% and the free volume of the housing to 60%. This is the basis for the recommended grease quantities, see table. The free volume is the space that remains in the housing once the bearing, adapter sleeve, shaft and seals have been fitted.

### Recommended grease quantity

| Housing | Grease quantity Initial greasing ≈ g |
|---|---|
| S3024 | 390 |
| S3026 | 560 |
| S3028 | 630 |
| S3030 | 730 |
| S3032 | 970 |
| S3034 | 1 100 |

### Relubrication

The top of the housing has a threaded hole M10×1. In the delivered condition, this is closed off using a plastic stopper. For relubrication, a taper type or button type lubrication nipple can be screwed into place here. In the case of plummer block housings S30, the lubrication nipples are not included in the scope of delivery.

## Designation structure

The designation structure for split plummer block housings S30 and accessories is shown in the tables and *Figure 7* to *Figure 9*, page 138.







### Designation structure of plummer block housings S30

| Feature | | Code | Description |
|---|---|---|---|
| ① | Series | S30 | Split plummer block housings S30 |
| ② | Bore code of bearing | 24 | Bore diameter (24 · 5) mm = 120 mm |
| ③ | Bearing bore | H | Tapered bearing bore and adapter sleeve |
| | | Z | Cylindrical bearing bore |
| ④ | Housing design | N | Normal design (without grease valve) |
| ⑤ | Type of seal | FZ | Felt seal |
| ⑥ | Housing concept | AB | Housing body only, to be supplemented by covers and locating rings |
| ⑦ | Housing material | L | Flake graphite cast iron (standard) |
| | | D | Spheroidal graphite cast iron |
| | | S | Cast steel |




*Figure 7*
Designation structure of plummer block housings S30, example

## Designation structure of covers

| Feature | | Code | Description |
|---|---|---|---|
| ① | Series | DK | Cover |
| ② | Cover size | 127-135 | Permissible diameter range for felt locating slot in housing |




*Figure 8*
Designation structure of covers, example

## Designation structure of locating rings

| Feature | | Code | Description |
|---|---|---|---|
| ① | Series | FRM | Locating ring |
| ② | Outside diameter | 180 | Outside diameter 180 mm |
| ③ | Width | 10 | Width 10 mm |

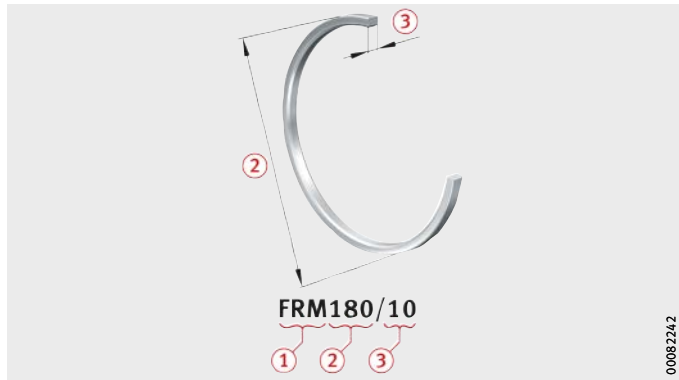



*Figure 9*
Designation structure of locating rings, example

## Ordering examples







When a split plummer block housing S30 is ordered, the housing designation only describes the housing body. The other components such as covers or locating rings must be ordered separately in the specific design required. The rolling bearing and, if necessary, the adapter sleeve must also be ordered separately.

Plummer block housings S30 with a bearing fitted give non-locating bearing arrangements. These can be converted into locating bearing arrangements through the additional insertion of locating rings FRM.

The ordering examples show the construction of orders for selected housing combinations and the appropriate bearings. The allocation of housings, bearings and accessories for all housing sizes is shown in the dimension tables.

The felt strips for sealing the housing are included in the scope of delivery and need not be ordered separately.

**Example 1** Plummer block housing S30 made from flake graphite cast iron, closed on one side, spherical roller bearing 23024-E1-K-TVPB as non-locating bearing, location by means of adapter sleeve, felt seal.

| | | |
|---|---|---|
| Order | 1 plummer block housing | S3024-H-N-FZ-AB-L |
| | 1 spherical roller bearing | 23024-E1-K-TVPB |
| | 1 adapter sleeve | H3024 |
| | 1 locating ring | FRM180/10 |
| | 1 cover | DK127-135 |

**Example 2** Plummer block housing S30 made from flake graphite cast iron, for continuous shaft, spherical roller bearing 23034-E1-TVPB as non-locating bearing, felt seal.

| | | |
|---|---|---|
| Order | 1 plummer block housing | S3034-Z-N-FZ-AB-L |
| | 1 spherical roller bearing | 23034-E1-TVPB |

## Design and safety guidelines
## Load carrying capacity

Guide values have been determined for the rupture load of plummer block housings S30 and the maximum load carrying capacity of connecting screws for the upper and lower housing sections, *Figure 10* and table, page 141. The guide values are valid for purely static loading.

The guide values for housing rupture load are valid for the standard housing material flake graphite cast iron (suffix L). For spheroidal graphite cast iron (suffix D) a factor of 1,6 should be applied.

The guide values in the table, page 141, are only valid if the flatness of the mounting surface in accordance with DIN EN ISO 1101 corresponds to the tolerance grade IT7 in accordance with DIN EN ISO 286-1 (measured across the diagonal). A precondition for supporting loads is that the housing base surface is completely and rigidly supported.

When determining the permissible static load, safety factors must be applied:

- safety factor of 6 relative to the housing rupture load
- safety factor of 3 relative to the maximum load carrying capacity of the connecting screws.

The housing must not be subjected to an axial load of more than 35% of the housing rupture load $F_{180°}$.

If the housing is subjected to axial load, the permissible axial load of the bearing fitted must be taken into consideration. If the bearing is located on the shaft using an adapter sleeve, the axial retaining force of the bearing and adapter sleeve must also be taken into consideration.

If the load direction is between 55° and 120° or axial load is present, we recommend that the housings should be secured in the load direction by means of stops or dowels.

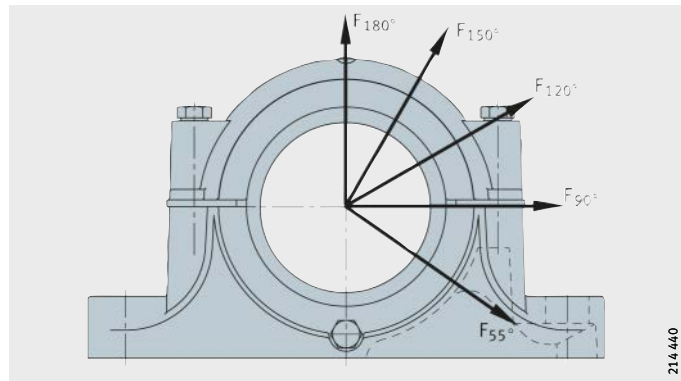



*Figure 10*
Load directions F
for the guide values
for the housing rupture load and
the maximum load carrying capacity
of the connecting screws

## Guide values for housing rupture load and maximum load carrying capacity of connecting screws





| Housing Designation | Housing rupture load in load direction F Housing made from flake graphite cast iron | | | | | Connecting screws | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Thread to DIN 13 | Maximum load carrying capacity of both screws with contact between parting surfaces in load direction | | |
| | 55° kN | 90° kN | 120° kN | 150° kN | 180° kN | Material 8.8 | 120° kN | 150° kN | 180° kN |
| S3024 | 540 | 320 | 245 | 215 | 270 | M20 | 260 | 150 | 130 |
| S3026 | 620 | 370 | 280 | 250 | 310 | M20 | 260 | 150 | 130 |
| S3028 | 700 | 420 | 315 | 280 | 350 | M20 | 260 | 150 | 130 |
| S3030 | 780 | 470 | 350 | 310 | 390 | M20 | 260 | 150 | 130 |
| S3032 | 860 | 520 | 390 | 345 | 430 | M20 | 260 | 150 | 130 |
| S3034 | 1 000 | 600 | 450 | 400 | 500 | M24 | 360 | 210 | 180 |

Housings made from spheroidal graphite cast iron (suffix D) have a housing rupture load 1,6 times higher than that of housings made from flake graphite cast iron.

### Eye bolts

In the case of housings S3034, the upper housing section has an eye bolt in accordance with DIN 580. This is intended as a locating point for mounting and dismounting of the housing. The load carrying capacity of the eye bolt allows lifting of the housing including a bearing fitted in the housing.

The eye bolt must always be screwed fully into the housing.

The eye bolt must not be subjected to a mass greater than that of the housing together with the bearing fitted in the housing.

### Foot screws

Foot screws are used for screw mounting of the housing to the locating surface. They are not included in the scope of delivery of the housings.

The appropriate screw size for each housing is stated, see dimension tables.

The associated tightening torques are stated for screws with a metric thread in accordance with DIN 13, DIN 962 and DIN ISO 965-2, see table, page 42.

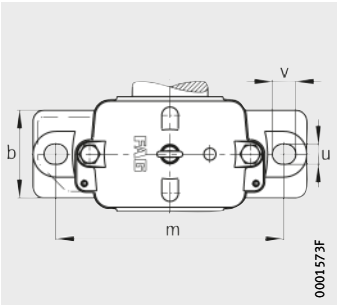
### Accuracy

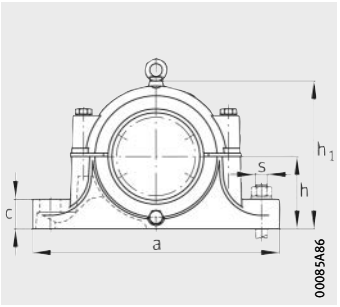
The bearing seat in split plummer block housings S30 is machined to the tolerance class H7.

By agreement, the housings can also be supplied with other tolerance classes for the bearing seat, see section Tolerance class of bearing seat, page 47.

# Plummer block housings

S30, split
For spherical roller bearings with tapered bore and adapter sleeve




**Dimension table** · Dimensions in mm

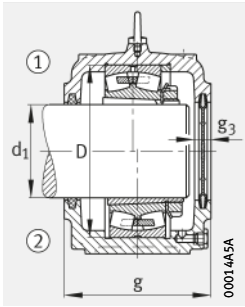
| Shaft | Housing Dimensions | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_1$ | h | $h_1$ | g | b | c | a | m | v | u | s | | D | $g_3$ |
| | | | | | | | | | | mm | *inch* | | |
| **110** | 112 | 215 | 150 | 110 | 40 | 390 | 320 | 36 | 30 | M24 | *1* | 180 | 18 |
| **115** | 125 | 239 | 160 | 120 | 45 | 420 | 350 | 36 | 30 | M24 | *1* | 200 | 18 |
| **125** | 140 | 259 | 170 | 120 | 45 | 420 | 350 | 36 | 30 | M24 | *1* | 210 | 21 |
| **135** | 150 | 278 | 175 | 130 | 45 | 460 | 380 | 36 | 30 | M24 | *1* | 225 | 21 |
| **140** | 150 | 288 | 190 | 130 | 50 | 470 | 390 | 36 | 30 | M24 | *1* | 240 | 21 |
| **150** | 160 | 320 | 200 | 160 | 55 | 540 | 450 | 48 | 36 | M30 | $1^1/_8$ | 260 | 25 |

① Locating bearing; ② Non-locating bearing

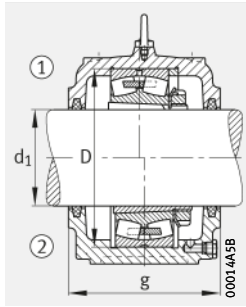
1) The felt strips are supplied by the metre and cut to the appropriate length on site.

2) Quantity of felt strips required: In the case of a housing closed on one side/in the case of a continuous shaft.

3) Housing without eye bolt.




Felt strip
Cover DK




Felt strip



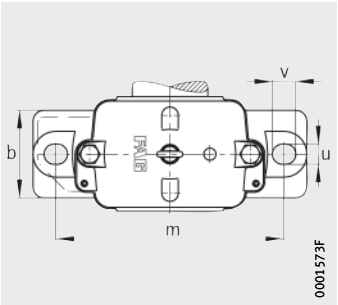


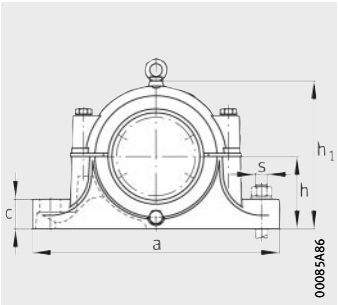


| Spherical roller bearing and accessories | | | | | | Housing | |
|---|---|---|---|---|---|---|---|
| Bearing | Adapter sleeve | Locating ring | Cover | Felt strip[1] (length 1 000 mm) | | Mass | Designation |
| | | | | Designation | Quantity[2] | m ≈ kg | |
| **23024..-K** | H3024 | FRM180/10 | DK127-135 | STRS153401-1-10X8,5-F2 | 1/1 | 16,5 | **S3024-H-N-FZ-AB-L**[3] |
| **23026..-K** | H3026 | FRM200/10 | DK127-135 | STRS153401-1-10X8,5-F2 | 1/1 | 19,3 | **S3026-H-N-FZ-AB-L**[3] |
| **23028..-K** | H3028 | FRM210/10 | DK147-155 | STRS153401-1-14X11-F2 | 1/1 | 24,6 | **S3028-H-N-FZ-AB-L**[3] |
| **23030..-K** | H3030 | FRM225/10 | DK156-163 | STRS153401-1-14X11-F2 | 1/2 | 29 | **S3030-H-N-FZ-AB-L**[3] |
| **23032..-K** | H3032(-HG) | FRM240/10 | DK166-182 | STRS153401-1-14X11-F2 | 1/2 | 37 | **S3032-H-N-FZ-AB-L**[3] |
| **23034..-K** | H3034(-HG) | FRM260/10 | DK166-182 | STRS153401-1-16X12-F2 | 1/2 | 45 | **S3034-H-N-FZ-AB-L** |

# Plummer block housings

S30, split
For spherical roller bearings with cylindrical bore




**Dimension table** · Dimensions in mm

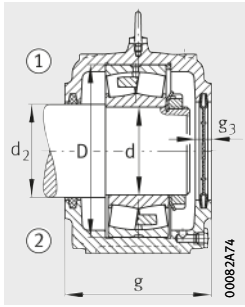
| Shaft | | Housing Dimensions | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | $d_2$ | h | $h_1$ | g | b | c | a | m | v | u | s | | D | $g_3$ |
| | | | | | | | | | | | mm | *inch* | | |
| **120** | 130 | 112 | 215 | 150 | 110 | 40 | 390 | 320 | 36 | 30 | M24 | *1* | 180 | 18 |
| **130** | 145 | 125 | 239 | 160 | 120 | 45 | 420 | 350 | 36 | 30 | M24 | *1* | 200 | 18 |
| **140** | 155 | 140 | 259 | 170 | 120 | 45 | 420 | 350 | 36 | 30 | M24 | *1* | 210 | 21 |
| **150** | 160 | 150 | 278 | 175 | 130 | 45 | 460 | 380 | 36 | 30 | M24 | *1* | 225 | 21 |
| **160** | 175 | 150 | 288 | 190 | 130 | 50 | 470 | 390 | 36 | 30 | M24 | *1* | 240 | 21 |
| **170** | 185 | 160 | 320 | 200 | 160 | 55 | 540 | 450 | 48 | 36 | M30 | *$1^{1}/_{8}$* | 260 | 25 |

① Locating bearing; ② Non-locating bearing

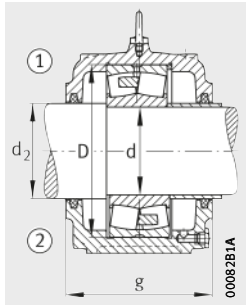
1) The felt strips are supplied by the metre and cut to the appropriate length on site.

2) Quantity of felt strips required: In the case of a housing closed on one side/in the case of a continuous shaft.

3) Housing without eye bolt.




Felt strip
Cover DK




Felt strip







| Spherical roller bearing and accessories | | | | | Housing | |
|---|---|---|---|---|---|---|
| Bearing | Locating ring | Cover | Felt strip[1] (length 1 000 mm) | | Mass | Designation |
| | | | Designation | Quantity[2] | m ≈ kg | |
| **23024** | FRM180/10 | DK147-155 | STRS153401-1-10X8,5-F2 | 1/1 | 16,5 | **S3024-Z-N-FZ-AB-L**[3] |
| **23026** | FRM200/10 | DK156-163 | STRS153401-1-10X8,5-F2 | 1/1 | 19,3 | **S3026-Z-N-FZ-AB-L**[3] |
| **23028** | FRM210/10 | DK166-182 | STRS153401-1-14X11-F2 | 1/1 | 24,6 | **S3028-Z-N-FZ-AB-L**[3] |
| **23030** | FRM225/10 | DK185-197 | STRS153401-1-14X11-F2 | 1/2 | 29 | **S3030-Z-N-FZ-AB-L**[3] |
| **23032** | FRM240/10 | DK200-212 | STRS153401-1-14X11-F2 | 1/2 | 37 | **S3032-Z-N-FZ-AB-L**[3] |
| **23034** | FRM260/10 | DK200-212 | STRS153401-1-16X12-F2 | 1/2 | 45 | **S3034-Z-N-FZ-AB-L** |

FAG



# Split plummer block housings SNS

# Split plummer block housings SNS


| | | Page |
|---|---|---|
| **Product overview** | Split plummer block housings SNS | 148 |
| **Features** | Modular concept | 150 |
| | Dimensions and interchangeability | 150 |
| | Suitable bearings | 151 |
| | Housing material and anti-corrosion protection | 152 |
| | Locating and non-locating bearings | 153 |
| | Longer bearing life | 153 |
| | Advantages of the detailed design | 154 |
| | Seals and covers | 156 |
| | Housing configurations | 160 |
| | Lubrication | 164 |
| | Designation structure | 168 |
| | Ordering examples | 172 |
| **Design and safety guidelines** | Load carrying capacity | 173 |
| | Permissible shaft end designs | 176 |
| | Eye bolts | 177 |
| | Foot screws | 177 |
| | Mounting and dismounting | 177 |
| **Accuracy** | | 177 |
| **Dimension tables** | Plummer block housings SNS, split, for spherical roller bearings with tapered bore and adapter sleeve, metric shaft | 178 |
| | Plummer block housings SNS, split, for spherical roller bearings with cylindrical bore, metric shaft | 188 |
| | Plummer block housings SNS, split, for spherical roller bearings with tapered bore and adapter sleeve, inch size shaft | 196 |
| | Plummer block housings SNS, split, for spherical roller bearings with tapered bore and adapter sleeve, metric shaft, Bolt-on design | 212 |








## Plummer block housings

Split

For labyrinth and Taconite seals

**SNS..-H, SNS..-Z**



0001AD70

For Bolt-on seals

**SNS..-B**



0008D681

## Accessories

Labyrinth seals
Taconite seals

### NTS




### NTC

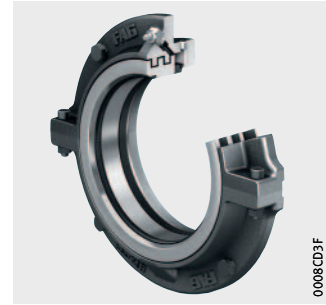



Split labyrinth seals
Bolt-on seals

### NTSG




### BTAC

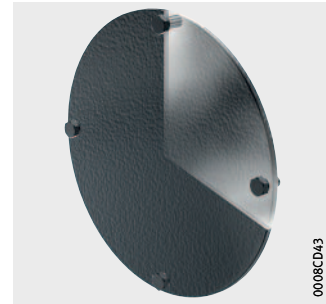



Covers

### NDK




### BDK




Locating rings

### NFR



# Split plummer block housings SNS

## Features

Plummer block housings SNS are highly robust housings and ideally suitable for aggressive environmental conditions such as those in mining applications.

## Modular concept

The housings are designed in accordance with a modular concept. Each housing can be fitted with spherical roller bearings of various diameter and width series if they have the correct outside diameter for the housing.

Depending on their design, the bearings can be located either directly on the shaft or by means of an adapter sleeve. This gives different shaft diameters for the same bearing size. The spacings between the shaft and housing body are compensated by means of appropriately matched seals.

## Dimensions and interchangeability

The dimensions of the housings conform to ISO 113.

FAG plummer block housings SNS are a further development of the FAG plummer block housings SD31. The design envelope and mounting dimensions of both series of housings are identical and the housings are interchangeable 1:1.

The interchangeability with other series of FAG housings is as follows:

- All bearing series that can be combined with the FAG plummer block housings SD5 and SD6 can be fitted in plummer block housings SNS.
- Bearing series that can be combined with the FAG plummer block housings S30 can only be fitted in certain cases in plummer block housings SNS.



The dimensions of housings SD5, SD6 and S30 are not identical with the dimensions of housings SNS.

## Suitable bearings



Split plummer block housings SNS are suitable for fitting with spherical roller bearings with a tapered or cylindrical bore, see table. The range of shaft diameters is 115 mm to 530 mm and $4^{7}/_{16}$ inch to $19^{1}/_{2}$ inch.



Unsplit spherical roller bearings with an adapter sleeve can be replaced by split spherical roller bearings. This gives a considerable reduction in the work associated with bearing replacement in numerous applications.



In order to ensure selection of the correct combination of housing and bearing when using split bearings, please contact us.

### Bearing types and sizes

| Bearing type | Size |
|---|---|
| **Spherical roller bearings** | |
| ■ with tapered bore and adapter sleeve | 22232..-K to 22272..-K |
| | 22326..-K to 22356..-K |
| | 23036-K to 230/530..-K |
| | 23134..-K to 23196..-K |
| | 23232..-K to 23288..-K |
| ■ with cylindrical bore | 22232 to 22272 |
| | 22326 to 22356 |
| | 23036 to 230/530 |
| | 23134 to 23196 |
| | 23232 to 23288 |
| | 24036 to 240/530 |
| ■ split | 230SM160 to 230SM410 |
| | 230S.607 to 230S.1608 |
| | 231SM150 to 231SM410 |
| | 231S.515 to 231S.1500 |
| | 232SM260 to 232SM340 |
| | 232S.1200 to 232S.1308 |

On the basis of the modular concept, one or more series of plummer block housings SNS are suitable for each series of spherical roller bearings, see tables, page 152.

### Plummer block housings SNS for spherical roller bearings with tapered bore and adapter sleeve

| Bearing Series | Plummer block housing | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | SNS2264 | | SNS30 | | SNS31 | | | SNS32 | | SNS40 | |
| | Suffix | | | | | | | | | | |
| | H | Z | H | Z | H | Z | B | H | Z | H | Z |
| 222..-K | ● | – | ● | – | ● | – | – | – | – | – | – |
| 223..-K | – | – | ● | – | ● | – | – | – | – | – | – |
| 230..-K | – | – | ● | – | – | – | – | – | – | – | – |
| 231..-K | – | – | – | – | ● | – | ● | – | – | – | – |
| 232..-K | – | – | ● | – | – | – | – | ● | – | – | – |

● Suitable

### Plummer block housings SNS for spherical roller bearings with cylindrical bore

| Bearing Series | Plummer block housing | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | SNS2264 | | SNS30 | | SNS31 | | | SNS32 | | SNS40 | |
| | Suffix | | | | | | | | | | |
| | H | Z | H | Z | H | Z | B | H | Z | H | Z |
| 222 | – | ● | ● | – | ● | ● | – | – | – | – | – |
| 223 | – | – | ● | – | ● | – | – | – | – | – | – |
| 230 | – | – | ● | ● | – | – | – | – | – | – | – |
| 231 | – | – | – | – | ● | ● | – | – | – | – | – |
| 232 | – | – | ● | – | – | – | – | – | ● | – | – |
| 240 | – | – | ● | ● | – | – | – | – | – | – | ● |

● Suitable

### Plummer block housings SNS for split spherical roller bearings

| Bearing Series | Plummer block housing | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | SNS2264 | | SNS30 | | SNS31 | | | SNS32 | | SNS40 | |
| | Suffix | | | | | | | | | | |
| | H | Z | H | Z | H | Z | B | H | Z | H | Z |
| 230S | – | – | ● | – | – | – | – | – | – | – | – |
| 231S | – | – | – | – | ● | – | ● | – | – | – | – |
| 232S | – | – | – | – | – | – | – | ● | – | – | – |

● Suitable

### Further information

WL 43165, Split Spherical Roller Bearings.

## Housing material and anti-corrosion protection

The housing bodies are made from spheroidal graphite cast iron GJS-400-15 (suffix D).

All outer surfaces not machined by chip-forming methods and the locating surfaces on the lower housing section have a universal paint coating (colour RAL 7016, anthracite grey). The coating can be finished using all synthetic resin, polyurethane, acrylic, epoxy resin, chlorinated rubber, nitrocellulose and acid-hardening hammer tone finishes.

Inner and outer surfaces machined by chip-forming methods are provided with anti-corrosion protection that can be easily removed. It is recommended that only volatile solvents and lint-free cloths should be used.

## Locating and non-locating bearings

The bearing seats in the housing are machined such that the bearings are movable and can thus function as non-locating bearings. Locating bearing arrangements can be achieved by the insertion of locating rings NFR on both sides of the bearing outer ring. Depending on the combination of housing and bearing, either 2, 4 or 6 locating rings will be required, see dimension tables.

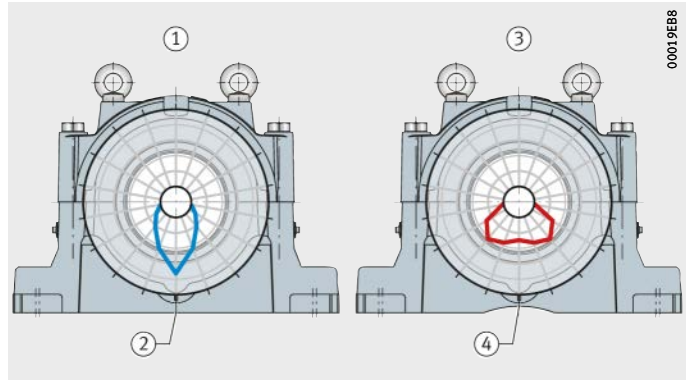
Locating rings must be ordered separately.

## Longer bearing life

In the case of FAG plummer block housings SNS, the life of the spherical roller bearings fitted is up to 50% higher than in the case of conventional plummer block housings. The increase in life is dependent on the application, the load and the bearing design. Calculation of the bearing life is based on the calculation software BEARINX. The reason for the longer bearing life is the optimum load distribution in the bearing that is achieved as a result of the new housing design, *Figure 1*.

Conventional plummer block housings are designed such that the bearing load is introduced into the housing locating face by means of a support area directly below the bearing, *Figure 1*, ②. If loading is in the main load direction, namely with an orientation vertical to the housing locating face, an unfavourable load distribution occurs in the bearing. Due to the narrow load zone, the load is distributed over only a small number of rolling elements, leading to a particularly high load maximum on the roller in the apex position.

In the case of plummer block housings SNS, a material recess below the bearing distributes the support area over two symmetrically arranged support faces, *Figure 1*, ④. This leads to a significant improvement in the load distribution in the bearing. The load zone is wider and the load is distributed more uniformly over several rolling elements. The maximum is now present on the two neighbouring rollers of the roller in the apex position and is reduced. This results in a significant increase in the fatigue life of the rolling bearings.

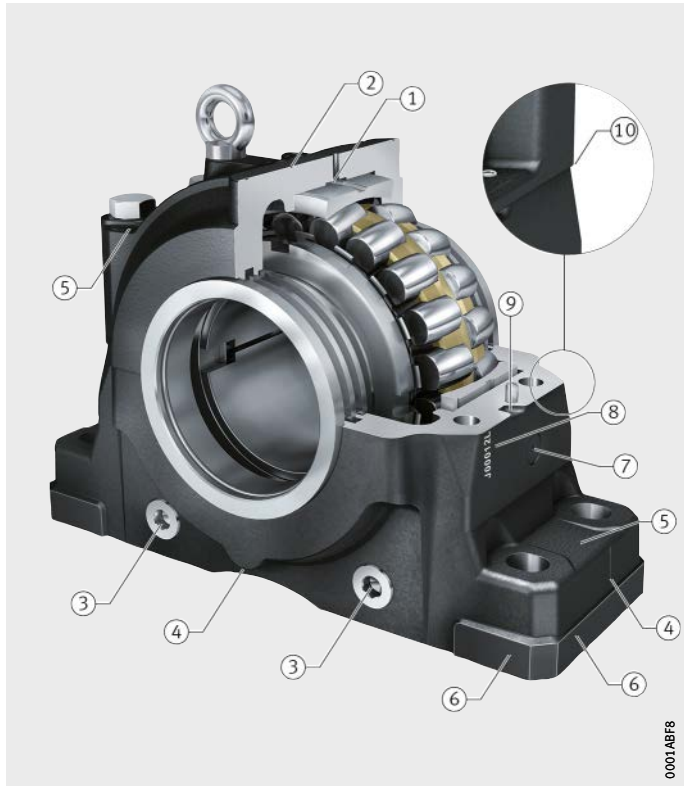



① Conventional plummer block housing with associated load distribution
② Support area directly below the bearing
③ FAG plummer block housing SNS with associated load distribution
④ Material recess below the bearing

*Figure 1*
Influence of housing design on the load distribution in the bearing

## Advantages of the detailed design

A large number of details in the housing design that are systematically matched to practical application allows a particularly flexible and economical usage of plummer block housings SNS, *Figure 2*.




① Lubrication hole with long axial lubrication groove
② Pilot hole at predefined position for condition monitoring
③ Grease outlet holes
④ Indentations indicating shaft and bearing centres
⑤ Inclined run-off areas
⑥ Machined locating faces
⑦ Prepared mounting points for condition monitoring
⑧ Marking of housing halves
⑨ Dismounting notches
⑩ Projection of upper housing section

*Figure 2*
Advantages of detailed design

### Lubrication hole with long axial lubrication groove

A lubrication hole with a long axial lubrication groove in the upper housing section ensures supply of lubricant irrespective of bearing position to all bearing series that can be fitted, *Figure 2*, ①. Suitable lubrication nipples are included in the scope of delivery.

### Grease outlet holes

Grease outlet holes in the lower housing section allow the escape of used and superfluous grease during relubrication, *Figure 2*, ③.

### Indentations indicating shaft and bearing centres

Indentations in the lower housing section indicate the shaft and bearing centres in the housing, *Figure 2*, ④. This allows rapid alignment and reduces mounting time.

**Inclined run-off areas**



Inclined run-off areas on the upper and lower housing section promote the removal of fluids and reduce deposits of contamination, *Figure 2*, ⑤. This leads to reduced cleaning work and a lower risk of corrosion.

**Machined locating faces**



Machined locating faces on the lower housing section allow precise alignment of the housing, *Figure 2*, ⑥. When the housing is painted, the locating faces are also provided with a universal paint coating. Since the locating faces are raised, strips can be used as an alignment aid. One-off alignment is sufficient to allow rapid interchange of the housing when necessary.

**Prepared mounting points for condition monitoring**



In order to allow the uncomplicated use of Condition Monitoring, the lower housing section has a connection facility on both sides for condition monitoring systems, *Figure 2*, ⑦. Due to the thread M6 and a flattened area on the diameter 26 mm, it is possible to directly connect FAG SmartCheck, a modular online measuring system for machine monitoring. Alternatively, other vibration sensors can also be connected. If neither of the two connection points is accessible as a result of the adjacent construction, a further suitable connection point on the upper section is indicated by a cast-in pilot hole, *Figure 2*, ②.

FAG SmartCheck must be ordered separately.
For detailed information, see TPI 214, FAG SmartCheck or www.FAG-SmartCheck.de.

**Marking of housing halves**

The upper housing section and lower housing section are matched to each other and must not be transposed with other housing halves. The serial numbering on both halves of the housing ensure their correct allocation, *Figure 2*, ⑧. Furthermore, the serial numbering allows traceability and simplified documentation.

**Dismounting notches**

Recessed dismounting notches on the interface of the housing halves make it easier to remove the upper housing section, *Figure 2*, ⑨.

**Projection of upper housing section**

The projection of the upper housing section prevents the collection of fluids and contaminants at the interface of the two housing halves, *Figure 2*, ⑩. This leads to reduced cleaning work and a lower risk of corrosion.

## Seals and covers

For sealing of the bearing housings, the following standard seals are available:

- labyrinth seals and Taconite seals, each in a split and unsplit design. These seals are matched to the rectangular section annular slots on both sides of the housings SNS..-H and SNS..-Z.
- Bolt-on seals. These seals are screw mounted to the outside of housings SNS..-B.

If a housing closed on one side is required, the following covers are available:

- covers NDK, for housings SNS..-H and SNS..-Z
- covers BDK, for housings SNS..-B.

Seals and covers must be ordered specially. Seals are supplied individually. If a continuous shaft is present, two seals must be ordered.

### Labyrinth seals NTS

Labyrinth seals NTS give non-contact sealing. They are therefore suitable for high circumferential velocities. The round cord made from fluoro rubber FKM pressed between the labyrinth ring and shaft is suitable for temperatures up to +200 °C.

The labyrinth seal allows shaft misalignment of up to 0,3° in both directions and is suitable for grease lubrication. If necessary, the labyrinth can be relubricated. For this purpose, a lubrication hole must be made in the upper housing section for each labyrinth seal. The optimum positions are indicated by cast-in pilot holes.

### Taconite seals NTC

Taconite seals NTC are combined seals comprising a labyrinth seal and a V ring. These seals are suitable for extreme operating conditions in relation to contamination and dust. The V ring is made from NBR and is suitable for temperatures up to +100 °C.

The Taconite seal allows shaft misalignment of up to 0,3° in both directions and is suitable for grease lubrication. For relubrication, the seal is fitted with a lubrication nipple.

### Split labyrinth seals NTSG

For plummer block housings SNS, labyrinth seals are also available in a split design. As a result, the work involved in replacing the seal can be considerably reduced, especially if a split bearing is also fitted.

The characteristics and operating limits correspond to those of the unsplit labyrinth seal NTS.

Split labyrinth seals NTSG are available in various sizes, see table, page 157. Other sizes are available by agreement.







**Sizes**

| Sizes of split labyrinth seals for | |
|---|---|
| metric shaft | inch size shaft |
| NTSG34 | NTSG34×515 |
| NTSG36 | NTSG36×607 |
| NTSG38 | – |
| NTSG40 | – |
| NTSG44 | – |
| NTSG48 | – |
| NTSG52 | – |

**Split Taconite seals NTCG**

For plummer block housings SNS, Taconite seals are also available in a split design. As a result, the work involved in replacing the seal can be considerably reduced, especially if a split bearing is also fitted.

Split Taconite seals are supplied by agreement.

**Bolt-on seals BTAC**

Bolt-on seals BTAC are combined seals comprising a labyrinth seal and a V ring.

They are screw mounted to the outside of the housing and, unlike all other seals for plummer block housings SNS, are not inserted in the annular slots in the housing.

The seals are suitable for extreme operating conditions in relation to contamination and dust. The V ring is made from NBR and is suitable for temperatures up to +100 °C.

The Bolt-on seal allows shaft misalignment of up to 0,4° in both directions and is suitable for grease lubrication. For relubrication, the seal is fitted with a lubrication nipple.

The seals are available in the sizes BTAC34 to BTAC68.

When using Bolt-on seals, housings in a special design SNS..-B are required instead of the designs SNS..-H and SNS..-Z suitable for all other seals.

**Covers NDK**

Covers NDK are used with housings closed on one side. The covers fit in the rectangular section annular slots in the housings. They are suitable for temperatures up to +200 °C.

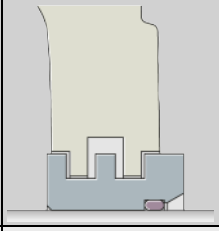
**Covers BDK**

Covers BDK are screw mounted to the outside of the housing. They are suitable for the housings SNS..-B designed for the Bolt-on seal.

**Characteristics and operating limits**

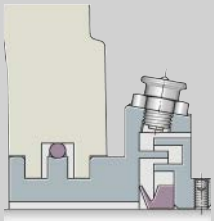
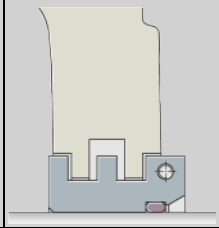
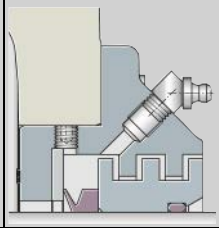
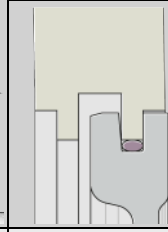
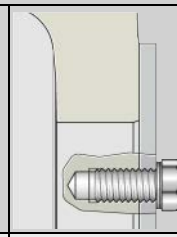
The characteristics and operating limits of the standard seals and covers are compared in an overview, see table, page 158.

## Standard seals and covers for plummer block housings SNS

| Seal or cover | | Labyrinth seal  |
|---|---|---|
| Designation | | **NTS** |
| Material | | Steel, FKM |
| Pieces per pack | | 1 |
| **Suitability for sealing against** | | |
| Dust | | (+) |
| Fine solid particles | | + |
| Coarse solid particles | | + |
| Slivers | | ++ |
| Spray liquids | | – |
| **Operating limits** | | |
| Long term temperature | °C | –20 to +200 (due to FKM) |
| | °F | –4 to +390 (due to FKM) |
| Circumferential velocity | m/s | No restriction |
| Misalignment | ° | ≦ 0,3 |
| Low friction | | ++ |
| Axial shaft displacement (suitability as non-locating bearing) | | + |
| Vertical arrangement | | – |
| Suitability for grease relubrication | | + |
| Suitability for oil lubrication | | – |
| Compatibility with sunlight | | ++ |
| **Preconditions** | | |
| Shaft diameter tolerance[1)] | | h8 (h9) |
| Shaft roughness | µm | Ra 3,2 |

++ Highly suitable
+ Suitable
(+) Suitable with restrictions
– Not suitable

1) The envelope condition Ⓔ applies here.

| Taconite seal | Labyrinth seal, split | Bolt-on seal | Cover | |
|---|---|---|---|---|
|  |  |  |  |  |
| **NTC** | **NTSG** | **BTAC** | **NDK** | **BDK** |
| Steel, NBR | Steel, FKM | Steel, NBR | Steel, FKM | Steel |
| 1 | 1 | 1 | 1 | 1 |
| | | | | |
| ++ | (+) | ++ | ++ | ++ |
| ++ | + | ++ | ++ | ++ |
| ++ | + | ++ | ++ | ++ |
| ++ | ++ | ++ | ++ | ++ |
| ++ | – | ++ | ++ | ++ |
| | | | | |
| –30 to +100<br>(due to NBR) | –20 to +200<br>(due to FKM) | –30 to +100<br>(due to NBR) | –20 to +200<br>(due to FKM) | Not applicable |
| –22 to +210<br>(due to NBR) | –4 to +390<br>(due to FKM) | –22 to +210<br>(due to NBR) | –4 to +390<br>(due to FKM) | Not applicable |
| 12 | No restriction | 12 | Not applicable | Not applicable |
| ≦ 0,3 | ≦ 0,3 | ≦ 0,4 | Not applicable | Not applicable |
| + | ++ | + | Not applicable | Not applicable |
| + | + | + | Not applicable | Not applicable |
| (+) | – | – | ++ | ++ |
| + | + | ++ | ++ | ++ |
| (+) | – | – | + | – |
| ++ | ++ | ++ | ++ | ++ |
| | | | | |
| h8 (h9) | h8 (h9) | h8 (h9) | Not applicable | Not applicable |
| Ra 3,2 | Ra 3,2 | Ra 3,2 | Not applicable | Not applicable |

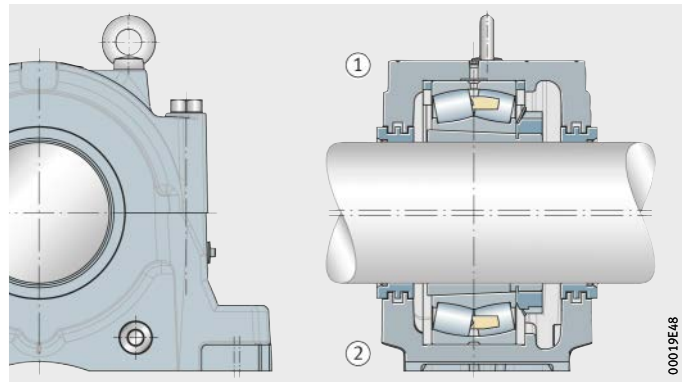
## Housing configurations

The modular structure of the plummer block housings SNS facilitates numerous possible combinations.

Based on the standard components, the housings can be combined as follows:

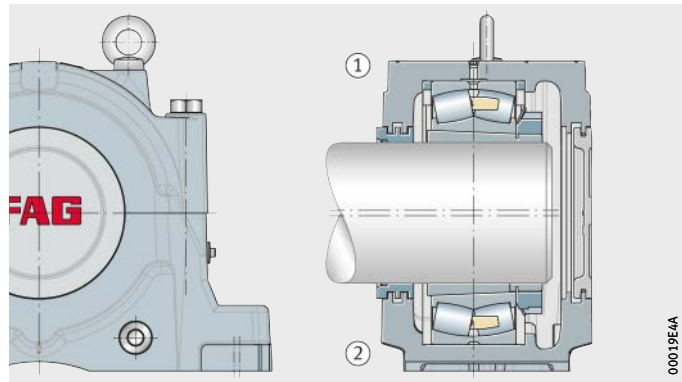
- location of bearings with a tapered bore by means of an adapter sleeve on a shaft of constant diameter or of bearings with a cylindrical bore directly on a stepped shaft
- sealing of housing by labyrinth seals (unsplit or split), Taconite seals (unsplit or split) or Bolt-on seals (in combination with housings of design SNS..-B)
- with a continuous shaft or a housing closed on one side
- design of the bearing arrangement as a locating bearing arrangement or a non-locating bearing arrangement
- spherical roller bearing in a split or unsplit design.

The resulting possible housing configurations, *Figure 3* to *Figure 12*, page 162 make it possible to fulfil various requirements on the bearing positions by means of standard components.



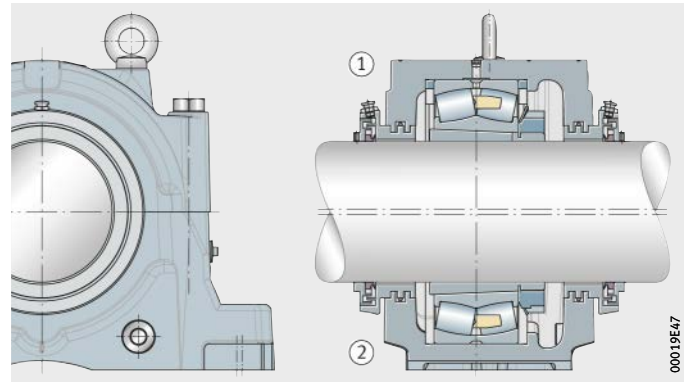

① Locating bearing
② Non-locating bearing

*Figure 3*
Plummer block housing SNS for bearing with tapered bore and adapter sleeve (2 labyrinth seals NTS)



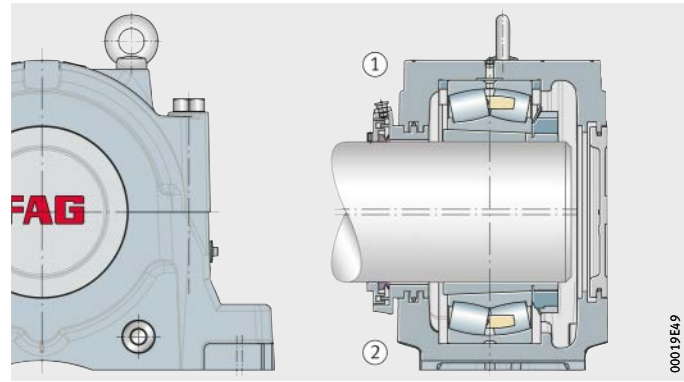

① Locating bearing
② Non-locating bearing

*Figure 4*
Plummer block housing SNS for bearing with tapered bore and adapter sleeve (labyrinth seal NTS and cover NDK)



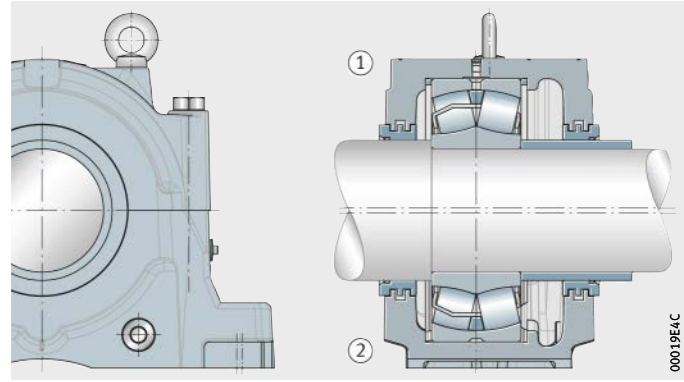

① Locating bearing
② Non-locating bearing

*Figure 5*
Plummer block housing SNS
for bearing with tapered bore and
adapter sleeve
(2 Taconite seals NTC)



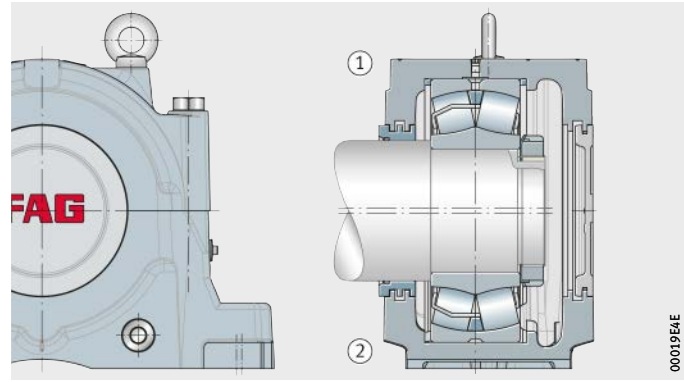

① Locating bearing
② Non-locating bearing

*Figure 6*
Plummer block housing SNS
for bearing with tapered bore and
adapter sleeve
(Taconite seal NTC and cover NDK)



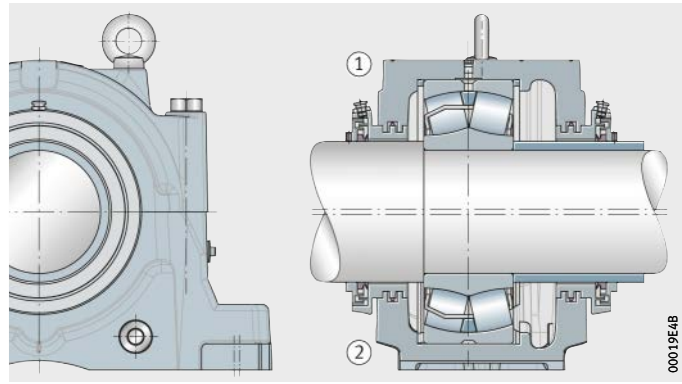

① Locating bearing
② Non-locating bearing

*Figure 7*
Plummer block housing SNS
for bearing with cylindrical bore
(2 labyrinth seals NTS)



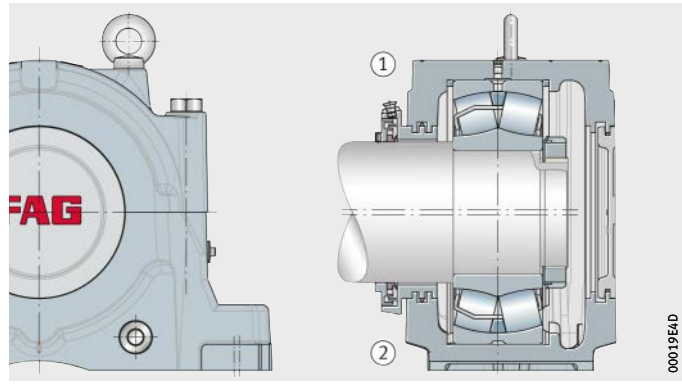

① Locating bearing
② Non-locating bearing

*Figure 8*
Plummer block housing SNS
for bearing with cylindrical bore
(labyrinth seal NTS and cover NDK)



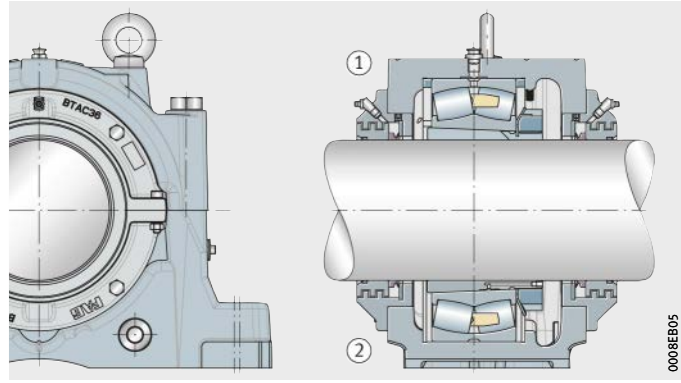

① Locating bearing
② Non-locating bearing

*Figure 9*
Plummer block housing SNS
for bearing with cylindrical bore
(2 Taconite seals NTC)



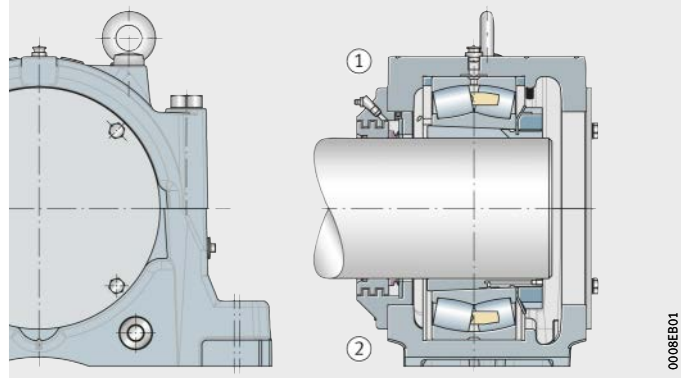

① Locating bearing
② Non-locating bearing

*Figure 10*
Plummer block housing SNS
for bearing with cylindrical bore
(Taconite seal NTC and cover NDK)




① Locating bearing
② Non-locating bearing

*Figure 11*
Plummer block housing SNS
for bearing with tapered bore and
adapter sleeve
(2 Bolt-on seals NTC)

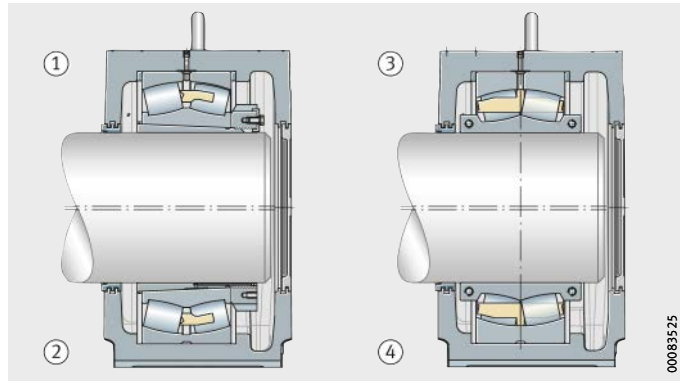



① Locating bearing
② Non-locating bearing

*Figure 12*
Plummer block housing SNS
for bearing with tapered bore and
adapter sleeve
(Bolt-on seal BTAC and cover BDK)

## Mounting of split spherical roller bearings

In the case of plummer block housings SNS, an unsplit spherical roller bearing with a tapered bore and adapter sleeve can be replaced by a split spherical roller bearing, *Figure 13*.




① Locating bearing with unsplit bearing
② Non-locating bearing with unsplit bearing
③ Locating bearing with split bearing
④ Non-locating bearing with split bearing

*Figure 13*
Plummer block housing SNS with split and unsplit spherical roller bearing

## Combination with products for maintenance

The housings are suitable for connection of systems for preventive maintenance such as Condition Monitoring or automatic lubricators. Schaeffler offers a wide range of such products.

## Further information on maintenance products

- Catalogue IS 1, Mounting and Maintenance of Rolling Bearings.

## Lubrication

Split plummer block housings SNS are principally intended for grease lubrication. However, a design for oil lubrication is also available by agreement.

### Greases

In order to achieve a long operating life and high operational security of the bearing arrangement, we recommend the use of Arcanol rolling bearing greases, see section Rolling bearing greases Arcanol, page 419. These have been designed and tested for bearing arrangement engineering.

### Grease quantity

For initial greasing, the basic rule is that the bearing should be filled with grease to 100% and the free volume of the housing to 60%. The free volume is the space that remains in the housing once the bearing, adapter sleeve, shaft and seals have been fitted.

The recommended grease quantity can also be stated in grams once the density of the grease has been taken into consideration, see table.

The recommended grease quantity in the table takes account of the following:

- filling of the free volume to 60%
- grease with a density of 0,9 g/cm$^3$.

### Recommended grease quantity for selected housing/bearing combinations

| Housing | | Bearing | Adapter sleeve | Free volume (100%) cm$^3$ | Recommended grease quantity ≈ g |
|---|---|---|---|---|---|
| SNS22 | SNS2264-H-D | 22264..-K | H3064 | 27 550 | 14 900 |
| SNS30 | SNS3036-H-D | 23036..-K | H3036 | 2 900 | 1 600 |
| | SNS3038-H-D | 23038..-K | H3038 | 3 900 | 2 250 |
| | SNS3040-H-D | 23040..-K | H3040 | 5 020 | 3 050 |
| | SNS3044-H-D | 23044..-K | H3044 | 5 770 | 4 260 |
| | SNS3048-H-D | 23048..-K | H3048 | 7 280 | 4 550 |
| | SNS3052-H-D | 23052..-K | H3052 | 9 930 | 6 750 |
| | SNS3056-H-D | 23056..-K | H3056 | 12 500 | 6 750 |
| | SNS3060-H-D | 23060..-K | H3060 | 14 800 | 8 000 |
| | SNS3064-H-D | 23064..-K | H3064 | 19 400 | 10 500 |
| | SNS3068-H-D | 23068..-K | H3068 | 24 000 | 13 000 |
| | SNS3072-H-D | 23072..-K | H3072 | 30 400 | 16 450 |
| | SNS3076-H-D | 23076..-K | H3076 | 32 000 | 17 300 |
| | SNS3080-H-D | 23080..-K | H3080 | 33 500 | 18 100 |
| | SNS3084-H-D | 23084..-K | H3084 | 35 000 | 18 900 |
| | SNS3088-H-D | 23088..-K | H3088 | 43 400 | 23 450 |
| | SNS3092-H-D | 23092..-K | H3092 | 56 600 | 30 600 |
| | SNS3096-H-D | 23096..-K | H3096 | 55 200 | 29 850 |
| | SNS30/500-H-D | 230/500..-K | H30/500 | 55 200 | 29 850 |
| | SNS30/530-H-D | 230/530..-K | H30/530 | 67 500 | 36 450 |

## Recommended grease quantity for selected housing/bearing combinations (continued)





| Housing | | Bearing | Adapter sleeve | Free volume (100%) $cm^3$ | Recommended grease quantity ≈ g |
|---|---|---|---|---|---|
| SNS31 | SNS3134-H-D | 23134..-K | H3134 | 2 900 | 1 600 |
| | SNS3136-H-D | 23136..-K | H3136 | 3 810 | 2 060 |
| | SNS3138-H-D | 23138..-K | H3138 | 5 030 | 2 720 |
| | SNS3140-H-D | 23140..-K | H3140 | 6 780 | 3 660 |
| | SNS3144-H-D | 23144..-K | H3144 | 7 520 | 4 060 |
| | SNS3148-H-D | 23148..-K | H3148 | 10 100 | 5 990 |
| | SNS3152-H-D | 23152..-K | H3152 | 11 650 | 6 300 |
| | SNS3156-H-D | 23156..-K | H3156 | 12 550 | 6 800 |
| | SNS3160-H-D | 23160..-K | H3160 | 17 200 | 9 300 |
| | SNS3164-H-D | 23164..-K | H3164 | 21 250 | 11 500 |
| | SNS3168-H-D | 23168..-K | H3168 | 27 550 | 14 900 |
| | SNS3172-H-D | 23172..-K | H3172 | 28 500 | 15 400 |
| | SNS3176-H-D | 23176..-K | H3176 | 28 300 | 15 300 |
| | SNS3180-H-D | 23180..-K | H3180 | 36 450 | 19 700 |
| | SNS3184-H-D | 23184..-K | H3184 | 45 550 | 24 600 |
| | SNS3188-H-D | 23188..-K | H3188 | 48 300 | 26 100 |
| | SNS3192-H-D | 23192..-K | H3192 | 52 000 | 28 100 |
| | SNS3196-H-D | 23196..-K | H3196 | 55 000 | 29 700 |
| SNS32 | SNS3234-H-D | 23234..-K | H2334 | 5 350 | 2 900 |
| | SNS3236-H-D | 23236..-K | H2336 | 5 350 | 2 900 |
| | SNS3238-H-D | 23238..-K | H2338 | 6 500 | 3 510 |
| | SNS3240-H-D | 23240..-K | H2340 | 6 900 | 3 760 |
| | SNS3244-H-D | 23244..-K | H2344 | 10 000 | 5 400 |
| | SNS3248-H-D | 23248..-K | H2348 | 10 200 | 5 550 |
| | SNS3252-H-D | 23252..-K | H2352 | 15 500 | 8 400 |
| | SNS3256-H-D | 23256..-K | H2356 | 15 500 | 8 400 |
| | SNS3260-H-D | 23260..-K | H3260 | 19 000 | 10 300 |
| | SNS3264-H-D | 23264..-K | H3264 | 25 300 | 13 700 |
| | SNS3268-H-D | 23268..-K | H3268 | 25 000 | 13 500 |
| | SNS3272-H-D | 23272..-K | H3272 | 26 800 | 14 500 |
| | SNS3276-H-D | 23276..-K | H3276 | 38 600 | 20 850 |
| | SNS3280-H-D | 23280..-K | H3280 | 44 100 | 23 850 |
| | SNS3284-H-D | 23284..-K | H3284 | 45 000 | 24 350 |
| | SNS3288-H-D | 23288..-K | H3288 | 49 400 | 26 700 |

Information on the recommended grease quantity for other housing sizes is available by agreement.

The recommended degree of filling for the greasing of bearings, as a function of the application and speed, may deviate from 100%.

### Relubrication

Where relubrication is carried out on bearings with a circumferential lubrication groove, the grease is introduced into the housing via the central lubrication hole, *Figure 14*, page 167, ①. In this type of relubrication, the grease acts directly on the bearing.

For the relubrication of bearings without a lubrication groove, two relubrication points are provided in the upper housing section, *Figure 14*, ②. One of the two points has a threaded hole, while the other is indicated by a cast-in pilot hole.

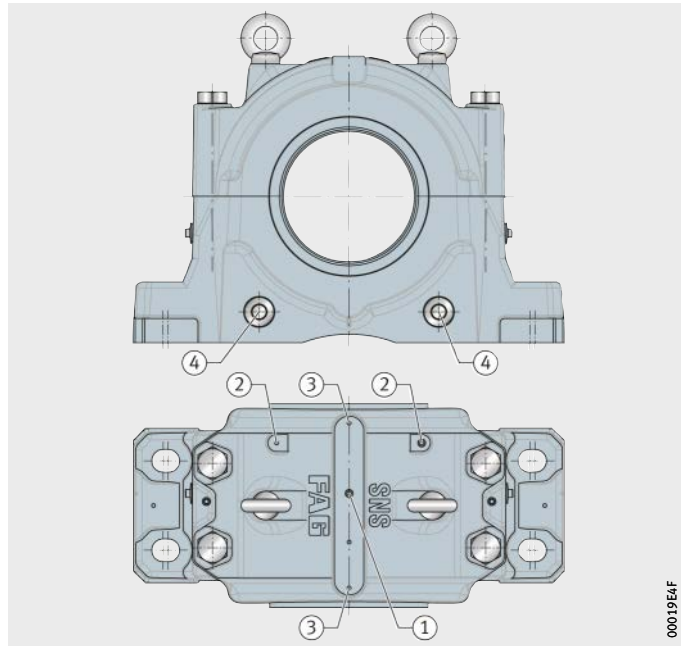
The lubrication holes and lubrication nipples provided for relubrication differ according to the design of the housing, see table. In the case of housings SNS..-H and SNS..-Z, the threaded holes are closed off by a screw plug. This must be removed and permanently replaced by one of the lubrication nipples supplied. In the case of housings SNS..-B, both taper type lubrication nipples are already fitted.

### Lubrication holes and lubrication nipples

| Housing | Thread | Lubrication nipple | Delivery quantity |
|---|---|---|---|
| SNS..-H<br>SNS..-Z | M10×1 | Button head lubrication nipple in accordance with DIN 3404-M10×1 (with dust cap) | 1 |
| | | Taper type lubrication nipple in accordance with DIN 71412-AM10×1 (with dust cap) | 1 |
| SNS..-B | ISO 288-G1/4 | Button head lubrication nipple in accordance with DIN 3404-A G1/4 St | 2 |

Lubrication holes can be provided at two further points for relubrication of labyrinth seals, *Figure 14*, ③.

In order to prevent overgreasing, the screw plugs must be removed from the two grease outlet holes in the lower housing section for the duration of relubrication, *Figure 14*, ④. This allows superfluous grease to escape. The grease outlet holes must then be closed off again using the screw plugs.




① Central lubrication hole, for bearings with lubrication groove
② Points for relubrication of bearings without lubrication groove
③ Points for relubrication of labyrinth seals
④ Grease outlet holes

*Figure 14*
Points for relubrication

If unfavourable environmental conditions are present, there is therefore a risk of contamination being carried into the housing when the grease outlet holes are opened.

## Designation structure

The designation structure for split plummer block housings SNS and accessories is shown in the tables and *Figure 15* to *Figure 18*, page 171.

### Designation structure of plummer block housings SNS

| Feature | | Code | Description |
|---|---|---|---|
| ① | Series | SNS | Split plummer block housings SNS |
| ② | ISO dimension series of bearing | 30 | ISO dimension series 22, 23, 30 and 40 |
| | | 31 | ISO dimension series 22, 23 and 31 |
| | | 32 | ISO dimension series 22 and 32 |
| | | 40 | ISO dimension series 40 |
| ③ | Housing size | 36 | For bearings of ISO dimension series 30, 31 and 32:<br>■ Bore code of bearing |
| | | /530 | |
| ④ | Housing design | H | Main design,<br>see table, page 169 |
| | | Z | Additional design,<br>see table, page 169 |
| | | B | Design for Bolt-on seal |
| ⑤ | Housing material | D | Spheroidal graphite cast iron |




*Figure 15*
Designation structure of plummer block housings SNS, example



Plummer block housings SNS with labyrinth and Taconite seals are available in the housing designs H and Z. Spherical roller bearings can be fitted, as a function of the bearing series, in one of the two housing designs, see table.



**Allocation of housing designs H and Z to bearing types**

| Housing design | Bearing series |
|---|---|
| H | Spherical roller bearings with tapered bore and adapter sleeve |
| | Split spherical roller bearings |
| | Following spherical roller bearings with cylindrical bore:<br>22232, 22234, 22252, 22272, 22326, 22328, 22330, 22332, 22334, 22338, 22344, 22348, 22352, 22356, 23232, 24036 |
| Z | Spherical roller bearings with cylindrical bore, not allocated to housing design H |



## Designation structure of standard seals

| Feature | | Code | Description |
|---|---|---|---|
| ① | Series | NTS | Labyrinth seal |
| | | NTC | Taconite seal |
| | | NTSG | Split labyrinth seal |
| | | NTCG | Split Taconite seal |
| | | BTAC | Bolt-on seal |
| ② | Dimension series | 36 | Dimension series 36 |
| ③ | Shaft diameter | No further indications | Standard shaft diameter of dimension series |
| | | /125 | Metric shaft diameter:<br>125 mm |
| | | X415 | Inch size shaft diameter:<br>4 inch + 15 · $^{1}/_{16}$ inch = $4^{15}/_{16}$ inch |




*Figure 16*
Designation structure of standard seals, examples





## Designation structure of covers

| Feature | | Code | Description |
|---|---|---|---|
| ① | Series | NDK | Cover for plummer block housings SNS..-H and SNS..-Z. |
| | | BDK | Cover for plummer block housing SNS..-B |
| ② | Dimension series | 36 | Dimension series36 |

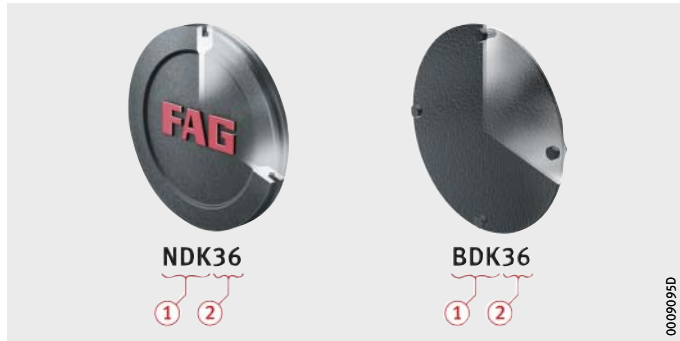



*Figure 17*
Designation structure of covers, example

## Designation structure of locating rings

| Feature | | Code | Description |
|---|---|---|---|
| ① | Series | NFR | Locating ring |
| ② | Outside diameter | 280 | Outside diameter 280 mm |
| ③ | Width | 10 | Width 10 mm |

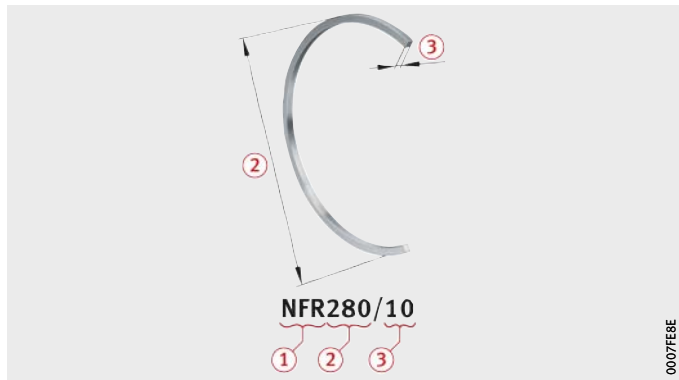



*Figure 18*
Designation structure of locating rings, example

## Ordering examples

When a split plummer block housing SNS is ordered, the housing designation only describes the housing body. The other components such as seals, covers or locating rings must be ordered separately in the specific design required. The rolling bearing and, if necessary, the adapter sleeve must also be ordered separately.

Plummer block housings SNS with a bearing fitted give non-locating bearing arrangements. These can be converted into locating bearing arrangements through the additional insertion of locating rings NFR.

The ordering examples show the construction of orders for selected housing combinations and the appropriate bearings. The allocation of housings, bearings and accessories for all housing sizes is shown in the dimension tables.

**Example 1** Plummer block housing SNS made from spheroidal graphite cast iron, closed on one side, spherical roller bearing 23136-E1A-K-M as locating bearing, location by means of adapter sleeve on shaft diameter 160 mm, labyrinth seal.

| | | |
|---|---|---|
| Order | 1 plummer block housing | SNS3136-H-D |
| | 1 spherical roller bearing | 23136-E1A-K-M |
| | 1 adapter sleeve | H3136-HG |
| | 2 locating rings | NFR300/10 |
| | 1 cover | NDK36 |
| | 1 labyrinth seal | NTS36 |

**Example 2** Plummer block housing SNS made from spheroidal graphite cast iron, continuous shaft, spherical roller bearing 23136-E1A-K-M as non-locating bearing, location by means of adapter sleeve on shaft diameter 160 mm, Taconite seal.

| | | |
|---|---|---|
| Order | 1 plummer block housing | SNS3136-H-D |
| | 1 spherical roller bearing | 23136-E1A-K-M |
| | 1 adapter sleeve | H3136-HG |
| | 2 Taconite seals | NTC36 |

**Example 3** Plummer block housing SNS made from spheroidal graphite cast iron, closed on one side, spherical roller bearing 23136-E1A-K-M as non-locating bearing, location by means of adapter sleeve on shaft diameter 160 mm, Bolt-on seal.

| | | |
|---|---|---|
| Order | 1 plummer block housing | SNS3136-B-D |
| | 1 spherical roller bearing | 23136-E1A-K-M |
| | 1 adapter sleeve | H3136-HG |
| | 1 cover | BDK36 |
| | 1 Bolt-on seal | BTAC36 |

## Design and safety guidelines
## Load carrying capacity

Guide values have been determined for the rupture load of plummer block housings SNS and the maximum load carrying capacity of connecting screws for the upper and lower housing sections, *Figure 19* and table, page 174. The guide values are valid for purely static loading.

The guide values in the table, page 174, are only valid if the flatness of the mounting surface in accordance with DIN EN ISO 1101 corresponds to the tolerance grade IT7 in accordance with DIN EN ISO 286-1 (measured across the diagonal). A precondition for supporting loads is that the housing base surface is completely and rigidly supported.

When determining the permissible static load, safety factors must be applied. For general machine building, a safety factor of 6 relative to the housing rupture load is normally applied. Based on the precise calculation of the housing rupture loads using the Finite Element method and the use as standard of spheroidal graphite cast iron as the housing material, a safety factor of 5 is sufficient for plummer block housings SNS.

A safety factor is not required for the values given for the load carrying capacity of the connecting screws.

If the housing is subjected to axial load, the permissible axial load of the bearing fitted must be taken into consideration. If the bearing is located on the shaft using an adapter sleeve, the axial retaining force of the bearing and adapter sleeve must also be taken into consideration.

If the load direction is between 55° and 120° or axial load is present, we recommend that the housings should be secured in the load direction by means of stops.

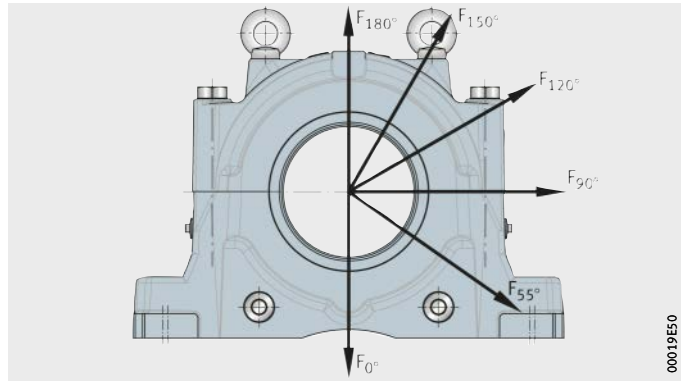



*Figure 19*
Load directions F
for the guide values
for the housing rupture load and
the maximum load carrying capacity
of the connecting screws

**Guide values for housing rupture load and maximum load carrying capacity of connecting screws, as well as tightening torques**

| Designation, housing | | | | | Housing rupture loads[1] in load direction F | |
|---|---|---|---|---|---|---|
| SNS22 | SNS30 | SNS31 | SNS32 | SNS40 | 0° kN | 55° kN |
| – | SNS3036 | SNS3134 | – | – | 4 050 | 4 540 |
| – | SNS3038 | SNS3136 | – | – | 4 400 | 4 940 |
| – | SNS3040 | SNS3138 | SNS3234 | – | 4 880 | 5 480 |
| – | – | – | SNS3236 | – | 4 880 | 5 480 |
| – | SNS3044 | SNS3140 | SNS3238 | – | 5 800 | 6 500 |
| – | SNS3048 | SNS3144 | SNS3240 | – | 6 240 | 7 560 |
| – | SNS3052 | SNS3148 | – | – | 7 330 | 8 550 |
| – | – | – | SNS3244 | – | 7 330 | 8 550 |
| – | SNS3056 | SNS3152 | – | – | 8 740 | 9 810 |
| – | – | – | SNS3248 | – | 8 740 | 9 810 |
| – | SNS3060 | SNS3156 | – | – | 9 200 | 10 320 |
| – | SNS3064 | SNS3160 | – | – | 10 150 | 11 390 |
| – | – | – | SNS3252 | – | 10 150 | 11 390 |
| – | – | – | SNS3256 | – | 10 150 | 11 390 |
| – | SNS3068 | SNS3164 | – | – | 11 410 | 12 810 |
| – | SNS3072 | – | – | – | 11 410 | 12 810 |
| – | – | – | SNS3260 | – | 11 410 | 12 810 |
| SNS2264 | SNS3076 | SNS3168 | – | SNS4076 | 13 300 | 14 930 |
| – | – | – | SNS3264 | – | 13 300 | 14 930 |
| – | SNS3080 | SNS3172 | – | – | 14 740 | 16 540 |
| – | – | – | – | SNS4080 | 14 740 | 16 540 |
| – | SNS3084 | SNS3176 | – | – | 15 940 | 17 890 |
| – | – | – | SNS3268 | – | 15 940 | 17 890 |
| – | – | – | – | SNS4084 | 15 940 | 17 890 |
| – | SNS3088 | SNS3180 | – | – | 18 490 | 20 750 |
| – | – | – | SNS3272 | – | 18 490 | 20 750 |
| – | – | – | – | SNS4088 | 18 490 | 20 750 |
| – | SNS3092 | SNS3184 | – | SNS4092 | 20 180 | 22 650 |
| – | SNS3096 | – | – | SNS4096 | 20 180 | 22 650 |
| – | – | – | SNS3276 | – | 20 180 | 22 650 |
| – | SNS30/500 | SNS3188 | – | – | 21 940 | 24 620 |
| – | – | – | SNS3280 | – | 21 940 | 24 620 |
| – | – | – | – | SNS40/500 | 21 940 | 24 620 |
| – | – | SNS3192 | – | – | 24 150 | 27 100 |
| – | – | – | SNS3284 | – | 24 150 | 27 100 |
| – | SNS30/530 | SNS3196 | – | SNS40/530 | 26 080 | 29 270 |
| – | – | – | SNS3288 | – | 26 080 | 29 270 |

[1] For housings made from spheroidal graphite cast iron GJS-400-15 (suffix D).

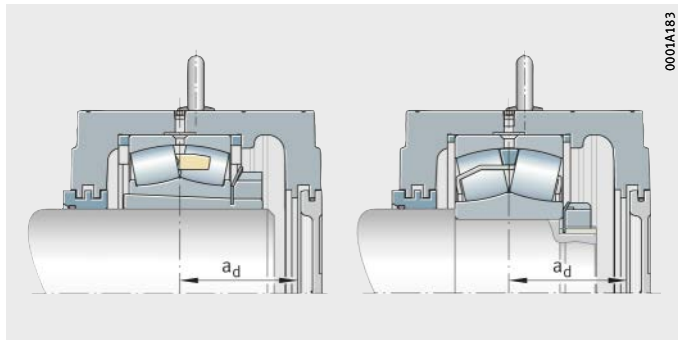




| | | | | | Connecting screws | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Screws in accordance with DIN EN ISO 4014 | Tightening torque | Maximum load carrying capacity of the four screws with contact between parting surfaces in load direction F | | | |
| 90° | 120° | 150° | 180° | axial | Material 8.8 | | 90° | 120° | 150° | 180° |
| kN | kN | kN | kN | kN | | Nm | kN | kN | kN | kN |
| 3 040 | 1 650 | 1 190 | 1 220 | 1 170 | M24 | 559 | 1 380 | 760 | 618 | 725 |
| 3 300 | 1 800 | 1 300 | 1 330 | 1 270 | M24 | 559 | 1 370 | 760 | 615 | 723 |
| 3 660 | 1 990 | 1 440 | 1 470 | 1 410 | M24 | 559 | 1 500 | 830 | 670 | 790 |
| 3 660 | 1 990 | 1 440 | 1 470 | 1 410 | M24 | 559 | 1 500 | 830 | 670 | 790 |
| 4 350 | 2 370 | 1 700 | 1 750 | 1 670 | M24 | 559 | 1 510 | 836 | 677 | 796 |
| 5 070 | 2 880 | 2 360 | 2 380 | 1 880 | M24 | 559 | 1 484 | 820 | 664 | 781 |
| 5 720 | 3 190 | 2 470 | 2 510 | 2 080 | M30 | 1 118 | 2 380 | 1 315 | 1 065 | 1 252 |
| 5 720 | 3 190 | 2 470 | 2 510 | 1 880 | M30 | 1 118 | 2 380 | 1 315 | 1 065 | 1 252 |
| 6 550 | 3 570 | 2 580 | 2 640 | 2 520 | M30 | 1 118 | 2 372 | 1 310 | 1 061 | 1 250 |
| 6 550 | 3 570 | 2 580 | 2 640 | 1 410 | M30 | 1 118 | 2 372 | 1 310 | 1 061 | 1 250 |
| 6 900 | 3 760 | 2 710 | 2 780 | 2 652 | M30 | 1 118 | 2 330 | 1 290 | 1 040 | 1 230 |
| 7 620 | 4 150 | 3 000 | 3 070 | 2 810 | M30 | 1 118 | 2 220 | 1 230 | 990 | 1 170 |
| 7 620 | 4 150 | 3 000 | 3 070 | 2 230 | M30 | 1 118 | 2 220 | 1 230 | 990 | 1 170 |
| 7 620 | 4 150 | 3 000 | 3 070 | 2 230 | M30 | 1 118 | 2 220 | 1 230 | 990 | 1 170 |
| 8 560 | 4 660 | 3 370 | 3 450 | 3 355 | M30 | 1 118 | 2 220 | 1 230 | 1 000 | 1 170 |
| 8 560 | 4 660 | 3 370 | 3 450 | 3 355 | M30 | 1 118 | 2 200 | 1 230 | 1 000 | 1 170 |
| 8 560 | 4 660 | 3 370 | 3 450 | 2 900 | M30 | 1 118 | 2 200 | 1 230 | 1 000 | 1 170 |
| 9 980 | 5 430 | 3 930 | 4 020 | 3 480 | M36 | 1 945 | 3 260 | 1 800 | 1 460 | 1 720 |
| 9 980 | 5 430 | 3 930 | 4 020 | 2 690 | M36 | 1 945 | 3 260 | 1 800 | 1 460 | 1 720 |
| 11 060 | 6 020 | 4 350 | 4 450 | 4 250 | M36 | 1 945 | 3 100 | 1 710 | 1 390 | 1 630 |
| 11 060 | 6 020 | 4 350 | 4 450 | 4 295 | M36 | 1 945 | 3 100 | 1 710 | 1 390 | 1 630 |
| 11 960 | 6 510 | 4 710 | 4 820 | 4 600 | M36 | 1 945 | 3 100 | 1 710 | 1 390 | 1 630 |
| 11 960 | 6 510 | 4 710 | 4 820 | 3 628 | M36 | 1 945 | 3 100 | 1 710 | 1 390 | 1 630 |
| 11 960 | 6 510 | 4 710 | 4 820 | 4 200 | M36 | 1 945 | 3 100 | 1 710 | 1 390 | 1 630 |
| 13 870 | 7 560 | 5 460 | 5 590 | 5 330 | M36 | 1 945 | 3 200 | 1 770 | 1 430 | 1 690 |
| 13 870 | 7 560 | 5 460 | 5 590 | 3 200 | M36 | 1 945 | 3 200 | 1 770 | 1 430 | 1 690 |
| 13 870 | 7 560 | 5 460 | 5 590 | 4 535 | M36 | 1 945 | 3 200 | 1 770 | 1 430 | 1 690 |
| 15 140 | 8 250 | 5 960 | 6 100 | 5 650 | M42 | 2 794 | 4 110 | 2 270 | 1 840 | 2 160 |
| 15 140 | 8 250 | 5 960 | 6 100 | 5 650 | M42 | 2 794 | 4 110 | 2 270 | 1 840 | 2 160 |
| 15 140 | 8 250 | 5 960 | 6 100 | 4 530 | M42 | 2 794 | 4 110 | 2 270 | 1 840 | 2 160 |
| 16 460 | 8 970 | 6 480 | 6 630 | 6 320 | M42 | 2 794 | 4 110 | 2 270 | 1 840 | 2 160 |
| 16 460 | 8 970 | 6 480 | 6 630 | 4 360 | M42 | 2 794 | 4 110 | 2 270 | 1 840 | 2 160 |
| 16 460 | 8 970 | 6 480 | 6 630 | 6 350 | M42 | 2 794 | 4 110 | 2 270 | 1 840 | 2 160 |
| 18 120 | 9 870 | 7 130 | 7 300 | 6 962 | M42 | 2 794 | 4 160 | 2 300 | 1 860 | 2 190 |
| 18 120 | 9 870 | 7 130 | 7 300 | 4 747 | M42 | 2 794 | 4 160 | 2 300 | 1 860 | 2 190 |
| 19 560 | 10 660 | 7 700 | 7 880 | 7 420 | M42 | 2 794 | 4 160 | 2 300 | 1 860 | 2 190 |
| 19 560 | 10 660 | 7 700 | 7 880 | 4 500 | M42 | 2 794 | 4 160 | 2 300 | 1 860 | 2 190 |

## Permissible shaft end designs

In the case of a housing closed on one side, the length of the shaft in the housing must be restricted such that no contact occurs between the shaft and the cover. In this case, the displacement facility of the bearing in a non-locating bearing arrangement must be taken into consideration. The basis for determining the permissible length of the shaft is the spacing between the centre of the bearing seat and the cover, *Figure 20* and table.




$a_d$ = spacing between centre of bearing seat and cover

*Figure 20*
Spacing between centre of bearing seat and cover

### Spacing between centre of bearing seat and cover

| Housing | | | | | Spacing |
|---|---|---|---|---|---|
| SNS22 | SNS30 | SNS31 | SNS32 | SNS40 | $a_d$ mm |
| – | SNS3036 | SNS3134 | – | – | 107,5 |
| – | SNS3038 | SNS3136 | – | – | 113,5 |
| – | SNS3040 | SNS3138 | SNS3234 | – | 117,5 |
| – | – | – | SNS3236 | – | 117,5 |
| – | SNS3044 | SNS3140 | SNS3238 | – | 127,5 |
| – | SNS3048 | SNS3144 | SNS3240 | – | 133,5 |
| – | SNS3052 | SNS3148 | SNS3244 | – | 141,5 |
| – | SNS3056 | SNS3152 | SNS3248 | – | 151,5 |
| – | SNS3060 | SNS3156 | – | – | 154,5 |
| – | SNS3064 | SNS3160 | SNS3252 | – | 175,5 |
| – | – | – | SNS3256 | – | 175,5 |
| – | SNS3068 | SNS3164 | SNS3260 | – | 186,5 |
| – | SNS3072 | – | – | – | 186,5 |
| SNS2264 | SNS3076 | SNS3168 | SNS3264 | SNS4076 | 202,5 |
| – | SNS3080 | SNS3172 | SNS3268 | SNS4080 | 208,5 |
| – | SNS3084 | SNS3176 | – | SNS4084 | 208,5 |
| – | SNS3088 | SNS3180 | SNS3272 | SNS4088 | 223,5 |
| – | SNS3092 | SNS3184 | SNS3276 | SNS4092 | 243,5 |
| – | SNS3096 | SNS3188 | SNS3280 | SNS4096 | 243,5 |
| – | SNS30/500 | – | – | SNS40/500 | 243,5 |
| – | SNS30/530 | SNS3192 | SNS3284 | SNS40/530 | 248,5 |
| – | – | SNS3196 | SNS3288 | – | 248,5 |

## Eye bolts



The upper housing section has 2 eye bolts in accordance with DIN 580. These are intended as locating points for mounting and dismounting of the housing. The load carrying capacity of the eye bolts allows lifting of the housing including a bearing fitted in the housing.



Eye bolts must always be screwed fully into the housing.

The eye bolt must not be subjected to a mass greater than that of the housing together with the bearing fitted in the housing.

## Foot screws



Foot screws are used for screw mounting of the housing to the locating surface. They are not included in the scope of delivery of the housings.

The appropriate screw size for each housing is stated, see dimension tables.

The associated tightening torques are stated for screws with a metric thread in accordance with DIN 13, DIN 962 and DIN ISO 965-2, see table, page 42.

## Mounting and dismounting

The fundamental requirements for the mounting and dismounting of bearing housings apply, see section Mounting and dismounting, page 39. Furthermore, there is a separate mounting manual for split plummer block housings SNS.

**Further information**

- MON 84, Split Plummer Block Housings SNS – Mounting Manual.

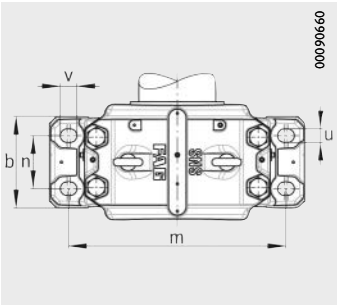
## Accuracy

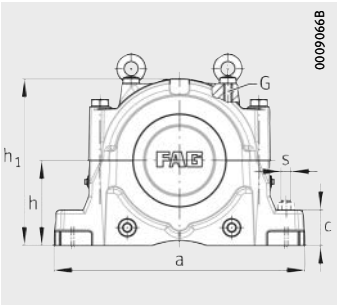
The bearing seat in split plummer block housings SNS is machined to the tolerance class G7.

By agreement, the housings can also be supplied with other tolerance classes for the bearing seat, see section Tolerance class of bearing seat, page 47.

# Plummer block housings

SNS, split
For spherical roller bearings with tapered bore and adapter sleeve
Metric shaft




**Dimension table** · Dimensions in mm

| Shaft | Housing Dimensions | | | | | | | | | | | | | | Spherical roller bearing and accessories | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_1$ | h | $h_1$ | g | b | c | a | m | n | v | u | s | D | k | e | Bearing | Adapter sleeve |
| **115** | 170 | 333 | 230 | 180 | 70 | 510 | 430 | 100 | 34 | 28 | M24 | 280 | 108 | 14 | **22326..-K** | H2326 |
| **125** | 180 | 353 | 240 | 190 | 75 | 530 | 450 | 110 | 34 | 28 | M24 | 300 | 116 | 15 | **22328..-K** | H2328 |
| **135** | 190 | 375 | 260 | 210 | 80 | 560 | 480 | 120 | 34 | 28 | M24 | 320 | 124 | 10 | **22330..-K** | H2330 |
| **140** | 180 | 353 | 240 | 190 | 75 | 530 | 450 | 110 | 34 | 28 | M24 | 290 | 115 | 15 | **22232..-K** | H3132(-HG) |
| **140** | 210 | 411 | 280 | 230 | 85 | 610 | 510 | 130 | 42 | 35 | M30 | 340 | 132 | 10 | **22332..-K** | H2332(-HG) |
| **140** | 180 | 353 | 240 | 190 | 75 | 530 | 450 | 110 | 34 | 28 | M24 | 290 | 115 | 15 | **23232..-K** | H2332(-HG) |
| **150** | 190 | 375 | 260 | 210 | 80 | 560 | 480 | 120 | 34 | 28 | M24 | 310 | 122 | 10 | **22234..-K** | H3134(-HG) |
| **150** | 220 | 434 | 290 | 240 | 90 | 640 | 540 | 140 | 42 | 35 | M30 | 360 | 140 | 12 | **22334..-K** | H2334(-HG) |
| **150** | 170 | 333 | 230 | 180 | 70 | 510 | 430 | 100 | 34 | 28 | M24 | 280 | 108 | 14 | **23134..-K** | H3134(-HG) |
| **150** | 170 | 333 | 230 | 180 | 70 | 510 | 430 | 100 | 34 | 28 | M24 | 280 | 108 | 14 | **231SM150-MA**[1)] | – |
| **150** | 190 | 375 | 260 | 210 | 80 | 560 | 480 | 120 | 34 | 28 | M24 | 310 | 122 | 10 | **23234..-K** | H2334(-HG) |
| **160** | 190 | 375 | 260 | 210 | 80 | 560 | 480 | 120 | 34 | 28 | M24 | 320 | 124 | 10 | **22236..-K** | H3136(-HG) |
| **160** | 170 | 333 | 230 | 180 | 70 | 510 | 430 | 100 | 34 | 28 | M24 | 280 | 108 | 14 | **23036..-K** | H3036(-HG) |
| **160** | 170 | 333 | 230 | 180 | 70 | 510 | 430 | 100 | 34 | 28 | M24 | 280 | 108 | 14 | **230SM160-MA**[1)] | – |
| **160** | 180 | 353 | 240 | 190 | 75 | 530 | 450 | 110 | 34 | 28 | M24 | 300 | 116 | 15 | **23136..-K** | H3136(-HG) |
| **160** | 180 | 353 | 240 | 190 | 75 | 530 | 450 | 110 | 34 | 28 | M24 | 300 | 116 | 15 | **231SM160-MA**[1)] | – |
| **160** | 190 | 375 | 260 | 210 | 80 | 560 | 480 | 120 | 34 | 28 | M24 | 320 | 124 | 10 | **23236..-K** | H2336(-HG) |
| **170** | 210 | 411 | 280 | 230 | 85 | 610 | 510 | 130 | 42 | 35 | M30 | 340 | 132 | 10 | **22238..-K** | H3138(-HG) |
| **170** | 240 | 474 | 310 | 260 | 95 | 700 | 600 | 150 | 42 | 35 | M30 | 400 | 148 | 12 | **22338..-K** | H2338(-HG) |
| **170** | 180 | 353 | 240 | 190 | 75 | 530 | 450 | 110 | 34 | 28 | M24 | 290 | 115 | 15 | **23038..-K** | H3038(-HG) |
| **170** | 180 | 353 | 240 | 190 | 75 | 530 | 450 | 110 | 34 | 28 | M24 | 290 | 115 | 15 | **230SM170-MA**[1)] | – |
| **170** | 190 | 375 | 260 | 210 | 80 | 560 | 480 | 120 | 34 | 28 | M24 | 320 | 124 | 10 | **23138..-K** | H3138(-HG) |
| **170** | 190 | 375 | 260 | 210 | 80 | 560 | 480 | 120 | 34 | 28 | M24 | 320 | 124 | 10 | **231SM170-MA** | – |
| **170** | 210 | 411 | 280 | 230 | 85 | 610 | 510 | 130 | 42 | 35 | M30 | 340 | 132 | 10 | **23238..-K** | H2338(-HG) |

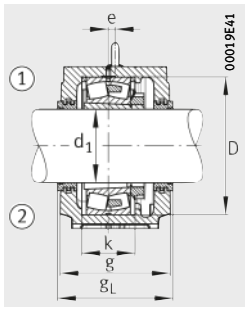
① Locating bearing; ② Non-locating bearing

1) Split bearing in associated housing has restricted usability. Please ask for further information.

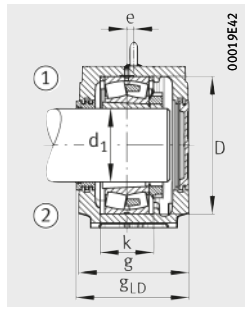
2) Alternatively also available with split labyrinth seal NTSG.

3) With NTSG: width $g_L$ increased by 16 mm.

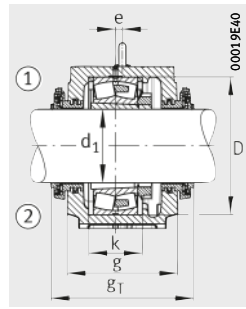
4) With NTSG: width $g_{LD}$ increased by 8 mm.



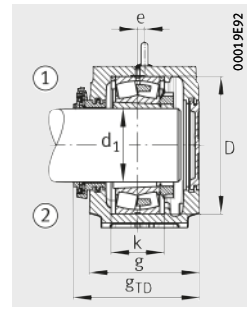

Labyrinth seal NTS




Labyrinth seal NTS
Cover NDK




Taconite seal NTC




Taconite seal NTC
Cover NDK



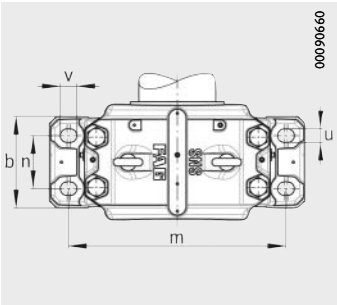


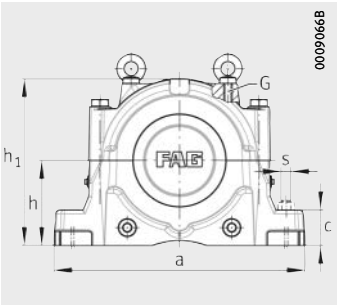


| | | | | | | | | | Housing | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Locating ring | | Labyrinth seal | | | Taconite seal | | | Cover | G | Mass | Designation |
| | Quantity | | $g_L$ mm | $g_{LD}$ mm | | $g_T$ mm | $g_{TD}$ mm | | | m ≈ kg | |
| NFR280/7,5 | 2 | NTS34/115 | 241 | 235,5 | NTC34/115 | 299 | 264 | NDK34 | M16 | 75 | **SNS3134-H-D** |
| NFR300/7 | 2 | NTS36/125 | 251 | 245,5 | NTC36/125 | 310 | 274,5 | NDK36 | M16 | 83 | **SNS3136-H-D** |
| NFR320/8 | 2 | NTS38/135 | 271 | 265,5 | NTC38/135 | 330 | 294,5 | NDK38 | M20 | 102 | **SNS3138-H-D** |
| NFR290/17,5 | 2 | NTS38/140 | 251 | 245,5 | NTC38/140 | 312 | 275,5 | NDK38 | M16 | 86 | **SNS3038-H-D** |
| NFR340/9 | 2 | NTS40/140 | 291 | 285,5 | NTC40/140 | 347 | 313 | NDK40 | M20 | 133 | **SNS3140-H-D** |
| NFR290/5,5 | 2 | NTS38/140 | 251 | 245,5 | NTC38/140 | 312 | 275,5 | NDK38 | M16 | 86 | **SNS3038-H-D** |
| NFR310/18 | 2 | NTS40/150 | 271 | 265,5 | NTC40/150 | 326 | 293 | NDK40 | M20 | 105 | **SNS3040-H-D** |
| NFR360/10 | 2 | NTS48/150 | 301 | 295,5 | NTC48/150 | 380 | 335 | NDK48 | M20 | 148 | **SNS3048-H-D** |
| NFR280/10 | 2 | NTS34[2)] | 241[3)] | 235,5[4)] | NTC34 | 299 | 264,5 | NDK34 | M16 | 75 | **SNS3134-H-D** |
| NFR280/10 | 2 | NTS34[2)] | 241[3)] | 235,5[4)] | NTC34 | 299 | 264,5 | NDK34 | M16 | 75 | **SNS3134-H-D** |
| NFR310/6 | 2 | NTS40/150 | 271 | 265,5 | NTC40/150 | 327 | 293 | NDK40 | M20 | 105 | **SNS3234-H-D** |
| NFR320/19 | 2 | NTS38/160 | 271 | 265,5 | NTC38/160 | 329 | 294,5 | NDK38 | M20 | 102 | **SNS3138-H-D** |
| NFR280/17 | 2 | NTS36[2)] | 241[3)] | 235,5[4)] | NTC36 | 304 | 267 | NDK36 | M16 | 74 | **SNS3036-H-D** |
| NFR280/17 | 2 | NTS36[2)] | 241[3)] | 235,5[4)] | NTC36 | 304 | 267 | NDK36 | M16 | 74 | **SNS3036-H-D** |
| NFR300/10 | 2 | NTS36[2)] | 251[3)] | 245,5[4)] | NTC36 | 314 | 277 | NDK36 | M16 | 83 | **SNS3136-H-D** |
| NFR300/10 | 2 | NTS36[2)] | 251[3)] | 245,5[4)] | NTC36 | 314 | 277 | NDK36 | M16 | 83 | **SNS3136-H-D** |
| NFR320/6 | 2 | NTS38/160 | 271 | 265,5 | NTC38/160 | 330 | 294,5 | NDK38 | M20 | 102 | **SNS3236-H-D** |
| NFR340/10 | 4 | NTS40/170 | 291 | 285,5 | NTC40/170 | 346 | 313 | NDK40 | M20 | 133 | **SNS3140-H-D** |
| NFR400/8 | 2 | NTS48/170 | 321 | 315,5 | NTC48/170 | 401 | 355 | NDK48 | M24 | 184 | **SNS3148-H-D** |
| NFR290/10 | 4 | NTS38[2)] | 251[3)] | 245,5[4)] | NTC38 | 312 | 275,5 | NDK38 | M16 | 86 | **SNS3038-H-D** |
| NFR290/10 | 4 | NTS38[2)] | 251[3)] | 245,5[4)] | NTC38 | 312 | 275,5 | NDK38 | M16 | 86 | **SNS3038-H-D** |
| NFR320/10 | 2 | NTS38[2)] | 271[3)] | 265,5[4)] | NTC38 | 334 | 297 | NDK38 | M20 | 102 | **SNS3138-H-D** |
| NFR320/10 | 2 | NTS38[2)] | 271[3)] | 265,5[4)] | NTC38 | 334 | 297 | NDK38 | M20 | 102 | **SNS3138-H-D** |
| NFR340/6 | 2 | NTS40/170 | 291 | 285,5 | NTC40/170 | 347 | 313 | NDK40 | M20 | 133 | **SNS3238-H-D** |

# Plummer block housings

SNS, split
For spherical roller bearings with tapered bore and adapter sleeve
Metric shaft




**Dimension table** (continued) · Dimensions in mm

| Shaft | Housing Dimensions | | | | | | | | | | | | | | Spherical roller bearing and accessories | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_1$ | h | $h_1$ | g | b | c | a | m | n | v | u | s | D | k | e | Bearing | Adapter sleeve |
| **180** | 220 | 434 | 290 | 240 | 90 | 640 | 540 | 140 | 42 | 35 | M30 | 360 | 140 | 12 | **22240..-K** | H3140(-HG) |
| **180** | 260 | 516 | 320 | 280 | 100 | 770 | 650 | 160 | 50 | 42 | M36 | 420 | 166 | 13 | **22340..-K** | H2340(-HG) |
| **180** | 190 | 375 | 260 | 210 | 80 | 560 | 480 | 120 | 34 | 28 | M24 | 310 | 122 | 10 | **23040..-K** | H3040(-HG) |
| **180** | 190 | 375 | 260 | 210 | 80 | 560 | 480 | 120 | 34 | 28 | M24 | 310 | 122 | 10 | **230SM180-MA**[1)] | – |
| **180** | 210 | 411 | 280 | 230 | 85 | 610 | 510 | 130 | 42 | 35 | M30 | 340 | 132 | 10 | **23140..-K** | H3140(-HG) |
| **180** | 210 | 411 | 280 | 230 | 85 | 610 | 510 | 130 | 42 | 35 | M30 | 340 | 132 | 10 | **231SM180-MA** | – |
| **180** | 220 | 434 | 290 | 240 | 90 | 640 | 540 | 140 | 42 | 35 | M30 | 360 | 140 | 12 | **23240..-K** | H2340(-HG) |
| **200** | 240 | 474 | 310 | 260 | 95 | 700 | 600 | 150 | 42 | 35 | M30 | 400 | 148 | 12 | **22244..-K** | H3144X(-HG) |
| **200** | 280 | 550 | 320 | 280 | 105 | 790 | 670 | 160 | 50 | 42 | M36 | 460 | 166 | 16 | **22344..-K** | H2344X(-HG) |
| **200** | 210 | 411 | 280 | 230 | 85 | 610 | 510 | 130 | 42 | 35 | M30 | 340 | 130 | 10 | **23044..-K** | H3044X(-HG) |
| **200** | 210 | 411 | 280 | 230 | 85 | 610 | 510 | 130 | 42 | 35 | M30 | 340 | 130 | 10 | **230SM200-MA** | – |
| **200** | 220 | 434 | 290 | 240 | 90 | 640 | 540 | 140 | 42 | 35 | M30 | 370 | 140 | 12 | **23144..-K** | H3144X(-HG) |
| **200** | 220 | 434 | 290 | 240 | 90 | 640 | 540 | 140 | 42 | 35 | M30 | 370 | 140 | 12 | **231SM200-MA**[1)] | – |
| **200** | 240 | 474 | 310 | 260 | 95 | 700 | 600 | 150 | 42 | 35 | M30 | 400 | 164 | 12 | **23244..-K** | H2344X(-HG) |
| **220** | 260 | 516 | 320 | 280 | 100 | 770 | 650 | 160 | 50 | 42 | M36 | 440 | 164 | 13 | **22248..-K** | H3148X(-HG) |
| **220** | 300 | 591 | 350 | 310 | 110 | 830 | 710 | 190 | 50 | 42 | M36 | 500 | 180 | 22 | **22348..-K** | H2348X(-HG) |
| **220** | 220 | 434 | 290 | 240 | 90 | 640 | 540 | 140 | 42 | 35 | M30 | 360 | 140 | 12 | **23048..-K** | H3048(-HG) |
| **220** | 220 | 434 | 290 | 240 | 90 | 640 | 540 | 140 | 42 | 35 | M30 | 360 | 140 | 12 | **230SM220-MA**[1)] | – |
| **220** | 240 | 474 | 310 | 260 | 95 | 700 | 600 | 150 | 42 | 35 | M30 | 400 | 148 | 12 | **23148..-K** | H3148X(-HG) |
| **220** | 240 | 474 | 310 | 260 | 95 | 700 | 600 | 150 | 42 | 35 | M30 | 400 | 148 | 12 | **231SM220-MA** | – |
| **220** | 260 | 516 | 320 | 280 | 100 | 770 | 650 | 160 | 50 | 42 | M36 | 440 | 180 | 13 | **23248..-K** | H2348X(-HG) |
| **240** | 300 | 591 | 350 | 310 | 110 | 830 | 710 | 190 | 50 | 42 | M36 | 480 | 181 | 22 | **22252..-K** | H3152X(-HG) |
| **240** | 320 | 631 | 370 | 330 | 115 | 880 | 750 | 200 | 50 | 42 | M36 | 540 | 196 | 23 | **22352..-K** | H2352X(-HG) |
| **240** | 240 | 474 | 310 | 260 | 95 | 700 | 600 | 150 | 42 | 35 | M30 | 400 | 148 | 12 | **23052..-K** | H3052X(-HG) |
| **240** | 240 | 474 | 310 | 260 | 95 | 700 | 600 | 150 | 42 | 35 | M30 | 400 | 148 | 12 | **230SM240-MA** | – |
| **240** | 260 | 516 | 320 | 280 | 100 | 770 | 650 | 160 | 50 | 42 | M36 | 440 | 164 | 13 | **23152..-K** | H3152X(-HG) |
| **240** | 260 | 516 | 320 | 280 | 100 | 770 | 650 | 160 | 50 | 42 | M36 | 440 | 164 | 13 | **231SM240-MA**[1)] | – |
| **240** | 300 | 591 | 350 | 310 | 110 | 830 | 710 | 190 | 50 | 42 | M36 | 480 | 194 | 22 | **23252..-K** | H2352X(-HG) |

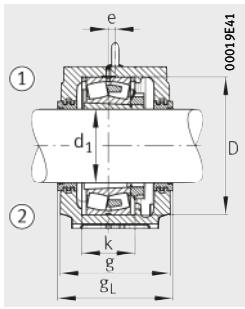
① Locating bearing; ② Non-locating bearing

1) Split bearing in associated housing has restricted usability. Please ask for further information.

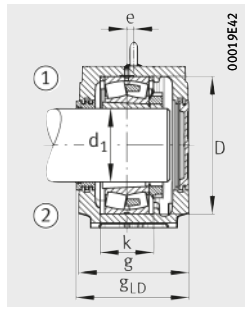
2) Alternatively also available with split labyrinth seal NTSG.

3) With NTSG: width $g_L$ increased by 16 mm.

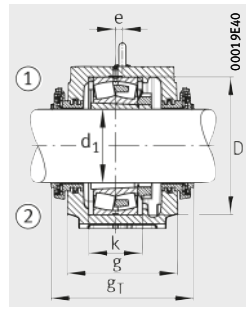
4) With NTSG: width $g_{LD}$ increased by 8 mm.



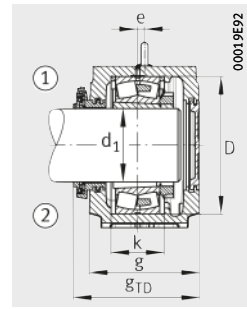

Labyrinth seal NTS




Labyrinth seal NTS
Cover NDK




Taconite seal NTC




Taconite seal NTC
Cover NDK



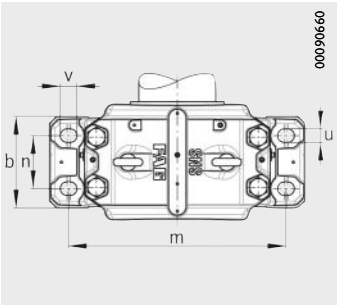


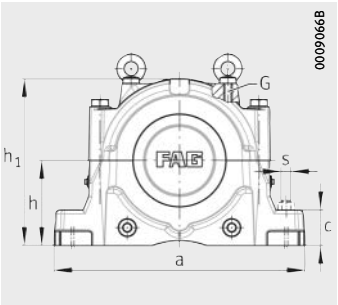


| | | | | | | | | | Housing | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Locating ring | | Labyrinth seal | | | Taconite seal | | | Cover | G | Mass | Designation |
| | Quantity | | $g_L$ mm | $g_{LD}$ mm | | $g_T$ mm | $g_{TD}$ mm | | | m ≈ kg | |
| NFR360/21 | 2 | NTS48/180 | 301 | 295,5 | NTC48/180 | 380 | 335 | NDK48 | M20 | 148 | **SNS3048-H-D** |
| NFR420/14 | 2 | NTS56/180 | 331 | 325,5 | NTC56/180 | 411 | 365 | NDK56 | M24 | 249 | **SNS3056-H-D** |
| NFR310/10 | 4 | NTS40[2] | 271[3] | 265,5[4] | NTC40 | 326 | 293 | NDK40 | M20 | 105 | **SNS3040-H-D** |
| NFR310/10 | 4 | NTS40[2] | 271[3] | 265,5[4] | NTC40 | 326 | 293 | NDK40 | M20 | 105 | **SNS3040-H-D** |
| NFR340/10 | 2 | NTS40[2] | 291[3] | 285,5[4] | NTC40 | 354 | 317 | NDK40 | M20 | 133 | **SNS3140-H-D** |
| NFR340/10 | 2 | NTS40[2] | 291[3] | 285,5[4] | NTC40 | 354 | 317 | NDK40 | M20 | 133 | **SNS3140-H-D** |
| NFR360/6 | 2 | NTS48/180 | 301 | 295,5 | NTC48/180 | 381 | 335 | NDK48 | M20 | 148 | **SNS3240-H-D** |
| NFR400/10 | 4 | NTS48/200 | 321 | 315,5 | NTC48/200 | 400 | 355 | NDK48 | M24 | 184 | **SNS3148-H-D** |
| NFR460/10,5 | 2 | NTS56/200 | 331 | 325,5 | NTC56/200 | 411 | 365 | NDK56 | M24 | 264 | **SNS3156-H-D** |
| NFR340/10 | 4 | NTS44[2] | 291[3] | 285,5[4] | NTC44 | 370 | 325 | NDK44 | M20 | 129 | **SNS3044-H-D** |
| NFR340/10 | 4 | NTS44[2] | 291[3] | 285,5[4] | NTC44 | 370 | 325 | NDK44 | M20 | 129 | **SNS3044-H-D** |
| NFR370/10 | 2 | NTS44[2] | 301[3] | 295,5[4] | NTC44 | 380 | 335 | NDK44 | M20 | 146 | **SNS3144-H-D** |
| NFR370/10 | 2 | NTS44[2] | 301[3] | 295,5[4] | NTC44 | 380 | 335 | NDK44 | M20 | 146 | **SNS3144-H-D** |
| NFR400/10 | 2 | NTS48/200 | 321 | 315,5 | NTC48/200 | 401 | 355 | NDK48 | M24 | 183 | **SNS3244-H-D** |
| NFR440/22 | 2 | NTS52/220 | 331 | 325,5 | NTC52/220 | 410 | 365 | NDK52 | M24 | 238 | **SNS3152-H-D** |
| NFR500/12,5 | 2 | NTS60/220 | 361 | 355,5 | NTC60/220 | 441 | 395 | NDK60 | M30 | 317 | **SNS3160-H-D** |
| NFR360/12 | 4 | NTS48[2] | 301[3] | 295,5[4] | NTC48 | 380 | 335 | NDK48 | M20 | 148 | **SNS3048-H-D** |
| NFR360/12 | 4 | NTS48[2] | 301[3] | 295,5[4] | NTC48 | 380 | 335 | NDK48 | M20 | 148 | **SNS3048-H-D** |
| NFR400/10 | 2 | NTS48[2] | 321[3] | 315,5[4] | NTC48 | 400 | 355 | NDK48 | M24 | 184 | **SNS3148-H-D** |
| NFR400/10 | 2 | NTS48[2] | 321[3] | 315,5[4] | NTC48 | 400 | 355 | NDK48 | M24 | 184 | **SNS3148-H-D** |
| NFR440/10 | 2 | NTS52/220 | 331 | 325,5 | NTC52/220 | 410 | 365 | NDK52 | M24 | 235 | **SNS3248-H-D** |
| NFR480/25,5 | 2 | NTS64/240 | 361 | 355,5 | NTC64/240 | 440 | 395 | NDK64 | M30 | 332 | **SNS3064-H-D** |
| NFR540/15,5 | 2 | NTS64/240 | 381 | 375,5 | NTC64/240 | 460 | 415 | NDK64 | M30 | 368 | **SNS3164-H-D** |
| NFR400/22 | 2 | NTS52[2] | 321[3] | 315,5[4] | NTC52 | 401 | 355 | NDK52 | M24 | 180 | **SNS3052-H-D** |
| NFR400/22 | 2 | NTS52[2] | 321[3] | 315,5[4] | NTC52 | 401 | 355 | NDK52 | M24 | 180 | **SNS3052-H-D** |
| NFR440/10 | 2 | NTS52[2] | 331[3] | 325,5[4] | NTC52 | 410 | 365 | NDK52 | M24 | 238 | **SNS3152-H-D** |
| NFR440/10 | 2 | NTS52[2] | 331[3] | 325,5[4] | NTC52 | 410 | 365 | NDK52 | M24 | 238 | **SNS3152-H-D** |
| NFR480/10 | 2 | NTS64/240 | 361 | 355,5 | NTC64/240 | 440 | 395 | NDK64 | M30 | 331 | **SNS3252-H-D** |

# Plummer block housings

SNS, split
For spherical roller bearings with tapered bore and adapter sleeve
Metric shaft



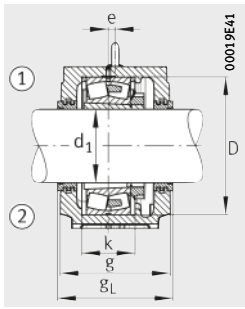




**Dimension table** (continued) · Dimensions in mm

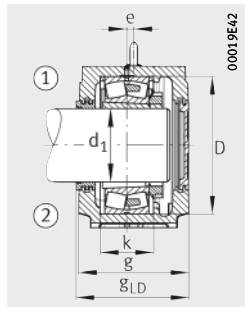
| Shaft | Housing Dimensions | | | | | | | | | | | | | | Spherical roller bearing and accessories | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_1$ | h | $h_1$ | g | b | c | a | m | n | v | u | s | D | k | e | Bearing | Adapter sleeve |
| **260** | 300 | 591 | 350 | 310 | 110 | 830 | 710 | 190 | 50 | 42 | M36 | 500 | 180 | 22 | **22256..-K** | H3156X(-HG) |
| **260** | 340 | 675 | 400 | 360 | 120 | 950 | 810 | 220 | 50 | 42 | M36 | 580 | 210 | 24 | **22356..-K** | H2356X(-HG) |
| **260** | 260 | 516 | 320 | 280 | 100 | 770 | 650 | 160 | 50 | 42 | M36 | 420 | 166 | 13 | **23056..-K** | H3056(-HG) |
| **260** | 260 | 516 | 320 | 280 | 100 | 770 | 650 | 160 | 50 | 42 | M36 | 420 | 166 | 13 | **230SM260-MA**[1)] | – |
| **260** | 280 | 550 | 320 | 280 | 105 | 790 | 670 | 160 | 50 | 42 | M36 | 460 | 166 | 16 | **23156..-K** | H3156X(-HG) |
| **260** | 280 | 550 | 320 | 280 | 105 | 790 | 670 | 160 | 50 | 42 | M36 | 460 | 166 | 16 | **231SM260-MA** | – |
| **260** | 300 | 591 | 350 | 310 | 110 | 830 | 710 | 190 | 50 | 42 | M36 | 500 | 196 | 22 | **23256..-K** | H2356X(-HG) |
| **260** | 300 | 591 | 350 | 310 | 110 | 830 | 710 | 190 | 50 | 42 | M36 | 500 | 196 | 22 | **232SM260-MA**[1)] | – |
| **280** | 320 | 631 | 370 | 330 | 115 | 880 | 750 | 200 | 50 | 42 | M36 | 540 | 196 | 23 | **22260..-K** | H3160(-HG) |
| **280** | 280 | 550 | 320 | 280 | 105 | 790 | 670 | 160 | 50 | 42 | M36 | 460 | 168 | 16 | **23060..-K** | H3060(-HG) |
| **280** | 280 | 550 | 320 | 280 | 105 | 790 | 670 | 160 | 50 | 42 | M36 | 460 | 168 | 16 | **230SM280-MA**[1)] | – |
| **280** | 300 | 591 | 350 | 310 | 110 | 830 | 710 | 190 | 50 | 42 | M36 | 500 | 180 | 22 | **23160..-K** | H3160(-HG) |
| **280** | 300 | 591 | 350 | 310 | 110 | 830 | 710 | 190 | 50 | 42 | M36 | 500 | 180 | 22 | **231SM280-MA**[1)] | – |
| **280** | 320 | 631 | 370 | 330 | 115 | 880 | 750 | 200 | 50 | 42 | M36 | 540 | 212 | 23 | **23260..-K** | H3260(-HG) |
| **300** | 340 | 675 | 400 | 360 | 120 | 950 | 810 | 220 | 50 | 42 | M36 | 580 | 190 | 24 | **22264..-K** | H3164-HG |
| **300** | 300 | 591 | 350 | 310 | 110 | 830 | 710 | 190 | 50 | 42 | M36 | 480 | 181 | 22 | **23064..-K** | H3064-HG |
| **300** | 300 | 591 | 350 | 310 | 110 | 830 | 710 | 190 | 50 | 42 | M36 | 480 | 181 | 22 | **230SM300-MA**[1)] | – |
| **300** | 320 | 631 | 370 | 330 | 115 | 880 | 750 | 200 | 50 | 42 | M36 | 540 | 196 | 23 | **23164..-K** | H3164-HG |
| **300** | 320 | 631 | 370 | 330 | 115 | 880 | 750 | 200 | 50 | 42 | M36 | 540 | 196 | 23 | **231SM300-MA**[1)] | – |
| **300** | 340 | 675 | 400 | 360 | 120 | 950 | 810 | 220 | 50 | 42 | M36 | 580 | 228 | 24 | **23264..-K** | H3264-HG |
| **300** | 340 | 675 | 400 | 360 | 120 | 950 | 810 | 220 | 50 | 42 | M36 | 580 | 228 | 24 | **232SM300-MA**[1)] | – |
| **320** | 320 | 631 | 370 | 330 | 115 | 880 | 750 | 200 | 50 | 42 | M36 | 520 | 197 | 23 | **23068..-K** | H3068-HG |
| **320** | 320 | 631 | 370 | 330 | 115 | 880 | 750 | 200 | 50 | 42 | M36 | 520 | 197 | 23 | **230SM320-MA**[1)] | – |
| **320** | 340 | 675 | 400 | 360 | 120 | 950 | 810 | 220 | 50 | 42 | M36 | 580 | 210 | 24 | **23168..-K** | H3168-HG |
| **320** | 340 | 675 | 400 | 360 | 120 | 950 | 810 | 220 | 50 | 42 | M36 | 580 | 210 | 24 | **231SM320-MA** | – |
| **320** | 360 | 715 | 400 | 360 | 120 | 1 040 | 870 | 220 | 50 | 42 | M36 | 620 | 244 | 30 | **23268..-K** | H3268-HG |

① Locating bearing; ② Non-locating bearing

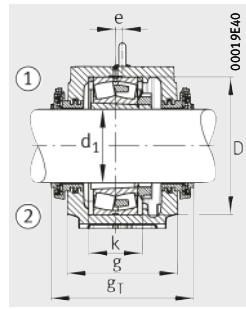
[1)] Split bearing in associated housing has restricted usability.
Please ask for further information.



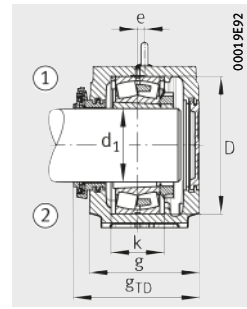

Labyrinth seal NTS




Labyrinth seal NTS
Cover NDK




Taconite seal NTC




Taconite seal NTC
Cover NDK



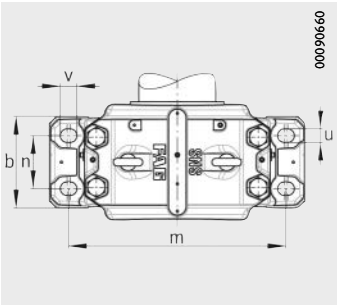


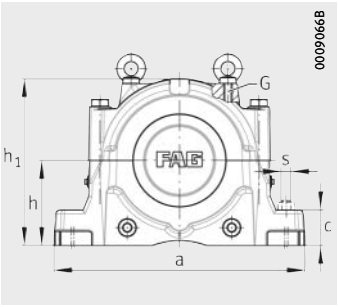


| Locating ring | | Labyrinth seal | | | Taconite seal | | | Cover | Housing G | Mass m ≈ kg | Designation |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Quantity | | $g_L$ mm | $g_{LD}$ mm | | $g_T$ mm | $g_{TD}$ mm | | | | |
| NFR500/25 | 2 | NTS60/260 | 361 | 355,5 | NTC60/260 | 440 | 395 | NDK60 | M30 | 317 | **SNS3160-H-D** |
| NFR580/17,5 | 2 | NTS68/260 | 411 | 405,5 | NTC68/260 | 490 | 445 | NDK68 | M30 | 461 | **SNS3168-H-D** |
| NFR420/10 | 6 | NTS56 | 331 | 325,5 | NTC56 | 411 | 365 | NDK56 | M24 | 249 | **SNS3056-H-D** |
| NFR420/10 | 6 | NTS56 | 331 | 325,5 | NTC56 | 411 | 365 | NDK56 | M24 | 249 | **SNS3056-H-D** |
| NFR460/10 | 2 | NTS56 | 331 | 325,5 | NTC56 | 410 | 365 | NDK56 | M24 | 264 | **SNS3156-H-D** |
| NFR460/10 | 2 | NTS56 | 331 | 325,5 | NTC56 | 410 | 365 | NDK56 | M24 | 264 | **SNS3156-H-D** |
| NFR500/10 | 2 | NTS60/260 | 361 | 355,5 | NTC60/260 | 441 | 395 | NDK60 | M30 | 314 | **SNS3256-H-D** |
| NFR500/10 | 2 | NTS60/260 | 361 | 355,5 | NTC60/260 | 441 | 395 | NDK60 | M30 | 314 | **SNS3256-H-D** |
| NFR540/28 | 2 | NTS64/280 | 381 | 375,5 | NTC64/280 | 460 | 415 | NDK64 | M30 | 368 | **SNS3164-H-D** |
| NFR460/25 | 2 | NTS60 | 331 | 325,5 | NTC60 | 411 | 365 | NDK60 | M24 | 260 | **SNS3060-H-D** |
| NFR460/25 | 2 | NTS60 | 331 | 325,5 | NTC60 | 411 | 365 | NDK60 | M24 | 260 | **SNS3060-H-D** |
| NFR500/10 | 2 | NTS60 | 361 | 355,5 | NTC60 | 440 | 395 | NDK60 | M30 | 317 | **SNS3160-H-D** |
| NFR500/10 | 2 | NTS60 | 361 | 355,5 | NTC60 | 440 | 395 | NDK60 | M30 | 317 | **SNS3160-H-D** |
| NFR540/10 | 2 | NTS64/280 | 381 | 375,5 | NTC64/280 | 461 | 415 | NDK64 | M30 | 364 | **SNS3260-H-D** |
| NFR580/20 | 2 | NTS68/300 | 411 | 405,5 | NTC68/300 | 490 | 445 | NDK68 | M30 | 466 | **SNS2264-H-D** |
| NFR480/10 | 6 | NTS64 | 361 | 355,5 | NTC64 | 441 | 395 | NDK64 | M30 | 332 | **SNS3064-H-D** |
| NFR480/10 | 6 | NTS64 | 361 | 355,5 | NTC64 | 441 | 395 | NDK64 | M30 | 332 | **SNS3064-H-D** |
| NFR540/10 | 2 | NTS64 | 381 | 375,5 | NTC64 | 460 | 415 | NDK64 | M30 | 368 | **SNS3164-H-D** |
| NFR540/10 | 2 | NTS64 | 381 | 375,5 | NTC64 | 460 | 415 | NDK64 | M30 | 368 | **SNS3164-H-D** |
| NFR580/10 | 2 | NTS68/300 | 411 | 405,5 | NTC68/300 | 491 | 445 | NDK68 | M30 | 457 | **SNS3264-H-D** |
| NFR580/10 | 2 | NTS68/300 | 411 | 405,5 | NTC68/300 | 491 | 445 | NDK68 | M30 | 457 | **SNS3264-H-D** |
| NFR520/16 | 4 | NTS68 | 381 | 375,5 | NTC68 | 461 | 415 | NDK68 | M30 | 386 | **SNS3068-H-D** |
| NFR520/16 | 4 | NTS68 | 381 | 375,5 | NTC68 | 461 | 415 | NDK68 | M30 | 386 | **SNS3068-H-D** |
| NFR580/10 | 2 | NTS68 | 411 | 405,5 | NTC68 | 490 | 445 | NDK68 | M30 | 461 | **SNS3168-H-D** |
| NFR580/10 | 2 | NTS68 | 411 | 405,5 | NTC68 | 490 | 445 | NDK68 | M30 | 461 | **SNS3168-H-D** |
| NFR620/10 | 2 | NTS76/320 | 411 | 405,5 | NTC76/320 | 490 | 445 | NDK76 | M36 | 530 | **SNS3268-H-D** |

# Plummer block housings

SNS, split
For spherical roller bearings with tapered bore and adapter sleeve
Metric shaft



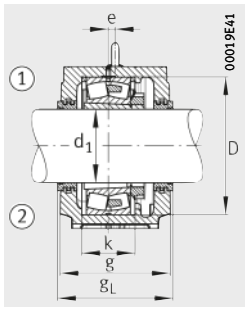




**Dimension table** (continued) · Dimensions in mm

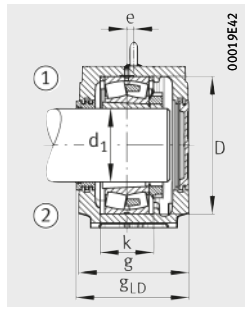
| Shaft | Housing Dimensions | | | | | | | | | | | | | | Spherical roller bearing and accessories | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_1$ | h | $h_1$ | g | b | c | a | m | n | v | u | s | D | k | e | Bearing | Adapter sleeve |
| **340** | 380 | 755 | 430 | 390 | 125 | 1 120 | 950 | 240 | 60 | 48 | M42 | 650 | 220 | 30 | **22272..-K** | H3172-HG |
| **340** | 320 | 631 | 370 | 330 | 115 | 880 | 750 | 200 | 50 | 42 | M36 | 540 | 198 | 23 | **23072..-K** | H3072-HG |
| **340** | 320 | 631 | 370 | 330 | 115 | 880 | 750 | 200 | 50 | 42 | M36 | 540 | 198 | 23 | **230SM340-MA**[1)] | – |
| **340** | 350 | 695 | 400 | 360 | 120 | 1 000 | 840 | 220 | 50 | 42 | M36 | 600 | 212 | 30 | **23172..-K** | H3172-HG |
| **340** | 350 | 695 | 400 | 360 | 120 | 1 000 | 840 | 220 | 50 | 42 | M36 | 600 | 212 | 30 | **231SM340-MA**[1)] | – |
| **340** | 380 | 755 | 430 | 390 | 125 | 1 120 | 950 | 240 | 60 | 48 | M42 | 650 | 252 | 30 | **23272..-K** | H3272-HG |
| **340** | 380 | 755 | 430 | 390 | 125 | 1 120 | 950 | 240 | 60 | 48 | M42 | 650 | 252 | 30 | **232SM340-MA**[1)] | – |
| **360** | 340 | 675 | 400 | 360 | 120 | 950 | 810 | 220 | 50 | 42 | M36 | 560 | 180 | 24 | **23076..-K** | H3076-HG |
| **360** | 340 | 675 | 400 | 360 | 120 | 950 | 810 | 220 | 50 | 42 | M36 | 560 | 180 | 24 | **230SM360-MA** | – |
| **360** | 360 | 715 | 400 | 360 | 120 | 1 040 | 870 | 220 | 50 | 42 | M36 | 620 | 214 | 30 | **23176..-K** | H3176-HG |
| **360** | 360 | 715 | 400 | 360 | 120 | 1 040 | 870 | 220 | 50 | 42 | M36 | 620 | 214 | 30 | **231SM360-MA**[1)] | – |
| **360** | 410 | 810 | 460 | 420 | 130 | 1 170 | 1 000 | 260 | 60 | 48 | M42 | 680 | 260 | 35 | **23276..-K** | H3276-HG |
| **380** | 350 | 695 | 400 | 360 | 120 | 1 000 | 840 | 220 | 50 | 42 | M36 | 600 | 192 | 30 | **23080..-K** | H3080-HG |
| **380** | 350 | 695 | 400 | 360 | 120 | 1 000 | 840 | 220 | 50 | 42 | M36 | 600 | 192 | 30 | **230SM380-MA**[1)] | – |
| **380** | 380 | 755 | 430 | 390 | 125 | 1 120 | 950 | 240 | 60 | 48 | M42 | 650 | 220 | 30 | **23180..-K** | H3180-HG |
| **380** | 380 | 755 | 430 | 390 | 125 | 1 120 | 950 | 240 | 60 | 48 | M42 | 650 | 220 | 30 | **231SM380-MA**[1)] | – |
| **380** | 420 | 835 | 460 | 430 | 135 | 1 220 | 1 030 | 260 | 60 | 48 | M42 | 720 | 276 | 35 | **23280..-K** | H3280-HG |
| **400** | 360 | 715 | 400 | 360 | 120 | 1 040 | 870 | 220 | 50 | 42 | M36 | 620 | 194 | 30 | **23084..-K** | H3084X-HG |
| **400** | 360 | 715 | 400 | 360 | 120 | 1 040 | 870 | 220 | 50 | 42 | M36 | 620 | 194 | 30 | **230SM400-MA**[1)] | – |
| **400** | 410 | 810 | 460 | 420 | 130 | 1 170 | 1 000 | 260 | 60 | 48 | M42 | 700 | 244 | 35 | **23184..-K** | H3184-HG |
| **400** | 410 | 810 | 460 | 420 | 130 | 1 170 | 1 000 | 260 | 60 | 48 | M42 | 700 | 244 | 35 | **231SM400-MA** | – |
| **400** | 440 | 880 | 470 | 440 | 145 | 1 280 | 1 070 | 260 | 60 | 48 | M42 | 760 | 292 | 35 | **23284..-K** | H3284-HG |

① Locating bearing; ② Non-locating bearing

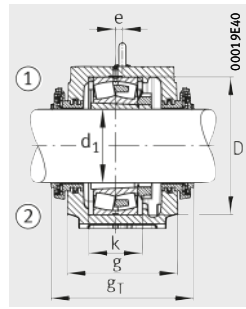
1) Split bearing in associated housing has restricted usability.
Please ask for further information.



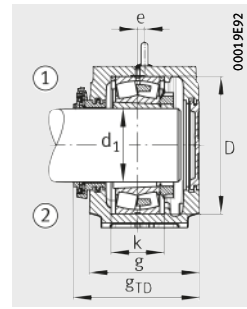

Labyrinth seal NTS




Labyrinth seal NTS
Cover NDK




Taconite seal NTC




Taconite seal NTC
Cover NDK



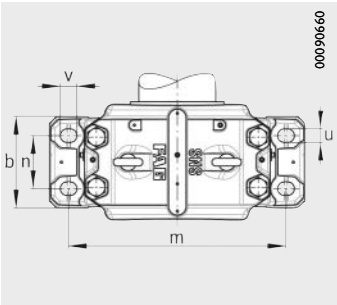


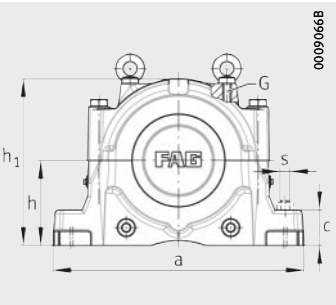


| | | | | | | | | | Housing | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Locating ring | | Labyrinth seal | | | Taconite seal | | | Cover | G | Mass | Designation |
| | Quantity | | $g_L$ mm | $g_{LD}$ mm | | $g_T$ mm | $g_{TD}$ mm | | | m ≈ kg | |
| NFR650/25 | 2 | NTS80/340 | 441 | 435,5 | NTC80/340 | 520 | 475 | NDK80 | M42 | 681 | **SNS3180-H-D** |
| NFR540/16 | 4 | NTS72 | 381 | 375,5 | NTC72 | 461 | 415 | NDK72 | M30 | 356 | **SNS3072-H-D** |
| NFR540/16 | 4 | NTS72 | 381 | 375,5 | NTC72 | 461 | 415 | NDK72 | M30 | 356 | **SNS3072-H-D** |
| NFR600/10 | 2 | NTS72 | 411 | 405,5 | NTC72 | 490 | 445 | NDK72 | M36 | 498 | **SNS3172-H-D** |
| NFR600/10 | 2 | NTS72 | 411 | 405,5 | NTC72 | 490 | 445 | NDK72 | M36 | 498 | **SNS3172-H-D** |
| NFR650/10 | 2 | NTS80/340 | 441 | 435,5 | NTC80/340 | 520 | 475 | NDK80 | M42 | 675 | **SNS3272-H-D** |
| NFR650/10 | 2 | NTS80/340 | 441 | 435,5 | NTC80/340 | 520 | 475 | NDK80 | M42 | 675 | **SNS3272-H-D** |
| NFR560/22,5 | 2 | NTS76 | 411 | 405,5 | NTC76 | 491 | 445 | NDK76 | M30 | 481 | **SNS3076-H-D** |
| NFR560/22,5 | 2 | NTS76 | 411 | 405,5 | NTC76 | 491 | 445 | NDK76 | M30 | 481 | **SNS3076-H-D** |
| NFR620/10 | 2 | NTS76 | 411 | 405,5 | NTC76 | 490 | 445 | NDK76 | M36 | 534 | **SNS3176-H-D** |
| NFR620/10 | 2 | NTS76 | 411 | 405,5 | NTC76 | 490 | 445 | NDK76 | M36 | 534 | **SNS3176-H-D** |
| NFR680/10 | 2 | NTS92/360 | 471 | 465,5 | NTC92/360 | 550 | 505 | NDK92 | M42 | 841 | **SNS3276-H-D** |
| NFR600/22 | 2 | NTS80 | 411 | 405,5 | NTC80 | 491 | 445 | NDK80 | M36 | 489 | **SNS3080-H-D** |
| NFR600/22 | 2 | NTS80 | 411 | 405,5 | NTC80 | 491 | 445 | NDK80 | M36 | 489 | **SNS3080-H-D** |
| NFR650/10 | 2 | NTS80 | 441 | 435,5 | NTC80 | 520 | 475 | NDK80 | M42 | 681 | **SNS3180-H-D** |
| NFR650/10 | 2 | NTS80 | 441 | 435,5 | NTC80 | 520 | 475 | NDK80 | M42 | 681 | **SNS3180-H-D** |
| NFR720/10 | 2 | NTS88/380 | 471 | 465,5 | NTC88/380 | 550 | 505 | NDK88 | M42 | 895 | **SNS3280-H-D** |
| NFR620/22 | 2 | NTS84 | 411 | 405,5 | NTC84 | 491 | 445 | NDK84 | M36 | 527 | **SNS3084-H-D** |
| NFR620/22 | 2 | NTS84 | 411 | 405,5 | NTC84 | 491 | 445 | NDK84 | M36 | 527 | **SNS3084-H-D** |
| NFR700/10 | 2 | NTS84 | 471 | 465,5 | NTC84 | 550 | 505 | NDK84 | M42 | 821 | **SNS3184-H-D** |
| NFR700/10 | 2 | NTS84 | 471 | 465,5 | NTC84 | 550 | 505 | NDK84 | M42 | 821 | **SNS3184-H-D** |
| NFR760/10 | 2 | NTS92/400 | 481 | 475,5 | NTC92/400 | 560 | 515 | NDK92 | M48 | 984 | **SNS3284-H-D** |

# Plummer block housings

SNS, split
For spherical roller bearings with tapered bore and adapter sleeve
Metric shaft



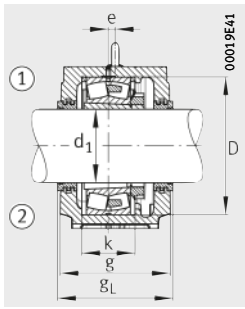




**Dimension table** (continued) · Dimensions in mm

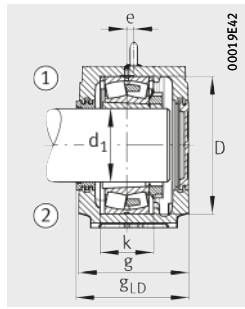
| Shaft | Housing Dimensions | | | | | | | | | | | | | | Spherical roller bearing and accessories | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_1$ | h | $h_1$ | g | b | c | a | m | n | v | u | s | D | k | e | Bearing | Adapter sleeve |
| **410** | 380 | 755 | 430 | 390 | 125 | 1 120 | 950 | 240 | 60 | 48 | M42 | 650 | 200 | 30 | **23088..-K** | H3088-HG |
| **410** | 380 | 755 | 430 | 390 | 125 | 1 120 | 950 | 240 | 60 | 48 | M42 | 650 | 200 | 30 | **230SM410-MA** | – |
| **410** | 420 | 835 | 460 | 430 | 135 | 1 220 | 1 030 | 260 | 60 | 48 | M42 | 720 | 246 | 35 | **23188..-K** | H3188-HG |
| **410** | 420 | 835 | 460 | 430 | 135 | 1 220 | 1 030 | 260 | 60 | 48 | M42 | 720 | 246 | 35 | **231SM410-MA**[1)] | – |
| **410** | 460 | 920 | 470 | 440 | 155 | 1 330 | 1 110 | 260 | 70 | 56 | M48 | 790 | 300 | 35 | **23288..-K** | H3288-HG |
| **430** | 410 | 810 | 460 | 420 | 130 | 1 170 | 1 000 | 260 | 60 | 48 | M42 | 680 | 224 | 35 | **23092..-K** | H3092-HG |
| **430** | 440 | 880 | 470 | 440 | 145 | 1 280 | 1 070 | 260 | 60 | 48 | M42 | 760 | 260 | 35 | **23192..-K** | H3192-HG |
| **450** | 410 | 810 | 460 | 420 | 130 | 1 170 | 1 000 | 260 | 60 | 48 | M42 | 700 | 224 | 35 | **23096..-K** | H3096-HG |
| **450** | 460 | 920 | 470 | 440 | 155 | 1 330 | 1 110 | 260 | 70 | 56 | M48 | 790 | 268 | 35 | **23196..-K** | H3196-HG |
| **470** | 420 | 835 | 460 | 430 | 135 | 1 220 | 1 030 | 260 | 60 | 48 | M42 | 720 | 226 | 35 | **230/500..-K** | H30/500-HG |
| **500** | 460 | 920 | 470 | 440 | 155 | 1 330 | 1 110 | 260 | 70 | 56 | M48 | 780 | 248 | 35 | **230/530..-K** | H30/530-HG |

① Locating bearing; ② Non-locating bearing

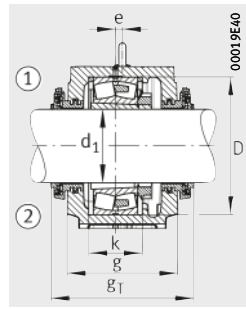
1) Split bearing in associated housing has restricted usability. Please ask for further information.



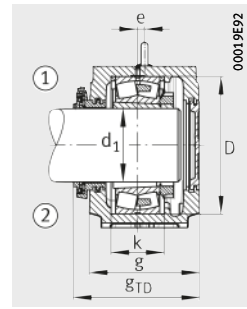

Labyrinth seal NTS




Labyrinth seal NTS
Cover NDK




Taconite seal NTC




Taconite seal NTC
Cover NDK



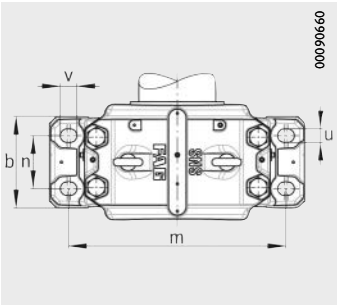


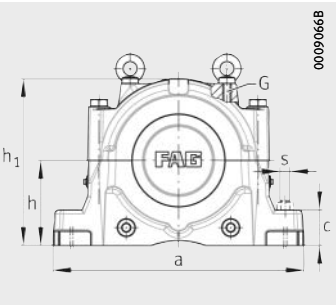


| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Housing | | |
| Locating ring | | Labyrinth seal | | | Taconite seal | | | Cover | G | Mass | Designation |
| | Quantity | | $g_L$ mm | $g_{LD}$ mm | | $g_T$ mm | $g_{TD}$ mm | | | m ≈ kg | |
| NFR650/21,5 | 2 | NTS88 | 441 | 435,5 | NTC88 | 521 | 475 | NDK88 | M42 | 672 | **SNS3088-H-D** |
| NFR650/21,5 | 2 | NTS88 | 441 | 435,5 | NTC88 | 521 | 475 | NDK88 | M42 | 672 | **SNS3088-H-D** |
| NFR720/10 | 2 | NTS88 | 471 | 465,5 | NTC88 | 550 | 505 | NDK88 | M42 | 895 | **SNS3188-H-D** |
| NFR720/10 | 2 | NTS88 | 471 | 465,5 | NTC88 | 550 | 505 | NDK88 | M42 | 895 | **SNS3188-H-D** |
| NFR790/10 | 2 | NTS96/410 | 481 | 475,5 | NTC96/410 | 560 | 515 | NDK96 | M48 | 1 100 | **SNS3288-H-D** |
| NFR680/30,5 | 2 | NTS92 | 471 | 465,5 | NTC92 | 551 | 505 | NDK92 | M42 | 849 | **SNS3092-H-D** |
| NFR760/10 | 2 | NTS92 | 481 | 475,5 | NTC92 | 560 | 515 | NDK92 | M48 | 993 | **SNS3192-H-D** |
| NFR700/29,5 | 2 | NTS96 | 471 | 465,5 | NTC96 | 551 | 505 | NDK96 | M42 | 806 | **SNS3096-H-D** |
| NFR790/10 | 2 | NTS96 | 481 | 475,5 | NTC96 | 560 | 515 | NDK96 | M48 | 1 100 | **SNS3196-H-D** |
| NFR720/29,5 | 2 | NTS500 | 471 | 465,5 | NTC500 | 551 | 505 | NDK500 | M42 | 895 | **SNS30/500-H-D** |
| NFR780/31,5 | 2 | NTS530 | 481 | 475,5 | NTC530 | 561 | 515 | NDK530 | M48 | 1 100 | **SNS30/530-H-D** |

# Plummer block housings

SNS, split
For spherical roller bearings with cylindrical bore
Metric shaft




**Dimension table** · Dimensions in mm

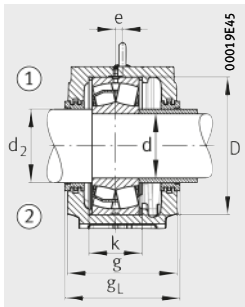
| Shaft | | Housing Dimensions | | | | | | | | | | | | | | Spherical roller bearing and accessories |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | $d_2$ | h | $h_1$ | g | b | c | a | m | n | v | u | s | D | k | e | Bearing |
| **130** | 150 | 170 | 333 | 230 | 180 | 70 | 510 | 430 | 100 | 34 | 28 | M24 | 280 | 108 | 14 | **22 326** |
| **140** | 160 | 180 | 353 | 240 | 190 | 75 | 530 | 450 | 110 | 34 | 28 | M24 | 300 | 116 | 15 | **22 328** |
| **150** | 170 | 190 | 375 | 260 | 210 | 80 | 560 | 480 | 120 | 34 | 28 | M24 | 320 | 124 | 10 | **22 330** |
| **160** | 180 | 180 | 353 | 240 | 190 | 75 | 530 | 450 | 110 | 34 | 28 | M24 | 290 | 115 | 15 | **22 232** |
| **160** | 180 | 210 | 411 | 280 | 230 | 85 | 610 | 510 | 130 | 42 | 35 | M30 | 340 | 132 | 10 | **22 332** |
| **160** | 180 | 180 | 353 | 240 | 190 | 75 | 530 | 450 | 110 | 34 | 28 | M24 | 290 | 115 | 15 | **23 232** |
| **170** | 190 | 190 | 375 | 260 | 210 | 80 | 560 | 480 | 120 | 34 | 28 | M24 | 310 | 122 | 10 | **22 234** |
| **170** | 190 | 220 | 434 | 290 | 240 | 90 | 640 | 540 | 140 | 42 | 35 | M30 | 360 | 140 | 12 | **22 334** |
| **170** | 180 | 170 | 333 | 230 | 180 | 70 | 510 | 430 | 100 | 34 | 28 | M24 | 280 | 108 | 14 | **23 134** |
| **170** | 190 | 190 | 375 | 260 | 210 | 80 | 560 | 480 | 120 | 34 | 28 | M24 | 310 | 122 | 10 | **23 234** |
| **180** | 200 | 190 | 375 | 260 | 210 | 80 | 560 | 480 | 120 | 34 | 28 | M24 | 320 | 124 | 10 | **22 236** |
| **180** | 200 | 170 | 333 | 230 | 180 | 70 | 510 | 430 | 100 | 34 | 28 | M24 | 280 | 108 | 14 | **23 036** |
| **180** | 200 | 180 | 353 | 240 | 190 | 75 | 530 | 450 | 110 | 34 | 28 | M24 | 300 | 116 | 15 | **23 136** |
| **180** | 200 | 190 | 375 | 260 | 210 | 80 | 560 | 480 | 120 | 34 | 28 | M24 | 320 | 124 | 10 | **23 236** |
| **180** | 200 | 170 | 333 | 230 | 180 | 70 | 510 | 430 | 100 | 34 | 28 | M24 | 280 | 108 | 14 | **24 036** |
| **190** | 210 | 210 | 411 | 280 | 230 | 85 | 610 | 510 | 130 | 42 | 35 | M30 | 340 | 132 | 10 | **22 238** |
| **190** | 210 | 240 | 474 | 310 | 260 | 95 | 700 | 600 | 150 | 42 | 35 | M30 | 400 | 148 | 12 | **22 338** |
| **190** | 200 | 180 | 353 | 240 | 190 | 75 | 530 | 450 | 110 | 34 | 28 | M24 | 290 | 115 | 15 | **23 038** |
| **190** | 200 | 190 | 375 | 260 | 210 | 80 | 560 | 480 | 120 | 34 | 28 | M24 | 320 | 124 | 10 | **23 138** |
| **190** | 210 | 210 | 411 | 280 | 230 | 85 | 610 | 510 | 130 | 42 | 35 | M30 | 340 | 132 | 10 | **23 238** |
| **190** | 200 | 180 | 353 | 240 | 190 | 75 | 530 | 450 | 110 | 34 | 28 | M24 | 290 | 115 | 15 | **24 038** |
| **200** | 220 | 220 | 434 | 290 | 240 | 90 | 640 | 540 | 140 | 42 | 35 | M30 | 360 | 140 | 12 | **22 240** |
| **200** | 220 | 190 | 375 | 260 | 210 | 80 | 560 | 480 | 120 | 34 | 28 | M24 | 310 | 122 | 10 | **23 040** |
| **200** | 220 | 210 | 411 | 280 | 230 | 85 | 610 | 510 | 130 | 42 | 35 | M30 | 340 | 132 | 10 | **23 140** |
| **200** | 220 | 220 | 434 | 290 | 240 | 90 | 640 | 540 | 140 | 42 | 35 | M30 | 360 | 140 | 12 | **23 240** |
| **200** | 220 | 190 | 375 | 260 | 210 | 80 | 560 | 480 | 120 | 34 | 28 | M24 | 310 | 122 | 10 | **24 040** |

① Locating bearing; ② Non-locating bearing

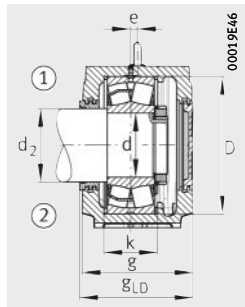
1) Alternatively also available with split labyrinth seal NTSG.

2) With NTSG: width $g_L$ increased by 16 mm.

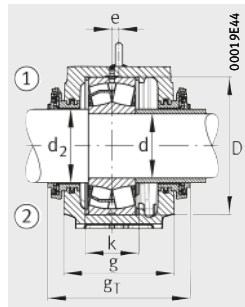
3) With NTSG: width $g_{LD}$ increased by 8 mm.



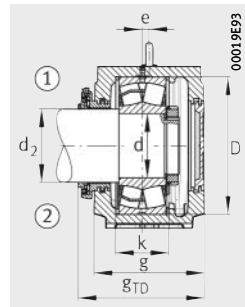

Labyrinth seal NTS




Labyrinth seal NTS
Cover NDK




Taconite seal NTC




Taconite seal NTC
Cover NDK



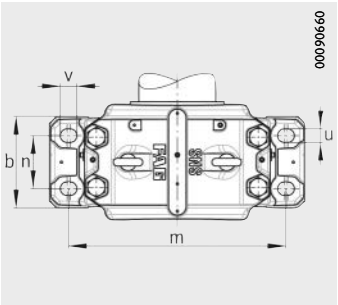


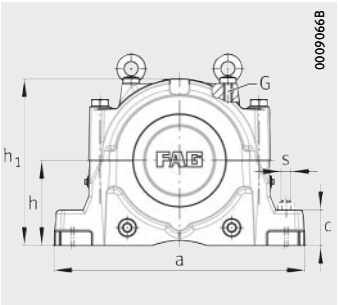


| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | Housing | | |
| Locating ring | | Labyrinth seal | | | Taconite seal | | | Cover | G | Mass | Designation |
| | Quantity | | $g_L$ mm | $g_{LD}$ mm | | $g_T$ mm | $g_{TD}$ mm | | | m ≈ kg | |
| NFR280/7,5 | 2 | NTS34[1] | 241[2] | 235,5[3] | NTC34 | 299 | 264,5 | NDK34 | M16 | 75 | **SNS3134-H-D** |
| NFR300/7 | 2 | NTS36[1] | 251[2] | 245,5[3] | NTC36 | 314 | 277 | NDK36 | M16 | 83 | **SNS3136-H-D** |
| NFR320/8 | 2 | NTS38[1] | 271[2] | 265,5[3] | NTC38 | 334 | 297 | NDK38 | M20 | 102 | **SNS3138-H-D** |
| NFR290/17,5 | 2 | NTS38/180 | 251 | 245,5 | NTC38/180 | 314 | 277 | NDK38 | M16 | 86 | **SNS3038-H-D** |
| NFR340/9 | 2 | NTS40[1] | 291[2] | 285,5[3] | NTC40 | 354 | 317 | NDK40 | M20 | 133 | **SNS3140-H-D** |
| NFR290/5,5 | 2 | NTS38/180 | 251 | 245,5 | NTC38/180 | 314 | 277 | NDK38 | M16 | 86 | **SNS3038-H-D** |
| NFR310/18 | 2 | NTS40/190 | 271 | 265,5 | NTC40/190 | 334 | 297 | NDK40 | M20 | 105 | **SNS3040-H-D** |
| NFR360/10 | 2 | NTS48/190 | 301 | 295,5 | NTC48/190 | 380 | 335 | NDK48 | M20 | 148 | **SNS3048-H-D** |
| NFR280/10 | 2 | NTS40[1] | 241[2] | 235,5[3] | NTC40 | 298 | 264 | NDK40 | M16 | 71 | **SNS3134-Z-D** |
| NFR310/6 | 2 | NTS40/190 | 271 | 265,5 | NTC40/190 | 326 | 293 | NDK40 | M20 | 105 | **SNS3234-Z-D** |
| NFR320/19 | 2 | NTS44[1] | 271[2] | 265,5[3] | NTC44 | 350 | 305 | NDK44 | M20 | 97 | **SNS3138-Z-D** |
| NFR280/17 | 2 | NTS44[1] | 241[2] | 235,5[3] | NTC44 | 320 | 275 | NDK44 | M16 | 67 | **SNS3036-Z-D** |
| NFR300/10 | 2 | NTS44[1] | 251[2] | 245,5[3] | NTC44 | 330 | 285 | NDK44 | M16 | 77 | **SNS3136-Z-D** |
| NFR320/6 | 2 | NTS44[1] | 271[2] | 265,5[3] | NTC44 | 350 | 305 | NDK44 | M20 | 97 | **SNS3236-Z-D** |
| NFR280/4 | 2 | NTS44[1] | 241[2] | 235,5[3] | NTC44 | 320 | 275 | NDK44 | M16 | 67 | **SNS3036-Z-D** |
| NFR340/10 | 4 | NTS48/210 | 291 | 285,5 | NTC48/210 | 372 | 302,5 | NDK48 | M20 | 125 | **SNS3140-Z-D** |
| NFR400/8 | 2 | NTS48/210 | 321 | 315,5 | NTC48/210 | 402 | 329,5 | NDK48 | M24 | 184 | **SNS3148-H-D** |
| NFR290/10 | 4 | NTS44[1] | 251[2] | 245,5[3] | NTC44 | 330 | 285 | NDK44 | M16 | 81 | **SNS3038-Z-D** |
| NFR320/10 | 2 | NTS44[1] | 271[2] | 265,5[3] | NTC44 | 350 | 305 | NDK44 | M20 | 97 | **SNS3138-Z-D** |
| NFR340/6 | 2 | NTS48/210 | 291 | 285,5 | NTC48/210 | 372 | 302,5 | NDK48 | M20 | 125 | **SNS3238-Z-D** |
| NFR290/7,5 | 2 | NTS44[1] | 251[2] | 245,5[3] | NTC44 | 330 | 285 | NDK44 | M16 | 81 | **SNS3038-Z-D** |
| NFR360/21 | 2 | NTS48[1] | 301[2] | 295,5[3] | NTC48 | 380 | 335 | NDK48 | M20 | 148 | **SNS3048-H-D** |
| NFR310/10 | 4 | NTS48[1] | 271[2] | 265,5[3] | NTC48 | 350 | 305 | NDK48 | M20 | 97 | **SNS3040-Z-D** |
| NFR340/10 | 2 | NTS48[1] | 291[2] | 285,5[3] | NTC48 | 372 | 302,5 | NDK48 | M20 | 125 | **SNS3140-Z-D** |
| NFR360/6 | 2 | NTS48[1] | 301[2] | 295,5[3] | NTC48 | 380 | 335 | NDK48 | M20 | 148 | **SNS3240-Z-D** |
| NFR310/6,5 | 2 | NTS48[1] | 271[2] | 265,5[3] | NTC48 | 350 | 305 | NDK48 | M20 | 97 | **SNS3040-Z-D** |

# Plummer block housings

SNS, split
For spherical roller bearings
with cylindrical bore
Metric shaft




**Dimension table** (continued) · Dimensions in mm

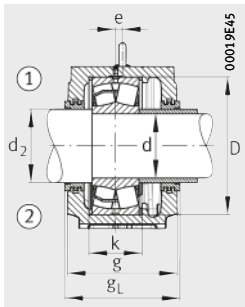
| Shaft | | Housing Dimensions | | | | | | | | | | | | | | Spherical roller bearing and accessories |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | $d_2$ | h | $h_1$ | g | b | c | a | m | n | v | u | s | D | k | e | Bearing |
| **220** | 240 | 240 | 474 | 310 | 260 | 95 | 700 | 600 | 150 | 42 | 35 | M30 | 400 | 148 | 12 | **22 244** |
| **220** | 240 | 280 | 550 | 320 | 280 | 105 | 790 | 670 | 160 | 50 | 42 | M36 | 460 | 166 | 16 | **22 344** |
| **220** | 240 | 210 | 411 | 280 | 230 | 85 | 610 | 510 | 130 | 42 | 35 | M30 | 340 | 130 | 10 | **23 044** |
| **220** | 240 | 220 | 434 | 290 | 240 | 90 | 640 | 540 | 140 | 42 | 35 | M30 | 370 | 140 | 12 | **23 144** |
| **220** | 240 | 240 | 474 | 310 | 260 | 95 | 700 | 600 | 150 | 42 | 35 | M30 | 400 | 164 | 12 | **23 244** |
| **220** | 240 | 210 | 411 | 280 | 230 | 85 | 610 | 510 | 130 | 42 | 35 | M30 | 340 | 130 | 10 | **24 044** |
| **240** | 260 | 260 | 516 | 320 | 280 | 100 | 770 | 650 | 160 | 50 | 42 | M36 | 440 | 164 | 13 | **22 248** |
| **240** | 260 | 300 | 591 | 350 | 310 | 110 | 830 | 710 | 190 | 50 | 42 | M36 | 500 | 180 | 22 | **22 348** |
| **240** | 260 | 220 | 434 | 290 | 240 | 90 | 640 | 540 | 140 | 42 | 35 | M30 | 360 | 140 | 12 | **23 048** |
| **240** | 260 | 240 | 474 | 310 | 260 | 95 | 700 | 600 | 150 | 42 | 35 | M30 | 400 | 148 | 12 | **23 148** |
| **240** | 260 | 260 | 516 | 320 | 280 | 100 | 770 | 650 | 160 | 50 | 42 | M36 | 440 | 180 | 13 | **23 248** |
| **240** | 260 | 220 | 434 | 290 | 240 | 90 | 640 | 540 | 140 | 42 | 35 | M30 | 360 | 140 | 12 | **24 048** |
| **260** | 280 | 300 | 591 | 350 | 310 | 110 | 830 | 710 | 190 | 50 | 42 | M36 | 480 | 181 | 22 | **22 252** |
| **260** | 290 | 320 | 631 | 370 | 330 | 115 | 880 | 750 | 200 | 50 | 42 | M36 | 540 | 196 | 23 | **22 352** |
| **260** | 280 | 240 | 474 | 310 | 260 | 95 | 700 | 600 | 150 | 42 | 35 | M30 | 400 | 148 | 12 | **23 052** |
| **260** | 280 | 260 | 516 | 320 | 280 | 100 | 770 | 650 | 160 | 50 | 42 | M36 | 440 | 164 | 13 | **23 152** |
| **260** | 280 | 300 | 591 | 350 | 310 | 110 | 830 | 710 | 190 | 50 | 42 | M36 | 480 | 194 | 22 | **23 252** |
| **260** | 280 | 240 | 474 | 310 | 260 | 95 | 700 | 600 | 150 | 42 | 35 | M30 | 400 | 148 | 12 | **24 052** |
| **280** | 300 | 300 | 591 | 350 | 310 | 110 | 830 | 710 | 190 | 50 | 42 | M36 | 500 | 180 | 22 | **22 256** |
| **280** | 310 | 340 | 675 | 400 | 360 | 120 | 950 | 810 | 220 | 50 | 42 | M36 | 580 | 210 | 24 | **22 356** |
| **280** | 300 | 260 | 516 | 320 | 280 | 100 | 770 | 650 | 160 | 50 | 42 | M36 | 420 | 166 | 13 | **23 056** |
| **280** | 300 | 280 | 550 | 320 | 280 | 105 | 790 | 670 | 160 | 50 | 42 | M36 | 460 | 166 | 16 | **23 156** |
| **280** | 300 | 300 | 591 | 350 | 310 | 110 | 830 | 710 | 190 | 50 | 42 | M36 | 500 | 196 | 22 | **23 256** |
| **280** | 300 | 260 | 516 | 320 | 280 | 100 | 770 | 650 | 160 | 50 | 42 | M36 | 420 | 166 | 13 | **24 056** |

① Locating bearing; ② Non-locating bearing

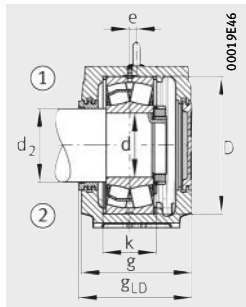
1) Alternatively also available with split labyrinth seal NTSG.

2) With NTSG: width $g_L$ increased by 16 mm.

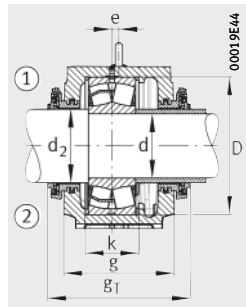
3) With NTSG: width $g_{LD}$ increased by 8 mm.



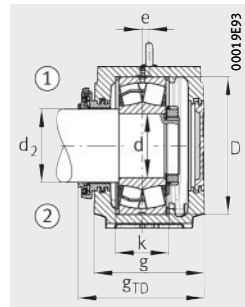

Labyrinth seal NTS




Labyrinth seal NTS
Cover NDK




Taconite seal NTC




Taconite seal NTC
Cover NDK



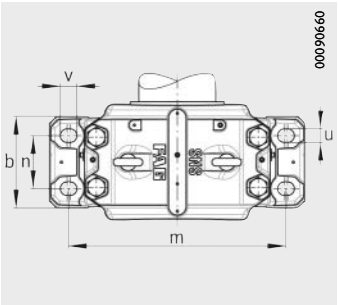


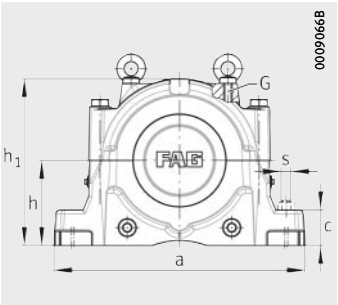


| | | | | | | | | | Housing | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Locating ring | | Labyrinth seal | | | Taconite seal | | | Cover | G | Mass | Designation |
| | Quantity | | $g_L$ mm | $g_{LD}$ mm | | $g_T$ mm | $g_{TD}$ mm | | | m ≈ kg | |
| NFR400/10 | 4 | NTS56/240 | 321 | 315,5 | NTC56/240 | 400 | 355 | NDK56 | M24 | 176 | **SNS3148-Z-D** |
| NFR460/10,5 | 2 | NTS56/240 | 331 | 325,5 | NTC56/240 | 410 | 365 | NDK56 | M24 | 264 | **SNS3156-H-D** |
| NFR340/10 | 4 | NTS52[1] | 291[2] | 285,5[3] | NTC52 | 370 | 325 | NDK52 | M20 | 121 | **SNS3044-Z-D** |
| NFR370/10 | 2 | NTS52[1] | 301[2] | 295,5[3] | NTC52 | 380 | 335 | NDK52 | M20 | 138 | **SNS3144-Z-D** |
| NFR400/10 | 2 | NTS56/240 | 321 | 315,5 | NTC56/240 | 400 | 355 | NDK56 | M24 | 174 | **SNS3244-Z-D** |
| NFR340/6 | 2 | NTS52[1] | 291[2] | 285,5[3] | NTC52 | 370 | 325 | NDK52 | M20 | 121 | **SNS3044-Z-D** |
| NFR440/22 | 2 | NTS60/260 | 331 | 325,5 | NTC60/260 | 410 | 365 | NDK60 | M24 | 229 | **SNS3152-Z-D** |
| NFR500/12,5 | 2 | NTS60/260 | 361 | 355,5 | NTC60/260 | 440 | 395 | NDK60 | M30 | 317 | **SNS3160-H-D** |
| NFR360/12 | 4 | NTS56 | 301 | 295,5 | NTC56 | 380 | 335 | NDK56 | M20 | 140 | **SNS3048-Z-D** |
| NFR400/10 | 2 | NTS56 | 321 | 315,5 | NTC56 | 400 | 355 | NDK56 | M24 | 176 | **SNS3148-Z-D** |
| NFR440/10 | 2 | NTS60/260 | 331 | 325,5 | NTC60/260 | 410 | 365 | NDK60 | M24 | 226 | **SNS3248-Z-D** |
| NFR360/11 | 2 | NTS56 | 301 | 295,5 | NTC56 | 380 | 335 | NDK56 | M20 | 140 | **SNS3048-Z-D** |
| NFR480/25,5 | 2 | NTS64/280 | 361 | 355,5 | NTC64/280 | 440 | 395 | NDK64 | M30 | 332 | **SNS3064-H-D** |
| NFR540/15,5 | 2 | NTS64/290 | 381 | 375,5 | NTC64/290 | 460 | 415 | NDK64 | M30 | 368 | **SNS3164-H-D** |
| NFR400/22 | 2 | NTS60 | 321 | 315,5 | NTC60 | 400 | 355 | NDK60 | M24 | 171 | **SNS3052-Z-D** |
| NFR440/10 | 2 | NTS60 | 331 | 325,5 | NTC60 | 410 | 365 | NDK60 | M24 | 229 | **SNS3152-Z-D** |
| NFR480/10 | 2 | NTS64/280 | 361 | 355,5 | NTC64/280 | 440 | 395 | NDK64 | M30 | 331 | **SNS3252-Z-D** |
| NFR400/4 | 2 | NTS60 | 321 | 315,5 | NTC60 | 400 | 355 | NDK60 | M24 | 171 | **SNS3052-Z-D** |
| NFR500/25 | 2 | NTS68/300 | 361 | 355,5 | NTC68/300 | 440 | 395 | NDK68 | M30 | 307 | **SNS3160-Z-D** |
| NFR580/17,5 | 2 | NTS68/310 | 411 | 405,5 | NTC68/310 | 490 | 445 | NDK68 | M30 | 461 | **SNS3168-H-D** |
| NFR420/10 | 6 | NTS64 | 331 | 325,5 | NTC64 | 410 | 365 | NDK64 | M24 | 240 | **SNS3056-Z-D** |
| NFR460/10 | 2 | NTS64 | 331 | 325,5 | NTC64 | 410 | 365 | NDK64 | M24 | 255 | **SNS3156-Z-D** |
| NFR500/10 | 2 | NTS68/300 | 361 | 355,5 | NTC68/300 | 440 | 395 | NDK68 | 300 | 591 | **SNS3256-Z-D** |
| NFR420/13 | 2 | NTS64 | 331 | 325,5 | NTC64 | 410 | 365 | NDK64 | M24 | 240 | **SNS3056-Z-D** |

# Plummer block housings

SNS, split
For spherical roller bearings with cylindrical bore
Metric shaft

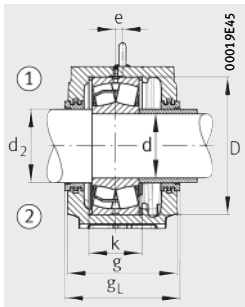


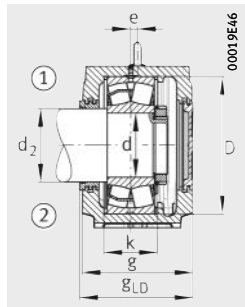

**Dimension table** (continued) · Dimensions in mm

| Shaft | | Housing Dimensions | | | | | | | | | | | | | | Spherical roller bearing and accessories |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | $d_2$ | h | $h_1$ | g | b | c | a | m | n | v | u | s | D | k | e | Bearing |
| **300** | 320 | 320 | 631 | 370 | 330 | 115 | 880 | 750 | 200 | 50 | 42 | M36 | 540 | 196 | 23 | **22260** |
| **300** | 320 | 280 | 550 | 320 | 280 | 105 | 790 | 670 | 160 | 50 | 42 | M36 | 460 | 168 | 16 | **23060** |
| **300** | 320 | 300 | 591 | 350 | 310 | 110 | 830 | 710 | 190 | 50 | 42 | M36 | 500 | 180 | 22 | **23160** |
| **300** | 320 | 320 | 631 | 370 | 330 | 115 | 880 | 750 | 200 | 50 | 42 | M36 | 540 | 212 | 23 | **23260** |
| **300** | 320 | 280 | 550 | 320 | 280 | 105 | 790 | 670 | 160 | 50 | 42 | M36 | 460 | 168 | 16 | **24060** |
| **320** | 340 | 340 | 675 | 400 | 360 | 120 | 950 | 810 | 220 | 50 | 42 | M36 | 580 | 190 | 24 | **22264** |
| **320** | 340 | 300 | 591 | 350 | 310 | 110 | 830 | 710 | 190 | 50 | 42 | M36 | 480 | 181 | 22 | **23064** |
| **320** | 340 | 320 | 631 | 370 | 330 | 115 | 880 | 750 | 200 | 50 | 42 | M36 | 540 | 196 | 23 | **23164** |
| **320** | 340 | 340 | 675 | 400 | 360 | 120 | 950 | 810 | 220 | 50 | 42 | M36 | 580 | 228 | 24 | **23264** |
| **320** | 340 | 300 | 591 | 350 | 310 | 110 | 830 | 710 | 190 | 50 | 42 | M36 | 480 | 181 | 22 | **24064** |
| **340** | 360 | 320 | 631 | 370 | 330 | 115 | 880 | 750 | 200 | 50 | 42 | M36 | 520 | 197 | 23 | **23068** |
| **340** | 360 | 340 | 675 | 400 | 360 | 120 | 950 | 810 | 220 | 50 | 42 | M36 | 580 | 210 | 24 | **23168** |
| **340** | 370 | 360 | 715 | 400 | 360 | 120 | 1040 | 870 | 220 | 50 | 42 | M36 | 620 | 244 | 30 | **23268** |
| **340** | 360 | 320 | 631 | 370 | 330 | 115 | 880 | 750 | 200 | 50 | 42 | M36 | 520 | 197 | 23 | **24068** |
| **360** | 390 | 380 | 755 | 430 | 390 | 125 | 1120 | 950 | 240 | 60 | 48 | M42 | 650 | 220 | 30 | **22272** |
| **360** | 380 | 320 | 631 | 370 | 330 | 115 | 880 | 750 | 200 | 50 | 42 | M36 | 540 | 198 | 23 | **23072** |
| **360** | 380 | 350 | 695 | 400 | 360 | 120 | 1000 | 840 | 220 | 50 | 42 | M36 | 600 | 212 | 30 | **23172** |
| **360** | 390 | 380 | 755 | 430 | 390 | 125 | 1120 | 950 | 240 | 60 | 48 | M42 | 650 | 252 | 30 | **23272** |
| **360** | 380 | 320 | 631 | 370 | 330 | 115 | 880 | 750 | 200 | 50 | 42 | M36 | 540 | 198 | 23 | **24072** |
| **380** | 400 | 340 | 675 | 400 | 360 | 120 | 950 | 810 | 220 | 50 | 42 | M36 | 560 | 180 | 24 | **23076** |
| **380** | 400 | 360 | 715 | 400 | 360 | 120 | 1040 | 870 | 220 | 50 | 42 | M36 | 620 | 214 | 30 | **23176** |
| **380** | 410 | 410 | 810 | 460 | 420 | 130 | 1170 | 1000 | 260 | 60 | 48 | M42 | 680 | 260 | 35 | **23276** |
| **380** | 400 | 340 | 675 | 400 | 360 | 120 | 950 | 810 | 220 | 50 | 42 | M36 | 560 | 200 | 24 | **24076** |

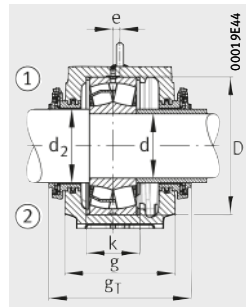
① Locating bearing; ② Non-locating bearing



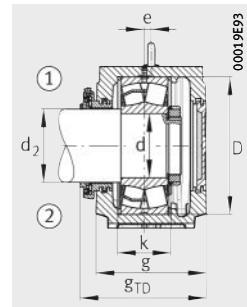

Labyrinth seal NTS




Labyrinth seal NTS
Cover NDK




Taconite seal NTC




Taconite seal NTC
Cover NDK



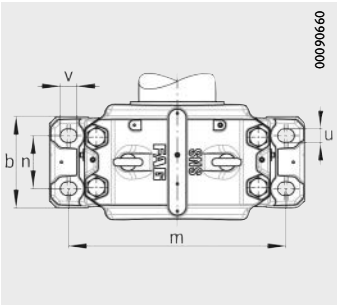


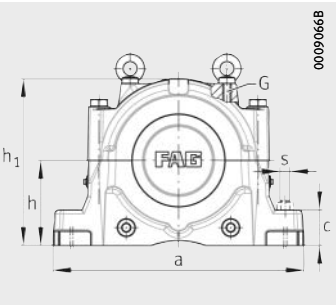


| | | | | | | | | | Housing | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Locating ring | | Labyrinth seal | | | Taconite seal | | | Cover | G | Mass | Designation |
| | Quantity | | $g_L$ mm | $g_{LD}$ mm | | $g_T$ mm | $g_{TD}$ mm | | | m ≈ kg | |
| NFR540/28 | 2 | NTS72/320 | 381 | 375,5 | NTC72/320 | 460 | 415 | NDK72 | M30 | 357 | **SNS3164-Z-D** |
| NFR460/25 | 2 | NTS68 | 331 | 325,5 | NTC68 | 410 | 365 | NDK68 | M24 | 249 | **SNS3060-Z-D** |
| NFR500/10 | 2 | NTS68 | 361 | 355,5 | NTC68 | 440 | 395 | NDK68 | M30 | 307 | **SNS3160-Z-D** |
| NFR540/10 | 2 | NTS72/320 | 381 | 375,5 | NTC72/320 | 460 | 415 | NDK72 | M30 | 353 | **SNS3260-Z-D** |
| NFR460/4 | 2 | NTS68 | 331 | 325,5 | NTC68 | 410 | 365 | NDK68 | M24 | 249 | **SNS3060-Z-D** |
| NFR580/20 | 2 | NTS76/340 | 411 | 405,5 | NTC76/340 | 490 | 445 | NDK76 | M30 | 455 | **SNS2264-Z-D** |
| NFR480/10 | 6 | NTS72 | 361 | 355,5 | NTC72 | 440 | 395 | NDK72 | M30 | 321 | **SNS3064-Z-D** |
| NFR540/10 | 2 | NTS72 | 381 | 375,5 | NTC72 | 460 | 415 | NDK72 | M30 | 357 | **SNS3164-Z-D** |
| NFR580/10 | 2 | NTS76/340 | 411 | 405,5 | NTC76/340 | 490 | 445 | NDK76 | M30 | 445 | **SNS3264-Z-D** |
| NFR480/10,5 | 2 | NTS72 | 361 | 355,5 | NTC72 | 440 | 395 | NDK72 | M30 | 321 | **SNS3064-Z-D** |
| NFR520/16 | 4 | NTS76 | 381 | 375,5 | NTC76 | 460 | 415 | NDK76 | M30 | 374 | **SNS3068-Z-D** |
| NFR580/10 | 2 | NTS76 | 411 | 405,5 | NTC76 | 490 | 445 | NDK76 | M30 | 450 | **SNS3168-Z-D** |
| NFR620/10 | 2 | NTS76/370 | 411 | 405,5 | NTC76/370 | 490 | 445 | NDK76 | M36 | 530 | **SNS3268-Z-D** |
| NFR520/8,5 | 2 | NTS76 | 381 | 375,5 | NTC76 | 460 | 415 | NDK76 | M30 | 374 | **SNS3068-Z-D** |
| NFR650/25 | 2 | NTS80/390 | 441 | 435,5 | NTC80/390 | 520 | 475 | NDK80 | M42 | 681 | **SNS3180-H-D** |
| NFR540/16 | 4 | NTS80 | 381 | 375,5 | NTC80 | 460 | 415 | NDK80 | M30 | 344 | **SNS3072-Z-D** |
| NFR600/10 | 2 | NTS80 | 411 | 405,5 | NTC80 | 490 | 445 | NDK80 | M36 | 486 | **SNS3172-Z-D** |
| NFR650/10 | 2 | NTS80/390 | 441 | 435,5 | NTC80/390 | 520 | 475 | NDK80 | M42 | 675 | **SNS3272-Z-D** |
| NFR540/9 | 2 | NTS80 | 381 | 375,5 | NTC80 | 460 | 415 | NDK80 | M30 | 344 | **SNS3072-Z-D** |
| NFR560/22,5 | 2 | NTS84 | 411 | 405,5 | NTC84 | 490 | 445 | NDK84 | M30 | 467 | **SNS3076-Z-D** |
| NFR620/10 | 2 | NTS84 | 411 | 405,5 | NTC84 | 490 | 445 | NDK84 | M36 | 521 | **SNS3176-Z-D** |
| NFR680/10 | 2 | NTS92/410 | 471 | 465,5 | NTC92/410 | 550 | 505 | NDK92 | M42 | 841 | **SNS3276-Z-D** |
| NFR560/10 | 2 | NTS84 | 411 | 405,5 | NTC84 | 475 | 438 | NDK84 | M30 | 465 | **SNS4076-Z-D** |

# Plummer block housings

SNS, split
For spherical roller bearings
with cylindrical bore
Metric shaft

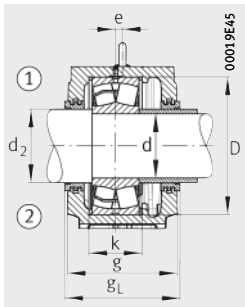


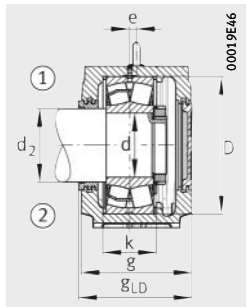

**Dimension table** (continued) · Dimensions in mm

| Shaft | | Housing Dimensions | | | | | | | | | | | | | | Spherical roller bearing and accessories |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | $d_2$ | h | $h_1$ | g | b | c | a | m | n | v | u | s | D | k | e | Bearing |
| **400** | 430 | 350 | 695 | 400 | 360 | 120 | 1 000 | 840 | 220 | 50 | 42 | M36 | 600 | 192 | 30 | **23 080** |
| **400** | 430 | 380 | 755 | 430 | 390 | 125 | 1 120 | 950 | 240 | 60 | 48 | M42 | 650 | 220 | 30 | **23 180** |
| **400** | 430 | 420 | 835 | 460 | 430 | 135 | 1 220 | 1 030 | 260 | 60 | 48 | M42 | 720 | 276 | 35 | **23 280** |
| **400** | 430 | 350 | 695 | 400 | 360 | 120 | 1 000 | 840 | 220 | 50 | 42 | M36 | 600 | 220 | 30 | **24 080** |
| **420** | 450 | 360 | 715 | 400 | 360 | 120 | 1 040 | 870 | 220 | 50 | 42 | M36 | 620 | 194 | 30 | **23 084** |
| **420** | 450 | 410 | 810 | 460 | 420 | 130 | 1 170 | 1 000 | 260 | 60 | 48 | M42 | 700 | 244 | 35 | **23 184** |
| **420** | 460 | 440 | 880 | 470 | 440 | 145 | 1 280 | 1 070 | 260 | 60 | 48 | M42 | 760 | 292 | 35 | **23 284** |
| **420** | 450 | 360 | 715 | 400 | 360 | 120 | 1 040 | 870 | 220 | 50 | 42 | M36 | 620 | 220 | 30 | **24 084** |
| **440** | 470 | 380 | 755 | 430 | 390 | 125 | 1 120 | 950 | 240 | 60 | 48 | M42 | 650 | 200 | 30 | **23 088** |
| **440** | 470 | 420 | 835 | 460 | 430 | 135 | 1 220 | 1 030 | 260 | 60 | 48 | M42 | 720 | 246 | 35 | **23 188** |
| **440** | 480 | 460 | 920 | 470 | 440 | 155 | 1 330 | 1 110 | 260 | 70 | 56 | M48 | 790 | 300 | 35 | **23 288** |
| **440** | 470 | 380 | 755 | 430 | 390 | 125 | 1 120 | 950 | 240 | 60 | 48 | M42 | 650 | 232 | 30 | **24 088** |
| **460** | 500 | 410 | 810 | 460 | 420 | 130 | 1 170 | 1 000 | 260 | 60 | 48 | M42 | 680 | 224 | 35 | **23 092** |
| **460** | 500 | 440 | 880 | 470 | 440 | 145 | 1 280 | 1 070 | 260 | 60 | 48 | M42 | 760 | 260 | 35 | **23 192** |
| **460** | 500 | 410 | 810 | 460 | 420 | 130 | 1 170 | 1 000 | 260 | 60 | 48 | M42 | 680 | 238 | 35 | **24 092** |
| **480** | 510 | 410 | 810 | 460 | 420 | 130 | 1 170 | 1 000 | 260 | 60 | 48 | M42 | 700 | 224 | 35 | **23 096** |
| **480** | 520 | 460 | 920 | 470 | 440 | 155 | 1 330 | 1 110 | 260 | 70 | 56 | M48 | 790 | 268 | 35 | **23 196** |
| **480** | 510 | 410 | 810 | 460 | 420 | 130 | 1 170 | 1 000 | 260 | 60 | 48 | M42 | 700 | 238 | 35 | **24 096** |
| **500** | 530 | 420 | 835 | 460 | 430 | 135 | 1 220 | 1 030 | 260 | 60 | 48 | M42 | 720 | 226 | 35 | **230/500** |
| **500** | 530 | 420 | 835 | 460 | 430 | 135 | 1 220 | 1 030 | 260 | 60 | 48 | M42 | 720 | 238 | 35 | **240/500** |
| **530** | 560 | 460 | 920 | 470 | 440 | 155 | 1 330 | 1 110 | 260 | 70 | 56 | M48 | 780 | 248 | 35 | **230/530** |
| **530** | 560 | 460 | 920 | 470 | 440 | 155 | 1 330 | 1 110 | 260 | 70 | 56 | M48 | 780 | 270 | 35 | **240/530** |

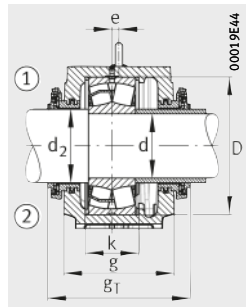
① Locating bearing; ② Non-locating bearing



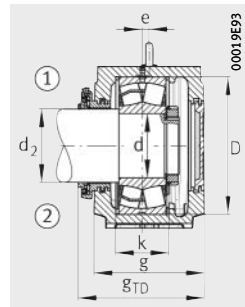

Labyrinth seal NTS




Labyrinth seal NTS
Cover NDK




Taconite seal NTC




Taconite seal NTC
Cover NDK



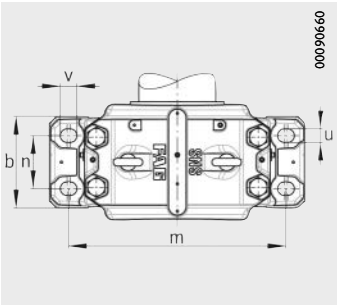


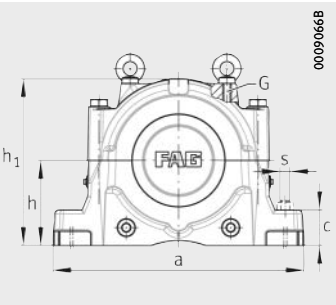


| | | | | | | | | | Housing | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Locating ring | | Labyrinth seal | | | Taconite seal | | | Cover | G | Mass | Designation |
| | Quantity | | $g_L$ mm | $g_{LD}$ mm | | $g_T$ mm | $g_{TD}$ mm | | | m ≈ kg | |
| NFR600/22 | 2 | NTS92 | 411 | 405,5 | NTC92 | 490 | 445 | NDK92 | M36 | 468 | **SNS3080-Z-D** |
| NFR650/10 | 2 | NTS92 | 441 | 435,5 | NTC92 | 520 | 475 | NDK92 | M42 | 660 | **SNS3180-Z-D** |
| NFR720/10 | 2 | NTS500/430 | 471 | 465,5 | NTC500/430 | 550 | 505 | NDK500 | M42 | 895 | **SNS3280-Z-D** |
| NFR600/10 | 2 | NTS92 | 411 | 405,5 | NTC92 | 475 | 438 | NDK92 | M36 | 463 | **SNS4080-Z-D** |
| NFR620/22 | 2 | NTS96 | 411 | 405,5 | NTC96 | 490 | 445 | NDK96 | M36 | 505 | **SNS3084-Z-D** |
| NFR700/10 | 2 | NTS96 | 471 | 465,5 | NTC96 | 550 | 505 | NDK96 | M42 | 799 | **SNS3184-Z-D** |
| NFR760/10 | 2 | NTS530/460 | 481 | 475,5 | NTC530/460 | 560 | 515 | NDK530 | M48 | 956 | **SNS3284-Z-D** |
| NFR620/10 | 2 | NTS96 | 411 | 405,5 | NTC96 | 475 | 438 | NDK96 | M36 | 499 | **SNS4084-Z-D** |
| NFR650/21,5 | 2 | NTS500 | 441 | 435,5 | NTC500 | 520 | 475 | NDK500 | M42 | 649 | **SNS3088-Z-D** |
| NFR720/10 | 2 | NTS500 | 471 | 465,5 | NTC500 | 550 | 505 | NDK500 | M42 | 895 | **SNS3188-Z-D** |
| NFR790/10 | 2 | NTS560/480 | 481 | 475,5 | NTC560/480 | 560 | 515 | NDK560 | M48 | 1 100 | **SNS3288-Z-D** |
| NFR650/10 | 2 | NTS500 | 441 | 435,5 | NTC500 | 505 | 468 | NDK500 | M42 | 642 | **SNS4088-Z-D** |
| NFR680/30,5 | 2 | NTS530 | 471 | 465,5 | NTC530 | 550 | 505 | NDK530 | M42 | 821 | **SNS3092-Z-D** |
| NFR760/10 | 2 | NTS530 | 481 | 475,5 | NTC530 | 560 | 515 | NDK530 | M48 | 966 | **SNS3192-Z-D** |
| NFR680/10 | 2 | NTS530 | 471 | 465,5 | NTC530 | 535 | 498 | NDK530 | M42 | 818 | **SNS4092-Z-D** |
| NFR700/29,5 | 2 | NTS530/510 | 471 | 465,5 | NTC530/510 | 550 | 505 | NDK530 | M42 | 786 | **SNS3096-Z-D** |
| NFR790/10 | 2 | NTS560/520 | 481 | 475,5 | NTC560/520 | 560 | 515 | NDK560 | M48 | 1 100 | **SNS3196-Z-D** |
| NFR700/10 | 2 | NTS530/510 | 471 | 465,5 | NTC530/510 | 535 | 498 | NDK530 | M42 | 780 | **SNS4096-Z-D** |
| NFR720/29,5 | 2 | NTS560 | 471 | 465,5 | NTC560 | 550 | 505 | NDK560 | M42 | 895 | **SNS30/500-Z-D** |
| NFR720/10 | 2 | NTS560 | 471 | 465,5 | NTC560 | 535 | 498 | NDK560 | M42 | 895 | **SNS40/500-Z-D** |
| NFR780/31,5 | 2 | NTS600 | 481 | 475,5 | NTC600 | 560 | 515 | NDK600 | M48 | 1 100 | **SNS30/530-Z-D** |
| NFR780/10 | 2 | NTS600 | 481 | 475,5 | NTC600 | 545 | 508 | NDK600 | M48 | 1 100 | **SNS40/530-Z-D** |

# Plummer block housings

SNS, split
For spherical roller bearings with tapered bore and adapter sleeve
Inch size shaft




**Dimension table** · Dimensions in mm

| Shaft | | Housing Dimensions | | | | | | | | | | | | | | Spherical roller bearing and accessories |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_1$ | | h | $h_1$ | g | b | c | a | m | n | v | u | s | D | k | e | Bearing |
| *inch* | mm | | | | | | | | | | | | | | | |
| **$4^{7}/_{16}$** | 112,713 | 170 | 333 | 230 | 180 | 70 | 510 | 430 | 100 | 34 | 28 | M24 | 280 | 108 | 14 | **22326..-K** |
| **$4^{1}/_{2}$** | 114,300 | 170 | 333 | 230 | 180 | 70 | 510 | 430 | 100 | 34 | 28 | M24 | 280 | 108 | 14 | **22326..-K** |
| **$4^{15}/_{16}$** | 125,413 | 180 | 353 | 240 | 190 | 75 | 530 | 450 | 110 | 34 | 28 | M24 | 300 | 116 | 15 | **22328..-K** |
| **5** | 127,000 | 180 | 353 | 240 | 190 | 75 | 530 | 450 | 110 | 34 | 28 | M24 | 300 | 116 | 15 | **22328..-K** |
| **$5^{3}/_{16}$** | 131,763 | 190 | 375 | 260 | 210 | 80 | 560 | 480 | 120 | 34 | 28 | M24 | 320 | 124 | 10 | **22330..-K** |
| **$5^{1}/_{4}$** | 133,350 | 190 | 375 | 260 | 210 | 80 | 560 | 480 | 120 | 34 | 28 | M24 | 320 | 124 | 10 | **22330..-K** |
| **$5^{7}/_{16}$** | 138,113 | 180 | 353 | 240 | 190 | 75 | 530 | 450 | 110 | 34 | 28 | M24 | 290 | 115 | 15 | **22232..-K** |
| **$5^{7}/_{16}$** | 138,113 | 210 | 411 | 280 | 230 | 85 | 610 | 510 | 130 | 42 | 35 | M30 | 340 | 132 | 10 | **22332..-K** |
| **$5^{1}/_{2}$** | 139,700 | 180 | 353 | 240 | 190 | 75 | 530 | 450 | 110 | 34 | 28 | M24 | 290 | 115 | 15 | **22232..-K** |
| **$5^{1}/_{2}$** | 139,700 | 210 | 411 | 280 | 230 | 85 | 610 | 510 | 130 | 42 | 35 | M30 | 340 | 132 | 10 | **22332..-K** |
| **$5^{13}/_{16}$** | 147,638 | 190 | 375 | 260 | 210 | 80 | 560 | 480 | 120 | 34 | 28 | M24 | 310 | 122 | 10 | **22234..-K** |
| **$5^{13}/_{16}$** | 147,638 | 220 | 434 | 290 | 240 | 90 | 640 | 540 | 140 | 42 | 35 | M30 | 360 | 140 | 12 | **22334..-K** |
| **$5^{13}/_{16}$** | 147,638 | 190 | 375 | 260 | 210 | 80 | 560 | 480 | 120 | 34 | 28 | M24 | 310 | 122 | 10 | **23234..-K** |
| **$5^{7}/_{8}$** | 149,225 | 190 | 375 | 260 | 210 | 80 | 560 | 480 | 120 | 34 | 28 | M24 | 310 | 122 | 10 | **22234..-K** |
| **$5^{7}/_{8}$** | 149,225 | 220 | 434 | 290 | 240 | 90 | 640 | 540 | 140 | 42 | 35 | M30 | 360 | 140 | 12 | **22334..-K** |
| **$5^{7}/_{8}$** | 149,225 | 190 | 375 | 260 | 210 | 80 | 560 | 480 | 120 | 34 | 28 | M24 | 310 | 122 | 10 | **23234..-K** |
| **$5^{15}/_{16}$** | 150,813 | 190 | 375 | 260 | 210 | 80 | 560 | 480 | 120 | 34 | 28 | M24 | 310 | 122 | 10 | **22234..-K** |
| **$5^{15}/_{16}$** | 150,813 | 220 | 434 | 290 | 240 | 90 | 640 | 540 | 140 | 42 | 35 | M30 | 360 | 140 | 12 | **22334..-K** |
| **$5^{15}/_{16}$** | 150,813 | 170 | 333 | 230 | 180 | 70 | 510 | 430 | 100 | 34 | 28 | M24 | 280 | 108 | 14 | **23134..-K** |
| **$5^{15}/_{16}$** | 150,813 | 170 | 333 | 230 | 180 | 70 | 510 | 430 | 100 | 34 | 28 | M24 | 280 | 108 | 14 | **231S.515**[1)] |
| **$5^{15}/_{16}$** | 150,813 | 190 | 375 | 260 | 210 | 80 | 560 | 480 | 120 | 34 | 28 | M24 | 310 | 122 | 10 | **23234..-K** |
| **6** | 152,400 | 190 | 375 | 260 | 210 | 80 | 560 | 480 | 120 | 34 | 28 | M24 | 310 | 122 | 10 | **22234..-K** |
| **6** | 152,400 | 220 | 434 | 290 | 240 | 90 | 640 | 540 | 140 | 42 | 35 | M30 | 360 | 140 | 12 | **22334..-K** |
| **6** | 152,400 | 170 | 333 | 230 | 180 | 70 | 510 | 430 | 100 | 34 | 28 | M24 | 280 | 108 | 14 | **23134..-K** |
| **6** | 152,400 | 190 | 375 | 260 | 210 | 80 | 560 | 480 | 120 | 34 | 28 | M24 | 310 | 122 | 10 | **23234..-K** |

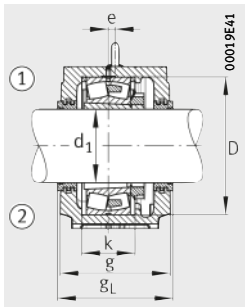
① Locating bearing; ② Non-locating bearing

1) Split bearing in associated housing has restricted usability. Please ask for further information.

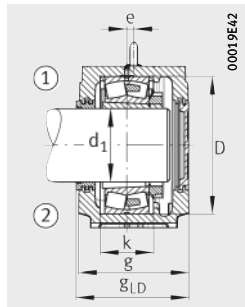
2) Alternatively also available with split labyrinth seal NTSG.

3) With NTSG: width $g_L$ increased by 16 mm.

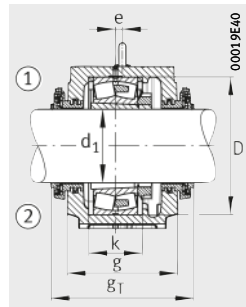
4) With NTSG: width $g_{LD}$ increased by 8 mm.



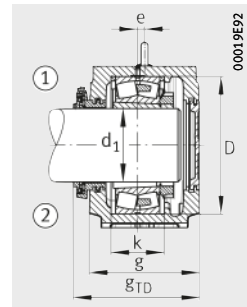

Labyrinth seal NTS




Labyrinth seal NTS
Cover NDK




Taconite seal NTC




Taconite seal NTC
Cover NDK



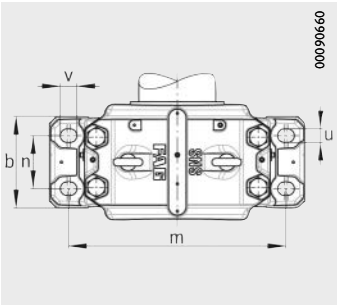


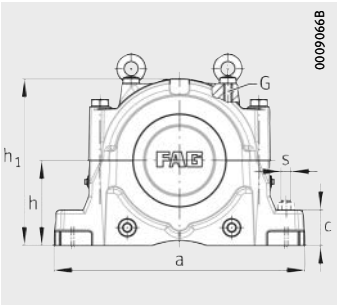


| | | | | | | | | | | | Housing | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adapter sleeve | Locating ring | | Labyrinth seal | | | Taconite seal | | | Cover | G | Mass | Designation |
| | | Quantity | | $g_L$ mm | $g_{LD}$ mm | | $g_T$ mm | $g_{TD}$ mm | | | m ≈ kg | |
| H2326X407 | NFR280/7,5 | 2 | NTS34X407 | 241 | 235,5 | NTC34X407 | 299 | 264 | NDK34 | M16 | 75 | **SNS3134-H-D** |
| H2326X408 | NFR280/7,5 | 2 | NTS34X408 | 241 | 235,5 | NTC34X408 | 299 | 264 | NDK34 | M16 | 75 | **SNS3134-H-D** |
| H2328X415 | NFR300/7 | 2 | NTS36X415 | 251 | 245,5 | NTC36X415 | 310 | 274,5 | NDK36 | M16 | 83 | **SNS3136-H-D** |
| H2328X500 | NFR300/7 | 2 | NTS36X500 | 251 | 245,5 | NTC36X500 | 310 | 274,5 | NDK36 | M16 | 83 | **SNS3136-H-D** |
| H2330X503 | NFR320/8 | 2 | NTS38X503 | 271 | 265,5 | NTC38X503 | 330 | 294,5 | NDK38 | M20 | 102 | **SNS3138-H-D** |
| H2330X504 | NFR320/8 | 2 | NTS38X504 | 271 | 265,5 | NTC38X504 | 330 | 294,5 | NDK38 | M20 | 102 | **SNS3138-H-D** |
| H3132X507 | NFR290/17,5 | 2 | NTS38X507 | 251 | 245,5 | NTC38X507 | 312 | 275,5 | NDK38 | M16 | 86 | **SNS3038-H-D** |
| H2332X507 | NFR340/9 | 2 | NTS40X507 | 291 | 285,5 | NTC40X507 | 347 | 313 | NDK40 | M20 | 133 | **SNS3140-H-D** |
| H3132X508 | NFR290/17,5 | 2 | NTS38X508 | 251 | 245,5 | NTC38X508 | 312 | 275,5 | NDK38 | M16 | 86 | **SNS3038-H-D** |
| H2332X508 | NFR340/9 | 2 | NTS40X508 | 291 | 285,5 | NTC40X508 | 347 | 313 | NDK40 | M20 | 133 | **SNS3140-H-D** |
| H3134(-HG)X513 | NFR310/18 | 2 | NTS40X513 | 271 | 265,5 | NTC40X513 | 327 | 293 | NDK40 | M20 | 105 | **SNS3040-H-D** |
| H2334(-HG)X513 | NFR360/10 | 2 | NTS48X513 | 301 | 295,5 | NTC48X513 | 380 | 335 | NDK48 | M20 | 148 | **SNS3048-H-D** |
| H2334(-HG)X513 | NFR310/6 | 2 | NTS40X513 | 271 | 265,5 | NTC40X513 | 326 | 293 | NDK40 | M20 | 105 | **SNS3234-H-D** |
| H3134(-HG)X514 | NFR310/18 | 2 | NTS40X514 | 271 | 265,5 | NTC40X514 | 326 | 293 | NDK40 | M20 | 105 | **SNS3040-H-D** |
| H2334(-HG)X514 | NFR360/10 | 2 | NTS48X514 | 301 | 295,5 | NTC48X514 | 380 | 335 | NDK48 | M20 | 148 | **SNS3048-H-D** |
| H2334(-HG)X514 | NFR310/6 | 2 | NTS40X514 | 271 | 265,5 | NTC40X514 | 326 | 293 | NDK40 | M20 | 105 | **SNS3234-H-D** |
| H3134(-HG)X515 | NFR310/18 | 2 | NTS40X515 | 271 | 265,5 | NTC40X515 | 326 | 293 | NDK40 | M20 | 105 | **SNS3040-H-D** |
| H2334(-HG)X515 | NFR360/10 | 2 | NTS48X515 | 301 | 295,5 | NTC48X515 | 380 | 335 | NDK48 | M20 | 148 | **SNS3048-H-D** |
| H3134(-HG)X515 | NFR280/10 | 2 | NTS34X515[2] | 241[3] | 235,5[4] | NTC34X515 | 298 | 264 | NDK34 | M16 | 75 | **SNS3134-H-D** |
| – | NFR280/10 | 2 | NTS34X515[2] | 241[3] | 235,5[4] | NTC34X515 | 298 | 264 | NDK34 | M16 | 75 | **SNS3134-H-D** |
| H2334(-HG)X515 | NFR310/6 | 2 | NTS40X515 | 271 | 265,5 | NTC40X515 | 326 | 293 | NDK40 | M20 | 105 | **SNS3234-H-D** |
| H3134(-HG)X600 | NFR310/18 | 2 | NTS40X600 | 271 | 265,5 | NTC40X600 | 326 | 293 | NDK40 | M20 | 105 | **SNS3040-H-D** |
| H2334(-HG)X600 | NFR360/10 | 2 | NTS48X600 | 301 | 295,5 | NTC48X600 | 380 | 335 | NDK48 | M20 | 148 | **SNS3048-H-D** |
| H3134(-HG)X600 | NFR280/10 | 2 | NTS34X600 | 241 | 235,5 | NTC34X600 | 298 | 264 | NDK34 | M16 | 75 | **SNS3134-H-D** |
| H2334(-HG)X600 | NFR310/6 | 2 | NTS40X600 | 271 | 265,5 | NTC40X600 | 326 | 293 | NDK40 | M20 | 105 | **SNS3234-H-D** |

# Plummer block housings

SNS, split
For spherical roller bearings with tapered bore and adapter sleeve
Inch size shaft




**Dimension table** (continued) · Dimensions in mm

| Shaft | | Housing Dimensions | | | | | | | | | | | | | | Spherical roller bearing and accessories |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_1$ | | h | $h_1$ | g | b | c | a | m | n | v | u | s | D | k | e | Bearing |
| *inch* | mm | | | | | | | | | | | | | | | |
| $6^{5}/_{16}$ | **160,338** | 190 | 375 | 260 | 210 | 80 | 560 | 480 | 120 | 34 | 28 | M24 | 320 | 124 | 10 | **22236..-K** |
| $6^{5}/_{16}$ | **160,338** | 170 | 333 | 230 | 180 | 70 | 510 | 430 | 100 | 34 | 28 | M24 | 280 | 108 | 14 | **23036..-K** |
| $6^{3}/_{8}$ | **161,925** | 190 | 375 | 260 | 210 | 80 | 560 | 480 | 120 | 34 | 28 | M24 | 320 | 124 | 10 | **22236..-K** |
| $6^{3}/_{8}$ | **161,925** | 170 | 333 | 230 | 180 | 70 | 510 | 430 | 100 | 34 | 28 | M24 | 280 | 108 | 14 | **23036..-K** |
| $6^{7}/_{16}$ | **163,513** | 190 | 375 | 260 | 210 | 80 | 560 | 480 | 120 | 34 | 28 | M24 | 320 | 124 | 10 | **22236..-K** |
| $6^{7}/_{16}$ | **163,513** | 170 | 333 | 230 | 180 | 70 | 510 | 430 | 100 | 34 | 28 | M24 | 280 | 108 | 14 | **23036..-K** |
| $6^{7}/_{16}$ | **163,513** | 170 | 333 | 230 | 180 | 70 | 510 | 430 | 100 | 34 | 28 | M24 | 280 | 108 | 14 | **230S.607-MA**[1] |
| $6^{7}/_{16}$ | **163,513** | 180 | 353 | 240 | 190 | 75 | 530 | 450 | 110 | 34 | 28 | M24 | 300 | 116 | 15 | **23136..-K** |
| $6^{7}/_{16}$ | **163,513** | 180 | 353 | 240 | 190 | 75 | 530 | 450 | 110 | 34 | 28 | M24 | 300 | 116 | 15 | **231S.607-MA**[1] |
| $6^{7}/_{16}$ | **163,513** | 190 | 375 | 260 | 210 | 80 | 560 | 480 | 120 | 34 | 28 | M24 | 320 | 124 | 10 | **23236..-K** |
| $6^{1}/_{2}$ | **165,100** | 190 | 375 | 260 | 210 | 80 | 560 | 480 | 120 | 34 | 28 | M24 | 320 | 124 | 10 | **22236..-K** |
| $6^{1}/_{2}$ | **165,100** | 170 | 333 | 230 | 180 | 70 | 510 | 430 | 100 | 34 | 28 | M24 | 280 | 108 | 14 | **23036..-K** |
| $6^{1}/_{2}$ | **165,100** | 180 | 353 | 240 | 190 | 75 | 530 | 450 | 110 | 34 | 28 | M24 | 300 | 116 | 15 | **23136..-K** |
| $6^{1}/_{2}$ | **165,100** | 190 | 375 | 260 | 210 | 80 | 560 | 480 | 120 | 34 | 28 | M24 | 320 | 124 | 10 | **23236..-K** |
| $6^{3}/_{4}$ | **171,450** | 210 | 411 | 280 | 230 | 85 | 610 | 510 | 130 | 42 | 35 | M30 | 340 | 132 | 10 | **22238..-K** |
| $6^{3}/_{4}$ | **171,450** | 240 | 474 | 310 | 260 | 95 | 700 | 600 | 150 | 42 | 35 | M30 | 400 | 148 | 12 | **22338..-K** |
| $6^{3}/_{4}$ | **171,450** | 180 | 353 | 240 | 190 | 75 | 530 | 450 | 110 | 34 | 28 | M24 | 290 | 115 | 15 | **23038..-K** |
| $6^{3}/_{4}$ | **171,450** | 190 | 375 | 260 | 210 | 80 | 560 | 480 | 120 | 34 | 28 | M24 | 320 | 124 | 10 | **23138..-K** |
| $6^{3}/_{4}$ | **171,450** | 210 | 411 | 280 | 230 | 85 | 610 | 510 | 130 | 42 | 35 | M30 | 340 | 132 | 10 | **23238..-K** |
| $6^{13}/_{16}$ | **173,038** | 210 | 411 | 280 | 230 | 85 | 610 | 510 | 130 | 42 | 35 | M30 | 340 | 132 | 10 | **22238..-K** |
| $6^{13}/_{16}$ | **173,038** | 240 | 474 | 310 | 260 | 95 | 700 | 600 | 150 | 42 | 35 | M30 | 400 | 148 | 12 | **22338..-K** |
| $6^{13}/_{16}$ | **173,038** | 180 | 353 | 240 | 190 | 75 | 530 | 450 | 110 | 34 | 28 | M24 | 290 | 115 | 15 | **23038..-K** |
| $6^{13}/_{16}$ | **173,038** | 210 | 411 | 280 | 230 | 85 | 610 | 510 | 130 | 42 | 35 | M30 | 340 | 132 | 10 | **23238..-K** |
| $6^{7}/_{8}$ | **174,625** | 210 | 411 | 280 | 230 | 85 | 610 | 510 | 130 | 42 | 35 | M30 | 340 | 132 | 10 | **22238..-K** |
| $6^{7}/_{8}$ | **174,625** | 240 | 474 | 310 | 260 | 95 | 700 | 600 | 150 | 42 | 35 | M30 | 400 | 148 | 12 | **22338..-K** |
| $6^{7}/_{8}$ | **174,625** | 180 | 353 | 240 | 190 | 75 | 530 | 450 | 110 | 34 | 28 | M24 | 290 | 115 | 15 | **23038..-K** |
| $6^{7}/_{8}$ | **174,625** | 210 | 411 | 280 | 230 | 85 | 610 | 510 | 130 | 42 | 35 | M30 | 340 | 132 | 10 | **23238..-K** |

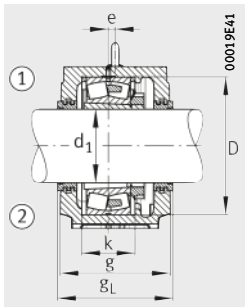
① Locating bearing; ② Non-locating bearing

1) Split bearing in associated housing has restricted usability. Please ask for further information.

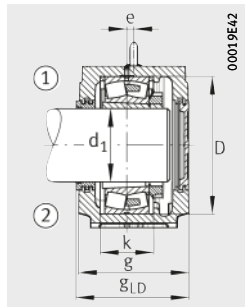
2) Alternatively also available with split labyrinth seal NTSG.

3) With NTSG: width $g_L$ increased by 16 mm.

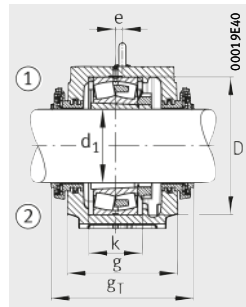
4) With NTSG: width $g_{LD}$ increased by 8 mm.



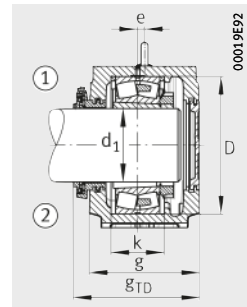

Labyrinth seal NTS




Labyrinth seal NTS
Cover NDK




Taconite seal NTC




Taconite seal NTC
Cover NDK



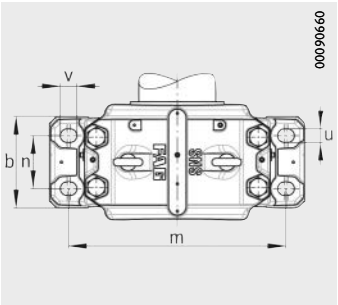


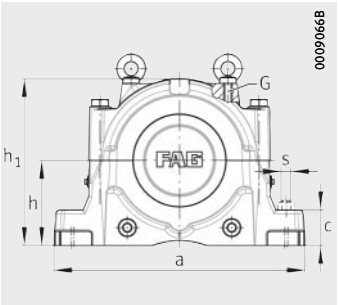


| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Housing | | |
| Adapter sleeve | Locating ring | | Labyrinth seal | | | Taconite seal | | | Cover | G | Mass | Designation |
| | | Quantity | | $g_L$ mm | $g_{LD}$ mm | | $g_T$ mm | $g_{TD}$ mm | | | m ≈ kg | |
| H3136(-HG)X605 | NFR320/19 | 2 | NTS38X605 | 271 | 265,5 | NTC38X605 | 329 | 294,5 | NDK38 | M20 | 102 | **SNS3138-H-D** |
| H3036(-HG)X605 | NFR280/17 | 2 | NTS36X605 | 241 | 235,5 | NTC36X605 | 299 | 264,5 | NDK36 | M16 | 74 | **SNS3036-H-D** |
| H3136(-HG)X606 | NFR320/19 | 2 | NTS38X606 | 271 | 265,5 | NTC38X606 | 329 | 294,5 | NDK38 | M20 | 102 | **SNS3138-H-D** |
| H3036(-HG)X606 | NFR280/17 | 2 | NTS36X606 | 241 | 235,5 | NTC36X606 | 299 | 264,5 | NDK36 | M16 | 74 | **SNS3036-H-D** |
| H3136(-HG)X607 | NFR320/19 | 2 | NTS38X607 | 271 | 265,5 | NTC38X607 | 329 | 294,5 | NDK38 | M20 | 102 | **SNS3138-H-D** |
| H3036(-HG)X607 | NFR280/17 | 2 | NTS36X607 [2] | 241 [3] | 235,5 [4] | NTC36X607 | 299 | 264,5 | NDK36 | M16 | 74 | **SNS3036-H-D** |
| – | NFR280/17 | 2 | NTS36X607 [2] | 241 [3] | 235,5 [4] | NTC36X607 | 299 | 264,5 | NDK36 | M16 | 74 | **SNS3036-H-D** |
| H3136(-HG)X607 | NFR300/10 | 2 | NTS36X607 [2] | 251 [3] | 245,5 [4] | NTC36X607 | 309 | 274,5 | NDK36 | M16 | 83 | **SNS3136-H-D** |
| – | NFR300/10 | 2 | NTS36X607 [2] | 251 [3] | 245,5 [4] | NTC36X607 | 309 | 274,5 | NDK36 | M16 | 83 | **SNS3136-H-D** |
| H2336(-HG)X607 | NFR320/6 | 2 | NTS38X607 | 271 | 265,5 | NTC38X607 | 329 | 294,5 | NDK38 | M20 | 102 | **SNS3236-H-D** |
| H3136(-HG)X608 | NFR320/19 | 2 | NTS38X608 | 271 | 265,5 | NTC38X608 | 329 | 294,5 | NDK38 | M20 | 102 | **SNS3138-H-D** |
| H3036(-HG)X608 | NFR280/17 | 2 | NTS36X608 | 241 | 235,5 | NTC36X608 | 299 | 264,5 | NDK36 | M16 | 74 | **SNS3036-H-D** |
| H3136(-HG)X608 | NFR300/10 | 2 | NTS36X608 | 251 | 245,5 | NTC36X608 | 309 | 274,5 | NDK36 | M16 | 83 | **SNS3136-H-D** |
| H2336(-HG)X608 | NFR320/6 | 2 | NTS38X608 | 271 | 265,5 | NTC38X608 | 329 | 294,5 | NDK38 | M20 | 102 | **SNS3236-H-D** |
| H3138(-HG)X612 | NFR340/10 | 4 | NTS40X612 | 291 | 285,5 | NTC40X612 | 346 | 313 | NDK40 | M20 | 133 | **SNS3140-H-D** |
| H2338(-HG)X612 | NFR400/8 | 2 | NTS48X612 | 321 | 315,5 | NTC48X612 | 400 | 355 | NDK48 | M24 | 184 | **SNS3148-H-D** |
| H3038(-HG)X612 | NFR290/10 | 4 | NTS38X612 | 251 | 245,5 | NTC38X612 | 311 | 275,5 | NDK38 | M16 | 86 | **SNS3038-H-D** |
| H3138(-HG)X612 | NFR320/10 | 2 | NTS38X612 | 271 | 265,5 | NTC38X612 | 329 | 294,5 | NDK38 | M20 | 102 | **SNS3138-H-D** |
| H2338(-HG)X612 | NFR340/6 | 2 | NTS40X612 | 291 | 285,5 | NTC40X612 | 346 | 313 | NDK40 | M20 | 133 | **SNS3238-H-D** |
| H3138(-HG)X613 | NFR340/10 | 4 | NTS40X613 | 291 | 285,5 | NTC40X613 | 346 | 313 | NDK40 | M20 | 133 | **SNS3140-H-D** |
| H2338(-HG)X613 | NFR400/8 | 2 | NTS48X613 | 321 | 315,5 | NTC48X613 | 400 | 355 | NDK48 | M24 | 184 | **SNS3148-H-D** |
| H3038(-HG)X613 | NFR290/10 | 4 | NTS38X613 | 251 | 245,5 | NTC38X613 | 311 | 275,5 | NDK38 | M16 | 86 | **SNS3038-H-D** |
| H2338(-HG)X613 | NFR340/6 | 2 | NTS40X613 | 291 | 285,5 | NTC40X613 | 346 | 313 | NDK40 | M20 | 133 | **SNS3238-H-D** |
| H3138(-HG)X614 | NFR340/10 | 4 | NTS40X614 | 291 | 285,5 | NTC40X614 | 346 | 313 | NDK40 | M20 | 133 | **SNS3140-H-D** |
| H2338(-HG)X614 | NFR400/8 | 2 | NTS48X614 | 321 | 315,5 | NTC48X614 | 400 | 355 | NDK48 | M24 | 184 | **SNS3148-H-D** |
| H3038(-HG)X614 | NFR290/10 | 4 | NTS38X614 | 251 | 245,5 | NTC38X614 | 311 | 275,5 | NDK38 | M16 | 86 | **SNS3038-H-D** |
| H2338(-HG)X614 | NFR340/6 | 2 | NTS40X614 | 291 | 285,5 | NTC40X614 | 346 | 313 | NDK40 | M20 | 133 | **SNS3238-H-D** |

# Plummer block housings

SNS, split
For spherical roller bearings with tapered bore and adapter sleeve
Inch size shaft



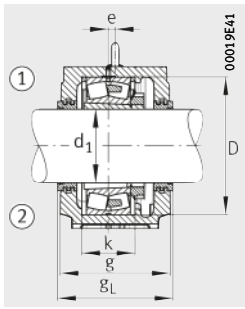




**Dimension table** (continued) · Dimensions in mm

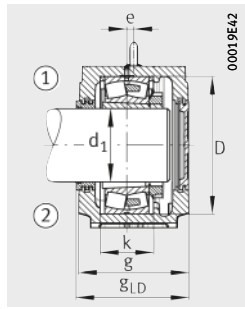
| Shaft | | Housing Dimensions | | | | | | | | | | | | | | Spherical roller bearing and accessories |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_1$ | | h | $h_1$ | g | b | c | a | m | n | v | u | s | D | k | e | Bearing |
| *inch* | mm | | | | | | | | | | | | | | | |
| **$6^{15}/_{16}$** | **176,213** | 210 | 411 | 280 | 230 | 85 | 610 | 510 | 130 | 42 | 35 | M30 | 340 | 132 | 10 | **22238..-K** |
| **$6^{15}/_{16}$** | **176,213** | 240 | 474 | 310 | 260 | 95 | 700 | 600 | 150 | 42 | 35 | M30 | 400 | 148 | 12 | **22338..-K** |
| **$6^{15}/_{16}$** | **176,213** | 180 | 353 | 240 | 190 | 75 | 530 | 450 | 110 | 34 | 28 | M24 | 290 | 115 | 15 | **23038..-K** |
| **$6^{15}/_{16}$** | **176,213** | 190 | 375 | 260 | 210 | 80 | 560 | 480 | 120 | 34 | 28 | M24 | 320 | 124 | 10 | **23138..-K** |
| **$6^{15}/_{16}$** | **176,213** | 190 | 375 | 260 | 210 | 80 | 560 | 480 | 120 | 34 | 28 | M24 | 320 | 124 | 10 | **231S.615** |
| **$6^{15}/_{16}$** | **176,213** | 210 | 411 | 280 | 230 | 85 | 610 | 510 | 130 | 42 | 35 | M30 | 340 | 132 | 10 | **23238..-K** |
| **7** | **177,800** | 210 | 411 | 280 | 230 | 85 | 610 | 510 | 130 | 42 | 35 | M30 | 340 | 132 | 10 | **22238..-K** |
| **7** | **177,800** | 220 | 434 | 290 | 240 | 90 | 640 | 540 | 140 | 42 | 35 | M30 | 360 | 140 | 12 | **22240..-K** |
| **7** | **177,800** | 240 | 474 | 310 | 260 | 95 | 700 | 600 | 150 | 42 | 35 | M30 | 400 | 148 | 12 | **22338..-K** |
| **7** | **177,800** | 260 | 516 | 320 | 280 | 100 | 770 | 650 | 160 | 50 | 42 | M36 | 420 | 166 | 13 | **22340..-K** |
| **7** | **177,800** | 180 | 353 | 240 | 190 | 75 | 530 | 450 | 110 | 34 | 28 | M24 | 290 | 115 | 15 | **23038..-K** |
| **7** | **177,800** | 180 | 353 | 240 | 190 | 75 | 530 | 450 | 110 | 34 | 28 | M24 | 290 | 115 | 15 | **230S.700**[1)] |
| **7** | **177,800** | 190 | 375 | 260 | 210 | 80 | 560 | 480 | 120 | 34 | 28 | M24 | 310 | 122 | 10 | **23040..-K** |
| **7** | **177,800** | 210 | 411 | 280 | 230 | 85 | 610 | 510 | 130 | 42 | 35 | M30 | 340 | 132 | 10 | **23140..-K** |
| **7** | **177,800** | 210 | 411 | 280 | 230 | 85 | 610 | 510 | 130 | 42 | 35 | M30 | 340 | 132 | 10 | **231S.700** |
| **7** | **177,800** | 210 | 411 | 280 | 230 | 85 | 610 | 510 | 130 | 42 | 35 | M30 | 340 | 132 | 10 | **23238..-K** |
| **7** | **177,800** | 220 | 434 | 290 | 240 | 90 | 640 | 540 | 140 | 42 | 35 | M30 | 360 | 140 | 12 | **23240..-K** |
| **$7^{1}/_{8}$** | **180,975** | 220 | 434 | 290 | 240 | 90 | 640 | 540 | 140 | 42 | 35 | M30 | 360 | 140 | 12 | **22240..-K** |
| **$7^{1}/_{8}$** | **180,975** | 260 | 516 | 320 | 280 | 100 | 770 | 650 | 160 | 50 | 42 | M36 | 420 | 166 | 13 | **22340..-K** |
| **$7^{1}/_{8}$** | **180,975** | 190 | 375 | 260 | 210 | 80 | 560 | 480 | 120 | 34 | 28 | M24 | 310 | 122 | 10 | **23040..-K** |
| **$7^{1}/_{8}$** | **180,975** | 220 | 434 | 290 | 240 | 90 | 640 | 540 | 140 | 42 | 35 | M30 | 360 | 140 | 12 | **23240..-K** |
| **$7^{3}/_{16}$** | **182,563** | 220 | 434 | 290 | 240 | 90 | 640 | 540 | 140 | 42 | 35 | M30 | 360 | 140 | 12 | **22240..-K** |
| **$7^{3}/_{16}$** | **182,563** | 260 | 516 | 320 | 280 | 100 | 770 | 650 | 160 | 50 | 42 | M36 | 420 | 166 | 13 | **22340..-K** |
| **$7^{3}/_{16}$** | **182,563** | 190 | 375 | 260 | 210 | 80 | 560 | 480 | 120 | 34 | 28 | M24 | 310 | 122 | 10 | **23040..-K** |
| **$7^{3}/_{16}$** | **182,563** | 210 | 411 | 280 | 230 | 85 | 610 | 510 | 130 | 42 | 35 | M30 | 340 | 132 | 10 | **23140..-K** |
| **$7^{3}/_{16}$** | **182,563** | 220 | 434 | 290 | 240 | 90 | 640 | 540 | 140 | 42 | 35 | M30 | 360 | 140 | 12 | **23240..-K** |

① Locating bearing; ② Non-locating bearing

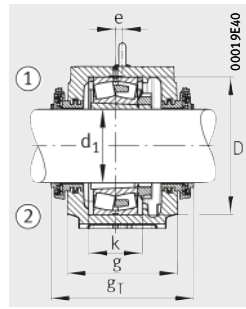
1) Split bearing in associated housing has restricted usability.
Please ask for further information.



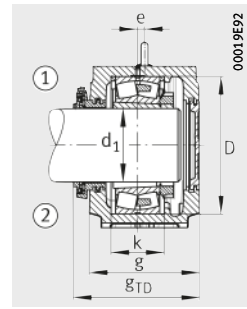

Labyrinth seal NTS




Labyrinth seal NTS
Cover NDK




Taconite seal NTC




Taconite seal NTC
Cover NDK



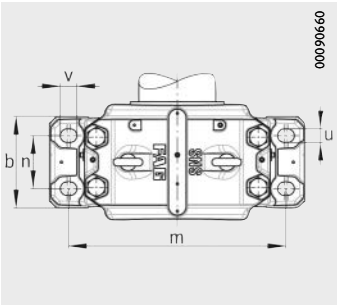


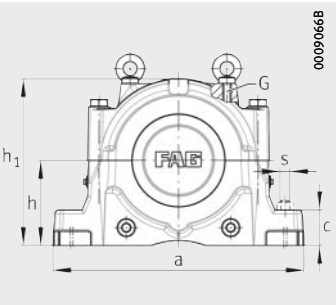


| | | | | | | | | | | Housing | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adapter sleeve | Locating ring | | Labyrinth seal | | | Taconite seal | | | Cover | G | Mass | Designation |
| | | Quantity | | $g_L$ mm | $g_{LD}$ mm | | $g_T$ mm | $g_{TD}$ mm | | | m ≈ kg | |
| H3138(-HG)X615 | NFR340/10 | 4 | NTS40X615 | 291 | 285,5 | NTC40X615 | 346 | 313 | NDK40 | M20 | 133 | **SNS3140-H-D** |
| H2338(-HG)X615 | NFR400/8 | 2 | NTS48X615 | 321 | 315,5 | NTC48X615 | 400 | 355 | NDK48 | M24 | 184 | **SNS3148-H-D** |
| H3038(-HG)X615 | NFR290/10 | 4 | NTS38X615 | 251 | 245,5 | NTC38X615 | 309 | 274,5 | NDK38 | M16 | 86 | **SNS3038-H-D** |
| H3138(-HG)X615 | NFR320/10 | 2 | NTS38X615 | 271 | 265,5 | NTC38X615 | 329 | 294,5 | NDK38 | M20 | 102 | **SNS3138-H-D** |
| – | NFR320/10 | 2 | NTS38X615 | 271 | 265,5 | NTC38X615 | 329 | 294,5 | NDK38 | M20 | 102 | **SNS3138-H-D** |
| H2338(-HG)X615 | NFR340/6 | 2 | NTS40X615 | 291 | 285,5 | NTC40X615 | 346 | 313 | NDK40 | M20 | 133 | **SNS3238-H-D** |
| H3138(-HG)X700 | NFR340/10 | 4 | NTS40X700 | 291 | 285,5 | NTC40X700 | 346 | 313 | NDK40 | M20 | 133 | **SNS3140-H-D** |
| H3140(-HG)X700 | NFR360/21 | 2 | NTS48X700 | 301 | 295,5 | NTC48X700 | 380 | 335 | NDK48 | M20 | 148 | **SNS3048-H-D** |
| H2338(-HG)X700 | NFR400/8 | 2 | NTS48X700 | 321 | 315,5 | NTC48X700 | 400 | 355 | NDK48 | M24 | 184 | **SNS3148-H-D** |
| H2340(-HG)X700 | NFR420/14 | 2 | NTS56X700 | 331 | 325,5 | NTC56X700 | 410 | 365 | NDK56 | M24 | 249 | **SNS3056-H-D** |
| H3038(-HG)X700 | NFR290/10 | 4 | NTS38X700 | 251 | 245,5 | NTC38X700 | 311 | 275,5 | NDK38 | M16 | 86 | **SNS3038-H-D** |
| – | NFR290/10 | 4 | NTS38X700 | 251 | 245,5 | NTC38X700 | 311 | 275,5 | NDK38 | M16 | 86 | **SNS3038-H-D** |
| H3040(-HG)X700 | NFR310/10 | 4 | NTS40X700 | 271 | 265,5 | NTC40X700 | 326 | 293 | NDK40 | M20 | 105 | **SNS3040-H-D** |
| H3140(-HG)X700 | NFR340/10 | 2 | NTS40X700 | 291 | 285,5 | NTC40X700 | 346 | 313 | NDK40 | M20 | 133 | **SNS3140-H-D** |
| – | NFR340/10 | 2 | NTS40X700 | 291 | 285,5 | NTC40X700 | 346 | 313 | NDK40 | M20 | 133 | **SNS3140-H-D** |
| H2338(-HG)X700 | NFR340/6 | 2 | NTS40X700 | 291 | 285,5 | NTC40X700 | 346 | 313 | NDK40 | M20 | 133 | **SNS3238-H-D** |
| H2340(-HG)X700 | NFR360/6 | 2 | NTS48X700 | 301 | 295,5 | NTC48X700 | 380 | 335 | NDK48 | M20 | 148 | **SNS3240-H-D** |
| H3140(-HG)X702 | NFR360/21 | 2 | NTS48X702 | 301 | 295,5 | NTC48X702 | 380 | 335 | NDK48 | M20 | 148 | **SNS3048-H-D** |
| H2340(-HG)X702 | NFR420/14 | 2 | NTS56X702 | 331 | 325,5 | NTC56X702 | 410 | 365 | NDK56 | M24 | 249 | **SNS3056-H-D** |
| H3040(-HG)X702 | NFR310/10 | 4 | NTS40X702 | 271 | 265,5 | NTC40X702 | 326 | 293 | NDK40 | M20 | 105 | **SNS3040-H-D** |
| H2340(-HG)X702 | NFR360/6 | 2 | NTS48X702 | 301 | 295,5 | NTC48X702 | 380 | 335 | NDK48 | M20 | 148 | **SNS3240-H-D** |
| H3140(-HG)X703 | NFR360/21 | 2 | NTS48X703 | 301 | 295,5 | NTC48X703 | 380 | 335 | NDK48 | M20 | 148 | **SNS3048-H-D** |
| H2340(-HG)X703 | NFR420/14 | 2 | NTS56X703 | 331 | 325,5 | NTC56X703 | 410 | 365 | NDK56 | M24 | 249 | **SNS3056-H-D** |
| H3040(-HG)X703 | NFR310/10 | 4 | NTS40X703 | 271 | 265,5 | NTC40X703 | 326 | 293 | NDK40 | M20 | 105 | **SNS3040-H-D** |
| H3140(-HG)X703 | NFR340/10 | 2 | NTS40X703 | 291 | 285,5 | NTC40X703 | 346 | 313 | NDK40 | M20 | 133 | **SNS3140-H-D** |
| H2340(-HG)X703 | NFR360/6 | 2 | NTS48X703 | 301 | 295,5 | NTC48X703 | 380 | 335 | NDK48 | M20 | 148 | **SNS3240-H-D** |

# Plummer block housings

SNS, split
For spherical roller bearings with tapered bore and adapter sleeve
Inch size shaft



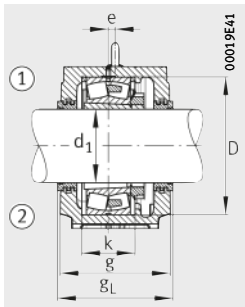




**Dimension table** (continued) · Dimensions in mm

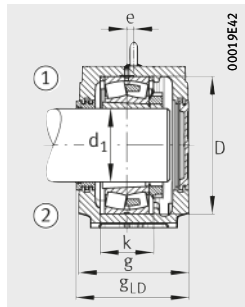
| Shaft | | Housing Dimensions | | | | | | | | | | | | | | Spherical roller bearing and accessories |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_1$ | | h | $h_1$ | g | b | c | a | m | n | v | u | s | D | k | e | Bearing |
| *inch* | mm | | | | | | | | | | | | | | | |
| **$7^{1}/_{4}$** | **184,150** | 220 | 434 | 290 | 240 | 90 | 640 | 540 | 140 | 42 | 35 | M30 | 360 | 140 | 12 | **22240..-K** |
| **$7^{1}/_{4}$** | **184,150** | 260 | 516 | 320 | 280 | 100 | 770 | 650 | 160 | 50 | 42 | M36 | 420 | 166 | 13 | **22340..-K** |
| **$7^{1}/_{4}$** | **184,150** | 190 | 375 | 260 | 210 | 80 | 560 | 480 | 120 | 34 | 28 | M24 | 310 | 122 | 10 | **23040..-K** |
| **$7^{1}/_{4}$** | **184,150** | 220 | 434 | 290 | 240 | 90 | 640 | 540 | 140 | 42 | 35 | M30 | 360 | 140 | 12 | **23240..-K** |
| **$7^{13}/_{16}$** | **198,438** | 240 | 474 | 310 | 260 | 95 | 700 | 600 | 150 | 42 | 35 | M30 | 400 | 148 | 12 | **22244..-K** |
| **$7^{13}/_{16}$** | **198,438** | 210 | 411 | 280 | 230 | 85 | 610 | 510 | 130 | 42 | 35 | M30 | 340 | 130 | 10 | **23044..-K** |
| **$7^{7}/_{8}$** | **200,025** | 240 | 474 | 310 | 260 | 95 | 700 | 600 | 150 | 42 | 35 | M30 | 400 | 148 | 12 | **22244..-K** |
| **$7^{7}/_{8}$** | **200,025** | 210 | 411 | 280 | 230 | 85 | 610 | 510 | 130 | 42 | 35 | M30 | 340 | 130 | 10 | **23044..-K** |
| **$7^{15}/_{16}$** | **201,613** | 240 | 474 | 310 | 260 | 95 | 700 | 600 | 150 | 42 | 35 | M30 | 400 | 148 | 12 | **22244..-K** |
| **$7^{15}/_{16}$** | **201,613** | 280 | 550 | 320 | 280 | 105 | 790 | 670 | 160 | 50 | 42 | M36 | 460 | 166 | 16 | **22344..-K** |
| **$7^{15}/_{16}$** | **201,613** | 210 | 411 | 280 | 230 | 85 | 610 | 510 | 130 | 42 | 35 | M30 | 340 | 130 | 10 | **23044..-K** |
| **$7^{15}/_{16}$** | **201,613** | 220 | 434 | 290 | 240 | 90 | 640 | 540 | 140 | 42 | 35 | M30 | 370 | 140 | 12 | **23144..-K** |
| **$7^{15}/_{16}$** | **201,613** | 240 | 474 | 310 | 260 | 95 | 700 | 600 | 150 | 42 | 35 | M30 | 400 | 164 | 12 | **23244..-K** |
| **8** | **203,200** | 240 | 474 | 310 | 260 | 95 | 700 | 600 | 150 | 42 | 35 | M30 | 400 | 148 | 12 | **22244..-K** |
| **8** | **203,200** | 210 | 411 | 280 | 230 | 85 | 610 | 510 | 130 | 42 | 35 | M30 | 340 | 130 | 10 | **23044..-K** |
| **$8^{7}/_{16}$** | **214,313** | 260 | 516 | 320 | 280 | 100 | 770 | 650 | 160 | 50 | 42 | M36 | 440 | 164 | 13 | **22248..-K** |
| **$8^{7}/_{16}$** | **214,313** | 220 | 434 | 290 | 240 | 90 | 640 | 540 | 140 | 42 | 35 | M30 | 360 | 140 | 12 | **23048..-K** |
| **$8^{7}/_{16}$** | **214,313** | 220 | 434 | 290 | 240 | 90 | 640 | 540 | 140 | 42 | 35 | M30 | 360 | 140 | 12 | **230S.807**[1)] |
| **$8^{1}/_{2}$** | **215,900** | 260 | 516 | 320 | 280 | 100 | 770 | 650 | 160 | 50 | 42 | M36 | 440 | 164 | 13 | **22248..-K** |
| **$8^{1}/_{2}$** | **215,900** | 220 | 434 | 290 | 240 | 90 | 640 | 540 | 140 | 42 | 35 | M30 | 360 | 140 | 12 | **23048..-K** |
| **$8^{1}/_{2}$** | **215,900** | 220 | 434 | 290 | 240 | 90 | 640 | 540 | 140 | 42 | 35 | M30 | 360 | 140 | 12 | **230S.808**[1)] |
| **$8^{15}/_{16}$** | **227,013** | 260 | 516 | 320 | 280 | 100 | 770 | 650 | 160 | 50 | 42 | M36 | 440 | 164 | 13 | **22248..-K** |
| **$8^{15}/_{16}$** | **227,013** | 300 | 591 | 350 | 310 | 110 | 830 | 710 | 190 | 50 | 42 | M36 | 500 | 180 | 22 | **22348..-K** |
| **$8^{15}/_{16}$** | **227,013** | 220 | 434 | 290 | 240 | 90 | 640 | 540 | 140 | 42 | 35 | M30 | 360 | 140 | 12 | **23048..-K** |
| **$8^{15}/_{16}$** | **227,013** | 240 | 474 | 310 | 260 | 95 | 700 | 600 | 150 | 42 | 35 | M30 | 400 | 148 | 12 | **23148..-K** |
| **$8^{15}/_{16}$** | **227,013** | 260 | 516 | 320 | 280 | 100 | 770 | 650 | 160 | 50 | 42 | M36 | 440 | 180 | 13 | **23248..-K** |

① Locating bearing; ② Non-locating bearing

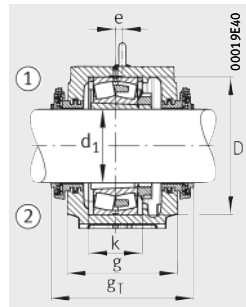
1) Split bearing in associated housing has restricted usability. Please ask for further information.



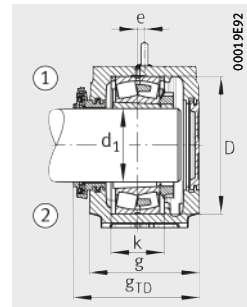

Labyrinth seal NTS




Labyrinth seal NTS
Cover NDK




Taconite seal NTC




Taconite seal NTC
Cover NDK



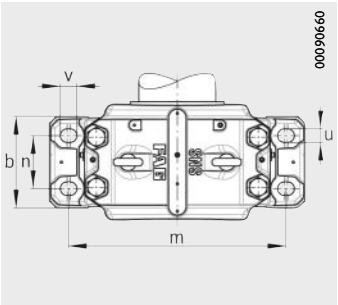


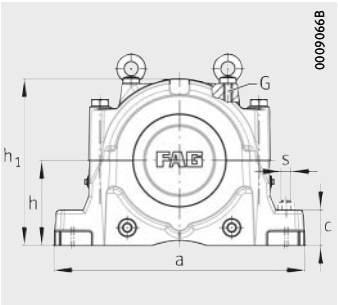


| | | | | | | | | | | Housing | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adapter sleeve | Locating ring | | Labyrinth seal | | | Taconite seal | | | Cover | G | Mass | Designation |
| | | Quantity | | $g_L$ mm | $g_{LD}$ mm | | $g_T$ mm | $g_{TD}$ mm | | | m ≈ kg | |
| H3140(-HG)X704 | NFR360/21 | 2 | NTS48X704 | 301 | 295,5 | NTC48X704 | 380 | 335 | NDK48 | M20 | 148 | **SNS3048-H-D** |
| H2340(-HG)X704 | NFR420/14 | 2 | NTS56X704 | 331 | 325,5 | NTC56X704 | 410 | 365 | NDK56 | M24 | 249 | **SNS3056-H-D** |
| H3040(-HG)X704 | NFR310/10 | 4 | NTS40X704 | 271 | 265,5 | NTC40X704 | 326 | 293 | NDK40 | M20 | 105 | **SNS3040-H-D** |
| H2340(-HG)X704 | NFR360/6 | 2 | NTS48X704 | 301 | 295,5 | NTC48X704 | 380 | 335 | NDK48 | M20 | 148 | **SNS3240-H-D** |
| H3144X(-HG)X713 | NFR400/10 | 4 | NTS48X713 | 321 | 315,5 | NTC48X713 | 400 | 355 | NDK48 | M24 | 184 | **SNS3148-H-D** |
| H3044(-HG)X713 | NFR340/10 | 4 | NTS44X713 | 291 | 285,5 | NTC44X713 | 370 | 325 | NDK44 | M20 | 129 | **SNS3044-H-D** |
| H3144X(-HG)X714 | NFR400/10 | 4 | NTS48X714 | 321 | 315,5 | NTC48X714 | 400 | 355 | NDK48 | M24 | 184 | **SNS3148-H-D** |
| H3044(-HG)X714 | NFR340/10 | 4 | NTS44X714 | 291 | 285,5 | NTC44X714 | 370 | 325 | NDK44 | M20 | 129 | **SNS3044-H-D** |
| H3144X(-HG)X715 | NFR400/10 | 4 | NTS48X715 | 321 | 315,5 | NTC48X715 | 400 | 355 | NDK48 | M24 | 184 | **SNS3148-H-D** |
| H2344(-HG)X715 | NFR460/10,5 | 2 | NTS56X715 | 331 | 325,5 | NTC56X715 | 410 | 365 | NDK56 | M24 | 264 | **SNS3156-H-D** |
| H3044(-HG)X715 | NFR340/10 | 4 | NTS44X715 | 291 | 285,5 | NTC44X715 | 370 | 325 | NDK44 | M20 | 129 | **SNS3044-H-D** |
| H3144X(-HG)X715 | NFR370/10 | 2 | NTS44X715 | 301 | 295,5 | NTC44X715 | 380 | 335 | NDK44 | M20 | 146 | **SNS3144-H-D** |
| H2344(-HG)X715 | NFR400/10 | 2 | NTS48X715 | 321 | 315,5 | NTC48X715 | 400 | 355 | NDK48 | M24 | 183 | **SNS3244-H-D** |
| H3144X(-HG)X800 | NFR400/10 | 4 | NTS48X800 | 321 | 315,5 | NTC48X800 | 400 | 355 | NDK48 | M24 | 184 | **SNS3148-H-D** |
| H3044(-HG)X800 | NFR340/10 | 4 | NTS44X800 | 291 | 285,5 | NTC44X800 | 370 | 325 | NDK44 | M20 | 129 | **SNS3044-H-D** |
| H3148X(-HG)X807 | NFR440/22 | 2 | NTS52X807 | 331 | 325,5 | NTC52X807 | 410 | 365 | NDK52 | M24 | 238 | **SNS3152-H-D** |
| H3048(-HG)X807 | NFR360/12 | 4 | NTS48X807 | 301 | 295,5 | NTC48X807 | 380 | 335 | NDK48 | M20 | 148 | **SNS3048-H-D** |
| – | NFR360/12 | 4 | NTS48X807 | 301 | 295,5 | NTC48X807 | 380 | 335 | NDK48 | M20 | 148 | **SNS3048-H-D** |
| H3148X(-HG)X808 | NFR440/22 | 2 | NTS52X808 | 331 | 325,5 | NTC52X808 | 410 | 365 | NDK52 | M24 | 238 | **SNS3152-H-D** |
| H3048(-HG)X808 | NFR360/12 | 4 | NTS48X808 | 301 | 295,5 | NTC48X808 | 380 | 335 | NDK48 | M20 | 148 | **SNS3048-H-D** |
| – | NFR360/12 | 4 | NTS48X808 | 301 | 295,5 | NTC48X808 | 380 | 335 | NDK48 | M20 | 148 | **SNS3048-H-D** |
| H3148X(-HG)X815 | NFR440/22 | 2 | NTS52X815 | 331 | 325,5 | NTC52X815 | 410 | 365 | NDK52 | M24 | 238 | **SNS3152-H-D** |
| H2348(-HG)X815 | NFR500/12,5 | 2 | NTS60X815 | 361 | 355,5 | NTC60X815 | 440 | 395 | NDK60 | M30 | 317 | **SNS3160-H-D** |
| H3048(-HG)X815 | NFR360/12 | 4 | NTS48X815 | 301 | 295,5 | NTC48X815 | 380 | 335 | NDK48 | M20 | 148 | **SNS3048-H-D** |
| H3148X(-HG)X815 | NFR400/10 | 2 | NTS48X815 | 321 | 315,5 | NTC48X815 | 400 | 355 | NDK48 | M24 | 184 | **SNS3148-H-D** |
| H2348(-HG)X815 | NFR440/10 | 2 | NTS52X815 | 331 | 325,5 | NTC52X815 | 410 | 365 | NDK52 | M24 | 235 | **SNS3248-H-D** |

# Plummer block housings

SNS, split
For spherical roller bearings with tapered bore and adapter sleeve
Inch size shaft



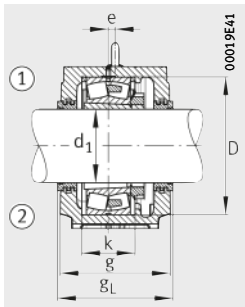




**Dimension table** (continued) · Dimensions in mm

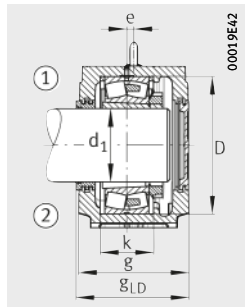
| Shaft | | Housing Dimensions | | | | | | | | | | | | | | Spherical roller bearing and accessories |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_1$ | | h | $h_1$ | g | b | c | a | m | n | v | u | s | D | k | e | Bearing |
| *inch* | mm | | | | | | | | | | | | | | | |
| **$9^{7}/_{16}$** | **239,713** | 240 | 474 | 310 | 260 | 95 | 700 | 600 | 150 | 42 | 35 | M30 | 400 | 148 | 12 | **23052..-K** |
| **$9^{7}/_{16}$** | **239,713** | 260 | 516 | 320 | 280 | 100 | 770 | 650 | 160 | 50 | 42 | M36 | 440 | 164 | 13 | **23152..-K** |
| **$9^{7}/_{16}$** | **239,713** | 260 | 516 | 320 | 280 | 100 | 770 | 650 | 160 | 50 | 42 | M36 | 440 | 164 | 13 | **231S.907**[1)] |
| **$9^{7}/_{16}$** | **239,713** | 300 | 591 | 350 | 310 | 110 | 830 | 710 | 190 | 50 | 42 | M36 | 480 | 194 | 22 | **23252..-K** |
| **$9^{1}/_{2}$** | **241,300** | 300 | 591 | 350 | 310 | 110 | 830 | 710 | 190 | 50 | 42 | M36 | 480 | 181 | 22 | **22252..-K** |
| **$9^{1}/_{2}$** | **241,300** | 320 | 631 | 370 | 330 | 115 | 880 | 750 | 200 | 50 | 42 | M36 | 540 | 196 | 23 | **22352..-K** |
| **$9^{1}/_{2}$** | **241,300** | 240 | 474 | 310 | 260 | 95 | 700 | 600 | 150 | 42 | 35 | M30 | 400 | 148 | 12 | **23052..-K** |
| **$9^{1}/_{2}$** | **241,300** | 240 | 474 | 310 | 260 | 95 | 700 | 600 | 150 | 42 | 35 | M30 | 400 | 148 | 12 | **230S.908** |
| **$9^{1}/_{2}$** | **241,300** | 260 | 516 | 320 | 280 | 100 | 770 | 650 | 160 | 50 | 42 | M36 | 440 | 164 | 13 | **23152..-K** |
| **$9^{1}/_{2}$** | **241,300** | 260 | 516 | 320 | 280 | 100 | 770 | 650 | 160 | 50 | 42 | M36 | 440 | 164 | 13 | **231S.908**[1)] |
| **$9^{1}/_{2}$** | **241,300** | 300 | 591 | 350 | 310 | 110 | 830 | 710 | 190 | 50 | 42 | M36 | 480 | 194 | 22 | **23252..-K** |
| **$9^{15}/_{16}$** | **252,413** | 260 | 516 | 320 | 280 | 100 | 770 | 650 | 160 | 50 | 42 | M36 | 420 | 166 | 13 | **23056..-K** |
| **10** | **254,000** | 300 | 591 | 350 | 310 | 110 | 830 | 710 | 190 | 50 | 42 | M36 | 500 | 180 | 22 | **22256..-K** |
| **10** | **254,000** | 260 | 516 | 320 | 280 | 100 | 770 | 650 | 160 | 50 | 42 | M36 | 420 | 166 | 13 | **23056..-K** |
| **10** | **254,000** | 260 | 516 | 320 | 280 | 100 | 770 | 650 | 160 | 50 | 42 | M36 | 420 | 166 | 13 | **230S.1000**[1)] |
| **10** | **254,000** | 280 | 550 | 320 | 280 | 105 | 790 | 670 | 160 | 50 | 42 | M36 | 460 | 166 | 16 | **23156..-K** |
| **10** | **254,000** | 280 | 550 | 320 | 280 | 105 | 790 | 670 | 160 | 50 | 42 | M36 | 460 | 166 | 16 | **231S.1000** |
| **$10^{7}/_{16}$** | **265,113** | 300 | 591 | 350 | 310 | 110 | 830 | 710 | 190 | 50 | 42 | M36 | 500 | 180 | 22 | **22256..-K** |
| **$10^{7}/_{16}$** | **265,113** | 340 | 675 | 400 | 360 | 120 | 950 | 810 | 220 | 50 | 42 | M36 | 580 | 210 | 24 | **22356..-K** |
| **$10^{7}/_{16}$** | **265,113** | 260 | 516 | 320 | 280 | 100 | 770 | 650 | 160 | 50 | 42 | M36 | 420 | 166 | 13 | **23056..-K** |
| **$10^{7}/_{16}$** | **265,113** | 280 | 550 | 320 | 280 | 105 | 790 | 670 | 160 | 50 | 42 | M36 | 460 | 166 | 16 | **23156..-K** |
| **$10^{7}/_{16}$** | **265,113** | 300 | 591 | 350 | 310 | 110 | 830 | 710 | 190 | 50 | 42 | M36 | 500 | 196 | 22 | **23256..-K** |
| **$10^{1}/_{2}$** | **266,700** | 300 | 591 | 350 | 310 | 110 | 830 | 710 | 190 | 50 | 42 | M36 | 500 | 180 | 22 | **22256..-K** |
| **$10^{1}/_{2}$** | **266,700** | 340 | 675 | 400 | 360 | 120 | 950 | 810 | 220 | 50 | 42 | M36 | 580 | 210 | 24 | **22356..-K** |
| **$10^{1}/_{2}$** | **266,700** | 260 | 516 | 320 | 280 | 100 | 770 | 650 | 160 | 50 | 42 | M36 | 420 | 166 | 13 | **23056..-K** |
| **$10^{1}/_{2}$** | **266,700** | 280 | 550 | 320 | 280 | 105 | 790 | 670 | 160 | 50 | 42 | M36 | 460 | 166 | 16 | **23156..-K** |
| **$10^{1}/_{2}$** | **266,700** | 300 | 591 | 350 | 310 | 110 | 830 | 710 | 190 | 50 | 42 | M36 | 500 | 196 | 22 | **23256..-K** |

① Locating bearing; ② Non-locating bearing

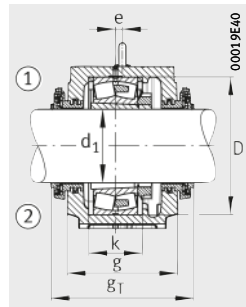
1) Split bearing in associated housing has restricted usability.
Please ask for further information.



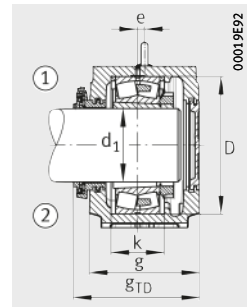

Labyrinth seal NTS




Labyrinth seal NTS
Cover NDK




Taconite seal NTC




Taconite seal NTC
Cover NDK



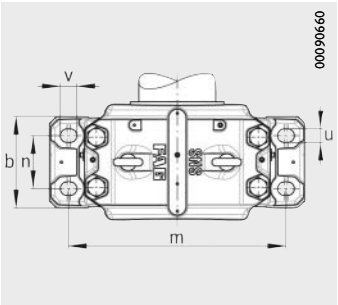


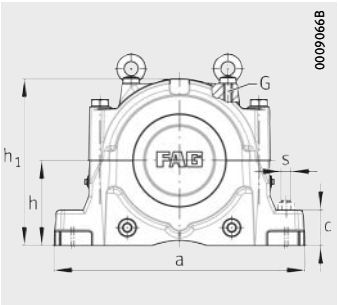


| | | | | | | | | | | Housing | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adapter sleeve | Locating ring | | Labyrinth seal | | | Taconite seal | | | Cover | G | Mass m ≈ kg | Designation |
| | | Quantity | | $g_L$ mm | $g_{LD}$ mm | | $g_T$ mm | $g_{TD}$ mm | | | | |
| H3052(-HG)X907 | NFR400/22 | 2 | NTS52X907 | 321 | 315,5 | NTC52X907 | 400 | 355 | NDK52 | M24 | 180 | **SNS3052-H-D** |
| H3152X(-HG)X907 | NFR440/10 | 2 | NTS52X907 | 331 | 325,5 | NTC52X907 | 410 | 365 | NDK52 | M24 | 238 | **SNS3152-H-D** |
| – | NFR440/10 | 2 | NTS52X907 | 331 | 325,5 | NTC52X907 | 410 | 365 | NDK52 | M24 | 238 | **SNS3152-H-D** |
| H2352(-HG)X907 | NFR480/10 | 2 | NTS64X907 | 361 | 355,5 | NTC64X907 | 440 | 395 | NDK64 | M30 | 331 | **SNS3252-H-D** |
| H3152X(-HG)X908 | NFR480/25,5 | 2 | NTS64X908 | 361 | 355,5 | NTC64X908 | 440 | 395 | NDK64 | M30 | 332 | **SNS3064-H-D** |
| H2352(-HG)X908 | NFR540/15,5 | 2 | NTS64X908 | 381 | 375,5 | NTC64X908 | 460 | 415 | NDK64 | M30 | 368 | **SNS3164-H-D** |
| H3052(-HG)X908 | NFR400/22 | 2 | NTS52X908 | 321 | 315,5 | NTC52X908 | 400 | 355 | NDK52 | M24 | 180 | **SNS3052-H-D** |
| – | NFR400/22 | 2 | NTS52X908 | 321 | 315,5 | NTC52X908 | 400 | 355 | NDK52 | M24 | 180 | **SNS3052-H-D** |
| H3152X(-HG)X908 | NFR440/10 | 2 | NTS52X908 | 331 | 325,5 | NTC52X908 | 410 | 365 | NDK52 | M24 | 238 | **SNS3152-H-D** |
| – | NFR440/10 | 2 | NTS52X908 | 331 | 325,5 | NTC52X908 | 410 | 365 | NDK52 | M24 | 238 | **SNS3152-H-D** |
| H2352(-HG)X908 | NFR480/10 | 2 | NTS64X908 | 361 | 355,5 | NTC64X908 | 440 | 395 | NDK64 | M30 | 331 | **SNS3252-H-D** |
| H3056(-HG)X915 | NFR420/10 | 6 | NTS56X915 | 331 | 325,5 | NTC56X915 | 410 | 365 | NDK56 | M24 | 249 | **SNS3056-H-D** |
| H3156X(-HG)X1000 | NFR500/25 | 2 | NTS60X1000 | 361 | 355,5 | NTC60X1000 | 440 | 395 | NDK60 | M30 | 317 | **SNS3160-H-D** |
| H3056(-HG)X1000 | NFR420/10 | 6 | NTS56X1000 | 331 | 325,5 | NTC56X1000 | 410 | 365 | NDK56 | M24 | 249 | **SNS3056-H-D** |
| – | NFR420/10 | 6 | NTS56X1000 | 331 | 325,5 | NTC56X1000 | 410 | 365 | NDK56 | M24 | 249 | **SNS3056-H-D** |
| H3156X(-HG)X1000 | NFR460/10 | 2 | NTS56X1000 | 331 | 325,5 | NTC56X1000 | 410 | 365 | NDK56 | M24 | 264 | **SNS3156-H-D** |
| – | NFR460/10 | 2 | NTS56X1000 | 331 | 325,5 | NTC56X1000 | 410 | 365 | NDK56 | M24 | 264 | **SNS3156-H-D** |
| H3156X(-HG)X1007 | NFR500/25 | 2 | NTS60X1007 | 361 | 355,5 | NTC60X1007 | 440 | 395 | NDK60 | M30 | 317 | **SNS3160-H-D** |
| H2356(-HG)X1007 | NFR580/17,5 | 2 | NTS68X1007 | 411 | 405,5 | NTC68X1007 | 490 | 445 | NDK68 | M30 | 461 | **SNS3168-H-D** |
| H3056(-HG)X1007 | NFR420/10 | 6 | NTS56X1007 | 331 | 325,5 | NTC56X1007 | 410 | 365 | NDK56 | M24 | 249 | **SNS3056-H-D** |
| H3156X(-HG)X1007 | NFR460/10 | 2 | NTS56X1007 | 331 | 325,5 | NTC56X1007 | 410 | 365 | NDK56 | M24 | 264 | **SNS3156-H-D** |
| H2356(-HG)X1007 | NFR500/10 | 2 | NTS60X1007 | 361 | 355,5 | NTC60X1007 | 440 | 395 | NDK60 | M30 | 314 | **SNS3256-H-D** |
| H3156X(-HG)X1008 | NFR500/25 | 2 | NTS60X1008 | 361 | 355,5 | NTC60X1008 | 440 | 395 | NDK60 | M30 | 317 | **SNS3160-H-D** |
| H2356(-HG)X1008 | NFR580/17,5 | 2 | NTS68X1008 | 411 | 405,5 | NTC68X1008 | 490 | 445 | NDK68 | M30 | 461 | **SNS3168-H-D** |
| H3056(-HG)X1008 | NFR420/10 | 6 | NTS56X1008 | 331 | 325,5 | NTC56X1008 | 410 | 365 | NDK56 | M24 | 249 | **SNS3056-H-D** |
| H3156X(-HG)X1008 | NFR460/10 | 2 | NTS56X1008 | 331 | 325,5 | NTC56X1008 | 410 | 365 | NDK56 | M24 | 264 | **SNS3156-H-D** |
| H2356(-HG)X1008 | NFR500/10 | 2 | NTS60X1008 | 361 | 355,5 | NTC60X1008 | 440 | 395 | NDK60 | M30 | 314 | **SNS3256-H-D** |

# Plummer block housings

SNS, split
For spherical roller bearings with tapered bore and adapter sleeve
Inch size shaft



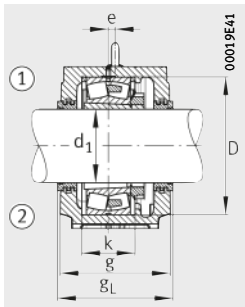




**Dimension table** (continued) · Dimensions in mm

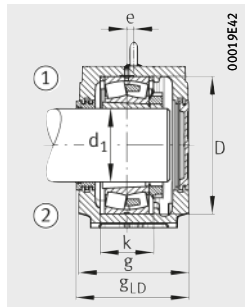
| Shaft | | Housing Dimensions | | | | | | | | | | | | | | Spherical roller bearing and accessories |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_1$ | | h | $h_1$ | g | b | c | a | m | n | v | u | s | D | k | e | Bearing |
| *inch* | mm | | | | | | | | | | | | | | | |
| **$10^{15}/_{16}$** | **277,813** | 320 | 631 | 370 | 330 | 115 | 880 | 750 | 200 | 50 | 42 | M36 | 540 | 196 | 23 | **22260..-K** |
| **$10^{15}/_{16}$** | **277,813** | 280 | 550 | 320 | 280 | 105 | 790 | 670 | 160 | 50 | 42 | M36 | 460 | 168 | 16 | **23060..-K** |
| **$10^{15}/_{16}$** | **277,813** | 280 | 550 | 320 | 280 | 105 | 790 | 670 | 160 | 50 | 42 | M36 | 460 | 168 | 16 | **230S.1015**[1)] |
| **$10^{15}/_{16}$** | **277,813** | 300 | 591 | 350 | 310 | 110 | 830 | 710 | 190 | 50 | 42 | M36 | 500 | 180 | 22 | **23160..-K** |
| **$10^{15}/_{16}$** | **277,813** | 320 | 631 | 370 | 330 | 115 | 880 | 750 | 200 | 50 | 42 | M36 | 540 | 212 | 23 | **23260..-K** |
| **11** | **279,400** | 320 | 631 | 370 | 330 | 115 | 880 | 750 | 200 | 50 | 42 | M36 | 540 | 196 | 23 | **22260..-K** |
| **11** | **279,400** | 280 | 550 | 320 | 280 | 105 | 790 | 670 | 160 | 50 | 42 | M36 | 460 | 168 | 16 | **23060..-K** |
| **11** | **279,400** | 280 | 550 | 320 | 280 | 105 | 790 | 670 | 160 | 50 | 42 | M36 | 460 | 168 | 16 | **230S.1100**[1)] |
| **11** | **279,400** | 300 | 591 | 350 | 310 | 110 | 830 | 710 | 190 | 50 | 42 | M36 | 500 | 180 | 22 | **23160..-K** |
| **11** | **279,400** | 300 | 591 | 350 | 310 | 110 | 830 | 710 | 190 | 50 | 42 | M36 | 500 | 180 | 22 | **231S.1100**[1)] |
| **11** | **279,400** | 320 | 631 | 370 | 330 | 115 | 880 | 750 | 200 | 50 | 42 | M36 | 540 | 212 | 23 | **23260..-K** |
| **$11^{7}/_{16}$** | **290,513** | 300 | 591 | 350 | 310 | 110 | 830 | 710 | 190 | 50 | 42 | M36 | 480 | 181 | 22 | **23064..-K** |
| **$11^{1}/_{2}$** | **292,100** | 340 | 675 | 400 | 360 | 120 | 950 | 810 | 220 | 50 | 42 | M36 | 580 | 190 | 24 | **22264..-K** |
| **$11^{1}/_{2}$** | **292,100** | 300 | 591 | 350 | 310 | 110 | 830 | 710 | 190 | 50 | 42 | M36 | 480 | 181 | 22 | **23064..-K** |
| **$11^{15}/_{16}$** | **303,213** | 300 | 591 | 350 | 310 | 110 | 830 | 710 | 190 | 50 | 42 | M36 | 480 | 181 | 22 | **23064..-K** |
| **$11^{15}/_{16}$** | **303,213** | 320 | 631 | 370 | 330 | 115 | 880 | 750 | 200 | 50 | 42 | M36 | 540 | 196 | 23 | **23164..-K** |
| **$11^{15}/_{16}$** | **303,213** | 340 | 675 | 400 | 360 | 120 | 950 | 810 | 220 | 50 | 42 | M36 | 580 | 228 | 24 | **23264..-K** |
| **12** | **304,800** | 340 | 675 | 400 | 360 | 120 | 950 | 810 | 220 | 50 | 42 | M36 | 580 | 190 | 24 | **22264..-K** |
| **12** | **304,800** | 300 | 591 | 350 | 310 | 110 | 830 | 710 | 190 | 50 | 42 | M36 | 480 | 181 | 22 | **23064..-K** |
| **12** | **304,800** | 300 | 591 | 350 | 310 | 110 | 830 | 710 | 190 | 50 | 42 | M36 | 480 | 181 | 22 | **230S.1200**[1)] |
| **12** | **304,800** | 320 | 631 | 370 | 330 | 115 | 880 | 750 | 200 | 50 | 42 | M36 | 540 | 196 | 23 | **23164..-K** |
| **12** | **304,800** | 320 | 631 | 370 | 330 | 115 | 880 | 750 | 200 | 50 | 42 | M36 | 540 | 196 | 23 | **231S.1200**[1)] |
| **12** | **304,800** | 340 | 675 | 400 | 360 | 120 | 950 | 810 | 220 | 50 | 42 | M36 | 580 | 228 | 24 | **23264..-K** |
| **12** | **304,800** | 340 | 675 | 400 | 360 | 120 | 950 | 810 | 220 | 50 | 42 | M36 | 580 | 228 | 24 | **232S.1200**[1)] |
| **$12^{7}/_{16}$** | **315,913** | 320 | 631 | 370 | 330 | 115 | 880 | 750 | 200 | 50 | 42 | M36 | 520 | 197 | 23 | **23068..-K** |
| **$12^{7}/_{16}$** | **315,913** | 340 | 675 | 400 | 360 | 120 | 950 | 810 | 220 | 50 | 42 | M36 | 580 | 210 | 24 | **23168..-K** |
| **$12^{7}/_{16}$** | **315,913** | 360 | 715 | 400 | 360 | 120 | 1 040 | 870 | 220 | 50 | 42 | M36 | 620 | 244 | 30 | **23268..-K** |

① Locating bearing; ② Non-locating bearing

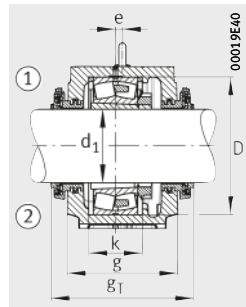
1) Split bearing in associated housing has restricted usability.
Please ask for further information.



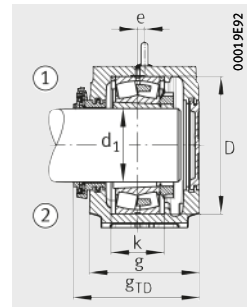

Labyrinth seal NTS




Labyrinth seal NTS
Cover NDK




Taconite seal NTC




Taconite seal NTC
Cover NDK



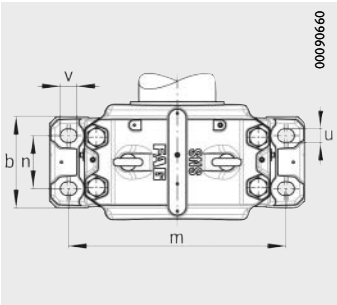


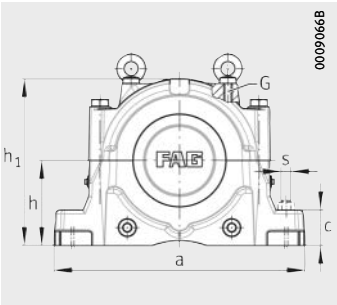


| | | | | | | | | | | Housing | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adapter sleeve | Locating ring | | Labyrinth seal | | | Taconite seal | | | Cover | G | Mass | Designation |
| | | Quantity | | $g_L$ mm | $g_{LD}$ mm | | $g_T$ mm | $g_{TD}$ mm | | | m ≈ kg | |
| H3160(-HG)X1015 | NFR540/28 | 2 | NTS64X1015 | 381 | 375,5 | NTC64X1015 | 460 | 415 | NDK64 | M30 | 368 | **SNS3164-H-D** |
| H3060(-HG)X1015 | NFR460/25 | 2 | NTS60X1015 | 331 | 325,5 | NTC60X1015 | 410 | 365 | NDK60 | M24 | 260 | **SNS3060-H-D** |
| – | NFR460/25 | 2 | NTS60X1015 | 331 | 325,5 | NTC60X1015 | 410 | 365 | NDK60 | M24 | 260 | **SNS3060-H-D** |
| H3160(-HG)X1015 | NFR500/10 | 2 | NTS60X1015 | 361 | 355,5 | NTC60X1015 | 440 | 395 | NDK60 | M30 | 317 | **SNS3160-H-D** |
| H3260(-HG)X1015 | NFR540/10 | 2 | NTS64X1015 | 381 | 375,5 | NTC64X1015 | 460 | 415 | NDK64 | M30 | 364 | **SNS3260-H-D** |
| H3160(-HG)X1100 | NFR540/28 | 2 | NTS64X1100 | 381 | 375,5 | NTC64X1100 | 460 | 415 | NDK64 | M30 | 368 | **SNS3164-H-D** |
| H3060(-HG)X1100 | NFR460/25 | 2 | NTS60X1100 | 331 | 325,5 | NTC60X1100 | 410 | 365 | NDK60 | M24 | 260 | **SNS3060-H-D** |
| – | NFR460/25 | 2 | NTS60X1100 | 331 | 325,5 | NTC60X1100 | 410 | 365 | NDK60 | M24 | 260 | **SNS3060-H-D** |
| H3160(-HG)X1100 | NFR500/10 | 2 | NTS60X1100 | 361 | 355,5 | NTC60X1100 | 440 | 395 | NDK60 | M30 | 317 | **SNS3160-H-D** |
| – | NFR500/10 | 2 | NTS60X1100 | 361 | 355,5 | NTC60X1100 | 440 | 395 | NDK60 | M30 | 317 | **SNS3160-H-D** |
| H3260(-HG)X1100 | NFR540/10 | 2 | NTS64X1100 | 381 | 375,5 | NTC64X1100 | 460 | 415 | NDK64 | M30 | 364 | **SNS3260-H-D** |
| H3064(-HG)X1107 | NFR480/10 | 6 | NTS64X1107 | 361 | 355,5 | NTC64X1107 | 440 | 395 | NDK64 | M30 | 332 | **SNS3064-H-D** |
| H3164(-HG)X1108 | NFR580/20 | 2 | NTS68X1108 | 411 | 405,5 | NTC68X1108 | 490 | 445 | NDK68 | M30 | 466 | **SNS2264-H-D** |
| H3064(-HG)X1108 | NFR480/10 | 6 | NTS64X1108 | 361 | 355,5 | NTC64X1108 | 440 | 395 | NDK64 | M30 | 332 | **SNS3064-H-D** |
| H3064-HGX1115 | NFR480/10 | 6 | NTS64X1115 | 361 | 355,5 | NTC64X1115 | 440 | 395 | NDK64 | M30 | 332 | **SNS3064-H-D** |
| H3164-HGX1115 | NFR540/10 | 2 | NTS64X1115 | 381 | 375,5 | NTC64X1115 | 460 | 415 | NDK64 | M30 | 368 | **SNS3164-H-D** |
| H3264-HGX1115 | NFR580/10 | 2 | NTS68X1115 | 411 | 405,5 | NTC68X1115 | 490 | 445 | NDK68 | M30 | 457 | **SNS3264-H-D** |
| H3164-HGX1200 | NFR580/20 | 2 | NTS68X1200 | 411 | 405,5 | NTC68X1200 | 490 | 445 | NDK68 | M30 | 466 | **SNS2264-H-D** |
| H3064-HGX1200 | NFR480/10 | 6 | NTS64X1200 | 361 | 355,5 | NTC64X1200 | 440 | 395 | NDK64 | M30 | 332 | **SNS3064-H-D** |
| – | NFR480/10 | 6 | NTS64X1200 | 361 | 355,5 | NTC64X1200 | 440 | 395 | NDK64 | M30 | 332 | **SNS3064-H-D** |
| H3164-HGX1200 | NFR540/10 | 2 | NTS64X1200 | 381 | 375,5 | NTC64X1200 | 460 | 415 | NDK64 | M30 | 368 | **SNS3164-H-D** |
| – | NFR540/10 | 2 | NTS64X1200 | 381 | 375,5 | NTC64X1200 | 460 | 415 | NDK64 | M30 | 368 | **SNS3164-H-D** |
| H3264-HGX1200 | NFR580/10 | 2 | NTS68X1200 | 411 | 405,5 | NTC68X1200 | 490 | 445 | NDK68 | M30 | 457 | **SNS3264-H-D** |
| – | NFR580/10 | 2 | NTS68X1200 | 411 | 405,5 | NTC68X1200 | 490 | 445 | NDK68 | M30 | 457 | **SNS3264-H-D** |
| H3068-HGX1207 | NFR520/16 | 4 | NTS68X1207 | 381 | 375,5 | NTC68X1207 | 460 | 415 | NDK68 | M30 | 386 | **SNS3068-H-D** |
| H3168-HGX1207 | NFR580/10 | 2 | NTS68X1207 | 411 | 405,5 | NTC68X1207 | 490 | 445 | NDK68 | M30 | 461 | **SNS3168-H-D** |
| H3268-HGX1207 | NFR620/10 | 2 | NTS76X1207 | 411 | 405,5 | NTC76X1207 | 490 | 445 | NDK76 | M36 | 530 | **SNS3268-H-D** |

# Plummer block housings

SNS, split
For spherical roller bearings with tapered bore and adapter sleeve
Inch size shaft



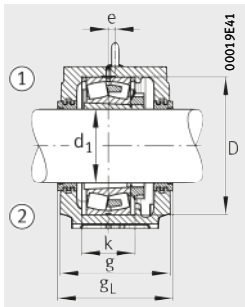




**Dimension table** (continued) · Dimensions in mm

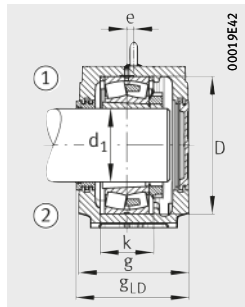
| Shaft | | Housing Dimensions | | | | | | | | | | | | | | Spherical roller bearing and accessories | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_1$ | | h | $h_1$ | g | b | c | a | m | n | v | u | s | D | k | e | Bearing | Adapter sleeve |
| *inch* | mm | | | | | | | | | | | | | | | | |
| **12 1/2** | **317,500** | 320 | 631 | 370 | 330 | 115 | 880 | 750 | 200 | 50 | 42 | M36 | 520 | 197 | 23 | **23068..-K** | H3068-HGX1208 |
| **12 1/2** | **317,500** | 340 | 675 | 400 | 360 | 120 | 950 | 810 | 220 | 50 | 42 | M36 | 580 | 210 | 24 | **23168..-K** | H3168-HGX1208 |
| **12 1/2** | **317,500** | 340 | 675 | 400 | 360 | 120 | 950 | 810 | 220 | 50 | 42 | M36 | 580 | 210 | 24 | **231S.1208** | – |
| **12 1/2** | **317,500** | 360 | 715 | 400 | 360 | 120 | 1 040 | 870 | 220 | 50 | 42 | M36 | 620 | 244 | 30 | **23268..-K** | H3268-HGX1208 |
| **12 15/16** | **328,613** | 320 | 631 | 370 | 330 | 115 | 880 | 750 | 200 | 50 | 42 | M36 | 540 | 198 | 23 | **23072..-K** | H3072-HGX1215 |
| **13** | **330,200** | 380 | 755 | 430 | 390 | 125 | 1 120 | 950 | 240 | 60 | 48 | M42 | 650 | 220 | 30 | **22272..-K** | H3172-HGX1300 |
| **13** | **330,200** | 320 | 631 | 370 | 330 | 115 | 880 | 750 | 200 | 50 | 42 | M36 | 540 | 198 | 23 | **23072..-K** | H3072-HGX1300 |
| **13 7/16** | **341,313** | 320 | 631 | 370 | 330 | 115 | 880 | 750 | 200 | 50 | 42 | M36 | 540 | 198 | 23 | **23072..-K** | H3072-HGX1307 |
| **13 7/16** | **341,313** | 350 | 695 | 400 | 360 | 120 | 1 000 | 840 | 220 | 50 | 42 | M36 | 600 | 212 | 30 | **23172..-K** | H3172-HGX1307 |
| **13 7/16** | **341,313** | 380 | 755 | 430 | 390 | 125 | 1 120 | 950 | 240 | 60 | 48 | M42 | 650 | 252 | 30 | **23272..-K** | H3272-HGX1307 |
| **13 1/2** | **342,900** | 380 | 755 | 430 | 390 | 125 | 1 120 | 950 | 240 | 60 | 48 | M42 | 650 | 220 | 30 | **22272..-K** | H3172-HGX1308 |
| **13 1/2** | **342,900** | 320 | 631 | 370 | 330 | 115 | 880 | 750 | 200 | 50 | 42 | M36 | 540 | 198 | 23 | **23072..-K** | H3072-HGX1308 |
| **13 1/2** | **342,900** | 350 | 695 | 400 | 360 | 120 | 1 000 | 840 | 220 | 50 | 42 | M36 | 600 | 212 | 30 | **23172..-K** | H3172-HGX1308 |
| **13 1/2** | **342,900** | 380 | 755 | 430 | 390 | 125 | 1 120 | 950 | 240 | 60 | 48 | M42 | 650 | 252 | 30 | **23272..-K** | H3272-HGX1308 |
| **13 1/2** | **342,900** | 380 | 755 | 430 | 390 | 125 | 1 120 | 950 | 240 | 60 | 48 | M42 | 650 | 252 | 30 | **232S.1308**[1)] | – |
| **13 15/16** | **354,013** | 340 | 675 | 400 | 360 | 120 | 950 | 810 | 220 | 50 | 42 | M36 | 560 | 180 | 24 | **23076..-K** | H3076-HGX1315 |
| **13 15/16** | **354,013** | 360 | 715 | 400 | 360 | 120 | 1 040 | 870 | 220 | 50 | 42 | M36 | 620 | 214 | 30 | **23176..-K** | H3176-HGX1315 |
| **13 15/16** | **354,013** | 410 | 810 | 460 | 420 | 130 | 1 170 | 1 000 | 260 | 60 | 48 | M42 | 680 | 260 | 35 | **23276..-K** | H3276-HGX1315 |
| **14** | **355,600** | 340 | 675 | 400 | 360 | 120 | 950 | 810 | 220 | 50 | 42 | M36 | 560 | 180 | 24 | **23076..-K** | H3076-HGX1400 |
| **14** | **355,600** | 340 | 675 | 400 | 360 | 120 | 950 | 810 | 220 | 50 | 42 | M36 | 560 | 180 | 24 | **230S.1400** | – |
| **14** | **355,600** | 360 | 715 | 400 | 360 | 120 | 1 040 | 870 | 220 | 50 | 42 | M36 | 620 | 214 | 30 | **23176..-K** | H3176-HGX1400 |
| **14** | **355,600** | 360 | 715 | 400 | 360 | 120 | 1 040 | 870 | 220 | 50 | 42 | M36 | 620 | 214 | 30 | **231S.1400**[1)] | – |
| **14** | **355,600** | 410 | 810 | 460 | 420 | 130 | 1 170 | 1 000 | 260 | 60 | 48 | M42 | 680 | 260 | 35 | **23276..-K** | H3276-HGX1400 |
| **15** | **381,000** | 350 | 695 | 400 | 360 | 120 | 1 000 | 840 | 220 | 50 | 42 | M36 | 600 | 192 | 30 | **23080..-K** | H3080-HGX1500 |
| **15** | **381,000** | 380 | 755 | 430 | 390 | 125 | 1 120 | 950 | 240 | 60 | 48 | M42 | 650 | 220 | 30 | **23180..-K** | H3180-HGX1500 |
| **15** | **381,000** | 380 | 755 | 430 | 390 | 125 | 1 120 | 950 | 240 | 60 | 48 | M42 | 650 | 220 | 30 | **231S.1500**[1)] | – |
| **15** | **381,000** | 420 | 835 | 460 | 430 | 135 | 1 220 | 1 030 | 260 | 60 | 48 | M42 | 720 | 276 | 35 | **23280..-K** | H3280-HGX1500 |

① Locating bearing; ② Non-locating bearing

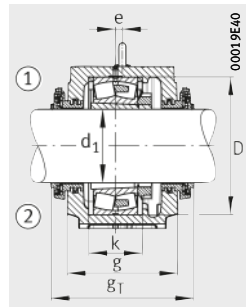
1) Split bearing in associated housing has restricted usability.
Please ask for further information.



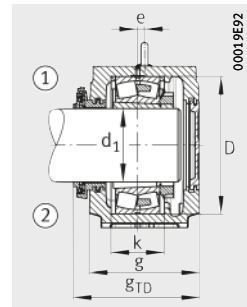

Labyrinth seal NTS




Labyrinth seal NTS
Cover NDK




Taconite seal NTC




Taconite seal NTC
Cover NDK



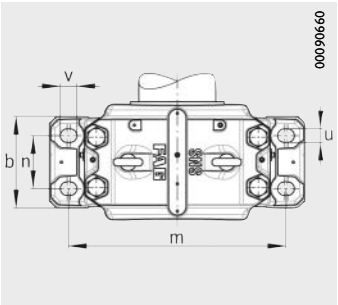


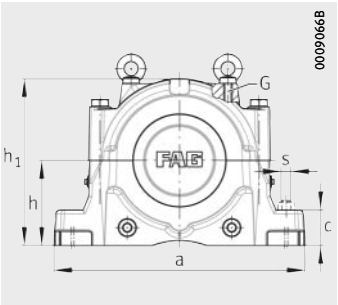


| | | | | | | | | | Housing | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Locating ring | | Labyrinth seal | | | Taconite seal | | | Cover | G | Mass | Designation |
| | Quantity | | $g_L$ mm | $g_{LD}$ mm | | $g_T$ mm | $g_{TD}$ mm | | | m ≈ kg | |
| NFR520/16 | 4 | NTS68X1208 | 381 | 375,5 | NTC68X1208 | 460 | 415 | NDK68 | M30 | 386 | **SNS3068-H-D** |
| NFR580/10 | 2 | NTS68X1208 | 411 | 405,5 | NTC68X1208 | 490 | 445 | NDK68 | M30 | 461 | **SNS3168-H-D** |
| NFR580/10 | 2 | NTS68X1208 | 411 | 405,5 | NTC68X1208 | 490 | 445 | NDK68 | M30 | 461 | **SNS3168-H-D** |
| NFR620/10 | 2 | NTS76X1208 | 411 | 405,5 | NTC76X1208 | 490 | 445 | NDK76 | M36 | 530 | **SNS3268-H-D** |
| NFR540/16 | 4 | NTS72X1215 | 381 | 375,5 | NTC72X1215 | 460 | 415 | NDK72 | M30 | 356 | **SNS3072-H-D** |
| NFR650/25 | 2 | NTS80X1300 | 441 | 435,5 | NTC80X1300 | 520 | 475 | NDK80 | M42 | 681 | **SNS3180-H-D** |
| NFR540/16 | 4 | NTS72X1300 | 381 | 375,5 | NTC72X1300 | 460 | 415 | NDK72 | M30 | 356 | **SNS3072-H-D** |
| NFR540/16 | 4 | NTS72X1307 | 381 | 375,5 | NTC72X1307 | 460 | 415 | NDK72 | M30 | 356 | **SNS3072-H-D** |
| NFR600/10 | 2 | NTS72X1307 | 411 | 405,5 | NTC72X1307 | 490 | 445 | NDK72 | M36 | 498 | **SNS3172-H-D** |
| NFR650/10 | 2 | NTS80X1307 | 441 | 435,5 | NTC80X1307 | 520 | 475 | NDK80 | M42 | 675 | **SNS3272-H-D** |
| NFR650/25 | 2 | NTS80X1308 | 441 | 435,5 | NTC80X1308 | 520 | 475 | NDK80 | M42 | 681 | **SNS3180-H-D** |
| NFR540/16 | 4 | NTS72X1308 | 381 | 375,5 | NTC72X1308 | 460 | 415 | NDK72 | M30 | 356 | **SNS3072-H-D** |
| NFR600/10 | 2 | NTS72X1308 | 411 | 405,5 | NTC72X1308 | 490 | 445 | NDK72 | M36 | 498 | **SNS3172-H-D** |
| NFR650/10 | 2 | NTS80X1308 | 441 | 435,5 | NTC80X1308 | 520 | 475 | NDK80 | M42 | 675 | **SNS3272-H-D** |
| NFR650/10 | 2 | NTS80X1308 | 441 | 435,5 | NTC80X1308 | 520 | 475 | NDK80 | M42 | 675 | **SNS3272-H-D** |
| NFR560/22,5 | 2 | NTS76X1315 | 411 | 405,5 | NTC76X1315 | 490 | 445 | NDK76 | M30 | 481 | **SNS3076-H-D** |
| NFR620/10 | 2 | NTS76X1315 | 411 | 405,5 | NTC76X1315 | 490 | 445 | NDK76 | M36 | 534 | **SNS3176-H-D** |
| NFR680/10 | 2 | NTS92X1315 | 471 | 465,5 | NTC92X1315 | 550 | 505 | NDK92 | M42 | 841 | **SNS3276-H-D** |
| NFR560/22,5 | 2 | NTS76X1400 | 411 | 405,5 | NTC76X1400 | 490 | 445 | NDK76 | M30 | 481 | **SNS3076-H-D** |
| NFR560/22,5 | 2 | NTS76X1400 | 411 | 405,5 | NTC76X1400 | 490 | 445 | NDK76 | M30 | 481 | **SNS3076-H-D** |
| NFR620/10 | 2 | NTS76X1400 | 411 | 405,5 | NTC76X1400 | 490 | 445 | NDK76 | M36 | 534 | **SNS3176-H-D** |
| NFR620/10 | 2 | NTS76X1400 | 411 | 405,5 | NTC76X1400 | 490 | 445 | NDK76 | M36 | 534 | **SNS3176-H-D** |
| NFR680/10 | 2 | NTS92X1400 | 471 | 465,5 | NTC92X1400 | 550 | 505 | NDK92 | M42 | 841 | **SNS3276-H-D** |
| NFR600/22 | 2 | NTS80X1500 | 411 | 405,5 | NTC80X1500 | 490 | 445 | NDK80 | M36 | 489 | **SNS3080-H-D** |
| NFR650/10 | 2 | NTS80X1500 | 441 | 435,5 | NTC80X1500 | 520 | 475 | NDK80 | M42 | 681 | **SNS3180-H-D** |
| NFR650/10 | 2 | NTS80X1500 | 441 | 435,5 | NTC80X1500 | 520 | 475 | NDK80 | M42 | 681 | **SNS3180-H-D** |
| NFR720/10 | 2 | NTS88X1500 | 471 | 465,5 | NTC88X1500 | 550 | 505 | NDK88 | M42 | 895 | **SNS3280-H-D** |

# Plummer block housings

SNS, split
For spherical roller bearings with tapered bore and adapter sleeve
Inch size shaft

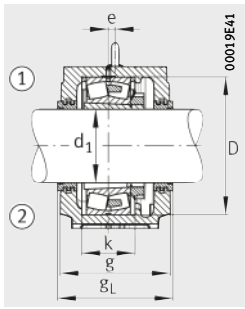


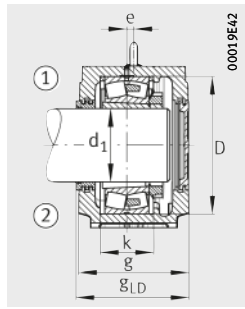

**Dimension table** (continued) · Dimensions in mm

| Shaft | | Housing Dimensions | | | | | | | | | | | | | | Spherical roller bearing and accessories | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_1$ | | h | $h_1$ | g | b | c | a | m | n | v | u | s | D | k | e | Bearing | Adapter sleeve |
| *inch* | mm | | | | | | | | | | | | | | | | |
| **$15^3/_4$** | **400,050** | 360 | 715 | 400 | 360 | 120 | 1 040 | 870 | 220 | 50 | 42 | M36 | 620 | 194 | 30 | **23084..-K** | H3084X-HGX1512 |
| **$15^3/_4$** | **400,050** | 410 | 810 | 460 | 420 | 130 | 1 170 | 1 000 | 260 | 60 | 48 | M42 | 700 | 244 | 35 | **23184..-K** | H3184-HGX1512 |
| **$15^3/_4$** | **400,050** | 440 | 880 | 470 | 440 | 145 | 1 280 | 1 070 | 260 | 60 | 48 | M42 | 760 | 292 | 35 | **23284..-K** | H3284-HGX1512 |
| **$16^1/_2$** | **419,100** | 380 | 755 | 430 | 390 | 125 | 1 120 | 950 | 240 | 60 | 48 | M42 | 650 | 200 | 30 | **23088..-K** | H3088-HGX1608 |
| **$16^1/_2$** | **419,100** | 380 | 755 | 430 | 390 | 125 | 1 120 | 950 | 240 | 60 | 48 | M42 | 650 | 200 | 30 | **230S.1608** | – |
| **$16^1/_2$** | **419,100** | 420 | 835 | 460 | 430 | 135 | 1 220 | 1 030 | 260 | 60 | 48 | M42 | 720 | 246 | 35 | **23188..-K** | H3188-HGX1608 |
| **$16^1/_2$** | **419,100** | 460 | 920 | 470 | 440 | 155 | 1 330 | 1 110 | 260 | 70 | 56 | M48 | 790 | 300 | 35 | **23288..-K** | H3288-HGX1608 |
| **17** | **431,800** | 410 | 810 | 460 | 420 | 130 | 1 170 | 1 000 | 260 | 60 | 48 | M42 | 680 | 224 | 35 | **23092..-K** | H3092-HGX1700 |
| **17** | **431,800** | 440 | 880 | 470 | 440 | 145 | 1 280 | 1 070 | 260 | 60 | 48 | M42 | 760 | 260 | 35 | **23192..-K** | H3192-HGX1700 |
| **18** | **457,200** | 410 | 810 | 460 | 420 | 130 | 1 170 | 1 000 | 260 | 60 | 48 | M42 | 700 | 224 | 35 | **23096..-K** | H3096-HGX1800 |
| **18** | **457,200** | 460 | 920 | 470 | 440 | 155 | 1 330 | 1 110 | 260 | 70 | 56 | M48 | 790 | 268 | 35 | **23196..-K** | H3196-HGX1800 |
| **$18^1/_2$** | **469,900** | 420 | 835 | 460 | 430 | 135 | 1 220 | 1 030 | 260 | 60 | 48 | M42 | 720 | 226 | 35 | **230/500..-K** | H30/500-HGX1808 |
| **$19^1/_2$** | **495,300** | 460 | 920 | 470 | 440 | 155 | 1 330 | 1 110 | 260 | 70 | 56 | M48 | 780 | 248 | 35 | **230/530..-K** | H30/530-HGX1908 |

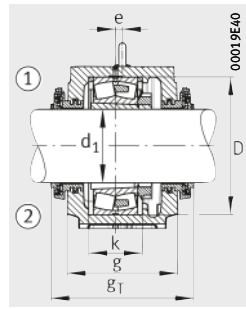
① Locating bearing; ② Non-locating bearing



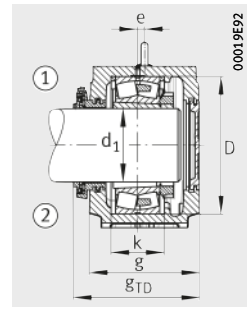

Labyrinth seal NTS




Labyrinth seal NTS
Cover NDK




Taconite seal NTC




Taconite seal NTC
Cover NDK



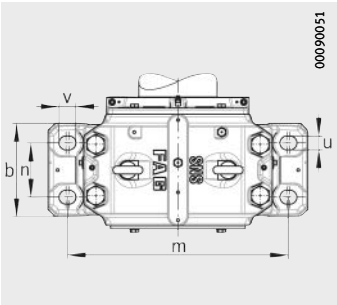


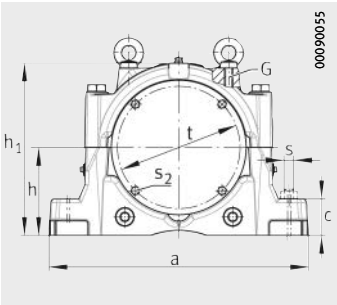


| Locating ring | | Labyrinth seal | | | Taconite seal | | | Cover | Housing G | Mass m ≈ kg | Designation |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Quantity | | $g_L$ mm | $g_{LD}$ mm | | $g_T$ mm | $g_{TD}$ mm | | | | |
| NFR620/22 | 2 | NTS84X1512 | 411 | 405,5 | NTC84X1512 | 490 | 445 | NDK84 | M36 | 527 | **SNS3084-H-D** |
| NFR700/10 | 2 | NTS84X1512 | 471 | 465,5 | NTC84X1512 | 550 | 505 | NDK84 | M42 | 821 | **SNS3184-H-D** |
| NFR760/10 | 2 | NTS92X1512 | 481 | 475,5 | NTC92X1512 | 560 | 515 | NDK92 | M48 | 984 | **SNS3284-H-D** |
| NFR650/21,5 | 2 | NTS88X1608 | 441 | 435,5 | NTC88X1608 | 520 | 475 | NDK88 | M42 | 672 | **SNS3088-H-D** |
| NFR650/21,5 | 2 | NTS88X1608 | 441 | 435,5 | NTC88X1608 | 520 | 475 | NDK88 | M42 | 672 | **SNS3088-H-D** |
| NFR720/10 | 2 | NTS88X1608 | 471 | 465,5 | NTC88X1608 | 550 | 505 | NDK88 | M42 | 895 | **SNS3188-H-D** |
| NFR790/10 | 2 | NTS96X1608 | 481 | 475,5 | NTC96X1608 | 560 | 515 | NDK96 | M48 | 1 100 | **SNS3288-H-D** |
| NFR680/30,5 | 2 | NTS92X1700 | 471 | 465,5 | NTC92X1700 | 550 | 505 | NDK92 | M42 | 849 | **SNS3092-H-D** |
| NFR760/10 | 2 | NTS92X1700 | 481 | 475,5 | NTC92X1700 | 560 | 515 | NDK92 | M48 | 993 | **SNS3192-H-D** |
| NFR700/29,5 | 2 | NTS96X1800 | 471 | 465,5 | NTC96X1800 | 550 | 505 | NDK96 | M42 | 806 | **SNS3096-H-D** |
| NFR790/10 | 2 | NTS96X1800 | 481 | 475,5 | NTC96X1800 | 560 | 515 | NDK96 | M48 | 1 100 | **SNS3196-H-D** |
| NFR720/29,5 | 2 | NTS500X1808 | 471 | 465,5 | NTC500X1808 | 550 | 505 | NDK500 | M42 | 895 | **SNS30/500-H-D** |
| NFR780/31,5 | 2 | NTS530X1908 | 481 | 475,5 | NTC530X1908 | 560 | 515 | NDK530 | M48 | 1 100 | **SNS30/530-H-D** |

# Plummer block housings

SNS, split
For spherical roller bearings with tapered bore and adapter sleeve
Metric shaft
Bolt-on design



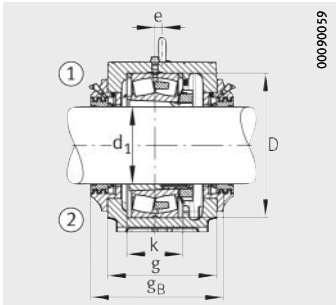




**Dimension table** · Dimensions in mm

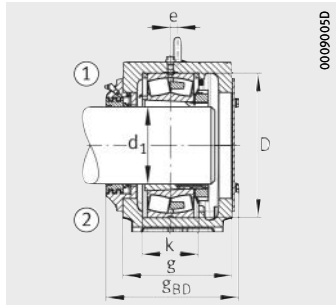
| Shaft | Housing Dimensions | | | | | | | | | | | | | | | | | Spherical roller bearing and accessories |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_1$ | h | $h_1$ | g | b | c | a | m | n | v | u | s | $D_z$ | D | k | e | t | $s_2$ | | Bearing |
| | | | | | | | | | | | | | | | | | | Quantity | |
| **150** | 170 | 333 | 219 | 180 | 70 | 510 | 430 | 100 | 34 | 28 | M24 | 210 | 280 | 108 | 14 | 240 | M8 | 4 | **23134..-K** |
| **150** | 170 | 333 | 219 | 180 | 70 | 510 | 430 | 100 | 34 | 28 | M24 | 210 | 280 | 108 | 14 | 240 | M8 | 4 | **231SM150-MA**[1)] |
| **160** | 180 | 353 | 226 | 190 | 75 | 530 | 450 | 110 | 34 | 28 | M24 | 220 | 300 | 116 | 15 | 250 | M10 | 4 | **23136..-K** |
| **160** | 180 | 353 | 226 | 190 | 75 | 530 | 450 | 110 | 34 | 28 | M24 | 220 | 300 | 116 | 15 | 250 | M10 | 4 | **231SM160-MA**[1)] |
| **170** | 190 | 375 | 246 | 210 | 80 | 560 | 480 | 120 | 34 | 28 | M24 | 230 | 320 | 124 | 10 | 266 | M8 | 4 | **23138..-K** |
| **170** | 190 | 375 | 246 | 210 | 80 | 560 | 480 | 120 | 34 | 28 | M24 | 230 | 320 | 124 | 10 | 266 | M8 | 4 | **231SM170-MA** |
| **180** | 210 | 411 | 266 | 230 | 85 | 610 | 510 | 130 | 42 | 35 | M30 | 250 | 340 | 132 | 10 | 286 | M8 | 4 | **23140..-K** |
| **180** | 210 | 411 | 266 | 230 | 85 | 610 | 510 | 130 | 42 | 35 | M30 | 250 | 340 | 132 | 10 | 286 | M8 | 4 | **231SM180-MA** |
| **200** | 220 | 434 | 278 | 240 | 90 | 640 | 540 | 140 | 42 | 35 | M30 | 270 | 370 | 140 | 12 | 310 | M10 | 4 | **23144..-K** |
| **200** | 220 | 434 | 278 | 240 | 90 | 640 | 540 | 140 | 42 | 35 | M30 | 270 | 370 | 140 | 12 | 310 | M10 | 4 | **231SM200-MA**[1)] |
| **220** | 240 | 474 | 300 | 260 | 95 | 700 | 600 | 150 | 42 | 35 | M30 | 300 | 400 | 148 | 12 | 336 | M10 | 4 | **23148..-K** |
| **220** | 240 | 474 | 300 | 260 | 95 | 700 | 600 | 150 | 42 | 35 | M30 | 300 | 400 | 148 | 12 | 336 | M10 | 4 | **231SM220-MA** |
| **240** | 260 | 516 | 310 | 280 | 100 | 770 | 650 | 160 | 50 | 42 | M36 | 320 | 440 | 164 | 13 | 356 | M10 | 4 | **23152..-K** |
| **240** | 260 | 516 | 310 | 280 | 100 | 770 | 650 | 160 | 50 | 42 | M36 | 320 | 440 | 164 | 13 | 356 | M10 | 4 | **231SM240-MA**[1)] |
| **260** | 280 | 550 | 310 | 280 | 105 | 790 | 670 | 160 | 50 | 42 | M36 | 340 | 460 | 166 | 16 | 380 | M10 | 4 | **23156..-K** |
| **260** | 280 | 550 | 310 | 280 | 105 | 790 | 670 | 160 | 50 | 42 | M36 | 340 | 460 | 166 | 16 | 380 | M10 | 4 | **231SM260-MA** |
| **280** | 300 | 591 | 340 | 310 | 110 | 830 | 710 | 190 | 50 | 42 | M36 | 355 | 500 | 180 | 22 | 412 | M10 | 8 | **23160..-K** |
| **280** | 300 | 591 | 340 | 310 | 110 | 830 | 710 | 190 | 50 | 42 | M36 | 355 | 500 | 180 | 22 | 412 | M10 | 8 | **231SM280-MA**[1)] |
| **300** | 320 | 631 | 360 | 330 | 115 | 880 | 750 | 200 | 50 | 42 | M36 | 380 | 540 | 196 | 23 | 436 | M10 | 8 | **23164..-K** |
| **300** | 320 | 631 | 360 | 330 | 115 | 880 | 750 | 200 | 50 | 42 | M36 | 380 | 540 | 196 | 23 | 436 | M10 | 8 | **231SM300-MA**[1)] |
| **320** | 340 | 675 | 392 | 360 | 120 | 950 | 810 | 220 | 50 | 42 | M36 | 400 | 580 | 210 | 24 | 468 | M10 | 8 | **23168..-K** |
| **320** | 340 | 675 | 392 | 360 | 120 | 950 | 810 | 220 | 50 | 42 | M36 | 400 | 580 | 210 | 24 | 468 | M10 | 8 | **231SM320-MA** |

① Locating bearing; ② Non-locating bearing

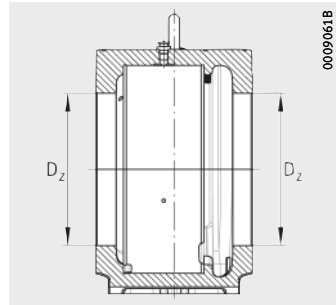
1) Split bearing in associated housing has restricted usability.
Please ask for further information.



Bolt-on seal BTAC



Bolt-on seal BTAC
Cover BDK



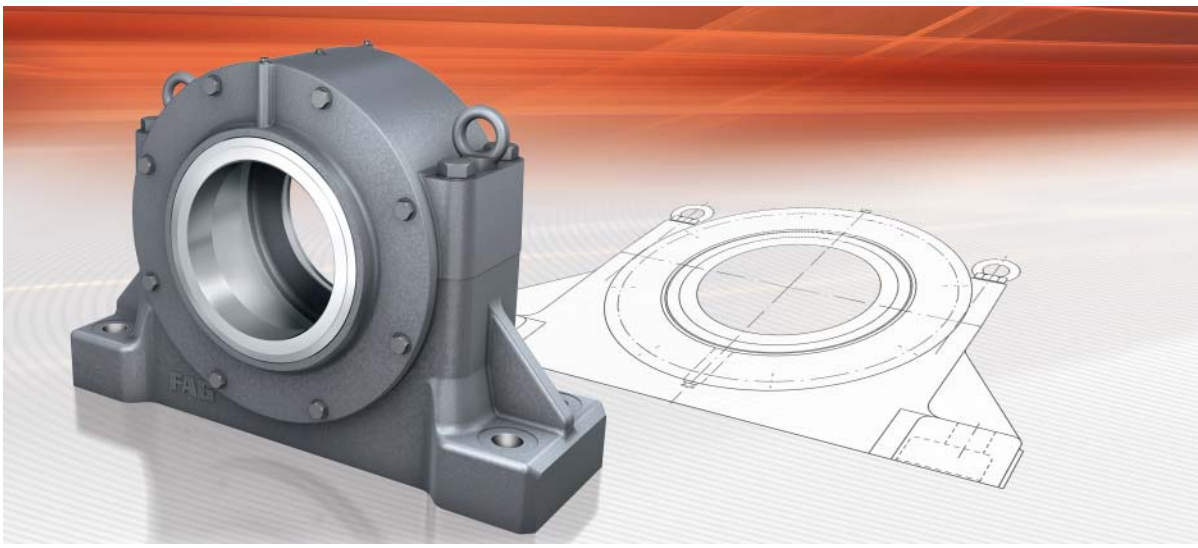







| | | | | | | | Housing | | |
|---|---|---|---|---|---|---|---|---|---|
| Adapter sleeve | Locating ring | | Bolt-on seal | | | Cover | G | Mass m ≈ kg | Designation |
| | | Quantity | | $g_B$ mm | $g_{BD}$ mm | | | | |
| H3134(-HG) | NFR280/10 | 2 | BTAC34 | 289 | 268 | BDK34 | M16 | 70 | **SNS3134-B-D** |
| – | NFR280/10 | 2 | BTAC34 | 289 | 268 | BDK34 | M16 | 70 | **SNS3134-B-D** |
| H3136(-HG) | NFR300/10 | 2 | BTAC36 | 296 | 275 | BDK36 | M16 | 78 | **SNS3136-B-D** |
| – | NFR300/10 | 2 | BTAC36 | 296 | 275 | BDK36 | M16 | 78 | **SNS3136-B-D** |
| H3138(-HG) | NFR320/10 | 2 | BTAC38 | 316 | 295 | BDK38 | M20 | 96 | **SNS3138-B-D** |
| – | NFR320/10 | 2 | BTAC38 | 316 | 295 | BDK38 | M20 | 96 | **SNS3138-B-D** |
| H3140(-HG) | NFR340/10 | 2 | BTAC40 | 336 | 315 | BDK40 | M20 | 123 | **SNS3140-B-D** |
| – | NFR340/10 | 2 | BTAC40 | 336 | 315 | BDK40 | M20 | 123 | **SNS3140-B-D** |
| H3144X(-HG) | NFR370/10 | 2 | BTAC44 | 348 | 327 | BDK44 | M20 | 137 | **SNS3144-B-D** |
| – | NFR370/10 | 2 | BTAC44 | 348 | 327 | BDK44 | M20 | 137 | **SNS3144-B-D** |
| H3148X(-HG) | NFR400/10 | 2 | BTAC48 | 378 | 353 | BDK48 | M24 | 173 | **SNS3148-B-D** |
| – | NFR400/10 | 2 | BTAC48 | 378 | 353 | BDK48 | M24 | 173 | **SNS3148-B-D** |
| H3152X(-HG) | NFR440/10 | 2 | BTAC52 | 392 | 365 | BDK52 | M24 | 226 | **SNS3152-B-D** |
| – | NFR440/10 | 2 | BTAC52 | 392 | 365 | BDK52 | M24 | 226 | **SNS3152-B-D** |
| H3156X(-HG) | NFR460/10 | 2 | BTAC56 | 392 | 365 | BDK56 | M24 | 252 | **SNS3156-B-D** |
| – | NFR460/10 | 2 | BTAC56 | 392 | 365 | BDK56 | M24 | 252 | **SNS3156-B-D** |
| H3160(-HG) | NFR500/10 | 2 | BTAC60 | 422 | 395 | BDK60 | M30 | 305 | **SNS3160-B-D** |
| – | NFR500/10 | 2 | BTAC60 | 422 | 395 | BDK60 | M30 | 305 | **SNS3160-B-D** |
| H3164-HG | NFR540/10 | 2 | BTAC64 | 442 | 415 | BDK64 | M30 | 354 | **SNS3164-B-D** |
| – | NFR540/10 | 2 | BTAC64 | 442 | 415 | BDK64 | M30 | 354 | **SNS3164-B-D** |
| H3168-HG | NFR580/10 | 2 | BTAC68 | 480 | 450 | BDK68 | M30 | 446 | **SNS3168-B-D** |
| – | NFR580/10 | 2 | BTAC68 | 480 | 450 | BDK68 | M30 | 446 | **SNS3168-B-D** |

FAG



# Split plummer block housings RLE

# Split plummer block housings RLE


| | | Page |
|---|---|---|
| **Product overview** | Split plummer block housings RLE | 216 |
| **Features** | Suitable bearings | 217 |
| | Housing materials and anti-corrosion protection | 217 |
| | Locating and non-locating bearings | 217 |
| | Seals and covers | 218 |
| | Housing configurations | 219 |
| | Lubrication | 220 |
| | Designation structure | 221 |
| | Ordering examples | 222 |
| **Design and safety guidelines** | Eye bolts | 223 |
| | Foot screws | 223 |
| **Accuracy** | | 223 |
| **Dimension tables** | Plummer block housings RLE, split, for spherical roller bearings with tapered bore and withdrawal sleeve, stepped shaft | 224 |
| | Plummer block housings RLE, split, for spherical roller bearings with cylindrical bore, stepped shaft | 226 |








## Plummer block housings

**Split**

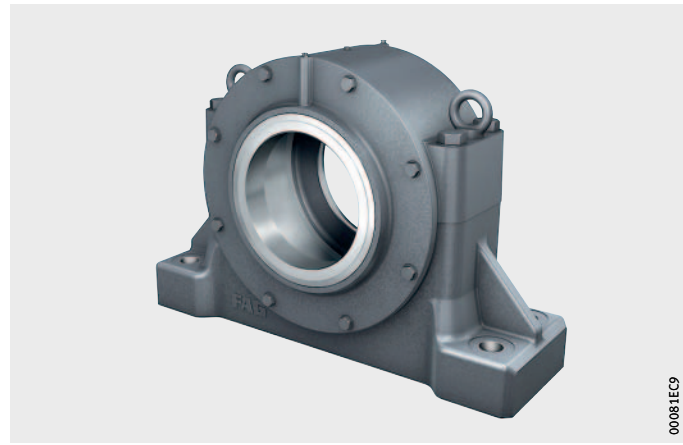
Closed on one side, with cover

**RLE..-AF, RLE..-AL**




For continuous shaft

**RLE..-BF, RLE..-BL**



# Split plummer block housings RLE



## Features

Split plummer block housings RLE were developed specifically for the bearing arrangements of back-up rollers.

## Suitable bearings

The dimensions of split plummer block housings RLE are matched to spherical roller bearings 241, see table. The range of shaft diameters is between 180 mm and 500 mm.



### Bearing type and sizes

| Bearing type | Size |
|---|---|
| **Spherical roller bearings** | 24122..-K30 to 241/500..-K30 |
| ■ with tapered bore and withdrawal sleeve | |
| ■ with cylindrical bore | 24122 to 241/500 |



## Housing materials and anti-corrosion protection

The standard material for the housing bodies is flake graphite cast iron (suffix L). By agreement, housing bodies made from spheroidal graphite cast iron (suffix D) or cast steel (suffix S) are available.

All outer surfaces not machined by chip-forming methods have a universal paint coating (colour RAL 7031, bluish-grey). The coating can be finished using all synthetic resin, polyurethane, acrylic, epoxy resin, chlorinated rubber, nitrocellulose and acid-hardening hammer tone finishes.

Inner and outer surfaces machined by chip-forming methods are provided with anti-corrosion protection that can be easily removed. It is recommended that only volatile solvents and lint-free cloths should be used.

## Locating and non-locating bearings

The housings are supplied as a locating bearing design or non-locating bearing design. In the locating bearing, the bearing is clamped between the housing covers. In the non-locating bearing, the bearing can align itself axially, since the covers have shorter centring collars.

## Seals and covers

Plummer block housings RLE of design A are intended for the bearing arrangements of shaft ends. One side is closed by a cover and the other side is sealed against the shaft. Design B is intended for continuous shafts, in which case the housing is sealed against the shaft on both sides.

The seal is a combination of a labyrinth seal and a felt seal, *Figure 1*. The labyrinth is separated from the grease cavity in the housing by oil-soaked felt strips, so a more economical grease can be used for labyrinth lubrication.

The labyrinth rings are unsplit. The seal allows shaft misalignment of up to 0,5° in both directions.

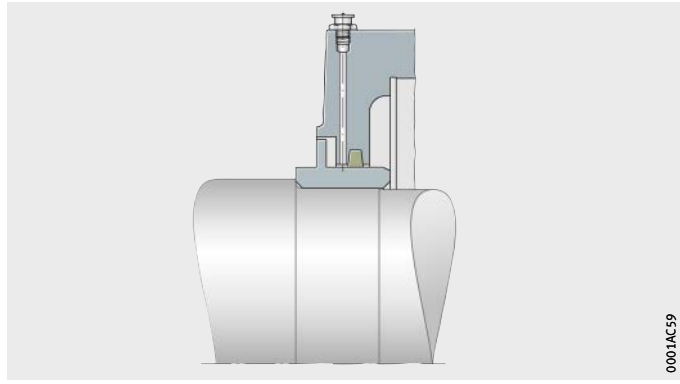


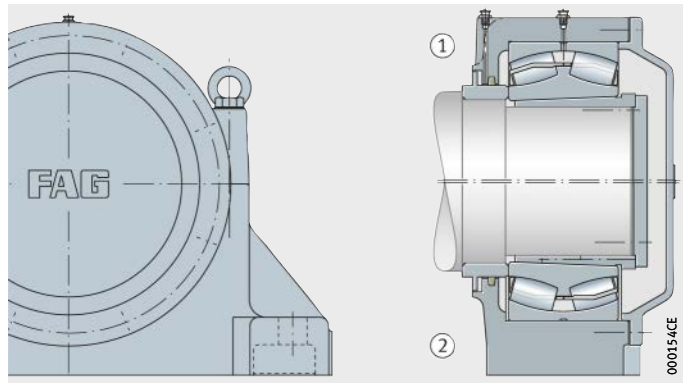

*Figure 1*
Labyrinth with felt seal
for plummer block housing RLE

## Housing configurations

In the case of plummer block housings RLE, various housing configurations are possible that are clearly described by means of the designation, *Figure 2* to *Figure 5*, page 220.

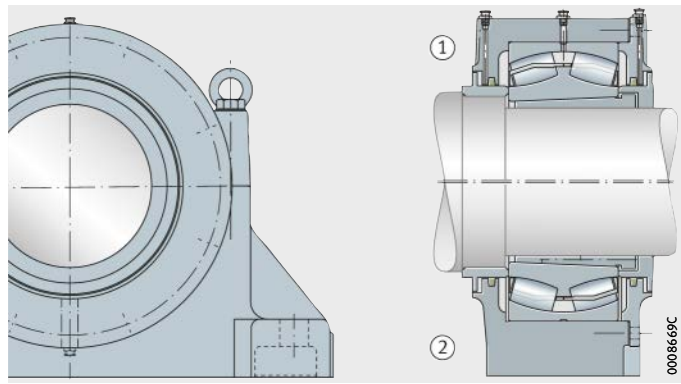
The following features can be varied in the housing configuration:

- location of bearings with a tapered bore by means of a withdrawal sleeve on a shaft of constant diameter or of bearings with a cylindrical bore directly on a stepped shaft
- continuous shaft or a housing closed on one side
- design of the bearing arrangement as a locating bearing arrangement or a non-locating bearing arrangement.



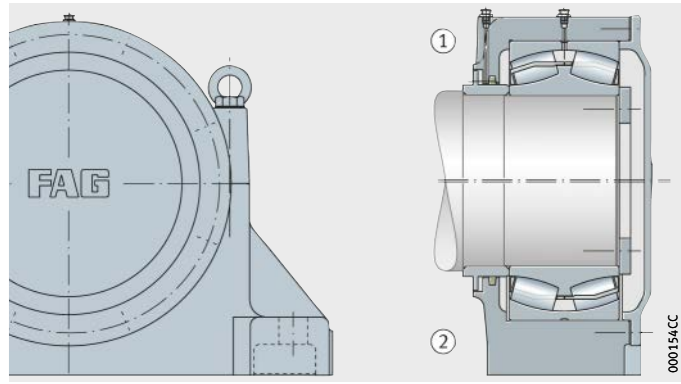

① Locating bearing RLE..-AH-AF
② Non-locating bearing RLE..-AH-AL

*Figure 2*
Plummer block housing RLE for bearings with tapered bore and withdrawal sleeve, design A



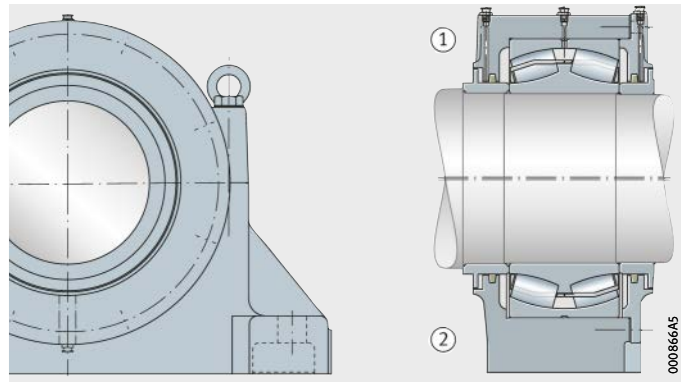

① Locating bearing RLE..-AH-BF
② Non-locating bearing RLE..-AH-BL

*Figure 3*
Plummer block housing RLE for bearings with tapered bore and withdrawal sleeve, design B




① Locating bearing RLE..-Z-AF
② Non-locating bearing RLE..-Z-AL

*Figure 4*
Plummer block housing RLE for bearings with cylindrical bore, design A




① Locating bearing RLE..-Z-BF
② Non-locating bearing RLE..-Z-BL

*Figure 5*
Plummer block housing RLE for bearings with cylindrical bore, design B

## Lubrication

Split plummer block housings RLE are designed for grease lubrication.

### Relubrication

The housings have button head lubrication nipples to DIN 3404-M10×1. The lubrication nipple in the centre of the housing is intended for relubrication of the bearing. The grease is fed uniformly to both rows of rollers via the circumferential slot and three lubrication holes in the outer ring of the spherical roller bearings. The outer lubrication nipples are intended for relubrication of the labyrinth seals.

## Designation structure

The designation structure for split plummer block housings RLE is shown in the table and *Figure 6*.







### Designation structure of plummer block housings RLE

| Feature | | Code | Description |
|---|---|---|---|
| ① | Series | RLE | Split plummer block housings RLE |
| ② | ISO dimension series of bearing | 41 | ISO dimension series 41 |
| ③ | Bore code of bearing | 68 | Bore code, two digits:<br>bore diameter (68 · 5) mm = 340 mm |
| | | /500 | Bore code, three digits:<br>bore diameter 500 mm |
| ④ | Bearing bore | AH | Tapered bearing bore and withdrawal sleeve |
| | | Z | Cylindrical bearing bore |
| ⑤ | Housing design | AF | Closed on one side, locating bearing |
| | | AL | Closed on one side, non-locating bearing |
| | | BF | Continuous shaft, locating bearing |
| | | BL | Continuous shaft, non-locating bearing |
| ⑥ | Housing material | L | Flake graphite cast iron (standard) |
| | | D | Spheroidal graphite cast iron |
| | | S | Cast steel |




*Figure 6*
Designation structure of plummer block housings RLE, example

## Ordering examples

When ordering a split plummer block housing RLE, the designation contains indications of the size and location method of the bearing as well as the design and material of the housing. The rolling bearing and, if necessary, the withdrawal sleeve must be ordered separately.

The ordering examples show the construction of orders for selected housing combinations and the appropriate bearings. The allocation of housings, bearings and withdrawal sleeves for all housing sizes is shown in the dimension tables.

**Example 1** Plummer block housing RLE made from flake graphite cast iron, for continuous shaft, spherical roller bearing 24180-B-K30 as non-locating bearing, location using withdrawal sleeve.

| | | |
|---|---|---|
| Order | 1 plummer block housing | RLE4180-AH-BL-L |
| | 1 spherical roller bearing | 24180-B-K30 |
| | 1 withdrawal sleeve | AH24180-H |

**Example 2** Plummer block housing RLE made from flake graphite cast iron, closed on one side, spherical roller bearing 24180-B as locating bearing.

| | | |
|---|---|---|
| Order | 1 plummer block housing | RLE24180-Z-AF-L |
| | 1 spherical roller bearing | 24180-B |

## Design and safety guidelines

### Eye bolts

The upper housing section has 2 eye bolts in accordance with DIN 580. These are intended as locating points for mounting and dismounting of the housing. The load carrying capacity of the eye bolts allows lifting of the housing including a bearing fitted in the housing.

Eye bolts must always be screwed fully into the housing.

The eye bolt must not be subjected to a mass greater than that of the housing together with the bearing fitted in the housing.

### Foot screws

Foot screws are used for screw mounting of the housing to the locating surface. They are not included in the scope of delivery of the housings.

The appropriate screw size for each housing is stated, see dimension tables.

The associated tightening torques are stated for screws with a metric thread in accordance with DIN 13, DIN 962 and DIN ISO 965-2, see table, page 42.

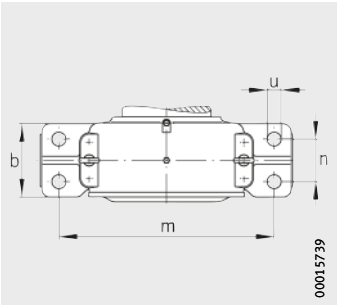
### Accuracy

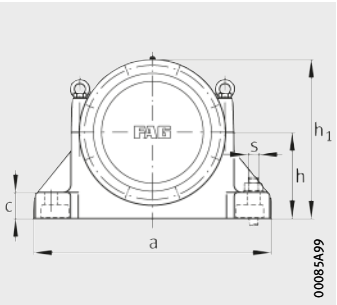
The bearing seat in split plummer block housings RLE is machined to the tolerance class H7.

By agreement, the housings can also be supplied with other tolerance classes for the bearing seat, see section Tolerance class of bearing seat, page 47.

# Plummer block housings

RLE, split
For spherical roller bearings with tapered bore and withdrawal sleeve
Stepped shaft

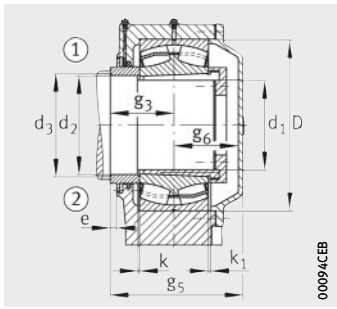


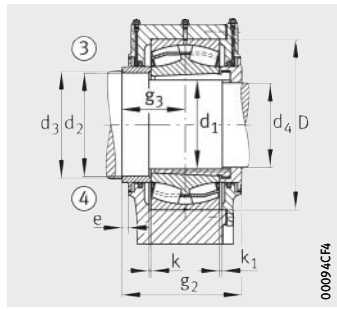

**Dimension table** · Dimensions in mm

| Shaft | | | | Housing Dimensions | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_1$ | $d_2$ | $d_3$ max. | $d_4$ | h | $h_1$ | $g_2$ | $g_5$ | e | k | $k_1$ | b | c | a | m |
| **180** | 192 | 198 | 175 | 225 | 412 | – | 272 | 15 | 1 | 4 | 180 | 70 | 600 | 510 |
| **180** | 192 | 198 | 175 | 225 | 412 | 240 | – | 15 | 1 | 4 | 180 | 70 | 600 | 510 |
| **190** | 202 | 212 | 185 | 240 | 442 | – | 287 | 15 | 1 | 4 | 195 | 75 | 690 | 580 |
| **190** | 202 | 212 | 185 | 240 | 442 | 260 | – | 15 | 1 | 4 | 195 | 75 | 690 | 580 |
| **200** | 222 | 232 | 195 | 260 | 477 | – | 307 | 15 | 1 | 4 | 210 | 80 | 720 | 610 |
| **200** | 222 | 232 | 195 | 260 | 477 | 270 | – | 15 | 1 | 4 | 210 | 80 | 720 | 610 |
| **220** | 242 | 252 | 215 | 280 | 517 | – | 323 | 15 | 1 | 5 | 225 | 85 | 770 | 655 |
| **220** | 242 | 252 | 215 | 280 | 517 | 280 | – | 15 | 1 | 5 | 225 | 85 | 770 | 655 |
| **240** | 262 | 272 | 235 | 310 | 567 | – | 350 | 15 | 1 | 5 | 250 | 95 | 860 | 730 |
| **240** | 262 | 272 | 235 | 310 | 567 | 315 | – | 15 | 1 | 5 | 250 | 95 | 860 | 730 |
| **260** | 282 | 292 | 255 | 320 | 587 | – | 350 | 15 | 2 | 5 | 250 | 100 | 880 | 750 |
| **260** | 282 | 292 | 255 | 320 | 587 | 315 | – | 15 | 2 | 5 | 250 | 100 | 880 | 750 |
| **280** | 302 | 315 | 275 | 350 | 642 | – | 386 | 15 | 2 | 5 | 280 | 110 | 940 | 800 |
| **280** | 302 | 315 | 275 | 350 | 642 | 335 | – | 15 | 2 | 5 | 280 | 110 | 940 | 800 |
| **300** | 322 | 335 | 295 | 380 | 697 | – | 421 | 20 | 2 | 5 | 305 | 120 | 1 060 | 900 |
| **300** | 322 | 335 | 295 | 380 | 697 | 370 | – | 20 | 2 | 5 | 305 | 120 | 1 060 | 900 |
| **320** | 342 | 355 | 315 | 410 | 752 | – | 480 | 20 | 2 | 5 | 340 | 130 | 1 110 | 940 |
| **320** | 342 | 355 | 315 | 410 | 752 | 405 | – | 20 | 2 | 5 | 340 | 130 | 1 110 | 940 |
| **340** | 362 | 375 | 335 | 430 | 792 | – | 480 | 20 | 2 | 5 | 340 | 135 | 1 190 | 1 010 |
| **340** | 362 | 375 | 335 | 430 | 792 | 405 | – | 20 | 2 | 5 | 340 | 135 | 1 190 | 1 010 |
| **360** | 382 | 395 | 355 | 430 | 792 | – | 490 | 20 | 2 | 5 | 340 | 140 | 1 190 | 1 010 |
| **360** | 382 | 395 | 355 | 430 | 792 | 405 | – | 20 | 2 | 5 | 340 | 140 | 1 190 | 1 010 |
| **380** | 402 | 415 | 375 | 450 | 827 | – | 500 | 20 | 2 | 5 | 350 | 145 | 1 230 | 1 040 |
| **380** | 402 | 415 | 375 | 450 | 827 | 415 | – | 20 | 2 | 5 | 350 | 145 | 1 230 | 1 040 |
| **400** | 422 | 435 | 395 | 490 | 897 | – | 555 | 20 | 2 | 5 | 390 | 155 | 1 300 | 1 110 |
| **400** | 422 | 435 | 395 | 490 | 897 | 455 | – | 20 | 2 | 5 | 390 | 155 | 1 300 | 1 110 |
| **420** | 442 | 455 | 415 | 500 | 917 | – | 555 | 20 | 2 | 5 | 390 | 155 | 1 370 | 1 165 |
| **420** | 442 | 455 | 415 | 500 | 917 | 455 | – | 20 | 2 | 5 | 390 | 155 | 1 370 | 1 165 |
| **440** | 462 | 475 | 435 | 530 | 972 | – | 595 | 25 | 2 | 6 | 420 | 160 | 1 500 | 1 270 |
| **440** | 462 | 475 | 435 | 530 | 972 | 495 | – | 25 | 2 | 6 | 420 | 160 | 1 500 | 1 270 |
| **460** | 482 | 495 | 455 | 550 | 1 012 | – | 610 | 25 | 2 | 6 | 430 | 165 | 1 530 | 1 300 |
| **460** | 482 | 495 | 455 | 550 | 1 012 | 500 | – | 25 | 2 | 6 | 430 | 165 | 1 530 | 1 300 |
| **480** | 502 | 515 | 475 | 550 | 1 032 | – | 630 | 25 | 2 | 6 | 450 | 180 | 1 580 | 1 300 |
| **480** | 502 | 515 | 475 | 550 | 1 032 | 520 | – | 25 | 2 | 6 | 450 | 180 | 1 580 | 1 300 |

① Locating bearing AF; ② Non-locating bearing AL; ③ Locating bearing BF; ④ Non-locating bearing BL




Design A




Design B



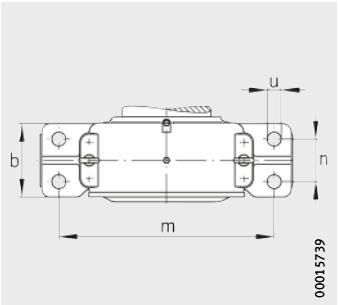


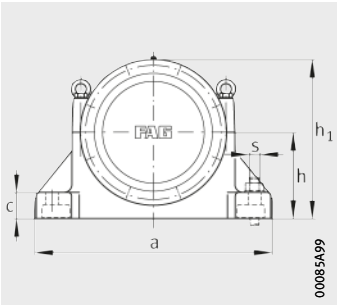


| | | | | | | Spherical roller bearing and accessories | | Housing | | |
|---|---|---|---|---|---|---|---|---|---|---|
| n | u | s | D | $g_3$ | $g_6$ min. | Bearing | Withdrawal sleeve | Mass m ≈ kg | Designation Locating bearing | Non-locating bearing |
| 100 | 36 | M30 | 320 | 127 | 137 | **24138..-K30** | AH24138 | 115 | **RLE4138..-AH-AF** | **RLE4138..-AH-AL** |
| 100 | 36 | M30 | 320 | 127 | 137 | **24138..-K30** | AH24138 | 115 | **RLE4138..-AH-BF** | **RLE4138..-AH-BL** |
| 105 | 42 | M36 | 340 | 137 | 142 | **24140..-K30** | AH24140 | 145 | **RLE4140..-AH-AF** | **RLE4140..-AH-AL** |
| 105 | 42 | M36 | 340 | 137 | 142 | **24140..-K30** | AH24140 | 145 | **RLE4140..-AH-BF** | **RLE4140..-AH-BL** |
| 120 | 42 | M36 | 370 | 142 | 155 | **24144..-K30** | AH24144(-H) | 175 | **RLE4144..-AH-AF** | **RLE4144..-AH-AL** |
| 120 | 42 | M36 | 370 | 142 | 155 | **24144..-K30** | AH24144(-H) | 175 | **RLE4144..-AH-BF** | **RLE4144..-AH-BL** |
| 130 | 42 | M36 | 400 | 148 | 165 | **24148..-K30** | AH24148(-H) | 220 | **RLE4148..-AH-AF** | **RLE4148..-AH-AL** |
| 130 | 42 | M36 | 400 | 148 | 165 | **24148..-K30** | AH24148(-H) | 220 | **RLE4148..-AH-BF** | **RLE4148..-AH-BL** |
| 140 | 49 | M42 | 440 | 165 | 175 | **24152..-K30** | AH24152(-H) | 295 | **RLE4152..-AH-AF** | **RLE4152..-AH-AL** |
| 140 | 49 | M42 | 440 | 165 | 175 | **24152..-K30** | AH24152(-H) | 295 | **RLE4152..-AH-BF** | **RLE4152..-AH-BL** |
| 145 | 49 | M42 | 460 | 165 | 175 | **24156..-K30** | AH24156(-H) | 320 | **RLE4156..-AH-AF** | **RLE4156..-AH-AL** |
| 145 | 49 | M42 | 460 | 165 | 175 | **24156..-K30** | AH24156(-H) | 320 | **RLE4156..-AH-BF** | **RLE4156..-AH-BL** |
| 165 | 49 | M42 | 500 | 176 | 198 | **24160..-K30** | AH24160(-H) | 415 | **RLE4160..-AH-AF** | **RLE4160..-AH-AL** |
| 165 | 49 | M42 | 500 | 176 | 198 | **24160..-K30** | AH24160(-H) | 415 | **RLE4160..-AH-BF** | **RLE4160..-AH-BL** |
| 170 | 56 | M48 | 540 | 196 | 213 | **24164..-K30** | AH24164-H | 550 | **RLE4164..-AH-AF** | **RLE4164..-AH-AL** |
| 170 | 56 | M48 | 540 | 196 | 213 | **24164..-K30** | AH24164-H | 550 | **RLE4164..-AH-BF** | **RLE4164..-AH-BL** |
| 195 | 56 | M48 | 580 | 210 | 258 | **24168..-K30** | AH24168-H | 685 | **RLE4168..-AH-AF** | **RLE4168..-AH-AL** |
| 195 | 56 | M48 | 580 | 210 | 258 | **24168..-K30** | AH24168-H | 685 | **RLE4168..-AH-BF** | **RLE4168..-AH-BL** |
| 195 | 56 | M48 | 600 | 210 | 258 | **24172..-K30** | AH24172-H | 765 | **RLE4172..-AH-AF** | **RLE4172..-AH-AL** |
| 195 | 56 | M48 | 600 | 210 | 258 | **24172..-K30** | AH24172-H | 765 | **RLE4172..-AH-BF** | **RLE4172..-AH-BL** |
| 195 | 68 | M56 | 620 | 210 | 265 | **24176..-K30** | AH24176-H | 775 | **RLE4176..-AH-AF** | **RLE4176..-AH-AL** |
| 195 | 68 | M56 | 620 | 210 | 265 | **24176..-K30** | AH24176-H | 775 | **RLE4176..-AH-BF** | **RLE4176..-AH-BL** |
| 200 | 68 | M56 | 650 | 215 | 270 | **24180..-K30** | AH24180-H | 870 | **RLE4180..-AH-AF** | **RLE4180..-AH-AL** |
| 200 | 68 | M56 | 650 | 215 | 270 | **24180..-K30** | AH24180-H | 870 | **RLE4180..-AH-BF** | **RLE4180..-AH-BL** |
| 225 | 68 | M56 | 700 | 232 | 308 | **24184..-K30** | AH24184-H | 1 100 | **RLE4184..-AH-AF** | **RLE4184..-AH-AL** |
| 225 | 68 | M56 | 700 | 232 | 308 | **24184..-K30** | AH24184-H | 1 100 | **RLE4184..-AH-BF** | **RLE4184..-AH-BL** |
| 225 | 68 | M56 | 720 | 232 | 308 | **24188..-K30** | AH24188-H | 1 150 | **RLE4188..-AH-AF** | **RLE4188..-AH-AL** |
| 225 | 68 | M56 | 720 | 232 | 308 | **24188..-K30** | AH24188-H | 1 150 | **RLE4188..-AH-BF** | **RLE4188..-AH-BL** |
| 240 | 76 | M64 | 760 | 252 | 328 | **24192..-K30** | AH24192-H | 1 400 | **RLE4192..-AH-AF** | **RLE4192..-AH-AL** |
| 240 | 76 | M64 | 760 | 252 | 328 | **24192..-K30** | AH24192-H | 1 400 | **RLE4192..-AH-BF** | **RLE4192..-AH-BL** |
| 245 | 76 | M64 | 790 | 256 | 338 | **24196..-K30** | AH24196-H | 1 550 | **RLE4196..-AH-AF** | **RLE4196..-AH-AL** |
| 245 | 76 | M64 | 790 | 256 | 338 | **24196..-K30** | AH24196-H | 1 550 | **RLE4196..-AH-BF** | **RLE4196..-AH-BL** |
| 260 | 76 | M64 | 830 | 265 | 350 | **241/500..-K30** | AH241/500-H | 1 600 | **RLE41/500..-AH-AF** | **RLE41/500..-AH-AL** |
| 260 | 76 | M64 | 830 | 265 | 350 | **241/500..-K30** | AH241/500-H | 1 600 | **RLE41/500..-AH-BF** | **RLE41/500..-AH-BL** |

# Plummer block housings

RLE, split
For spherical roller bearings with cylindrical bore
Stepped shaft

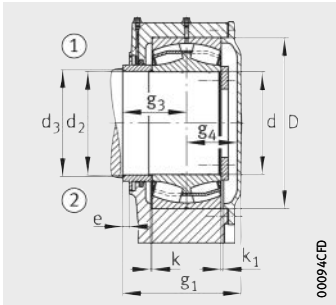


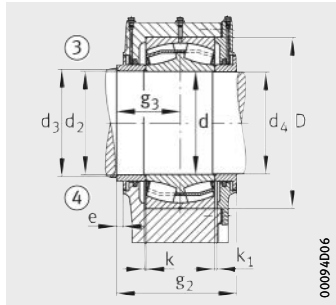

**Dimension table** · Dimensions in mm

| Shaft | | | | Housing Dimensions | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | $d_2$ | $d_3$ max. | $d_4$ | h | $h_1$ | $g_1$ | $g_2$ | e | k | $k_1$ | b | c | a | m |
| **190** | 192 | 198 | 175 | 225 | 412 | 230 | – | 15 | 1 | 4 | 180 | 70 | 600 | 510 |
| **190** | 192 | 198 | 175 | 225 | 412 | – | 240 | 15 | 1 | 4 | 180 | 70 | 600 | 510 |
| **200** | 202 | 212 | 185 | 240 | 442 | 250 | – | 15 | 1 | 4 | 195 | 75 | 690 | 580 |
| **200** | 202 | 212 | 185 | 240 | 442 | – | 260 | 15 | 1 | 4 | 195 | 75 | 690 | 580 |
| **220** | 222 | 232 | 195 | 260 | 477 | 265 | – | 15 | 1 | 4 | 210 | 80 | 720 | 610 |
| **220** | 222 | 232 | 195 | 260 | 477 | – | 270 | 15 | 1 | 4 | 210 | 80 | 720 | 610 |
| **240** | 242 | 252 | 215 | 280 | 517 | 275 | – | 15 | 1 | 5 | 225 | 85 | 770 | 655 |
| **240** | 242 | 252 | 215 | 280 | 517 | – | 280 | 15 | 1 | 5 | 225 | 85 | 770 | 655 |
| **260** | 262 | 272 | 235 | 310 | 567 | 305 | – | 15 | 1 | 5 | 250 | 95 | 860 | 730 |
| **260** | 262 | 272 | 235 | 310 | 567 | – | 315 | 15 | 1 | 5 | 250 | 95 | 860 | 730 |
| **280** | 282 | 292 | 255 | 320 | 587 | 305 | – | 15 | 2 | 5 | 250 | 100 | 880 | 750 |
| **280** | 282 | 292 | 255 | 320 | 587 | – | 315 | 15 | 2 | 5 | 250 | 100 | 880 | 750 |
| **300** | 302 | 315 | 275 | 350 | 642 | 335 | – | 15 | 2 | 5 | 280 | 110 | 940 | 800 |
| **300** | 302 | 315 | 275 | 350 | 642 | – | 335 | 15 | 2 | 5 | 280 | 110 | 940 | 800 |
| **320** | 322 | 335 | 295 | 380 | 697 | 365 | – | 20 | 2 | 5 | 305 | 120 | 1 060 | 900 |
| **320** | 322 | 335 | 295 | 380 | 697 | – | 370 | 20 | 2 | 5 | 305 | 120 | 1 060 | 900 |
| **340** | 342 | 355 | 315 | 410 | 752 | 400 | – | 20 | 2 | 5 | 340 | 130 | 1 110 | 940 |
| **340** | 342 | 355 | 315 | 410 | 752 | – | 405 | 20 | 2 | 5 | 340 | 130 | 1 110 | 940 |
| **360** | 362 | 375 | 335 | 430 | 792 | 400 | – | 20 | 2 | 5 | 340 | 135 | 1 190 | 1 010 |
| **360** | 362 | 375 | 335 | 430 | 792 | – | 405 | 20 | 2 | 5 | 340 | 135 | 1 190 | 1 010 |
| **380** | 382 | 395 | 355 | 430 | 792 | 400 | – | 20 | 2 | 5 | 340 | 140 | 1 190 | 1 010 |
| **380** | 382 | 395 | 355 | 430 | 792 | – | 405 | 20 | 2 | 5 | 340 | 140 | 1 190 | 1 010 |
| **400** | 402 | 415 | 375 | 450 | 827 | 410 | – | 20 | 2 | 5 | 350 | 145 | 1 230 | 1 040 |
| **400** | 402 | 415 | 375 | 450 | 827 | – | 415 | 20 | 2 | 5 | 350 | 145 | 1 230 | 1 040 |
| **420** | 422 | 435 | 395 | 490 | 897 | 450 | – | 20 | 2 | 5 | 390 | 155 | 1 300 | 1 110 |
| **420** | 422 | 435 | 395 | 490 | 897 | – | 455 | 20 | 2 | 5 | 390 | 155 | 1 300 | 1 110 |
| **440** | 442 | 455 | 415 | 500 | 917 | 450 | – | 20 | 2 | 5 | 390 | 155 | 1 370 | 1 165 |
| **440** | 442 | 455 | 415 | 500 | 917 | – | 455 | 20 | 2 | 5 | 390 | 155 | 1 370 | 1 165 |
| **460** | 462 | 475 | 435 | 530 | 972 | 485 | – | 25 | 2 | 6 | 420 | 160 | 1 500 | 1 270 |
| **460** | 462 | 475 | 435 | 530 | 972 | – | 495 | 25 | 2 | 6 | 420 | 160 | 1 500 | 1 270 |
| **480** | 482 | 495 | 455 | 550 | 1 012 | 500 | – | 25 | 2 | 6 | 430 | 165 | 1 530 | 1 300 |
| **480** | 482 | 495 | 455 | 550 | 1 012 | – | 500 | 25 | 2 | 6 | 430 | 165 | 1 530 | 1 300 |
| **500** | 502 | 515 | 475 | 550 | 1 032 | 515 | – | 25 | 2 | 6 | 450 | 180 | 1 580 | 1 300 |
| **500** | 502 | 515 | 475 | 550 | 1 032 | – | 520 | 25 | 2 | 6 | 450 | 180 | 1 580 | 1 300 |

① Locating bearing AF; ② Non-locating bearing AL; ③ Locating bearing BF; ④ Non-locating bearing BL




Design A




Design B







| | | | | | | Spherical roller bearing | Housing | | |
|---|---|---|---|---|---|---|---|---|---|
| n | u | s | D | $g_3$ | $g_4$ min. | | Mass m ≈ kg | Designation Locating bearing | Non-locating bearing |
| 100 | 36 | M30 | 320 | 127 | 95 | **24138** | 115 | **RLE4138..-Z-AF** | **RLE4138..-Z-AL** |
| 100 | 36 | M30 | 320 | 127 | 95 | **24138** | 115 | **RLE4138..-Z-BF** | **RLE4138..-Z-BL** |
| 105 | 42 | M36 | 340 | 137 | 105 | **24140** | 145 | **RLE4140..-Z-AF** | **RLE4140..-Z-AL** |
| 105 | 42 | M36 | 340 | 137 | 105 | **24140** | 145 | **RLE4140..-Z-BF** | **RLE4140..-Z-BL** |
| 120 | 42 | M36 | 370 | 142 | 113 | **24144** | 175 | **RLE4144..-Z-AF** | **RLE4144..-Z-AL** |
| 120 | 42 | M36 | 370 | 142 | 113 | **24144** | 175 | **RLE4144..-Z-BF** | **RLE4144..-Z-BL** |
| 130 | 42 | M36 | 400 | 148 | 117 | **24148** | 220 | **RLE4148..-Z-AF** | **RLE4148..-Z-AL** |
| 130 | 42 | M36 | 400 | 148 | 117 | **24148** | 220 | **RLE4148..-Z-BF** | **RLE4148..-Z-BL** |
| 140 | 49 | M42 | 440 | 165 | 130 | **24152** | 295 | **RLE4152..-Z-AF** | **RLE4152..-Z-AL** |
| 140 | 49 | M42 | 440 | 165 | 130 | **24152** | 295 | **RLE4152..-Z-BF** | **RLE4152..-Z-BL** |
| 145 | 49 | M42 | 460 | 165 | 130 | **24156** | 320 | **RLE4156..-Z-AF** | **RLE4156..-Z-AL** |
| 145 | 49 | M42 | 460 | 165 | 130 | **24156** | 320 | **RLE4156..-Z-BF** | **RLE4156..-Z-BL** |
| 165 | 49 | M42 | 500 | 176 | 147 | **24160** | 415 | **RLE4160..-Z-AF** | **RLE4160..-Z-AL** |
| 165 | 49 | M42 | 500 | 176 | 147 | **24160** | 415 | **RLE4160..-Z-BF** | **RLE4160..-Z-BL** |
| 170 | 56 | M48 | 540 | 196 | 157 | **24164** | 550 | **RLE4164..-Z-AF** | **RLE4164..-Z-AL** |
| 170 | 56 | M48 | 540 | 196 | 157 | **24164** | 550 | **RLE4164..-Z-BF** | **RLE4164..-Z-BL** |
| 195 | 56 | M48 | 580 | 210 | 178 | **24168** | 685 | **RLE4168..-Z-AF** | **RLE4168..-Z-AL** |
| 195 | 56 | M48 | 580 | 210 | 178 | **24168** | 685 | **RLE4168..-Z-BF** | **RLE4168..-Z-BL** |
| 195 | 56 | M48 | 600 | 210 | 178 | **24172** | 765 | **RLE4172..-Z-AF** | **RLE4172..-Z-AL** |
| 195 | 56 | M48 | 600 | 210 | 178 | **24172** | 765 | **RLE4172..-Z-BF** | **RLE4172..-Z-BL** |
| 195 | 68 | M56 | 620 | 210 | 175 | **24176** | 775 | **RLE4176..-Z-AF** | **RLE4176..-Z-AL** |
| 195 | 68 | M56 | 620 | 210 | 175 | **24176** | 775 | **RLE4176..-Z-BF** | **RLE4176..-Z-BL** |
| 200 | 68 | M56 | 650 | 215 | 180 | **24180** | 870 | **RLE4180..-Z-AF** | **RLE4180..-Z-AL** |
| 200 | 68 | M56 | 650 | 215 | 180 | **24180** | 870 | **RLE4180..-Z-BF** | **RLE4180..-Z-BL** |
| 225 | 68 | M56 | 700 | 232 | 203 | **24184** | 1 100 | **RLE4184..-Z-AF** | **RLE4184..-Z-AL** |
| 225 | 68 | M56 | 700 | 232 | 203 | **24184** | 1 100 | **RLE4184..-Z-BF** | **RLE4184..-Z-BL** |
| 225 | 68 | M56 | 720 | 232 | 203 | **24188** | 1 150 | **RLE4188..-Z-AF** | **RLE4188..-Z-AL** |
| 225 | 68 | M56 | 720 | 232 | 203 | **24188** | 1 150 | **RLE4188..-Z-BF** | **RLE4188..-Z-BL** |
| 240 | 76 | M64 | 760 | 252 | 218 | **24192** | 1 400 | **RLE4192..-Z-AF** | **RLE4192..-Z-AL** |
| 240 | 76 | M64 | 760 | 252 | 218 | **24192** | 1 400 | **RLE4192..-Z-BF** | **RLE4192..-Z-BL** |
| 245 | 76 | M64 | 790 | 256 | 228 | **24196** | 1 550 | **RLE4196..-Z-AF** | **RLE4196..-Z-AL** |
| 245 | 76 | M64 | 790 | 256 | 228 | **24196** | 1 550 | **RLE4196..-Z-BF** | **RLE4196..-Z-BL** |
| 260 | 76 | M64 | 830 | 265 | 235 | **241/500** | 1 600 | **RLE41/500..-Z-AF** | **RLE41/500..-Z-AL** |
| 260 | 76 | M64 | 830 | 265 | 235 | **241/500** | 1 600 | **RLE41/500..-Z-BF** | **RLE41/500..-Z-BL** |

FAG



# Split plummer block housings KPG, KPGZ

# Split plummer block housings KPG, KPGZ


| | | Page |
|---|---|---|
| **Product overview** | Split plummer block housings KPG, KPGZ | 230 |
| **Features** | Demands on the trunnion bearing arrangement on converters | 231 |
| | Suitable bearings | 231 |
| | Housing materials and anti-corrosion protection | 232 |
| | Locating and non-locating bearings | 232 |
| | Seals | 232 |
| | Housing configurations | 233 |
| | Lubrication | 235 |
| | Designation structure | 235 |
| | Ordering examples | 236 |
| **Design and safety guidelines** | Eye bolts | 237 |
| | Foot screws | 237 |
| **Accuracy** | | 237 |
| **Dimension tables** | Plummer block housings KPG, split, for spherical roller bearings with tapered bore and sleeve, for split spherical roller bearings | 238 |
| | Plummer block housings KPGZ, split, for spherical roller bearings with cylindrical bore, for split spherical roller bearings | 242 |








## Plummer block housings

**Split**
With high-pressure packing

KPG, KPGZ



# Split plummer block housings KPG, KPGZ



## Features

Split plummer block housings KPG and KPGZ were developed specifically for trunnion bearing arrangements on converters.



## Demands on the trunnion bearing arrangement on converters

When filled, large converter drums weigh several hundred tonnes. The resulting loads must be supported by the trunnion bearing arrangement. As only slow swivel motions occur, the bearings must feature a high static load carrying capacity. In addition, shock loads must be accommodated daily in converters.



The bearing arrangement must also be able to compensate housing misalignments and deflections of the construction. These are in addition to considerable changes in length that arise due to temperature changes during the commissioning and decommissioning of the converter as well as geometrical changes in the support ring.

The spherical roller bearing has established itself as the principal rolling bearing type for converters. In addition to its high radial and axial load carrying capacity and its insensitivity to shocks, it also exhibits significant angular adjustability. Converter bearing arrangements are fitted with spherical roller bearings specifically developed for the application.

## Suitable bearings

The dimensions of split plummer block housings KPG and KPGZ are matched to spherical roller bearings 249, see table.
The housings KPG are intended for bearings with a tapered bore and adjustment sleeve, while the housings KPGZ are intended for bearings with a cylindrical bore. The range of shaft diameters is between 470 mm and 1 320 mm.

### Bearing type and sizes

| Bearing type | Size |
|---|---|
| **Spherical roller bearings** | |
| ■ with tapered bore and adjustment sleeve | 249/470..-K30 to 249/1250..-K30 |
| ■ with cylindrical bore | 249/500 to 249/1320 |

### Split spherical roller bearings

On the locating bearing side of the converter, an unsplit spherical roller bearing can be replaced by a split spherical roller bearing. Since there is no need to dismount the drive system, the work involved in mounting can be considerably reduced.

### Further information

■ TPI 148, Rolling Bearing Arrangements for Converters.

## Housing materials and anti-corrosion protection

The standard material for the housing bodies is spheroidal graphite cast iron (suffix D). Housings made from other materials are available by agreement.

All outer surfaces not machined by chip-forming methods have a universal paint coating (colour RAL 7031, bluish-grey). The coating can be finished using all synthetic resin, polyurethane, acrylic, epoxy resin, chlorinated rubber, nitrocellulose and acid-hardening hammer tone finishes.

Inner and outer surfaces machined by chip-forming methods are provided with anti-corrosion protection.

## Locating and non-locating bearings

The housings are supplied as a locating bearing design or non-locating bearing design. The locating bearing on the drive side provides axial guidance of the converter support ring.

The locating bearing design of the housings KPG and KPGZ is originally designed for the fitting of unsplit spherical roller bearings. The locating bearing is formed by fitting locating rings on both sides of the bearing, *Figure 2* and *Figure 3*, page 233.

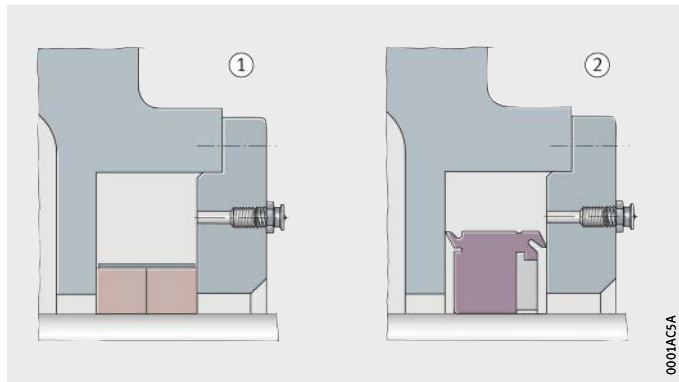
A housing of the locating bearing design can also accommodate a split spherical roller bearing, replacing an unsplit bearing, *Figure 4* and *Figure 5*, page 234. As a result, the bearing can be replaced without dismounting the drive system.

The non-locating bearing design is fitted with unsplit bearings. The bearing outer ring can be displaced axially in a bearing sleeve.

## Seals

Plummer block housings KPG and KPGZ are sealed by means of high-pressure packing. This allows shaft misalignment of up to 1,5°.

Profiled rubber seals are available by agreement as special seals, *Figure 1*.




① High-pressure packing
② Profiled rubber seal

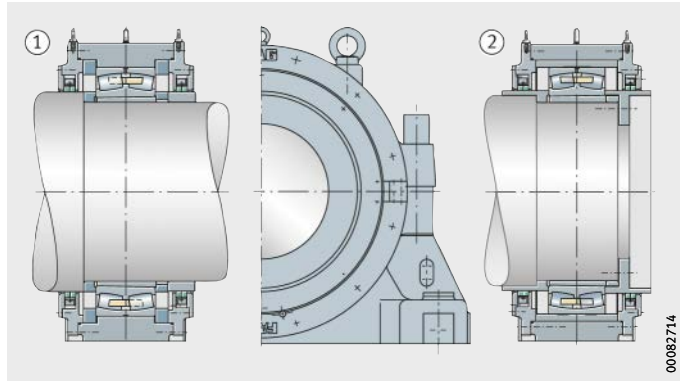
*Figure 1*
Seals for plummer block housings KPG and KPGZ

## Housing configurations

Plummer block housings KPG are used for bearings with a tapered bore and adjustment sleeve, while plummer block housings KPGZ are used for bearings with a cylindrical bore, *Figure 2* and *Figure 3*.

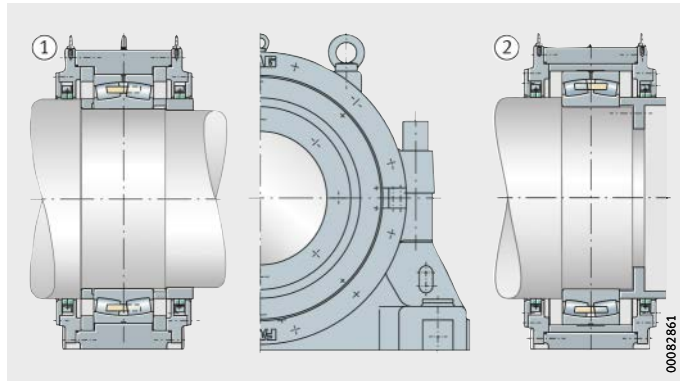
In the case of plummer block housings KPG and KPGZ, the following features can be varied in the housing configuration:

- sealing of the housing by means of high-pressure packing or a profiled rubber seal
- design of the bearing arrangement as a locating bearing arrangement or a non-locating bearing arrangement
- spherical roller bearing in a split or unsplit design.




① Locating bearing KPG..-F
② Non-locating bearing KPG..-L

*Figure 2*
Plummer block housings KPG
for bearings with tapered bore and adjustment sleeve



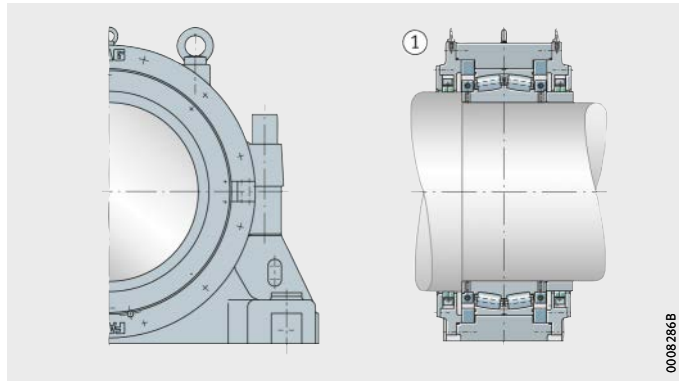

① Locating bearing KPGZ..-F
② Non-locating bearing KPGZ..-L

*Figure 3*
Plummer block housings KPGZ
for bearings with cylindrical bore

**Mounting of split spherical roller bearings**

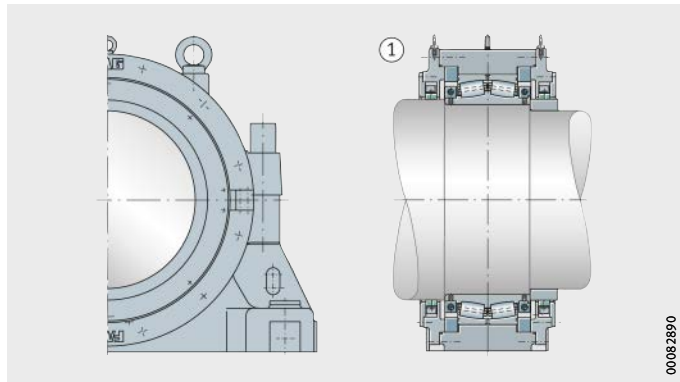
In the case of plummer block housings KPG and KPGZ, an unsplit spherical roller bearing can be replaced, but only as standard in the locating bearing design F, *Figure 4* and *Figure 5*.

Housings of the non-locating bearing design L, which allow the use of split spherical roller bearings, are available by agreement as a special solution. Please ask for further information.




① Locating bearing KPG..-F with split bearing

*Figure 4*
Plummer block housing KPG for bearings with tapered bore and adjustment sleeve, with split bearing




① Locating bearing KPGZ..-F with split bearing

*Figure 5*
Plummer block housing KPGZ for bearings with cylindrical bore, with split bearing

## Lubrication

Split plummer block housings KPG and KPGZ are designed for grease lubrication.

### Greases

Lithium soap greases with highly effective EP and anti-corrosion protection additives are suitable. We recommend the use of Arcanol LOAD400.

### Grease quantities

In initial greasing, the bearing is filled with grease to 100% and the housing cavities are filled to 60%. The recommended grease quantity is dependent not only on the housing size but also on its design, see dimension tables.

### Relubrication

Relubrication should be carried out using the same grease as for the initial lubrication. The bearings, displacement sleeve and seals are relubricated in accordance with an audit plan.

## Designation structure

The designation structure for split plummer block housings KPG and KPGZ is shown in the table and *Figure 6*.

**Designation structure of plummer block housings KPG and KPGZ**

| Feature | | Code | Description |
|---|---|---|---|
| ① | Series | KPG | Split plummer block housings KPG |
| | | KPGZ | Split plummer block housings KPGZ |
| ② | ISO dimension series of bearing | 49 | ISO dimension series 49 |
| ③ | Bore code of bearing | /850 | Bore diameter 850 mm |
| ④ | Housing design | F | Locating bearing |
| | | L | Non-locating bearing |
| ⑤ | Housing material | D | Spheroidal graphite cast iron (standard) |




*Figure 6*
Designation structure of plummer block housings KPG and KPGZ, example

## Ordering examples

When ordering split plummer block housings KPG and KPGZ, the designation contains indications of the size of the bearing as well as the design and material of the housing. The rolling bearing and, if necessary, the sleeve must be ordered separately.

The ordering examples show the construction of orders for selected housing combinations and the appropriate bearings. The allocation of housings, bearings and sleeves for all housing sizes is shown in the dimension tables.

Customer-specific solutions are developed for each converter application on the basis of split plummer block housings KPG and KPGZ. The housings can be supplemented by the use of additional components and modified where necessary. Before placing any orders for these housings, we therefore recommend contacting our engineering service.

**Example 1** Plummer block housing KGP made from spheroidal graphite cast iron, spherical roller bearing with pin cage Z-541834.249/1060-B-K30 as locating bearing, sleeve.

| | | |
|---|---|---|
| Order | 1 plummer block housing | KPG49/1000-F-D |
| | 1 spherical roller bearing | Z-541834.249/1060-B-K30 |
| | 1 sleeve | Z-525000.KH |

**Example 2** Plummer block housing KGPZ made from spheroidal graphite cast iron, split spherical roller bearing Z-533567.PRL as locating bearing.

| | | |
|---|---|---|
| Order | 1 plummer block housing | KPGZ49/1000-F-D |
| | 1 split spherical roller bearing | Z-533567.PRL |

## Design and safety guidelines

### Eye bolts







The upper housing section has 2 eye bolts in accordance with DIN 580. These are intended as locating points for mounting and dismounting of the housing. The load carrying capacity of the eye bolts only allows lifting of the housing without a bearing.

A further eye bolt is located in each of the two covers on the housing.

The eye bolts must always be screwed in fully.

The eye bolts in the upper housing section must not be subjected to a load that is more than the mass of the housing.

The eye bolt in the cover must not be subjected to a load that is more than the mass of the cover.

### Foot screws

Foot screws are used for screw mounting of the housing to the locating surface. They are not included in the scope of delivery of the housings.

The appropriate screw size for each housing is stated, see dimension tables.

The associated tightening torques are stated for screws with a metric thread in accordance with DIN 13, DIN 962 and DIN ISO 965-2, see table, page 42.

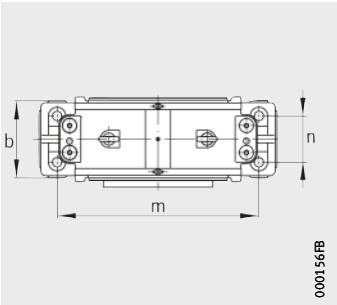
### Accuracy

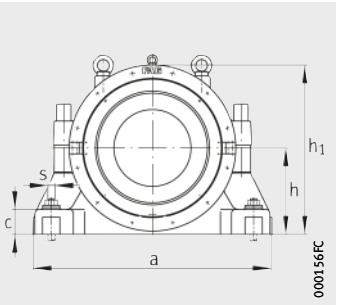
The bearing seat in split plummer block housings KPG and KPGZ is machined to the tolerance class H7.

By agreement, the housings can also be supplied with other tolerance classes for the bearing seat, see section Tolerance class of bearing seat, page 47.

# Plummer block housings

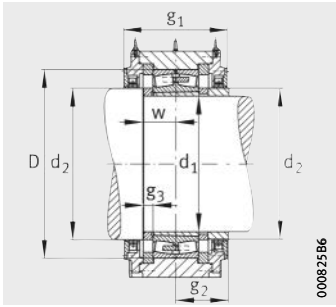
KPG, split
For spherical roller bearings with tapered bore and sleeve, for split spherical roller bearings



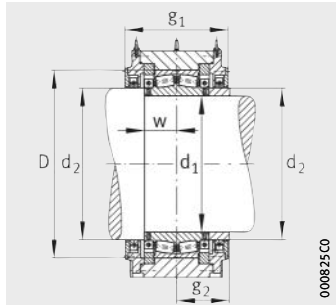




**Dimension table** · Dimensions in mm

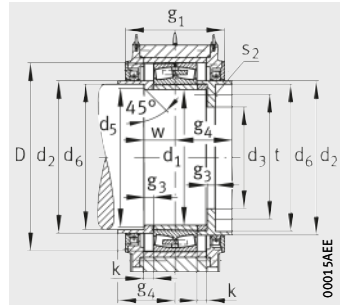
| Shaft | | Housing Dimensions | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_1$ | $d_2$ | h | $h_1$ | $g_1$ | b | c | a | m | n | s | D | w | k |
| **470** | 540 | 425 | 820 | 400 | 375 | 130 | 1 170 | 975 | 230 | M42 | 670 | 125 | 40 |
| **500** | 570 | 450 | 875 | 410 | 400 | 140 | 1 240 | 1 050 | 240 | M42 | 710 | 130 | 40 |
| **530** | 600 | 475 | 930 | 420 | 420 | 145 | 1 320 | 1 100 | 255 | M48 | 750 | 135 | 40 |
| **570** | 645 | 500 | 980 | 460 | 440 | 155 | 1 400 | 1 150 | 270 | M52 | 800 | 145 | 40 |
| **600** | 675 | 535 | 1 040 | 480 | 480 | 165 | 1 500 | 1 225 | 295 | M56 | 850 | 155 | 40 |
| **630** | 720 | 570 | 1 110 | 500 | 500 | 175 | 1 570 | 1 300 | 310 | M56 | 900 | 165 | 40 |
| **670** | 760 | 600 | 1 170 | 560 | 535 | 185 | 1 660 | 1 375 | 325 | M64 | 950 | 175 | 50 |
| **710** | 800 | 630 | 1 240 | 590 | 550 | 195 | 1 750 | 1 450 | 335 | M64 | 1 000 | 180 | 50 |
| **750** | 860 | 670 | 1 310 | 600 | 570 | 205 | 1 850 | 1 550 | 345 | M72 | 1 060 | 185 | 50 |
| **800** | 910 | 710 | 1 390 | 630 | 600 | 220 | 1 960 | 1 600 | 360 | M72 | 1 120 | 195 | 50 |
| **850** | 960 | 740 | 1 450 | 660 | 620 | 230 | 2 060 | 1 700 | 370 | M80 | 1 180 | 200 | 60 |
| **900** | 1 015 | 800 | 1 550 | 680 | 660 | 250 | 2 200 | 1 820 | 390 | M90 | 1 250 | 210 | 60 |
| **950** | 1 065 | 830 | 1 620 | 720 | 650 | 255 | 2 330 | 1 980 | 360 | M90 | 1 320 | 230 | 70 |
| **1 000** | 1 135 | 880 | 1 710 | 780 | 740 | 275 | 2 450 | 2 000 | 460 | M100 | 1 400 | 245 | 60 |
| **1 060** | 1 195 | 920 | 1 780 | 800 | 740 | 285 | 2 560 | 2 150 | 460 | M100 | 1 460 | 245 | 70 |
| **1 120** | 1 260 | 970 | 1 880 | 820 | 780 | 300 | 2 700 | 2 300 | 480 | M110 | 1 540 | 260 | 70 |
| **1 180** | 1 330 | 1 010 | 1 985 | 850 | 820 | 320 | 2 850 | 2 400 | 510 | M110 | 1 630 | 275 | 70 |
| **1 250** | 1 400 | 1 080 | 2 100 | 900 | 850 | 340 | 3 000 | 2 500 | 520 | M125 | 1 720 | 290 | 70 |




KPG49..-F (unsplit bearing)
Locating bearing




KPG49..-F (split bearing)
Locating bearing




KPG49..-L (unsplit bearing)
Non-locating bearing



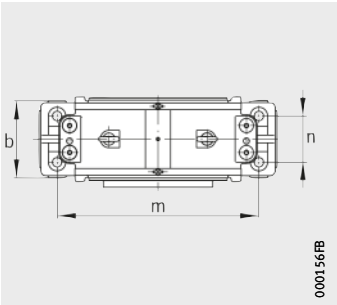


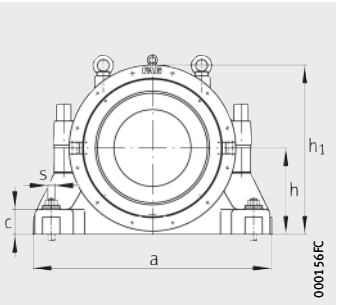


| | | | | | | | | | Housing Designation |
|---|---|---|---|---|---|---|---|---|---|
| $g_2$ | $g_3$ | $g_4$ | $d_3$ | $d_5$ | $d_6$ | t | $s_2$ | | |
| | | | | | | | DIN 931 | Quantity | |
| 210 | 40 | 230 | 375 | 480 | 505 | 437,5 | M20×70 | 8 | **KPG49/470..-D** |
| 215 | 40 | 235 | 400 | 510 | 535 | 465 | M20×70 | 8 | **KPG49/500..-D** |
| 220 | 40 | 240 | 420 | 540 | 565 | 490 | M20×70 | 8 | **KPG49/530..-D** |
| 240 | 45 | 260 | 450 | 580 | 610 | 525 | M20×80 | 8 | **KPG49/570..-D** |
| 250 | 46 | 270 | 475 | 612 | 640 | 552,5 | M20×80 | 8 | **KPG49/600..-D** |
| 260 | 50 | 280 | 505 | 642 | 675 | 587,5 | M24×90 | 8 | **KPG49/630..-D** |
| 290 | 53,5 | 317,5 | 535 | 682 | 715 | 622,5 | M24×90 | 8 | **KPG49/670..-D** |
| 305 | 55 | 332,5 | 565 | 722 | 755 | 657,5 | M30×100 | 8 | **KPG49/710..-D** |
| 310 | 56 | 337,5 | 600 | 762 | 805 | 700 | M30×100 | 8 | **KPG49/750..-D** |
| 325 | 59 | 352,5 | 640 | 812 | 855 | 745 | M30×110 | 8 | **KPG49/800..-D** |
| 340 | 60 | 375 | 675 | 862 | 905 | 787,5 | M30×110 | 8 | **KPG49/850..-D** |
| 350 | 60 | 385 | 715 | 915 | 960 | 832,5 | M36×110 | 8 | **KPG49/900..-D** |
| 370 | 72,5 | 412,5 | 750 | 965 | 1 010 | 875 | M36×130 | 8 | **KPG49/950..-D** |
| 400 | 77,5 | 435 | 795 | 1 015 | 1 070 | 927,5 | M36×130 | 8 | **KPG49/1000..-D** |
| 410 | 77,5 | 452,5 | 840 | 1 075 | 1 130 | 980 | M42×140 | 8 | **KPG49/1060..-D** |
| 420 | 82,5 | 462,5 | 885 | 1 135 | 1 190 | 1 032,5 | M42×140 | 8 | **KPG49/1120..-D** |
| 435 | 87,5 | 477,5 | 940 | 1 195 | 1 255 | 1 095 | M42×150 | 8 | **KPG49/1180..-D** |
| 460 | 90 | 502,5 | 990 | 1 265 | 1 325 | 1 155 | M48×180 | 8 | **KPG49/1250..-D** |

# Plummer block housings

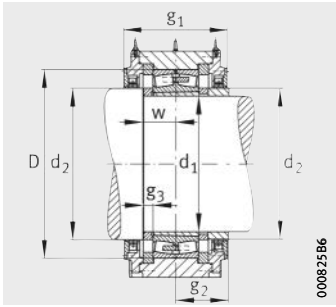
KPG, split
For spherical roller bearings with tapered bore and sleeve, for split spherical roller bearings



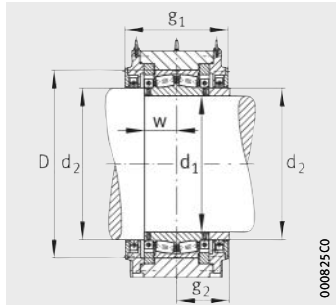




**Dimension table** (continued) · Dimensions in mm

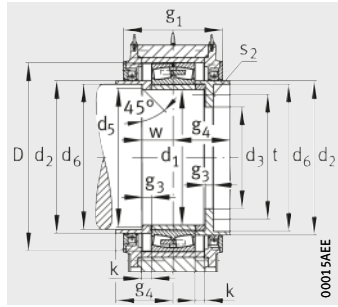
| Shaft | | Bearing | | Sleeve | Split bearing (for locating bearings only) |
|---|---|---|---|---|---|
| $d_1$ | $d_2$ | MB cage | Pin cage | | |
| **470** | 540 | **Z-528741.PRL-K30** | **Z-541821.249/500-K30** | Z-524974.KH | **Z-529173.PRL** |
| **500** | 570 | **Z-528742.PRL-K30** | **Z-541822.249/530-K30** | Z-524976.KH | **Z-528441.PRL** |
| **530** | 600 | **Z-528743.PRL-K30** | **Z-541823.249/560-B-K30** | Z-524978.KH | **Z-529223.PRL** |
| **570** | 645 | **Z-528744.PRL-K30** | **Z-541824.249/600-B-K30** | Z-524980.KH | **Z-529224.PRL** |
| **600** | 675 | – | **Z-541825.249/630-K30** | Z-524982.KH | **Z-529225.PRL** |
| **630** | 720 | **Z-528746.PRL-K30** | **Z-541826.249/670-K30** | Z-524984.KH | **Z-529226.PRL** |
| **670** | 760 | **Z-528747.PRL-K30** | **Z-541827.249/710-B-K30** | Z-524986.KH | **Z-529227.PRL** |
| **710** | 800 | **Z-528748.PRL-K30** | **Z-541828.249/750-B-K30** | Z-524988.KH | **Z-527943.PRL** |
| **750** | 860 | **Z-528749.PRL-K30** | **Z-541829.249/800-B-K30** | Z-524990.KH | **Z-529228.PRL** |
| **800** | 910 | **Z-528750.PRL-K30** | **Z-541830.249/850-B-K30** | Z-524992.KH | **Z-529229.PRL** |
| **850** | 960 | **Z-528751.PRL-K30** | **Z-541831.249/900-B-K30** | Z-524994.KH | **Z-529230.PRL** |
| **900** | 1 015 | **Z-528752.PRL-K30** | **Z-541832.249/950-B-K30** | Z-524996.KH | **Z-527254.PRL** |
| **950** | 1 065 | **Z-528753.PRL-K30** | **Z-541833.249/1000-B-K30** | Z-524998.KH | **Z-529231.PRL** |
| **1 000** | 1 135 | – | **Z-541834.249/1060-B-K30** | Z-525000.KH | **Z-529232.PRL** |
| **1 060** | 1 195 | – | **Z-541835.249/1120-B-K30** | Z-525001.KH | **Z-529233.01.PRL** |
| **1 120** | 1 260 | – | **Z-541836.249/1180-B-K30** | Z-525003.KH | **Z-529234.PRL** |
| **1 180** | 1 330 | – | **Z-541837.249/1250-B-K30** | Z-525005.KH | – |
| **1 250** | 1 400 | – | **Z-541838.249/1320-B-K30** | Z-525007.KH | **Z-529215.PRL** |




KPG49..-F (unsplit bearing)
Locating bearing




KPG49..-F (split bearing)
Locating bearing




KPG49..-L (unsplit bearing)
Non-locating bearing





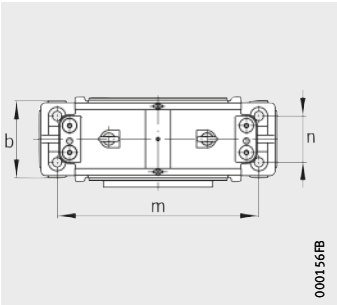


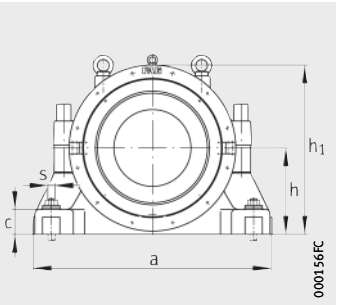
Housing

| Initial grease filling quantity | | | Mass | Designation |
|---|---|---|---|---|
| Locating bearing | | Non-locating bearing | m | |
| Unsplit | Split | Unsplit | | |
| ≈ kg | ≈ kg | ≈ kg | ≈ kg | |
| 10 | 8 | 14 | 945 | **KPG49/470..-D** |
| 10 | 8 | 14 | 1 050 | **KPG49/500..-D** |
| 13 | 10 | 15 | 1 365 | **KPG49/530..-D** |
| 15 | 12 | 20 | 1 575 | **KPG49/570..-D** |
| 20 | 15 | 24 | 2 205 | **KPG49/600..-D** |
| 22 | 18 | 25 | 2 625 | **KPG49/630..-D** |
| 26 | 20 | 30 | 2 835 | **KPG49/670..-D** |
| 30 | 24 | 35 | 2 940 | **KPG49/710..-D** |
| 35 | 26 | 40 | 3 465 | **KPG49/750..-D** |
| 40 | 30 | 50 | 3 885 | **KPG49/800..-D** |
| 45 | 35 | 55 | 4 515 | **KPG49/850..-D** |
| 55 | 45 | 65 | 5 460 | **KPG49/900..-D** |
| 65 | 50 | 80 | 5 660 | **KPG49/950..-D** |
| 75 | 60 | 95 | 7 140 | **KPG49/1000..-D** |
| 80 | 65 | 100 | 8 400 | **KPG49/1060..-D** |
| 95 | 75 | 110 | 9 450 | **KPG49/1120..-D** |
| 110 | – | 130 | 11 550 | **KPG49/1180..-D** |
| 125 | 100 | 170 | 13 440 | **KPG49/1250..-D** |

# Plummer block housings

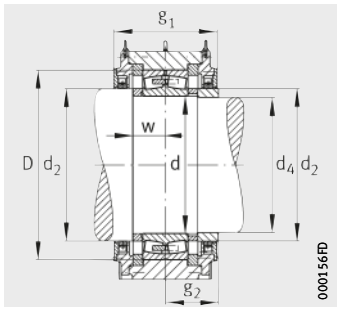
KPGZ, split
For spherical roller bearings with cylindrical bore, for split spherical roller bearings



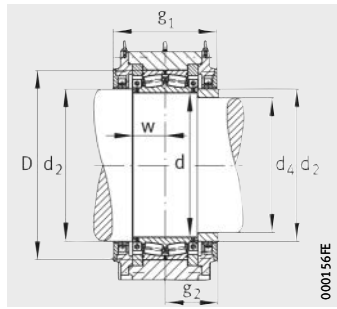




**Dimension table** · Dimensions in mm

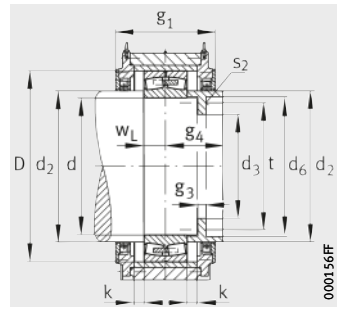
| Shaft | | | Housing Dimensions | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | $d_2$ | $d_4$ | h | $h_1$ | $g_1$ | b | c | a | m | n | s | D | w | $w_L$ |
| **500** | 540 | 495 | 425 | 820 | 400 | 375 | 130 | 1 170 | 975 | 230 | M42 | 670 | 125 | 85 |
| **530** | 570 | 525 | 450 | 875 | 410 | 400 | 140 | 1 240 | 1 050 | 240 | M42 | 710 | 130 | 90 |
| **560** | 600 | 555 | 475 | 930 | 420 | 420 | 145 | 1 320 | 1 100 | 255 | M48 | 750 | 135 | 95 |
| **600** | 645 | 595 | 500 | 980 | 460 | 440 | 155 | 1 400 | 1 150 | 270 | M52 | 800 | 145 | 100 |
| **630** | 675 | 625 | 535 | 1 040 | 480 | 480 | 165 | 1 500 | 1 225 | 295 | M56 | 850 | 155 | 109 |
| **670** | 720 | 665 | 570 | 1 110 | 500 | 500 | 175 | 1 570 | 1 300 | 310 | M56 | 900 | 163 | 115 |
| **710** | 760 | 695 | 600 | 1 170 | 560 | 535 | 185 | 1 660 | 1 375 | 325 | M64 | 950 | 175 | 122 |
| **750** | 800 | 745 | 630 | 1 240 | 590 | 550 | 195 | 1 750 | 1 450 | 335 | M64 | 1 000 | 178 | 125 |
| **800** | 860 | 795 | 670 | 1 310 | 600 | 570 | 205 | 1 850 | 1 550 | 345 | M72 | 1 060 | 185 | 129 |
| **850** | 910 | 845 | 710 | 1 390 | 630 | 600 | 220 | 1 960 | 1 600 | 360 | M72 | 1 120 | 193 | 136 |
| **900** | 960 | 895 | 740 | 1 450 | 660 | 620 | 230 | 2 060 | 1 700 | 370 | M80 | 1 180 | 195 | 140 |
| **950** | 1 015 | 945 | 800 | 1 550 | 680 | 660 | 250 | 2 200 | 1 820 | 390 | M90 | 1 250 | 205 | 150 |
| **1 000** | 1 065 | 985 | 830 | 1 620 | 720 | 650 | 255 | 2 330 | 1 980 | 360 | M90 | 1 320 | 225 | 158 |
| **1 060** | 1 135 | 1 055 | 880 | 1 710 | 780 | 740 | 275 | 2 450 | 2 000 | 460 | M100 | 1 400 | 238 | 168 |
| **1 120** | 1 195 | 1 115 | 920 | 1 780 | 800 | 740 | 285 | 2 560 | 2 150 | 460 | M100 | 1 460 | 238 | 168 |
| **1 180** | 1 260 | 1 175 | 970 | 1 880 | 820 | 780 | 300 | 2 700 | 2 300 | 480 | M110 | 1 540 | 250 | 178 |
| **1 250** | 1 330 | 1 245 | 1 010 | 1 985 | 850 | 820 | 320 | 2 850 | 2 400 | 510 | M110 | 1 630 | 273 | 188 |
| **1 320** | 1 400 | 1 315 | 1 080 | 2 100 | 900 | 850 | 340 | 3 000 | 2 500 | 520 | M125 | 1 720 | 290 | 200 |




KPGZ49..-F (unsplit bearing)
Locating bearing




KPGZ49..-F (unsplit bearing)
Locating bearing




KPGZ49..-F (unsplit bearing)
Non-locating bearing



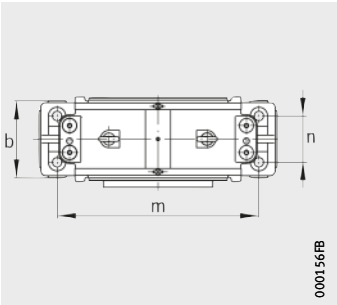


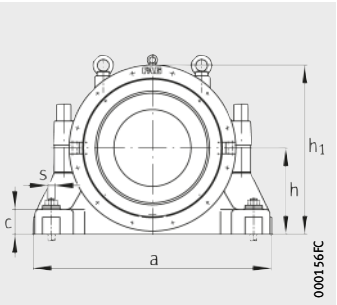


| | | | | | | | | | Housing Designation |
|---|---|---|---|---|---|---|---|---|---|
| k | $g_2$ | $g_3$ | $g_4$ | $d_3$ | $d_6$ | t | $s_2$ | | |
| | | | | | | | DIN 931 | Quantity | |
| 40 | 210 | 40 | 230 | 375 | 505 | 437,5 | M20×70 | 8 | **KPGZ49/500..-D** |
| 40 | 215 | 40 | 235 | 400 | 535 | 465 | M20×70 | 8 | **KPGZ49/530..-D** |
| 40 | 220 | 40 | 240 | 420 | 565 | 490 | M20×70 | 8 | **KPGZ49/560..-D** |
| 40 | 240 | 45 | 260 | 450 | 610 | 525 | M20×80 | 8 | **KPGZ49/600..-D** |
| 40 | 250 | 46 | 270 | 475 | 640 | 552,5 | M20×80 | 8 | **KPGZ49/630..-D** |
| 40 | 260 | 48 | 280 | 505 | 675 | 587,5 | M24×90 | 8 | **KPGZ49/670..-D** |
| 50 | 290 | 54 | 318 | 535 | 715 | 622,5 | M24×90 | 8 | **KPGZ49/710..-D** |
| 50 | 305 | 53 | 333 | 565 | 755 | 657,5 | M30×100 | 8 | **KPGZ49/750..-D** |
| 50 | 310 | 56 | 338 | 600 | 805 | 700 | M30×100 | 8 | **KPGZ49/800..-D** |
| 50 | 325 | 57 | 353 | 640 | 855 | 745 | M30×110 | 8 | **KPGZ49/850..-D** |
| 60 | 340 | 55 | 375 | 675 | 905 | 787,5 | M30×110 | 8 | **KPGZ49/900..-D** |
| 60 | 350 | 55 | 385 | 715 | 960 | 832,5 | M36×110 | 8 | **KPGZ49/950..-D** |
| 70 | 370 | 68 | 413 | 750 | 1 010 | 875 | M36×130 | 8 | **KPGZ49/1000..-D** |
| 60 | 400 | 70 | 435 | 795 | 1 070 | 927,5 | M36×130 | 8 | **KPGZ49/1060..-D** |
| 70 | 410 | 70 | 453 | 840 | 1 130 | 980 | M42×140 | 8 | **KPGZ49/1120..-D** |
| 70 | 420 | 73 | 463 | 885 | 1 190 | 1 032,5 | M42×140 | 8 | **KPGZ49/1180..-D** |
| 70 | 435 | 85 | 478 | 940 | 1 255 | 1 095 | M42×150 | 8 | **KPGZ49/1250..-D** |
| 70 | 460 | 90 | 503 | 990 | 1 325 | 1 155 | M48×180 | 8 | **KPGZ49/1320..-D** |

# Plummer block housings

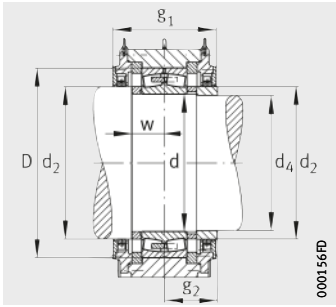
KPGZ, split
For spherical roller bearings with cylindrical bore, for split spherical roller bearings



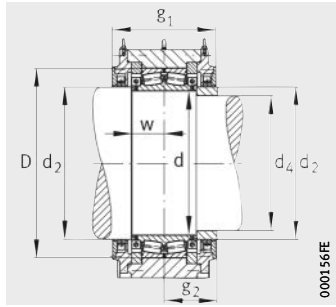




**Dimension table** (continued) · Dimensions in mm

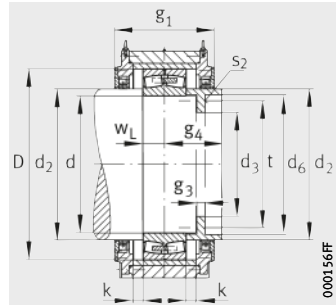
| Shaft | | | Bearing | | Split bearing (for locating bearings only) |
|---|---|---|---|---|---|
| d | $d_2$ | $d_4$ | MB cage | Pin cage | |
| **500** | 540 | 495 | **Z-528741.PRL** | **Z-541821.249/500** | **Z-537276.PRL** |
| **530** | 570 | 525 | **Z-528742.PRL** | **Z-541822.249/530** | **Z-537277.PRL** |
| **560** | 600 | 555 | **Z-528743.PRL** | **Z-541823.249/560-B** | **Z-537278.PRL** |
| **600** | 645 | 595 | **Z-528744.PRL** | **Z-541824.249/600-B** | **Z-533761.PRL** |
| **630** | 675 | 625 | – | **Z-541825.249/630** | **Z-537279.PRL** |
| **670** | 720 | 665 | **Z-528746.PRL** | **Z-541826.249/670** | **Z-537280.PRL** |
| **710** | 760 | 695 | **Z-528747.PRL** | **Z-541827.249/710-B** | **Z-526073.PRL** |
| **750** | 800 | 745 | **Z-528748.PRL** | **Z-541828.249/750-B** | **Z-533414.01.PRL** |
| **800** | 860 | 795 | **Z-528749.PRL** | **Z-541829.249/800-B** | **Z-532063.PRL** |
| **850** | 910 | 845 | **Z-528750.PRL** | **Z-541830.249/850-B** | **Z-537281.PRL** |
| **900** | 960 | 895 | **Z-528751.PRL** | **Z-541831.249/900-B** | **Z-537282.PRL** |
| **950** | 1 015 | 945 | **Z-528752.PRL** | **Z-541832.249/950-B** | **Z-534826.PRL** |
| **1 000** | 1 065 | 985 | **Z-528753.PRL** | **Z-541833.249/1000-B** | **Z-533567.PRL** |
| **1 060** | 1 135 | 1 055 | – | **Z-541834.249/1060-B** | **Z-537283.PRL** |
| **1 120** | 1 195 | 1 115 | – | **Z-541835.249/1120-B** | **Z-537284.PRL** |
| **1 180** | 1 260 | 1 175 | – | **Z-541836.249/1180-B** | **Z-536806.PRL** |
| **1 250** | 1 330 | 1 245 | – | **Z-541837.249/1250-B** | **Z-537285.PRL** |
| **1 320** | 1 400 | 1 315 | – | **Z-541838.249/1320-B** | **Z-545161.PRL** |




KPGZ49..-F (unsplit bearing)
Locating bearing




KPGZ49..-F (split bearing)
Locating bearing




KPGZ49..-F (unsplit bearing)
Non-locating bearing







Housing

| Initial grease filling quantity | | | Mass | Designation |
|---|---|---|---|---|
| Locating bearing | | Non-locating bearing | m | |
| Unsplit | Split | Unsplit | | |
| ≈ kg | ≈ kg | ≈ kg | ≈ kg | |
| 10 | 8 | 14 | 900 | **KPGZ49/500..-D** |
| 10 | 8 | 14 | 1 000 | **KPGZ49/530..-D** |
| 13 | 10 | 15 | 1 300 | **KPGZ49/560..-D** |
| 15 | 12 | 20 | 1 500 | **KPGZ49/600..-D** |
| 20 | 15 | 24 | 2 100 | **KPGZ49/630..-D** |
| 22 | 18 | 25 | 2 500 | **KPGZ49/670..-D** |
| 26 | 20 | 30 | 2 700 | **KPGZ49/710..-D** |
| 30 | 24 | 35 | 2 800 | **KPGZ49/750..-D** |
| 35 | 26 | 40 | 3 300 | **KPGZ49/800..-D** |
| 40 | 30 | 50 | 3 700 | **KPGZ49/850..-D** |
| 45 | 35 | 55 | 4 300 | **KPGZ49/900..-D** |
| 55 | 45 | 65 | 5 200 | **KPGZ49/950..-D** |
| 65 | 50 | 80 | 5 770 | **KPGZ49/1000..-D** |
| 75 | 60 | 95 | 6 800 | **KPGZ49/1060..-D** |
| 80 | 65 | 100 | 8 000 | **KPGZ49/1120..-D** |
| 95 | 75 | 110 | 9 000 | **KPGZ49/1180..-D** |
| 110 | 85 | 130 | 11 000 | **KPGZ49/1250..-D** |
| 125 | 100 | 170 | 12 800 | **KPGZ49/1320..-D** |

FAG



# Split plummer block housings LOE

# Split plummer block housings LOE


| | | Page |
|---|---|---|
| **Product overview** | Split plummer block housings LOE | 248 |
| **Features** | Suitable bearings | 249 |
| | Housing materials and anti-corrosion protection | 249 |
| | Locating and non-locating bearings | 249 |
| | Seals and covers | 250 |
| | Housing configurations | 250 |
| | Lubrication | 252 |
| | Designation structure | 253 |
| | Ordering examples | 254 |
| **Design and safety guidelines** | Eye bolts | 255 |
| | Foot screws | 255 |
| **Accuracy** | | 255 |
| **Dimension tables** | Plummer block housings LOE, split, for spherical roller bearings with tapered bore and adapter sleeve | 256 |
| | Plummer block housings LOE, split, for spherical roller bearings with cylindrical bore | 260 |








## Plummer block housings

**Split**

Closed on one side, with cover

**LOE..-AF, LOE..-AL**




For continuous shaft

**LOE..-BF, LOE..-BL**



# Split plummer block housings LOE



## Features

Split plummer block housings LOE are designed for oil lubrication. They are suitable for high speed bearing arrangements, for example in fans.



## Suitable bearings

The dimensions of split plummer block housings LOE are matched to spherical roller bearings 222 and 223, see table. The housings LOE2 and LOE3 are intended for bearings with a cylindrical bore, while the housings LOE5 and LOE6 are intended for bearings with a tapered bore and adapter sleeve. The range of shaft diameters is between 50 mm and 240 mm.



### Bearing type and sizes

| Bearing type | Size |
|---|---|
| **Spherical roller bearings** | 22217..-K to 22248..-K |
| ■ with tapered bore and adapter sleeve | 22314..-K to 22336..-K |
| ■ with cylindrical bore | 22214 to 22248 |
| | 22310 to 22336 |

## Housing materials and anti-corrosion protection

The standard material for the housing bodies is flake graphite cast iron (suffix L). By agreement, housing bodies made from spheroidal graphite cast iron (suffix D) or cast steel (suffix S) are available.

All outer surfaces not machined by chip-forming methods have a universal paint coating (colour RAL 7031, bluish-grey). The coating can be finished using all synthetic resin, polyurethane, acrylic, epoxy resin, chlorinated rubber, nitrocellulose and acid-hardening hammer tone finishes.

Inner and outer surfaces machined by chip-forming methods are provided with anti-corrosion protection that can be easily removed. It is recommended that only volatile solvents and lint-free cloths should be used.

## Locating and non-locating bearings

The housings are supplied as a locating bearing design or non-locating bearing design. In the locating bearing, the bearing is clamped between the housing covers. In the non-locating bearing, the bearing can align itself axially, since the covers have shorter centring collars.

## Seals and covers

Plummer block housings LOE of design A are intended for the bearing arrangements of shaft ends. One side is closed by a cover and the other side is sealed against the shaft. Design B is intended for continuous shafts, in which case the housing is sealed against the shaft on both sides.

A labyrinth seal is used in this case, *Figure 1*. The labyrinth rings are unsplit. The grease chamber in the labyrinth can be relubricated.

The labyrinth seal allows shaft misalignment of up to 0,25° in both directions and is suitable for oil lubrication.

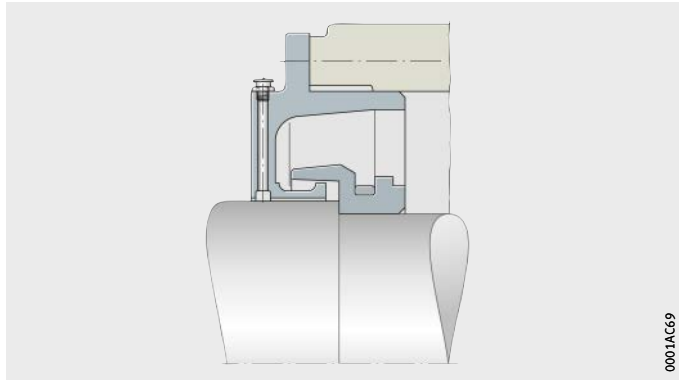


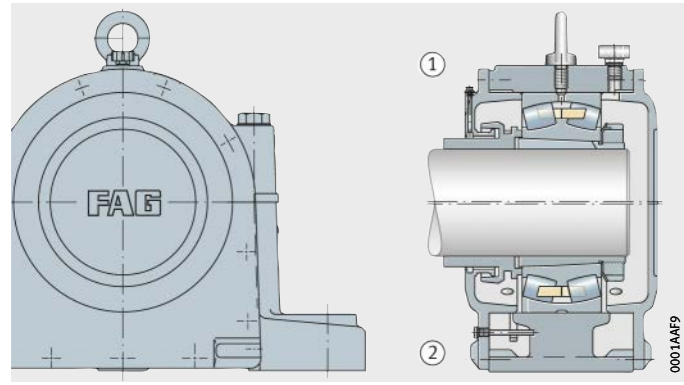

*Figure 1*
Labyrinth seal
for plummer block housing LOE

## Housing configurations

In the case of plummer block housings LOE , various housing configurations are possible that are clearly described by means of the designation, *Figure 2* to *Figure 5*, page 251.

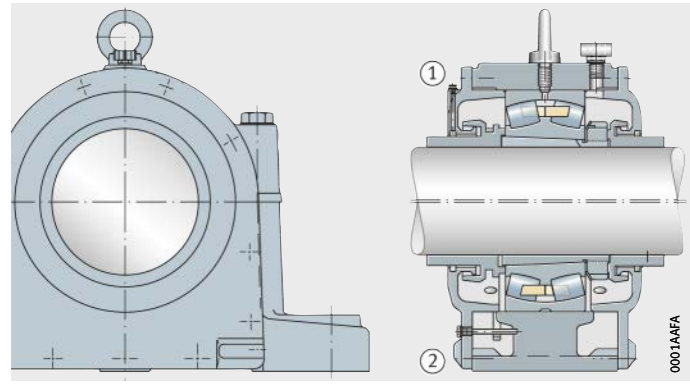
The following features can be varied in the housing configuration:

- location of bearings with a tapered bore by means of an adapter sleeve on a shaft of constant diameter or of bearings with a cylindrical bore directly on a stepped shaft
- continuous shaft or a housing closed on one side
- design of the bearing arrangement as a locating bearing arrangement or a non-locating bearing arrangement
- design with or without cooling coil, *Figure 6*, page 252.



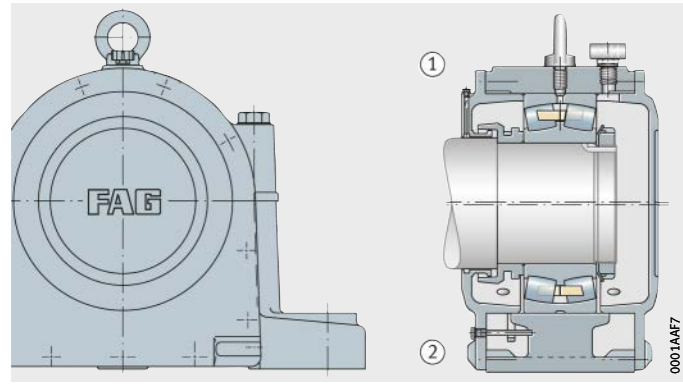

① Locating bearing LOE..-N-AF
② Non-locating bearing LOE..-N-AL

*Figure 2*
Plummer block housings LOE5, LOE6 for bearings with tapered bore and adapter sleeve, design A



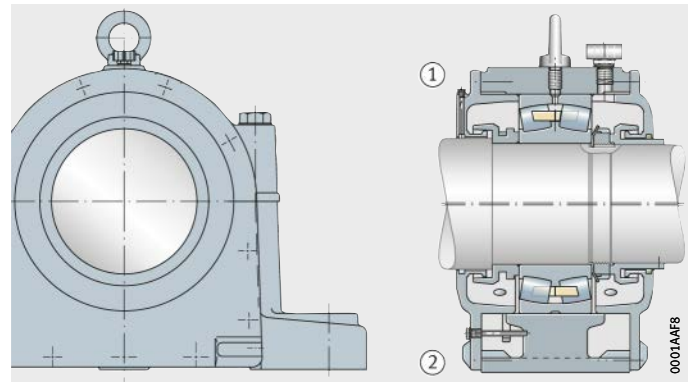

① Locating bearing LOE..-N-BF
② Non-locating bearing LOE..-N-BL

*Figure 3*
Plummer block housings LOE5, LOE6 for bearings with tapered bore and adapter sleeve, design B




① Locating bearing LOE..-N-AF
② Non-locating bearing LOE..-N-AL

*Figure 4*
Plummer block housings LOE2, LOE3 for bearings with cylindrical bore, design A




① Locating bearing LOE..-N-BF
② Non-locating bearing LOE..-N-BL

*Figure 5*
Plummer block housings LOE2, LOE3 for bearings with cylindrical bore, design B

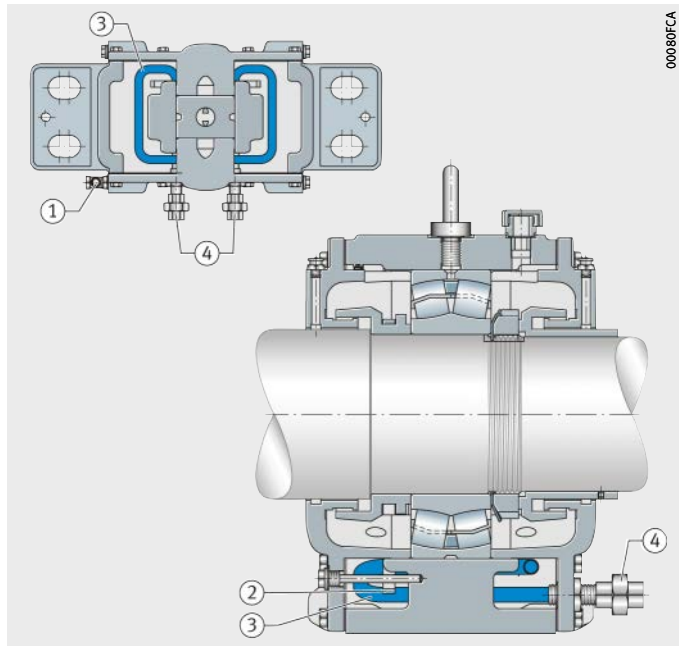
## Lubrication

Split plummer block housings LOE are designed for oil lubrication. They are suitable for high speed bearing arrangements. The oil gives good heat dissipation from the bearing.

### Oil bath lubrication

Oil lubrication is used as the lubrication method for the housings. The oil is supplied to the rolling bearing from the oil sump in the lower housing section by a ring oiler. An angled oil level indicator is screwed to one cover.

If cooling of the oil is necessary, the housings can be ordered in a design with a cooling coil (suffix E), *Figure 6*. The cooling coil is located in the area of the oil sump in the lower housing section and can be connected to an external cooling circuit.




① Angled oil level indicator
② Ring oiler
③ Cooling coil
④ Connectors for external cooling circuit

*Figure 6*
Plummer block housing LOE..-E with cooling coil

### Recirculating oil lubrication

By agreement, a housing design for recirculating oil lubrication can be ordered using the designation F-582158.LOU. Please ask for further information.

## Designation structure

The designation structure for split plummer block housings LOE is shown in the table and *Figure 7*.







**Designation structure of plummer block housings LOE**

| Feature | | Code | Description |
|---|---|---|---|
| ① | Series | LOE | Split plummer block housings LOE |
| ② | Diameter series of bearing, bearing bore | 2 | Bearings of diameter series 2, cylindrical bearing bore |
| | | 3 | Bearings of diameter series 3, cylindrical bearing bore |
| | | 5 | Bearings of diameter series 2, tapered bearing bore and adapter sleeve |
| | | 6 | Bearings of diameter series 3, tapered bearing bore and adapter sleeve |
| ③ | Bore code of bearing | 38 | Bore diameter (38 · 5) mm = 190 mm |
| ④ | Oil lubrication | N | Standard design |
| | | E | Design with cooling coil |
| ⑤ | Housing design | AF | Closed on one side, locating bearing |
| | | AL | Closed on one side, non-locating bearing |
| | | BF | Continuous shaft, locating bearing |
| | | BL | Continuous shaft, non-locating bearing |
| ⑥ | Housing material | L | Flake graphite cast iron (standard) |
| | | D | Spheroidal graphite cast iron |
| | | S | Cast steel |




*Figure 7*
Designation structure of plummer block housings LOE, example

## Ordering examples

When ordering a split plummer block housing LOE, the designation contains indications of the size and location method of the bearing, the type of oil cooling and the design and material of the housing. The rolling bearing and, if necessary, the adapter sleeve or locknut must be ordered separately.

The ordering examples show the construction of orders for selected housing combinations and the appropriate bearings. The allocation of housings, bearings and accessories for all housing sizes is shown in the dimension tables.

**Example 1**

Plummer block housing LOE made from flake graphite cast iron, for continuous shaft, spherical roller bearing 22238-K-MB as locating bearing, location using adapter sleeve. Housing for oil cooling of standard design.

| | | | |
|---|---|---|---|
| Order | 1 | plummer block housing | LOE538-N-BF-L |
| | 1 | spherical roller bearing | 22238-K-MB |
| | 1 | adapter sleeve | H3138-HG |

**Example 2**

Plummer block housing LOE made from flake graphite cast iron, for continuous shaft, spherical roller bearing 22238-MB as locating bearing, location using locknut. Housing for oil cooling of standard design.

| | | | |
|---|---|---|---|
| Order | 1 | plummer block housing | LOE238-N-BF-L |
| | 1 | spherical roller bearing | 22238-MB |
| | 1 | locknut | KM38 |
| | 1 | tab washer | MB38 |

## Design and safety guidelines

### Eye bolts

The upper housing section has an eye bolt in accordance with DIN 580. This is intended as a locating point for mounting and dismounting of the housing. The load carrying capacity of the eye bolt allows lifting of the housing including a bearing fitted in the housing.

The eye bolt must always be screwed fully into the housing.

The eye bolt must not be subjected to a mass greater than that of the housing together with the bearing fitted in the housing.

### Foot screws

Foot screws are used for screw mounting of the housing to the locating surface. They are not included in the scope of delivery of the housings.

The appropriate screw size for each housing is stated, see dimension tables.

The associated tightening torques are stated for screws with a metric thread in accordance with DIN 13, DIN 962 and DIN ISO 965-2, see table, page 42.

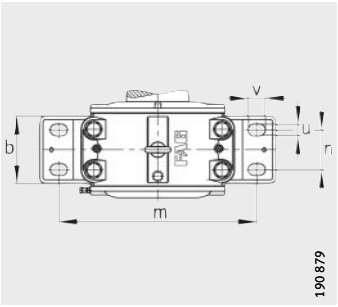
### Accuracy

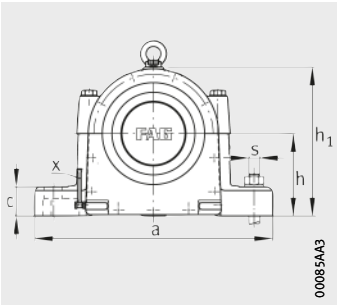
The bearing seat in split plummer block housings LOE is machined to the tolerance class G6.

By agreement, the housings can also be supplied with other tolerance classes for the bearing seat, see section Tolerance class of bearing seat, page 47.

# Plummer block housings

LOE, split
For spherical roller bearings with tapered bore and adapter sleeve

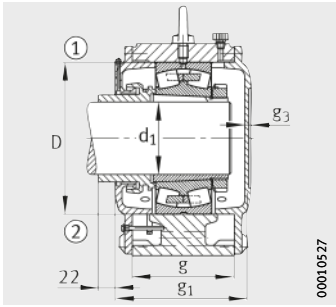


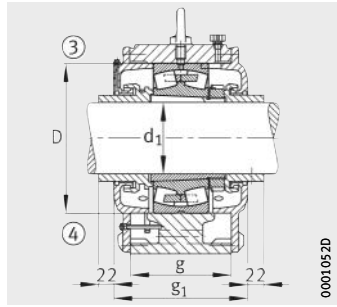

**Dimension table** · Dimensions in mm

| Shaft | Housing Dimensions | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_1$ | h | $h_1$ | g | $g_1$ | b | c | a | m | n | v | u | s | D | $g_3$ |
| **60** | 135 | 240 | 160 | 225 | 150 | 48 | 410 | 340 | 80 | 35 | 25 | M20 | 150 | 18 |
| **60** | 135 | 240 | 160 | 225 | 150 | 48 | 410 | 340 | 80 | 35 | 25 | M20 | 150 | – |
| **70** | 150 | 270 | 170 | 250 | 160 | 50 | 490 | 400 | 80 | 45 | 30 | M24 | 170 | 18 |
| **70** | 150 | 270 | 170 | 250 | 160 | 50 | 490 | 400 | 80 | 45 | 30 | M24 | 170 | – |
| **75** | 135 | 240 | 160 | 225 | 150 | 48 | 410 | 340 | 80 | 35 | 25 | M20 | 150 | 18 |
| **75** | 135 | 240 | 160 | 225 | 150 | 48 | 410 | 340 | 80 | 35 | 25 | M20 | 150 | – |
| **80** | 135 | 245 | 160 | 225 | 150 | 48 | 410 | 340 | 80 | 35 | 25 | M20 | 160 | 17,5 |
| **80** | 135 | 245 | 160 | 225 | 150 | 48 | 410 | 340 | 80 | 35 | 25 | M20 | 160 | – |
| **80** | 175 | 305 | 175 | 250 | 165 | 55 | 500 | 420 | 80 | 45 | 30 | M24 | 190 | 18 |
| **80** | 175 | 305 | 175 | 250 | 165 | 55 | 500 | 420 | 80 | 45 | 30 | M24 | 190 | – |
| **85** | 150 | 270 | 170 | 250 | 160 | 50 | 490 | 400 | 80 | 45 | 30 | M24 | 170 | 18 |
| **85** | 150 | 270 | 170 | 250 | 160 | 50 | 490 | 400 | 80 | 45 | 30 | M24 | 170 | – |
| **90** | 150 | 270 | 170 | 250 | 160 | 50 | 490 | 400 | 80 | 45 | 30 | M24 | 180 | 20 |
| **90** | 150 | 270 | 170 | 250 | 160 | 50 | 490 | 400 | 80 | 45 | 30 | M24 | 180 | – |
| **90** | 175 | 320 | 175 | 250 | 165 | 55 | 550 | 440 | 80 | 50 | 36 | M30 | 215 | 18 |
| **90** | 175 | 320 | 175 | 250 | 165 | 55 | 550 | 440 | 80 | 50 | 36 | M30 | 215 | – |
| **100** | 165 | 300 | 175 | 250 | 165 | 50 | 510 | 420 | 80 | 45 | 30 | M24 | 200 | 18 |
| **100** | 165 | 300 | 175 | 250 | 165 | 50 | 510 | 420 | 80 | 45 | 30 | M24 | 200 | – |
| **100** | 180 | 335 | 190 | 270 | 180 | 65 | 570 | 460 | 95 | 50 | 36 | M30 | 240 | 20 |
| **100** | 180 | 335 | 190 | 270 | 180 | 65 | 570 | 460 | 95 | 50 | 36 | M30 | 240 | – |
| **110** | 175 | 320 | 175 | 250 | 165 | 55 | 550 | 440 | 80 | 50 | 36 | M30 | 215 | 18 |
| **110** | 175 | 320 | 175 | 250 | 165 | 55 | 550 | 440 | 80 | 50 | 36 | M30 | 215 | – |
| **110** | 220 | 390 | 210 | 300 | 200 | 75 | 660 | 530 | 110 | 60 | 42 | M36 | 260 | 18 |
| **110** | 220 | 390 | 210 | 300 | 200 | 75 | 660 | 530 | 110 | 60 | 42 | M36 | 260 | – |
| **115** | 190 | 345 | 185 | 260 | 175 | 65 | 570 | 460 | 90 | 50 | 36 | M30 | 230 | 18 |
| **115** | 190 | 345 | 185 | 260 | 175 | 65 | 570 | 460 | 90 | 50 | 36 | M30 | 230 | – |
| **115** | 235 | 420 | 220 | 315 | 200 | 80 | 660 | 530 | 110 | 60 | 42 | M36 | 280 | 18 |
| **115** | 235 | 420 | 220 | 315 | 200 | 80 | 660 | 530 | 110 | 60 | 42 | M36 | 280 | – |

① Locating bearing AF; ② Non-locating bearing AL; ③ Locating bearing BF; ④ Non-locating bearing BL




Design A




Design B



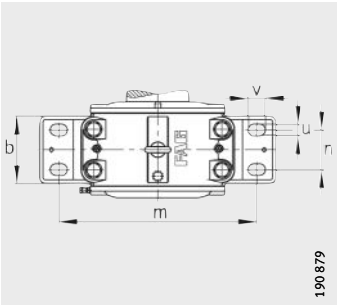


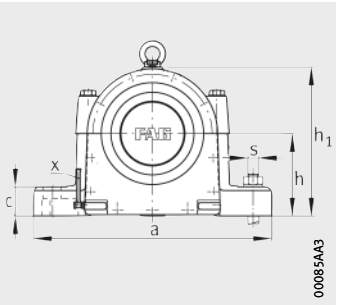


| Spherical roller bearing and accessories | | Oil quantity | Oil level | Housing | | |
|---|---|---|---|---|---|---|
| Bearing | Adapter sleeve | Initial filling | Height | Mass | Designation | |
| | | | x | m | Locating bearing | Non-locating bearing |
| | | l | mm | ≈ kg | | |
| **22314..-K** | H2314 | 1,4 | 50 – 65 | 45 | **LOE614-N-AF-L** | **LOE614-N-AL-L** |
| **22314..-K** | H2314 | 1,4 | 50 – 65 | 45 | **LOE614-N-BF-L** | **LOE614-N-BL-L** |
| **22316..-K** | H2316 | 1,6 | 55 – 70 | 60 | **LOE616-N-AF-L** | **LOE616-N-AL-L** |
| **22316..-K** | H2316 | 1,6 | 55 – 70 | 60 | **LOE616-N-BF-L** | **LOE616-N-BL-L** |
| **22217..-K** | H317 | 1,4 | 50 – 65 | 45 | **LOE517-N-AF-L** | **LOE517-N-AL-L** |
| **22217..-K** | H317 | 1,4 | 50 – 65 | 45 | **LOE517-N-BF-L** | **LOE517-N-BL-L** |
| **22218..-K** | H318 | 1,5 | 45 – 60 | 47 | **LOE518-N-AF-L** | **LOE518-N-AL-L** |
| **22218..-K** | H318 | 1,5 | 45 – 60 | 47 | **LOE518-N-BF-L** | **LOE518-N-BL-L** |
| **22318..-K** | H2318 | 2,3 | 65 – 85 | 73 | **LOE618-N-AF-L** | **LOE618-N-AL-L** |
| **22318..-K** | H2318 | 2,3 | 65 – 85 | 73 | **LOE618-N-BF-L** | **LOE618-N-BL-L** |
| **22219..-K** | H319 | 1,6 | 55 – 70 | 60 | **LOE519-N-AF-L** | **LOE519-N-AL-L** |
| **22219..-K** | H319 | 1,6 | 55 – 70 | 60 | **LOE519-N-BF-L** | **LOE519-N-BL-L** |
| **22220..-K** | H320 | 1,7 | 50 – 65 | 67 | **LOE520-N-AF-L** | **LOE520-N-AL-L** |
| **22220..-K** | H320 | 1,7 | 50 – 65 | 67 | **LOE520-N-BF-L** | **LOE520-N-BL-L** |
| **22320..-K** | H2320 | 2,4 | 55 – 75 | 81 | **LOE620-N-AF-L** | **LOE620-N-AL-L** |
| **22320..-K** | H2320 | 2,4 | 55 – 75 | 81 | **LOE620-N-BF-L** | **LOE620-N-BL-L** |
| **22222..-K** | H322 | 2,1 | 50 – 70 | 74 | **LOE522-N-AF-L** | **LOE522-N-AL-L** |
| **22222..-K** | H322 | 2,1 | 50 – 70 | 74 | **LOE522-N-BF-L** | **LOE522-N-BL-L** |
| **22322..-K** | H2322 | 2,4 | 45 – 65 | 100 | **LOE622-N-AF-L** | **LOE622-N-AL-L** |
| **22322..-K** | H2322 | 2,4 | 45 – 65 | 100 | **LOE622-N-BF-L** | **LOE622-N-BL-L** |
| **22224..-K** | H3124 | 2,3 | 50 – 70 | 80 | **LOE524-N-AF-L** | **LOE524-N-AL-L** |
| **22224..-K** | H3124 | 2,3 | 50 – 70 | 80 | **LOE524-N-BF-L** | **LOE524-N-BL-L** |
| **22324..-K** | H2324 | 4,2 | 65 – 90 | 130 | **LOE624-N-AF-L** | **LOE624-N-AL-L** |
| **22324..-K** | H2324 | 4,2 | 65 – 90 | 130 | **LOE624-N-BF-L** | **LOE624-N-BL-L** |
| **22226..-K** | H3126 | 2,3 | 55 – 75 | 93 | **LOE526-N-AF-L** | **LOE526-N-AL-L** |
| **22226..-K** | H3126 | 2,3 | 55 – 75 | 93 | **LOE526-N-BF-L** | **LOE526-N-BL-L** |
| **22326..-K** | H2326 | 3,7 | 75 – 105 | 142 | **LOE626-N-AF-L** | **LOE626-N-AL-L** |
| **22326..-K** | H2326 | 3,7 | 75 – 105 | 142 | **LOE626-N-BF-L** | **LOE626-N-BL-L** |

# Plummer block housings

LOE, split
For spherical roller bearings with tapered bore and adapter sleeve

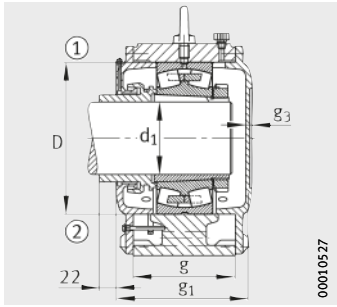


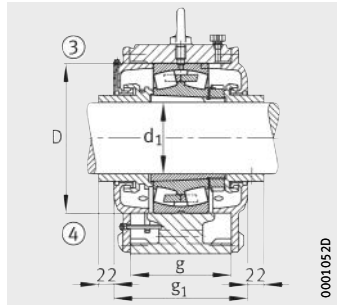

**Dimension table** (continued) · Dimensions in mm

| Shaft | Housing Dimensions | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_1$ | h | $h_1$ | g | $g_1$ | b | c | a | m | n | v | u | s | D | $g_3$ |
| **125** | 190 | 355 | 180 | 260 | 175 | 65 | 570 | 460 | 100 | 50 | 36 | M30 | 250 | 18 |
| **125** | 190 | 355 | 180 | 260 | 175 | 65 | 570 | 460 | 100 | 50 | 36 | M30 | 250 | – |
| **125** | 260 | 450 | 230 | 325 | 220 | 85 | 710 | 580 | 125 | 60 | 42 | M36 | 300 | 19,5 |
| **125** | 260 | 450 | 230 | 325 | 220 | 85 | 710 | 580 | 125 | 60 | 42 | M36 | 300 | – |
| **135** | 220 | 395 | 200 | 275 | 190 | 70 | 660 | 530 | 100 | 60 | 42 | M36 | 270 | 18 |
| **135** | 220 | 395 | 200 | 275 | 190 | 70 | 660 | 530 | 100 | 60 | 42 | M36 | 270 | – |
| **135** | 265 | 465 | 240 | 335 | 200 | 85 | 760 | 630 | 125 | 60 | 42 | M36 | 320 | 18 |
| **135** | 265 | 465 | 240 | 335 | 200 | 85 | 760 | 630 | 125 | 60 | 42 | M36 | 320 | – |
| **140** | 220 | 400 | 210 | 290 | 200 | 70 | 660 | 530 | 110 | 60 | 42 | M36 | 290 | 20 |
| **140** | 220 | 400 | 210 | 290 | 200 | 70 | 660 | 530 | 110 | 60 | 42 | M36 | 290 | – |
| **140** | 270 | 485 | 250 | 350 | 240 | 90 | 820 | 670 | 130 | 70 | 48 | M42 | 340 | 20 |
| **140** | 270 | 485 | 250 | 350 | 240 | 90 | 820 | 670 | 130 | 70 | 48 | M42 | 340 | – |
| **150** | 260 | 460 | 210 | 300 | 200 | 85 | 710 | 580 | 110 | 60 | 42 | M36 | 310 | 18 |
| **150** | 260 | 460 | 210 | 300 | 200 | 85 | 710 | 580 | 110 | 60 | 42 | M36 | 310 | – |
| **150** | 280 | 510 | 255 | 350 | 240 | 90 | 830 | 670 | 130 | 70 | 48 | M42 | 360 | 18 |
| **150** | 280 | 510 | 255 | 350 | 240 | 90 | 830 | 670 | 130 | 70 | 48 | M42 | 360 | – |
| **160** | 260 | 465 | 210 | 300 | 200 | 85 | 710 | 580 | 110 | 60 | 42 | M36 | 320 | 20 |
| **160** | 260 | 465 | 210 | 300 | 200 | 85 | 710 | 580 | 110 | 60 | 42 | M36 | 320 | – |
| **160** | 290 | 530 | 260 | 360 | 240 | 90 | 840 | 680 | 130 | 70 | 48 | M42 | 380 | 20 |
| **160** | 290 | 530 | 260 | 360 | 240 | 90 | 840 | 680 | 130 | 70 | 48 | M42 | 380 | – |
| **170** | 270 | 485 | 250 | 350 | 240 | 90 | 820 | 670 | 130 | 70 | 48 | M42 | 340 | 20 |
| **170** | 270 | 485 | 250 | 350 | 240 | 90 | 820 | 670 | 130 | 70 | 48 | M42 | 340 | – |
| **180** | 280 | 510 | 260 | 344 | 240 | 90 | 830 | 670 | 130 | 70 | 48 | M42 | 360 | 20 |
| **180** | 280 | 510 | 260 | 344 | 240 | 90 | 830 | 670 | 130 | 70 | 48 | M42 | 360 | – |
| **200** | 310 | 565 | 280 | 380 | 240 | 105 | 880 | 720 | 130 | 70 | 48 | M42 | 400 | 20 |
| **200** | 310 | 565 | 280 | 380 | 240 | 105 | 880 | 720 | 130 | 70 | 48 | M42 | 400 | – |
| **220** | 340 | 625 | 300 | 400 | 280 | 120 | 980 | 820 | 165 | 70 | 48 | M42 | 440 | 20 |
| **220** | 340 | 625 | 300 | 400 | 280 | 120 | 980 | 820 | 165 | 70 | 48 | M42 | 440 | – |

① Locating bearing AF; ② Non-locating bearing AL; ③ Locating bearing BF; ④ Non-locating bearing BL




Design A




Design B



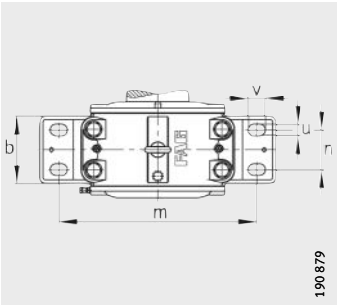


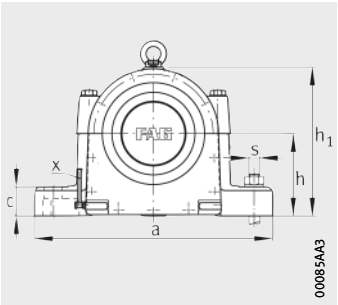


| Spherical roller bearing and accessories | | Oil quantity | Oil level | Housing | | |
|---|---|---|---|---|---|---|
| Bearing | Adapter sleeve | Initial filling | Height | Mass | Designation | |
| | | | x | m | Locating bearing | Non-locating bearing |
| | | l | mm | ≈ kg | | |
| **22228..-K** | H3128 | 3,7 | 55 – 75 | 100 | **LOE528-N-AF-L** | **LOE528-N-AL-L** |
| **22228..-K** | H3128 | 3,7 | 55 – 75 | 100 | **LOE528-N-BF-L** | **LOE528-N-BL-L** |
| **22328..-K** | H2328 | 6,7 | 80 – 110 | 170 | **LOE628-N-AF-L** | **LOE628-N-AL-L** |
| **22328..-K** | H2328 | 6,7 | 80 – 110 | 170 | **LOE628-N-BF-L** | **LOE628-N-BL-L** |
| **22230..-K** | H3130 | 4,2 | 65 – 90 | 125 | **LOE530-N-AF-L** | **LOE530-N-AL-L** |
| **22230..-K** | H3130 | 4,2 | 65 – 90 | 125 | **LOE530-N-BF-L** | **LOE530-N-BL-L** |
| **22330..-K** | H2330 | 6,2 | 75 – 110 | 200 | **LOE630-N-AF-L** | **LOE630-N-AL-L** |
| **22330..-K** | H2330 | 6,2 | 75 – 110 | 200 | **LOE630-N-BF-L** | **LOE630-N-BL-L** |
| **22232..-K** | H3132(-HG) | 4,7 | 60 – 80 | 135 | **LOE532-N-AF-L** | **LOE532-N-AL-L** |
| **22232..-K** | H3132(-HG) | 4,7 | 60 – 80 | 135 | **LOE532-N-BF-L** | **LOE532-N-BL-L** |
| **22332..-K** | H2332(-HG) | 7,0 | 80 – 105 | 240 | **LOE632-N-AF-L** | **LOE632-N-AL-L** |
| **22332..-K** | H2332(-HG) | 7,0 | 80 – 105 | 240 | **LOE632-N-BF-L** | **LOE632-N-BL-L** |
| **22234..-K** | H3134(-HG) | 6,0 | 90 – 105 | 160 | **LOE534-N-AF-L** | **LOE534-N-AL-L** |
| **22234..-K** | H3134(-HG) | 6,0 | 80 – 105 | 160 | **LOE534-N-BF-L** | **LOE534-N-BL-L** |
| **22334..-K** | H2334(-HG) | 7,2 | 80 – 105 | 270 | **LOE634-N-AF-L** | **LOE634-N-AL-L** |
| **22334..-K** | H2334(-HG) | 7,2 | 80 – 105 | 270 | **LOE634-N-BF-L** | **LOE634-N-BL-L** |
| **22236..-K** | H3136(-HG) | 6,0 | 75 – 110 | 200 | **LOE536-N-AF-L** | **LOE536-N-AL-L** |
| **22236..-K** | H3136(-HG) | 6,0 | 75 – 110 | 200 | **LOE536-N-BF-L** | **LOE536-N-BL-L** |
| **22336..-K** | H2336(-HG) | 7,4 | 80 – 105 | 330 | **LOE636-N-AF-L** | **LOE636-N-AL-L** |
| **22336..-K** | H2336(-HG) | 7,4 | 80 – 105 | 330 | **LOE636-N-BF-L** | **LOE636-N-BL-L** |
| **22238..-K** | H3138(-HG) | 7,2 | 70 – 100 | 230 | **LOE538-N-AF-L** | **LOE538-N-AL-L** |
| **22238..-K** | H3138(-HG) | 7,2 | 70 – 100 | 230 | **LOE538-N-BF-L** | **LOE538-N-BL-L** |
| **22240..-K** | H3140(-HG) | 7,2 | 75 – 100 | 250 | **LOE540-N-AF-L** | **LOE540-N-AL-L** |
| **22240..-K** | H3140(-HG) | 7,2 | 75 – 100 | 250 | **LOE540-N-BF-L** | **LOE540-N-BL-L** |
| **22244..-K** | H3144X(-HG) | 8,2 | 80 – 110 | 310 | **LOE544-N-AF-L** | **LOE544-N-AL-L** |
| **22244..-K** | H3144X(-HG) | 8,2 | 80 – 110 | 310 | **LOE544-N-BF-L** | **LOE544-N-BL-L** |
| **22248..-K** | H3148X(-HG) | 8,4 | 100 – 120 | 385 | **LOE548-N-AF-L** | **LOE548-N-AL-L** |
| **22248..-K** | H3148X(-HG) | 8,4 | 100 – 120 | 385 | **LOE548-N-BF-L** | **LOE548-N-BL-L** |

# Plummer block housings

LOE, split
For spherical roller bearings with cylindrical bore

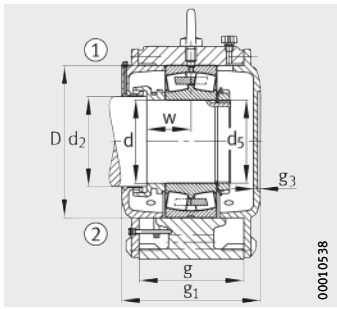


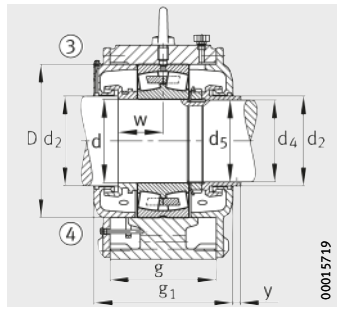

**Dimension table** · Dimensions in mm

| Shaft | | | Housing Dimensions | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | $d_2$ | $d_4$ | h | $h_1$ | g | $g_1$ | b | c | a | m | n | v | u | s | D |
| **50** | 55 | – | 115 | 205 | 135 | 210 | 125 | 40 | 350 | 290 | 75 | 30 | 20 | M16 | 110 |
| **50** | 55 | 47 | 115 | 205 | 135 | 210 | 125 | 40 | 350 | 290 | 75 | 30 | 20 | M16 | 110 |
| **60** | 65 | – | 125 | 220 | 140 | 220 | 130 | 45 | 370 | 310 | 80 | 30 | 20 | M16 | 130 |
| **60** | 65 | 57 | 125 | 220 | 140 | 220 | 130 | 45 | 370 | 310 | 80 | 30 | 20 | M16 | 130 |
| **70** | 75 | – | 135 | 240 | 160 | 225 | 150 | 48 | 410 | 340 | 80 | 35 | 25 | M20 | 150 |
| **70** | 75 | 67 | 135 | 240 | 160 | 225 | 150 | 48 | 410 | 340 | 80 | 35 | 25 | M20 | 150 |
| **80** | 85 | – | 150 | 270 | 170 | 250 | 160 | 50 | 490 | 400 | 80 | 45 | 30 | M24 | 170 |
| **80** | 85 | 77 | 150 | 270 | 170 | 250 | 160 | 50 | 490 | 400 | 80 | 45 | 30 | M24 | 170 |
| **85** | 90 | – | 135 | 240 | 160 | 225 | 150 | 48 | 410 | 340 | 80 | 35 | 25 | M20 | 150 |
| **85** | 90 | 82 | 135 | 240 | 160 | 225 | 150 | 48 | 410 | 340 | 80 | 35 | 25 | M20 | 150 |
| **90** | 95 | – | 135 | 245 | 160 | 225 | 150 | 48 | 410 | 340 | 80 | 35 | 25 | M20 | 160 |
| **90** | 95 | 87 | 135 | 245 | 160 | 225 | 150 | 48 | 410 | 340 | 80 | 35 | 25 | M20 | 160 |
| **90** | 95 | – | 175 | 305 | 175 | 250 | 165 | 55 | 500 | 420 | 80 | 45 | 30 | M24 | 190 |
| **90** | 95 | 87 | 175 | 305 | 175 | 250 | 165 | 55 | 500 | 420 | 80 | 45 | 30 | M24 | 190 |
| **95** | 100 | – | 150 | 270 | 170 | 250 | 160 | 50 | 490 | 400 | 80 | 45 | 30 | M24 | 170 |
| **95** | 100 | 92 | 150 | 270 | 170 | 250 | 160 | 50 | 490 | 400 | 80 | 45 | 30 | M24 | 170 |
| **100** | 110 | – | 150 | 270 | 170 | 250 | 160 | 50 | 490 | 400 | 80 | 45 | 30 | M24 | 180 |
| **100** | 110 | 97 | 150 | 270 | 170 | 250 | 160 | 50 | 490 | 400 | 80 | 45 | 30 | M24 | 180 |
| **100** | 106 | – | 175 | 320 | 175 | 250 | 165 | 55 | 550 | 440 | 80 | 50 | 36 | M30 | 215 |
| **100** | 106 | 97 | 175 | 320 | 175 | 250 | 165 | 55 | 550 | 440 | 80 | 50 | 36 | M30 | 215 |
| **110** | 116 | – | 165 | 300 | 175 | 250 | 165 | 50 | 510 | 420 | 80 | 45 | 30 | M24 | 200 |
| **110** | 116 | 107 | 165 | 300 | 175 | 250 | 165 | 50 | 510 | 420 | 80 | 45 | 30 | M24 | 200 |
| **110** | 120 | – | 180 | 335 | 190 | 270 | 180 | 65 | 570 | 460 | 95 | 50 | 36 | M30 | 240 |
| **110** | 120 | 107 | 180 | 335 | 190 | 270 | 180 | 65 | 570 | 460 | 95 | 50 | 36 | M30 | 240 |
| **120** | 126 | – | 175 | 320 | 175 | 250 | 165 | 55 | 550 | 440 | 80 | 50 | 36 | M30 | 215 |
| **120** | 126 | 117 | 175 | 320 | 175 | 250 | 165 | 55 | 550 | 440 | 80 | 50 | 36 | M30 | 215 |
| **120** | 126 | – | 220 | 390 | 210 | 300 | 200 | 75 | 660 | 530 | 110 | 60 | 42 | M36 | 260 |
| **120** | 126 | 117 | 220 | 390 | 210 | 300 | 200 | 75 | 660 | 530 | 110 | 60 | 42 | M36 | 260 |
| **130** | 136 | – | 190 | 345 | 185 | 260 | 175 | 65 | 570 | 460 | 90 | 50 | 36 | M30 | 230 |
| **130** | 136 | 127 | 190 | 345 | 185 | 260 | 175 | 65 | 570 | 460 | 90 | 50 | 36 | M30 | 230 |
| **130** | 140 | – | 235 | 420 | 220 | 315 | 200 | 80 | 660 | 530 | 110 | 60 | 42 | M36 | 280 |
| **130** | 140 | 127 | 235 | 420 | 220 | 315 | 200 | 80 | 660 | 530 | 110 | 60 | 42 | M36 | 280 |

① Locating bearing AF; ② Non-locating bearing AL; ③ Locating bearing BF; ④ Non-locating bearing BL




Design A




Design B



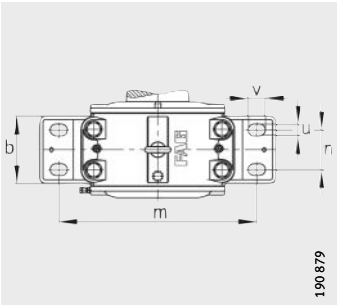


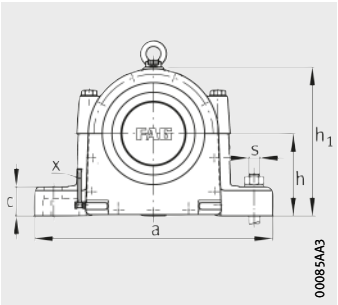


| | | | Spherical roller bearing and accessories | | | | Oil quantity | Oil level | Housing | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| w | y | $g_3$ | Bearing | Shaft nut | | Tab washer | Initial filling | Height x | Mass m | Designation | |
| | | | | | $d_5$ | | l | mm | ≈ kg | Locating bearing | Non-locating bearing |
| 52 | – | 18 | **22310** | KM10 | M50×2 | MB10 | 0,9 | 50 – 65 | 30 | **LOE310-N-AF-L** | **LOE310-N-AL-L** |
| 52 | 15 | – | **22310** | KM10 | M50×2 | MB10 | 0,9 | 50 – 65 | 30 | **LOE310-N-BF-L** | **LOE310-N-BL-L** |
| 55 | – | 18 | **22312** | KM12 | M60×2 | MB12 | 1,0 | 50 – 65 | 35 | **LOE312-N-AF-L** | **LOE312-N-AL-L** |
| 55 | 15 | – | **22312** | KM12 | M60×2 | MB12 | 1,0 | 50 – 65 | 35 | **LOE312-N-BF-L** | **LOE312-N-BL-L** |
| 62 | – | 18 | **22314** | KM14 | M70×2 | MB14 | 1,4 | 50 – 65 | 45 | **LOE314-N-AF-L** | **LOE314-N-AL-L** |
| 62 | 15 | – | **22314** | KM14 | M70×2 | MB14 | 1,4 | 50 – 65 | 45 | **LOE314-N-BF-L** | **LOE314-N-BL-L** |
| 67 | – | 18 | **22316** | KM16 | M80×2 | MB16 | 1,6 | 55 – 70 | 60 | **LOE316-N-AF-L** | **LOE316-N-AL-L** |
| 67 | 15 | – | **22316** | KM16 | M80×2 | MB16 | 1,6 | 55 – 70 | 60 | **LOE316-N-BF-L** | **LOE316-N-BL-L** |
| 62 | – | 18 | **22217** | KM17 | M85×2 | MB17 | 1,4 | 50 – 65 | 45 | **LOE217-N-AF-L** | **LOE217-N-AL-L** |
| 62 | 15 | – | **22217** | KM17 | M85×2 | MB17 | 1,4 | 50 – 65 | 45 | **LOE217-N-BF-L** | **LOE217-N-BL-L** |
| 61 | – | 17,5 | **22218** | KM18 | M90×2 | MB18 | 1,5 | 45 – 60 | 47 | **LOE218-N-AF-L** | **LOE218-N-AL-L** |
| 61 | 15 | – | **22218** | KM18 | M90×2 | MB18 | 1,5 | 45 – 60 | 47 | **LOE218-N-BF-L** | **LOE218-N-BL-L** |
| 72 | – | 18 | **22318** | KM18 | M90×2 | MB18 | 2,3 | 65 – 85 | 73 | **LOE318-N-AF-L** | **LOE318-N-AL-L** |
| 72 | 15 | – | **22318** | KM18 | M90×2 | MB18 | 2,3 | 65 – 85 | 73 | **LOE318-N-BF-L** | **LOE318-N-BL-L** |
| 67 | – | 18 | **22219** | KM19 | M95×2 | MB19 | 1,6 | 55 – 70 | 60 | **LOE219-N-AF-L** | **LOE219-N-AL-L** |
| 67 | 15 | – | **22219** | KM19 | M95×2 | MB19 | 1,6 | 55 – 70 | 60 | **LOE219-N-BF-L** | **LOE219-N-BL-L** |
| 60 | – | 20 | **22220** | KM20 | M100×2 | MB20 | 1,7 | 50 – 65 | 67 | **LOE220-N-AF-L** | **LOE220-N-AL-L** |
| 60 | 15 | – | **22220** | KM20 | M100×2 | MB20 | 1,7 | 50 – 65 | 67 | **LOE220-N-BF-L** | **LOE220-N-BL-L** |
| 72 | – | 18 | **22320** | KM20 | M100×2 | MB20 | 2,4 | 55 – 75 | 81 | **LOE320-N-AF-L** | **LOE320-N-AL-L** |
| 72 | 15 | – | **22320** | KM20 | M100×2 | MB20 | 2,4 | 55 – 75 | 81 | **LOE320-N-BF-L** | **LOE320-N-BL-L** |
| 70 | – | 18 | **22222** | KM22 | M110×2 | MB22 | 2,1 | 50 – 70 | 74 | **LOE222-N-AF-L** | **LOE222-N-AL-L** |
| 70 | 15 | – | **22222** | KM22 | M110×2 | MB22 | 2,1 | 50 – 70 | 74 | **LOE222-N-BF-L** | **LOE222-N-BL-L** |
| 77 | – | 20 | **22322** | KM22 | M110×2 | MB22 | 2,4 | 45 – 65 | 100 | **LOE322-N-AF-L** | **LOE322-N-AL-L** |
| 77 | 15 | – | **22322** | KM22 | M110×2 | MB22 | 2,4 | 45 – 65 | 100 | **LOE322-N-BF-L** | **LOE322-N-BL-L** |
| 72 | – | 18 | **22224** | KM24 | M120×2 | MB24 | 2,3 | 50 – 70 | 80 | **LOE224-N-AF-L** | **LOE224-N-AL-L** |
| 72 | 15 | – | **22224** | KM24 | M120×2 | MB24 | 2,3 | 50 – 70 | 80 | **LOE224-N-BF-L** | **LOE224-N-BL-L** |
| 90 | – | 18 | **22324** | KM24 | M120×2 | MB24 | 4,2 | 65 – 90 | 130 | **LOE324-N-AF-L** | **LOE324-N-AL-L** |
| 90 | 15 | – | **22324** | KM24 | M120×2 | MB24 | 4,2 | 65 – 90 | 130 | **LOE324-N-BF-L** | **LOE324-N-BL-L** |
| 77 | – | 18 | **22226** | KM26 | M130×2 | MB26 | 2,3 | 55 – 75 | 93 | **LOE226-N-AF-L** | **LOE226-N-AL-L** |
| 77 | 15 | – | **22226** | KM26 | M130×2 | MB26 | 2,3 | 55 – 75 | 93 | **LOE226-N-BF-L** | **LOE226-N-BL-L** |
| 86 | – | 18 | **22326** | KM26 | M130×2 | MB26 | 3,7 | 75 – 105 | 142 | **LOE326-N-AF-L** | **LOE326-N-AL-L** |
| 86 | 15 | – | **22326** | KM26 | M130×2 | MB26 | 3,7 | 75 – 105 | 142 | **LOE326-N-BF-L** | **LOE326-N-BL-L** |

# Plummer block housings

LOE, split
For spherical roller bearings with cylindrical bore

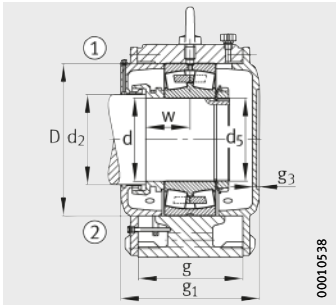


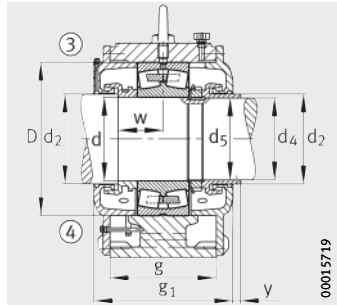

**Dimension table** (continued) · Dimensions in mm

| Shaft | | | Housing Dimensions | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | $d_2$ | $d_4$ | h | $h_1$ | g | $g_1$ | b | c | a | m | n | v | u | s | D |
| **140** | 150 | – | 190 | 355 | 180 | 260 | 175 | 65 | 570 | 460 | 100 | 50 | 36 | M30 | 250 |
| **140** | 150 | 137 | 190 | 355 | 180 | 260 | 175 | 65 | 570 | 460 | 100 | 50 | 36 | M30 | 250 |
| **140** | 146 | – | 260 | 450 | 230 | 325 | 220 | 85 | 710 | 580 | 125 | 60 | 42 | M36 | 300 |
| **140** | 146 | 137 | 260 | 450 | 230 | 325 | 220 | 85 | 710 | 580 | 125 | 60 | 42 | M36 | 300 |
| **150** | 156 | – | 220 | 395 | 200 | 275 | 190 | 70 | 660 | 530 | 100 | 60 | 42 | M36 | 270 |
| **150** | 156 | 147 | 220 | 395 | 200 | 275 | 190 | 70 | 660 | 530 | 100 | 60 | 42 | M36 | 270 |
| **150** | 160 | – | 265 | 465 | 240 | 335 | 200 | 85 | 760 | 630 | 125 | 60 | 42 | M36 | 320 |
| **150** | 160 | 147 | 265 | 465 | 240 | 335 | 200 | 85 | 760 | 630 | 125 | 60 | 42 | M36 | 320 |
| **160** | 170 | – | 220 | 400 | 210 | 290 | 200 | 70 | 660 | 530 | 110 | 60 | 42 | M36 | 290 |
| **160** | 170 | 155 | 220 | 400 | 210 | 290 | 200 | 70 | 660 | 530 | 110 | 60 | 42 | M36 | 290 |
| **160** | 166 | – | 270 | 485 | 250 | 350 | 240 | 90 | 820 | 670 | 130 | 70 | 48 | M42 | 340 |
| **160** | 166 | 155 | 270 | 485 | 250 | 350 | 240 | 90 | 820 | 670 | 130 | 70 | 48 | M42 | 340 |
| **170** | 176 | – | 260 | 460 | 210 | 300 | 200 | 85 | 710 | 580 | 110 | 60 | 42 | M36 | 310 |
| **170** | 176 | 165 | 260 | 460 | 210 | 300 | 200 | 85 | 710 | 580 | 110 | 60 | 42 | M36 | 310 |
| **170** | 180 | – | 280 | 510 | 255 | 350 | 240 | 90 | 830 | 670 | 130 | 70 | 48 | M42 | 360 |
| **170** | 180 | 165 | 280 | 510 | 255 | 350 | 240 | 90 | 830 | 670 | 130 | 70 | 48 | M42 | 360 |
| **180** | 190 | – | 260 | 465 | 210 | 300 | 200 | 85 | 710 | 580 | 110 | 60 | 42 | M36 | 320 |
| **180** | 190 | 175 | 260 | 465 | 210 | 300 | 200 | 85 | 710 | 580 | 110 | 60 | 42 | M36 | 320 |
| **180** | 190 | – | 290 | 530 | 260 | 360 | 240 | 90 | 840 | 680 | 130 | 70 | 48 | M42 | 380 |
| **180** | 190 | 175 | 290 | 530 | 260 | 360 | 240 | 90 | 840 | 680 | 130 | 70 | 48 | M42 | 380 |
| **190** | 196 | – | 270 | 485 | 250 | 350 | 240 | 90 | 820 | 670 | 130 | 70 | 48 | M42 | 340 |
| **190** | 196 | 185 | 270 | 485 | 250 | 350 | 240 | 90 | 820 | 670 | 130 | 70 | 48 | M42 | 340 |
| **200** | 210 | – | 280 | 510 | 260 | 344 | 240 | 90 | 830 | 670 | 130 | 70 | 48 | M42 | 360 |
| **200** | 210 | 195 | 280 | 510 | 260 | 344 | 240 | 90 | 830 | 670 | 130 | 70 | 48 | M42 | 360 |
| **220** | 230 | – | 310 | 565 | 280 | 380 | 240 | 105 | 880 | 720 | 130 | 70 | 48 | M42 | 400 |
| **220** | 230 | 212 | 310 | 565 | 280 | 380 | 240 | 105 | 880 | 720 | 130 | 70 | 48 | M42 | 400 |
| **240** | 260 | – | 340 | 615 | 300 | 400 | 280 | 120 | 980 | 820 | 165 | 70 | 48 | M42 | 440 |
| **240** | 260 | 235 | 340 | 615 | 300 | 400 | 280 | 120 | 980 | 820 | 165 | 70 | 48 | M42 | 440 |

① Locating bearing AF; ② Non-locating bearing AL; ③ Locating bearing BF; ④ Non-locating bearing BL




Design A




Design B







| | | | Spherical roller bearing and accessories | | | | Oil quantity | Oil level | Housing | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| w | y | $g_3$ | Bearing | Shaft nut | | Tab washer | Initial filling | Height | Mass | Designation | |
| | | | | | $d_5$ | | l | x mm | m ≈ kg | Locating bearing | Non-locating bearing |
| 73 | – | 18 | **22228** | KM28 | M140×2 | MB28 | 3,7 | 55 – 70 | 100 | **LOE228-N-AF-L** | **LOE228-N-AL-L** |
| 73 | 22 | – | **22228** | KM28 | M140×2 | MB28 | 3,7 | 55 – 70 | 100 | **LOE228-N-BF-L** | **LOE228-N-BL-L** |
| 95 | – | 19,5 | **22328** | KM28 | M140×2 | MB28 | 6,7 | 80 – 110 | 170 | **LOE328-N-AF-L** | **LOE328-N-AL-L** |
| 95 | 15 | – | **22328** | KM28 | M140×2 | MB28 | 6,7 | 80 – 110 | 170 | **LOE328-N-BF-L** | **LOE328-N-BL-L** |
| 82 | – | 18 | **22230** | KM30 | M150×2 | MB30 | 4,2 | 65 – 90 | 125 | **LOE230-N-AF-L** | **LOE230-N-AL-L** |
| 82 | 15 | – | **22230** | KM30 | M150×2 | MB30 | 4,2 | 65 – 90 | 125 | **LOE230-N-BF-L** | **LOE230-N-BL-L** |
| 95 | – | 18 | **22330** | KM30 | M150×2 | MB30 | 6,2 | 75 – 110 | 200 | **LOE330-N-AF-L** | **LOE330-N-AL-L** |
| 95 | 15 | – | **22330** | KM30 | M150×2 | MB30 | 6,2 | 75 – 110 | 200 | **LOE330-N-BF-L** | **LOE330-N-BL-L** |
| 80 | – | 20 | **22232** | KM32 | M160×3 | MB32 | 4,7 | 60 – 80 | 136 | **LOE232-N-AF-L** | **LOE232-N-AL-L** |
| 80 | 22 | – | **22232** | KM32 | M160×3 | MB32 | 4,7 | 60 – 80 | 136 | **LOE232-N-BF-L** | **LOE232-N-BL-L** |
| 100 | – | 20 | **22332** | KM32 | M160×3 | MB32 | 7,0 | 80 – 105 | 240 | **LOE332-N-AF-L** | **LOE332-N-AL-L** |
| 100 | 15 | – | **22332** | KM32 | M160×3 | MB32 | 7,0 | 80 – 105 | 240 | **LOE332-N-BF-L** | **LOE332-N-BL-L** |
| 90 | – | 18 | **22234** | KM34 | M170×3 | MB34 | 6,0 | 90 – 105 | 160 | **LOE234-N-AF-L** | **LOE234-N-AL-L** |
| 90 | 15 | – | **22234** | KM34 | M170×3 | MB34 | 6,0 | 90 – 105 | 160 | **LOE234-N-BF-L** | **LOE234-N-BL-L** |
| 105 | – | 18 | **22334** | KM34 | M170×3 | MB34 | 7,2 | 80 – 105 | 270 | **LOE334-N-AF-L** | **LOE334-N-AL-L** |
| 105 | 15 | – | **22334** | KM34 | M170×3 | MB34 | 7,2 | 80 – 105 | 270 | **LOE334-N-BF-L** | **LOE334-N-BL-L** |
| 90 | – | 20 | **22236** | KM36 | M180×3 | MB36 | 6,0 | 75 – 110 | 200 | **LOE236-N-AF-L** | **LOE236-N-AL-L** |
| 90 | 22 | – | **22236** | KM36 | M180×3 | MB36 | 6,0 | 75 – 110 | 200 | **LOE236-N-BF-L** | **LOE236-N-BL-L** |
| 108 | – | 20 | **22336** | KM36 | M180×3 | MB36 | 7,4 | 80 – 105 | 330 | **LOE336-N-AF-L** | **LOE336-N-AL-L** |
| 108 | 15 | – | **22336** | KM36 | M180×3 | MB36 | 7,4 | 80 – 105 | 330 | **LOE336-N-BF-L** | **LOE336-N-BL-L** |
| 95 | – | 20 | **22238** | KM38 | M190×3 | MB38 | 7,2 | 70 – 100 | 230 | **LOE238-N-AF-L** | **LOE238-N-AL-L** |
| 95 | 15 | – | **22238** | KM38 | M190×3 | MB38 | 7,2 | 70 – 100 | 230 | **LOE238-N-BF-L** | **LOE238-N-BL-L** |
| 100 | – | 20 | **22240** | KM40 | M200×3 | MB40 | 7,2 | 75 – 100 | 250 | **LOE240-N-AF-L** | **LOE240-N-AL-L** |
| 100 | 15 | – | **22240** | KM40 | M200×3 | MB40 | 7,2 | 75 – 100 | 250 | **LOE240-N-BF-L** | **LOE240-N-BL-L** |
| 108 | – | 20 | **22244** | HM44T | Tr220×4 | MB44 | 8,2 | 80 – 110 | 310 | **LOE244-N-AF-L** | **LOE244-N-AL-L** |
| 108 | 15 | – | **22244** | HM44T | Tr220×4 | MB44 | 8,2 | 80 – 110 | 310 | **LOE244-N-BF-L** | **LOE244-N-BL-L** |
| 120 | – | 20 | **22248** | HM48T | Tr240×4 | MB48 | 8,4 | 100 – 125 | 385 | **LOE248-N-AF-L** | **LOE248-N-AL-L** |
| 120 | 22 | – | **22248** | HM48T | Tr240×4 | MB48 | 8,4 | 100 – 125 | 385 | **LOE248-N-BF-L** | **LOE248-N-BL-L** |



# Unsplit plummer block housings

Plummer block housing units VRE3
BNM
BND

# Unsplit plummer block housings

## Plummer block housing units VRE3

268

Plummer block housing units VRE3 are completely assembled and greased bearing units that can be integrated directly in existing machinery. Plummer block housing units VRE3 were originally developed for the bearing arrangement of high speed impellers in fan applications. The units are now used wherever there is a requirement for a precise, smooth-running bearing arrangement.

The housings, which are made from flake graphite cast iron, are designed for grease lubrication. The housing body and the shaft can also be ordered individually.

The bearings used, depending on the design, are various combinations of deep groove ball bearings, cylindrical roller bearings and angular contact ball bearings.

## Unsplit plummer block housings BNM

290

Unsplit plummer block housings BNM can be used in various applications. Mills are a typical area of application.

The housings, which are made from cast steel, are designed for grease lubrication.

The housings are specifically suitable for spherical roller bearings 232 with a tapered bore that are mounted on a withdrawal sleeve.

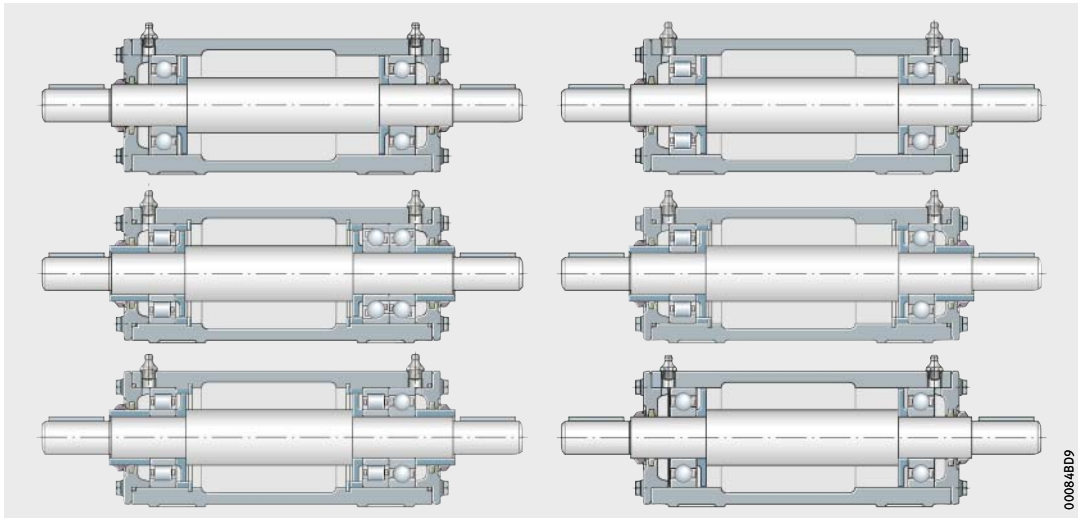
## Unsplit plummer block housings BND

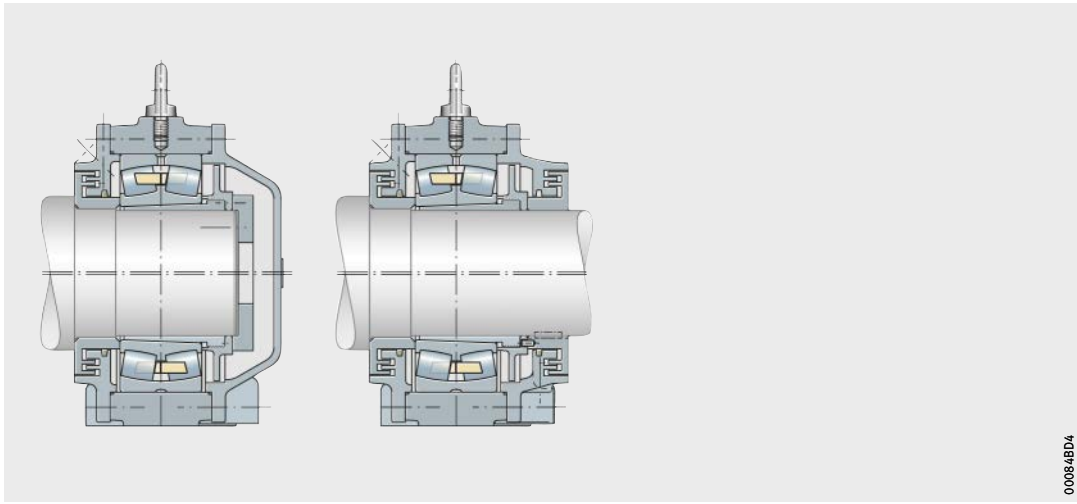
300

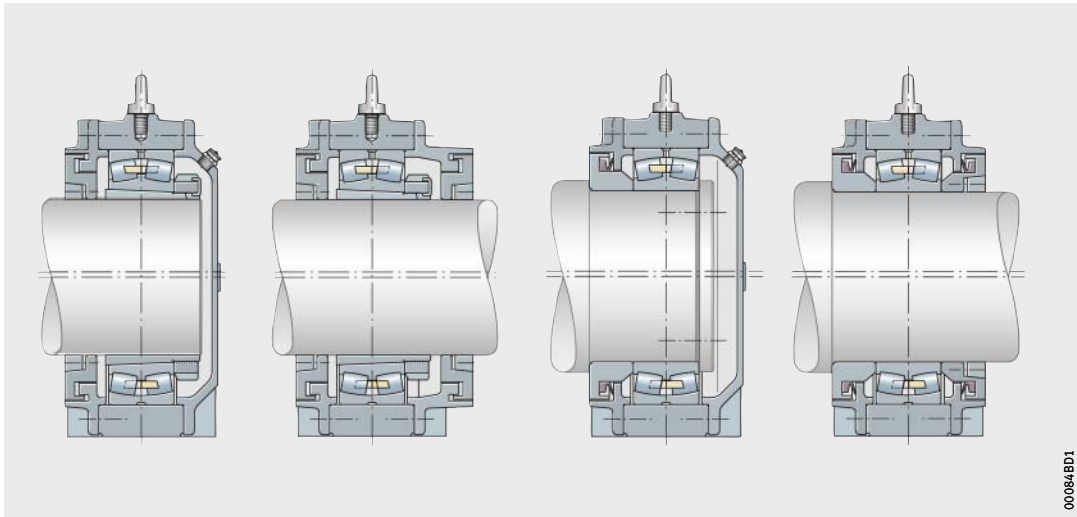
Unsplit plummer block housings BND are suitable for very high loads. In order to match the sealing arrangement to the operating and environmental conditions, either labyrinth or Taconite seals can be selected.

The housings are designed for grease lubrication. The standard housing material is cast steel, while a design made from spheroidal graphite cast iron is also available.

Suitable bearings are spherical roller bearings 222, 230, 231 and 232 with a tapered bore and withdrawal sleeve and with a cylindrical bore.


00084BD9


00084BD4


00084BD1

FAG



# Plummer block housing units VRE3

# Plummer block housing units VRE3


| | | Page |
|---|---|---|
| **Product overview** | Plummer block housing units VRE3 | 270 |
| **Features** | Complete bearing units | 271 |
| | Advantages | 271 |
| | Suitable bearings | 272 |
| | Housing materials and anti-corrosion protection | 272 |
| | Seals | 272 |
| | Designs | 273 |
| | Areas of application of designs | 275 |
| | Lubrication | 275 |
| | Designation structure | 278 |
| | Ordering examples | 280 |
| **Design and safety guidelines** | Eye bolts | 281 |
| | Foot screws | 281 |
| | Marking | 281 |
| **Accuracy** | | 281 |
| **Dimension tables** | Plummer block housing units VRE3, unsplit, with bearings and shaft | 282 |




**Plummer block housing units**
Unsplit, with bearings and shaft

VRE3



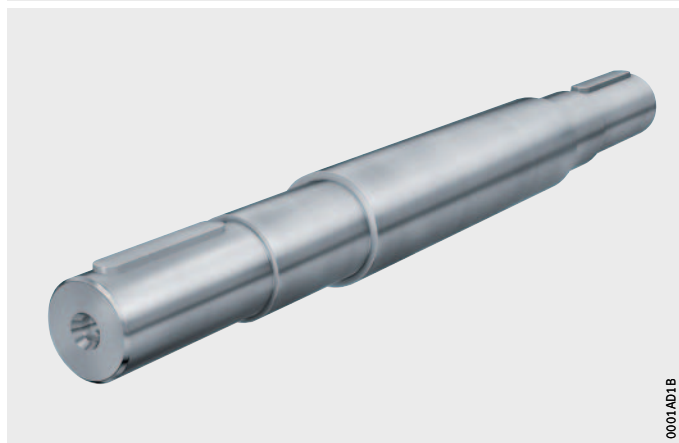

**Plummer block housings**
Unsplit

VR3




**Shafts**

VRW3



# Plummer block housing units VRE3

## Features

Plummer block housing units VRE3 were originally developed for fan applications, for the flying bearing arrangement of high speed impellers.

The units are now used wherever there is a requirement for a precise bearing arrangement that can be easily mounted, for example in:

- conveying equipment
- test rigs
- materials processing machinery
- belt drives
- laboratory equipment
- textile machinery
- feeder mechanisms.

## Complete bearing units

Plummer block housing units VRE3 comprise a tubular plummer block housing VR3 with seals and a shaft VRW3 supported in rolling bearings of dimension series 3. The units are completely assembled and the bearings are greased. The units can therefore be integrated directly in existing machinery without substantial preparation.



Plummer block housing units VRE3 are available in 6 designs for different areas of application, see page 273.

### Range

The complete plummer block housing units VRE3 are available in the designs A, B, C, D, E and F with shaft diameters of 25 mm to 120 mm.

In addition, the following components are individually available:

- housings VR3 with covers, seals and locating elements
- shafts VRW3 with locating elements
- standard rolling bearings.

## Advantages

Plummer block bearing units VRE3 have the following advantages:

- ease of mounting
- low maintenance requirements
- effective, low-friction sealing against dust and moisture
- bearing arrangement combined in a single-piece housing, therefore requiring no alignment work
- support of high tilting moments by two bearings with optimum spacing
- six designs allow matching to different load conditions.

## Suitable bearings

Plummer block housing units VRE3 are fitted, depending on their design, with various combinations of deep groove ball bearings, cylindrical roller bearings and angular contact ball bearings, see table. Only bearings with a cylindrical bore are fitted. The range of shaft diameters is between 25 mm and 120 mm.

**Plummer block housing units and bearings**

| Plummer block housing unit | Bearing | | |
|---|---|---|---|
| | Quantity | Bearing type | Size |
| VRE305A – VRE324A | 2 | Deep groove ball bearing | 6305 – 6324 |
| VRE305B – VRE324B | 1 | Cylindrical roller bearing | NJ305E – NJ324E |
| | 1 | Deep groove ball bearing | 6305 – 6324 |
| VRE305C – VRE324C | 1 | Cylindrical roller bearing | NU305E – NU324E |
| | 2 | Angular contact ball bearing | 7305B.UA – 7324B.UA |
| VRE305D – VRE324D | 1 | Cylindrical roller bearing | NU305E – NU324E |
| | 1 | Deep groove ball bearing | 6305 – 6324 |
| VRE305E – VRE324E | 2 | Cylindrical roller bearing | NU305E – NU324E |
| | 1 | Deep groove ball bearing | 6305 – 6324 |
| VRE305F – VRE316F | 2 | Deep groove ball bearing | 6305 – 6316 |

## Housing materials and anti-corrosion protection

The housings are made from flake graphite cast iron EN-GJL-HB215. Covers and grease valves can be made from the same material or from steel S185. The shafts are made from steel E295.

All outer surfaces not machined by chip-forming methods have a universal paint coating (colour RAL 7031, bluish-grey). The coating can be finished using all synthetic resin, polyurethane, acrylic, epoxy resin, chlorinated rubber, nitrocellulose and acid-hardening hammer tone finishes.

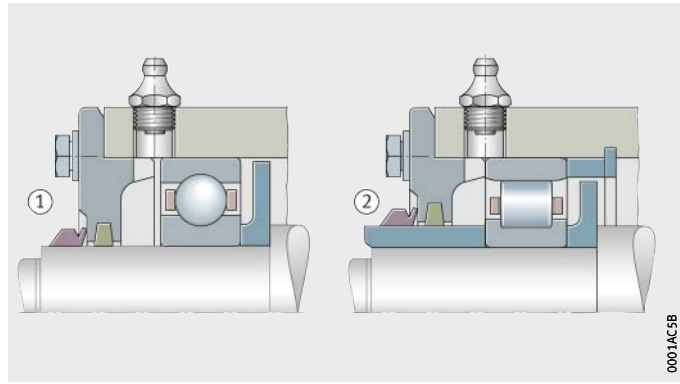
Inner and outer surfaces of the housing body and shaft machined by chip-forming methods are provided with anti-corrosion protection that can be easily removed. It is recommended that only volatile solvents and lint-free cloths should be used.

## Seals

Plummer block housing units VRE3 are sealed on both sides by a combined seal comprising a felt seal and a V ring, *Figure 1*, page 273. As a result, effective sealing against the ingress of contamination and the escape of lubricant is achieved.

The oil-soaked felt strips are inserted in the slots in the covers on the housing.

The external V rings are made from NBR and are suitable for temperatures up to +100 °C. If a circumferential velocity of more than 8 m/s is present, axial support of the V rings is necessary. At or above 12 m/s, the seal lip lifts and the V ring then acts as a splash ring.

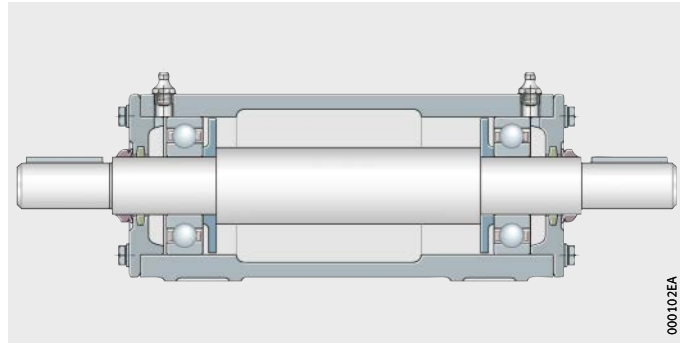



① Sealing of designs A, B and F
② Sealing of designs C, D and E

*Figure 1*
Felt seal with V ring for plummer block bearing units VRE3

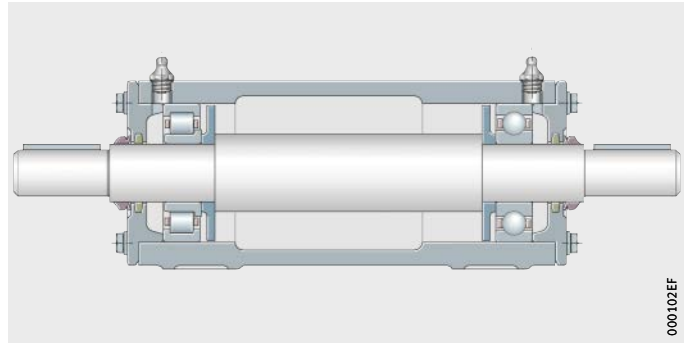
## Designs

The 6 designs of plummer block housing units VRE3 represent various combinations of housings VR3, shafts VRW3 and one or more bearing types, *Figure 2* to *Figure 7*, page 274.




Housing VR3..-A
2 deep groove ball bearings in floating arrangement
Shaft VRW3..-A

*Figure 2*
Plummer block housing unit VRE3..-A

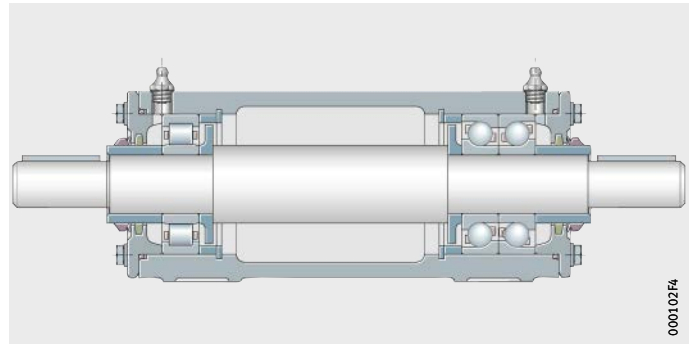



Housing VR3..-A
1 deep groove ball bearing and 1 cylindrical roller bearing NJ in floating arrangement
Shaft VRW3..-A

*Figure 3*
Plummer block housing unit VRE3..-B

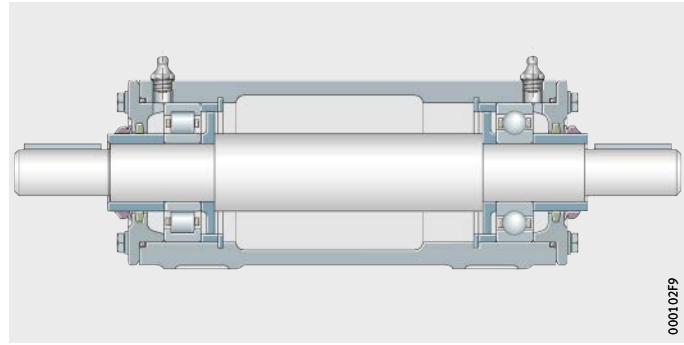
Housing VR3..-C
Locating/non-locating bearing arrangement
with 1 cylindrical roller bearing NU and
2 angular contact ball bearings
in O arrangement
Shaft VRW3..-C

*Figure 4*
Plummer block housing
unit VRE3..-C



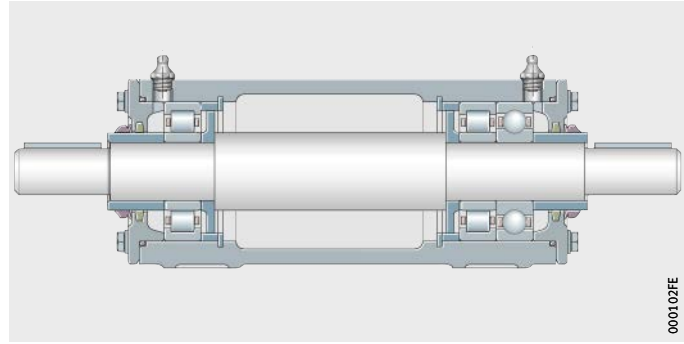

Housing VR3..-D
Locating/non-locating bearing arrangement
with 1 cylindrical roller bearing NU and
1 deep groove ball bearing
Shaft VRW3..-D

*Figure 5*
Plummer block housing
unit VRE3..-D



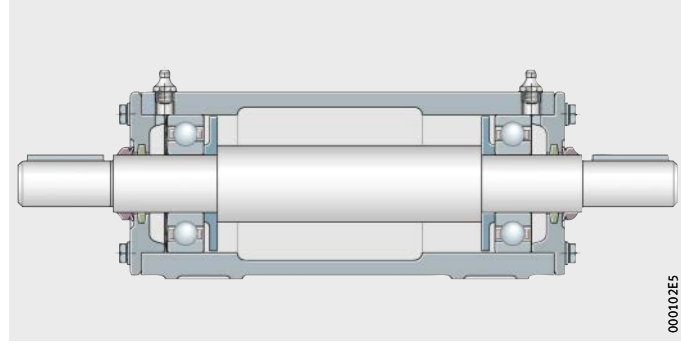

Housing VR3..-E
Locating/non-locating bearing arrangement
with 2 cylindrical roller bearings NU and
1 deep groove ball bearing
Shaft VRW3..-C

*Figure 6*
Plummer block housing
unit VRE3..-E




Housing VR3..-F
2 deep groove ball bearings
in floating arrangement,
axially adjusted by spring
between outer ring and cover
Shaft VRW3..-F

*Figure 7*
Plummer block housing
unit VRE3..-F



## Areas of application of designs

Based on the specific bearing combination, the designs of plummer block housing units VRE3 have different areas of application.

Design A:
- predominantly radial load
- high speed
- axial load from both directions (not alternating).

Design B:
- high radial load on one side
- axial load from one direction only.

Design C:
- high radial load on one side
- high axial load from both directions.

Design D:
- axial load from both directions.

Design E:
- high radial load on both sides
- axial load from both directions.



Design F:
- predominantly radial load
- high speed
- axial load from one direction (facing away from the spring).

### Maximum operating temperature

The maximum permissible operating temperature for all designs is +100 °C.

## Lubrication

Plummer block housing units VRE3 are completely assembled and greased at the time of delivery.

### Greases

The bearings fitted are filled with a lithium soap grease of NLGI grade 3, which has a base oil with a viscosity class ISO VG 100.

For relubrication, Arcanol MULTI3 is recommended. If this grease is not available, a grease with the same oil base and NLGI grade and the most similar base oil viscosity possible should be used.

### Grease quantities

The grease quantities recommended for initial greasing are dependent on the size and design of the plummer block housing unit and the relubrication quantities are additionally dependent on the type of bearing arrangement, see table.

### Recommended grease quantities for initial greasing and relubrication

| Plummer block housing unit | | Grease quantity | | |
|---|---|---|---|---|
| | | Initial greasing | Relubrication | |
| | | | Non-locating bearing | Locating bearing |
| | | ≈ g | ≈ g | ≈ g |
| VRE305 | A, B, F | 40 | 5 | 5 |
| | C, E | 45 | 5 | 10 |
| | D | 35 | 5 | 5 |
| VRE306 | A, B, F | 60 | 5 | 5 |
| | C, E | 65 | 5 | 10 |
| | D | 55 | 5 | 5 |
| VRE307 | A, B, F | 80 | 5 | 5 |
| | C, E | 90 | 5 | 10 |
| | D | 75 | 5 | 5 |
| VRE308 | A, B, F | 110 | 10 | 10 |
| | C, E | 120 | 10 | 20 |
| | D | 100 | 10 | 10 |
| VRE309 | A, B, F | 140 | 10 | 10 |
| | C, E | 155 | 10 | 20 |
| | D | 125 | 10 | 10 |
| VRE310 | A, B, F | 190 | 10 | 10 |
| | C, E | 210 | 10 | 20 |
| | D | 170 | 10 | 10 |
| VRE311 | A, B, F | 240 | 15 | 15 |
| | C, E | 265 | 15 | 25 |
| | D | 220 | 15 | 15 |
| VRE312 | A, B, F | 300 | 15 | 15 |
| | C, E | 330 | 15 | 25 |
| | D | 270 | 15 | 15 |
| VRE313 | A, B, F | 380 | 15 | 15 |
| | C, E | 420 | 15 | 25 |
| | D | 340 | 15 | 15 |
| VRE314 | A, B, F | 480 | 20 | 20 |
| | C, E | 525 | 20 | 35 |
| | D | 425 | 20 | 20 |
| VRE315 | A, B, F | 590 | 20 | 20 |
| | C, E | 650 | 20 | 35 |
| | D | 525 | 20 | 20 |
| VRE316 | A, B, F | 700 | 20 | 20 |
| | C, E | 770 | 20 | 40 |
| | D | 620 | 20 | 20 |

## Recommended grease quantities for initial greasing and relubrication (continued)

| Plummer block housing unit | | Grease quantity | | |
|---|---|---|---|---|
| | | Initial greasing | Relubrication | |
| | | | Non-locating bearing | Locating bearing |
| | | ≈ g | ≈ g | ≈ g |
| VRE317 | A, B | 830 | 25 | 25 |
| | C, E | 900 | 25 | 40 |
| | D | 750 | 25 | 25 |
| VRE318 | A, B | 1 000 | 25 | 25 |
| | C, E | 1 050 | 25 | 50 |
| | D | 850 | 25 | 25 |
| VRE319 | A, B | 1 160 | 30 | 30 |
| | C, E | 1 300 | 30 | 55 |
| | D | 1 050 | 30 | 30 |
| VRE320 | A, B | 1 450 | 35 | 35 |
| | C, E | 1 550 | 35 | 65 |
| | D | 1 250 | 35 | 35 |
| VRE322 | A, B | 1 950 | 40 | 40 |
| | C, E | 1 950 | 40 | 75 |
| | D | 1 600 | 40 | 40 |
| VRE324 | A, B | 2 350 | 45 | 45 |
| | C, E | 2 500 | 45 | 90 |
| | D | 2 050 | 45 | 45 |



## Relubrication

For relubrication, each bearing position has a taper type lubrication nipple to DIN 71412-AM10×1. Overgreasing of the bearings is prevented by the washers mounted internally adjacent to the bearings. They convey the grease exiting the bearings into the free space in the housing between the bearing positions.

The relubrication intervals are dependent on the speed and design of the plummer block housing unit, see table. The values stated are valid for continuous operation.

## Relubrication intervals for continuous operation

| Plummer block housing unit | | Speed parameter | Relubrication interval |
|---|---|---|---|
| | | $min^{-1} \cdot mm$ | h |
| VRE3 | A, F | 200 000 | 3400 |
| | | 300 000 | 2350 |
| | | 400 000 | 1800 |
| | B, C, D, E | 200 000 | 1050 |
| | | 300 000 | 600 |
| | | 400 000 | 350 |

## Designation structure

The designation structure for plummer block housing units VRE3 as well as housings and shafts is shown in the tables and *Figure 8* to *Figure 10*, page 279.

**Designation structure of plummer block housing units VRE3**

| Feature | | Code | Description |
|---|---|---|---|
| ① | Series | VRE | Unsplit plummer block housing unit VRE3 with bearings and shaft |
| ② | Diameter series of bearing | 3 | Bearing of diameter series 3 |
| ③ | Bore code of bearing | 18 | Bore diameter (18 · 5) mm = 90 mm |
| ④ | Design of housing unit | A | Design A |
| | | B | Design B |
| | | C | Design C |
| | | D | Design D |
| | | E | Design E |
| | | F | Design F |




*Figure 8*
Designation structure of plummer block housing units VRE3, example

**Designation structure of plummer block housings VR3**

| Feature | | Code | Description |
|---|---|---|---|
| ① | Series | VR | Unsplit plummer block housings VR |
| ② | Diameter series of bearing | 3 | Bearing of diameter series 3 |
| ③ | Bore code of bearing | 18 | Bore diameter (18 · 5) mm = 90 mm |
| ④ | Housing design | A | Design A |
| | | C | Design C |
| | | D | Design D |
| | | E | Design E |
| | | F | Design F |




*Figure 9*
Designation structure of plummer block housings VR3, example

**Designation structure of shafts VRW3**

| Feature | | Code | Description |
|---|---|---|---|
| ① | Series | VRW | Shaft VRW |
| ② | Diameter series of bearing | 3 | Bearing of diameter series 3 |
| ③ | Bore code of bearing | 18 | Bore diameter (18 · 5) mm = 90 mm |
| ④ | Housing design | A | Design A |
| | | C | Design C |
| | | D | Design D |
| | | F | Design F |




*Figure 10*
Designation structure of shafts VRW3, example

## Ordering examples

Plummer block housing units VRE3 are ideally ordered as complete units. However, it is also possible to order only the housing VR3 or only the shaft VRW3.

The ordering examples show the construction of orders for a complete housing unit as well as for ordering only a housing and only a shaft. The allocation of housing units, housings, bearings and accessories for all housing sizes is shown in the dimension table.

**Example 1**

Plummer block housing unit VRE3 of design B (rolling bearing in floating arrangement), comprising plummer block housing VR314-A, cylindrical roller bearing NJ314-E-TVP2, deep groove ball bearing 6314-C3 and shaft VRW314-A.

Order 1 plummer block housing unit VRE314-B

**Example 2**

Plummer block housing VR3 (without shaft, without rolling bearing) of design E, including covers, grease valves, lubrication nipples, seals and locating elements. The housing is suitable for a locating/non-locating bearing arrangement with 1 cylindrical roller bearing as well as 1 cylindrical roller bearing and 1 deep groove ball bearing on the opposing side.

Order 1 plummer block housing VR322-E

**Example 3**

Shaft VRW3 (without housing, without rolling bearing) of design A, including feather keys. The housing is suitable for a floating arrangement of 2 deep groove ball bearings 6314.

Order 1 shaft VRW314-A

## Design and safety guidelines

### Eye bolts

Housings VR3 have two eye bolts to DIN 580. After mounting, the eye bolts can be replaced by the hexagon head bolts with seals included in the packaging.

Eye bolts must always be screwed fully into the housing.

The eye bolts must not be loaded to a value greater than the mass of the housing including the bearings and shaft.

### Foot screws

Foot screws are used for screw mounting of the housings to the locating surface. They are not included in the scope of delivery of the housings.

The appropriate screw size for each housing is stated, see dimension table.

The associated tightening torques are stated for screws with a metric thread in accordance with DIN 13, DIN 962 and DIN ISO 965-2, see table, page 42.



### Marking

A cast-on boss on the housing body indicates:

- the position of the cylindrical roller bearing in design B
- the position of the non-locating bearing in designs C, D and E
- the position of the ondular washer in design F.

The position of the ondular washer is also indicated on the shaft VRW3..-F.

### Accuracy

In the case of plummer block housing units VRE3, the tolerance of the bearing seat is dependent on the design of the associated housing, see table.

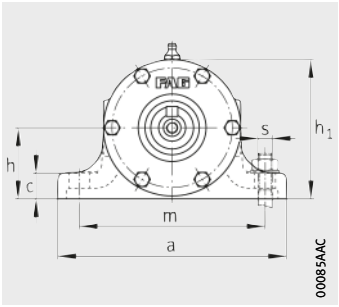
**Tolerance class of bearing seat**

| Design | | Tolerance class of bearing seat |
|---|---|---|
| Plummer block housing unit VRE3 | Housing VR3 | |
| A, B | A | G6 |
| C | C | J6 |
| D | D | J6 |
| E | E | J6 |
| F | F | G6 |

By agreement, the housings can also be supplied with other tolerance classes for the bearing seat, see section Tolerance class of bearing seat, page 47.

# Plummer block housing units

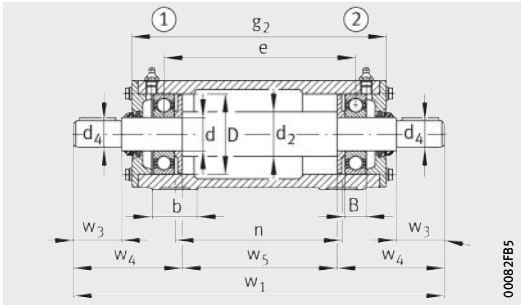
VRE3, unsplit
With bearings and shaft



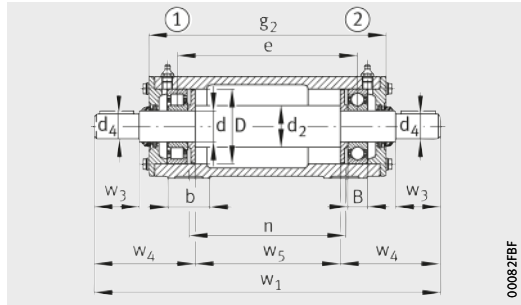

Cross-sections of
designs C, D, page 285,
designs E, F, page 287

**Dimension table** · Dimensions in mm

| Shaft | | | | | | | | | Designation | Housing | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dimensions | | | | | | | | | | Dimensions | | | | | | |
| d | $d_2$ | $d_4$ | $w_1$ | $w_2$ | $w_3$ | $w_4$ | $w_5$ | $w_7$ | | h | $h_1$ | $g_2$ | b | c | a | m |
| **25** | 35 | 19 | 298 | – | 40 | 90,5 | 117 | – | VRW305-A | 45 | 87 | 198 | 35 | 16 | 155 | 120 |
| **25** | 35 | 19 | 298 | – | 40 | 90,5 | 117 | – | VRW305-A | 45 | 87 | 198 | 35 | 16 | 155 | 120 |
| **25** | 35 | 19 | 298 | 40 | 42 | 90 | 101 | 107 | VRW305-C | 45 | 87 | 198 | 35 | 16 | 155 | 120 |
| **25** | 35 | 19 | 298 | 40 | 42 | 90 | 118 | – | VRW305-D | 45 | 87 | 198 | 35 | 16 | 155 | 120 |
| **25** | 35 | 19 | 298 | 40 | 42 | 90 | 101 | 107 | VRW305-C | 45 | 87 | 198 | 35 | 16 | 155 | 120 |
| **25** | 35 | 19 | 298 | – | 40 | 91,25 | 116,25 | 90,5 | VRW305-F | 45 | 87 | 198 | 35 | 16 | 155 | 120 |
| **30** | 40 | 24 | 345 | – | 50 | 102,5 | 140 | – | VRW306-A | 50 | 98 | 225 | 40 | 18 | 160 | 130 |
| **30** | 40 | 24 | 345 | – | 50 | 102,5 | 140 | – | VRW306-A | 50 | 98 | 225 | 40 | 18 | 160 | 130 |
| **30** | 40 | 24 | 349 | 50 | 52 | 104 | 122 | 123 | VRW306-C | 50 | 98 | 225 | 40 | 18 | 160 | 130 |
| **30** | 40 | 24 | 349 | 50 | 52 | 104 | 141 | – | VRW306-D | 50 | 98 | 225 | 40 | 18 | 160 | 130 |
| **30** | 40 | 24 | 349 | 50 | 52 | 104 | 122 | 123 | VRW306-C | 50 | 98 | 225 | 40 | 18 | 160 | 130 |
| **30** | 40 | 24 | 345 | – | 50 | 103,25 | 139,25 | 102,5 | VRW306-F | 50 | 98 | 225 | 40 | 18 | 160 | 130 |
| **35** | 45 | 28 | 395 | – | 60 | 117,5 | 160 | – | VRW307-A | 60 | 113 | 255 | 45 | 18 | 190 | 150 |
| **35** | 45 | 28 | 395 | – | 60 | 117,5 | 160 | – | VRW307-A | 60 | 113 | 255 | 45 | 18 | 190 | 150 |
| **35** | 45 | 28 | 399 | 60 | 62 | 119 | 140 | 140 | VRW307-C | 60 | 113 | 255 | 45 | 18 | 190 | 150 |
| **35** | 45 | 28 | 399 | 60 | 62 | 119 | 161 | – | VRW307-D | 60 | 113 | 255 | 45 | 18 | 190 | 150 |
| **35** | 45 | 28 | 399 | 60 | 62 | 119 | 140 | 140 | VRW307-C | 60 | 113 | 255 | 45 | 18 | 190 | 150 |
| **35** | 45 | 28 | 395 | – | 60 | 118,5 | 159 | 117,5 | VRW307-F | 60 | 113 | 255 | 45 | 18 | 190 | 150 |
| **40** | 50 | 32 | 501 | – | 80 | 143,5 | 214 | – | VRW308-A | 60 | 118 | 317 | 52 | 20 | 190 | 150 |
| **40** | 50 | 32 | 501 | – | 80 | 143,5 | 214 | – | VRW308-A | 60 | 118 | 317 | 52 | 20 | 190 | 150 |
| **40** | 50 | 32 | 501 | 80 | 82 | 143 | 192 | 166 | VRW308-C | 60 | 118 | 317 | 52 | 20 | 190 | 150 |
| **40** | 50 | 32 | 501 | 80 | 82 | 143 | 215 | – | VRW308-D | 60 | 118 | 317 | 52 | 20 | 190 | 150 |
| **40** | 50 | 32 | 501 | 80 | 82 | 143 | 192 | 166 | VRW308-C | 60 | 118 | 317 | 52 | 20 | 190 | 150 |
| **40** | 50 | 32 | 501 | – | 80 | 144,5 | 213 | 143,5 | VRW308-F | 60 | 118 | 317 | 52 | 20 | 190 | 150 |




VRE3..-A

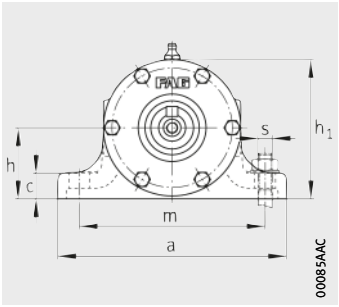



VRE3..-B

| | | | | | | | Bearing | | Plummer block housing unit | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Mass | Desig-nation | Designation | | Mass | Desig-nation |
| n | s | D | B | e | m | | Bearing position ① | Bearing position ② | m | Unit |
| | | | | | ≈ kg | | | | ≈ kg | |
| 135 | M12 | 62 | 17 | 148 | 5 | VR305-A | **6305-C3** | **6305-C3** | 7 | **VRE305-A** |
| 135 | M12 | 62 | 17 | 149 | 5 | VR305-A | **NJ305-E-TVP2** | **6305-C3** | 7 | **VRE305-B** |
| 135 | M12 | 62 | 17 | 140,5 | 5,2 | VR305-C | **NU305-E-TVP2-C3** | **2X7305-B-TVP-UA** | 7,4 | **VRE305-C** |
| 135 | M12 | 62 | 17 | 149 | 5,2 | VR305-D | **NU305-E-TVP2-C3** | **6305-C3** | 7,2 | **VRE305-D** |
| 135 | M12 | 62 | 17 | 132 | 5,2 | VR305-E | **NU305-E-TVP2-C3** | **NU305-E-TVP2-C3+6305-C3** | 7,5 | **VRE305-E** |
| 135 | M12 | 62 | 17 | 147,25 | 5 | VR305-F | **6305-C3** | **6305-C3** | 7 | **VRE305-F** |
| 150 | M12 | 72 | 19 | 173 | 5,8 | VR306-A | **6306-C3** | **6306-C3** | 9 | **VRE306-A** |
| 150 | M12 | 72 | 19 | 174 | 5,8 | VR306-A | **NJ306-E-TVP2** | **6306-C3** | 9 | **VRE306-B** |
| 150 | M12 | 72 | 19 | 164,5 | 6 | VR306-C | **NU306-E-TVP2-C3** | **2X7306-B-TVP-UA** | 9,4 | **VRE306-C** |
| 150 | M12 | 72 | 19 | 174 | 6 | VR306-D | **NU306-E-TVP2-C3** | **6306-C3** | 9,2 | **VRE306-D** |
| 150 | M12 | 72 | 19 | 155 | 6 | VR306-E | **NU306-E-TVP2-C3** | **NU306-E-TVP2-C3+6306-C3** | 9,4 | **VRE306-E** |
| 150 | M12 | 72 | 19 | 172,25 | 5,8 | VR306-F | **6306-C3** | **6306-C3** | 9 | **VRE306-F** |
| 175 | M12 | 80 | 21 | 197 | 8,5 | VR307-A | **6307-C3** | **6307-C3** | 13 | **VRE307-A** |
| 175 | M12 | 80 | 21 | 198 | 8,5 | VR307-A | **NJ307-E-TVP2** | **6307-C3** | 13 | **VRE307-B** |
| 175 | M12 | 80 | 21 | 187,5 | 8,8 | VR307-C | **NU307-E-TVP2-C3** | **2X7307-B-TVP-UA** | 13,6 | **VRE307-C** |
| 175 | M12 | 80 | 21 | 198 | 8,8 | VR307-D | **NU307-E-TVP2-C3** | **6307-C3** | 13,3 | **VRE307-D** |
| 175 | M12 | 80 | 21 | 177 | 8,8 | VR307-E | **NU307-E-TVP2-C3** | **NU307-E-TVP2-C3+6307-C3** | 13,6 | **VRE307-E** |
| 175 | M12 | 80 | 21 | 196 | 8,5 | VR307-F | **6307-C3** | **6307-C3** | 13 | **VRE307-F** |
| 225 | M12 | 90 | 23 | 257 | 10,9 | VR308-A | **6308-C3** | **6308-C3** | 18 | **VRE308-A** |
| 225 | M12 | 90 | 23 | 258 | 10,9 | VR308-A | **NJ308-E-TVP2** | **6308-C3** | 18 | **VRE308-B** |
| 225 | M12 | 90 | 23 | 246,5 | 11,7 | VR308-C | **NU308-E-TVP2-C3** | **2X7308-B-TVP-UA** | 19,1 | **VRE308-C** |
| 225 | M12 | 90 | 23 | 258 | 11,7 | VR308-D | **NU308-E-TVP2-C3** | **6308-C3** | 18,8 | **VRE308-D** |
| 225 | M12 | 90 | 23 | 235 | 11,7 | VR308-E | **NU308-E-TVP2-C3** | **NU308-E-TVP2-C3+6308-C3** | 19,2 | **VRE308-E** |
| 225 | M12 | 90 | 23 | 256 | 10,9 | VR308-F | **6308-C3** | **6308-C3** | 18 | **VRE308-F** |

# Plummer block housing units

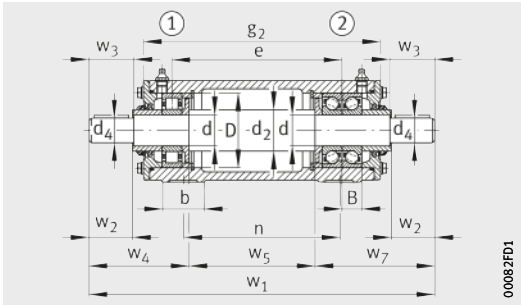
VRE3, unsplit
With bearings and shaft



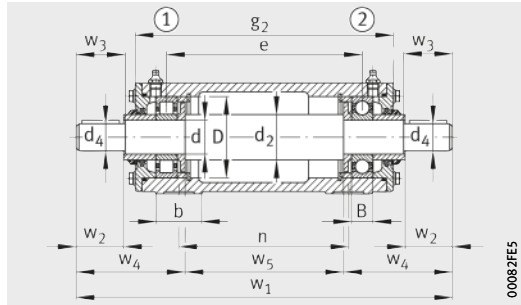

Cross-sections of
designs A, B, page 283,
designs E, F, page 287

**Dimension table** (continued) · Dimensions in mm

| Shaft | | | | | | | | | | Housing | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dimensions | | | | | | | | | Designation | Dimensions | | | | | | |
| d | $d_2$ | $d_4$ | $w_1$ | $w_2$ | $w_3$ | $w_4$ | $w_5$ | $w_7$ | | h | $h_1$ | $g_2$ | b | c | a | m |
| **45** | 55 | 38 | 527 | – | 80 | 145,5 | 236 | – | VRW309-A | 70 | 135 | 343 | 52 | 22 | 210 | 170 |
| **45** | 55 | 38 | 527 | – | 80 | 145,5 | 236 | – | VRW309-A | 70 | 135 | 343 | 52 | 22 | 210 | 170 |
| **45** | 55 | 38 | 527 | 80 | 82 | 145 | 212 | 170 | VRW309-C | 70 | 135 | 343 | 52 | 22 | 210 | 170 |
| **45** | 55 | 38 | 527 | 80 | 82 | 145 | 237 | – | VRW309-D | 70 | 135 | 343 | 52 | 22 | 210 | 170 |
| **45** | 55 | 38 | 527 | 80 | 82 | 145 | 212 | 170 | VRW309-C | 70 | 135 | 343 | 52 | 22 | 210 | 170 |
| **45** | 55 | 38 | 527 | – | 80 | 146,5 | 235 | 145,5 | VRW309-F | 70 | 135 | 343 | 52 | 22 | 210 | 170 |
| **50** | 60 | 42 | 625 | – | 110 | 179,5 | 266 | – | VRW310-A | 70 | 138 | 381 | 60 | 25 | 210 | 170 |
| **50** | 60 | 42 | 625 | – | 110 | 179,5 | 266 | – | VRW310-A | 70 | 138 | 381 | 60 | 25 | 210 | 170 |
| **50** | 60 | 42 | 625 | 110 | 112 | 179 | 240 | 206 | VRW310-C | 70 | 138 | 381 | 60 | 25 | 210 | 170 |
| **50** | 60 | 42 | 625 | 110 | 112 | 179 | 267 | – | VRW310-D | 70 | 138 | 381 | 60 | 25 | 210 | 170 |
| **50** | 60 | 42 | 625 | 110 | 112 | 179 | 240 | 206 | VRW310-C | 70 | 138 | 381 | 60 | 25 | 210 | 170 |
| **50** | 60 | 42 | 625 | – | 110 | 180,5 | 265 | 179,5 | VRW310-F | 70 | 138 | 381 | 60 | 25 | 210 | 170 |
| **55** | 65 | 48 | 651 | – | 110 | 181,5 | 288 | – | VRW311-A | 80 | 158 | 407 | 60 | 25 | 260 | 210 |
| **55** | 65 | 48 | 651 | – | 110 | 181,5 | 288 | – | VRW311-A | 80 | 158 | 407 | 60 | 25 | 260 | 210 |
| **55** | 65 | 48 | 651 | 110 | 112 | 181 | 260 | 210 | VRW311-C | 80 | 158 | 407 | 60 | 25 | 260 | 210 |
| **55** | 65 | 48 | 651 | 110 | 112 | 181 | 289 | – | VRW311-D | 80 | 158 | 407 | 60 | 25 | 260 | 210 |
| **55** | 65 | 48 | 651 | 110 | 112 | 181 | 260 | 210 | VRW311-C | 80 | 158 | 407 | 60 | 25 | 260 | 210 |
| **55** | 65 | 48 | 651 | – | 110 | 182,5 | 287 | 181,5 | VRW311-F | 80 | 158 | 407 | 60 | 25 | 260 | 210 |
| **60** | 70 | 48 | 701 | – | 110 | 183,5 | 334 | – | VRW312-A | 80 | 162 | 457 | 70 | 25 | 260 | 210 |
| **60** | 70 | 48 | 701 | – | 110 | 183,5 | 334 | – | VRW312-A | 80 | 162 | 457 | 70 | 25 | 260 | 210 |
| **60** | 70 | 48 | 706 | 110 | 112 | 185,5 | 304 | 216,5 | VRW312-C | 80 | 162 | 457 | 70 | 25 | 260 | 210 |
| **60** | 70 | 48 | 706 | 110 | 112 | 185,5 | 335 | – | VRW312-D | 80 | 162 | 457 | 70 | 25 | 260 | 210 |
| **60** | 70 | 48 | 706 | 110 | 112 | 185,5 | 304 | 216,5 | VRW312-C | 80 | 162 | 457 | 70 | 25 | 260 | 210 |
| **60** | 70 | 48 | 701 | – | 110 | 184,5 | 333 | 183,5 | VRW312-F | 80 | 162 | 457 | 70 | 25 | 260 | 210 |




VRE3..-C

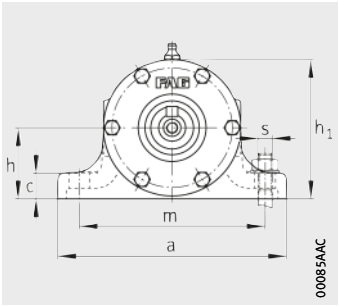



VRE3..-D

| | | | | | | | Bearing | | Plummer block housing unit | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Mass | Desig-nation | Designation | | Mass | Desig-nation |
| n | s | D | B | e | m ≈ kg | | Bearing position ① | Bearing position ② | m ≈ kg | Unit |
| 250 | M12 | 100 | 25 | 281 | 14,9 | VR309-A | **6309-C3** | **6309-C3** | 24,3 | **VRE309-A** |
| 250 | M12 | 100 | 25 | 282 | 14,9 | VR309-A | **NJ309-E-TVP2** | **6309-C3** | 24,4 | **VRE309-B** |
| 250 | M12 | 100 | 25 | 269,5 | 15,3 | VR309-C | **NU309-E-TVP2-C3** | **2X7309-B-TVP-UA** | 25,3 | **VRE309-C** |
| 250 | M12 | 100 | 25 | 282 | 15,3 | VR309-D | **NU309-E-TVP2-C3** | **6309-C3** | 24,8 | **VRE309-D** |
| 250 | M12 | 100 | 25 | 257 | 15,3 | VR309-E | **NU309-E-TVP2-C3** | **NU309-E-TVP2-C3+6309-C3** | 25,3 | **VRE309-E** |
| 250 | M12 | 100 | 25 | 280 | 14,9 | VR309-F | **6309-C3** | **6309-C3** | 24,2 | **VRE309-F** |
| 275 | M12 | 110 | 27 | 313 | 17,3 | VR310-A | **6310-C3** | **6310-C3** | 30,3 | **VRE310-A** |
| 275 | M12 | 110 | 27 | 314 | 17,3 | VR310-A | **NJ310-E-TVP2** | **6310-C3** | 30,3 | **VRE310-B** |
| 275 | M12 | 110 | 27 | 300,5 | 17,9 | VR310-C | **NU310-E-TVP2-C3** | **2X7310-B-TVP-UA** | 31,7 | **VRE310-C** |
| 275 | M12 | 110 | 27 | 314 | 17,9 | VR310-D | **NU310E-TVP2-C3** | **6310-C3** | 30,9 | **VRE310-D** |
| 275 | M12 | 110 | 27 | 287 | 17,9 | VR310-E | **NU310-E-TVP2-C3** | **NU310-E-TVP2-C3+6310-C3** | 31,8 | **VRE310-E** |
| 275 | M12 | 110 | 27 | 312 | 17,3 | VR310-F | **6310-C3** | **6310-C3** | 30,3 | **VRE310-F** |
| 300 | M16 | 120 | 29 | 337 | 22 | VR311-A | **6311-C3** | **6311-C3** | 38,6 | **VRE311-A** |
| 300 | M16 | 120 | 29 | 338 | 22 | VR311-A | **NJ311-E-TVP2** | **6311-C3** | 38,7 | **VRE311-B** |
| 300 | M16 | 120 | 29 | 323,5 | 22,5 | VR311-C | **NU311-E-TVP2-C3** | **2X7311-B-TVP-UA** | 40,2 | **VRE311-C** |
| 300 | M16 | 120 | 29 | 338 | 22,5 | VR311-D | **NU311-E-TVP2-C3** | **6311-C3** | 39,2 | **VRE311-D** |
| 300 | M16 | 120 | 29 | 309 | 22,5 | VR311-E | **NU311-E-TVP2-C3** | **NU311-E-TVP2-C3+6311-C3** | 40,2 | **VRE311-E** |
| 300 | M16 | 120 | 29 | 336 | 22 | VR311-F | **6311-C3** | **6311-C3** | 38,6 | **VRE311-F** |
| 340 | M16 | 130 | 31 | 385 | 30,7 | VR312-A | **6312-C3** | **6312-C3** | 51,2 | **VRE312-A** |
| 340 | M16 | 130 | 31 | 386 | 30,7 | VR312-A | **NJ312-E-TVP2** | **6312-C3** | 51,4 | **VRE312-B** |
| 340 | M16 | 130 | 31 | 370,5 | 31,7 | VR312-C | **NU312-E-TVP2-C3** | **2X7312-B-TVP-UA** | 53,8 | **VRE312-C** |
| 340 | M16 | 130 | 31 | 386 | 31,7 | VR312-D | **NU312-E-TVP2-C3** | **6312-C3** | 52,4 | **VRE312-D** |
| 340 | M16 | 130 | 31 | 355 | 31,7 | VR312-E | **NU312-E-TVP2-C3** | **NU312-E-TVP2-C3+6312-C3** | 53,7 | **VRE312-E** |
| 340 | M16 | 130 | 31 | 384 | 30,7 | VR312-F | **6312-C3** | **6312-C3** | 51,1 | **VRE312-F** |

# Plummer block housing units

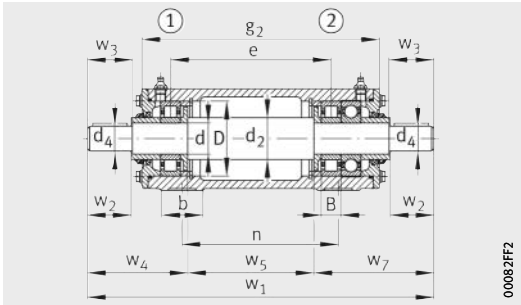
VRE3, unsplit
With bearings and shaft



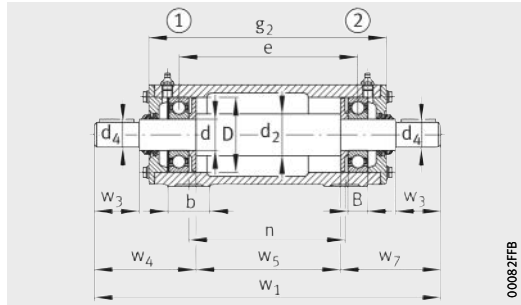

Cross-sections of
designs A, B, page 283,
designs C, D, page 285

**Dimension table** (continued) · Dimensions in mm

| Shaft | | | | | | | | | | Housing | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dimensions | | | | | | | | | Designation | Dimensions | | | | | | |
| d | $d_2$ | $d_4$ | $w_1$ | $w_2$ | $w_3$ | $w_4$ | $w_5$ | $w_7$ | | h | $h_1$ | $g_2$ | b | c | a | m |
| **65** | 75 | 55 | 724 | – | 110 | 187,5 | 349 | – | VRW313-A | 95 | 183 | 480 | 70 | 25 | 290 | 230 |
| **65** | 75 | 55 | 724 | – | 110 | 187,5 | 349 | – | VRW313-A | 95 | 183 | 480 | 70 | 25 | 290 | 230 |
| **65** | 75 | 55 | 729 | 110 | 112 | 189,5 | 317 | 222,5 | VRW313-C | 95 | 183 | 480 | 70 | 25 | 290 | 230 |
| **65** | 75 | 55 | 729 | 110 | 112 | 189,5 | 350 | – | VRW313-D | 95 | 183 | 480 | 70 | 25 | 290 | 230 |
| **65** | 75 | 55 | 729 | 110 | 112 | 189,5 | 317 | 222,5 | VRW313-C | 95 | 183 | 480 | 70 | 25 | 290 | 230 |
| **65** | 75 | 55 | 724 | – | 110 | 189 | 347,5 | 187,5 | VRW313-F | 95 | 183 | 480 | 70 | 25 | 290 | 230 |
| **70** | 80 | 60 | 811 | – | 140 | 223 | 365 | – | VRW314-A | 95 | 188 | 500 | 70 | 25 | 290 | 230 |
| **70** | 80 | 60 | 811 | – | 140 | 223 | 365 | – | VRW314-A | 95 | 188 | 500 | 70 | 25 | 290 | 230 |
| **70** | 80 | 60 | 811 | 140 | 143 | 222,5 | 331 | 257,5 | VRW314-C | 95 | 188 | 500 | 70 | 25 | 290 | 230 |
| **70** | 80 | 60 | 811 | 140 | 143 | 222,5 | 366 | – | VRW314-D | 95 | 188 | 500 | 70 | 25 | 290 | 230 |
| **70** | 80 | 60 | 811 | 140 | 143 | 222,5 | 331 | 257,5 | VRW314-C | 95 | 188 | 500 | 70 | 25 | 290 | 230 |
| **70** | 80 | 60 | 811 | – | 140 | 224,5 | 363,5 | 223 | VRW314-F | 95 | 188 | 500 | 70 | 25 | 290 | 230 |
| **75** | 90 | 65 | 841 | – | 140 | 226 | 389 | – | VRW315-A | 100 | 198 | 530 | 80 | 30 | 320 | 260 |
| **75** | 90 | 65 | 841 | – | 140 | 226 | 389 | – | VRW315-A | 100 | 198 | 530 | 80 | 30 | 320 | 260 |
| **75** | 90 | 65 | 841 | 140 | 143 | 225,5 | 353 | 262,5 | VRW315-C | 100 | 198 | 530 | 80 | 30 | 320 | 260 |
| **75** | 90 | 65 | 841 | 140 | 143 | 225,5 | 390 | – | VRW315-D | 100 | 198 | 530 | 80 | 30 | 320 | 260 |
| **75** | 90 | 65 | 841 | 140 | 143 | 225,5 | 353 | 262,5 | VRW315-C | 100 | 198 | 530 | 80 | 30 | 320 | 260 |
| **75** | 90 | 65 | 841 | – | 140 | 227,5 | 387,5 | 226 | VRW315-F | 100 | 198 | 530 | 80 | 30 | 320 | 260 |
| **80** | 95 | 70 | 861 | – | 140 | 228 | 405 | – | VRW316-A | 112 | 217 | 550 | 80 | 30 | 320 | 260 |
| **80** | 95 | 70 | 861 | – | 140 | 228 | 405 | – | VRW316-A | 112 | 217 | 550 | 80 | 30 | 320 | 260 |
| **80** | 95 | 70 | 861 | 140 | 143 | 227,5 | 367 | 266,5 | VRW316-C | 112 | 217 | 550 | 80 | 30 | 320 | 260 |
| **80** | 95 | 70 | 861 | 140 | 143 | 227,5 | 406 | – | VRW316-D | 112 | 217 | 550 | 80 | 30 | 320 | 260 |
| **80** | 95 | 70 | 861 | 140 | 143 | 227,5 | 367 | 266,5 | VRW316-C | 112 | 217 | 550 | 80 | 30 | 320 | 260 |
| **80** | 95 | 70 | 861 | – | 140 | 229,5 | 403,5 | 228 | VRW316-F | 112 | 217 | 550 | 80 | 30 | 320 | 260 |
| **85** | 100 | 75 | 881 | – | 140 | 230 | 421 | – | VRW317-A | 112 | 222 | 570 | 80 | 30 | 350 | 290 |
| **85** | 100 | 75 | 881 | – | 140 | 230 | 421 | – | VRW317-A | 112 | 222 | 570 | 80 | 30 | 350 | 290 |
| **85** | 100 | 75 | 881 | 140 | 143 | 229,5 | 381 | 270,5 | VRW317-C | 112 | 222 | 570 | 80 | 30 | 350 | 290 |
| **85** | 100 | 75 | 881 | 140 | 143 | 229,5 | 422 | – | VRW317-D | 112 | 222 | 570 | 80 | 30 | 350 | 290 |
| **85** | 100 | 75 | 881 | 140 | 143 | 229,5 | 381 | 270,5 | VRW317-C | 112 | 222 | 570 | 80 | 30 | 350 | 290 |




VRE3..-E

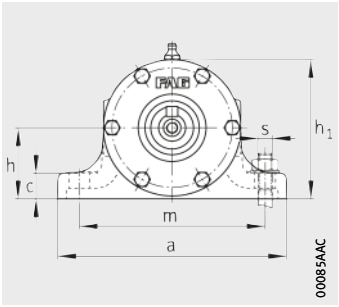



VRE3..-F

| | | | | | | | Bearing | | Plummer block housing unit | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Mass | Designation | Designation | | Mass | Designation |
| n | s | D | B | e | m ≈ kg | | Bearing position ① | Bearing position ② | m ≈ kg | Unit |
| 360 | M16 | 140 | 33 | 404 | 32,8 | VR313-A | **6313-C3** | **6313-C3** | 58 | **VRE313-A** |
| 360 | M16 | 140 | 33 | 405 | 32,8 | VR313-A | **NJ313-E-TVP2** | **6313-C3** | 58,2 | **VRE313-B** |
| 360 | M16 | 140 | 33 | 388,5 | 33,8 | VR313-C | **NU313-E-TVP2-C3** | **2X7313-B-TVP-UA** | 60,8 | **VRE313-C** |
| 360 | M16 | 140 | 33 | 405 | 33,8 | VR313-D | **NU313-E-TVP2-C3** | **6313-C3** | 59,3 | **VRE313-D** |
| 360 | M16 | 140 | 33 | 372 | 33,8 | VR313-E | **NU313-E-TVP2-C3** | **NU313-E-TVP2-C3+6313-C3** | 60,8 | **VRE313-E** |
| 360 | M16 | 140 | 33 | 402,5 | 32,8 | VR313-F | **6313-C3** | **6313-C3** | 58 | **VRE313-F** |
| 380 | M16 | 150 | 35 | 422 | 35 | VR314-A | **6314-C3** | **6314-C3** | 66,9 | **VRE314-A** |
| 380 | M16 | 150 | 35 | 423 | 35 | VR314-A | **NJ314-E-TVP2** | **6314-C3** | 67,1 | **VRE314-B** |
| 380 | M16 | 150 | 35 | 405,5 | 36 | VR314-C | **NU314-E-TVP2-C3** | **2X7314-B-TVP-UA** | 70,4 | **VRE314-C** |
| 380 | M16 | 150 | 35 | 423 | 36 | VR314-D | **NU314-E-TVP2-C3** | **6314-C3** | 68 | **VRE314-D** |
| 380 | M16 | 150 | 35 | 388 | 36 | VR314-E | **NU314-E-TVP2-C3** | **NU314-E-TVP2-C3+6314-C3** | 70,6 | **VRE314-E** |
| 380 | M16 | 150 | 35 | 420,5 | 35 | VR314-F | **6314-C3** | **6314-C3** | 66,8 | **VRE314-F** |
| 400 | M16 | 160 | 37 | 450 | 44,8 | VR315-A | **6315-C3** | **6315-C3** | 84,8 | **VRE315-A** |
| 400 | M16 | 160 | 37 | 451 | 44,8 | VR315-A | **NJ315-E-TVP2** | **6315-C3** | 85 | **VRE315-B** |
| 400 | M16 | 160 | 37 | 432,5 | 46,4 | VR315-C | **NU315-E-TVP2-C3** | **2X7315-B-TVP-UA** | 89,3 | **VRE315-C** |
| 400 | M16 | 160 | 37 | 451 | 46,4 | VR315-D | **NU315-E-TVP2-C3** | **6315-C3** | 86,4 | **VRE315-D** |
| 400 | M16 | 160 | 37 | 414 | 46,4 | VR315-E | **NU315-E-TVP2-C3** | **NU315-E-TVP2-C3+6315-C3** | 89,4 | **VRE315-E** |
| 400 | M16 | 160 | 37 | 448,5 | 44,8 | VR315-F | **6315-C3** | **6315-C3** | 84,8 | **VRE315-F** |
| 420 | M16 | 170 | 39 | 468 | 44 | VR316-A | **6316-C3** | **6316-C3** | 90,8 | **VRE316-A** |
| 420 | M16 | 170 | 39 | 469 | 44 | VR316-A | **NJ316-E-TVP2** | **6316-C3** | 91 | **VRE316-B** |
| 420 | M16 | 170 | 39 | 449,5 | 45 | VR316-C | **NU316-E-TVP2-C3** | **2X7316-B-TVP-UA** | 96,2 | **VRE316-C** |
| 420 | M16 | 170 | 39 | 469 | 45 | VR316-D | **NU316-E-TVP2-C3** | **6316-C3** | 91,9 | **VRE316-D** |
| 420 | M16 | 170 | 39 | 430 | 45 | VR316-E | **NU316-E-TVP2-C3** | **NU316-E-TVP2-C3+6316-C3** | 95,3 | **VRE316-E** |
| 420 | M16 | 170 | 39 | 466,5 | 44 | VR316-F | **6316-C3** | **6316-C3** | 90,8 | **VRE316-F** |
| 440 | M16 | 180 | 41 | 486 | 59,2 | VR317-A | **6317-C3** | **6317-C3** | 114 | **VRE317-A** |
| 440 | M16 | 180 | 41 | 487 | 59,2 | VR317-A | **NJ317-E-TVP2** | **6317-C3** | 115 | **VRE317-B** |
| 440 | M16 | 180 | 41 | 466,5 | 60 | VR317-C | **NU317-E-TVP2-C3** | **2X7317-B-TVP-UA** | 120 | **VRE317-C** |
| 440 | M16 | 180 | 41 | 487 | 60 | VR317-D | **NU317-E-TVP2-C3** | **6317-C3** | 115 | **VRE317-D** |
| 440 | M16 | 180 | 41 | 446 | 60 | VR317-E | **NU317-E-TVP2-C3** | **NU317-E-TVP2-C3+6317-C3** | 120 | **VRE317-E** |

# Plummer block housing units

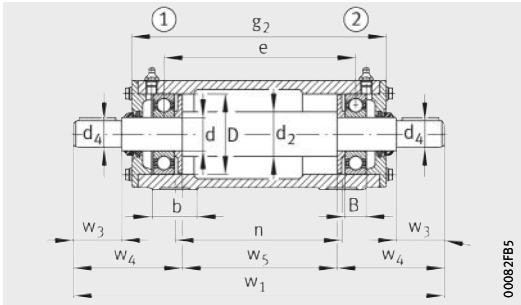
VRE3, unsplit
With bearings and shaft



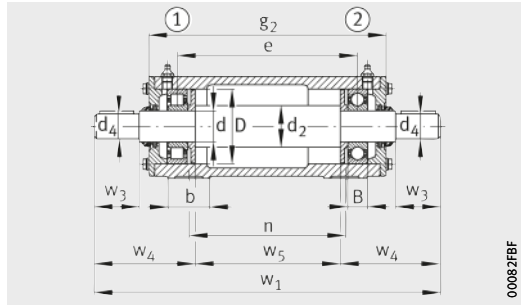

Cross-sections of
designs C, D, page 285,
design E, page 287

**Dimension table** (continued) · Dimensions in mm

| Shaft | | | | | | | | | | Housing | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dimensions | | | | | | | | | Desig-nation | Dimensions | | | | | | |
| d | $d_2$ | $d_4$ | $w_1$ | $w_2$ | $w_3$ | $w_4$ | $w_5$ | $w_7$ | | h | $h_1$ | $g_2$ | b | c | a | m |
| **90** | 105 | 80 | 971 | – | 170 | 263 | 445 | – | VRW318-A | 112 | 227 | 600 | 85 | 30 | 350 | 290 |
| **90** | 105 | 80 | 971 | – | 170 | 263 | 445 | – | VRW318-A | 112 | 227 | 600 | 85 | 30 | 350 | 290 |
| **90** | 105 | 80 | 975 | 170 | 173 | 264,5 | 403 | 307,5 | VRW318-C | 112 | 227 | 600 | 85 | 30 | 350 | 290 |
| **90** | 105 | 80 | 975 | 170 | 173 | 264,5 | 446 | – | VRW318-D | 112 | 227 | 600 | 85 | 30 | 350 | 290 |
| **90** | 105 | 80 | 975 | 170 | 173 | 264,5 | 403 | 307,5 | VRW318-C | 112 | 227 | 600 | 85 | 30 | 350 | 290 |
| **95** | 110 | 85 | 1 004 | – | 170 | 267,5 | 469 | – | VRW319-A | 125 | 248 | 633 | 90 | 35 | 400 | 320 |
| **95** | 110 | 85 | 1 004 | – | 170 | 267,5 | 469 | – | VRW319-A | 125 | 248 | 633 | 90 | 35 | 400 | 320 |
| **95** | 110 | 85 | 1 008 | 170 | 173 | 269 | 425 | 314 | VRW319-C | 125 | 248 | 633 | 90 | 35 | 400 | 320 |
| **95** | 110 | 85 | 1 008 | 170 | 173 | 269 | 470 | – | VRW319-D | 125 | 248 | 633 | 90 | 35 | 400 | 320 |
| **95** | 110 | 85 | 1 008 | 170 | 173 | 269 | 425 | 314 | VRW319-C | 125 | 248 | 633 | 90 | 35 | 400 | 320 |
| **100** | 120 | 90 | 1 036 | – | 170 | 268 | 500 | – | VRW320-A | 130 | 260 | 665 | 95 | 40 | 400 | 320 |
| **100** | 120 | 90 | 1 036 | – | 170 | 268 | 500 | – | VRW320-A | 130 | 260 | 665 | 95 | 40 | 400 | 320 |
| **100** | 120 | 90 | 1 040 | 170 | 173 | 269,5 | 454 | 316,5 | VRW320-C | 130 | 260 | 665 | 95 | 40 | 400 | 320 |
| **100** | 120 | 90 | 1 040 | 170 | 173 | 269,5 | 501 | – | VRW320-D | 130 | 260 | 665 | 95 | 40 | 400 | 320 |
| **100** | 120 | 90 | 1 040 | 170 | 173 | 269,5 | 454 | 316,5 | VRW320-C | 130 | 260 | 665 | 95 | 40 | 400 | 320 |
| **110** | 130 | 100 | 1 133 | – | 210 | 313 | 507 | – | VRW322-A | 150 | 295 | 678 | 95 | 40 | 450 | 380 |
| **110** | 130 | 100 | 1 133 | – | 210 | 313 | 507 | – | VRW322-A | 150 | 295 | 678 | 95 | 40 | 450 | 380 |
| **110** | 130 | 100 | 1 133 | 210 | 213 | 312,5 | 458 | 362,5 | VRW322-C | 150 | 295 | 678 | 95 | 40 | 450 | 380 |
| **110** | 130 | 100 | 1 133 | 210 | 213 | 312,5 | 508 | – | VRW322-D | 150 | 295 | 678 | 95 | 40 | 450 | 380 |
| **110** | 130 | 100 | 1 133 | 210 | 213 | 312,5 | 458 | 362,5 | VRW322-C | 150 | 295 | 678 | 95 | 40 | 450 | 380 |
| **120** | 140 | 110 | 1 160 | – | 210 | 318 | 524 | – | VRW324-A | 160 | 320 | 705 | 100 | 40 | 500 | 410 |
| **120** | 140 | 110 | 1 160 | – | 210 | 318 | 524 | – | VRW324-A | 160 | 320 | 705 | 100 | 40 | 500 | 410 |
| **120** | 140 | 110 | 1 160 | 210 | 213 | 317,5 | 470 | 372,5 | VRW324-C | 160 | 320 | 705 | 100 | 40 | 500 | 410 |
| **120** | 140 | 110 | 1 160 | 210 | 213 | 317,5 | 525 | – | VRW324-D | 160 | 320 | 705 | 100 | 40 | 500 | 410 |
| **120** | 140 | 110 | 1 160 | 210 | 213 | 317,5 | 470 | 372,5 | VRW324-C | 160 | 320 | 705 | 100 | 40 | 500 | 410 |



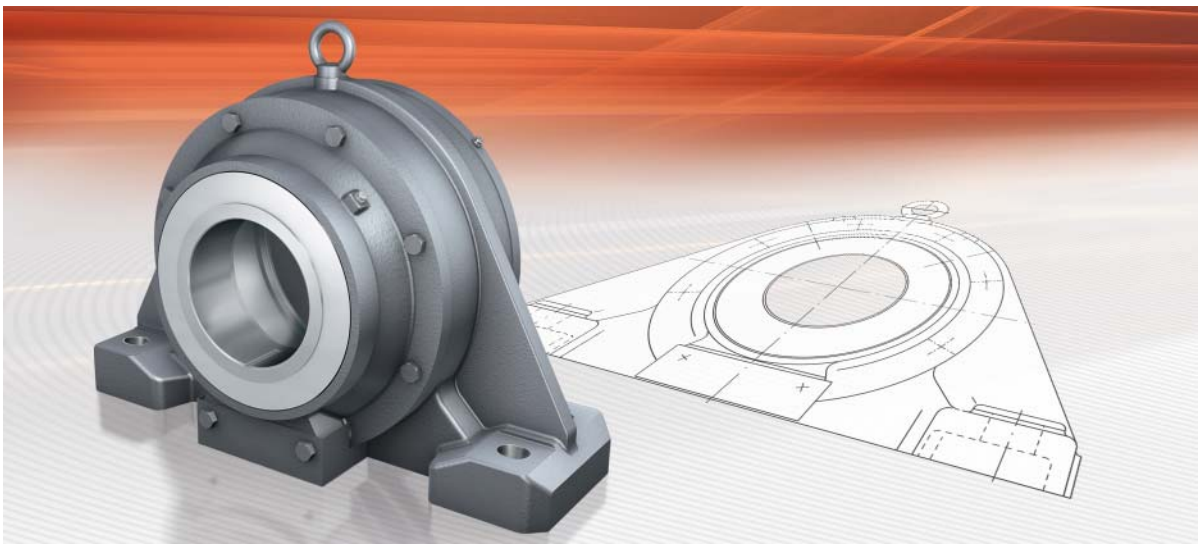

VRE3..-A




VRE3..-B

| | | | | | | | Bearing | | Plummer block housing unit | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Mass | Design-nation | Designation | | Mass | Design-nation |
| n | s | D | B | e | m ≈ kg | | Bearing position ① | Bearing position ② | m ≈ kg | Unit |
| 460 | M16 | 190 | 43 | 510 | 62 | VR318-A | **6318-C3** | **6318-C3** | 128 | **VRE318-A** |
| 460 | M16 | 190 | 43 | 511 | 62 | VR318-A | **NJ318-E-TVP2** | **6318-C3** | 128 | **VRE318-B** |
| 460 | M16 | 190 | 43 | 489,5 | 63 | VR318-C | **NU318-E-TVP2-C3** | **2X7318-B-TVP-UA** | 134 | **VRE318-C** |
| 460 | M16 | 190 | 43 | 511 | 63 | VR318-D | **NU318-E-TVP2-C3** | **6318-C3** | 129 | **VRE318-D** |
| 460 | M16 | 190 | 43 | 468 | 63 | VR318-E | **NU318-E-TVP2-C3** | **NU318-E-TVP2-C3+6318-C3** | 134 | **VRE318-E** |
| 480 | M20 | 200 | 45 | 540 | 84 | VR319-A | **6319-C3** | **6319-C3** | 156 | **VRE319-A** |
| 480 | M20 | 200 | 45 | 541 | 84 | VR319-A | **NJ319-E-TVP2** | **6319-C3** | 157 | **VRE319-B** |
| 480 | M20 | 200 | 45 | 518,5 | 86 | VR319-C | **NU319-E-TVP2-C3** | **2X7319-B-TVP-UA** | 164 | **VRE319-C** |
| 480 | M20 | 200 | 45 | 541 | 86 | VR319-D | **NU319-E-TVP2-C3** | **6319-C3** | 158 | **VRE319-D** |
| 480 | M20 | 200 | 45 | 496 | 86 | VR319-E | **NU319-E-TVP2-C3** | **NU319-E-TVP2-C3+6319-C3** | 164 | **VRE319-E** |
| 500 | M20 | 215 | 47 | 570 | 90 | VR320-A | **6320-C3** | **6320-C3** | 177 | **VRE320-A** |
| 500 | M20 | 215 | 47 | 571 | 90 | VR320-A | **NJ320-E-TVP2** | **6320-C3** | 177 | **VRE320-B** |
| 500 | M20 | 215 | 47 | 547,5 | 92 | VR320-C | **NU320-E-TVP2-C3** | **2X7320-B-TVP-UA** | 186 | **VRE320-C** |
| 500 | M20 | 215 | 47 | 571 | 92 | VR320-D | **NU320-E-TVP2-C3** | **6320-C3** | 179 | **VRE320-D** |
| 500 | M20 | 215 | 47 | 524 | 92 | VR320-E | **NU320-E-TVP2-C3** | **NU320-E-TVP2-C3+6320-C3** | 186 | **VRE320-E** |
| 520 | M24 | 240 | 50 | 580 | 130 | VR322-A | **6322-C3** | **6322-C3** | 226 | **VRE322-A** |
| 520 | M24 | 240 | 50 | 581 | 130 | VR322-A | **NJ322-E-TVP2** | **6322-C3** | 226 | **VRE322-B** |
| 520 | M24 | 240 | 50 | 556 | 132 | VR322-C | **NU322-E-TVP2-C3** | **2X7322-B-TVP-UA** | 238 | **VRE322-C** |
| 520 | M24 | 240 | 50 | 581 | 132 | VR322-D | **NU322-E-TVP2-C3** | **6322-C3** | 228 | **VRE322-D** |
| 520 | M24 | 240 | 50 | 531 | 132 | VR322-E | **NU322-E-TVP2-C3** | **NU322-E-TVP2-C3+6322-C3** | 238 | **VRE322-E** |
| 540 | M24 | 260 | 55 | 602 | 170 | VR324-A | **6324-C3** | **6324-C3** | 276 | **VRE324-A** |
| 540 | M24 | 260 | 55 | 603 | 170 | VR324-A | **NJ324-E-TVP2** | **6324-C3** | 277 | **VRE324-B** |
| 540 | M24 | 260 | 55 | 575,5 | 172 | VR324-C | **NU324-E-TVP2-C3** | **2X7324-B-TVP-UA** | 294 | **VRE324-C** |
| 540 | M24 | 260 | 55 | 603 | 172 | VR324-D | **NU324-E-TVP2-C3** | **6324-C3** | 278 | **VRE324-D** |
| 540 | M24 | 260 | 55 | 548 | 172 | VR324-E | **NU324-E-TVP2-C3** | **NU324-E-TVP2-C3+6324-C3** | 291 | **VRE324-E** |

FAG



# Unsplit plummer block housings BNM

# Unsplit plummer block housings BNM


| | | Page |
|---|---|---|
| **Product overview** | Unsplit plummer block housings BNM | 292 |
| **Features** | Suitable bearings | 293 |
| | Housing material and anti-corrosion protection | 293 |
| | Locating and non-locating bearings | 293 |
| | Seals and covers | 294 |
| | Housing configurations | 295 |
| | Lubrication | 295 |
| | Designation structure | 296 |
| | Ordering example | 296 |
| **Design and safety guidelines** | Eye bolts | 297 |
| | Foot screws | 297 |
| **Accuracy** | | 297 |
| **Dimension tables** | Plummer block housings BNM, unsplit, for spherical roller bearings with tapered bore and withdrawal sleeve, stepped shaft | 298 |




## Plummer block housings

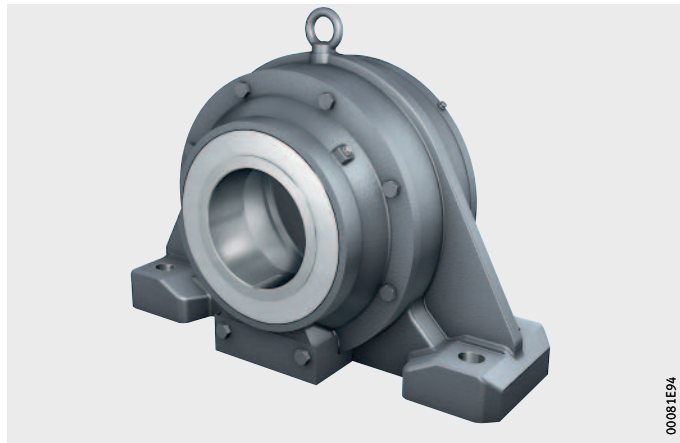
**Unsplit**
Closed on one side, with cover

**BNM..-AF, BNM..-AL**




For continuous shaft

**BNM..-BF, BNM..-BL**



# Unsplit plummer block housings BNM

## Features

Unsplit plummer block housings BNM can be used in various applications. Mills are a typical area of application.

## Suitable bearings

The dimensions of split plummer block housings BNM are matched to spherical roller bearings 232..-K, see table. The range of shaft diameters is between 150 mm and 400 mm.

## Bearing type and sizes

| Bearing type | Size |
|---|---|
| **Spherical roller bearings**<br>with tapered bore and withdrawal sleeve | 23232..-K to 23284..K |

## Housing material and anti-corrosion protection

The housing bodies are made from cast steel.

All outer surfaces not machined by chip-forming methods have a universal paint coating (colour RAL 7031, bluish-grey). The coating can be finished using all synthetic resin, polyurethane, acrylic, epoxy resin, chlorinated rubber, nitrocellulose and acid-hardening hammer tone finishes.

Inner and outer surfaces machined by chip-forming methods are provided with anti-corrosion protection that can be easily removed. It is recommended that only volatile solvents and lint-free cloths should be used.



## Locating and non-locating bearings

The housings are supplied as a locating bearing design or non-locating bearing design. In the locating bearing, the bearing is clamped between the housing covers. In the non-locating bearing, the bearing can align itself axially, since the covers have shorter centring collars.

## Seals and covers

Plummer block housings BNM of design A are intended for the bearing arrangements of shaft ends. One side is closed by a cover and the other side is sealed against the shaft. Design B is intended for continuous shafts, in which case the housing is sealed against the shaft on both sides.

The seal is a combination of a labyrinth seal and a felt seal, *Figure 1*. The oil-soaked felt strip is inserted in the slot in the outer labyrinth ring. The labyrinth rings are unsplit. The seal allows shaft misalignment of up to 0,5° in both directions.

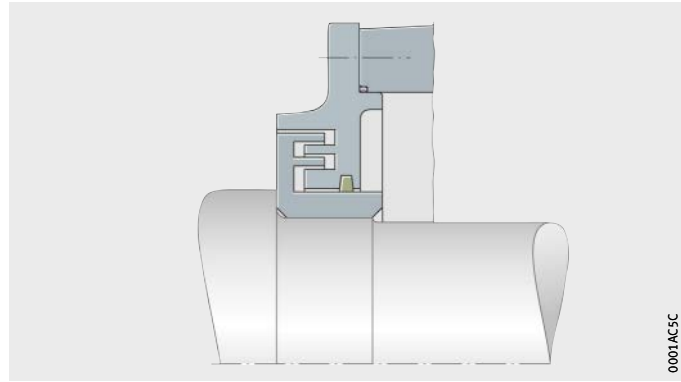
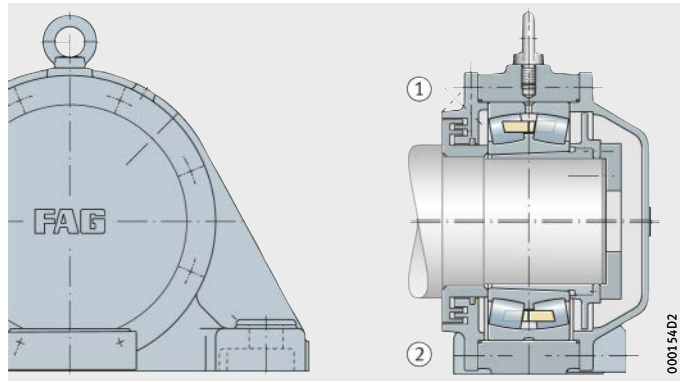



*Figure 1*
Labyrinth with felt seal
for plummer block housing BNM

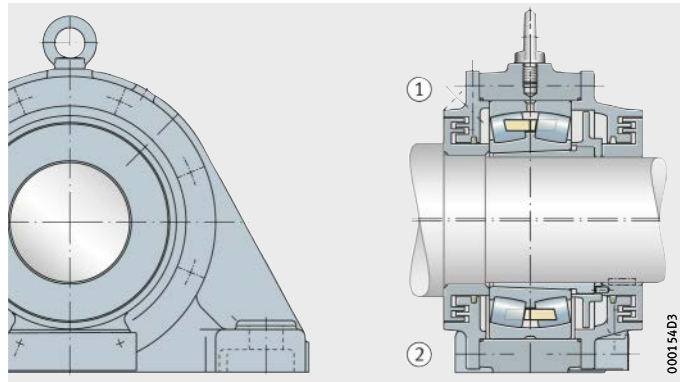
## Housing configurations

The housing configuration of plummer block housings BNM can be selected as either a continuous shaft or a housing closed on one side. All plummer block housings BNM are provided with grease valves and labyrinth seals, *Figure 2* and *Figure 3*.




① Locating bearing BNM..-AH-R-AF
② Non-locating bearing BNM..-AH-R-AL

*Figure 2*
Plummer block housing BNM for bearings with tapered bore and withdrawal sleeve, design A




① Locating bearing BNM..-AH-R-BF
② Non-locating bearing BNM..-AH-R-BL

*Figure 3*
Plummer block housing BNM for bearings with tapered bore and withdrawal sleeve, design B

## Lubrication

Unsplit plummer block housings BNM are designed for grease lubrication.

The housings have button head lubrication nipples to DIN 3404-M10×1 for relubrication of the bearing and seals. All the threaded holes for the lubrication nipples are located in the covers. The grease for the bearing is introduced into the housing on one side, then enters the bearing and is transported on the other side of the bearing by the grease valve into the grease collector.

## Designation structure

The designation structure for split plummer block housings BNM is shown in the table and *Figure 4*.

**Designation structure of plummer block housings BNM**

| Feature | | Code | Description |
|---|---|---|---|
| ① | Series | BNM | Unsplit plummer block housings BNM |
| ② | ISO dimension series of bearing | 32 | ISO dimension series 32 |
| ③ | Bore code of bearing | 52 | Bore diameter (52 · 5) mm = 260 mm |
| ④ | Bearing bore | AH | Tapered bearing bore and withdrawal sleeve |
| ⑤ | Grease valve | R | With grease valve |
| ⑥ | Housing design | AF | Closed on one side, locating bearing |
| | | AL | Closed on one side, non-locating bearing |
| | | BF | Continuous shaft, locating bearing |
| | | BL | Continuous shaft, non-locating bearing |




*Figure 4*
Designation structure of plummer block housings BNM, example

## Ordering example

When ordering an unsplit plummer block housing BNM, the designation contains indications of the size and location method of the bearing as well as the design and material of the housing. The rolling bearing and, if necessary, the withdrawal sleeve must be ordered separately.

The ordering example shows the construction of an order for a selected housing configuration and the appropriate bearing. The allocation of housings, bearings and withdrawal sleeves for all housing sizes is shown in the dimension table.

**Example 1**

Plummer block housing BNM, closed on one side, grease valve, spherical roller bearing 23260-K-MB as locating bearing, location using withdrawal sleeve.

Order

| | | |
|---|---|---|
| 1 | plummer block housing | BNN3260-AH-R-AF |
| 1 | spherical roller bearing | 23260-K-MB |
| 1 | withdrawal sleeve | AH3260G-H |

## Design and safety guidelines

### Eye bolts

The housing has an eye bolt in accordance with DIN 580. This is intended as a locating point for mounting and dismounting of the housing. The load carrying capacity of the eye bolt only allows lifting of the housing without a bearing.

The eye bolt must always be screwed fully into the housing.

The eye bolt must not be subjected to a load that is more than the mass of the housing.

### Foot screws

Foot screws are used for screw mounting of the housings to the locating surface. They are not included in the scope of delivery of the housings.

The appropriate screw size for each housing is stated, see dimension table.

The associated tightening torques are stated for screws with a metric thread in accordance with DIN 13, DIN 962 and DIN ISO 965-2, see table, page 42.



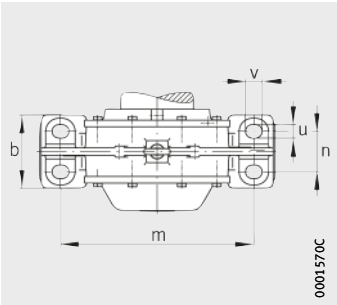
### Accuracy

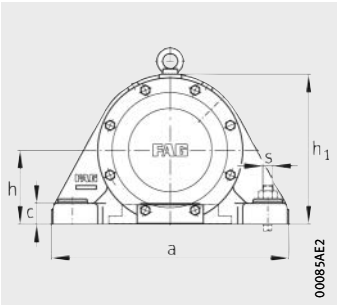
The bearing seat in unsplit plummer block housings BNM is machined to the tolerance class H7.

By agreement, the housings can also be supplied with other tolerance classes for the bearing seat, see section Tolerance class of bearing seat, page 47.

# Plummer block housings

BNM, unsplit
For spherical roller bearings with tapered bore and withdrawal sleeve
Stepped shaft

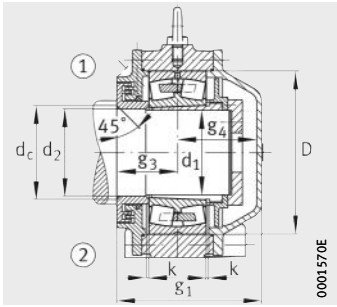


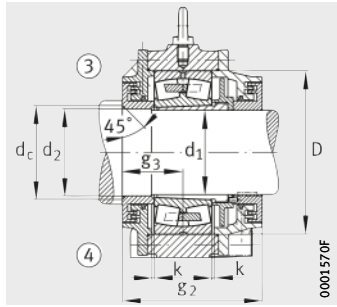

**Dimension table** · Dimensions in mm

| Shaft | | | Housing Dimensions | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_1$ | $d_2$ | $d_c$ max. | h | $h_1$ | b | c | a | m | n | v | u | s |
| **150** | 155 | 165 | 190 | 385 | 180 | 58 | 600 | 490 | 105 | 45 | 36 | M30 |
| **160** | 165 | 181 | 210 | 405 | 200 | 62 | 640 | 525 | 110 | 45 | 36 | M30 |
| **170** | 175 | 185 | 210 | 425 | 210 | 65 | 680 | 550 | 120 | 45 | 36 | M30 |
| **180** | 185 | 195 | 220 | 455 | 220 | 85 | 710 | 560 | 120 | 52 | 42 | M36 |
| **190** | 195 | 205 | 235 | 475 | 240 | 75 | 780 | 640 | 140 | 52 | 42 | M36 |
| **200** | 210 | 220 | 260 | 525 | 250 | 80 | 850 | 700 | 140 | 52 | 42 | M36 |
| **220** | 230 | 242 | 290 | 585 | 250 | 90 | 900 | 750 | 140 | 52 | 42 | M36 |
| **240** | 250 | 262 | 310 | 625 | 290 | 95 | 960 | 800 | 160 | 52 | 42 | M36 |
| **260** | 270 | 282 | 320 | 645 | 300 | 100 | 1 000 | 840 | 170 | 52 | 42 | M36 |
| **280** | 290 | 302 | 350 | 705 | 330 | 105 | 1 100 | 920 | 180 | 75 | 56 | M48 |
| **300** | 310 | 326 | 370 | 745 | 360 | 115 | 1 150 | 960 | 200 | 75 | 56 | M48 |
| **320** | 330 | 350 | 390 | 790 | 380 | 125 | 1 200 | 990 | 200 | 85 | 64 | M56 |
| **340** | 350 | 370 | 410 | 820 | 400 | 130 | 1 280 | 1 040 | 210 | 90 | 72 | M64 |
| **360** | 370 | 390 | 425 | 860 | 405 | 135 | 1 350 | 1 100 | 225 | 90 | 72 | M64 |
| **380** | 390 | 410 | 450 | 900 | 450 | 145 | 1 430 | 1 160 | 240 | 90 | 72 | M64 |
| **400** | 410 | 430 | 470 | 950 | 470 | 150 | 1 500 | 1 220 | 255 | 90 | 72 | M64 |

① Locating bearing AF; ② Non-locating bearing AL; ③ Locating bearing BF; ④ Non-locating bearing BL



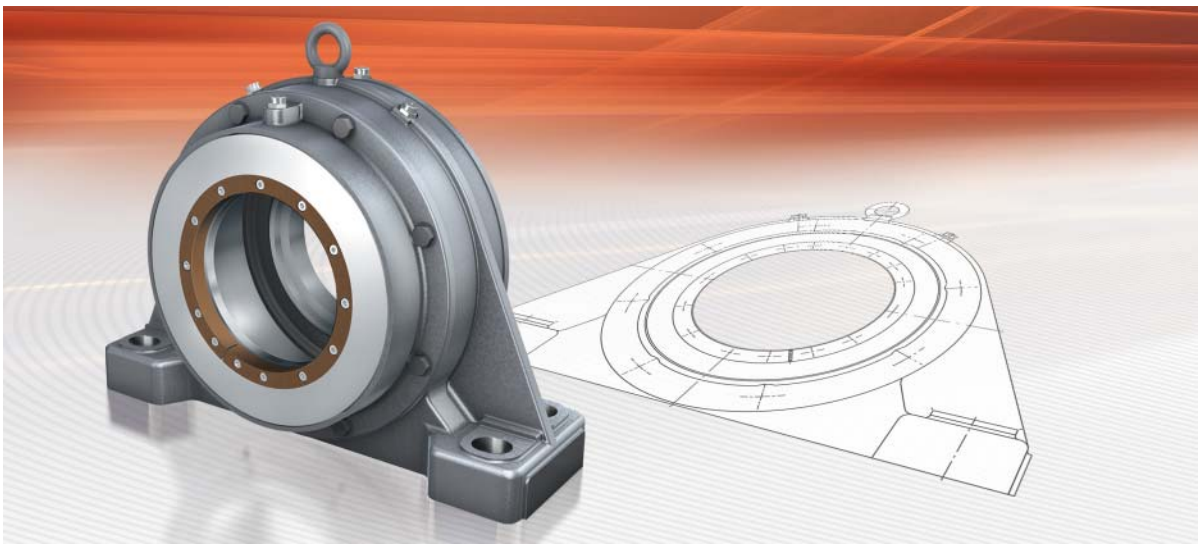

Design A




Design B

| | | | | | | Bearing | Withdrawal sleeve | Housing | |
|---|---|---|---|---|---|---|---|---|---|
| D | k | $g_1$ | $g_2$ | $g_3$ | $g_4$ min. | | | Mass m ≈ kg | Designation |
| 290 | 3 | 275 | 275 | 120 | 145 | **23232..-K** | AH3232(-H) | 100 | **BNM3232-AH** |
| 310 | 4 | 275 | 265 | 115 | 150 | **23234..-K** | AH3234(-H) | 135 | **BNM3234-AH** |
| 320 | 4 | 310 | 310 | 135 | 165 | **23236..-K** | AH3236(-H) | 160 | **BNM3236-AH** |
| 340 | 4 | 325 | 330 | 145 | 170 | **23238..-K** | AH3238(-H) | 180 | **BNM3238-AH** |
| 360 | 4 | 350 | 350 | 155 | 185 | **23240..-K** | AH3240(-H) | 240 | **BNM3240-AH** |
| 400 | 4 | 375 | 385 | 165 | 200 | **23244..-K** | AH2344(-H) | 290 | **BNM3244-AH** |
| 440 | 4 | 360 | 365 | 155 | 195 | **23248..-K** | AH2348(-H) | 330 | **BNM3248-AH** |
| 480 | 5 | 415 | 410 | 180 | 220 | **23252..-K** | AH2352(-H) | 480 | **BNM3252-AH** |
| 500 | 5 | 435 | 440 | 190 | 230 | **23256..-K** | AH2356(-H) | 550 | **BNM3256-AH** |
| 540 | 5 | 455 | 450 | 200 | 240 | **23260..-K** | AH3260(-H) | 660 | **BNM3260-AH** |
| 580 | 5 | 490 | 475 | 210 | 265 | **23264..-K** | AH3264-H | 800 | **BNM3264-AH** |
| 620 | 6 | 515 | 505 | 220 | 280 | **23268..-K** | AH3268-H | 930 | **BNM3268-AH** |
| 650 | 6 | 545 | 535 | 235 | 295 | **23272..-K** | AH3272-H | 1 100 | **BNM3272-AH** |
| 680 | 6 | 570 | 575 | 255 | 300 | **23276..-K** | AH3276-H | 1 210 | **BNM3276-AH** |
| 720 | 6 | 605 | 605 | 270 | 320 | **23280..-K** | AH3280-H | 1 510 | **BNM3280-AH** |
| 760 | 7,5 | 615 | 625 | 280 | 320 | **23284..-K** | AH3284-H | 1 710 | **BNM3284-AH** |

FAG



# Unsplit plummer block housings BND

# Unsplit plummer block housings BND


| | | Page |
|---|---|---|
| **Product overview** | Unsplit plummer block housings BND | 302 |
| **Features** | Suitable bearings | 303 |
| | Housing materials and anti-corrosion protection | 303 |
| | Locating and non-locating bearings | 304 |
| | Seals and covers | 304 |
| | Housing configurations | 305 |
| | Lubrication | 308 |
| | Designation structure | 310 |
| | Ordering examples | 311 |
| **Design and safety guidelines** | Load carrying capacity | 312 |
| | Eye bolts | 315 |
| | Foot screws | 315 |
| **Accuracy** | | 315 |
| **Dimension tables** | Plummer block housings BND, unsplit, for spherical roller bearings with tapered bore and adapter sleeve | 316 |
| | Plummer block housings BND, unsplit, for spherical roller bearings with tapered bore and adapter sleeve, stepped shaft | 322 |
| | Plummer block housings BND, unsplit, for spherical roller bearings with cylindrical bore | 328 |




## Plummer block housings

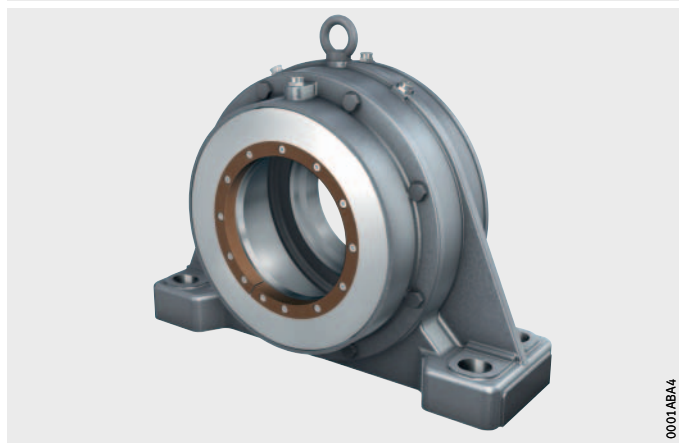
**Unsplit**
Closed on one side, with cover

**BND..-AF, BND..-AL**




For continuous shaft

**BND..-BF, BND..-BL**



# Unsplit plummer block housings BND

## Features

Unsplit plummer block housings BND are suitable for very high loads. The housings, which were originally developed for belt conveyors, can also be beneficially used in materials processing, for example in hard crushers, sugar cane mill drives and rotor shafts in wind turbines.

## Suitable bearings

The dimensions of unsplit plummer block housings BND are matched to spherical roller bearings 222, 230, 231 and 232, see table. The range of shaft diameters is between 60 mm and 420 mm.

### Bearing type and sizes

| Bearing type | Size |
|---|---|
| **Spherical roller bearings** | |
| with tapered bore and adapter sleeve | 22213..-K to 22284..-K |
| | 23024..-K to 23084..-K |
| | 23122..-K to 23184..-K |
| | 23222..-K to 23284..-K |
| with cylindrical bore | 22213 to 22284 |
| | 23024 to 23084 |
| | 23122 to 23184 |
| | 23222 to 23284 |



## Housing materials and anti-corrosion protection

The standard material for the housing bodies is cast steel (suffix S). By agreement, housing bodies made from spheroidal graphite cast iron (suffix D) are available.

All outer surfaces not machined by chip-forming methods have a universal paint coating (colour RAL 7031, bluish-grey). The coating can be finished using all synthetic resin, polyurethane, acrylic, epoxy resin, chlorinated rubber, nitrocellulose and acid-hardening hammer tone finishes.

Inner and outer surfaces machined by chip-forming methods are provided with anti-corrosion protection that can be easily removed. It is recommended that only volatile solvents and lint-free cloths should be used.

## Locating and non-locating bearings

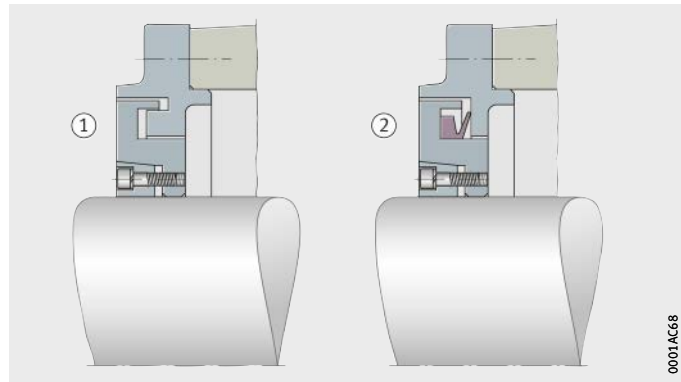
The housings are supplied as a locating bearing design or non-locating bearing design. In the locating bearing, the bearing is clamped between the housing covers. In the non-locating bearing, the bearing can align itself axially, since the covers have shorter centring collars.

## Seals and covers

Plummer block housings BND of design A are intended for the bearing arrangements of shaft ends. One side is closed by a cover and the other side is sealed against the shaft. Design B is intended for continuous shafts, in which case the housing is sealed against the shaft on both sides.

Labyrinth seals (suffix Y) or Taconite seals (suffix T) can be used, *Figure 1*. Where shafts of constant diameter are used, the seals are located on the shaft by means of slotted conical clamping rings made from laminated fabric. The labyrinth rings, Taconite seals and covers are unsplit.

The seals allow shaft misalignment of up to 0,5° in both directions and are suitable for grease lubrication.




① Labyrinth seal
② Taconite seal

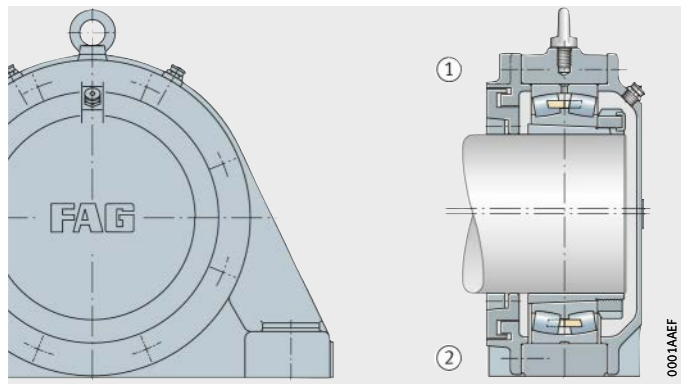
*Figure 1*
Seals
for plummer block housings BND

## Housing configurations

In the case of plummer block housings BND, various configurations are possible that are clearly described by means of the designation, *Figure 2* to *Figure 13*, page 308.

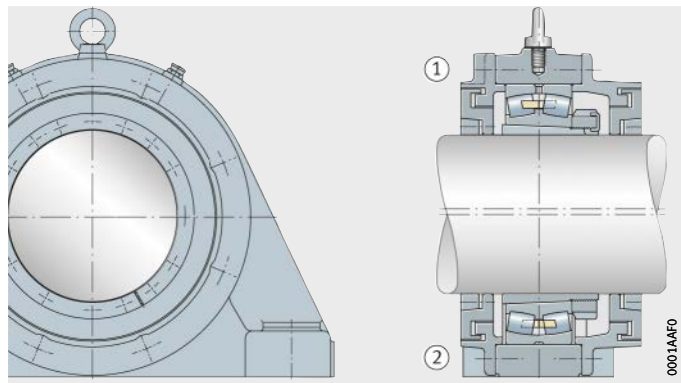
The following features can be varied in the housing configuration:

- location method of the bearing:
  - bearings with a tapered bore by means of an adapter sleeve on a shaft of constant diameter
  - bearings with a tapered bore by means of an adapter sleeve on a stepped shaft
  - bearings with a cylindrical bore directly on a stepped shaft
- sealing of the housing by means of a labyrinth seal or a Taconite seal
- continuous shaft or a housing closed on one side
- design of the bearing arrangement as a locating bearing arrangement or a non-locating bearing arrangement.



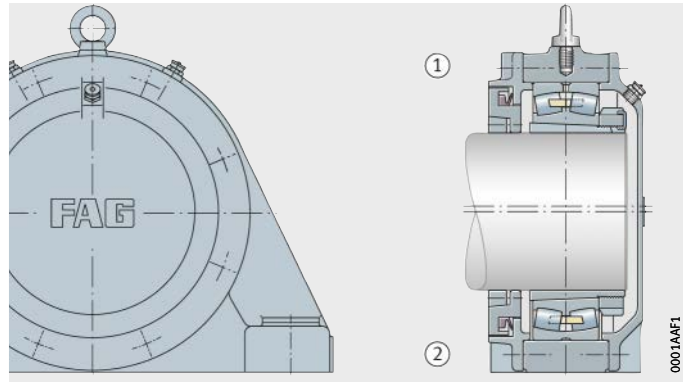

① Locating bearing BND..-H-W-Y-AF
② Non-locating bearing BND..-H-W-Y-AL

*Figure 2*
Plummer block housing BND for bearings with tapered bore and adapter sleeve (labyrinth seal), design A



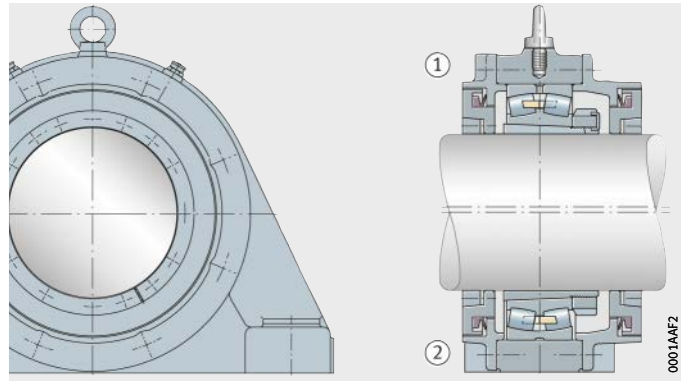

① Locating bearing BND..-H-W-Y-BF
② Non-locating bearing BND..-H-W-Y-BL

*Figure 3*
Plummer block housing BND for bearings with tapered bore and adapter sleeve (labyrinth seal), design B



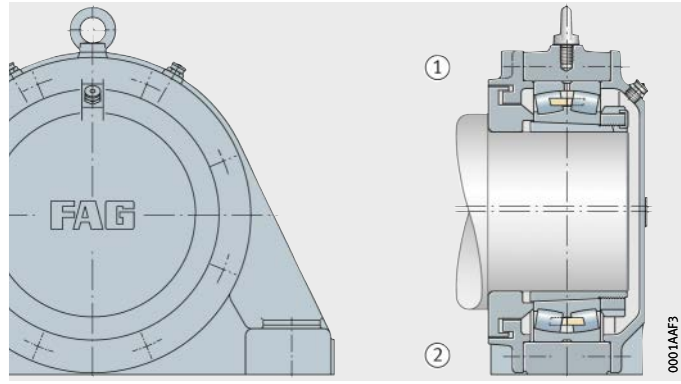

① Locating bearing BND..-H-W-T-AF
② Non-locating bearing BND..-H-W-T-AL

*Figure 4*
Plummer block housing BND for bearings with tapered bore and adapter sleeve (Taconite seal), design A



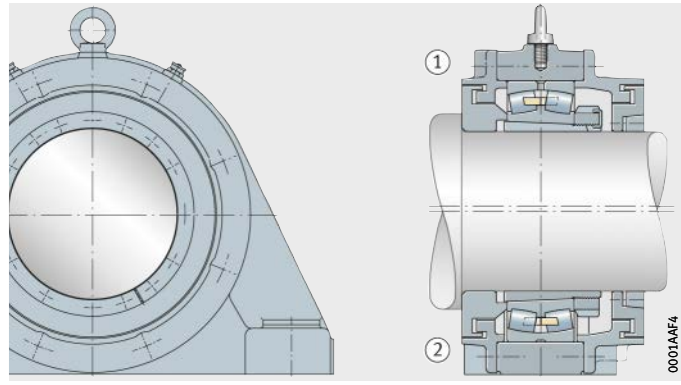

① Locating bearing BND..-H-W-T-BF
② Non-locating bearing BND..-H-W-T-BL

*Figure 5*
Plummer block housing BND for bearings with tapered bore and adapter sleeve (Taconite seal), design B



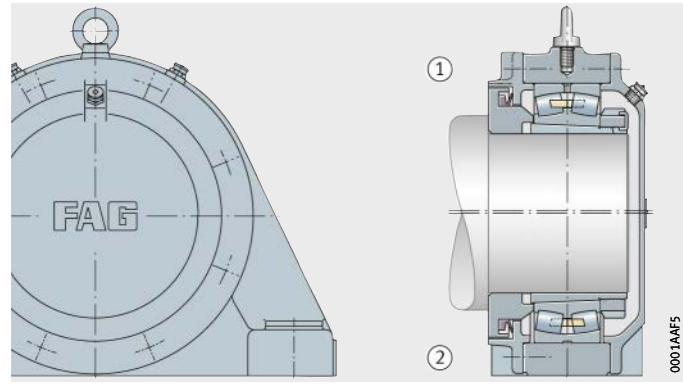

① Locating bearing BND..-H-C-Y-AF
② Non-locating bearing BND..-H-C-Y-AL

*Figure 6*
Plummer block housing BND for bearings with tapered bore and adapter sleeve for stepped shaft (labyrinth seal), design A



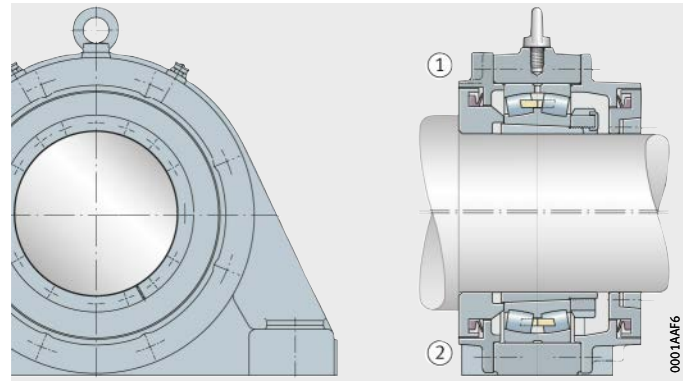

① Locating bearing BND..-H-C-Y-BF
② Non-locating bearing BND..-H-C-Y-BL

*Figure 7*
Plummer block housing BND for bearings with tapered bore and adapter sleeve for stepped shaft (labyrinth seal), design B



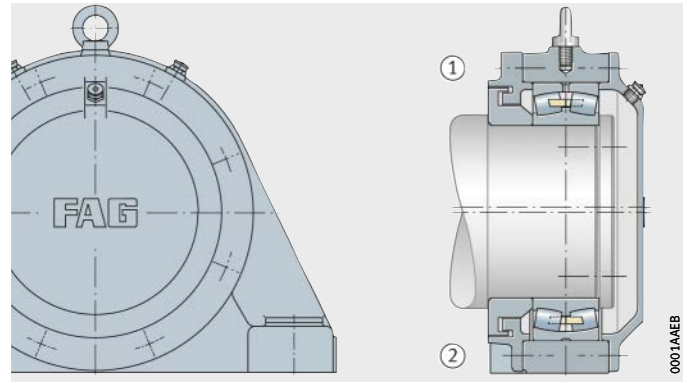

① Locating bearing BND..-H-C-T-AF
② Non-locating bearing BND..-H-C-T-AL

*Figure 8*
Plummer block housing BND for bearings with tapered bore and adapter sleeve for stepped shaft (Taconite seal), design A



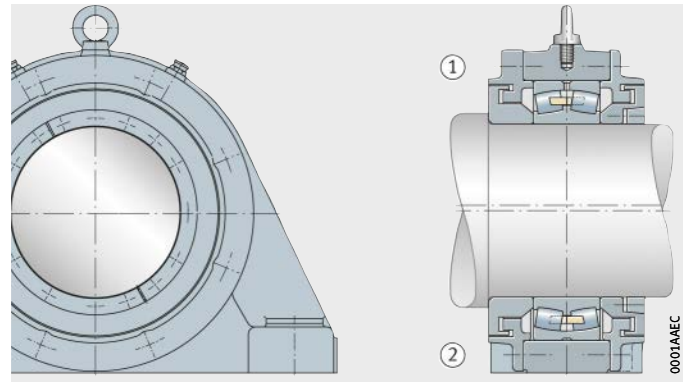

① Locating bearing BND..-H-C-T-BF
② Non-locating bearing BND..-H-C-T-BL

*Figure 9*
Plummer block housing BND for bearings with tapered bore and adapter sleeve for stepped shaft (Taconite seal), design B



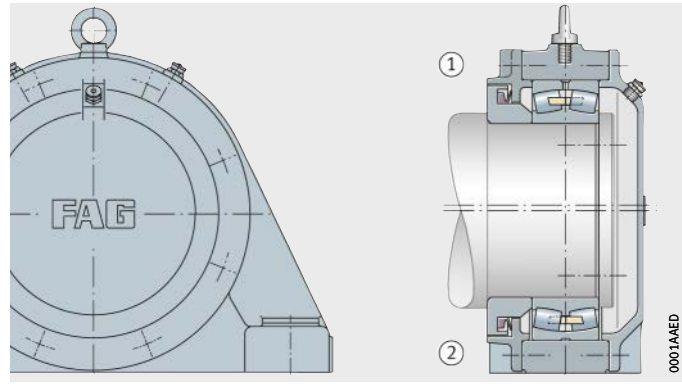

① Locating bearing BND..-Z-Y-AF
② Non-locating bearing BND..-Z-Y-AL

*Figure 10*
Plummer block housing BND for bearings with cylindrical bore (labyrinth seal), design A



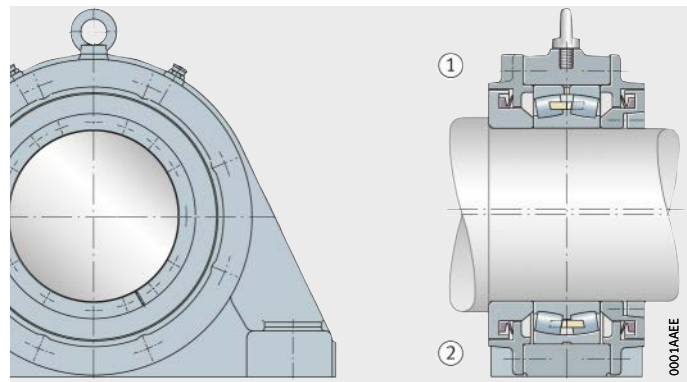

① Locating bearing BND..-Z-Y-BF
② Non-locating bearing BND..-Z-Y-BL

*Figure 11*
Plummer block housing BND for bearings with cylindrical bore (labyrinth seal), design B




① Locating bearing BND..-Z-T-AF
② Non-locating bearing BND..-Z-T-AL

*Figure 12*
Plummer block housing BND for bearings with cylindrical bore (Taconite seal), design A




① Locating bearing BND..-Z-T-BF
② Non-locating bearing BND..-Z-T-BL

*Figure 13*
Plummer block housing BND for bearings with cylindrical bore (Taconite seal), design B

## Lubrication

Unsplit plummer block housings BND are designed for grease lubrication.

### Greases

Suitable greases are lithium soap greases of NLGI grades 2 and 3, for example Arcanol MULTI3 for low loads and Arcanol MULTITOP and LOAD400 for high and very high loads.

### Grease quantities

In initial lubrication, the cavities in the bearing, the housing and the labyrinths are completely filled with grease. This is the basis for the recommended grease quantities, see table, page 309.

For relubrication, it is recommended that the grease quantity is approx. 10% of the grease quantity used in initial greasing. If the ambient conditions lead to heavy contamination of the housings, relubrication should be carried out on a daily basis using smaller quantities.

## Recommended grease quantity

| Bearing bore | Grease quantity for initial greasing | |
|---|---|---|
| | BND22, BND31, BND32 | BND30 |
| mm | ≈ g | ≈ g |
| 65 | 700 | – |
| 75 | 800 | – |
| 90 | 900 | – |
| 100 | 950 | – |
| 110 | 1 000 | – |
| 120 | 1 100 | 500 |
| 130 | 1 250 | 600 |
| 140 | 1 400 | 700 |
| 150 | 1 700 | 800 |
| 160 | 1 900 | 900 |
| 170 | 2 200 | 1 000 |
| 180 | 2 500 | 1 200 |
| 190 | 3 000 | 1 300 |
| 200 | 3 600 | 1 600 |
| 220 | 4 200 | 1 900 |
| 240 | 5 000 | 2 100 |
| 260 | 6 000 | 2 500 |
| 280 | 7 000 | 3 000 |
| 300 | 8 000 | 3 500 |
| 320 | 9 000 | 4 100 |
| 340 | 10 500 | 4 800 |
| 360 | 12 000 | 5 500 |
| 380 | 13 000 | 6 200 |
| 400 | 14 500 | 7 000 |
| 420 | 16 000 | 8 000 |



## Relubrication

The housings have button head lubrication nipples with a head diameter standardised to DIN 3404 of 22 mm. The grease is fed uniformly to both rows of rollers via the circumferential slot and three lubrication holes in the outer ring of the spherical roller bearings.

The relubrication intervals should be matched to the ambient conditions. The bearings should be relubricated after an interval of no more than 4 weeks.

## Designation structure

The designation structure for unsplit plummer block housings BND is shown in the table and *Figure 14*.

**Designation structure of plummer block housings BND**

| Feature | | Code | Description |
|---|---|---|---|
| ① | Series | BND | Unsplit plummer block housings BND |
| ② | ISO dimension series of bearing | 22 | ISO dimension series 22 |
| | | 30 | ISO dimension series 30 |
| | | 31 | ISO dimension series 31 |
| | | 32 | ISO dimension series 32 |
| ③ | Bore code of bearing | 52 | Bore diameter (52 · 5) mm = 260 mm |
| ④ | Bearing bore | H | Tapered bearing bore and adapter sleeve |
| | | Z | Cylindrical bearing bore |
| ⑤ | Shaft | W | Shaft of constant diameter (only in conjunction with bearing bore H) |
| | | C | Stepped shaft (only in conjunction with bearing bore H) |
| ⑥ | Seal | Y | Labyrinth seal |
| | | T | Taconite seal |
| ⑦ | Housing design | AF | Closed on one side, locating bearing |
| | | AL | Closed on one side, non-locating bearing |
| | | BF | Continuous shaft, locating bearing |
| | | BL | Continuous shaft, non-locating bearing |
| ⑧ | Housing material | S | Cast steel (standard) |
| | | D | Spheroidal graphite cast iron |




*Figure 14*
Designation structure of plummer block housings BND, example

## Ordering examples

When ordering an unsplit plummer block housing BND, the designation contains indications of the size and location method of the bearing, the shaft design, the sealing variant and the design and material of the housing. The rolling bearing and, if necessary, the adapter sleeve must be ordered separately.

The ordering examples show the construction of orders for selected housing combinations and the appropriate bearings. The allocation of housings, bearings and accessories for all housing sizes is shown in the dimension tables.

**Example 1** Plummer block housing BND made from cast steel, closed on one side, for shaft of constant diameter, Taconite seal, spherical roller bearing 23260-K-MB as locating bearing, location using adapter sleeve.

| | | | |
|---|---|---|---|
| Order | 1 | plummer block housing | BND3260-H-W-T-AL-S |
| | 1 | spherical roller bearing | 23260-K-MB |
| | 1 | adapter sleeve | H3260-HG |



**Example 2** Plummer block housing BND made from cast steel, for continuous stepped shaft, Taconite seal, spherical roller bearing 23084-B-K-MB as locating bearing, location using adapter sleeve.

| | | | |
|---|---|---|---|
| Order | 1 | plummer block housing | BND3084-H-C-T-BF-S |
| | 1 | spherical roller bearing | 23084-B-K-MB |
| | 1 | adapter sleeve | H3084X-HG |

**Example 3** Plummer block housing BND made from cast steel, closed on one side, labyrinth seal, spherical roller bearing 23148-B-MB as locating bearing.

| | | | |
|---|---|---|---|
| Order | 1 | plummer block housing | BND3148-Z-Y-AF-S |
| | 1 | spherical roller bearing | 23148-B-MB |

## Design and safety guidelines

### Load carrying capacity

Guide values for the rupture load of plummer block housings BND are given, *Figure 15* and tables, page 313 and page 314. The guide values are valid for purely static loading. They are valid for the standard material cast steel (suffix S) and for spheroidal graphite cast iron (suffix D).

The guide values in the table, page 313, are only valid if the flatness of the mounting surface in accordance with DIN EN ISO 1101 corresponds to the tolerance grade IT7 in accordance with DIN EN ISO 286-1 (measured across the diagonal). A precondition for supporting loads is that the housing base surface is completely and rigidly supported.

When determining the permissible static load, a safety factor of 6 must be applied.

The housing must not be subjected to an axial load of more than 20% of the housing rupture load $F_{180°}$.

If the housing is subjected to axial load, the permissible axial load of the bearing fitted must be taken into consideration. If the bearing is located on the shaft using an adapter sleeve, the axial retaining force of the bearing and adapter sleeve must also be taken into consideration.

If the load direction is between 55° and 120° or axial load is present, we recommend that the housings should be secured in the load direction by means of stops or dowels.

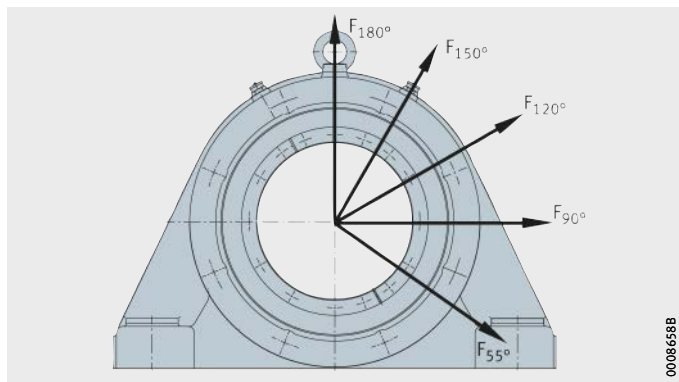



*Figure 15*
Load directions F of the guide values for housing rupture load

## Housings BND22 and BND30

| Housing Designation | | Housing rupture load in load direction F | | | | |
|---|---|---|---|---|---|---|
| | | 55° kN | 90° kN | 120° kN | 150° kN | 180° kN |
| BND2213 | – | 665 | 530 | 440 | 350 | 440 |
| BND2215 | – | 880 | 705 | 580 | 465 | 580 |
| BND2218 | – | 1 125 | 900 | 745 | 595 | 745 |
| BND2220 | BND3024 | 1 325 | 1 070 | 1 020 | 815 | 1 020 |
| BND2222 | BND3026 | 1 580 | 1 275 | 1 120 | 920 | 1 120 |
| BND2224 | BND3028 | 1 785 | 1 430 | 1 225 | 1 020 | 1 225 |
| BND2226 | BND3030 | 2 040 | 1 630 | 2 140 | 1 735 | 2 140 |
| – | BND3032 | 2 295 | 1 835 | 2 245 | 1 835 | 2 245 |
| BND2228 | BND3034 | 2 755 | 2 195 | 2 245 | 1 835 | 2 245 |
| BND2230 | BND3036 | 3 060 | 2 450 | 2 245 | 1 835 | 2 245 |
| BND2232 | BND3038 | 3 365 | 2 705 | 2 450 | 1 940 | 2 450 |
| BND2234 | BND3040 | 3 925 | 3 110 | 3 060 | 2 450 | 3 060 |
| BND2236 | – | 4 435 | 3 570 | 3 470 | 2 755 | 3 470 |
| BND2238 | BND3044 | 4 435 | 3 570 | 3 470 | 2 755 | 3 470 |
| BND2240 | BND3048 | 5 050 | 4 030 | 4 895 | 3 875 | 4 895 |
| BND2244 | BND3052 | 5 660 | 4 540 | 5 000 | 3 980 | 5 000 |
| – | BND3056 | 6 580 | 5 255 | 6 120 | 4 895 | 6 120 |
| BND2248 | BND3060 | 7 295 | 5 815 | 6 325 | 5 100 | 6 325 |
| BND2252 | BND3064 | 8 000 | 6 425 | 6 835 | 5 400 | 6 835 |
| BND2256 | BND3068 | 8 825 | 7 040 | 6 835 | 5 400 | 6 835 |
| BND2260 | BND3072 | 9 640 | 7 700 | 8 160 | 6 530 | 8 160 |
| – | BND3076 | 10 810 | 8 670 | 8 365 | 8 770 | 8 365 |
| BND2264 | BND3080 | 12 035 | 9 690 | 9 080 | 7 240 | 9 080 |
| BND2268 | BND3084 | 13 360 | 10 760 | 9 280 | 7 345 | 9 280 |
| BND2272 | – | 15 700 | 12 570 | 10 370 | 8 325 | 10 370 |
| BND2276 | – | 16 600 | 13 280 | 10 960 | 8 800 | 10 960 |
| BND2280 | – | 19 750 | 15 800 | 13 030 | 10 470 | 13 030 |
| BND2284 | – | 21 540 | 17 240 | 14 220 | 11 420 | 14 220 |



### Housings BND31 and BND32

| Housing Designation | | Housing rupture load in load direction F | | | | |
|---|---|---|---|---|---|---|
| | | 55° kN | 90° kN | 120° kN | 150° kN | 180° kN |
| BND3122 | – | 1 900 | 1 530 | 1 685 | 1 345 | 1 685 |
| BND3124 | BND3222 | 1 875 | 1 500 | 1 685 | 1 345 | 1 685 |
| BND3126 | BND3224 | 2 020 | 1 610 | 1 735 | 1 385 | 1 735 |
| BND3128 | BND3226 | 2 295 | 1 835 | 1 735 | 1 385 | 1 735 |
| BND3130 | BND3228 | 2 755 | 2 195 | 1 785 | 1 430 | 1 785 |
| BND3132 | BND3230 | 3 110 | 2 500 | 1 835 | 1 470 | 1 835 |
| BND3134 | BND3232 | 3 570 | 2 855 | 1 940 | 1 550 | 1 940 |
| BND3136 | BND3234 | 4 285 | 3 415 | 2 040 | 1 630 | 2 040 |
| BND3138 | BND3236 | 4 590 | 3 725 | 2 140 | 1 715 | 2 140 |
| BND3140 | BND3238 | 5 610 | 4 540 | 2 295 | 1 835 | 2 295 |
| BND3144 | BND3240 | 6 120 | 4 935 | 2 550 | 2 040 | 2 550 |
| BND3148 | BND3244 | 6 835 | 5 510 | 3 060 | 2 450 | 3 060 |
| BND3152 | BND3248 | 7 650 | 6 170 | 3 570 | 2 855 | 3 570 |
| BND3156 | BND3252 | 9 385 | 7 550 | 4 180 | 3 365 | 4 180 |
| BND3160 | BND3256 | 10 200 | 8 260 | 4 490 | 3 570 | 4 490 |
| BND3164 | BND3260 | 11 935 | 9 535 | 5 100 | 4 080 | 5 100 |
| BND3168 | BND3264 | 14 280 | 11 375 | 5 815 | 4 590 | 5 815 |
| BND3172 | – | 14 485 | 11 630 | 6 630 | 5 300 | 6 630 |
| BND3176 | BND3268 | 16 320 | 13 055 | 6 630 | 5 300 | 6 630 |
| BND3180 | BND3272 | 17 850 | 14 280 | 7 345 | 5 815 | 7 345 |
| – | BND3276 | 18 870 | 15 050 | 8 160 | 6 530 | 8 160 |
| BND3184 | – | 19 380 | 15 600 | 8 160 | 6 530 | 8 160 |
| – | BND3280 | 22 440 | 17 950 | 9 280 | 7 445 | 9 280 |
| – | BND3284 | 24 480 | 19 380 | 10 710 | 8 570 | 10 710 |

## Eye bolts

The housing has an eye bolt in accordance with DIN 580. This is intended as a locating point for mounting and dismounting of the housing. The load carrying capacity of the eye bolt allows lifting of the housing including a bearing fitted in the housing.

The eye bolt must always be screwed fully into the housing.

The eye bolt must not be subjected to a mass greater than that of the housing together with the bearing fitted in the housing.

## Foot screws

Foot screws are used for screw mounting of the housings to the locating surface. They are not included in the scope of delivery of the housings.

The appropriate screw size for each housing is stated, see dimension tables.

The associated tightening torques are stated for screws with a metric thread in accordance with DIN 13, DIN 962 and DIN ISO 965-2, see table, page 42.

## Accuracy

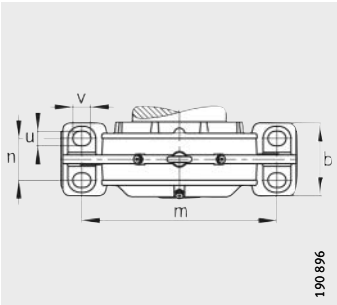
The bearing seat in unsplit plummer block housings BND is machined to the tolerance class H7.

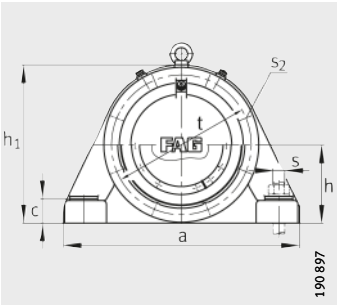


By agreement, the housings can also be supplied with other tolerance classes for the bearing seat, see section Tolerance class of bearing seat, page 47.

# Plummer block housings

BND, unsplit
For spherical roller bearings with tapered bore and adapter sleeve

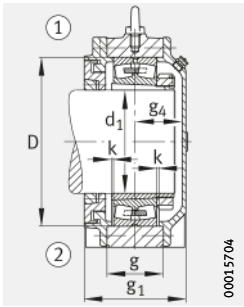


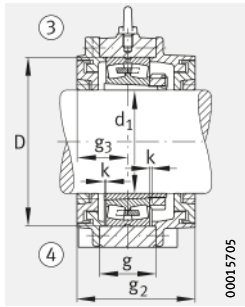

**Dimension table** · Dimensions in mm

| Shaft | Housing Dimensions | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_1$ | h | $h_1$ | g | b | c | a | m | n | v | u | s | D | k |
| **60** | 80 | 155 | 44 | 70 | 22 | 235 | 185 | 40 | 20 | 15 | M10 | 120 | 2 |
| **65** | 90 | 180 | 45 | 85 | 35 | 285 | 225 | 45 | 28 | 20 | M16 | 130 | 2 |
| **80** | 110 | 220 | 55 | 110 | 38 | 370 | 290 | 60 | 32 | 23 | M20 | 160 | 2 |
| **90** | 130 | 255 | 65 | 120 | 40 | 400 | 320 | 65 | 35 | 30 | M24 | 180 | 2,5 |
| **100** | 140 | 280 | 73 | 130 | 42 | 440 | 350 | 70 | 35 | 30 | M24 | 200 | 2,5 |
| **100** | 130 | 263 | 80 | 140 | 40 | 400 | 300 | 80 | 35 | 25 | M20 | 180 | 2,5 |
| **100** | 140 | 280 | 89,8 | 130 | 42 | 440 | 350 | 70 | 35 | 30 | M24 | 200 | 2,5 |
| **110** | 150 | 300 | 77 | 140 | 42 | 470 | 370 | 75 | 35 | 30 | M24 | 215 | 2,5 |
| **110** | 115 | 230 | 60 | 110 | 35 | 370 | 300 | 60 | 35 | 25 | M20 | 180 | 2,5 |
| **110** | 140 | 280 | 85 | 150 | 40 | 410 | 330 | 80 | 35 | 25 | M20 | 200 | 2,5 |
| **110** | 150 | 300 | 95 | 140 | 42 | 470 | 370 | 75 | 35 | 30 | M24 | 215 | 2,5 |
| **115** | 160 | 315 | 84 | 150 | 45 | 500 | 400 | 85 | 35 | 30 | M24 | 230 | 3 |
| **115** | 130 | 260 | 70 | 120 | 38 | 410 | 340 | 60 | 35 | 25 | M20 | 200 | 2 |
| **115** | 145 | 295 | 90 | 150 | 40 | 430 | 350 | 80 | 35 | 25 | M20 | 210 | 3 |
| **115** | 160 | 315 | 100 | 150 | 45 | 500 | 400 | 85 | 35 | 30 | M24 | 230 | 3 |
| **125** | 170 | 345 | 88 | 160 | 50 | 530 | 430 | 85 | 35 | 30 | M24 | 250 | 3 |
| **125** | 140 | 275 | 70 | 130 | 40 | 430 | 360 | 70 | 35 | 30 | M24 | 210 | 3 |
| **125** | 155 | 315 | 95 | 160 | 45 | 470 | 380 | 85 | 35 | 25 | M20 | 225 | 3 |
| **125** | 170 | 345 | 108 | 160 | 50 | 530 | 430 | 85 | 35 | 30 | M24 | 250 | 3 |
| **135** | 180 | 365 | 97 | 170 | 54 | 550 | 450 | 90 | 45 | 36 | M30 | 270 | 3 |
| **135** | 145 | 290 | 80 | 140 | 42 | 455 | 370 | 80 | 35 | 30 | M24 | 225 | 2 |
| **135** | 170 | 345 | 102 | 200 | 60 | 580 | 450 | 110 | 35 | 30 | M24 | 250 | 2 |
| **135** | 180 | 365 | 120 | 170 | 54 | 550 | 450 | 90 | 45 | 36 | M30 | 270 | 3 |
| **140** | 190 | 385 | 106 | 180 | 58 | 600 | 490 | 105 | 45 | 36 | M30 | 290 | 3 |
| **140** | 155 | 310 | 85 | 150 | 45 | 480 | 390 | 90 | 35 | 30 | M24 | 240 | 3 |
| **140** | 180 | 360 | 110 | 200 | 55 | 540 | 430 | 110 | 35 | 30 | M24 | 270 | 3 |
| **140** | 190 | 385 | 130 | 180 | 58 | 600 | 490 | 105 | 45 | 36 | M30 | 290 | 3 |
| **150** | 200 | 405 | 111 | 200 | 62 | 640 | 525 | 110 | 45 | 36 | M30 | 310 | 3 |
| **150** | 165 | 330 | 90 | 160 | 50 | 510 | 420 | 95 | 45 | 36 | M30 | 260 | 2 |
| **150** | 190 | 380 | 120 | 200 | 55 | 570 | 470 | 110 | 45 | 36 | M30 | 280 | 3 |
| **150** | 200 | 405 | 135 | 200 | 62 | 640 | 525 | 110 | 45 | 36 | M30 | 310 | 3 |

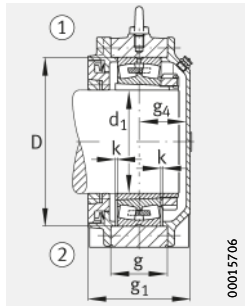
① Locating bearing AF; ② Non-locating bearing AL; ③ Locating bearing BF; ④ Non-locating bearing BL



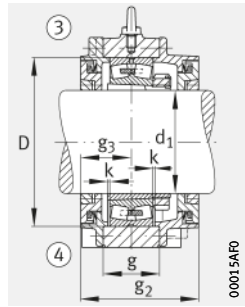

Design A
Housing with labyrinth seal




Design B




Design A
Housing with Taconite seal

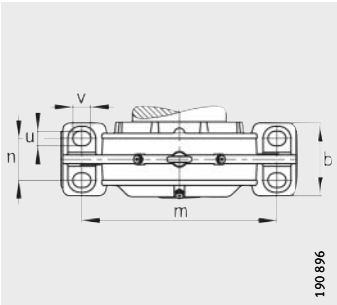


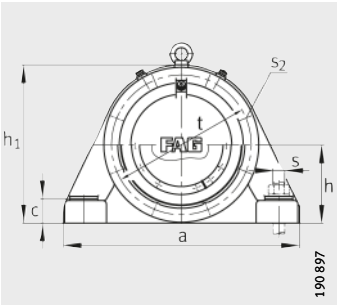

Design B

| | | | | | | | Spherical roller bearing and accessories | | Housing | |
|---|---|---|---|---|---|---|---|---|---|---|
| $g_1$ | $g_2$ | $g_3$ | $g_4$ min. | t | $s_2$ | Quantity | Bearing | Adapter sleeve | Mass m ≈ kg | Designation |
| 100 | 120 | 55 | 39 | 135 | M6 | 6 | **22213..-K** | H313 | 23 | **BND2213-H-W..-S** |
| 105 | 125 | 55 | 44 | 155 | M6 | 6 | **22215..-K** | H315 | 15 | **BND2215-H-W..-S** |
| 104 | 123 | 53 | 45 | 185 | M8 | 6 | **22218..-K** | H318 | 28 | **BND2218-H-W..-S** |
| 141 | 168 | 78 | 57 | 205 | M8 | 6 | **22220..-K** | H320 | 30 | **BND2220-H-W..-S** |
| 149,2 | 172 | 82,6 | 60 | 230 | M12 | 6 | **22222..-K** | H322 | 50 | **BND2222-H-W..-S** |
| 146 | 171 | 78 | 62 | 215 | M12 | 8 | **23122..-K** | H3122 | 40 | **BND3122-H-W..-S** |
| 166 | 194 | 91 | 68 | 230 | M12 | 6 | **23222..-K** | H2322 | 35 | **BND3222-H-W..-S** |
| 143 | 168 | 74 | 61 | 245 | M12 | 6 | **22224..-K** | H3124 | 58 | **BND2224-H-W..-S** |
| 126 | 146 | 63 | 57 | 205 | M8 | 8 | **23024..-K** | H3024 | 20 | **BND3024-H-W..-S** |
| 160 | 180 | 80 | 74 | 235 | M12 | 8 | **23124..-K** | H3124 | 50 | **BND3124-H-W..-S** |
| 161 | 186 | 83 | 70 | 245 | M12 | 6 | **23224..-K** | H2324 | 40 | **BND3224-H-W..-S** |
| 172 | 202 | 95 | 69 | 260 | M12 | 6 | **22226..-K** | H3126 | 65 | **BND2226-H-W..-S** |
| 133 | 156 | 68 | 59 | 225 | M10 | 8 | **23026..-K** | H3026 | 30 | **BND3026-H-W..-S** |
| 165 | 190 | 85 | 72 | 245 | M12 | 8 | **23126..-K** | H3126 | 55 | **BND3126-H-W..-S** |
| 188 | 218 | 103 | 77 | 260 | M12 | 6 | **23226..-K** | H2326 | 50 | **BND3226-H-W..-S** |
| 166 | 196 | 88 | 70 | 285 | M16 | 6 | **22228..-K** | H3128 | 70 | **BND2228-H-W..-S** |
| 136 | 156 | 68 | 61 | 240 | M10 | 8 | **23028..-K** | H3028 | 35 | **BND3028-H-W..-S** |
| 170 | 190 | 85 | 77 | 270 | M12 | 8 | **23128..-K** | H3128 | 60 | **BND3128-H-W..-S** |
| 186 | 216 | 98 | 80 | 285 | M16 | 6 | **23228..-K** | H2328 | 65 | **BND3228-H-W..-S** |
| 177 | 202 | 93,5 | 76 | 305 | M16 | 6 | **22230..-K** | H3130 | 85 | **BND2230-H-W..-S** |
| 149 | 176 | 78 | 64 | 250 | M12 | 8 | **23030..-K** | H3030 | 40 | **BND3030-H-W..-S** |
| 186 | 206 | 93 | 85 | 285 | M12 | 8 | **23130..-K** | H3130 | 70 | **BND3130-H-W..-S** |
| 200 | 225 | 105 | 87 | 305 | M16 | 6 | **23230..-K** | H2330 | 75 | **BND3230-H-W..-S** |
| 189 | 226 | 103 | 78 | 330 | M16 | 6 | **22232..-K** | H3132(-HG) | 100 | **BND2232-H-W..-S** |
| 156 | 181 | 78 | 71 | 265 | M12 | 8 | **23032..-K** | H3032(-HG) | 45 | **BND3032-H-W..-S** |
| 200 | 230 | 105 | 87 | 310 | M16 | 6 | **23132..-K** | H3132(-HG) | 80 | **BND3132-H-W..-S** |
| 213 | 250 | 115 | 90 | 330 | M16 | 6 | **23232..-K** | H2332(-HG) | 90 | **BND3232-H-W..-S** |
| 216 | 256 | 118 | 88 | 350 | M16 | 8 | **22234..-K** | H3134(-HG) | 105 | **BND2234-H-W..-S** |
| 166 | 191 | 83 | 75 | 285 | M12 | 8 | **23034..-K** | H3034(-HG) | 70 | **BND3034-H-W..-S** |
| 215 | 250 | 115 | 90 | 330 | M12 | 8 | **23134..-K** | H3134(-HG) | 100 | **BND3134-H-W..-S** |
| 240 | 280 | 130 | 100 | 350 | M16 | 8 | **23234..-K** | H2334(-HG) | 120 | **BND3234-H-W..-S** |

# Plummer block housings

BND, unsplit
For spherical roller bearings with tapered bore and adapter sleeve

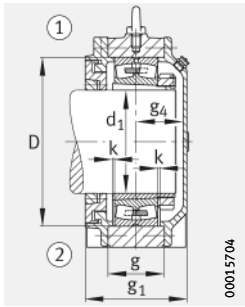


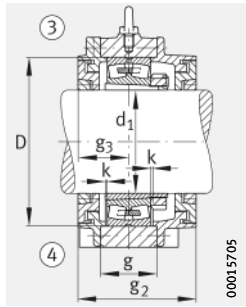

**Dimension table** (continued) · Dimensions in mm

| Shaft | Housing Dimensions | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_1$ | h | $h_1$ | g | b | c | a | m | n | v | u | s | D | k |
| **160** | 210 | 425 | 112 | 210 | 65 | 680 | 550 | 120 | 45 | 36 | M30 | 320 | 3 |
| **160** | 180 | 360 | 100 | 170 | 52 | 540 | 450 | 100 | 45 | 36 | M30 | 280 | 3 |
| **160** | 200 | 395 | 125 | 200 | 58 | 600 | 490 | 105 | 45 | 36 | M30 | 300 | 3 |
| **160** | 210 | 425 | 138 | 210 | 65 | 680 | 550 | 120 | 45 | 36 | M30 | 320 | 3 |
| **170** | 220 | 455 | 115 | 220 | 85 | 710 | 560 | 120 | 52 | 42 | M36 | 340 | 3 |
| **170** | 185 | 370 | 105 | 180 | 55 | 570 | 480 | 105 | 45 | 36 | M30 | 290 | 3 |
| **170** | 210 | 425 | 130 | 210 | 65 | 680 | 550 | 120 | 45 | 36 | M30 | 320 | 3 |
| **170** | 220 | 455 | 143 | 220 | 85 | 710 | 560 | 120 | 52 | 42 | M36 | 340 | 3 |
| **180** | 235 | 475 | 128 | 240 | 75 | 780 | 640 | 140 | 52 | 42 | M36 | 360 | 4 |
| **180** | 200 | 400 | 110 | 190 | 60 | 600 | 510 | 110 | 45 | 36 | M30 | 310 | 3 |
| **180** | 220 | 455 | 135 | 220 | 85 | 710 | 560 | 120 | 52 | 42 | M36 | 340 | 3 |
| **180** | 235 | 475 | 158 | 240 | 75 | 780 | 640 | 140 | 52 | 42 | M36 | 360 | 4 |
| **200** | 270 | 550 | 140 | 250 | 80 | 890 | 720 | 140 | 52 | 42 | M36 | 400 | 4 |
| **200** | 215 | 430 | 115 | 200 | 65 | 640 | 540 | 115 | 52 | 42 | M36 | 340 | 3 |
| **200** | 235 | 475 | 150 | 240 | 75 | 780 | 640 | 140 | 52 | 42 | M36 | 370 | 4 |
| **200** | 260 | 525 | 175 | 250 | 80 | 850 | 700 | 140 | 52 | 42 | M36 | 400 | 4 |
| **220** | 290 | 585 | 150 | 250 | 90 | 900 | 750 | 140 | 52 | 42 | M36 | 440 | 4 |
| **220** | 225 | 455 | 120 | 210 | 70 | 680 | 560 | 120 | 52 | 42 | M36 | 360 | 4 |
| **220** | 270 | 550 | 160 | 250 | 80 | 890 | 720 | 140 | 52 | 42 | M36 | 400 | 4 |
| **220** | 290 | 585 | 190 | 250 | 90 | 900 | 750 | 140 | 52 | 42 | M36 | 440 | 4 |
| **240** | 310 | 625 | 161 | 290 | 95 | 960 | 800 | 160 | 52 | 42 | M36 | 480 | 3 |
| **240** | 250 | 500 | 130 | 220 | 75 | 720 | 600 | 130 | 52 | 42 | M36 | 400 | 4 |
| **240** | 290 | 585 | 174 | 250 | 90 | 900 | 750 | 140 | 52 | 42 | M36 | 440 | 4 |
| **240** | 310 | 625 | 205 | 290 | 95 | 960 | 800 | 160 | 52 | 42 | M36 | 480 | 3 |
| **260** | 320 | 645 | 160 | 300 | 100 | 1 000 | 840 | 170 | 52 | 42 | M36 | 500 | 4 |
| **260** | 260 | 520 | 135 | 240 | 80 | 760 | 630 | 140 | 52 | 42 | M36 | 420 | 4 |
| **260** | 290 | 585 | 176 | 250 | 90 | 900 | 750 | 140 | 52 | 42 | M36 | 460 | 4 |
| **260** | 320 | 645 | 206 | 300 | 100 | 1 000 | 840 | 170 | 52 | 42 | M36 | 500 | 4 |

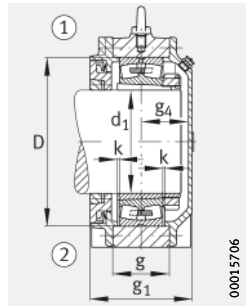
① Locating bearing AF; ② Non-locating bearing AL; ③ Locating bearing BF; ④ Non-locating bearing BL



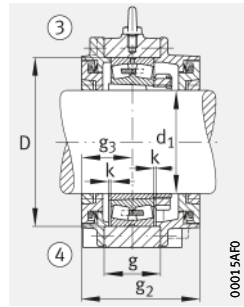

Design A
Housing with labyrinth seal




Design B




Design A
Housing with Taconite seal

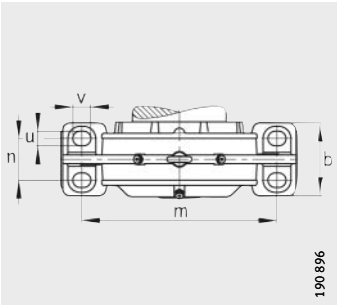


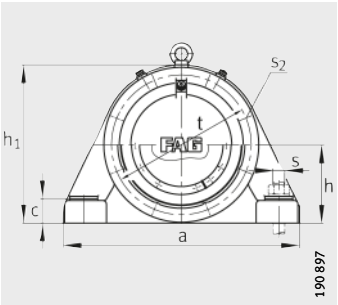

Design B

| | | | | | | | Spherical roller bearing and accessories | | Housing | |
|---|---|---|---|---|---|---|---|---|---|---|
| $g_1$ | $g_2$ | $g_3$ | $g_4$ min. | t | $s_2$ | Quantity | Bearing | Adapter sleeve | Mass m ≈ kg | Designation |
| 214 | 248 | 114 | 92 | 370 | M16 | 8 | **22236..-K** | H3136(-HG) | 130 | **BND2236-H-W..-S** |
| 176 | 201 | 88 | 80 | 310 | M12 | 8 | **23036..-K** | H3036(-HG) | 70 | **BND3036-H-W..-S** |
| 220 | 250 | 115 | 95 | 350 | M16 | 8 | **23136..-K** | H3136(-HG) | 110 | **BND3136-H-W..-S** |
| 240 | 274 | 127 | 105 | 370 | M16 | 8 | **23236..-K** | H2336(-HG) | 140 | **BND3236-H-W..-S** |
| 222 | 258 | 114 | 98 | 380 | M16 | 8 | **22238..-K** | H3138(-HG) | 170 | **BND2238-H-W..-S** |
| 181 | 211 | 93 | 80 | 325 | M12 | 8 | **23038..-K** | H3038(-HG) | 80 | **BND3038-H-W..-S** |
| 232 | 266 | 123 | 98 | 370 | M16 | 8 | **23138..-K** | H3138(-HG) | 125 | **BND3138-H-W..-S** |
| 250 | 286 | 128 | 112 | 380 | M16 | 8 | **23228..-K** | H2338(-HG) | 170 | **BND3238-H-W..-S** |
| 230 | 269 | 123 | 99 | 420 | M16 | 8 | **22240..-K** | H3140(-HG) | 185 | **BND2240-H-W..-S** |
| 196 | 226 | 98 | 90 | 340 | M16 | 8 | **23040..-K** | H3040(-HG) | 95 | **BND3040-H-W..-S** |
| 242 | 278 | 124 | 108 | 380 | M16 | 8 | **23140..-K** | H3140(-HG) | 170 | **BND3140-H-W..-S** |
| 260 | 299 | 138 | 114 | 420 | M16 | 8 | **23240..-K** | H2340(-HG) | 205 | **BND3240-H-W..-S** |
| 264 | 314 | 142 | 112 | 455 | M20 | 8 | **22244..-K** | H3144X(-HG) | 290 | **BND2244-H-W..-S** |
| 206 | 241 | 103 | 95 | 375 | M16 | 8 | **23044..-K** | H3044X(-HG) | 100 | **BND3044-H-W..-S** |
| 252 | 291 | 134 | 110 | 420 | M16 | 8 | **23144..-K** | H3144X(-HG) | 190 | **BND3144-H-W..-S** |
| 279 | 329 | 147 | 122 | 445 | M20 | 8 | **23244..-K** | H2344X(-HG) | 240 | **BND3244-H-W..-S** |
| 268 | 311 | 138 | 120 | 510 | M20 | 8 | **22248..-K** | H3148X(-HG) | 315 | **BND2248-H-W..-S** |
| 216 | 251 | 108 | 100 | 400 | M16 | 8 | **23048..-K** | H3048(-HG) | 130 | **BND3048-H-W..-S** |
| 284 | 334 | 152 | 122 | 455 | M20 | 8 | **23148..-K** | H3148X(-HG) | 280 | **BND3148-H-W..-S** |
| 308 | 351 | 158 | 140 | 510 | M20 | 8 | **23248..-K** | H2348X(-HG) | 330 | **BND3248-H-W..-S** |
| 286 | 326 | 148 | 126 | 535 | M20 | 8 | **22252..-K** | H3152X(-HG) | 370 | **BND2252-H-W..-S** |
| 226 | 261 | 113 | 103 | 440 | M16 | 8 | **23052..-K** | H3052X(-HG) | 160 | **BND3052-H-W..-S** |
| 292 | 335 | 150 | 132 | 510 | M20 | 8 | **23152..-K** | H3152X(-HG) | 310 | **BND3152-H-W..-S** |
| 330 | 370 | 170 | 148 | 535 | M20 | 8 | **23252..-K** | H2352X(-HG) | 380 | **BND3252-H-W..-S** |
| 297 | 354 | 157 | 128 | 555 | M24 | 8 | **22256..-K** | H3156X(-HG) | 420 | **BND2256-H-W..-S** |
| 236 | 281 | 118 | 108 | 460 | M16 | 8 | **23056..-K** | H3056(-HG) | 180 | **BND3056-H-W..-S** |
| 294 | 337 | 151 | 133 | 510 | M20 | 8 | **23156..-K** | H3156X(-HG) | 335 | **BND3156-H-W..-S** |
| 343 | 400 | 180 | 151 | 555 | M24 | 8 | **23256..-K** | H2356X(-HG) | 490 | **BND3256-H-W..-S** |

# Plummer block housings

BND, unsplit
For spherical roller bearings with tapered bore and adapter sleeve

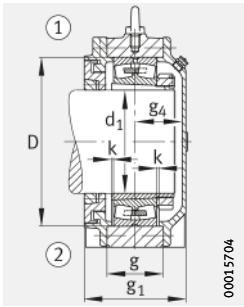


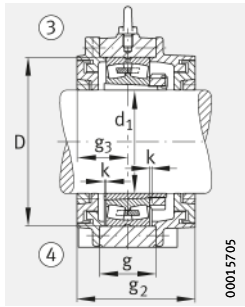

**Dimension table** (continued) · Dimensions in mm

| Shaft | Housing Dimensions | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_1$ | h | $h_1$ | g | b | c | a | m | n | v | u | s | D | k |
| **280** | 350 | 695 | 178 | 330 | 105 | 1 100 | 920 | 180 | 75 | 56 | M48 | 540 | 4 |
| **280** | 285 | 570 | 140 | 250 | 85 | 820 | 690 | 150 | 52 | 42 | M36 | 460 | 4 |
| **280** | 320 | 645 | 190 | 300 | 100 | 1 000 | 840 | 170 | 52 | 42 | M36 | 500 | 4 |
| **280** | 350 | 705 | 230 | 330 | 105 | 1 100 | 920 | 180 | 75 | 56 | M48 | 540 | 4 |
| **300** | 370 | 745 | 180 | 360 | 115 | 1 150 | 960 | 200 | 75 | 56 | M48 | 580 | 5 |
| **300** | 295 | 590 | 150 | 260 | 90 | 860 | 730 | 160 | 52 | 42 | M36 | 480 | 4 |
| **300** | 350 | 700 | 210 | 300 | 100 | 1 150 | 940 | 160 | 52 | 42 | M36 | 540 | 4 |
| **300** | 370 | 745 | 238 | 360 | 115 | 1 150 | 960 | 200 | 75 | 56 | M48 | 580 | 5 |
| **320** | 390 | 790 | 201 | 380 | 125 | 1 200 | 990 | 200 | 85 | 64 | M56 | 620 | 5 |
| **320** | 315 | 630 | 160 | 270 | 95 | 900 | 770 | 170 | 52 | 42 | M36 | 520 | 5 |
| **320** | 370 | 745 | 220 | 360 | 115 | 1 150 | 960 | 200 | 75 | 56 | M48 | 580 | 5 |
| **320** | 390 | 790 | 260 | 380 | 125 | 1 200 | 990 | 200 | 85 | 64 | M56 | 620 | 5 |
| **340** | 410 | 820 | 205 | 400 | 130 | 1 280 | 1 040 | 210 | 90 | 72 | M64 | 650 | 5 |
| **340** | 330 | 660 | 170 | 280 | 100 | 960 | 820 | 180 | 52 | 42 | M36 | 540 | 5 |
| **340** | 380 | 760 | 225 | 370 | 115 | 1 200 | 1 000 | 200 | 75 | 56 | M48 | 600 | 4 |
| **340** | 410 | 820 | 267 | 400 | 130 | 1 280 | 1 040 | 210 | 90 | 72 | M64 | 650 | 5 |
| **360** | 425 | 865 | 230 | 405 | 135 | 1 350 | 1 100 | 225 | 90 | 72 | M64 | 680 | 5 |
| **360** | 340 | 680 | 160 | 300 | 105 | 1 000 | 840 | 190 | 75 | 56 | M48 | 560 | 7 |
| **360** | 390 | 790 | 230 | 380 | 125 | 1 200 | 1 000 | 200 | 85 | 64 | M56 | 620 | 5 |
| **360** | 425 | 860 | 295 | 405 | 135 | 1 350 | 1 100 | 225 | 90 | 72 | M64 | 680 | 5 |
| **380** | 450 | 900 | 229 | 450 | 145 | 1 430 | 1 160 | 240 | 90 | 72 | M64 | 720 | 5 |
| **380** | 360 | 720 | 175 | 320 | 110 | 1 060 | 900 | 200 | 75 | 56 | M48 | 600 | 7 |
| **380** | 410 | 820 | 235 | 400 | 130 | 1 280 | 1 040 | 210 | 90 | 72 | M64 | 650 | 5 |
| **380** | 450 | 900 | 300 | 450 | 145 | 1 430 | 1 160 | 240 | 90 | 72 | M64 | 720 | 5 |
| **400** | 470 | 950 | 238 | 470 | 150 | 1 500 | 1 220 | 255 | 90 | 72 | M64 | 760 | 5 |
| **400** | 375 | 755 | 180 | 340 | 115 | 1 100 | 940 | 210 | 75 | 56 | M48 | 620 | 7 |
| **400** | 450 | 900 | 260 | 420 | 135 | 1 350 | 1 100 | 210 | 85 | 64 | M56 | 700 | 7 |
| **400** | 470 | 950 | 315 | 470 | 150 | 1 500 | 1 220 | 255 | 90 | 72 | M64 | 760 | 5 |

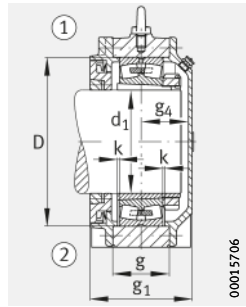
① Locating bearing AF; ② Non-locating bearing AL; ③ Locating bearing BF; ④ Non-locating bearing BL



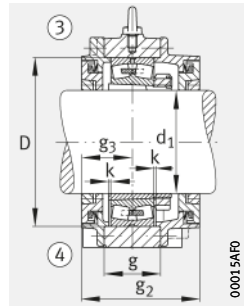

Design A
Housing with labyrinth seal




Design B




Design A
Housing with Taconite seal

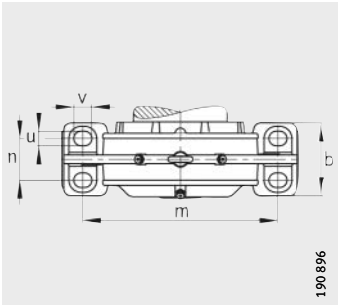


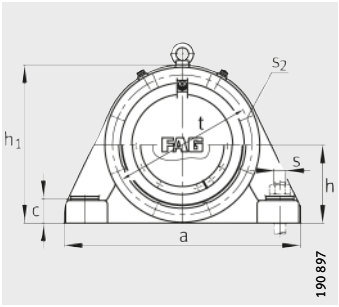

Design B

| | | | | | | | Spherical roller bearing and accessories | | Housing | |
|---|---|---|---|---|---|---|---|---|---|---|
| $g_1$ | $g_2$ | $g_3$ | $g_4$ min. | t | $s_2$ | Quantity | Bearing | Adapter sleeve | Mass m ≈ kg | Designation |
| 317 | 156 | 352 | 149 | 600 | M24 | 8 | **22260..-K** | H3160(-HG) | 485 | **BND2260-H-W..-S** |
| 261 | 128 | 296 | 121 | 510 | M16 | 8 | **23060..-K** | H3060(-HG) | 220 | **BND3060-H-W..-S** |
| 327 | 172 | 384 | 143 | 555 | M24 | 8 | **23160..-K** | H3160(-HG) | 400 | **BND3160-H-W..-S** |
| 369 | 182 | 404 | 175 | 600 | M24 | 8 | **23260..-K** | H3260(-HG) | 570 | **BND3260-H-W..-S** |
| 333 | 163 | 381 | 158 | 640 | M24 | 8 | **22264..-K** | H3164-HG | 600 | **BND2264-H-W..-S** |
| 266 | 133 | 311 | 123 | 530 | M16 | 8 | **23064..-K** | H3064-HG | 250 | **BND3064-H-W..-S** |
| 359 | 186 | 412 | 161 | 590 | M24 | 8 | **23164..-K** | H3164-HG | 500 | **BND3164-H-W..-S** |
| 391 | 192 | 439 | 187 | 640 | M24 | 8 | **23264..-K** | H3264-HG | 665 | **BND3264-H-W..-S** |
| 375 | 187,5 | 430 | 176 | 680 | M30 | 8 | **22268..-K** | H3168-HG | 635 | **BND2268-H-W..-S** |
| 276 | 133 | 311 | 132 | 565 | M20 | 8 | **23068..-K** | H3068-HG | 300 | **BND3068-H-W..-S** |
| 373 | 183 | 421 | 178 | 640 | M24 | 8 | **23168..-K** | H3168-HG | 520 | **BND3168-H-W..-S** |
| 434 | 217 | 489 | 205 | 680 | M30 | 8 | **23268..-K** | H3268-HG | 755 | **BND3268-H-W..-S** |
| 375 | 185 | 435 | 178 | 710 | M30 | 8 | **22272..-K** | H3172-HG | 690 | **BND2272-H-W..-S** |
| 290 | 140 | 325 | 138 | 590 | M20 | 8 | **23072..-K** | H3072-HG | 330 | **BND3072-H-W..-S** |
| 400 | 200 | 450 | 188 | 650 | M24 | 8 | **23172..-K** | H3172-HG | 600 | **BND3172-H-W..-S** |
| 437 | 216 | 497 | 209 | 710 | M30 | 8 | **23272..-K** | H3272-HG | 950 | **BND3272-H-W..-S** |
| 433 | 203 | 470 | 218 | 745 | M30 | 8 | **22276..-K** | H3176-HG | 900 | **BND2276-H-W..-S** |
| 294 | 142 | 329 | 141 | 610 | M20 | 8 | **23076..-K** | H3076-HG | 360 | **BND3076-H-W..-S** |
| 404 | 202 | 459 | 190 | 680 | M30 | 8 | **23176..-K** | H3176-HG | 720 | **BND3176-H-W..-S** |
| 489 | 232 | 529 | 244 | 745 | M30 | 8 | **23276..-K** | H3276-HG | 1 100 | **BND3276-H-W..-S** |
| 433 | 216,5 | 498 | 202 | 790 | M30 | 8 | **22280..-K** | H3180-HG | 940 | **BND2280-H-W..-S** |
| 310 | 150 | 355 | 145 | 650 | M20 | 8 | **23080..-K** | H3080-HG | 400 | **BND3080-H-W..-S** |
| 405 | 200 | 465 | 193 | 710 | M30 | 8 | **23180..-K** | H3180-HG | 750 | **BND3180-H-W..-S** |
| 504 | 252 | 569 | 237 | 790 | M30 | 8 | **23280..-K** | H3280-HG | 1 205 | **BND3280-H-W..-S** |
| 433 | 216,5 | 498 | 202 | 835 | M30 | 8 | **22284..-K** | H3184-HG | 1 055 | **BND2284-H-W..-S** |
| 310 | 150 | 350 | 149 | 670 | M20 | 8 | **23084..-K** | H3084X-HG | 435 | **BND3084-H-W..-S** |
| 440 | 210 | 510 | 215 | 760 | M30 | 8 | **23184..-K** | H3184-HG | 950 | **BND3184-H-W..-S** |
| 510 | 255 | 575 | 240 | 835 | M30 | 8 | **23284..-K** | H3284-HG | 1 310 | **BND3284-H-W..-S** |

# Plummer block housings

BND, unsplit
For spherical roller bearings with tapered bore and adapter sleeve
Stepped shaft

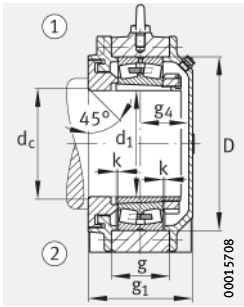


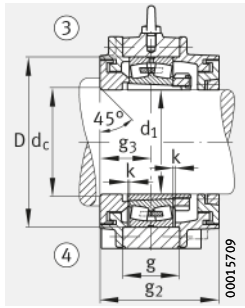

**Dimension table** · Dimensions in mm

| Shaft | | Housing Dimensions | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_1$ | $d_c$ max. | h | $h_1$ | g | b | c | a | m | n | v | u | s | D |
| **60** | 66 | 80 | 155 | 44 | 70 | 22 | 235 | 185 | 40 | 20 | 15 | M10 | 120 |
| **65** | 71 | 90 | 180 | 45 | 85 | 35 | 285 | 225 | 45 | 28 | 20 | M16 | 130 |
| **80** | 88 | 110 | 220 | 55 | 110 | 38 | 370 | 290 | 60 | 32 | 23 | M20 | 160 |
| **90** | 98 | 130 | 255 | 65 | 120 | 40 | 400 | 320 | 65 | 35 | 30 | M24 | 180 |
| **100** | 108 | 140 | 280 | 73 | 130 | 42 | 440 | 350 | 70 | 35 | 30 | M24 | 200 |
| **100** | 108 | 130 | 263 | 80 | 140 | 40 | 400 | 300 | 80 | 35 | 25 | M20 | 180 |
| **100** | 108 | 140 | 280 | 89,8 | 130 | 42 | 440 | 350 | 70 | 35 | 30 | M24 | 200 |
| **110** | 118 | 150 | 300 | 77 | 140 | 42 | 470 | 370 | 75 | 35 | 30 | M24 | 215 |
| **110** | 118 | 115 | 230 | 60 | 110 | 35 | 370 | 300 | 60 | 35 | 25 | M20 | 180 |
| **110** | 118 | 140 | 280 | 85 | 150 | 40 | 410 | 330 | 80 | 35 | 25 | M20 | 200 |
| **110** | 118 | 150 | 300 | 95 | 140 | 42 | 470 | 370 | 75 | 35 | 30 | M24 | 215 |
| **115** | 127 | 160 | 315 | 84 | 150 | 45 | 500 | 400 | 85 | 35 | 30 | M24 | 230 |
| **115** | 123 | 130 | 260 | 70 | 120 | 38 | 410 | 340 | 60 | 35 | 25 | M20 | 200 |
| **115** | 123 | 145 | 295 | 90 | 150 | 40 | 430 | 350 | 80 | 35 | 25 | M20 | 210 |
| **115** | 127 | 160 | 315 | 100 | 150 | 45 | 500 | 400 | 85 | 35 | 30 | M24 | 230 |
| **125** | 137 | 170 | 345 | 88 | 160 | 50 | 530 | 430 | 85 | 35 | 30 | M24 | 250 |
| **125** | 133 | 140 | 275 | 70 | 130 | 40 | 430 | 360 | 70 | 35 | 30 | M24 | 210 |
| **125** | 133 | 155 | 315 | 95 | 160 | 45 | 470 | 380 | 85 | 35 | 25 | M20 | 225 |
| **125** | 137 | 170 | 345 | 108 | 160 | 50 | 530 | 430 | 85 | 35 | 30 | M24 | 250 |
| **135** | 147 | 180 | 365 | 97 | 170 | 54 | 550 | 450 | 90 | 45 | 36 | M30 | 270 |
| **135** | 143 | 145 | 290 | 80 | 140 | 42 | 455 | 370 | 80 | 35 | 30 | M24 | 225 |
| **135** | 143 | 170 | 345 | 102 | 200 | 60 | 580 | 450 | 110 | 35 | 30 | M24 | 250 |
| **135** | 147 | 180 | 365 | 120 | 170 | 54 | 550 | 450 | 90 | 45 | 36 | M30 | 270 |
| **140** | 152 | 190 | 385 | 106 | 180 | 58 | 600 | 490 | 105 | 45 | 36 | M30 | 290 |
| **140** | 148 | 155 | 310 | 85 | 150 | 45 | 480 | 390 | 90 | 35 | 30 | M24 | 240 |
| **140** | 148 | 180 | 360 | 110 | 200 | 55 | 540 | 430 | 110 | 35 | 30 | M24 | 270 |
| **140** | 152 | 190 | 385 | 130 | 180 | 58 | 600 | 490 | 105 | 45 | 36 | M30 | 290 |
| **150** | 166 | 200 | 405 | 111 | 200 | 62 | 640 | 525 | 110 | 45 | 36 | M30 | 310 |
| **150** | 158 | 165 | 330 | 90 | 160 | 50 | 510 | 420 | 95 | 45 | 36 | M30 | 260 |
| **150** | 158 | 190 | 380 | 120 | 200 | 55 | 570 | 470 | 110 | 45 | 36 | M30 | 280 |
| **150** | 166 | 200 | 405 | 135 | 200 | 62 | 640 | 525 | 110 | 45 | 36 | M30 | 310 |

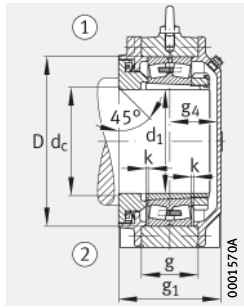
① Locating bearing AF; ② Non-locating bearing AL; ③ Locating bearing BF; ④ Non-locating bearing BL



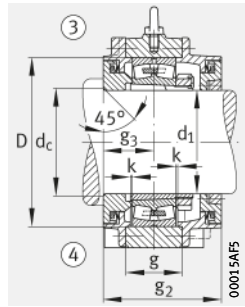

Design A
Housing with labyrinth seal




Design B




Design A
Housing with Taconite seal

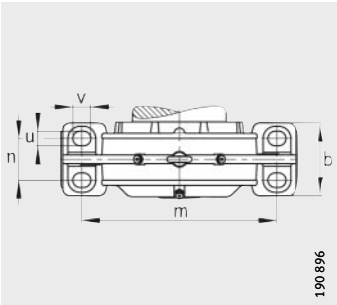


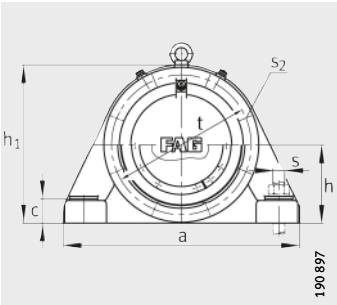

Design B

| | | | | | | | | Spherical roller bearing and accessories | | Housing | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| k | $g_1$ | $g_2$ | $g_3$ | $g_4$ min. | t | $s_2$ | Quantity | Bearing | Adapter sleeve | Mass m ≈ kg | Designation |
| 2 | 100 | 120 | 55 | 39 | 135 | M6 | 6 | **22213..-K** | H313 | 23 | **BND2213-H-C..-S** |
| 2 | 105 | 125 | 55 | 44 | 155 | M6 | 6 | **22215..-K** | H315 | 15 | **BND2215-H-C..-S** |
| 2 | 104 | 123 | 53 | 45 | 185 | M8 | 6 | **22218..-K** | H318 | 28 | **BND2218-H-C..-S** |
| 2,5 | 141 | 168 | 78 | 57 | 205 | M8 | 6 | **22220..-K** | H320 | 30 | **BND2220-H-C..-S** |
| 2,5 | 149,2 | 172 | 82,6 | 60 | 230 | M12 | 6 | **22222..-K** | H322 | 50 | **BND2222-H-C..-S** |
| 2,5 | 146 | 171 | 78 | 62 | 215 | M12 | 8 | **23122..-K** | H3122 | 40 | **BND3122-H-C..-S** |
| 2,5 | 166 | 194 | 91 | 68 | 230 | M12 | 6 | **23222..-K** | H2322 | 35 | **BND3222-H-C..-S** |
| 2,5 | 143 | 168 | 74 | 61 | 245 | M12 | 6 | **22224..-K** | H3124 | 58 | **BND2224-H-C..-S** |
| 2,5 | 126 | 146 | 63 | 57 | 205 | M8 | 8 | **23024..-K** | H3024 | 20 | **BND3024-H-C..-S** |
| 2,5 | 160 | 180 | 80 | 74 | 235 | M12 | 8 | **23124..-K** | H3124 | 50 | **BND3124-H-C..-S** |
| 2,5 | 161 | 186 | 83 | 70 | 245 | M12 | 6 | **23224..-K** | H2324 | 40 | **BND3224-H-C..-S** |
| 3 | 172 | 202 | 95 | 69 | 260 | M12 | 6 | **22226..-K** | H3126 | 65 | **BND2226-H-C..-S** |
| 2 | 133 | 156 | 68 | 59 | 225 | M10 | 8 | **23026..-K** | H3026 | 30 | **BND3026-H-C..-S** |
| 3 | 165 | 190 | 85 | 72 | 245 | M12 | 8 | **23126..-K** | H3126 | 55 | **BND3126-H-C..-S** |
| 3 | 188 | 218 | 103 | 77 | 260 | M12 | 6 | **23226..-K** | H2326 | 50 | **BND3226-H-C..-S** |
| 3 | 166 | 196 | 88 | 70 | 285 | M16 | 6 | **22228..-K** | H3128 | 70 | **BND2228-H-C..-S** |
| 3 | 136 | 156 | 68 | 61 | 240 | M10 | 8 | **23028..-K** | H3028 | 35 | **BND3028-H-C..-S** |
| 3 | 170 | 190 | 85 | 77 | 270 | M12 | 8 | **23128..-K** | H3128 | 60 | **BND3128-H-C..-S** |
| 3 | 186 | 216 | 98 | 80 | 285 | M16 | 6 | **23228..-K** | H2328 | 65 | **BND3228-H-C..-S** |
| 3 | 177 | 202 | 93,5 | 76 | 305 | M16 | 6 | **22230..-K** | H3130 | 85 | **BND2230-H-C..-S** |
| 2 | 149 | 176 | 78 | 64 | 250 | M12 | 8 | **23030..-K** | H3030 | 40 | **BND3030-H-C..-S** |
| 2 | 186 | 206 | 93 | 85 | 285 | M12 | 8 | **23130..-K** | H3130 | 70 | **BND3130-H-C..-S** |
| 3 | 200 | 225 | 105 | 87 | 305 | M16 | 6 | **23230..-K** | H2330 | 75 | **BND3230-H-C..-S** |
| 3 | 189 | 226 | 103 | 78 | 330 | M16 | 6 | **22232..-K** | H3132(-HG) | 100 | **BND2232-H-C..-S** |
| 3 | 156 | 181 | 78 | 71 | 265 | M12 | 8 | **23032..-K** | H3032(-HG) | 45 | **BND3032-H-C..-S** |
| 3 | 200 | 230 | 105 | 87 | 310 | M16 | 6 | **23132..-K** | H3132(-HG) | 80 | **BND3132-H-C..-S** |
| 3 | 213 | 250 | 115 | 90 | 330 | M16 | 6 | **23232..-K** | H2332(-HG) | 90 | **BND3232-H-C..-S** |
| 3 | 216 | 256 | 118 | 88 | 350 | M16 | 8 | **22234..-K** | H3134(-HG) | 105 | **BND2234-H-C..-S** |
| 2 | 166 | 191 | 83 | 75 | 285 | M12 | 8 | **23034..-K** | H3034(-HG) | 70 | **BND3034-H-C..-S** |
| 3 | 215 | 250 | 115 | 90 | 330 | M12 | 8 | **23134..-K** | H3134(-HG) | 100 | **BND3134-H-C..-S** |
| 3 | 240 | 280 | 130 | 100 | 350 | M16 | 8 | **23234..-K** | H2334(-HG) | 120 | **BND3234-H-C..-S** |

# Plummer block housings

BND, unsplit
For spherical roller bearings with tapered bore and adapter sleeve
Stepped shaft

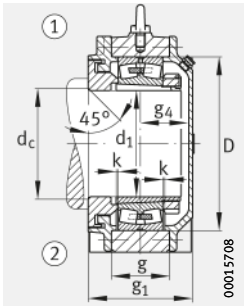


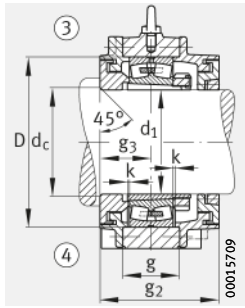

**Dimension table** (continued) · Dimensions in mm

| Shaft | | Housing Dimensions | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_1$ | $d_c$ max. | h | $h_1$ | g | b | c | a | m | n | v | u | s | D |
| **160** | 176 | 210 | 425 | 112 | 210 | 65 | 680 | 550 | 120 | 45 | 36 | M30 | 320 |
| **160** | 168 | 180 | 360 | 100 | 170 | 52 | 540 | 450 | 100 | 45 | 36 | M30 | 280 |
| **160** | 172 | 200 | 395 | 125 | 200 | 58 | 600 | 490 | 105 | 45 | 36 | M30 | 300 |
| **160** | 176 | 210 | 425 | 138 | 210 | 65 | 680 | 550 | 120 | 45 | 36 | M30 | 320 |
| **170** | 186 | 220 | 455 | 115 | 220 | 85 | 710 | 560 | 120 | 52 | 42 | M36 | 340 |
| **170** | 178 | 185 | 370 | 105 | 180 | 55 | 570 | 480 | 105 | 45 | 36 | M30 | 290 |
| **170** | 182 | 210 | 425 | 130 | 210 | 65 | 680 | 550 | 120 | 45 | 36 | M30 | 320 |
| **170** | 186 | 220 | 455 | 143 | 220 | 85 | 710 | 560 | 120 | 52 | 42 | M36 | 340 |
| **180** | 196 | 235 | 475 | 128 | 240 | 75 | 780 | 640 | 140 | 52 | 42 | M36 | 360 |
| **180** | 188 | 200 | 400 | 110 | 190 | 60 | 600 | 510 | 110 | 45 | 36 | M30 | 310 |
| **180** | 192 | 220 | 455 | 135 | 220 | 85 | 710 | 560 | 120 | 52 | 42 | M36 | 340 |
| **180** | 196 | 235 | 475 | 158 | 240 | 75 | 780 | 640 | 140 | 52 | 42 | M36 | 360 |
| **200** | 216 | 270 | 550 | 140 | 250 | 80 | 890 | 720 | 140 | 52 | 42 | M36 | 400 |
| **200** | 212 | 215 | 430 | 115 | 200 | 65 | 640 | 540 | 115 | 52 | 42 | M36 | 340 |
| **200** | 216 | 235 | 475 | 150 | 240 | 75 | 780 | 640 | 140 | 52 | 42 | M36 | 370 |
| **200** | 216 | 260 | 525 | 175 | 250 | 80 | 850 | 700 | 140 | 52 | 42 | M36 | 400 |
| **220** | 236 | 290 | 585 | 150 | 250 | 90 | 900 | 750 | 140 | 52 | 42 | M36 | 440 |
| **220** | 232 | 225 | 455 | 120 | 210 | 70 | 680 | 560 | 120 | 52 | 42 | M36 | 360 |
| **220** | 236 | 270 | 550 | 160 | 250 | 80 | 890 | 720 | 140 | 52 | 42 | M36 | 400 |
| **220** | 236 | 290 | 585 | 190 | 250 | 90 | 900 | 750 | 140 | 52 | 42 | M36 | 440 |
| **240** | 260 | 310 | 625 | 161 | 290 | 95 | 960 | 800 | 160 | 52 | 42 | M36 | 480 |
| **240** | 256 | 250 | 500 | 130 | 220 | 75 | 720 | 600 | 130 | 52 | 42 | M36 | 400 |
| **240** | 256 | 290 | 585 | 174 | 250 | 90 | 900 | 750 | 140 | 52 | 42 | M36 | 440 |
| **240** | 260 | 310 | 625 | 205 | 290 | 95 | 960 | 800 | 160 | 52 | 42 | M36 | 480 |
| **260** | 280 | 320 | 645 | 160 | 300 | 100 | 1 000 | 840 | 170 | 52 | 42 | M36 | 500 |
| **260** | 276 | 260 | 520 | 135 | 240 | 80 | 760 | 630 | 140 | 52 | 42 | M36 | 420 |
| **260** | 280 | 290 | 585 | 176 | 250 | 90 | 900 | 750 | 140 | 52 | 42 | M36 | 460 |
| **260** | 280 | 320 | 645 | 206 | 300 | 100 | 1 000 | 840 | 170 | 52 | 42 | M36 | 500 |

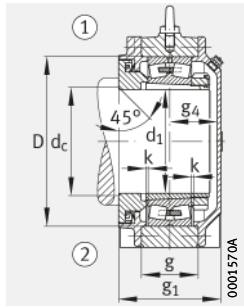
① Locating bearing AF; ② Non-locating bearing AL; ③ Locating bearing BF; ④ Non-locating bearing BL



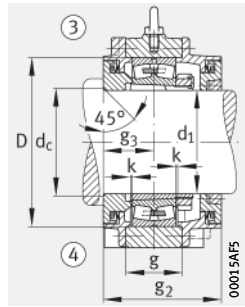

Design A
Housing with labyrinth seal




Design B




Design A
Housing with Taconite seal

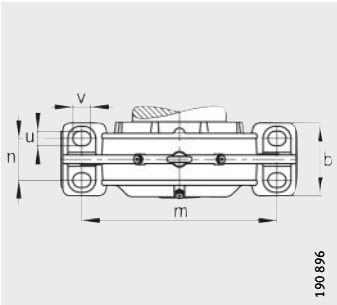


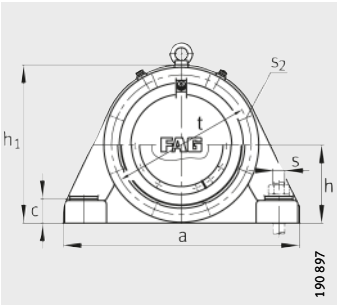

Design B

| | | | | | | | | Spherical roller bearing and accessories | | Housing | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| k | $g_1$ | $g_2$ | $g_3$ | $g_4$ min. | t | $s_2$ | Quantity | Bearing | Adapter sleeve | Mass m ≈ kg | Designation |
| 3 | 214 | 248 | 114 | 92 | 370 | M16 | 8 | **22236..-K** | H3136(-HG) | 130 | **BND2236-H-C..-S** |
| 3 | 176 | 201 | 88 | 80 | 310 | M12 | 8 | **23036..-K** | H3036(-HG) | 70 | **BND3036-H-C..-S** |
| 3 | 220 | 250 | 115 | 95 | 350 | M16 | 8 | **23136..-K** | H3136(-HG) | 110 | **BND3136-H-C..-S** |
| 3 | 240 | 274 | 127 | 105 | 370 | M16 | 8 | **23236..-K** | H2336(-HG) | 140 | **BND3236-H-C..-S** |
| 3 | 222 | 258 | 114 | 98 | 380 | M16 | 8 | **22238..-K** | H3138(-HG) | 170 | **BND2238-H-C..-S** |
| 3 | 181 | 211 | 93 | 80 | 325 | M12 | 8 | **23038..-K** | H3038(-HG) | 80 | **BND3038-H-C..-S** |
| 3 | 232 | 266 | 123 | 98 | 370 | M16 | 8 | **23138..-K** | H3138(-HG) | 125 | **BND3138-H-C..-S** |
| 3 | 250 | 286 | 128 | 112 | 380 | M16 | 8 | **23228..-K** | H2338(-HG) | 170 | **BND3238-H-C..-S** |
| 4 | 230 | 269 | 123 | 99 | 420 | M16 | 8 | **22240..-K** | H3140(-HG) | 185 | **BND2240-H-C..-S** |
| 3 | 196 | 226 | 98 | 90 | 340 | M16 | 8 | **23040..-K** | H3040(-HG) | 95 | **BND3040-H-C..-S** |
| 3 | 242 | 278 | 124 | 108 | 380 | M16 | 8 | **23140..-K** | H3140(-HG) | 170 | **BND3140-H-C..-S** |
| 4 | 260 | 299 | 138 | 114 | 420 | M16 | 8 | **23240..-K** | H2340(-HG) | 205 | **BND3240-H-C..-S** |
| 4 | 264 | 314 | 142 | 112 | 455 | M20 | 8 | **22244..-K** | H3144X(-HG) | 290 | **BND2244-H-C..-S** |
| 3 | 206 | 241 | 103 | 95 | 375 | M16 | 8 | **23044..-K** | H3044X(-HG) | 100 | **BND3044-H-C..-S** |
| 4 | 252 | 291 | 134 | 110 | 420 | M16 | 8 | **23144..-K** | H3144X(-HG) | 190 | **BND3144-H-C..-S** |
| 4 | 279 | 329 | 147 | 122 | 445 | M20 | 8 | **23244..-K** | H2344X(-HG) | 240 | **BND3244-H-C..-S** |
| 4 | 268 | 311 | 138 | 120 | 510 | M20 | 8 | **22248..-K** | H3148X(-HG) | 315 | **BND2248-H-C..-S** |
| 4 | 216 | 251 | 108 | 100 | 400 | M16 | 8 | **23048..-K** | H3048(-HG) | 130 | **BND3048-H-C..-S** |
| 4 | 284 | 334 | 152 | 122 | 455 | M20 | 8 | **23148..-K** | H3148X(-HG) | 280 | **BND3148-H-C..-S** |
| 4 | 308 | 351 | 158 | 140 | 510 | M20 | 8 | **23248..-K** | H2348X(-HG) | 330 | **BND3248-H-C..-S** |
| 3 | 286 | 326 | 148 | 126 | 535 | M20 | 8 | **22252..-K** | H3152X(-HG) | 370 | **BND2252-H-C..-S** |
| 4 | 226 | 261 | 113 | 103 | 440 | M16 | 8 | **23052..-K** | H3052X(-HG) | 160 | **BND3052-H-C..-S** |
| 4 | 292 | 335 | 150 | 132 | 510 | M20 | 8 | **23152..-K** | H3152X(-HG) | 310 | **BND3152-H-C..-S** |
| 3 | 330 | 370 | 170 | 148 | 535 | M20 | 8 | **23252..-K** | H2352X(-HG) | 380 | **BND3252-H-C..-S** |
| 4 | 297 | 354 | 157 | 128 | 555 | M24 | 8 | **22256..-K** | H3156X(-HG) | 420 | **BND2256-H-C..-S** |
| 4 | 236 | 281 | 118 | 108 | 460 | M16 | 8 | **23056..-K** | H3056(-HG) | 180 | **BND3056-H-C..-S** |
| 4 | 294 | 337 | 151 | 133 | 510 | M20 | 8 | **23156..-K** | H3156X(-HG) | 335 | **BND3156-H-C..-S** |
| 4 | 343 | 400 | 180 | 151 | 555 | M24 | 8 | **23256..-K** | H2356X(-HG) | 490 | **BND3256-H-C..-S** |

# Plummer block housings

BND, unsplit
For spherical roller bearings with tapered bore and adapter sleeve
Stepped shaft

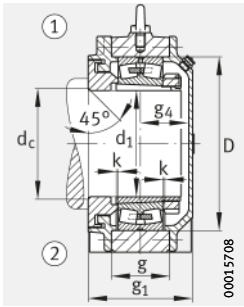


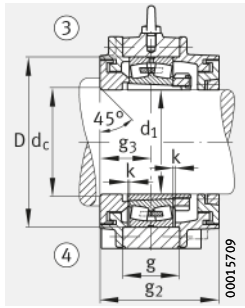

**Dimension table** (continued) · Dimensions in mm

| Shaft | | Housing Dimensions | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_1$ | $d_c$ max. | h | $h_1$ | g | b | c | a | m | n | v | u | s | D |
| **280** | 300 | 350 | 695 | 178 | 330 | 105 | 1 100 | 920 | 180 | 75 | 56 | M48 | 540 |
| **280** | 296 | 285 | 570 | 140 | 250 | 85 | 820 | 690 | 150 | 52 | 42 | M36 | 460 |
| **280** | 300 | 320 | 645 | 190 | 300 | 100 | 1 000 | 840 | 170 | 52 | 42 | M36 | 500 |
| **280** | 300 | 350 | 705 | 230 | 330 | 105 | 1 100 | 920 | 180 | 75 | 56 | M48 | 540 |
| **300** | 320 | 370 | 745 | 180 | 360 | 115 | 1 150 | 960 | 200 | 75 | 56 | M48 | 580 |
| **300** | 316 | 295 | 590 | 150 | 260 | 90 | 860 | 730 | 160 | 52 | 42 | M36 | 480 |
| **300** | 320 | 350 | 700 | 210 | 300 | 100 | 1 150 | 940 | 160 | 52 | 42 | M36 | 540 |
| **300** | 320 | 370 | 745 | 238 | 360 | 115 | 1 150 | 960 | 200 | 75 | 56 | M48 | 580 |
| **320** | 344 | 390 | 790 | 201 | 380 | 125 | 1 200 | 990 | 200 | 85 | 64 | M56 | 620 |
| **320** | 340 | 315 | 630 | 160 | 270 | 95 | 900 | 770 | 170 | 52 | 42 | M36 | 520 |
| **320** | 340 | 370 | 745 | 220 | 360 | 115 | 1 150 | 960 | 200 | 75 | 56 | M48 | 580 |
| **320** | 344 | 390 | 790 | 260 | 380 | 125 | 1 200 | 990 | 200 | 85 | 64 | M56 | 620 |
| **340** | 364 | 410 | 820 | 205 | 400 | 130 | 1 280 | 1 040 | 210 | 90 | 72 | M64 | 650 |
| **340** | 360 | 330 | 660 | 170 | 280 | 100 | 960 | 820 | 180 | 52 | 42 | M36 | 540 |
| **340** | 360 | 380 | 760 | 225 | 370 | 115 | 1 200 | 1 000 | 200 | 75 | 56 | M48 | 600 |
| **340** | 364 | 410 | 820 | 267 | 400 | 130 | 1 280 | 1 040 | 210 | 90 | 72 | M64 | 650 |
| **360** | 384 | 425 | 865 | 230 | 405 | 135 | 1 350 | 1 100 | 225 | 90 | 72 | M64 | 680 |
| **360** | 380 | 340 | 680 | 160 | 300 | 105 | 1 000 | 840 | 190 | 75 | 56 | M48 | 560 |
| **360** | 380 | 390 | 790 | 230 | 380 | 125 | 1 200 | 1 000 | 200 | 85 | 64 | M56 | 620 |
| **360** | 384 | 425 | 860 | 295 | 405 | 135 | 1 350 | 1 100 | 225 | 90 | 72 | M64 | 680 |
| **380** | 404 | 450 | 900 | 229 | 450 | 145 | 1 430 | 1 160 | 240 | 90 | 72 | M64 | 720 |
| **380** | 400 | 360 | 720 | 175 | 320 | 110 | 1 060 | 900 | 200 | 75 | 56 | M48 | 600 |
| **380** | 404 | 410 | 820 | 235 | 400 | 130 | 1 280 | 1 040 | 210 | 90 | 72 | M64 | 650 |
| **380** | 404 | 450 | 900 | 300 | 450 | 145 | 1 430 | 1 160 | 240 | 90 | 72 | M64 | 720 |
| **400** | 430 | 470 | 950 | 238 | 470 | 150 | 1 500 | 1 220 | 255 | 90 | 72 | M64 | 760 |
| **400** | 420 | 375 | 755 | 180 | 340 | 115 | 1 100 | 940 | 210 | 75 | 56 | M48 | 620 |
| **400** | 424 | 450 | 900 | 260 | 420 | 135 | 1 350 | 1 100 | 210 | 85 | 64 | M56 | 700 |
| **400** | 430 | 470 | 950 | 315 | 470 | 150 | 1 500 | 1 220 | 255 | 90 | 72 | M64 | 760 |

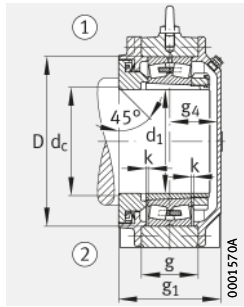
① Locating bearing AF; ② Non-locating bearing AL; ③ Locating bearing BF; ④ Non-locating bearing BL



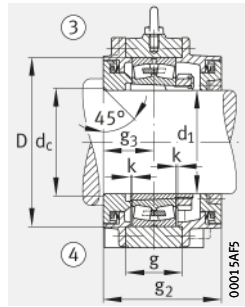

Design A
Housing with labyrinth seal




Design B




Design A
Housing with Taconite seal

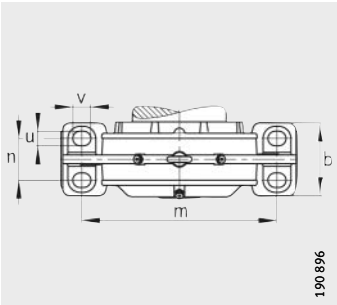


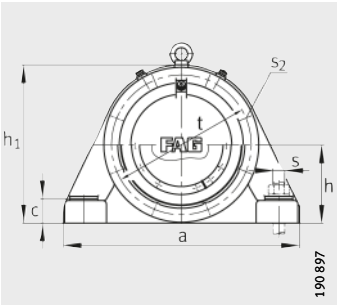

Design B

| | | | | | | | | Spherical roller bearing and accessories | | Housing | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| k | $g_1$ | $g_2$ | $g_3$ | $g_4$ min. | t | $s_2$ | Quantity | Bearing | Adapter sleeve | Mass m ≈ kg | Designation |
| 4 | 317 | 156 | 352 | 149 | 600 | M24 | 8 | **22260..-K** | H3160(-HG) | 485 | **BND2260-H-C..-S** |
| 4 | 261 | 128 | 296 | 121 | 510 | M16 | 8 | **23060..-K** | H3060(-HG) | 220 | **BND3060-H-C..-S** |
| 4 | 327 | 172 | 384 | 143 | 555 | M24 | 8 | **23160..-K** | H3160(-HG) | 400 | **BND3160-H-C..-S** |
| 4 | 369 | 182 | 404 | 175 | 600 | M24 | 8 | **23260..-K** | H3260(-HG) | 570 | **BND3260-H-C..-S** |
| 5 | 333 | 163 | 381 | 158 | 640 | M24 | 8 | **22264..-K** | H3164-HG | 600 | **BND2264-H-C..-S** |
| 4 | 266 | 133 | 311 | 123 | 530 | M16 | 8 | **23064..-K** | H3064-HG | 250 | **BND3064-H-C..-S** |
| 4 | 359 | 186 | 412 | 161 | 590 | M24 | 8 | **23164..-K** | H3164-HG | 500 | **BND3164-H-C..-S** |
| 5 | 391 | 192 | 439 | 187 | 640 | M24 | 8 | **23264..-K** | H3264-HG | 665 | **BND3264-H-C..-S** |
| 5 | 375 | 187,5 | 430 | 176 | 680 | M30 | 8 | **22268..-K** | H3168-HG | 635 | **BND2268-H-C..-S** |
| 5 | 276 | 133 | 311 | 132 | 565 | M20 | 8 | **23068..-K** | H3068-HG | 300 | **BND3068-H-C..-S** |
| 5 | 373 | 183 | 421 | 178 | 640 | M24 | 8 | **23168..-K** | H3168-HG | 520 | **BND3168-H-C..-S** |
| 5 | 434 | 217 | 489 | 205 | 680 | M30 | 8 | **23268..-K** | H3268-HG | 755 | **BND3268-H-C..-S** |
| 5 | 375 | 185 | 435 | 178 | 710 | M30 | 8 | **22272..-K** | H3172-HG | 690 | **BND2272-H-C..-S** |
| 5 | 290 | 140 | 325 | 138 | 590 | M20 | 8 | **23072..-K** | H3072-HG | 330 | **BND3072-H-C..-S** |
| 4 | 400 | 200 | 450 | 188 | 650 | M24 | 8 | **23172..-K** | H3172-HG | 600 | **BND3172-H-C..-S** |
| 5 | 437 | 216 | 497 | 209 | 710 | M30 | 8 | **23272..-K** | H3272-HG | 950 | **BND3272-H-C..-S** |
| 5 | 433 | 203 | 470 | 218 | 745 | M30 | 8 | **22276..-K** | H3176-HG | 900 | **BND2276-H-C..-S** |
| 7 | 294 | 142 | 329 | 141 | 610 | M20 | 8 | **23076..-K** | H3076-HG | 360 | **BND3076-H-C..-S** |
| 5 | 404 | 202 | 459 | 190 | 680 | M30 | 8 | **23176..-K** | H3176-HG | 720 | **BND3176-H-C..-S** |
| 5 | 489 | 232 | 529 | 244 | 745 | M30 | 8 | **23276..-K** | H3276-HG | 1 100 | **BND3276-H-C..-S** |
| 5 | 433 | 216,5 | 498 | 202 | 790 | M30 | 8 | **22280..-K** | H3180-HG | 940 | **BND2280-H-C..-S** |
| 7 | 310 | 150 | 355 | 145 | 650 | M20 | 8 | **23080..-K** | H3080-HG | 400 | **BND3080-H-C..-S** |
| 5 | 405 | 200 | 465 | 193 | 710 | M30 | 8 | **23180..-K** | H3180-HG | 750 | **BND3180-H-C..-S** |
| 5 | 504 | 252 | 569 | 237 | 790 | M30 | 8 | **23280..-K** | H3280-HG | 1 205 | **BND3280-H-C..-S** |
| 5 | 433 | 216,5 | 498 | 202 | 835 | M30 | 8 | **22284..-K** | H3184-HG | 1 055 | **BND2284-H-C..-S** |
| 7 | 310 | 150 | 350 | 149 | 670 | M20 | 8 | **23084..-K** | H3084X-HG | 435 | **BND3084-H-C..-S** |
| 7 | 440 | 210 | 510 | 215 | 760 | M30 | 8 | **23184..-K** | H3184-HG | 950 | **BND3184-H-C..-S** |
| 5 | 510 | 255 | 575 | 240 | 835 | M30 | 8 | **23284..-K** | H3284-HG | 1 310 | **BND3284-H-C..-S** |

# Plummer block housings

BND, unsplit
For spherical roller bearings with cylindrical bore

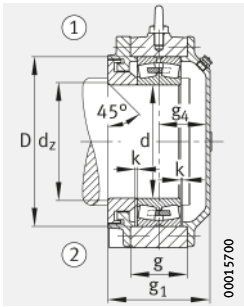


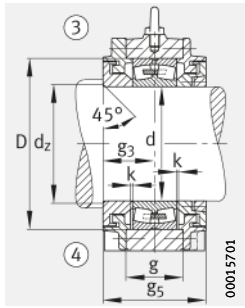

**Dimension table** · Dimensions in mm

| Shaft | | Housing Dimensions | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | $d_z$ max. | h | $h_1$ | g | b | c | a | m | n | v | u | s |
| **65** | 71 | 80 | 155 | 44 | 70 | 22 | 235 | 185 | 40 | 20 | 15 | M10 |
| **75** | 81 | 90 | 180 | 45 | 85 | 35 | 285 | 225 | 45 | 28 | 20 | M16 |
| **90** | 98 | 110 | 220 | 55 | 110 | 38 | 370 | 290 | 60 | 32 | 23 | M20 |
| **100** | 108 | 130 | 255 | 65 | 120 | 40 | 400 | 320 | 65 | 35 | 30 | M24 |
| **110** | 118 | 140 | 280 | 73 | 130 | 42 | 440 | 350 | 70 | 35 | 30 | M24 |
| **110** | 118 | 130 | 263 | 80 | 140 | 40 | 400 | 300 | 80 | 35 | 25 | M20 |
| **110** | 118 | 140 | 280 | 89,8 | 130 | 42 | 440 | 350 | 70 | 35 | 30 | M24 |
| **120** | 128 | 150 | 300 | 77 | 140 | 42 | 470 | 370 | 75 | 35 | 30 | M24 |
| **120** | 128 | 115 | 230 | 60 | 110 | 35 | 370 | 300 | 60 | 35 | 25 | M20 |
| **120** | 128 | 140 | 280 | 85 | 150 | 40 | 410 | 330 | 80 | 35 | 25 | M20 |
| **120** | 128 | 150 | 300 | 95 | 140 | 42 | 470 | 370 | 75 | 35 | 30 | M24 |
| **130** | 142 | 160 | 315 | 84 | 150 | 45 | 500 | 400 | 85 | 35 | 30 | M24 |
| **130** | 138 | 130 | 260 | 70 | 120 | 38 | 410 | 340 | 60 | 35 | 25 | M20 |
| **130** | 138 | 145 | 295 | 90 | 150 | 40 | 430 | 350 | 80 | 35 | 25 | M20 |
| **130** | 142 | 160 | 315 | 100 | 150 | 45 | 500 | 400 | 85 | 35 | 30 | M24 |
| **140** | 152 | 170 | 345 | 88 | 160 | 50 | 530 | 430 | 85 | 35 | 30 | M24 |
| **140** | 148 | 140 | 275 | 70 | 130 | 40 | 430 | 360 | 70 | 35 | 30 | M24 |
| **140** | 148 | 155 | 315 | 95 | 160 | 45 | 470 | 380 | 85 | 35 | 25 | M20 |
| **140** | 152 | 170 | 345 | 108 | 160 | 50 | 530 | 430 | 85 | 35 | 30 | M24 |
| **150** | 162 | 180 | 365 | 97 | 170 | 54 | 550 | 450 | 90 | 45 | 36 | M30 |
| **150** | 158 | 145 | 290 | 80 | 140 | 42 | 455 | 370 | 80 | 35 | 30 | M24 |
| **150** | 158 | 170 | 345 | 102 | 200 | 60 | 580 | 450 | 110 | 35 | 30 | M24 |
| **150** | 162 | 180 | 365 | 120 | 170 | 54 | 550 | 450 | 90 | 45 | 36 | M30 |
| **160** | 172 | 190 | 385 | 106 | 180 | 58 | 600 | 490 | 105 | 45 | 36 | M30 |
| **160** | 168 | 155 | 310 | 85 | 150 | 45 | 480 | 390 | 90 | 35 | 30 | M24 |
| **160** | 168 | 180 | 360 | 110 | 200 | 55 | 540 | 430 | 110 | 35 | 30 | M24 |
| **160** | 172 | 190 | 385 | 130 | 180 | 58 | 600 | 490 | 105 | 45 | 36 | M30 |
| **170** | 186 | 200 | 405 | 111 | 200 | 62 | 640 | 525 | 110 | 45 | 36 | M30 |
| **170** | 178 | 165 | 330 | 90 | 160 | 50 | 510 | 420 | 95 | 45 | 36 | M30 |
| **170** | 178 | 190 | 380 | 120 | 200 | 55 | 570 | 470 | 110 | 45 | 36 | M30 |
| **170** | 186 | 200 | 405 | 135 | 200 | 62 | 640 | 525 | 110 | 45 | 36 | M30 |

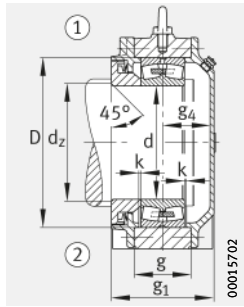
① Locating bearing AF; ② Non-locating bearing AL; ③ Locating bearing BF; ④ Non-locating bearing BL



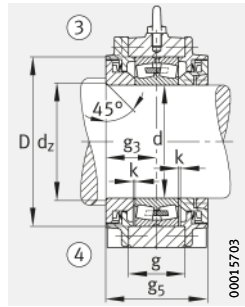

Design A
Housing with labyrinth seal




Design B




Design A
Housing with Taconite seal

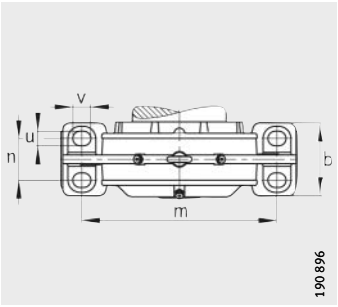


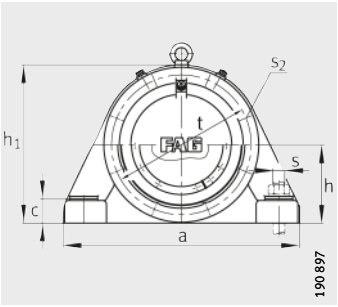

Design B

| | | | | | | | | | Spherical roller bearing | Housing | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| D | k | $g_1$ | $g_5$ | $g_3$ | $g_4$ min. | t | $s_2$ | Quantity | | Mass m ≈ kg | Designation |
| 120 | 2 | 100 | 110 | 55 | 39 | 135 | M6 | 6 | **22213** | 23 | **BND2213-Z..-S** |
| 130 | 2 | 105 | 110 | 55 | 44 | 155 | M6 | 6 | **22215** | 15 | **BND2215-Z..-S** |
| 160 | 2 | 104 | 106 | 53 | 45 | 185 | M8 | 6 | **22218** | 28 | **BND2218-Z..-S** |
| 180 | 2,5 | 141 | 156 | 78 | 57 | 205 | M8 | 6 | **22220** | 30 | **BND2220-Z..-S** |
| 200 | 2,5 | 149,2 | 165,2 | 82,6 | 60 | 230 | M12 | 6 | **22222** | 50 | **BND2222-Z..-S** |
| 180 | 2,5 | 146 | 156 | 78 | 62 | 215 | M12 | 8 | **23122** | 40 | **BND3122-Z..-S** |
| 200 | 2,5 | 166 | 182 | 91 | 68 | 230 | M12 | 6 | **23222** | 35 | **BND3222-Z..-S** |
| 215 | 2,5 | 143 | 148 | 74 | 61 | 245 | M12 | 6 | **22224** | 58 | **BND2224-Z..-S** |
| 180 | 2,5 | 126 | 126 | 63 | 57 | 205 | M8 | 8 | **23024** | 20 | **BND3024-Z..-S** |
| 200 | 2,5 | 160 | 160 | 80 | 74 | 235 | M12 | 8 | **23124** | 50 | **BND3124-Z..-S** |
| 215 | 2,5 | 161 | 166 | 83 | 70 | 245 | M12 | 6 | **23224** | 40 | **BND3224-Z..-S** |
| 230 | 3 | 172 | 190 | 95 | 69 | 260 | M12 | 6 | **22226** | 65 | **BND2226-Z..-S** |
| 200 | 2 | 133 | 136 | 68 | 59 | 225 | M10 | 8 | **23026** | 30 | **BND3026-Z..-S** |
| 210 | 3 | 165 | 170 | 85 | 72 | 245 | M12 | 8 | **23126** | 55 | **BND3126-Z..-S** |
| 230 | 3 | 188 | 206 | 103 | 77 | 260 | M12 | 6 | **23226** | 50 | **BND3226-Z..-S** |
| 250 | 3 | 166 | 176 | 88 | 70 | 285 | M16 | 6 | **22228** | 70 | **BND2228-Z..-S** |
| 210 | 3 | 136 | 136 | 68 | 61 | 240 | M10 | 8 | **23028** | 35 | **BND3028-Z..-S** |
| 225 | 3 | 170 | 170 | 85 | 77 | 270 | M12 | 8 | **23128** | 60 | **BND3128-Z..-S** |
| 250 | 3 | 186 | 196 | 98 | 80 | 285 | M16 | 6 | **23228** | 65 | **BND3228-Z..-S** |
| 270 | 3 | 177 | 187 | 93,5 | 76 | 305 | M16 | 6 | **22230** | 85 | **BND2230-Z..-S** |
| 225 | 2 | 149 | 156 | 78 | 64 | 250 | M12 | 8 | **23030** | 40 | **BND3030-Z..-S** |
| 250 | 2 | 186 | 186 | 93 | 85 | 285 | M12 | 8 | **23130** | 70 | **BND3130-Z..-S** |
| 270 | 3 | 200 | 210 | 105 | 87 | 305 | M16 | 6 | **23230** | 75 | **BND3230-Z..-S** |
| 290 | 3 | 189 | 206 | 103 | 78 | 330 | M16 | 6 | **22232** | 100 | **BND2232-Z..-S** |
| 240 | 3 | 156 | 156 | 78 | 71 | 265 | M12 | 8 | **23032** | 45 | **BND3032-Z..-S** |
| 270 | 3 | 200 | 210 | 105 | 87 | 310 | M16 | 6 | **23132** | 80 | **BND3132-Z..-S** |
| 290 | 3 | 213 | 230 | 115 | 90 | 330 | M16 | 6 | **23232** | 90 | **BND3232-Z..-S** |
| 310 | 3 | 216 | 236 | 118 | 88 | 350 | M16 | 8 | **22234** | 105 | **BND2234-Z..-S** |
| 260 | 2 | 166 | 166 | 83 | 75 | 285 | M12 | 8 | **23034** | 70 | **BND3034-Z..-S** |
| 280 | 3 | 215 | 230 | 115 | 90 | 330 | M12 | 8 | **23134** | 100 | **BND3134-Z..-S** |
| 310 | 3 | 240 | 260 | 130 | 100 | 350 | M16 | 8 | **23234** | 120 | **BND3234-Z..-S** |

# Plummer block housings

BND, unsplit
For spherical roller bearings with cylindrical bore

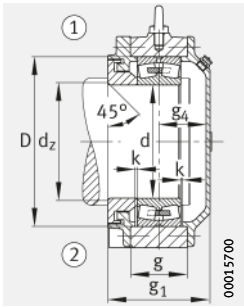


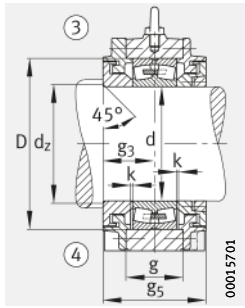

**Dimension table** (continued) · Dimensions in mm

| Shaft | | Housing Dimensions | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | $d_z$ max. | h | $h_1$ | g | b | c | a | m | n | v | u | s |
| **180** | 196 | 210 | 425 | 112 | 210 | 65 | 680 | 550 | 120 | 45 | 36 | M30 |
| **180** | 188 | 180 | 360 | 100 | 170 | 52 | 540 | 450 | 100 | 45 | 36 | M30 |
| **180** | 192 | 200 | 395 | 125 | 200 | 58 | 600 | 490 | 105 | 45 | 36 | M30 |
| **180** | 196 | 210 | 425 | 138 | 210 | 65 | 680 | 550 | 120 | 45 | 36 | M30 |
| **190** | 206 | 220 | 455 | 115 | 220 | 85 | 710 | 560 | 120 | 52 | 42 | M36 |
| **190** | 198 | 185 | 370 | 105 | 180 | 55 | 570 | 480 | 105 | 45 | 36 | M30 |
| **190** | 202 | 210 | 425 | 130 | 210 | 65 | 680 | 550 | 120 | 45 | 36 | M30 |
| **190** | 206 | 220 | 455 | 143 | 220 | 85 | 710 | 560 | 120 | 52 | 42 | M36 |
| **200** | 216 | 235 | 475 | 128 | 240 | 75 | 780 | 640 | 140 | 52 | 42 | M36 |
| **200** | 208 | 200 | 400 | 110 | 190 | 60 | 600 | 510 | 110 | 45 | 36 | M30 |
| **200** | 212 | 220 | 455 | 135 | 220 | 85 | 710 | 560 | 120 | 52 | 42 | M36 |
| **200** | 216 | 235 | 475 | 158 | 240 | 75 | 780 | 640 | 140 | 52 | 42 | M36 |
| **220** | 236 | 270 | 550 | 140 | 250 | 80 | 890 | 720 | 140 | 52 | 42 | M36 |
| **220** | 232 | 215 | 430 | 115 | 200 | 65 | 640 | 540 | 115 | 52 | 42 | M36 |
| **220** | 236 | 235 | 475 | 150 | 240 | 75 | 780 | 640 | 140 | 52 | 42 | M36 |
| **220** | 236 | 260 | 525 | 175 | 250 | 80 | 850 | 700 | 140 | 52 | 42 | M36 |
| **240** | 256 | 290 | 585 | 150 | 250 | 90 | 900 | 750 | 140 | 52 | 42 | M36 |
| **240** | 252 | 225 | 455 | 120 | 210 | 70 | 680 | 560 | 120 | 52 | 42 | M36 |
| **240** | 256 | 270 | 550 | 160 | 250 | 80 | 890 | 720 | 140 | 52 | 42 | M36 |
| **240** | 256 | 290 | 585 | 190 | 250 | 90 | 900 | 750 | 140 | 52 | 42 | M36 |
| **260** | 280 | 310 | 625 | 161 | 290 | 95 | 960 | 800 | 160 | 52 | 42 | M36 |
| **260** | 276 | 250 | 500 | 130 | 220 | 75 | 720 | 600 | 130 | 52 | 42 | M36 |
| **260** | 276 | 290 | 585 | 174 | 250 | 90 | 900 | 750 | 140 | 52 | 42 | M36 |
| **260** | 280 | 310 | 625 | 205 | 290 | 95 | 960 | 800 | 160 | 52 | 42 | M36 |
| **280** | 300 | 320 | 645 | 160 | 300 | 100 | 1 000 | 840 | 170 | 52 | 42 | M36 |
| **280** | 296 | 260 | 520 | 135 | 240 | 80 | 760 | 630 | 140 | 52 | 42 | M36 |
| **280** | 300 | 290 | 585 | 176 | 250 | 90 | 900 | 750 | 140 | 52 | 42 | M36 |
| **280** | 300 | 320 | 645 | 206 | 300 | 100 | 1 000 | 840 | 170 | 52 | 42 | M36 |

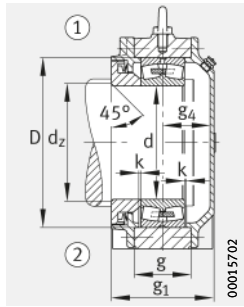
① Locating bearing AF; ② Non-locating bearing AL; ③ Locating bearing BF; ④ Non-locating bearing BL



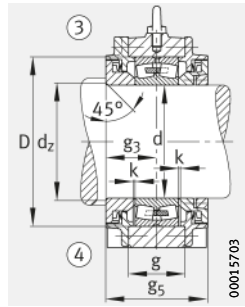

Design A
Housing with labyrinth seal




Design B




Design A
Housing with Taconite seal

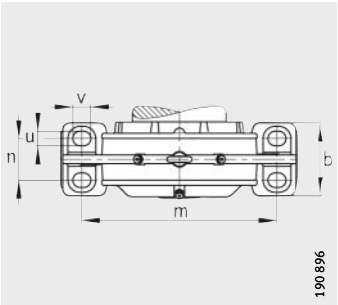


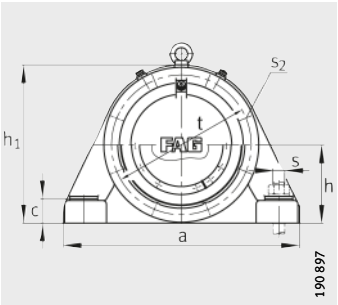

Design B

| | | | | | | | | | Spherical roller bearing | Housing | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| D | k | $g_1$ | $g_5$ | $g_3$ | $g_4$ min. | t | $s_2$ | Quantity | | Mass m ≈ kg | Designation |
| 320 | 3 | 214 | 228 | 114 | 92 | 370 | M16 | 8 | **22236** | 130 | **BND2236-Z..-S** |
| 280 | 3 | 176 | 176 | 88 | 80 | 310 | M12 | 8 | **23036** | 70 | **BND3036-Z..-S** |
| 300 | 3 | 220 | 230 | 115 | 95 | 350 | M16 | 8 | **23136** | 110 | **BND3136-Z..-S** |
| 320 | 3 | 240 | 254 | 127 | 105 | 370 | M16 | 8 | **23236** | 140 | **BND3236-Z..-S** |
| 340 | 3 | 222 | 228 | 114 | 98 | 380 | M16 | 8 | **22238** | 170 | **BND2238-Z..-S** |
| 290 | 3 | 181 | 186 | 93 | 80 | 325 | M12 | 8 | **23038** | 80 | **BND3038-Z..-S** |
| 320 | 3 | 232 | 246 | 123 | 98 | 370 | M16 | 8 | **23138** | 125 | **BND3138-Z..-S** |
| 340 | 3 | 250 | 256 | 128 | 112 | 380 | M16 | 8 | **23228** | 170 | **BND3238-Z..-S** |
| 360 | 4 | 230 | 246 | 123 | 99 | 420 | M16 | 8 | **22240** | 185 | **BND2240-Z..-S** |
| 310 | 3 | 196 | 196 | 98 | 90 | 340 | M16 | 8 | **23040** | 95 | **BND3040-Z..-S** |
| 340 | 3 | 242 | 248 | 124 | 108 | 380 | M16 | 8 | **23140** | 170 | **BND3140-Z..-S** |
| 360 | 4 | 260 | 276 | 138 | 114 | 420 | M16 | 8 | **23240** | 205 | **BND3240-Z..-S** |
| 400 | 4 | 264 | 284 | 142 | 112 | 455 | M20 | 8 | **22244** | 290 | **BND2244-Z..-S** |
| 340 | 3 | 206 | 206 | 103 | 95 | 375 | M16 | 8 | **23044** | 100 | **BND3044-Z..-S** |
| 370 | 4 | 252 | 268 | 134 | 110 | 420 | M16 | 8 | **23144** | 190 | **BND3144-Z..-S** |
| 400 | 4 | 279 | 294 | 147 | 122 | 445 | M20 | 8 | **23244** | 240 | **BND3244-Z..-S** |
| 440 | 4 | 268 | 276 | 138 | 120 | 510 | M20 | 8 | **22248** | 315 | **BND2248-Z..-S** |
| 360 | 4 | 216 | 216 | 108 | 100 | 400 | M16 | 8 | **23048** | 130 | **BND3048-Z..-S** |
| 400 | 4 | 284 | 304 | 152 | 122 | 455 | M20 | 8 | **23148** | 280 | **BND3148-Z..-S** |
| 440 | 4 | 308 | 316 | 158 | 140 | 510 | M20 | 8 | **23248** | 330 | **BND3248-Z..-S** |
| 480 | 3 | 286 | 296 | 148 | 126 | 535 | M20 | 8 | **22252** | 370 | **BND2252-Z..-S** |
| 400 | 4 | 226 | 226 | 113 | 103 | 440 | M16 | 8 | **23052** | 160 | **BND3052-Z..-S** |
| 440 | 4 | 292 | 300 | 150 | 132 | 510 | M20 | 8 | **23152** | 310 | **BND3152-Z..-S** |
| 480 | 3 | 330 | 340 | 170 | 148 | 535 | M20 | 8 | **23252** | 380 | **BND3252-Z..-S** |
| 500 | 4 | 297 | 314 | 157 | 128 | 555 | M24 | 8 | **22256** | 420 | **BND2256-Z..-S** |
| 420 | 4 | 236 | 236 | 118 | 108 | 460 | M16 | 8 | **23056** | 180 | **BND3056-Z..-S** |
| 460 | 4 | 294 | 302 | 151 | 133 | 510 | M20 | 8 | **23156** | 335 | **BND3156-Z..-S** |
| 500 | 4 | 343 | 360 | 180 | 151 | 555 | M24 | 8 | **23256** | 490 | **BND3256-Z..-S** |

# Plummer block housings

BND, unsplit
For spherical roller bearings with cylindrical bore

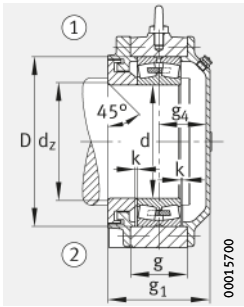


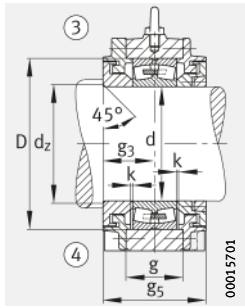

**Dimension table** (continued) · Dimensions in mm

| Shaft | | Housing Dimensions | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | $d_z$ max. | h | $h_1$ | g | b | c | a | m | n | v | u | s |
| **300** | 320 | 350 | 695 | 178 | 330 | 105 | 1 100 | 920 | 180 | 75 | 56 | M48 |
| **300** | 316 | 285 | 570 | 140 | 250 | 85 | 820 | 690 | 150 | 52 | 42 | M36 |
| **300** | 320 | 320 | 645 | 190 | 300 | 100 | 1 000 | 840 | 170 | 52 | 42 | M36 |
| **300** | 320 | 350 | 705 | 230 | 330 | 105 | 1 100 | 920 | 180 | 75 | 56 | M48 |
| **320** | 340 | 370 | 745 | 180 | 360 | 115 | 1 150 | 960 | 200 | 75 | 56 | M48 |
| **320** | 336 | 295 | 590 | 150 | 260 | 90 | 860 | 730 | 160 | 52 | 42 | M36 |
| **320** | 340 | 350 | 700 | 210 | 300 | 100 | 1 150 | 940 | 160 | 52 | 42 | M36 |
| **320** | 340 | 370 | 745 | 238 | 360 | 115 | 1 150 | 960 | 200 | 75 | 56 | M48 |
| **340** | 364 | 390 | 790 | 201 | 380 | 125 | 1 200 | 990 | 200 | 85 | 64 | M56 |
| **340** | 360 | 315 | 630 | 160 | 270 | 95 | 900 | 770 | 170 | 52 | 42 | M36 |
| **340** | 360 | 370 | 745 | 220 | 360 | 115 | 1 150 | 960 | 200 | 75 | 56 | M48 |
| **340** | 364 | 390 | 790 | 260 | 380 | 125 | 1 200 | 990 | 200 | 85 | 64 | M56 |
| **360** | 384 | 410 | 820 | 205 | 400 | 130 | 1 280 | 1 040 | 210 | 90 | 72 | M64 |
| **360** | 380 | 330 | 660 | 170 | 280 | 100 | 960 | 820 | 180 | 52 | 42 | M36 |
| **360** | 380 | 380 | 760 | 225 | 370 | 115 | 1 200 | 1 000 | 200 | 75 | 56 | M48 |
| **360** | 384 | 410 | 820 | 267 | 400 | 130 | 1 280 | 1 040 | 210 | 90 | 72 | M64 |
| **380** | 404 | 425 | 865 | 230 | 405 | 135 | 1 350 | 1 100 | 225 | 90 | 72 | M64 |
| **380** | 400 | 340 | 680 | 160 | 300 | 105 | 1 000 | 840 | 190 | 75 | 56 | M48 |
| **380** | 400 | 390 | 790 | 230 | 380 | 125 | 1 200 | 1 000 | 200 | 85 | 64 | M56 |
| **380** | 404 | 425 | 860 | 295 | 405 | 135 | 1 350 | 1 100 | 225 | 90 | 72 | M64 |
| **400** | 424 | 450 | 900 | 229 | 450 | 145 | 1 430 | 1 160 | 240 | 90 | 72 | M64 |
| **400** | 420 | 360 | 720 | 175 | 320 | 110 | 1 060 | 900 | 200 | 75 | 56 | M48 |
| **400** | 424 | 410 | 820 | 235 | 400 | 130 | 1 280 | 1 040 | 210 | 90 | 72 | M64 |
| **400** | 424 | 450 | 900 | 300 | 450 | 145 | 1 430 | 1 160 | 240 | 90 | 72 | M64 |
| **420** | 450 | 470 | 950 | 238 | 470 | 150 | 1 500 | 1 220 | 255 | 90 | 72 | M64 |
| **420** | 440 | 375 | 755 | 180 | 340 | 115 | 1 100 | 940 | 210 | 75 | 56 | M48 |
| **420** | 444 | 450 | 900 | 260 | 420 | 135 | 1 350 | 1 100 | 210 | 85 | 64 | M56 |
| **420** | 450 | 470 | 950 | 315 | 470 | 150 | 1 500 | 1 220 | 255 | 90 | 72 | M64 |

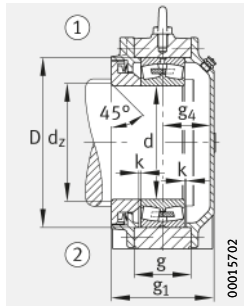
① Locating bearing AF; ② Non-locating bearing AL; ③ Locating bearing BF; ④ Non-locating bearing BL



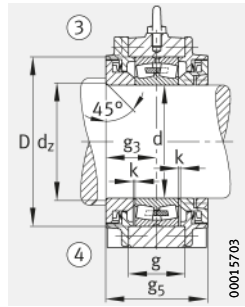

Design A
Housing with labyrinth seal




Design B

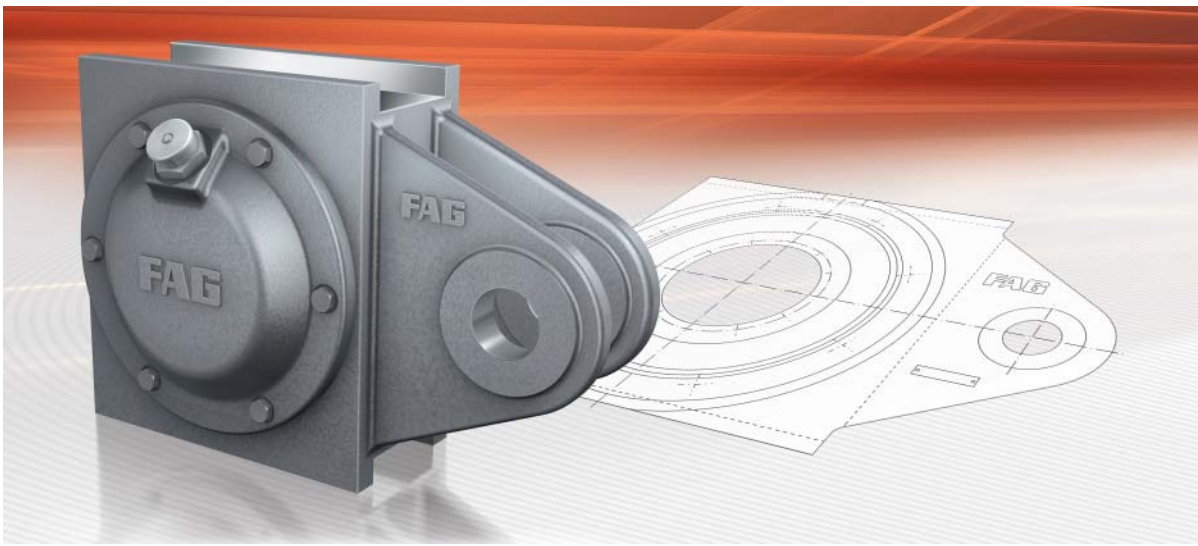



Design A
Housing with Taconite seal




Design B

| | | | | | | | | | Spherical roller bearing | Housing | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| D | k | $g_1$ | $g_5$ | $g_3$ | $g_4$ min. | t | $s_2$ | Quantity | | Mass m ≈ kg | Designation |
| 540 | 4 | 317 | 312 | 352 | 149 | 600 | M24 | 8 | **22260** | 485 | **BND2260-Z..-S** |
| 460 | 4 | 261 | 256 | 296 | 121 | 510 | M16 | 8 | **23060** | 220 | **BND3060-Z..-S** |
| 500 | 4 | 327 | 344 | 384 | 143 | 555 | M24 | 8 | **23160** | 400 | **BND3160-Z..-S** |
| 540 | 4 | 369 | 364 | 404 | 175 | 600 | M24 | 8 | **23260** | 570 | **BND3260-Z..-S** |
| 580 | 5 | 333 | 326 | 381 | 158 | 640 | M24 | 8 | **22264** | 600 | **BND2264-Z..-S** |
| 480 | 4 | 266 | 266 | 311 | 123 | 530 | M16 | 8 | **23064** | 250 | **BND3064-Z..-S** |
| 540 | 4 | 359 | 372 | 412 | 161 | 590 | M24 | 8 | **23164** | 500 | **BND3164-Z..-S** |
| 580 | 5 | 391 | 384 | 439 | 187 | 640 | M24 | 8 | **23264** | 665 | **BND3264-Z..-S** |
| 620 | 5 | 375 | 375 | 430 | 176 | 680 | M30 | 8 | **22268** | 635 | **BND2268-Z..-S** |
| 520 | 5 | 276 | 266 | 311 | 132 | 565 | M20 | 8 | **23068** | 300 | **BND3068-Z..-S** |
| 580 | 5 | 373 | 366 | 421 | 178 | 640 | M24 | 8 | **23168** | 520 | **BND3168-Z..-S** |
| 620 | 5 | 434 | 434 | 489 | 205 | 680 | M30 | 8 | **23268** | 755 | **BND3268-Z..-S** |
| 650 | 5 | 375 | 370 | 435 | 178 | 710 | M30 | 8 | **22272** | 690 | **BND2272-Z..-S** |
| 540 | 5 | 290 | 280 | 325 | 138 | 590 | M20 | 8 | **23072** | 330 | **BND3072-Z..-S** |
| 600 | 4 | 400 | 400 | 450 | 188 | 650 | M24 | 8 | **23172** | 600 | **BND3172-Z..-S** |
| 650 | 5 | 437 | 432 | 497 | 209 | 710 | M30 | 8 | **23272** | 950 | **BND3272-Z..-S** |
| 680 | 5 | 433 | 406 | 470 | 218 | 745 | M30 | 8 | **22276** | 900 | **BND2276-Z..-S** |
| 560 | 7 | 294 | 284 | 329 | 141 | 610 | M20 | 8 | **23076** | 360 | **BND3076-Z..-S** |
| 620 | 5 | 404 | 404 | 459 | 190 | 680 | M30 | 8 | **23176** | 720 | **BND3176-Z..-S** |
| 680 | 5 | 489 | 464 | 529 | 244 | 745 | M30 | 8 | **23276** | 1 100 | **BND3276-Z..-S** |
| 720 | 5 | 433 | 433 | 498 | 202 | 790 | M30 | 8 | **22280** | 940 | **BND2280-Z..-S** |
| 600 | 7 | 310 | 300 | 355 | 145 | 650 | M20 | 8 | **23080** | 400 | **BND3080-Z..-S** |
| 650 | 5 | 405 | 400 | 465 | 193 | 710 | M30 | 8 | **23180** | 750 | **BND3180-Z..-S** |
| 720 | 5 | 504 | 504 | 569 | 237 | 790 | M30 | 8 | **23280** | 1 205 | **BND3280-Z..-S** |
| 760 | 5 | 433 | 433 | 498 | 202 | 835 | M30 | 8 | **22284** | 1 055 | **BND2284-Z..-S** |
| 620 | 7 | 310 | 300 | 350 | 149 | 670 | M20 | 8 | **23084** | 435 | **BND3084-Z..-S** |
| 700 | 7 | 440 | 420 | 510 | 215 | 760 | M30 | 8 | **23184** | 950 | **BND3184-Z..-S** |
| 760 | 5 | 510 | 510 | 575 | 240 | 835 | M30 | 8 | **23284** | 1 310 | **BND3284-Z..-S** |




# Take-up housings SPA

# Take-up housings SPA


| | | Page |
|---|---|---|
| **Product overview** | Take-up housings SPA | 336 |
| **Features** | Suitable bearings | 337 |
| | Housing materials and anti-corrosion protection | 337 |
| | Locating and non-locating bearings | 337 |
| | Seals and covers | 338 |
| | Housing configurations | 338 |
| | Lubrication | 341 |
| | Designation structure | 342 |
| | Ordering examples | 343 |
| **Accuracy** | | 343 |
| **Dimension tables** | Take-up housings SPA, unsplit, for spherical roller bearings with tapered bore and adapter sleeve | 344 |
| | Take-up housings SPA, unsplit, for spherical roller bearings with tapered bore and adapter sleeve, stepped shaft | 348 |




## Take-up housings

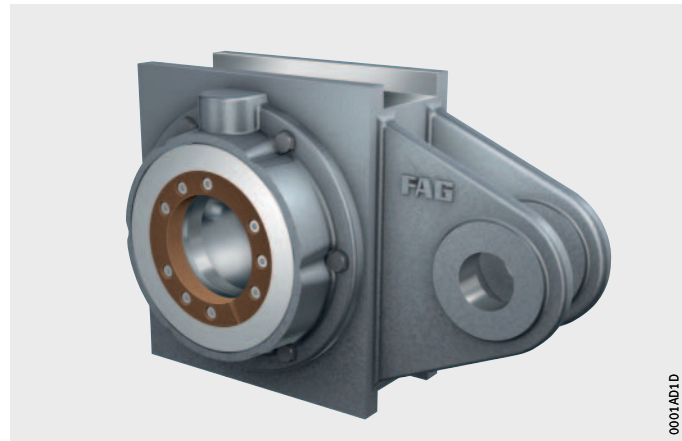
**Unsplit**
Closed on one side, with cover

**SPA..-AF, SPA..-AL**




For continuous shaft

**SPA..-BF, SPA..-BL**



# Take-up housings SPA

## Features

Take-up housings SPA are combined with FAG spherical roller bearings, seals and grease filling to form bearing units for very high loads.

The housings are unsplit. They were developed specifically for tensioner drum bearing arrangements in belt conveyor plant. There is a yoke-shaped drawbar eye for attachment to the tensioning device. The housing is guided by means of rails in the belt support structure.

## Suitable bearings

The dimensions of take-up housings SPA are matched to spherical roller bearings 222..-K, 230..-K, 231..-K and 232..-K, see table. The range of shaft diameters is between 50 mm and 400 mm.

### Bearing type and sizes

| Bearing type | Size |
|---|---|
| **Spherical roller bearings** | 22211..-K to 22228..-K |
| with tapered bore and adapter sleeve | 23028..-K to 23056..-K |
| | 23132..-K to 23176..-K |
| | 23222..-K to 23284..-K |

## Housing materials and anti-corrosion protection

The standard material for the housing bodies is cast steel (suffix S). By agreement, housing bodies made from spheroidal graphite cast iron (suffix D) are available.

All outer surfaces not machined by chip-forming methods have a universal paint coating (colour RAL 7031, bluish-grey). The coating can be finished using all synthetic resin, polyurethane, acrylic, epoxy resin, chlorinated rubber, nitrocellulose and acid-hardening hammer tone finishes.

Inner and outer surfaces machined by chip-forming methods are provided with anti-corrosion protection that can be easily removed. It is recommended that only volatile solvents and lint-free cloths should be used.

## Locating and non-locating bearings

The housings are supplied as a locating bearing design or non-locating bearing design. In the locating bearing, the bearing is clamped between the housing covers. In the non-locating bearing, the bearing can align itself axially, since the covers have shorter centring collars.

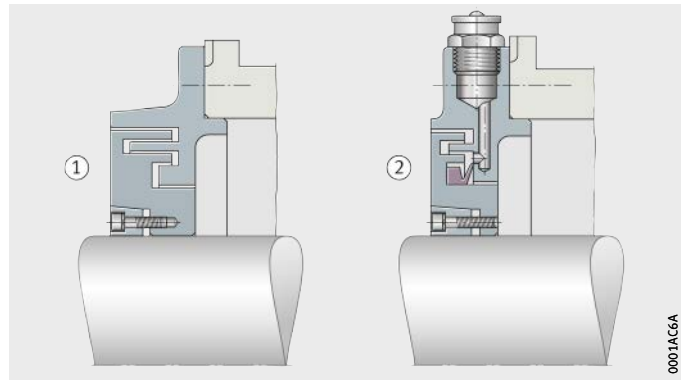
# Take-up housings SPA

## Seals and covers

Take-up housings SPA of design A are intended for the bearing arrangements of shaft ends. One side is closed by a cover and the other side is sealed against the shaft. Design B is intended for continuous shafts, in which case the housing is sealed against the shaft on both sides.

Labyrinth seals (suffix Y) or Taconite seals (suffix T) can be used, *Figure 1*. Where shafts of constant diameter are used, the seals are located on the shaft by means of slotted conical clamping rings made from laminated fabric. The labyrinth rings, Taconite seals and covers are unsplit.

The seals allow shaft misalignment of up to 0,5° in both directions and are suitable for grease lubrication.




① Labyrinth seal
② Taconite seal

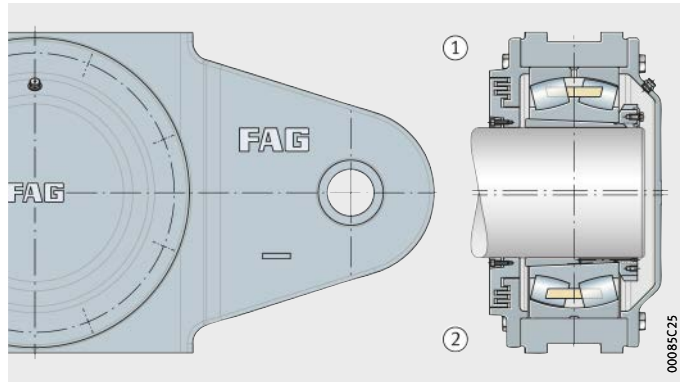
*Figure 1*
Seals for take-up housings SPA

## Housing configurations

In the case of take-up housings SPA, various housing configurations are possible that are clearly described by means of the designation, *Figure 2*, page 339 to *Figure 9*, page 340.

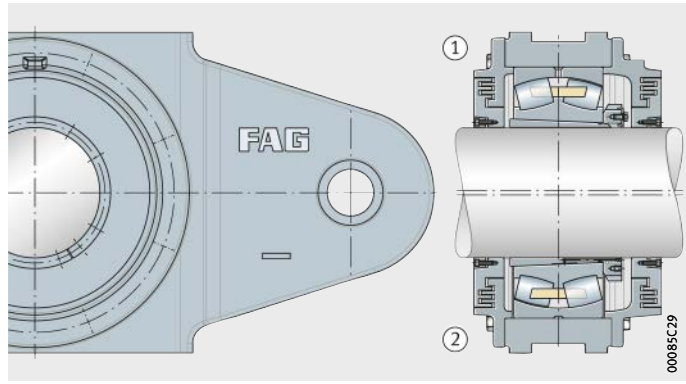
The following features can be varied in the housing configuration:

- location of bearings with a tapered bore by means of an adapter sleeve on a shaft of constant diameter or on a stepped shaft
- sealing of the housing by means of a labyrinth seal or a Taconite seal
- continuous shaft or a housing closed on one side
- design of the bearing arrangement as a locating bearing arrangement or a non-locating bearing arrangement.



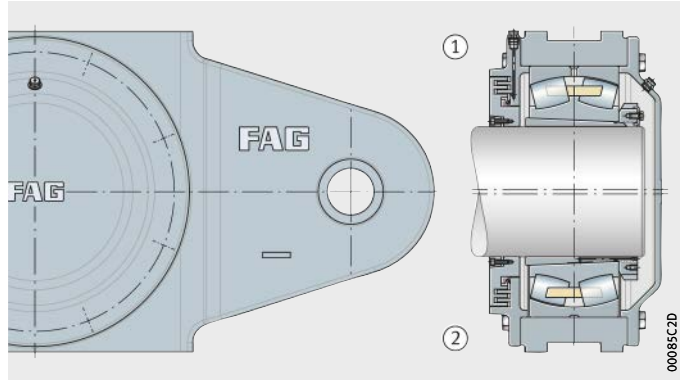

① Locating bearing SPA..-H-W-Y-AF
② Non-locating bearing SPA..-H-W-Y-AL

*Figure 2*
Take-up housing SPA
for bearings with tapered bore and
adapter sleeve (labyrinth seal),
design A



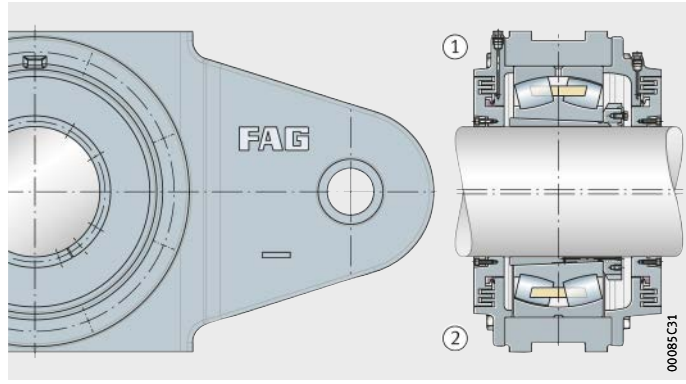

① Locating bearing SPA..-H-W-Y-BF
② Non-locating bearing SPA..-H-W-Y-BL

*Figure 3*
Take-up housing SPA
for bearings with tapered bore and
adapter sleeve (labyrinth seal),
design B



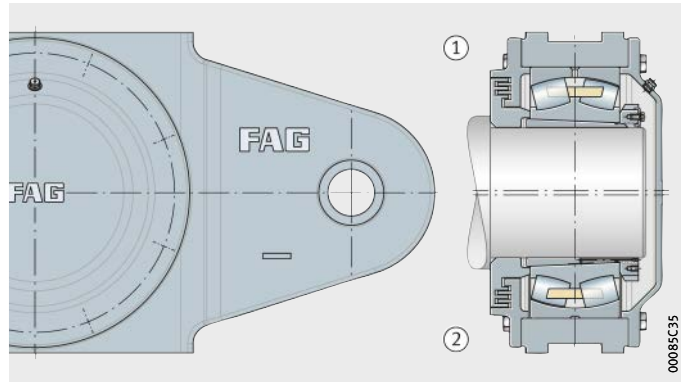

① Locating bearing SPA..-H-W-T-AF
② Non-locating bearing SPA..-H-W-T-AL

*Figure 4*
Take-up housing SPA
for bearings with tapered bore and
adapter sleeve (Taconite seal),
design A



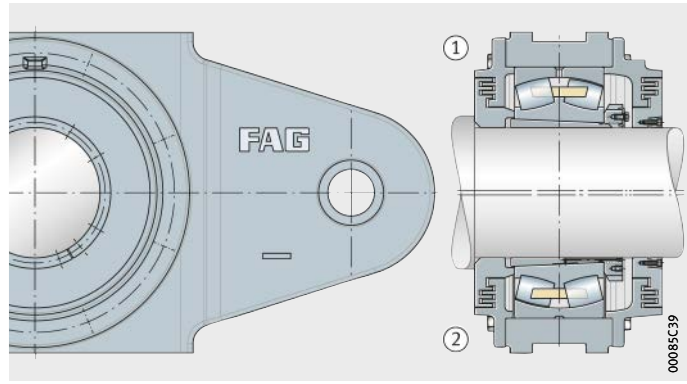

① Locating bearing SPA..-H-W-T-BF
② Non-locating bearing SPA..-H-W-T-BL

*Figure 5*
Take-up housing SPA
for bearings with tapered bore and
adapter sleeve (Taconite seal),
design B



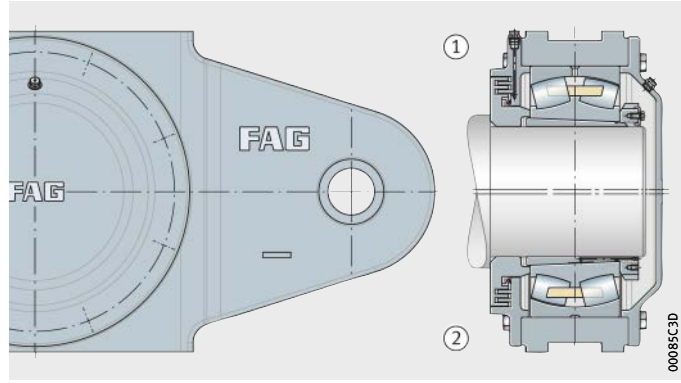

① Locating bearing SPA..-H-C-Y-AF
② Non-locating bearing SPA..-H-C-Y-AL

*Figure 6*
Take-up housing SPA
for bearings with tapered bore and
adapter sleeve for stepped shaft
(labyrinth seal),
design A



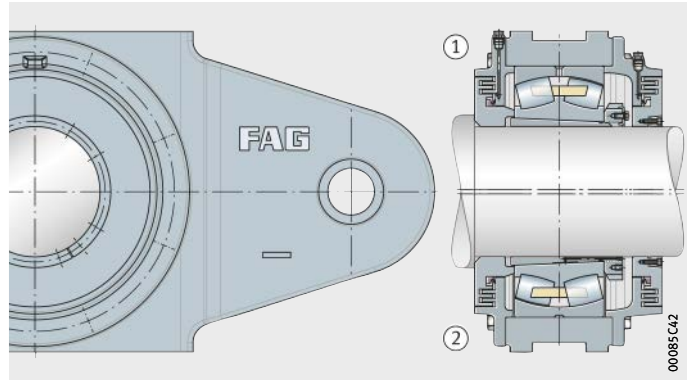

① Locating bearing SPA..-H-C-Y-BF
② Non-locating bearing SPA..-H-C-Y-BL

*Figure 7*
Take-up housing SPA
for bearings with tapered bore and
adapter sleeve for stepped shaft
(labyrinth seal),
design B




① Locating bearing SPA..-H-C-T-AF
② Non-locating bearing SPA..-H-C-T-AL

*Figure 8*
Take-up housing SPA
for bearings with tapered bore and
adapter sleeve for stepped shaft
(Taconite seal),
design A




① Locating bearing SPA..-H-C-T-BF
② Non-locating bearing SPA..-H-C-T-BL

*Figure 9*
Take-up housing SPA
for bearings with tapered bore and
adapter sleeve for stepped shaft
(Taconite seal),
design B

## Lubrication

Take-up housings SPA are designed for grease lubrication.

### Greases

Suitable greases are lithium soap greases of NLGI grades 2 and 3, for example Arcanol MULTI3 for low loads and Arcanol MULTITOP and LOAD400 for high and very high loads.

### Grease quantities

In initial lubrication, the cavities in the bearing, the housing and the labyrinths are completely filled with grease. This is the basis for the recommended grease quantities, see table.

For relubrication, it is recommended that the grease quantity is approx. 10% of the grease quantity used in initial greasing. If the ambient conditions lead to heavy contamination of the housings, relubrication should be carried out on a daily basis using smaller quantities.

### Recommended grease quantity

| Bearing bore | Grease quantity for initial greasing | |
|---|---|---|
| mm | SPA22, SPA31, SPA32<br>≈ g | SPA30<br>≈ g |
| 180 | 2 500 | – |
| 190 | 3 000 | – |
| 200 | 3 600 | – |
| 220 | 4 200 | 1 900 |
| 240 | 5 000 | 2 100 |
| 260 | 6 000 | 2 500 |
| 280 | 7 000 | 3 000 |
| 300 | 8 000 | 3 500 |
| 320 | 9 000 | 4 100 |
| 340 | 10 500 | 4 800 |
| 360 | 12 000 | 5 500 |
| 380 | 13 000 | 6 200 |
| 400 | 14 500 | 7 000 |
| 420 | 16 000 | 8 000 |



### Relubrication

The housings have button head lubrication nipples with a head diameter standardised to DIN 3404 of 22 mm. The grease is fed uniformly to both rows of rollers via the circumferential slot and three lubrication holes in the outer ring of the spherical roller bearings.

The relubrication intervals should be matched to the ambient conditions. The bearings should be relubricated after an interval of no more than 4 weeks.

## Designation structure

Designation structure of take-up housings SPA, see table and *Figure 10*.

**Designation structure of take-up housings SPA**

| Feature | | Code | Description |
|---|---|---|---|
| ① | Series | SPA | Take-up housings SPA |
| ② | ISO dimension series of bearing | 22 | ISO dimension series 22 |
| ③ | Bore code of bearing | 13 | Bore diameter (13 · 5) mm = 65 mm |
| ④ | Bearing bore | H | Tapered bearing bore and adapter sleeve |
| ⑤ | Shaft | W | Shaft of constant diameter |
| | | C | Stepped shaft |
| ⑥ | Seal | Y | Labyrinth seal |
| | | T | Taconite seal |
| ⑦ | Housing design | AF | Closed on one side, locating bearing |
| | | AL | Closed on one side, non-locating bearing |
| | | BF | Continuous shaft, locating bearing |
| | | BL | Continuous shaft, non-locating bearing |
| ⑧ | Housing material | S | Cast steel (standard) |
| | | D | Spheroidal graphite cast iron |




*Figure 10*
Designation structure of take-up housings SPA, example

## Ordering examples

When ordering a take-up housing SPA, the designation contains indications of the size and location method of the bearing, the shaft design, the sealing variant and the design and material of the housing. The rolling bearing and, if necessary, the adapter sleeve must be ordered separately.

The ordering examples show the construction of orders for selected housing configurations and the appropriate bearings.The allocation of housings, bearings and adapter sleeves for all housing sizes is shown in the dimension tables.

**Example 1**

Take-up housing SPA made from cast steel, for continuous shaft of constant diameter, labyrinth seal, spherical roller bearing 23260-K-MB as locating bearing, location using adapter sleeve.

| | | |
|---|---|---|
| Order | 1 take-up housing | SPA3260-H-W-Y-BF-S |
| | 1 spherical roller bearing | 23260-K-MB |
| | 1 adapter sleeve | H3260-HG |

**Example 2**

Take-up housing SPA made from cast steel, closed on one side, for stepped shaft, Taconite seal, spherical roller bearing 23284-B-K-MB as non-locating bearing, location using adapter sleeve.

| | | |
|---|---|---|
| Order | 1 take-up housing | SPA3284-H-C-T-AL-S |
| | 1 spherical roller bearing | 23284-B-K-MB |
| | 1 adapter sleeve | H3284-HG |

## Accuracy

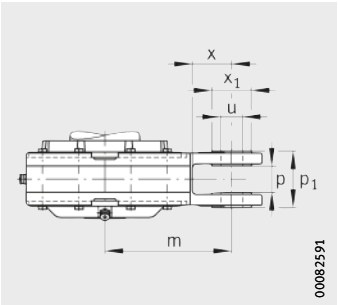
The bearing seat in take-up housings SPA is machined to the tolerance class H7.

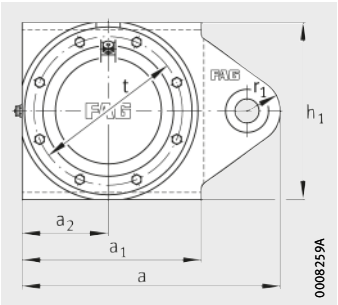
By agreement, the housings can also be supplied with other tolerance classes for the bearing seat, see section Tolerance class of bearing seat, page 47.



# Take-up housings

SPA, unsplit
For spherical roller bearings with tapered bore and adapter sleeve

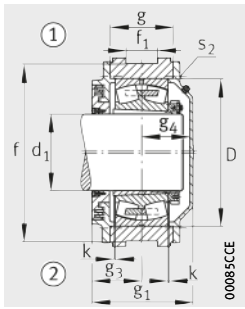


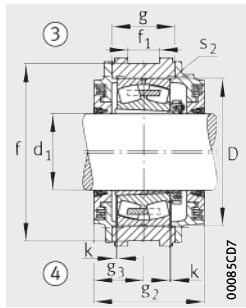

**Dimension table** · Dimensions in mm

| Shaft | Housing Dimensions | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_1$ | $h_1$ | a | $a_1$ | $a_2$ | $g_1$ | $g_2$ | m | $r_1$ | x | $x_1$ | u | p | $p_1$ | f | $f_1$ |
| **50** | 150 | 210 | 150 | 75 | 92,5 | 115 | 105 | 30 | 30 | – | 20 | 22 | 42 | 135 | 34 |
| **55** | 165 | 237,5 | 165 | 82,5 | 102,5 | 125 | 120 | 35 | 37,5 | – | 25 | 26 | 50 | 150 | 35 |
| **60** | 180 | 265 | 160 | 80 | 134 | 144 | 145 | 40 | 65 | 60 | 30 | 30 | 66 | 155 | 53 |
| **70** | 200 | 285 | 180 | 90 | 125 | 138 | 155 | 40 | 65 | 60 | 30 | 30 | 66 | 175 | 53 |
| **80** | 230 | 315 | 210 | 105 | 119 | 138 | 170 | 40 | 65 | 60 | 30 | 30 | 66 | 200 | 53 |
| **90** | 250 | 342,5 | 235 | 117,5 | 141 | 168 | 185 | 40 | 67,5 | 65 | 35 | 36 | 70 | 220 | 40 |
| **100** | 270 | 380 | 265 | 135 | 149,2 | 177,2 | 200 | 45 | 70 | 70 | 40 | 40 | 76 | 240 | 53 |
| **110** | 290 | 395 | 280 | 140 | 143 | 168 | 210 | 45 | 70 | 70 | 40 | 40 | 76 | 260 | 53 |
| **125** | 330 | 445 | 320 | 160 | 166 | 196 | 230 | 55 | 70 | 70 | 40 | 40 | 76 | 300 | 53 |
| **125** | 300 | 425 | 260 | 130 | 136 | 156 | 225 | 70 | 90 | 90 | 50 | 60 | 150 | 270 | 45 |
| **135** | 320 | 445 | 280 | 140 | 149 | 176 | 235 | 70 | 95 | 90 | 50 | 60 | 150 | 290 | 45 |
| **140** | 370 | 625 | 370 | 185 | 216 | 229 | 350 | 90 | 160 | 100 | 60 | 62 | 132 | 340 | 75 |
| **150** | 360 | 492,5 | 325 | 162,5 | 178 | 203 | 260 | 70 | 90 | 90 | 50 | 60 | 150 | 330 | 65 |
| **150** | 400 | 672,5 | 375 | 187,5 | 215 | 250 | 395 | 90 | 180 | 100 | 60 | 62 | 132 | 370 | 65 |
| **160** | 370 | 540 | 375 | 180 | 176 | 201 | 290 | 70 | 90 | 90 | 50 | 60 | 130 | 340 | 60 |
| **160** | 450 | 600 | 420 | 210 | 240 | 274 | 300 | 90 | 90 | 120 | 80 | 72 | 140 | 410 | 93 |
| **170** | 440 | 550 | 385 | 190 | 181 | 211 | 290 | 70 | 90 | 90 | 50 | 60 | 150 | 400 | 65 |
| **180** | 440 | 550 | 385 | 190 | 201 | 241 | 290 | 70 | 90 | 90 | 50 | 60 | 150 | 400 | 65 |
| **180** | 440 | 650 | 420 | 210 | 242 | 278 | 360 | 80 | 140 | 100 | 60 | 70 | 140 | 410 | 100 |
| **180** | 500 | 650 | 470 | 235 | 260 | 299 | 325 | 90 | 85 | 120 | 80 | 72 | 140 | 460 | 103 |
| **200** | 480 | 615 | 430 | 210 | 206 | 241 | 325 | 80 | 100 | 100 | 60 | 70 | 200 | 440 | 65 |
| **200** | 510 | 885 | 470 | 235 | 252 | 291 | 530 | 120 | 260 | 160 | 100 | 74 | 144 | 480 | 105 |
| **200** | 540 | 940 | 520 | 260 | 279 | 329 | 530 | 150 | 250 | 140 | 100 | 130 | 200 | 500 | 90 |
| **220** | 540 | 925 | 520 | 260 | 276 | 326 | 515 | 150 | 250 | 160 | 100 | 123 | 215 | 500 | 65 |
| **220** | 580 | 970 | 560 | 280 | 308 | 351 | 540 | 150 | 260 | 140 | 100 | 130 | 220 | 545 | 95 |

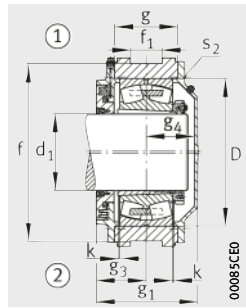
① Locating bearing AF; ② Non-locating bearing AL; ③ Locating bearing BF; ④ Non-locating bearing BL



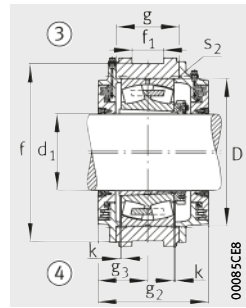

Guidance on both sides
Design A
Housing with labyrinth seal




Guidance on both sides
Design B




Guidance on both sides
Design A
Housing with Taconite seal

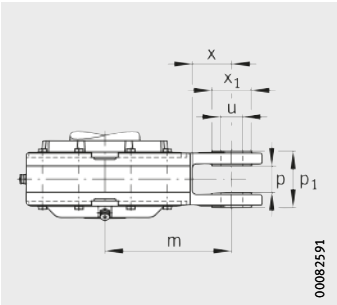


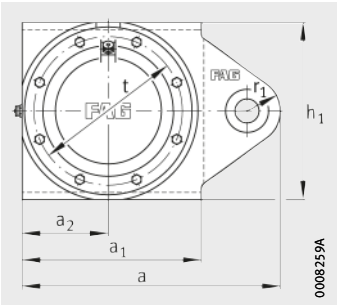

Guidance on both sides
Design B

| | | | | | | | | Spherical roller bearing and accessories | | Housing | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| D | k | g | $g_3$ | $g_4$ | t | $s_2$ | | Bearing | Adapter sleeve | Mass m ≈ kg | Designation |
| | | | | | | | Quantity | | | | |
| 100 | 2 | 45 | 52,5 | 35 | 130 | M8 | 6 | **22211..-K** | H311 | 9 | **SPA2211..-S** |
| 110 | 2 | 55 | 57,5 | 40 | 135 | M8 | 6 | **22212..-K** | H312 | 12 | **SPA2212..-S** |
| 120 | 2 | 78 | 72 | 56 | 135 | M6 | 6 | **22213..-K** | H313 | 16 | **SPA2213..-S** |
| 140 | 2 | 78 | 69 | 49 | 155 | M8 | 8 | **22216..-K** | H316 | 25 | **SPA2216..-S** |
| 160 | 2 | 70 | 60,5 | 52,5 | 185 | M8 | 6 | **22218..-K** | H318 | 22 | **SPA2218..-S** |
| 180 | 2,5 | 65 | 78 | 57 | 205 | M8 | 6 | **22220..-K** | H320 | 26 | **SPA2220..-S** |
| 200 | 2,5 | 73 | 82,6 | 60,6 | 230 | M12 | 6 | **22222..-K** | H322 | 32 | **SPA2222..-S** |
| 215 | 2,5 | 77 | 74 | 61 | 245 | M12 | 6 | **22224..-K** | H3124 | 39 | **SPA2224..-S** |
| 250 | 3 | 88 | 88 | 70 | 285 | M16 | 6 | **22228..-K** | H3128 | 58 | **SPA2228..-S** |
| 210 | 3 | 70 | 68 | 61 | 240 | M10 | 8 | **23028..-K** | H3028 | 53 | **SPA3028..-S** |
| 225 | 2 | 80 | 78 | 64 | 250 | M12 | 8 | **23030..-K** | H3030 | 65 | **SPA3030..-S** |
| 270 | 3 | 116 | 108 | 100 | 300 | M12 | 8 | **23132..-K** | H3132(-HG) | 120 | **SPA3132..-S** |
| 260 | 2 | 102 | 89 | 81 | 285 | M12 | 8 | **23034..-K** | H3034(-HG) | 90 | **SPA3034..-S** |
| 280 | 3 | 120 | 115 | 92 | 330 | M12 | 8 | **23134..-K** | H3134(-HG) | 131 | **SPA3134..-S** |
| 280 | 3 | 100 | 88 | 80 | 310 | M12 | 8 | **23036..-K** | H3036(-HG) | 85 | **SPA3036..-S** |
| 320 | 3 | 138 | 127 | 105 | 370 | M16 | 8 | **23236..-K** | H2336(-HG) | 158 | **SPA3236..-S** |
| 290 | 3 | 105 | 93 | 80 | 325 | M16 | 8 | **23038..-K** | H3038(-HG) | 129,5 | **SPA3038..-S** |
| 310 | 3 | 105 | 105,5 | 87,5 | 340 | M16 | 8 | **23040..-K** | H3040(-HG) | 180 | **SPA3040..-S** |
| 340 | 3 | 135 | 124 | 108 | 380 | M16 | 8 | **23140..-K** | H3140(-HG) | 165 | **SPA3140..-S** |
| 360 | 4 | 158 | 138 | 114 | 420 | M16 | 8 | **23240..-K** | H2340(-HG) | 260 | **SPA3240..-S** |
| 340 | 3 | 115 | 103 | 95 | 375 | M16 | 8 | **23044..-K** | H3044X(-HG) | 180 | **SPA3044..-S** |
| 370 | 4 | 150 | 134 | 110 | 420 | M16 | 8 | **23144..-K** | H3144X(-HG) | 280 | **SPA3144..-S** |
| 400 | 4 | 175 | 147 | 122 | 445 | M20 | 8 | **23244..-K** | H2344X(-HG) | 325 | **SPA3244..-S** |
| 400 | 4 | 152 | 148 | 122 | 455 | M20 | 8 | **23148..-K** | H3148X(-HG) | 330 | **SPA3148..-S** |
| 440 | 4 | 190 | 158 | 140 | 510 | M20 | 8 | **23248..-K** | H2348X(-HG) | 430 | **SPA3248..-S** |

# Take-up housings

SPA, unsplit
For spherical roller bearings with tapered bore and adapter sleeve

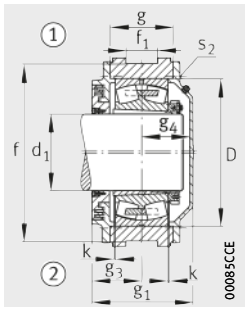


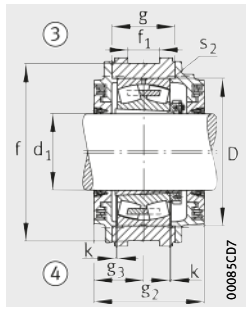

**Dimension table** (continued) · Dimensions in mm

| Shaft | Housing Dimensions | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_1$ | $h_1$ | a | $a_1$ | $a_2$ | $g_1$ | $g_2$ | m | $r_1$ | x | $x_1$ | u | p | $p_1$ | f | $f_1$ |
| **240** | 540 | 910 | 500 | 245 | 226 | 261 | 515 | 150 | 250 | 140 | 100 | 123 | 215 | 500 | 65 |
| **240** | 570 | 990 | 550 | 275 | 291 | 336 | 565 | 150 | 270 | 160 | 100 | 135 | 225 | 540 | 80 |
| **240** | 610 | 1 063 | 596 | 298 | 330 | 370 | 615 | 150 | 300 | 140 | 100 | 173 | 240 | 570 | 103 |
| **260** | 540 | 910 | 500 | 245 | 236 | 281 | 515 | 150 | 250 | 140 | 100 | 123 | 215 | 500 | 65 |
| **260** | 650 | 1 095 | 630 | 315 | 343 | 400 | 630 | 150 | 220 | 140 | 100 | 173 | 240 | 610 | 123 |
| **280** | 650 | 1 115 | 630 | 315 | 327 | 385 | 650 | 150 | 310 | 140 | 100 | 170 | 270 | 610 | 130 |
| **280** | 690 | 1 200 | 680 | 340 | 369 | 404 | 680 | 180 | 310 | 140 | 100 | 190 | 270 | 650 | 115 |
| **300** | 670 | 1 140 | 665 | 340 | 359 | 412 | 650 | 150 | 310 | 175 | 100 | 170 | 240 | 630 | 123 |
| **300** | 710 | 1 280 | 710 | 355 | 391 | 439 | 725 | 200 | 275 | 170 | 110 | 213 | 300 | 670 | 123 |
| **320** | 740 | 1 290 | 740 | 370 | 373 | 421 | 720 | 200 | 310 | 180 | 120 | 180 | 300 | 700 | 150 |
| **320** | 740 | 1 335 | 735 | 385 | 434 | 489 | 750 | 200 | 310 | 170 | 110 | 213 | 300 | 700 | 123 |
| **340** | 830 | 1 390 | 800 | 400 | 437 | 497 | 765 | 225 | 310 | 190 | 130 | 213 | 330 | 790 | 123 |
| **360** | 790 | 1 325 | 750 | 375 | 404 | 459 | 750 | 200 | 320 | 170 | 110 | 200 | 300 | 740 | 120 |
| **360** | 820 | 1 385 | 810 | 405 | 489 | 529 | 780 | 200 | 305 | 170 | 110 | 213 | 300 | 780 | 123 |
| **380** | 960 | 1 460 | 880 | 440 | 504 | 569 | 820 | 200 | 350 | 170 | 110 | 180 | 300 | 900 | 190 |
| **400** | 960 | 1 488 | 925 | 465 | 510 | 575 | 825 | 200 | 350 | 170 | 110 | 180 | 300 | 900 | 190 |

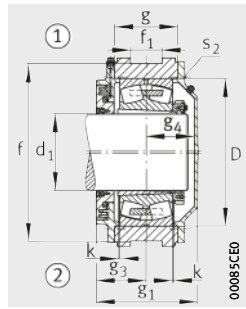
① Locating bearing AF; ② Non-locating bearing AL; ③ Locating bearing BF; ④ Non-locating bearing BL



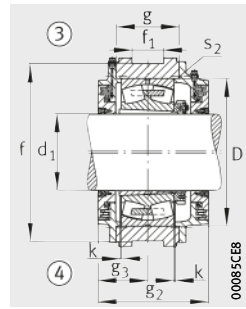

Guidance on both sides
Design A
Housing with labyrinth seal




Guidance on both sides
Design B




Guidance on both sides
Design A
Housing with Taconite seal

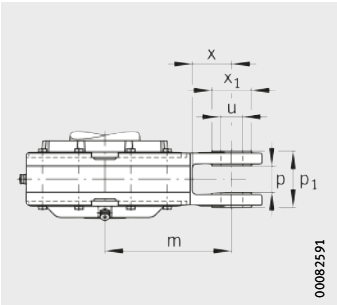


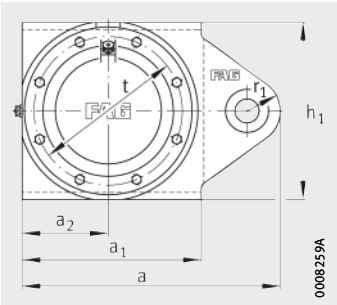

Guidance on both sides
Design B

| | | | | | | | | Spherical roller bearing and accessories | | Housing | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| D | k | g | $g_3$ | $g_4$ | t | $s_2$ | | Bearing | Adapter sleeve | Mass m ≈ kg | Designation |
| | | | | | | | Quantity | | | | |
| 400 | 4 | 130 | 113 | 103 | 440 | M16 | 8 | **23052..-K** | H3052X(-HG) | 225 | **SPA3052..-S** |
| 440 | 4 | 175 | 150,5 | 132 | 490 | M20 | 8 | **23152..-K** | H3152X(-HG) | 325 | **SPA3152..-S** |
| 480 | 3 | 205 | 170 | 148 | 535 | M20 | 8 | **23252..-K** | H2352X(-HG) | 410 | **SPA3252..-S** |
| 420 | 4 | 135 | 118 | 108 | 460 | M16 | 8 | **23056..-K** | H3056(-HG) | 310 | **SPA3056..-S** |
| 500 | 4 | 206 | 180 | 151 | 555 | M24 | 8 | **23256..-K** | H2356X(-HG) | 520 | **SPA3256..-S** |
| 500 | 4 | 190 | 170 | 143 | 555 | M24 | 8 | **23160..-K** | H3160(-HG) | 440 | **SPA3160..-S** |
| 540 | 4 | 230 | 182 | 175 | 600 | M24 | 8 | **23260..-K** | H3260(-HG) | 620 | **SPA3260..-S** |
| 540 | 4 | 210 | 186 | 161 | 590 | M24 | 8 | **23164..-K** | H3164-HG | 560 | **SPA3164..-S** |
| 580 | 5 | 238 | 192 | 187 | 640 | M24 | 8 | **23264..-K** | H3264-HG | 810 | **SPA3264..-S** |
| 580 | 5 | 220 | 183 | 178 | 640 | M24 | 8 | **23168..-K** | H3168-HG | 630 | **SPA3168..-S** |
| 620 | 5 | 260 | 217 | 205 | 680 | M30 | 8 | **23268..-K** | H3268-HG | 920 | **SPA3268..-S** |
| 650 | 5 | 267 | 216 | 209 | 710 | M30 | 8 | **23272..-K** | H3272-HG | 885 | **SPA3272..-S** |
| 620 | 5 | 230 | 202 | 190 | 680 | M30 | 8 | **23176..-K** | H3176-HG | 700 | **SPA3176..-S** |
| 680 | 5 | 295 | 232 | 244 | 745 | M30 | 8 | **23276..-K** | H3276-HG | 900 | **SPA3276..-S** |
| 720 | 5 | 300 | 252 | 237 | 790 | M30 | 8 | **23280..-K** | H3280-HG | 1 600 | **SPA3280..-S** |
| 760 | 5 | 315 | 255 | 240 | 835 | M30 | 8 | **23284..-K** | H3284-HG | 1 800 | **SPA3284..-S** |

# Take-up housings

SPA, unsplit
For spherical roller bearings with tapered bore and adapter sleeve
Stepped shaft

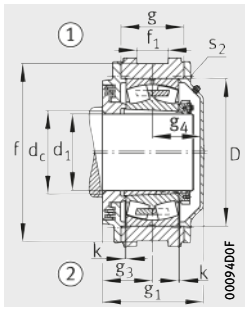


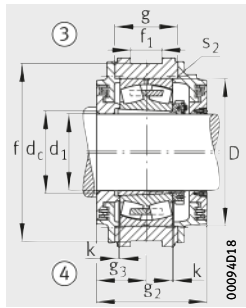

**Dimension table** · Dimensions in mm

| Shaft | | Housing Dimensions | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_1$ | $d_c$ max. | $h_1$ | a | $a_1$ | $a_2$ | $g_1$ | $g_2$ | m | $r_1$ | x | $x_1$ | u | p | $p_1$ |
| **50** | 56 | 150 | 210 | 150 | 75 | 92,5 | 115 | 105 | 30 | 30 | – | 20 | 22 | 42 |
| **55** | 61 | 165 | 237,5 | 165 | 82,5 | 102,5 | 125 | 120 | 35 | 37,5 | – | 25 | 26 | 50 |
| **60** | 66 | 180 | 265 | 160 | 80 | 134 | 144 | 145 | 40 | 65 | 60 | 30 | 30 | 66 |
| **70** | 76 | 200 | 285 | 180 | 90 | 125 | 138 | 155 | 40 | 65 | 60 | 30 | 30 | 66 |
| **80** | 88 | 230 | 315 | 210 | 105 | 119 | 138 | 170 | 40 | 65 | 60 | 30 | 30 | 66 |
| **90** | 98 | 250 | 342,5 | 235 | 117,5 | 141 | 168 | 185 | 40 | 67,5 | 65 | 35 | 36 | 70 |
| **100** | 108 | 270 | 380 | 265 | 135 | 149,2 | 177,2 | 200 | 45 | 70 | 70 | 40 | 40 | 76 |
| **110** | 118 | 290 | 395 | 280 | 140 | 143 | 168 | 210 | 45 | 70 | 70 | 40 | 40 | 76 |
| **125** | 137 | 330 | 445 | 320 | 160 | 166 | 196 | 230 | 55 | 70 | 70 | 40 | 40 | 76 |
| **125** | 137 | 300 | 425 | 260 | 130 | 136 | 156 | 225 | 70 | 90 | 90 | 50 | 60 | 150 |
| **135** | 147 | 320 | 445 | 280 | 140 | 149 | 176 | 235 | 70 | 95 | 90 | 50 | 60 | 150 |
| **140** | 152 | 370 | 625 | 370 | 185 | 216 | 229 | 350 | 90 | 160 | 100 | 60 | 62 | 132 |
| **150** | 166 | 360 | 492,5 | 325 | 162,5 | 178 | 203 | 260 | 70 | 90 | 90 | 50 | 60 | 150 |
| **150** | 166 | 400 | 672,5 | 375 | 187,5 | 215 | 250 | 395 | 90 | 180 | 100 | 60 | 62 | 132 |
| **160** | 176 | 370 | 540 | 375 | 180 | 176 | 201 | 290 | 70 | 90 | 90 | 50 | 60 | 130 |
| **160** | 176 | 450 | 600 | 420 | 210 | 240 | 274 | 300 | 90 | 90 | 120 | 80 | 72 | 140 |
| **170** | 186 | 440 | 550 | 385 | 190 | 181 | 211 | 290 | 70 | 90 | 90 | 50 | 60 | 150 |
| **180** | 196 | 440 | 550 | 385 | 190 | 201 | 241 | 290 | 70 | 90 | 90 | 50 | 60 | 150 |
| **180** | 196 | 440 | 650 | 420 | 210 | 242 | 278 | 360 | 80 | 140 | 100 | 60 | 70 | 140 |
| **180** | 196 | 500 | 650 | 470 | 235 | 260 | 299 | 325 | 90 | 85 | 120 | 80 | 72 | 140 |
| **200** | 216 | 480 | 615 | 430 | 210 | 206 | 241 | 325 | 80 | 100 | 100 | 60 | 70 | 200 |
| **200** | 216 | 510 | 885 | 470 | 235 | 252 | 291 | 530 | 120 | 260 | 160 | 100 | 74 | 144 |
| **200** | 216 | 540 | 940 | 520 | 260 | 279 | 329 | 530 | 150 | 250 | 140 | 100 | 130 | 200 |
| **220** | 236 | 540 | 925 | 520 | 260 | 276 | 326 | 515 | 150 | 250 | 160 | 100 | 123 | 215 |
| **220** | 236 | 580 | 970 | 560 | 280 | 308 | 351 | 540 | 150 | 260 | 140 | 100 | 130 | 220 |

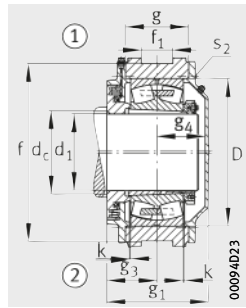
① Locating bearing AF; ② Non-locating bearing AL; ③ Locating bearing BF; ④ Non-locating bearing BL



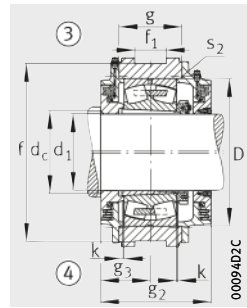

Guidance on both sides
Design A
Housing with labyrinth seal




Guidance on both sides
Design B




Guidance on both sides
Design A
Housing with Taconite seal

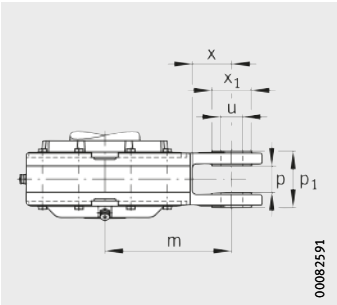


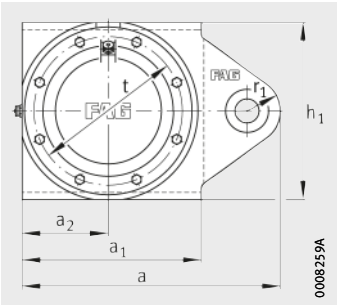

Guidance on both sides
Design B

| | | | | | | | | | | Spherical roller bearing and accessories | | Housing | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| f | $f_1$ | D | k | g | $g_3$ | $g_4$ | t | $s_2$ | | Bearing | Adapter sleeve | Mass m ≈ kg | Designation |
| | | | | | | | | | Quantity | | | | |
| 135 | 34 | 100 | 2 | 45 | 52,5 | 35 | 130 | M8 | 6 | **22211..-K** | H311 | 9 | **SPA2211..-S** |
| 150 | 35 | 110 | 2 | 55 | 57,5 | 40 | 135 | M8 | 6 | **22212..-K** | H312 | 12 | **SPA2212..-S** |
| 155 | 53 | 120 | 2 | 78 | 72 | 56 | 135 | M6 | 6 | **22213..-K** | H313 | 16 | **SPA2213..-S** |
| 175 | 53 | 140 | 2 | 78 | 69 | 49 | 155 | M8 | 8 | **22216..-K** | H316 | 25 | **SPA2216..-S** |
| 200 | 53 | 160 | 2 | 70 | 60,5 | 52,5 | 185 | M8 | 6 | **22218..-K** | H318 | 22 | **SPA2218..-S** |
| 220 | 40 | 180 | 2,5 | 65 | 78 | 57 | 205 | M8 | 6 | **22220..-K** | H320 | 26 | **SPA2220..-S** |
| 240 | 53 | 200 | 2,5 | 73 | 82,6 | 60,6 | 230 | M12 | 6 | **22222..-K** | H322 | 32 | **SPA2222..-S** |
| 260 | 53 | 215 | 2,5 | 77 | 74 | 61 | 245 | M12 | 6 | **22224..-K** | H3124 | 39 | **SPA2224..-S** |
| 300 | 53 | 250 | 3 | 88 | 88 | 70 | 285 | M16 | 6 | **22228..-K** | H3128 | 58 | **SPA2228..-S** |
| 270 | 45 | 210 | 3 | 70 | 68 | 61 | 240 | M10 | 8 | **23028..-K** | H3028 | 53 | **SPA3028..-S** |
| 290 | 45 | 225 | 2 | 80 | 78 | 64 | 250 | M12 | 8 | **23030..-K** | H3030 | 65 | **SPA3030..-S** |
| 340 | 75 | 270 | 3 | 116 | 108 | 100 | 300 | M12 | 8 | **23132..-K** | H3132(-HG) | 120 | **SPA3132..-S** |
| 330 | 65 | 260 | 2 | 102 | 89 | 81 | 285 | M12 | 8 | **23034..-K** | H3034(-HG) | 90 | **SPA3034..-S** |
| 370 | 65 | 280 | 3 | 120 | 115 | 92 | 330 | M12 | 8 | **23134..-K** | H3134(-HG) | 131 | **SPA3134..-S** |
| 340 | 60 | 280 | 3 | 100 | 88 | 80 | 310 | M12 | 8 | **23036..-K** | H3036(-HG) | 85 | **SPA3036..-S** |
| 410 | 93 | 320 | 3 | 138 | 127 | 105 | 370 | M16 | 8 | **23236..-K** | H2336(-HG) | 158 | **SPA3236..-S** |
| 400 | 65 | 290 | 3 | 105 | 93 | 80 | 325 | M16 | 8 | **23038..-K** | H3038(-HG) | 129,5 | **SPA3038..-S** |
| 400 | 65 | 310 | 3 | 105 | 105,5 | 87,5 | 340 | M16 | 8 | **23040..-K** | H3040(-HG) | 180 | **SPA3040..-S** |
| 410 | 100 | 340 | 3 | 135 | 124 | 108 | 380 | M16 | 8 | **23140..-K** | H3140(-HG) | 165 | **SPA3140..-S** |
| 460 | 103 | 360 | 4 | 158 | 138 | 114 | 420 | M16 | 8 | **23240..-K** | H2340(-HG) | 260 | **SPA3240..-S** |
| 440 | 65 | 340 | 3 | 115 | 103 | 95 | 375 | M16 | 8 | **23044..-K** | H3044X(-HG) | 180 | **SPA3044..-S** |
| 480 | 105 | 370 | 4 | 150 | 134 | 110 | 420 | M16 | 8 | **23144..-K** | H3144X(-HG) | 280 | **SPA3144..-S** |
| 500 | 90 | 400 | 4 | 175 | 147 | 122 | 445 | M20 | 8 | **23244..-K** | H2344X(-HG) | 325 | **SPA3244..-S** |
| 500 | 65 | 400 | 4 | 152 | 148 | 122 | 455 | M20 | 8 | **23148..-K** | H3148X(-HG) | 330 | **SPA3148..-S** |
| 545 | 95 | 440 | 4 | 190 | 158 | 140 | 510 | M20 | 8 | **23248..-K** | H2348X(-HG) | 430 | **SPA3248..-S** |

# Take-up housings

SPA, unsplit
For spherical roller bearings with tapered bore and adapter sleeve
Stepped shaft

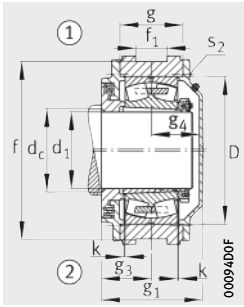


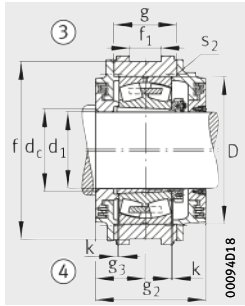

**Dimension table** (continued) · Dimensions in mm

| Shaft | | Housing Dimensions | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_1$ | $d_c$ max. | $h_1$ | a | $a_1$ | $a_2$ | $g_1$ | $g_2$ | m | $r_1$ | x | $x_1$ | u | p | $p_1$ |
| **240** | 256 | 540 | 910 | 500 | 245 | 226 | 261 | 515 | 150 | 250 | 140 | 100 | 123 | 215 |
| **240** | 256 | 570 | 990 | 550 | 275 | 291 | 336 | 565 | 150 | 270 | 160 | 100 | 135 | 225 |
| **240** | 256 | 610 | 1 063 | 596 | 298 | 330 | 370 | 615 | 150 | 300 | 140 | 100 | 173 | 240 |
| **260** | 280 | 540 | 910 | 500 | 245 | 236 | 281 | 515 | 150 | 250 | 140 | 100 | 123 | 215 |
| **260** | 280 | 650 | 1 095 | 630 | 315 | 343 | 400 | 630 | 150 | 220 | 140 | 100 | 173 | 240 |
| **280** | 300 | 650 | 1 115 | 630 | 315 | 327 | 385 | 650 | 150 | 310 | 140 | 100 | 170 | 270 |
| **280** | 300 | 690 | 1 200 | 680 | 340 | 369 | 404 | 680 | 180 | 310 | 140 | 100 | 190 | 270 |
| **300** | 320 | 670 | 1 140 | 665 | 340 | 359 | 412 | 650 | 150 | 310 | 175 | 100 | 170 | 240 |
| **300** | 320 | 710 | 1 280 | 710 | 355 | 391 | 439 | 725 | 200 | 275 | 170 | 110 | 213 | 300 |
| **320** | 344 | 740 | 1 290 | 740 | 370 | 373 | 421 | 720 | 200 | 310 | 180 | 120 | 180 | 300 |
| **320** | 344 | 740 | 1 335 | 735 | 385 | 434 | 489 | 750 | 200 | 310 | 170 | 110 | 213 | 300 |
| **340** | 364 | 830 | 1 390 | 800 | 400 | 437 | 497 | 765 | 225 | 310 | 190 | 130 | 213 | 330 |
| **360** | 384 | 790 | 1 325 | 750 | 375 | 404 | 459 | 750 | 200 | 320 | 170 | 110 | 200 | 300 |
| **360** | 384 | 820 | 1 385 | 810 | 405 | 489 | 529 | 780 | 200 | 305 | 170 | 110 | 213 | 300 |
| **380** | 404 | 960 | 1 460 | 880 | 440 | 504 | 569 | 820 | 200 | 350 | 170 | 110 | 180 | 300 |
| **400** | 430 | 960 | 1 488 | 925 | 465 | 510 | 575 | 825 | 200 | 350 | 170 | 110 | 180 | 300 |

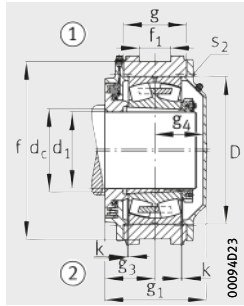
① Locating bearing AF; ② Non-locating bearing AL; ③ Locating bearing BF; ④ Non-locating bearing BL



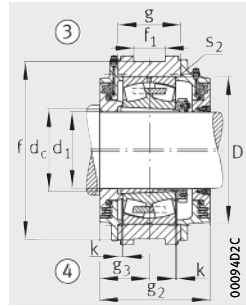

Guidance on both sides
Design A
Housing with labyrinth seal




Guidance on both sides
Design B




Guidance on both sides
Design A
Housing with Taconite seal




Guidance on both sides
Design B

| | | | | | | | | | Spherical roller bearing and accessories | | Housing | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| f | $f_1$ | D | k | g | $g_3$ | $g_4$ | t | $s_2$ | | Bearing | Adapter sleeve | Mass m | Designation |
| | | | | | | | | | Quantity | | | ≈ kg | |
| 500 | 65 | 400 | 4 | 130 | 113 | 103 | 440 | M16 | 8 | **23052..-K** | H3052X(-HG) | 225 | **SPA3052..-S** |
| 540 | 80 | 440 | 4 | 175 | 150,5 | 132 | 490 | M20 | 8 | **23152..-K** | H3152X(-HG) | 325 | **SPA3152..-S** |
| 570 | 103 | 480 | 3 | 205 | 170 | 148 | 535 | M20 | 8 | **23252..-K** | H2352X(-HG) | 410 | **SPA3252..-S** |
| 500 | 65 | 420 | 4 | 135 | 118 | 108 | 460 | M16 | 8 | **23056..-K** | H3056(-HG) | 310 | **SPA3056..-S** |
| 610 | 123 | 500 | 4 | 206 | 180 | 151 | 555 | M24 | 8 | **23256..-K** | H2356X(-HG) | 520 | **SPA3256..-S** |
| 610 | 130 | 500 | 4 | 190 | 170 | 143 | 555 | M24 | 8 | **23160..-K** | H3160(-HG) | 440 | **SPA3160..-S** |
| 650 | 115 | 540 | 4 | 230 | 182 | 175 | 600 | M24 | 8 | **23260..-K** | H3260(-HG) | 620 | **SPA3260..-S** |
| 630 | 123 | 540 | 4 | 210 | 186 | 161 | 590 | M24 | 8 | **23164..-K** | H3164-HG | 560 | **SPA3164..-S** |
| 670 | 123 | 580 | 5 | 238 | 192 | 187 | 640 | M24 | 8 | **23264..-K** | H3264-HG | 810 | **SPA3264..-S** |
| 700 | 150 | 580 | 5 | 220 | 183 | 178 | 640 | M24 | 8 | **23168..-K** | H3168-HG | 630 | **SPA3168..-S** |
| 700 | 123 | 620 | 5 | 260 | 217 | 205 | 680 | M30 | 8 | **23268..-K** | H3268-HG | 920 | **SPA3268..-S** |
| 790 | 123 | 650 | 5 | 267 | 216 | 209 | 710 | M30 | 8 | **23272..-K** | H3272-HG | 885 | **SPA3272..-S** |
| 740 | 120 | 620 | 5 | 230 | 202 | 190 | 680 | M30 | 8 | **23176..-K** | H3176-HG | 700 | **SPA3176..-S** |
| 780 | 123 | 680 | 5 | 295 | 232 | 244 | 745 | M30 | 8 | **23276..-K** | H3276-HG | 900 | **SPA3276..-S** |
| 900 | 190 | 720 | 5 | 300 | 252 | 237 | 790 | M30 | 8 | **23280..-K** | H3280-HG | 1 600 | **SPA3280..-S** |
| 900 | 190 | 760 | 5 | 315 | 255 | 240 | 835 | M30 | 8 | **23284..-K** | H3284-HG | 1 800 | **SPA3284..-S** |



# Flanged housings

F112
F5



# Flanged housings

**Flanged housings F112** ..... **356**

Flanged housings F112 can be used in a wide variety of applications, for example in general machine building. In many cases, the flange integrated in the housing represents the ideal interface with the machine or installation.

The housings, which are made from flake graphite cast iron, are designed for grease lubrication.

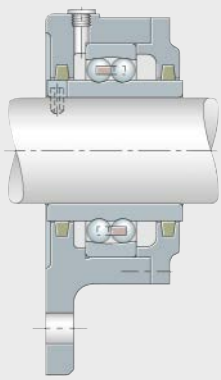
The bearings are always fitted in this housing such that they act as locating bearings. Suitable bearings are self-aligning ball bearings 112 with an extended inner ring.

**Flanged housings F5** ..... **364**

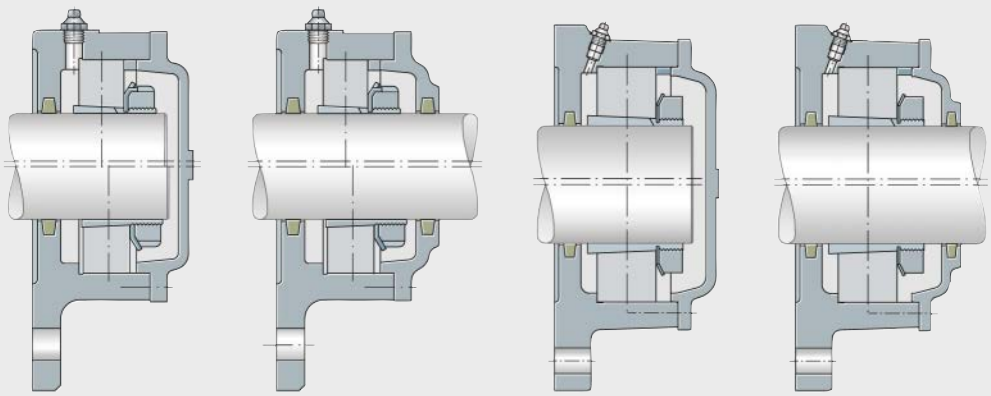
Flanged housings F5 can be used in a wide variety of applications, for example in general machine building. In many cases, the flange integrated in the housing represents the ideal interface with the machine or installation.

The housings are designed for grease lubrication. The standard housing material is flake graphite cast iron, while a design made from spheroidal graphite cast iron is also available. Depending on the size, the housing is of a triangular or square basic shape with three or four fixing holes.

Suitable bearings are self-aligning ball bearings, barrel roller bearings and spherical roller bearings with a tapered bore that are located on the shaft using adapter sleeves.



00084BEC



00084BF0



# Flanged housings F112

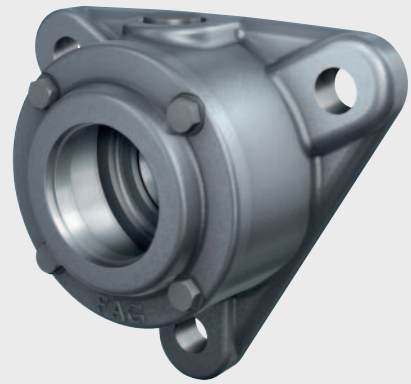
# Flanged housings F112


| | | Page |
|---|---|---|
| **Product overview** | Flanged housings F112 | 358 |
| **Features** | Suitable bearings | 359 |
| | Housing material and anti-corrosion protection | 359 |
| | Locating bearings | 359 |
| | Seals | 359 |
| | Housing configurations | 360 |
| | Lubrication | 360 |
| | Designation structure | 361 |
| | Ordering example | 361 |
| **Design and safety guidelines** | Flange screws | 362 |
| **Accuracy** | | 362 |
| **Dimension tables** | Flanged housings F112, unsplit, for self-aligning ball bearings with extended inner ring | 363 |




## Flanged housings

F112



# Flanged housings F112

## Features

Flanged housings F112 can be used in a wide variety of applications, for example in machine structures and support structures.

## Suitable bearings

The dimensions of flanged housings F112 are matched to self-aligning ball bearings 112 with an extended inner ring, see table. The range of shaft diameters is between 20 mm and 60 mm.

### Bearing type and sizes

| Bearing type | Size |
|---|---|
| **Self-aligning ball bearings**<br>with cylindrical bore and extended inner ring | 11204 to 11212 |

## Housing material and anti-corrosion protection

The housing bodies are made from flake graphite cast iron.

All outer surfaces not machined by chip-forming methods have a universal paint coating (colour RAL 7031, bluish-grey). The coating can be finished using all synthetic resin, polyurethane, acrylic, epoxy resin, chlorinated rubber, nitrocellulose and acid-hardening hammer tone finishes.

Inner and outer surfaces machined by chip-forming methods are provided with anti-corrosion protection that can be easily removed. It is recommended that only volatile solvents and lint-free cloths should be used.

## Locating bearings

In flanged housings F112, the self-aligning ball bearing is clamped between the abutment shoulder in the housing and the cover. As a result, the bearing acts as a locating bearing.

## Seals

Flanged housings F112 are sealed by means of felt seals, *Figure 1*. The felt seals allow shaft misalignment of up to 0,5° in both directions and are suitable for grease lubrication.

The oil-soaked felt strips must be inserted in the associated slots in the housing.

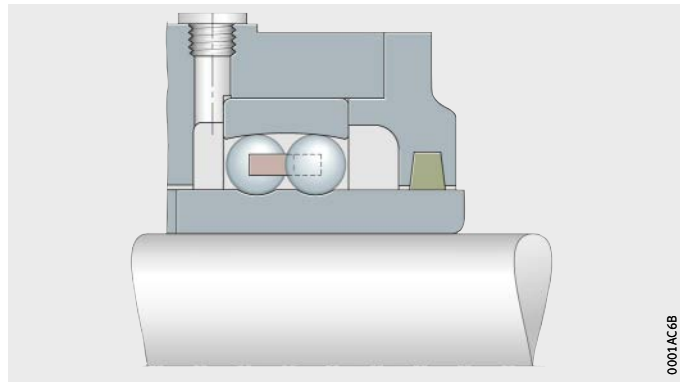



*Figure 1*
Felt seal for flanged housings F112

# Flanged housings F112

## Housing configuration

Flanged housings F112 are supplied in a uniform housing configuration, *Figure 2*.

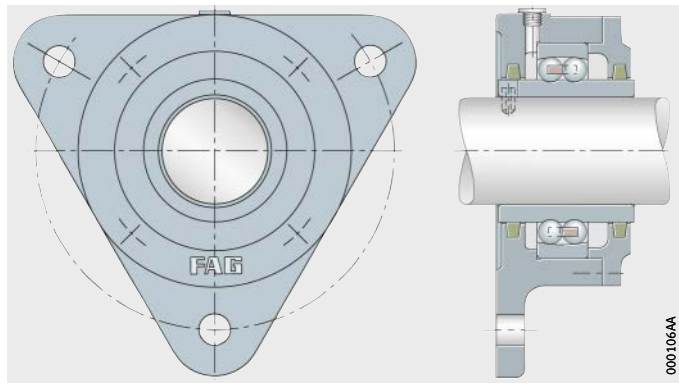



*Figure 2*
Flanged housing F112
for self-aligning ball bearings
with extended inner ring

## Lubrication

Flanged housings F112 are designed for grease lubrication.

### Relubrication

The top of the housing has a threaded hole M10×1. In the delivered condition, this is closed off using a plastic stopper. For relubrication, a taper type or button type lubrication nipple can be screwed into place here. In the case of flanged housings F112, the lubrication nipples are not included in the scope of delivery.

## Designation structure

The designation structure for flanged housings F112 is shown in the table and *Figure 3*.

**Designation structure of flanged housings F112**

| Feature | | Code | Description |
|---|---|---|---|
| ① | Series | F112 | Flanged housings F112 |
| ② | Bore code of bearing | 05 | Bore diameter (5 · 5) mm = 25 mm |




*Figure 3*
Designation structure of flanged housings F112, example

## Ordering example

When ordering a flanged housing F112, the designation indicates the bore diameter of the appropriate self-aligning ball bearing. The rolling bearing must be ordered separately.

The ordering example shows the construction of the order for a selected housing and the appropriate bearing. The allocation of housings and bearings for all housing sizes is shown in the dimension table.

The felt strips for sealing the housing are included in the scope of delivery and need not be ordered separately.

**Example 1** Flanged housing F112, for self-aligning ball bearings 11204-TVH.

Order
1 flanged housing F11204
1 self-aligning ball bearing 11204-TVH



# Flanged housings F112

## Design and safety guidelines

### Flange screws

Flange screws are used to screw mount the housing flange to a mating surface. They are not included in the scope of delivery of the housings.

The appropriate screw size for each housing is stated, see dimension table.

The associated tightening torques are stated for screws with a metric thread in accordance with DIN 13, DIN 962 and DIN ISO 965-2, see table, page 42. The values correspond to those of the foot screws for plummer block housings.

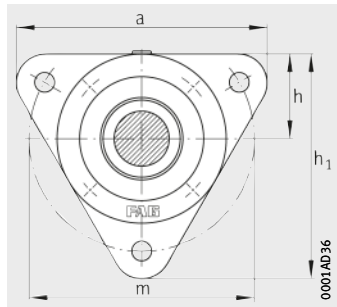
### Accuracy

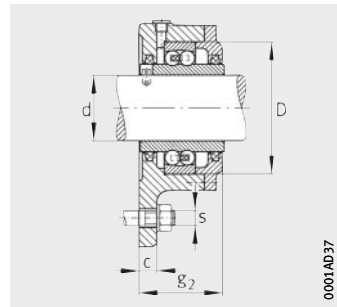
The bearing seat in flanged housings F112 is machined to the tolerance class H7.

By agreement, the housings can also be supplied with other tolerance classes for the bearing seat, see section Tolerance class of bearing seat, page 47.

# Flanged housings

F112, unsplit
For self-aligning ball bearings with extended inner ring




**Dimension table** · Dimensions in mm

| Shaft | Housing Dimensions | | | | | | | | Self-aligning ball bearing and accessories | | | Housing | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| d | h | $h_1$ | c | a | m | s | | D | $g_2$ | Bearing | Felt strip[1] (length 1 000 mm) | | Mass | Desig-nation |
| | | | | | | | | | | | Designation | Quan-tity | m ≈ kg | |
| | | | | | | mm | *inch* | | | | | | | |
| **20** | 35 | 92 | 10 | 105 | 90 | M10 | 3/8 | 47 | 42 | **11204** | STRS153401-1-5X4-F2 | 1 | 0,7 | **F11204** |
| **25** | 38 | 100 | 10 | 110 | 96 | M10 | 3/8 | 52 | 46 | **11205** | STRS153401-1-5X4-F2 | 1 | 0,8 | **F11205** |
| **30** | 44 | 117 | 12 | 130 | 116 | M10 | 3/8 | 62 | 49 | **11206** | STRS153401-1-5X4-F2 | 1 | 1,4 | **F11206** |
| **35** | 48,5 | 129,5 | 12 | 145 | 130 | M12 | 1/2 | 72 | 54 | **11207** | STRS153401-1-5X4-F2 | 1 | 1,8 | **F11207** |
| **40** | 54 | 143 | 12 | 160 | 140 | M12 | 1/2 | 80 | 60 | **11208** | STRS153401-1-5X4-F2 | 1 | 2,2 | **F11208** |
| **45** | 60 | 160 | 15 | 180 | 160 | M12 | 1/2 | 85 | 62,5 | **11209** | STRS153401-1-5X4-F2 | 1 | 3,1 | **F11209** |
| **50** | 60 | 160 | 15 | 180 | 160 | M12 | 1/2 | 90 | 62,5 | **11210** | STRS153401-1-5X4-F2 | 1 | 3 | **F11210** |
| **55** | 65 | 166 | 16 | 180 | 160 | M12 | 1/2 | 100 | 63,5 | **11211** | STRS153401-1-5X4-F2 | 1 | 3,2 | **F11211** |
| **60** | 70 | 177 | 16 | 191 | 170 | M12 | 1/2 | 110 | 65,5 | **11212** | STRS153401-1-5X4-F2 | 1 | 3,5 | **F11212** |

[1] The felt strips are supplied by the metre and cut to the appropriate length on site.



FAG



# Flanged housings F5

# Flanged housings F5


| | | Page |
|---|---|---|
| **Product overview** | Flanged housings F5 | 366 |
| **Features** | Suitable bearings | 368 |
| | Housing materials and anti-corrosion protection | 368 |
| | Locating and non-locating bearings | 368 |
| | Seals and covers | 368 |
| | Housing configurations | 369 |
| | Lubrication | 370 |
| | Designation structure | 371 |
| | Ordering examples | 372 |
| **Design and safety guidelines** | Flange screws | 373 |
| **Accuracy** | | 373 |
| **Dimension tables** | Flanged housings F5, unsplit, for bearings with tapered bore and adapter sleeve | 374 |




## Flanged housings

Closed on one side, with cover

F5..-A
(F505-A to F513-A)




F5..-A
(F515-A to F522-A)




For continuous shaft

F5..-B
(F505-B to F513-B)



**F5..-B**
**(F515-B to F522-B)**




## Accessories

**Locating rings**
For housings F505 to F513
For housings F515 to F522

**FE**




**FRM**



# Flanged housings F5

## Features

Flanged housings F5 can be used in a wide variety of applications.

## Suitable bearings

Flanged housings F5 are intended for fitting with self-aligning ball bearings, barrel roller bearings and spherical roller bearings with a tapered bore that are located on the shaft using adapter sleeves, see table. The range of shaft diameters is between 20 mm and 100 mm.

### Bearing types and sizes

| Bearing type | Size |
|---|---|
| **Spherical roller bearings**<br>– with tapered bore and adapter sleeve | 22205..-K to 22222..-K |
| **Self-aligning ball bearings** | 1205-K to 1222-K |
| – with tapered bore and adapter sleeve | 2205-K to 2222-K |
| **Barrel roller bearings**<br>– with tapered bore and adapter sleeve | 20205-K to 20222-K |

## Housing materials and anti-corrosion protection

The standard material for the housing bodies is flake graphite cast iron (suffix L). By agreement, housing bodies made from spheroidal graphite cast iron (suffix D) are available.

All outer surfaces not machined by chip-forming methods have a universal paint coating (colour RAL 7031, bluish-grey). The coating can be finished using all synthetic resin, polyurethane, acrylic, epoxy resin, chlorinated rubber, nitrocellulose and acid-hardening hammer tone finishes.

Inner and outer surfaces machined by chip-forming methods are provided with anti-corrosion protection that can be easily removed. It is recommended that only volatile solvents and lint-free cloths should be used.

## Locating and non-locating bearings

The bearing seats in the housing are machined such that the bearings are movable and can thus function as non-locating bearings. Locating bearing arrangements can be achieved by the insertion of locating rings. For housings F505 to F513, locating rings FE are used, while for housings F515 to F522, locating rings FRM are used. The quantity of locating rings required is 1 or 2, see dimension table. Two rings are inserted on both sides of the bearing, a single ring is inserted on the side with the adapter sleeve nut.

Locating rings must be ordered separately.

## Seals and covers

Flanged housings F5 of design A are intended for the bearing arrangements of shaft ends. One side is closed by a cover and the other side is sealed against the shaft. Design B is intended for continuous shafts, in which case the housing is sealed against the shaft on both sides.

Flanged housings F5 are sealed by means of felt seals, *Figure 1*, page 369. The felt seals allow shaft misalignment of up to 0,5° in both directions and are suitable for grease lubrication.

The oil-soaked felt strips must be inserted in the associated slots in the housing.

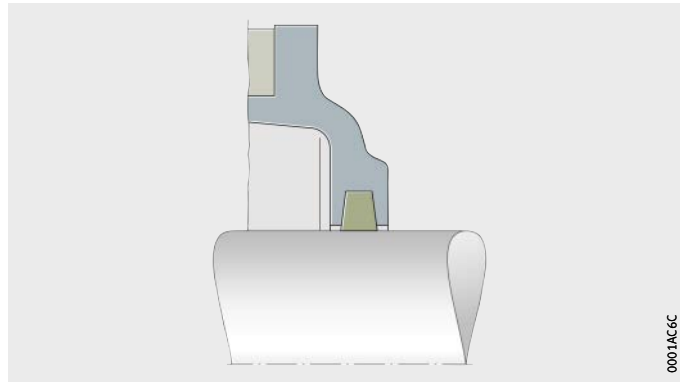



*Figure 1*
Felt seal for flanged housings F5

## Housing configurations

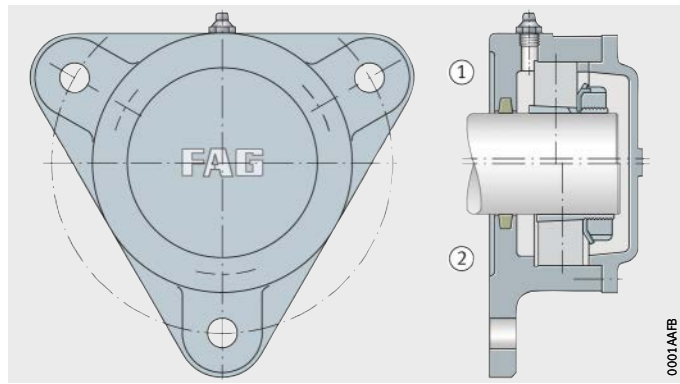
In the case of flanged housings F5, various housing configurations are possible that are described by means of the designation, *Figure 2* to *Figure 5*, page 370. For a locating bearing arrangement, the locating rings must be ordered separately.

The following features can be varied in the housing configuration:

- continuous shaft or a housing closed on one side
- selection of the housing design as a function of the bearing width
- design of the bearing arrangement as a locating bearing arrangement or a non-locating bearing arrangement.

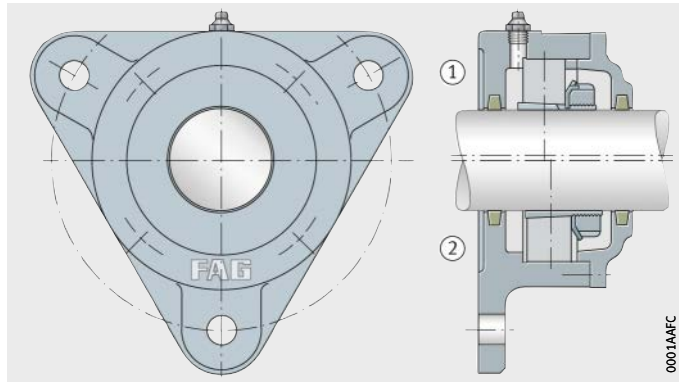
The basic shape of the housings varies with the size:

- triangular basic shape with 3 cover screws in the flanged housings F505, F506 and F508, *Figure 2* to *Figure 3*, page 370
- triangular basic shape with 4 cover screws in the flanged housings F507, F509 to F513
- square basic shape with 4 cover screws in the flanged housings F515 to F522, *Figure 4*, page 370 to *Figure 5*, page 370.



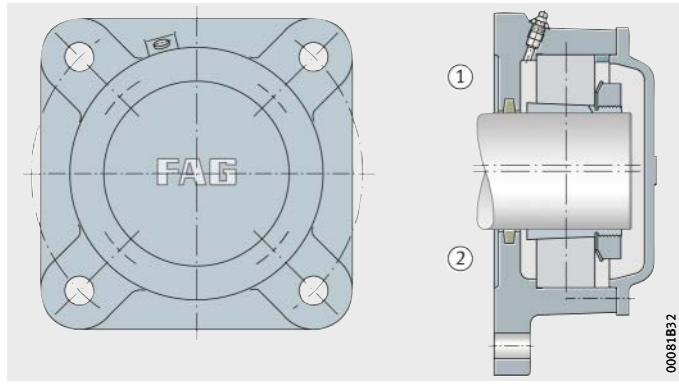

① Locating bearing F5..-A, F5..-WA
② Non-locating bearing F5..-A, F5..-WA

*Figure 2*
Flanged housings F505, F506 and F508, for bearings with tapered bore and adapter sleeve, design A



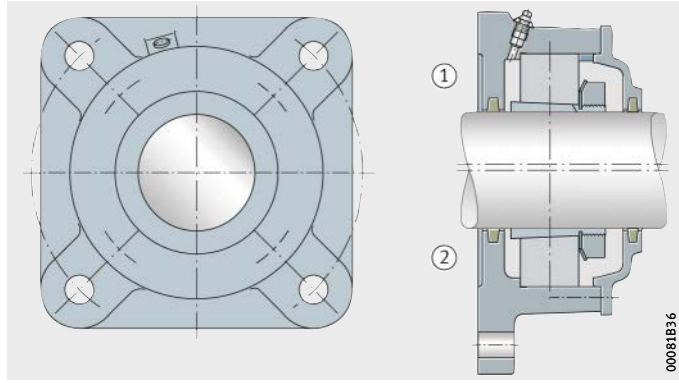

① Locating bearing F5..-B, F5..-WB
② Non-locating bearing F5..-B, F5..-WB

*Figure 3*
Flanged housings F507, F509 to F513, for bearings with tapered bore and adapter sleeve, design B




① Locating bearing F5..-A, F5..-WA
② Non-locating bearing F5..-A, F5..-WA

*Figure 4*
Flanged housings F515 to F522, for bearings with tapered bore and adapter sleeve, design A




① Locating bearing F5..-B, F5..-WB
② Non-locating bearing F5..-B, F5..-WB

*Figure 5*
Flanged housings F515 to F522, for bearings with tapered bore and adapter sleeve, design B

## Lubrication

Flanged housings F5 are designed for grease lubrication.

### Relubrication

For relubrication, a taper type lubrication nipple to DIN 71412-AM10×1 is screwed into the top of the housing.

## Designation structure

The designation structure for flanged housings F5 and accessories is shown in the tables and *Figure 6* to *Figure 7*.

### Designation structure of flanged housings F5

| Feature | | Code | Description |
|---|---|---|---|
| ① | Series | F5 | Flanged housings F5 |
| ② | Bore code of bearing | 10 | Bore diameter (10 · 5) mm = 50 mm |
| ③ | Housing design | A | Closed on one side |
| | | WA | Closed on one side, wider bearing |
| | | B | Continuous shaft |
| | | WB | Continuous shaft, wider bearing |
| ④ | Housing material | L | Flake graphite cast iron (standard) |
| | | D | Spheroidal graphite cast iron |




*Figure 6*
Designation structure of flanged housings F5, example

### Designation structure of locating rings

| Feature | | Code | Description |
|---|---|---|---|
| ① | Series | FE | Locating ring (for F505 to F513) |
| | | FRM | Locating ring (for F515 to F522) |
| ② | Outside diameter | 110 | Outside diameter 110 mm |
| ③ | Width | 2 | Width 2 mm |

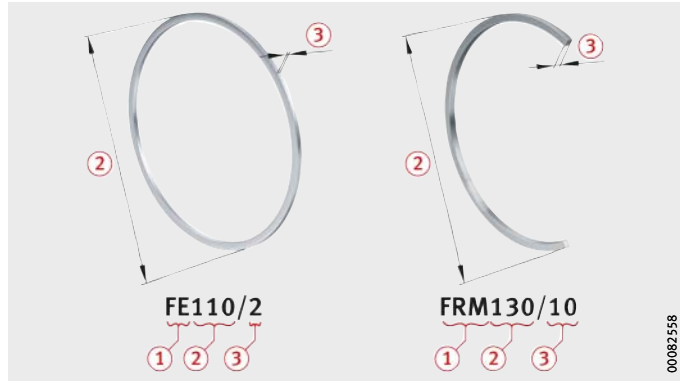



*Figure 7*
Designation structure of locating rings, example

# Flanged housings F5

## Ordering examples

When ordering a flanged housing F5, the designation contains indications of the size of the bearing as well as the design and material of the housing. Locating rings must be ordered separately. The rolling bearing and the adapter sleeve must be ordered separately.

Flanged housings F5 with a bearing fitted give non-locating bearing arrangements. These can be converted into locating bearing arrangements through the additional insertion of locating rings FE or FRM.

The ordering examples show the construction of orders for selected housing combinations and the appropriate bearings. The allocation of housings, bearings and accessories for all housing sizes is shown in the dimension table.

The felt strips for sealing the housing are included in the scope of delivery and need not be ordered separately.

**Example 1**

Flanged housing F5 made from flake graphite cast iron, closed on one side, self-aligning ball bearing 2207-K-TVH-C3 as locating bearing, location by means of adapter sleeve.

| | | |
|---|---|---|
| Order | 1 flanged housing | F507-WA-L |
| | 1 self-aligning ball bearing | 2207-K-TVH-C3 |
| | 1 adapter sleeve | H307 |
| | 1 locating ring | FE72/2 |

**Example 2**

Flanged housing F5 made from flake graphite cast iron, closed on one side, self-aligning ball bearing 1220-K-M-C3 as locating bearing, location by means of adapter sleeve.

| | | |
|---|---|---|
| Order | 1 flanged housing | F520-A-L |
| | 1 self-aligning ball bearing | 1220-K-M-C3 |
| | 1 adapter sleeve | H220 |
| | 1 locating ring | FRM180/10 |
| | 1 locating ring | FRM180/12 |

**Example 3**

Flanged housing F5 made from flake graphite cast iron, for continuous shaft, spherical roller bearing 22222-E1-K as non-locating bearing, location using adapter sleeve.

| | | |
|---|---|---|
| Order | 1 flanged housing | F522-WB-L |
| | 1 spherical roller bearing | 22222-E1-K |
| | 1 adapter sleeve | H322 |

## Design and safety guidelines

### Flange screws

Flange screws are used to screw mount the housing flange to a mating surface. They are not included in the scope of delivery of the housings.

The appropriate screw size for each housing is stated, see dimension table.

The associated tightening torques are stated for screws with a metric thread in accordance with DIN 13, DIN 962 and DIN ISO 965-2, see table, page 42. The values correspond to those of the foot screws for plummer block housings.

### Accuracy

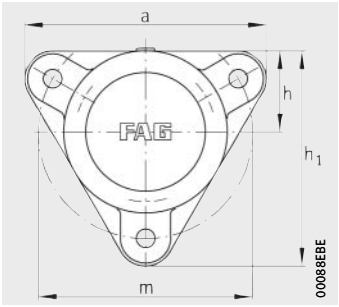
The bearing seat in flanged housings F5 is machined to the tolerance class H7.

By agreement, the housings can also be supplied with other tolerance classes for the bearing seat, see section Tolerance class of bearing seat, page 47.

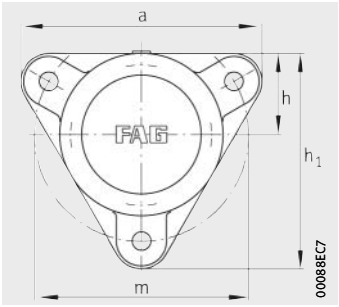


# Flanged housings

F5, unsplit
For bearings with tapered bore and adapter sleeve




F505, F506, F508

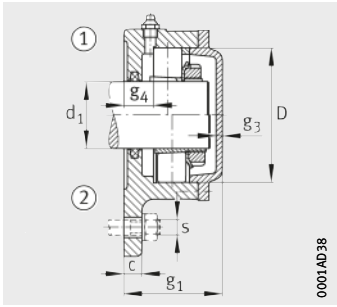



F507, F509 to F513

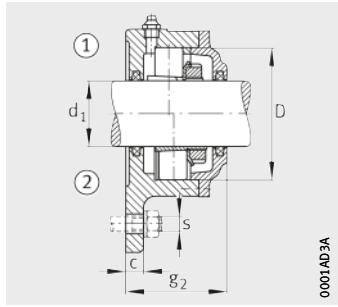
**Dimension table** · Dimensions in mm

| Shaft | Housing Dimensions | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_1$ | h | $h_1$ | c | a | m | s | | D | $g_1$ | $g_2$ | $g_3$ | $g_4$ |
| | | | | | | mm | *inch* | | | | | |
| **20** | 38 | 100 | 10 | 110 | 96 | M10 | *3/8* | 52 | 50 | – | 4 | 16 |
| **20** | 38 | 100 | 10 | 110 | 96 | M10 | *3/8* | 52 | – | 55 | – | 16 |
| **20** | 38 | 100 | 10 | 110 | 96 | M10 | *3/8* | 52 | 50 | – | 4 | 14,5 |
| **20** | 38 | 100 | 10 | 110 | 96 | M10 | *3/8* | 52 | – | 55 | – | 14,5 |
| **25** | 44 | 117 | 12 | 130 | 116 | M10 | *3/8* | 62 | 55 | – | 4 | 18 |
| **25** | 44 | 117 | 12 | 130 | 116 | M10 | *3/8* | 62 | – | 57 | – | 18 |
| **25** | 44 | 117 | 12 | 130 | 116 | M10 | *3/8* | 62 | 55 | – | 4 | 16 |
| **25** | 44 | 117 | 12 | 130 | 116 | M10 | *3/8* | 62 | – | 57 | – | 16 |
| **30** | 48,5 | 130 | 12 | 145 | 130 | M12 | *1/2* | 72 | 57 | – | 5 | 17 |
| **30** | 48,5 | 130 | 12 | 145 | 130 | M12 | *1/2* | 72 | – | 60 | – | 17 |
| **30** | 48,5 | 130 | 12 | 145 | 130 | M12 | *1/2* | 72 | 63 | – | 5 | 17 |
| **30** | 48,5 | 130 | 12 | 145 | 130 | M12 | *1/2* | 72 | – | 66 | – | 17 |
| **35** | 54 | 143 | 12 | 160 | 140 | M12 | *1/2* | 80 | 65 | – | 5 | 22 |
| **35** | 54 | 143 | 12 | 160 | 140 | M12 | *1/2* | 80 | – | 66 | – | 22 |
| **35** | 54 | 143 | 12 | 160 | 140 | M12 | *1/2* | 80 | 70 | – | 5 | 22 |
| **35** | 54 | 143 | 12 | 160 | 140 | M12 | *1/2* | 80 | – | 71 | – | 22 |
| **40** | 60 | 160 | 15 | 180 | 160 | M12 | *1/2* | 85 | 65 | – | 5 | 22 |
| **40** | 60 | 160 | 15 | 180 | 160 | M12 | *1/2* | 85 | – | 70 | – | 22 |
| **40** | 60 | 160 | 15 | 180 | 160 | M12 | *1/2* | 85 | 69 | – | 5 | 22 |
| **40** | 60 | 160 | 15 | 180 | 160 | M12 | *1/2* | 85 | – | 74 | – | 22 |
| **45** | 60 | 160 | 15 | 180 | 160 | M12 | *1/2* | 90 | 65 | – | 5 | 20 |
| **45** | 60 | 160 | 15 | 180 | 160 | M12 | *1/2* | 90 | – | 70 | – | 20 |
| **45** | 60 | 160 | 15 | 180 | 160 | M12 | *1/2* | 90 | 71 | – | 5 | 23 |
| **45** | 60 | 160 | 15 | 180 | 160 | M12 | *1/2* | 90 | – | 76 | – | 23 |
| **50** | 65 | 170 | 16 | 190 | 170 | M12 | *1/2* | 100 | 71 | – | 6 | 23 |
| **50** | 65 | 170 | 16 | 190 | 170 | M12 | *1/2* | 100 | – | 76 | – | 23 |
| **50** | 65 | 170 | 16 | 190 | 170 | M12 | *1/2* | 100 | 77 | – | 6 | 25 |
| **50** | 65 | 170 | 16 | 190 | 170 | M12 | *1/2* | 100 | – | 82 | – | 25 |
| **55** | 70 | 185 | 16 | 206 | 180 | M12 | *1/2* | 110 | 73 | – | 6 | 24 |
| **55** | 70 | 185 | 16 | 206 | 180 | M12 | *1/2* | 110 | – | 78 | – | 24 |
| **55** | 70 | 185 | 16 | 206 | 180 | M12 | *1/2* | 110 | 79 | – | 6 | 24 |
| **55** | 70 | 185 | 16 | 206 | 180 | M12 | *1/2* | 110 | – | 84 | – | 24 |

① Locating bearing; ② Non-locating bearing




Design A

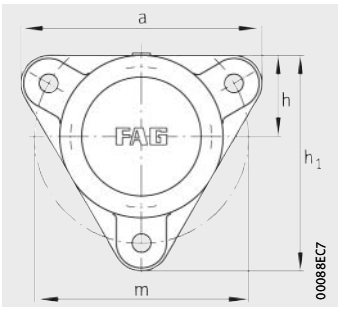



Design B

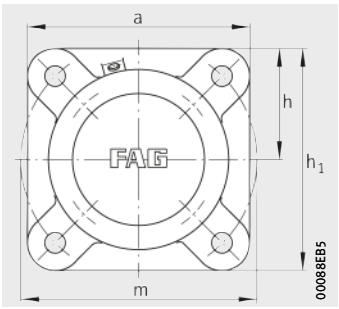
| Bearing and accessories | | | | | | | Housing | |
|---|---|---|---|---|---|---|---|---|
| Bearing | | Adapter sleeve | Locating ring | | Felt strip | | Mass | Designation |
| | | | | Quantity | a×b×l<br>mm | Quantity | m<br>≈ kg | |
| **1205-K** | **20205-K** | H205 | FE52/2 | 1 | 5×4×90 | 1 | 1,2 | **F505-A-L** |
| **1205-K** | **20205-K** | H205 | FE52/2 | 1 | 5×4×90 | 2 | 1,2 | **F505-B-L** |
| **2205-K** | **22205..-K** | H305 | FE52/2 | 1 | 5×4×90 | 1 | 1,2 | **F505-WA-L** |
| **2205-K** | **22205..-K** | H305 | FE52/2 | 1 | 5×4×90 | 2 | 1,2 | **F505-WB-L** |
| **1206-K** | **20206-K** | H206 | FE62/2 | 1 | 6×5×115 | 1 | 1,6 | **F506-A-L** |
| **1206-K** | **20206-K** | H206 | FE62/2 | 1 | 6×5×115 | 2 | 1,6 | **F506-B-L** |
| **2206-K** | **22206..-K** | H306 | FE62/2 | 1 | 6×5×115 | 1 | 1,6 | **F506-WA-L** |
| **2206-K** | **22206..-K** | H306 | FE62/2 | 1 | 6×5×115 | 2 | 1,6 | **F506-WB-L** |
| **1207-K** | **20207-K** | H207 | FE72/2 | 1 | 6×5×130 | 1 | 2 | **F507-A-L** |
| **1207-K** | **20207-K** | H207 | FE72/2 | 1 | 6×5×130 | 2 | 2 | **F507-B-L** |
| **2207-K** | **22207..-K** | H307 | FE72/2 | 1 | 6×5×130 | 1 | 2 | **F507-WA-L** |
| **2207-K** | **22207..-K** | H307 | FE72/2 | 1 | 6×5×130 | 2 | 2 | **F507-WB-L** |
| **1208-K** | **20208-K** | H208 | FE80/2 | 1 | 6×5×145 | 1 | 2,5 | **F508-A-L** |
| **1208-K** | **20208-K** | H208 | FE80/2 | 1 | 6×5×145 | 2 | 2,5 | **F508-B-L** |
| **2208-K** | **22208..-K** | H308 | FE80/2 | 1 | 6×5×145 | 1 | 2,5 | **F508-WA-L** |
| **2208-K** | **22208..-K** | H308 | FE80/2 | 1 | 6×5×145 | 2 | 2,5 | **F508-WB-L** |
| **1209-K** | **20209-K** | H209 | FE85/2 | 1 | 6×5×160 | 1 | 3,6 | **F509-A-L** |
| **1209-K** | **20209-K** | H209 | FE85/2 | 1 | 6×5×160 | 2 | 3,6 | **F509-B-L** |
| **2209-K** | **22209..-K** | H309 | FE85/2 | 1 | 6×5×160 | 1 | 3,6 | **F509-WA-L** |
| **2209-K** | **22209..-K** | H309 | FE85/2 | 1 | 6×5×160 | 2 | 3,6 | **F509-WB-L** |
| **1210-K** | **20210-K** | H210 | FE90/2 | 1 | 6×5×175 | 1 | 3,8 | **F510-A-L** |
| **1210-K** | **20210-K** | H210 | FE90/2 | 1 | 6×5×175 | 2 | 3,8 | **F510-B-L** |
| **2210-K** | **22210..-K** | H310 | FE90/2 | 1 | 6×5×175 | 1 | 3,8 | **F510-WA-L** |
| **2210-K** | **22210..-K** | H310 | FE90/2 | 1 | 6×5×175 | 2 | 3,8 | **F510-WB-L** |
| **1211-K** | **20211-K** | H211 | FE100/2 | 1 | 8×6,5×200 | 1 | 4,1 | **F511-A-L** |
| **1211-K** | **20211-K** | H211 | FE100/2 | 1 | 8×6,5×200 | 2 | 4,1 | **F511-B-L** |
| **2211-K** | **22211..-K** | H311 | FE100/2 | 1 | 8×6,5×200 | 1 | 4,1 | **F511-WA-L** |
| **2211-K** | **22211..-K** | H311 | FE100/2 | 1 | 8×6,5×200 | 2 | 4,1 | **F511-WB-L** |
| **1212-K** | **20212-K** | H212 | FE110/2 | 1 | 8×6,5×215 | 1 | 4,6 | **F512-A-L** |
| **1212-K** | **20212-K** | H212 | FE110/2 | 1 | 8×6,5×215 | 2 | 4,6 | **F512-B-L** |
| **2212-K** | **22212..-K** | H312 | FE110/2 | 1 | 8×6,5×215 | 1 | 4,6 | **F512-WA-L** |
| **2212-K** | **22212..-K** | H312 | FE110/2 | 1 | 8×6,5×215 | 2 | 4,6 | **F512-WB-L** |

# Flanged housings

F5, unsplit
For bearings with tapered bore and adapter sleeve




F513

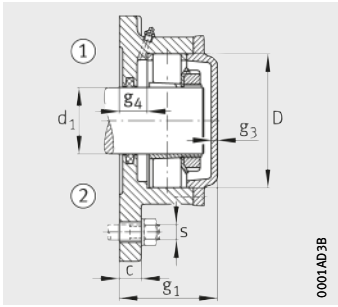



F515 to F522

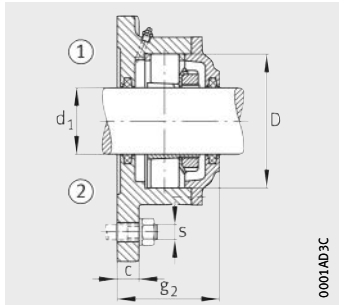
**Dimension table** (continued) · Dimensions in mm

| Shaft | Housing Dimensions | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $d_1$ | h | $h_1$ | c | a | m | s | | D | $g_1$ | $g_2$ | $g_3$ | $g_4$ |
| | | | | | | mm | *inch* | | | | | |
| **60** | 75 | 198 | 16 | 219 | 190 | M12 | *1/2* | 120 | 75 | – | 6 | 24 |
| **60** | 75 | 198 | 16 | 219 | 190 | M12 | *1/2* | 120 | – | 79 | – | 24 |
| **60** | 75 | 198 | 16 | 219 | 190 | M12 | *1/2* | 120 | 83 | – | 6 | 24 |
| **60** | 75 | 198 | 16 | 219 | 190 | M12 | *1/2* | 120 | – | 87 | – | 24 |
| **65** | 95 | 190 | 25 | 190 | 215 | M16 | *5/8* | 130 | 97 | – | 6 | 30 |
| **65** | 95 | 190 | 25 | 190 | 215 | M16 | *5/8* | 130 | 97 | – | 6 | 30 |
| **65** | 95 | 190 | 25 | 190 | 215 | M16 | *5/8* | 130 | – | 104 | – | 30 |
| **65** | 95 | 190 | 25 | 190 | 215 | M16 | *5/8* | 130 | – | 104 | – | 30 |
| **70** | 98 | 196 | 25 | 196 | 215 | M16 | *5/8* | 140 | 101 | – | 6 | 32 |
| **70** | 98 | 196 | 25 | 196 | 215 | M16 | *5/8* | 140 | 101 | – | 6 | 32 |
| **70** | 98 | 196 | 25 | 196 | 215 | M16 | *5/8* | 140 | – | 110 | – | 32 |
| **70** | 98 | 196 | 25 | 196 | 215 | M16 | *5/8* | 140 | – | 110 | – | 32 |
| **75** | 105 | 210 | 25 | 210 | 240 | M16 | *5/8* | 150 | 106 | – | 7 | 31 |
| **75** | 105 | 210 | 25 | 210 | 240 | M16 | *5/8* | 150 | 106 | – | 7 | 31 |
| **75** | 105 | 210 | 25 | 210 | 240 | M16 | *5/8* | 150 | – | 114 | – | 31 |
| **75** | 105 | 210 | 25 | 210 | 240 | M16 | *5/8* | 150 | – | 114 | – | 31 |
| **80** | 105 | 210 | 25 | 210 | 240 | M16 | *5/8* | 160 | 110 | – | 7 | 29 |
| **80** | 105 | 210 | 25 | 210 | 240 | M16 | *5/8* | 160 | 110 | – | 7 | 29 |
| **80** | 105 | 210 | 25 | 210 | 240 | M16 | *5/8* | 160 | – | 118 | – | 29 |
| **80** | 105 | 210 | 25 | 210 | 240 | M16 | *5/8* | 160 | – | 118 | – | 29 |
| **90** | 125 | 250 | 30 | 250 | 280 | M20 | *3/4* | 180 | 119 | – | 8 | 29 |
| **90** | 125 | 250 | 30 | 250 | 280 | M20 | *3/4* | 180 | 119 | – | 8 | 29 |
| **90** | 125 | 250 | 30 | 250 | 280 | M20 | *3/4* | 180 | – | 127 | – | 29 |
| **90** | 125 | 250 | 30 | 250 | 280 | M20 | *3/4* | 180 | – | 127 | – | 29 |
| **100** | 135 | 270 | 30 | 270 | 310 | M20 | *3/4* | 200 | 128 | – | 8 | 30 |
| **100** | 135 | 270 | 30 | 270 | 310 | M20 | *3/4* | 200 | – | 137 | – | 30 |
| **100** | 135 | 270 | 30 | 270 | 310 | M20 | *3/4* | 200 | 128 | – | 8 | 30 |
| **100** | 135 | 270 | 30 | 270 | 310 | M20 | *3/4* | 200 | – | 137 | – | 30 |

① Locating bearing; ② Non-locating bearing



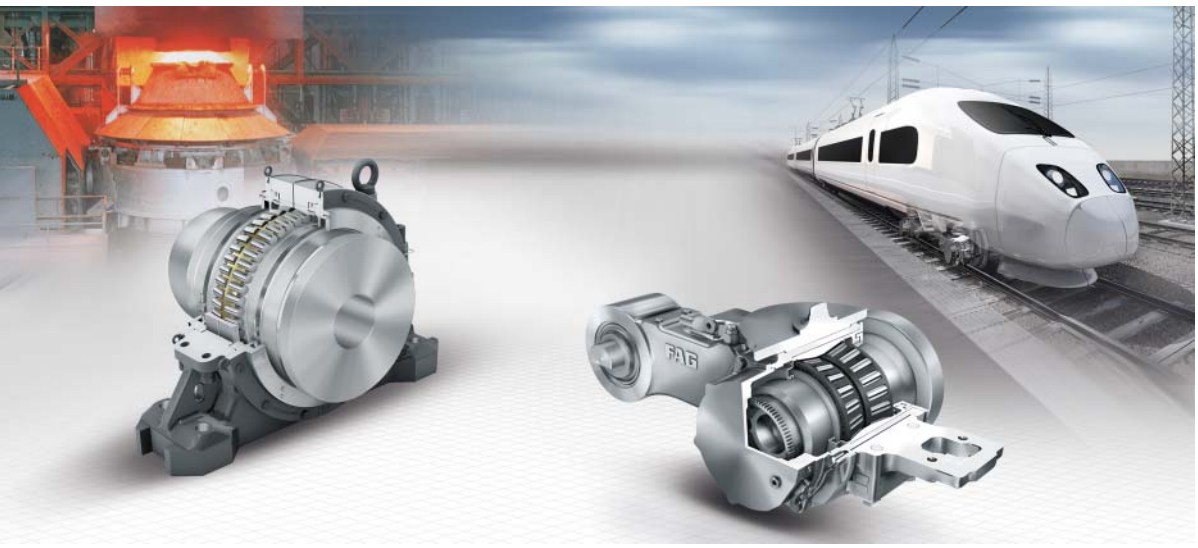

Design A




Design B

| Bearing and accessories | | | | | | | Housing | |
|---|---|---|---|---|---|---|---|---|
| Bearing | | Adapter sleeve | Locating ring | | Felt strip | | Mass | Designation |
| | | | | Quantity | a×b×l mm | Quantity | m ≈ kg | |
| **1213-K** | **20213-K** | H213 | FE120/2 | 1 | 8×6,5×230 | 1 | 5,4 | **F513-A-L** |
| **1213-K** | **20213-K** | H213 | FE120/2 | 1 | 8×6,5×230 | 2 | 5,4 | **F513-B-L** |
| **2213-K** | **22213..-K** | H313 | FE120/2 | 1 | 8×6,5×230 | 1 | 5,4 | **F513-WA-L** |
| **2213-K** | **22213..-K** | H313 | FE120/2 | 1 | 8×6,5×230 | 2 | 5,4 | **F513-WB-L** |
| **1215-K** | **20215-K** | H215 | FRM130/8 | 2 | 8×6,5×245 | 1 | 9,5 | **F515-A-L** |
| **2215-K** | **22215..-K** | H315 | FRM130/10 | 1 | 8×6,5×245 | 1 | 9,5 | **F515-A-L** |
| **1215-K** | **20215-K** | H215 | FRM130/8 | 2 | 8×6,5×245 | 2 | 9,5 | **F515-B-L** |
| **2215-K** | **22215..-K** | H315 | FRM130/10 | 1 | 8×6,5×245 | 2 | 9,5 | **F515-B-L** |
| **1216-K** | **20216-K** | H216 | FRM140/8,5 | 2 | 9×7,5×270 | 1 | 10 | **F516-A-L** |
| **2216-K** | **22216..-K** | H316 | FRM140/10 | 1 | 9×7,5×270 | 1 | 10 | **F516-A-L** |
| **1216-K** | **20216-K** | H216 | FRM140/8,5 | 2 | 9×7,5×270 | 2 | 10 | **F516-B-L** |
| **2216-K** | **22216..-K** | H316 | FRM140/10 | 1 | 9×7,5×270 | 2 | 10 | **F516-B-L** |
| **1217-K** | **20217-K** | H217 | FRM150/9 | 2 | 9×7,5×285 | 1 | 12 | **F517-A-L** |
| **2217-K** | **22217..-K** | H317 | FRM150/10 | 1 | 9×7,5×285 | 1 | 12 | **F517-A-L** |
| **1217-K** | **20217-K** | H217 | FRM150/9 | 2 | 9×7,5×285 | 2 | 12 | **F517-B-L** |
| **2217-K** | **22217..-K** | H317 | FRM150/10 | 1 | 9×7,5×285 | 2 | 12 | **F517-B-L** |
| **1218-K** | **20218-K** | H218 | FRM160/10 | 2 | 9×7,5×300 | 1 | 13 | **F518-A-L** |
| **2218-K** | **22218..-K** | H318 | FRM160/10 | 1 | 9×7,5×300 | 1 | 13 | **F518-A-L** |
| **1218-K** | **20218-K** | H218 | FRM160/10 | 2 | 9×7,5×300 | 2 | 13 | **F518-B-L** |
| **2218-K** | **22218..-K** | H318 | FRM160/10 | 1 | 9×7,5×300 | 2 | 13 | **F518-B-L** |
| **1220-K** | **20220-K** | H220 | FRM180/10+FRM180/12 | 1 | 10×8,5×335 | 1 | 18 | **F520-A-L** |
| **2220-K** | **22220..-K** | H320 | FRM180/10 | 1 | 10×8,5×335 | 1 | 18 | **F520-A-L** |
| **1220-K** | **20220-K** | H220 | FRM180/10+FRM180/12 | 1 | 10×8,5×335 | 2 | 18 | **F520-B-L** |
| **2220-K** | **22220..-K** | H320 | FRM180/10 | 1 | 10×8,5×335 | 2 | 18 | **F520-B-L** |
| **1222-K** | **20222-K** | H222 | FRM200/13,5 | 2 | 12×10×375 | 1 | 22 | **F522-A-L** |
| **1222-K** | **20222-K** | H222 | FRM200/13,5 | 2 | 12×10×375 | 2 | 22 | **F522-B-L** |
| **2222-K** | **22222..-K** | H322 | FRM200/10 | 1 | 12×10×375 | 1 | 22 | **F522-WA-L** |
| **2222-K** | **22222..-K** | H322 | FRM200/10 | 1 | 12×10×375 | 2 | 22 | **F522-WB-L** |

FAG



# Housings for specific industrial and railway applications





FAG



# Housings for specific industrial applications

# Housings for specific industrial applications


| | | Page |
|---|---|---|
| **Products and services** | Customer-specific solutions | 382 |
| | Portfolio | 382 |
| **Application examples** | Plummer block housings for the paper industry | 384 |
| | Water-cooled plummer block housings for continuous casting machines | 385 |
| | Twin block housings for rotary kilns in cement production | 386 |
| | Converter housings for steel production | 387 |
| | Flanged housing units for large electrical machinery | 388 |






# Housings for specific industrial applications

## Products and services

In order to fulfil the demand for bearing housings in special applications and unconventional operating conditions, Schaeffler offers an extensive range of products and services.

## Customer-specific solutions

Demanding applications in the industrial field often place special requirements on the bearing housings. These requirements cannot always be fulfilled by the use of standard housings. In these cases, the optimum solution can be facilitated by the use of special housings whose dimensions, special materials or special seals are precisely matched to the application.

Schaeffler has many years of experience in the development of special housings. In order to achieve the best possible solution in customer-specific special cases, development is carried out in close partnership and consultation with the customer.

## Portfolio

The most important features in the development of housings for specific industrial applications include:

- individual solutions for special requirements
- consideration of specific customer requirements, for example in sealing, the type of paint coatings or colours
- the use of state-of-the-art methods such as FEM in the calculation of the housing, *Figure 1*, page 383
- delivery options for complete units (bearings premounted in the housing).

For individually developed housings, Schaeffler also supplies the appropriate rolling bearings and other accessories. Furthermore, the industrial services experts at Schaeffler can also offered skilled mounting services.

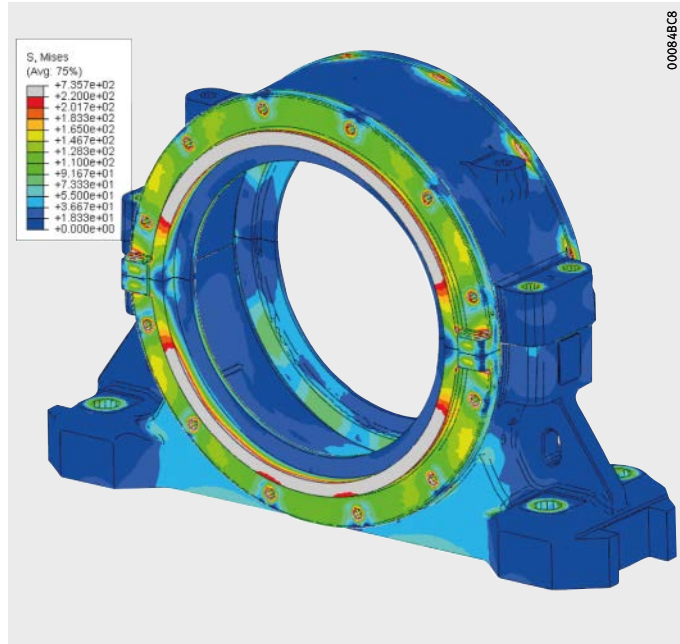



*Figure 1*
Calculation of a housing by means of the FEM method

# Housings for specific industrial applications

## Application examples

The following examples of FAG special housings give an insight into the wide variety of industrial applications and design solutions.

## Plummer block housings for the paper industry

In the paper industry, bearing housings PM30 are used for dryer cylinders, M.G. cylinders and Yankee cylinders, *Figure 2*. These cylinders are heated from within by means of steam that is fed into the cylinder via a hollow journal. The bearing housings are exposed to high ambient temperature and high humidity. Recirculating oil lubrication is therefore necessary in order to dissipate heat and allow the removal of any possible water ingress.

The bearings mainly used are spherical roller bearings, which allow compensation of any possible offset between the housings. The bearings are located either directly on a tapered journal or on the cylindrical shaft by means of a sleeve. Since substantial length increases occur due to heating of the cylinders, the housings are designed such that they allow considerable displacement of the non-locating bearing.




*Figure 2*
Plummer block housing PM30 for the paper industry

## Water-cooled plummer block housings for continuous casting machines

Continuous casting is a continuous process in the steel industry in which molten steel is converted to the solid phase. This results in long products which are then processed further in finish rolling mills.

During cooling of the steel, it is guided as an endless strand on lines of driven rollers. The strand moves through two opposing rows of rollers and is cooled at the same time. There are various possibilities for cooling the strand. Direct cooling can be carried out by projecting water directly onto the strand and rollers, while indirect cooling can be carried out by cooling the rollers from within. Normally, the two cooling methods are applied in combination.

The rollers are supported by means of water-cooled plummer block housings SZA developed specifically for this application, *Figure 3*. The housings have a water-cooled upper housing section.
The housing is designed such that a specially split bearing is fitted with only one outer ring half. This is made possible by the load directions present in the lines of rollers in continuous casting machines. The seals are matched to the extreme operating conditions (high temperatures, spray water from strand cooling).

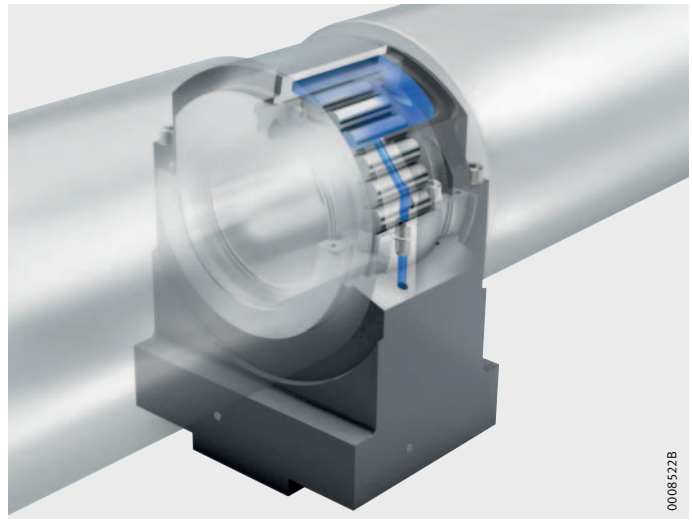



*Figure 3*
Water-cooled plummer block housing for continuous casting machines

## Twin block housings for rotary kilns in cement production

The kiln shell of a rotary kiln is supported by riding rings. Each riding ring rests on two radial support rollers. In order to support the high radial and axial loads resulting from the motion process, robust rolling bearing arrangements are required for the support rollers.

The support roller is rigidly connected to the shaft by means of an interference fit and is abutted on both sides in the rolling bearings. Good lever ratios can be achieved by means of appropriate bearing spacings, so the tilting forces can be supported. Wide, low section height spherical roller bearings 241 with high basic load ratings are suitable for supporting radial and axial forces. They are generally lubricated with grease, which is also the case for the labyrinth seals in the housing. Depending on the load, FAG Arcanol LOAD400 or LOAD1000 is used. The housings are precisely matched to the requirements of the application in terms of lubrication, sealing and permissible misalignment.

Schaeffler supplies complete units RLR for radial support rollers, *Figure 4*, comprising:

- the housing
- two rolling bearings
- the shaft
- the support roller
- grease.

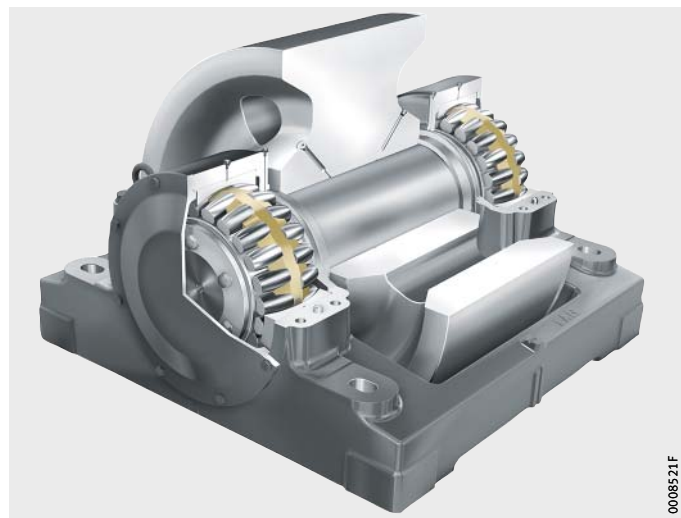



*Figure 4*
Twin block housing for rotary kilns in cement production (unit RLR)

## Converter housings for steel production

Converters are used in the steel industry to produce steel from molten unrefined iron. When filled, large converter drums weigh several hundred tonnes. The trunnion bearing arrangement of converters represents a particular challenge due to the extreme loads and ambient conditions.

For trunnion bearing arrangements on converters, Schaeffler has developed split plummer block housings KPG and KPGZ, which are available as standard housings, see page 228. These housings, *Figure 5*, are large, heavy-section housings for spherical roller bearings 249 with shaft diameters from 510 mm to 1320 mm. Where necessary, housings for even larger shaft diameters can be designed and supplied.

On the basis of these housings, customer-specific solutions have been developed for special applications. The housings can be supplemented by the use of additional components and modified where necessary.

Complete packages with the following scope can be supplied:

- special spherical roller bearings
- housings with seals of various designs
- sensors for grease condition monitoring
- grease distributor plate with complete pipework to all lubrication points (bearing, seal and displacement sleeve in the non-locating bearing design)
- sensor systems for bearing condition monitoring.




*Figure 5*
Converter housing for steel production

# Housings for specific industrial applications

## Flanged housing units for large electrical machinery

Special flanged housing units are available for rotor bearing arrangements in large electrical machinery. Depending on the application, one or more deep groove ball bearings, cylindrical roller bearings or angular contact ball bearings are integrated in the housing, *Figure 6*.

The flanged housing units offer solutions that are particularly economical, versatile and appropriate to the application. Due to the flanged housing units, the design of the end shields is significantly simplified, resulting in considerable reductions in the construction work required on large motor housings. A wide range of sealing variants in all IP protection classes and various lubrication concepts allow versatile matching to the requirements of the specific applications.

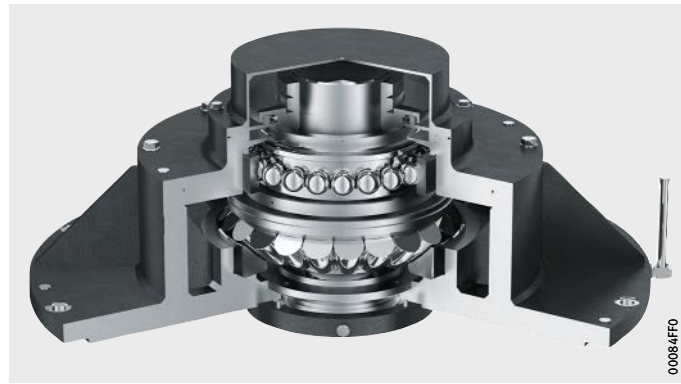



*Figure 6*
Flanged housing unit FKB with oil sump lubrication

**Further information**

- TPI 152, Flanged Housing Units for Large Electrical Machinery.



FAG




# Housings for railway applications

# Housings for railway applications


| | | Page |
|---|---|---|
| **Products and services** | Comprehensive product and service portfolio | 392 |
| | Wheelset bearing housings | 392 |
| | Further housings for railway applications | 392 |
| | Design and strength | 393 |
| | Materials and anti-corrosion protection | 394 |
| | Seals for wheelset bearings | 394 |
| **Application examples** | Universal wheelset bearings for diesel-hydraulic locomotives | 397 |
| | Standard housings for freight wagons | 398 |
| | Wheelset bearings for urban transport | 400 |
| | Wheelset bearings for regional trains | 401 |
| | Wheelset bearings for high speed trains | 402 |
| | Housing units with relubrication facility for traction motors | 403 |






# Housings for railway applications

## Products and services

For the rail vehicle industry, Schaeffler offers a comprehensive range of products and services from a single source. In terms of bearing housings, this predominantly applies to wheelset bearing housings, but also to other housings for rail applications.

## Comprehensive product and service portfolio

Schaeffler has many years of experience in the development of wheelset bearing housings. In order to achieve the best possible solution in customer-specific special cases, development is carried out in close partnership and consultation with the customer.

The most important criteria for FAG wheelset bearing housings are as follows:

- favourable price/performance ratio
- short lead times
- guarantee of long term supply
- proven design solutions
- worldwide delivery capability: from the region, for the region.

The range is rounded out by products for mounting, maintenance and diagnosis, mounting and diagnosis services, application engineering advisory work, training tools, PC calculation software and technical publications.

## Wheelset bearing housings

The types of rolling bearings commonly used in wheelset bearing arrangements are tapered roller bearing units TAROL, cylindrical roller bearings, tapered roller bearings and spherical roller bearings. Units comprising bearings and housings are known as wheelset bearings.

Wheelset bearing housings are matched to the various mounting and operating conditions in:

- locomotives
- freight wagons
- urban transport (trams, metro lines)
- regional trains
- high speed trains.

In addition to wheelset bearing housings with standardised housing dimensions, Schaeffler offers an extensive range of parts for widely varying applications.

## Further housings for railway applications

For the rail vehicle industry, Schaeffler also offers housings for specific applications:

- housings for traction motors
- motor suspension bearing housings.

**Further information**

- For further information and enquiries, please contact: rail_transport@schaeffler.com.

## Design and strength

The housing must, as a connecting part between the vehicle bogie frame and the wheelset, reliably transmit the forces present. In terms of the design, it is important to know how the forces are introduced into the housing. A housing of a suitable geometry will give a favourable pressure distribution in the rolling bearing, thus reducing the specific load and preventing the occurrence of stress peaks in the contact surfaces transmitting load.

High safety requirements are placed on wheelset bearing housings. The design must be appropriate to the load arising from the operating conditions, even over long periods of several decades. In order to achieve this, a precise analysis of the loads occurring is necessary.

### Calculation

Schaeffler uses state-of-the-art methods such as FEM calculation and topological optimisation, which give a description close to reality of not only difficult geometries but also the complex pattern of force flow in the housing. For the latter, a precise description of the interaction between the components is required, for example by means of a contact analysis. Valid design guidelines and a design brief prepared by the customer are required. A calculation-based strength analysis can be used as early as the design and development phase to identify weakpoints and optimise the geometry. In addition, this means that experimental investigations can be reduced to a minimum.

### Experimental investigations

Upon customer request, a wide range of experimental investigations can be carried out such as vibration tests, salt spray tests and seal integrity tests. Furthermore, the performance tests for the wheelset bearings to EN 12082 are carried out in the original housings.





## Materials and anti-corrosion protection

The standard material for wheelset housings is spheroidal graphite cast iron EN-GJS-400-18-LT. Depending on customer requirements on characteristics such as mass, strength or weldability, other materials such as cast aluminium alloys or cast steel may be used.

All outer surfaces of housings machined by methods that are not chip-forming are provided with a coating system. Inner and outer surfaces machined by chip-forming methods are provided with anti-corrosion protection. If there are particular requirements relating to paint coating and anti-corrosion protection, special solutions are possible. If particular specifications are presented by the customer, we check their feasibility and these can be implemented if the result is positive.

## Seals for wheelset bearings

In order that a wheelset bearing remains functionally capable, it is necessary to prevent the ingress of contaminant particles or liquids and the escape of lubricant. Sealing of the axle makes a very important contribution to maintaining the function of the wheelset bearing.

The term “protective seal” covers all types of seals that protect rolling bearings against the ingress of contaminant and loss of lubricant.

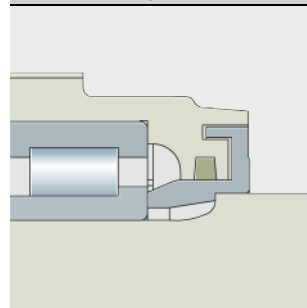
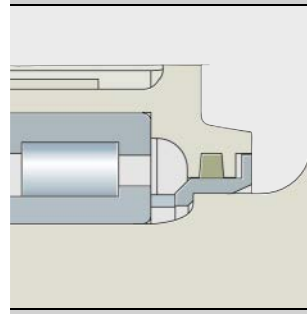
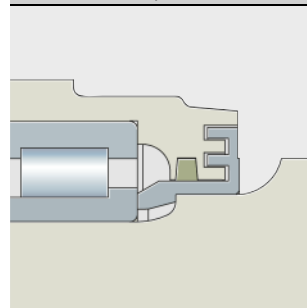
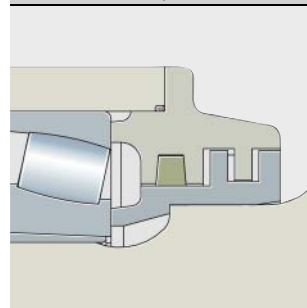
These seal types are differentiated into contact seals and non-contact seals. Based on the existing operating conditions, the seal type most suitable for the application is then determined.

For example, contact seals cannot be used in the high speed sector in very many cases due to the high circumferential velocities and the resulting generation of heat. In contrast, contact seals are necessary in the tram sector where circumferential velocities are lower and the tracks may become flooded.

In order to cover the whole spectrum of operating conditions, there is a wide range of seal variants, see table, page 395.
The housings used for wheelset bearings are designed for grease lubrication.

In other applications in the rail sector, such as motor suspension bearing arrangements, oil lubrication can also be implemented if appropriate seals are used.

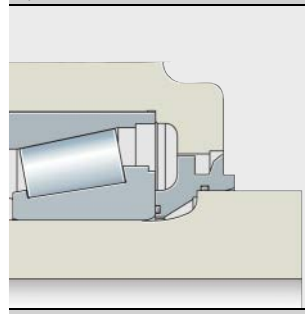
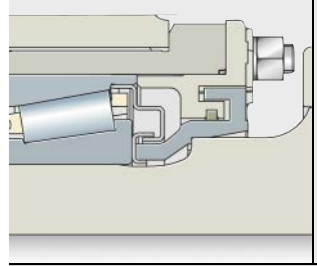
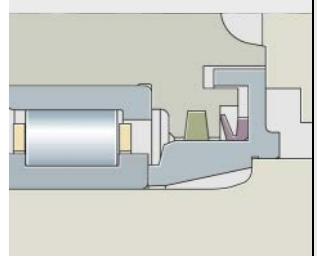
## Seal variants for wheelset bearings

| Seal | Characteristics |
|---|---|
| **Single axial labyrinth seal** | |
|  | ■ Small design envelope<br>■ Non-contact type<br>■ Improved sealing in combination with a felt seal, in this case no longer a non-contact type |
| **Single radial labyrinth seal** | |
|  | ■ Small design envelope<br>■ Also possible for use with split housings<br>■ Non-contact type<br>■ Improved sealing in combination with a felt seal, in this case no longer a non-contact type |
| **Double axial labyrinth seal** | |
|  | ■ Larger design envelope<br>■ Better labyrinth action<br>■ Non-contact type<br>■ Improved sealing in combination with a felt seal, in this case no longer a non-contact type |
| **Double radial labyrinth seal** | |
|  | ■ Larger design envelope<br>■ Better labyrinth action<br>■ Also possible for use with split housings<br>■ Non-contact type<br>■ Improved sealing in combination with a felt seal, in this case no longer a non-contact type |





## Seal variants for wheelset bearings (continued)

| Seal | Characteristics |
|---|---|
| **Splash ring seal** | |
|  | ■ Simple design<br>■ For use only in conjunction with sealed bearing<br>■ Suitable for use with split and unsplit housings<br>■ Non-contact type |
| **Labyrinth seal with stuffing box packing** | |
|  | ■ Also suitable for high circumferential velocities<br>■ Small design envelope<br>■ Contact type |
| **Combined seal comprising labyrinth seal, felt seal and V ring seal** | |
|  | ■ Very good sealing action against ingress of foreign matter from outside<br>■ Contact type |

## Application examples

The following examples show selected FAG housings for rail applications. They give an insight into various areas of application and the relevant design solutions.

## Universal wheelset bearings for diesel-hydraulic locomotives

The application example shows wheelset bearings for diesel-hydraulic locomotives on mainline services and heavy shunting operation. The vehicles of various models are intended for use not only in various countries but also in cross-border travel.

The modular construction allows the performance and configuration to be adapted to the conditions of the vehicle operators.
The vehicles are designed for a maximum velocity of 120 km/h at a wheelset load of 25 t.

### Wheelset bearings

Due to the modular structure and the intended usage of the locomotives in different countries, it was necessary to be able to use either tapered roller bearing units TAROL or cylindrical roller bearing units. Bearings of both types with the dimensions 150 mm×250 mm×160 mm (d×D×B) are interchangeable in the wheelset bearing, *Figure 1*.

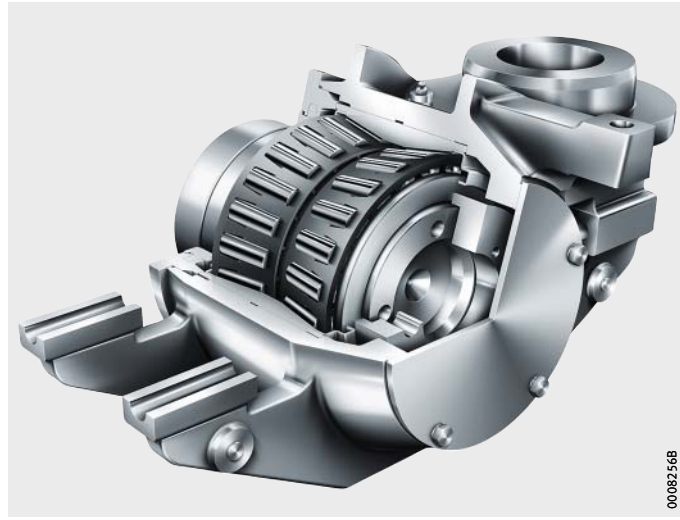



*Figure 1*
Universal wheelset bearing for diesel-hydraulic locomotives

### Wheelset bearing housings

The FAG wheelset bearing housing is of a single piece design and is made from spheroidal graphite cast iron EN-GJS-400-18-LT to EN 1563. The strength of the housing is optimised and confirmed by means of a structural analysis using FEM. The performance capacity of the wheelset bearing with TAROL units was tested and confirmed in accordance with EN 12082. Seal integrity testing was carried out in accordance with UIC 515-5.

## Standard housings for freight wagons

The Schaeffler product portfolio contains wheelset bearing housings for freight wagon bogies Y25-22,5t and Y25-25t to UIC. These housings are predominantly matched to shaft diameters of 120 mm and 130 mm, while housings for other diameters are available by agreement. The dimensions of the housings are standardised in order to ensure the greatest possible interchangeability.

### Approval

The specified performance tests on wheelset bearings to EN 12082 and the dynamic fatigue tests on the housing body to UIC 510-3 were carried out successfully at independent certified test facilities. The FAG wheelset bearing housings thus passed all the necessary tests.

For the design Y25-25t, the German Federal Railway Authority for the first time issued a separate approval for the wheelset bearing housing as a component on the basis of these test results (EBA Identification no. 00G17A). At present, several thousand of these wheelset bearings are already in operation worldwide.

### Wheelset bearings

In the wheelset bearing, the forces to be transmitted are supported by cylindrical roller bearings WJ and WJP.

In each wheelset, in other words on each axle, the following are installed:

- shaft diameter 120 mm:
  2 cylindrical roller bearings WJ120×240-TVP and WJP120×240-P-TVP in each case
- shaft diameter 130 mm:
  2 cylindrical roller bearings WJ130×240-TVP and WJP130×240-P-TVP in each case.

The calculated running distance is approx. 4 million km. The bearings are separable and can be mounted and dismounted relatively easily, which allows rapid inspection of the functional surfaces of the bearings.

### Wheelset bearing housings

The wheelset bearing housings are of a single piece design and are made from spheroidal graphite cast iron EN-GJS-400-18-LT to EN 1563 in accordance with the requirements of Deutsche Bahn.

The fatigue strength of the housings has been optimised and confirmed by means of a structural analysis using FEM. In practice, wheelset bearing housings thus remain in service for up to 30 years.

**Seals**

For sealing of the cylindrical roller bearings in the housing, a multi-chamber labyrinth seal or a felt seal with an outer labyrinth have proved effective. Other seal variants are possible, see table, page 395.

**Increased performance capability for Y25-25t**

Due to the demand for increased levels of transport activity by rail, Schaeffler has worked in partnership with several European bogie manufacturers to develop a wheelset bearing optimised for an axle load of 25 t for use in freight wagon bogies Y25, *Figure 2*. In combination with the further development of the brakes, bogie frame and primary suspension as subassemblies, higher load per vehicle is now possible and the demand for maximisation of transport activity can be fulfilled. The particular advantage of the FAG product is that it is not only suitable for use with the spring sets commonly fitted but has already been designed for the higher housing loads that occur with innovative spring systems such as rubber roller springs or TKS springs.

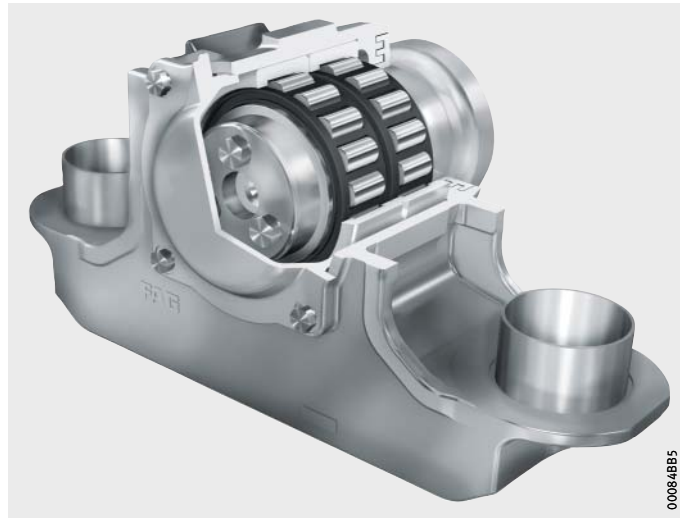



*Figure 2*
Wheelset bearing Y25-25t

## Wheelset bearings for urban transport

The application in this example is a tram in a low-floor design with bogies for operation in challenging climatic conditions. Development was focussed on key themes such as lightweight construction for maximum energy saving as well as reliability of the tram.

With a maximum axle load of 9 t, the tram can achieve a velocity of 80 km/h.

### Wheelset bearings

The wheelset bearing, *Figure 3*, is designed for combination with special metal/rubber spring elements that are mounted directly on the housing.

The design of the wheelset with brake discs and coupling requires different solutions for axial location of the rolling bearings: this is achieved on one side of the wheelset by pressing on a tapered bush and on the other side by a threaded nut with an integrated labyrinth for the labyrinth seal.

The wheelset bearing is sealed on both sides by combined seals comprising a labyrinth seal and V ring seal in order to achieve high operational security. The rolling bearings used are cylindrical roller bearings.

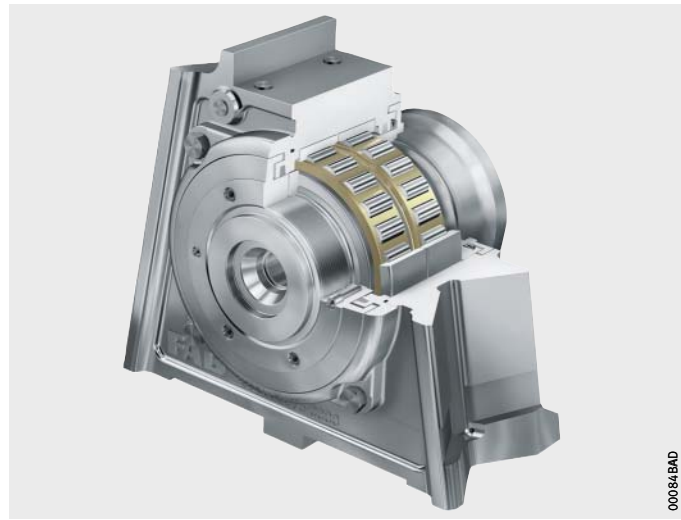



*Figure 3*
Wheelset bearing for tram

### Wheelset bearing housings

The material used is EN AC-AlSi7Mg0,3ST6 to DIN EN 1706, a cast aluminium alloy proven for use in the wheelset bearing sector.

## Wheelset bearings for regional trains

The application in this example is a regional train for commuters and urban transport links in towns. There is thus a requirement for high starting acceleration with stops occurring in rapid succession.
In order to allow rapid entry and exit of passengers as well as access for those such as wheelchair users, the train is of a low-floor design.
With a drive power of 12×250 kW, the train can reach a maximum velocity of 160 km/h.

### Wheelset bearings

The wheelset bearing is designed as a swing arm housing, *Figure 4*. Schaeffler developed the swing arm as a split design, comprising an upper and lower section, housing ring and rolling bearings. Due to the split design, the wheelset can be replaced rapidly and easily.

Cylindrical roller bearings were selected as the rolling bearings. Due to the harsh weather conditions in the area of operation, particular attention was devoted to sealing on the wheel side.

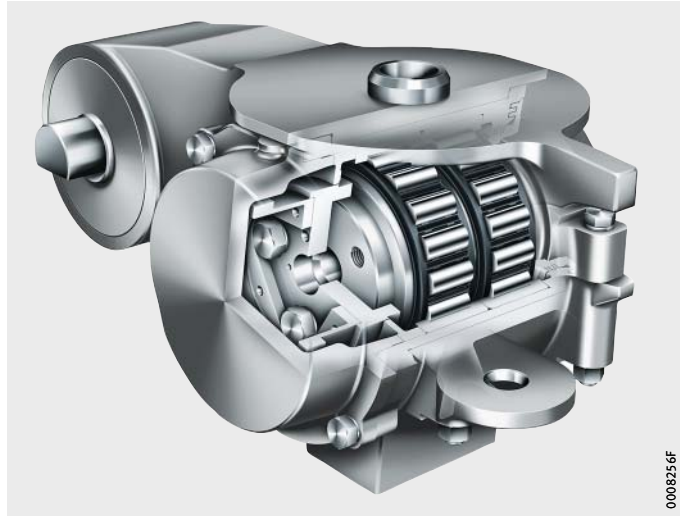



*Figure 4*
Wheelset bearing for regional trains

### Wheelset bearing housings

The material used for the wheelset swing arm is spheroidal graphite cast iron to DIN EN 1563 with a defined notched impact energy in the lower temperature range. The strength of the housing structure was investigated, optimised and confirmed by means of FEM calculation.





## Wheelset bearings for high speed trains

The application in this example is a high speed train for Russia. The trains are 250 m long and are equipped with several drive axles distributed over the length of the train. As a result, there is no need for traction units and additional passenger space can be gained. The trains are designed for a maximum travel velocity of 300 km/h.

### Wheelset bearings

The wheelset bearing is designed as a swing arm, *Figure 5*. The swing arm was completely developed at Schaeffler and comprises an upper and lower section, housing ring and rolling bearing. Operation on the Russian broad gauge system leads to high axle loads. Tapered roller bearing units TAROL with the dimensions 150 mm×250 mm (d×D) are used.

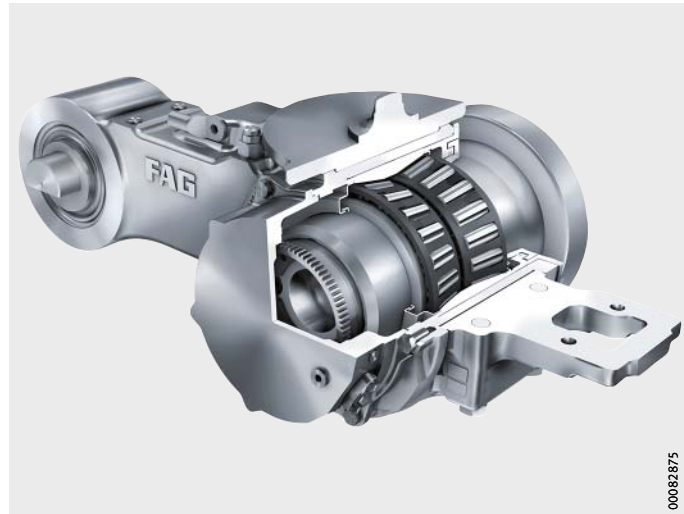



*Figure 5*
Wheelset bearing for high speed trains

### Wheelset bearing housings

The material used for the swing arm housing is spheroidal graphite cast iron to DIN EN 1563 with a defined notched impact energy in the lower temperature range. This m eans that the extreme requirements (notched impact energy of 12 J at –50 °C) can be fulfilled.

The strength of the housing structure was investigated, optimised and confirmed by means of FEM calculation, taking account of the particular requirements in relation to operating temperatures.

The suitability of the wheelset bearing was confirmed for the operating conditions present by means of a performance test in accordance with EN 12082 and safety standards within the Russian certification system.

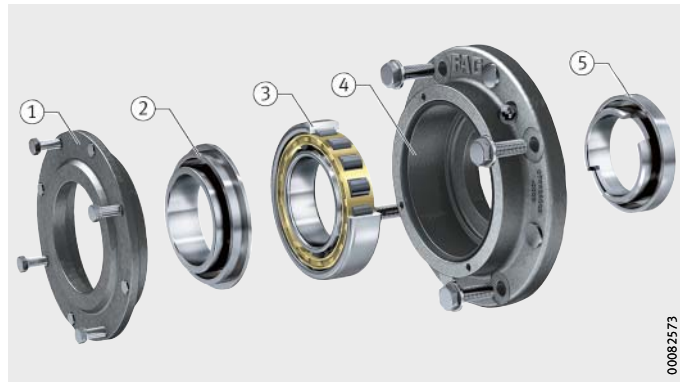
## Housing units with relubrication facility for traction motors

The requirements placed on modern drive concepts and for their high and rapid availability are increasing. For the rotor bearing arrangements in electric drives, Schaeffler works in consultation with customers to develop and manufacture complete housing units with a relubrication facility that are individually designed in accordance with the application and can also be equipped with measurement technology. Both standard bearings and current-insulating bearings can be used. In these units, all the housing components can be coated with Corrotect.

### Modular concept

FAG housing units offer numerous advantages in the design, production, mounting and maintenance of rotor bearing arrangements. Since the housing units are designed as a modular concept, all the subassemblies are matched to each other, *Figure 6*. They form a closed unit that is normally mounted externally on the end shield.

Due to the significantly simplified design of the end shields, the work involved in the development of new drive concepts is also reduced.




① Cover
② Labyrinth ring
③ Bearing
④ Housing
⑤ Labyrinth ring

*Figure 6*
Individual parts of a housing unit for traction motors

### Design

The rotor bearing arrangement must be matched to the particular operating and ambient conditions of the electric drive concept. Depending on the drive concept, widely differing bearing loads must be taken into consideration in order to achieve electric drives that are efficient, operationally reliable and cost-effective.

**Housing units**

The housing bodies of the housing units, *Figure 7*, are made in preference from spheroidal graphite cast iron. The lubrication and sealing must be configured such that the bearings are supplied with the correct quantity of lubricant in any operating mode. Due to their design, these bearing solutions are extremely easy to maintain.




*Figure 7*
Housing unit for traction motors

**Further information**

- RFB 21, FAG Housing Unit with Relubrication Facility for Traction Motors.




# Mounting and maintenance

# Mounting and maintenance


Page

**Products and services**

Features ..... 407
Industrial Aftermarket ..... 408
Mounting Toolbox – mounting made easy ..... 408

**Mounting**

Product overview ..... 410

Features ..... 412
Mounting and dismounting services ..... 412
Equipment rental ..... 413
Mechanical tools ..... 414
Thermal tools ..... 414
Hydraulic tools ..... 416

**Lubrication**

Product overview ..... 418

Features ..... 419
Services ..... 419
Lubricants ..... 419
Lubrication devices ..... 422

**Condition Monitoring**

Product overview ..... 424

Features ..... 425
Continuous monitoring ..... 425
Regular monitoring ..... 426
Condition monitoring with FAG SmartCheck ..... 427
Lubricant monitoring with FAG GreaseCheck ..... 428
Comprehensive monitoring ..... 429

# Products and services

**Features**

Within its Industrial Aftermarket function, Schaeffler offers high quality products, services and training, *Figure 1*.

Portfolio

The portfolio comprises:

- Mounting
- Lubrication
- Condition Monitoring
- Reconditioning.

The employees of Schaeffler worldwide will be pleased to help you select the ideal products, services and training courses, *Figure 1*.




*Figure 1*
Portfolio

## Industrial Aftermarket

Schaeffler Industrial Aftermarket (IAM) is responsible for replacement parts and service business for end customers and sales partners in all significant industrial sectors. On the basis of innovative solutions, products and services relating to rolling bearings, the service function of Schaeffler Industrial Aftermarket offers a comprehensive portfolio that covers all phases in the lifecycle of the bearing and takes account of the total costs (TCO).

The aim is to help customers save on maintenance costs, optimise plant availability and avoid unforeseen machine downtime. Schaeffler Industrial Aftermarket offers each customer an individual concept solution.

Schaeffler has centres of competence all around the world. This means we can provide customers worldwide with products, services and training quickly and professionally. All service employees worldwide undergo a comprehensive training programme and are audited regularly by officially certified specialists. This ensures that services throughout the world conform to a uniformly high standard of quality.

## Mounting Toolbox – mounting made easy

The Schaeffler Mounting Toolbox, *Figure 2*, brings together valuable knowledge relating to mounting and dismounting. In individual video sequences, the service experts present step by step the points that must be paid close attention for correct mounting, lubrication and alignment.

**http://mounting-toolbox.schaeffler.de**

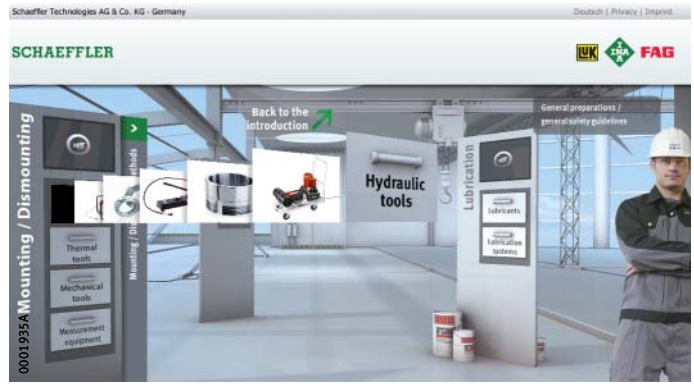



*Figure 2*
Mounting Toolbox



## Mounting and dismounting services

### MOUNT-HOUR




## Mechanical tools

Double hook wrench set

Internal extractor

### LOCKNUT-DOUBLEHOOK..-SET




### PULLER-INTERNAL10-100-SET




## Thermal tools

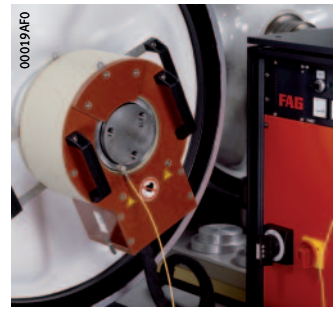
Induction heating devices

Medium frequency devices

### HEATER600




### HEAT-GENERATOR, HEAT-INDUCTOR



## Hydraulic tools

### Hydraulic nuts

HYDNUT




### Hand pumps for drive-up distance

PUMP1000-4L-CONTROL



# Mounting

## Features

The Schaeffler industrial service experts offer mounting services for bearing arrangement units, comprising bearings and housings, that are applicable across industrial sectors. They have detailed knowledge and extensive experience in all industrial sectors.

At several locations worldwide, Schaeffler has skilled personnel specifically trained for the Industrial Aftermarket sector who can provide reliable, rapid and competent assistance. The services are provided either at the customer's location or in the Schaeffler workshop facilities.

## Mounting and dismounting services

These services, *Figure 1*, include:

- mounting and dismounting of bearings and bearing arrangement systems
- problem solving and preparation of concept solutions
- measurement and condition analyses
- maintenance and inspection of bearing arrangements
- support in achieving optimum mounting operations
- certification of mounting processes
- design and manufacture of special tools.




*Figure 1*
Mounting service on a converter

Advantages

The services give the following advantages:

- worldwide portfolio of services for bearing arrangement technology
- mounting experts with comprehensive experience in highly diverse applications
- increased equipment availability and improvements in productivity
- optimisation of mounting and dismounting processes
- training and awareness measures for employees relating to the correct handling of bearings of all types.

**Further information**

- Enquiries: mounting-services@schaeffler.com, +49 9721 91 4995.

## Equipment rental

A wide range of special tools for correct mechanical mounting and dismounting and for measurement and inspection tasks can be rented from Schaeffler on a weekly basis for a fee.

Schaeffler offers rental of:

- mechanical tools (such as extractors)
- thermal tools (such as HEATER or medium frequency equipment)
- hydraulic tools (such as hydraulic pumps or hand pumps)
- measurement and inspection equipment (such as taper gauges or enveloping circle gauges).

If one of our qualified service personnel is commissioned in order to carry out the particular activity, the equipment rental is generally free of charge.

**Further information**

- Enquiries: mounting-services@schaeffler.com, +49 9721 91 4995.



# Mounting

## Mechanical tools

Mechanical tools are generally used for the mounting and dismounting of small and medium-sized bearings. The mounting forces are transmitted by the form fit effect. The Schaeffler range includes items such as hook and pin wrenches, socket wrenches and a wide variety of extractors.

**Further information**

- Catalogue IS 1, Mounting and Maintenance of Rolling Bearings.

## Thermal tools

Induction heating devices are used to heat rolling bearings or components with a cylindrical bore for mounting and dismounting. In addition to various induction heating devices operating with mains frequency technology, Schaeffler also offers induction heating devices with medium frequency technology.

Adequate expansion of the housings and bearings is normally achieved at +80 °C to +100 °C. During the heating operation, the maximum heating temperature must be observed. The temperature of rolling bearings must not normally exceed +120 °C, in order to prevent changes to the structure and hardness of the bearing. In all devices for heating, the temperature can be steplessly controlled.

Wear protective gloves during mounting and dismounting of heated parts.

**Induction units with medium frequency technology**

FAG heating devices with medium frequency technology give rapid, simple heating of medium-sized to large bearings, housings and similar steel parts for mounting and dismounting. The device always comprises two parts: an inductor and a generator, *Figure 2*, page 415.

The inductor can be of a flexible or rigid design. The rigid design is particularly suitable for batch applications. The flexible design of inductor can be wound around the components.

Each device is designed for the specific application and is fitted, depending on the workpiece, with flexible or rigid inductors. Due to its compact construction, the device can also be used for mobile operation.




*Figure 2*
Heating device
with medium frequency technology:
generator and inductor

Advantages

The advantages of the heating device with medium frequency technology are as follows:

- two in one: suitable for mounting and dismounting
- operating frequency from 10 kHz to 25 kHz
- efficiency of the generator higher than 90%
- low energy requirements
- short heating times
- control of heating according to time and temperature
- automatic demagnetisation
- flexible and rigid inductors available
- suitable for use either inside or outside component
- lower mains connection power than heating devices with mains frequency
- almost silent
- air-cooled system.

## Hydraulic tools

Hydraulic tools can be used to apply large forces. These tools are therefore particularly suitable for the mounting and dismounting of large bearings or components with a tapered bore.

Hydraulic nuts are used as a mounting tool. Pressure can be generated using oil injectors, hand pumps or hydraulic units.

### Hydraulic nuts

Hydraulic nuts HYDNUT, see table, are used to press components with a tapered bore onto their tapered seat. Presses are mainly used if the drive-up forces required cannot be applied using other accessories, e.g. shaft nuts or pressure screws.

The main applications are as follows:

- mounting and dismounting of bearings with tapered bore. These bearings with a tapered bore can be seated directly on a tapered shaft, an adapter sleeve or a withdrawal sleeve.
- dismounting of withdrawal sleeves and adapter sleeves.

### Available hydraulic nuts

| Designation | Design | Application |
|---|---|---|
| **HYDNUT50** to **HYDNUT200** | With metric fine pitch thread to DIN 13 | Adapter and withdrawal sleeves with metric dimensions |
| **HYDNUT205** to **HYDNUT1180** | With trapezoidal thread to DIN 103 | |
| **HYDNUT90-INCH** to **HYDNUT530-INCH** | With inch size thread to ABMA “Standards for Mounting Accessories, Section 8, Locknut Series N-00” | Sleeves with inch dimensions |
| **HYDNUT100-HEAVY** to **HYDNUT900-HEAVY** | Increased capacity design with smooth bore | For high mounting forces, for example in shipbuilding |

### Further information

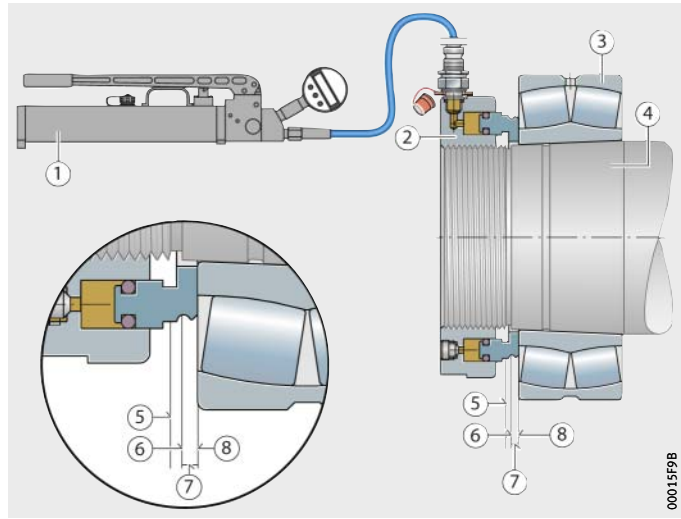
- TPI 196, FAG Hydraulic Nuts
- Enquiries: industrial-services@schaeffler.com, +49 2407 9149-66.

**Pump for drive-up distance**

The hand pump PUMP1000-4L-CONTROL is particularly suitable as a pressure generation device where bearings with a tapered bore are to be driven onto their seat using a hydraulic nut, *Figure 3*.

First, the bearing is driven smoothly onto the tapered seat as far as the initial position. A suitable hydraulic nut is then screwed onto the shaft and the hand pump is connected. The hand pump is then operated until the pressure to reach the start position is achieved. By further operation of the pump, the bearing is driven up by the required distance and thus reaches the final position.

The user manual for the pump PUMP1000-4L-CONTROL contains a table that shows the number of strokes necessary to achieve the required drive-up distance of the bearing. The required drive-up distance is calculated using the software Mounting Manager.




① Hand pump
② Hydraulic nut
③ Spherical roller bearing
④ Tapered seat
⑤ Initial position
⑥ Start position
⑦ Drive-up distance
⑧ Final position

*Figure 3*
Mounting
of a spherical roller bearing
using PUMP1000-4L-CONTROL

Scope of delivery

Hand pump with digital manometer
High pressure hose with coupling sleeve
Spacer ring (HYDNUT50 to HYDNUT150)
Push fit coupling nipple
User manual
Metal case

Ordering designation

**PUMP1000-4L-CONTROL**

## Arcanol greases

ARCANOL




## Lubrication system

CONCEPT8



# Lubrication

## Features

In more than half of all cases, inadequate lubrication is the cause of unplanned machine downtime. The life of machine elements undergoing swivel, rotary or linear motion can be significantly extended by the use of greases appropriate to the different operating and environmental conditions as well as the definition of and adherence to lubrication intervals and quantities.

## Services

Services relating to lubrication include:

- selection of lubricants and lubrication systems
- preparation of lubrication and maintenance plans
- lubrication point management
- consultancy on lubricants
- lubricant investigations and tests.

Advantages

The services provide assistance in:

- preventing failures
- increasing productivity
- reducing lubrication costs.

## Lubricants

The lubricants available from Schaeffler are designed and tested for bearing arrangement technology, *Figure 1*.

### Rolling bearing greases Arcanol

The 18 greases cover almost all applications. They are developed by experienced application engineers and are produced by the best manufacturers in the market. Different greases are used depending on the particular application, see table, page 420.

Rolling bearing greases under the name Arcanol are subjected to 100% quality inspection. The inspection methods at Schaeffler are among the most demanding in the market. As a result, Arcanol rolling bearing greases fulfil the highest quality requirements.




*Figure 1*
Analysis of the thermal behaviour of greases

## Rolling bearing greases Arcanol

| Arcanol grease | Designation to DIN 51825 | Classification |
|---|---|---|
| MULTI2 | KP2K–30 | Low-noise ball bearing grease for D ≦ 62 mm |
| MULTI3 | K3K–20 | Standard ball bearing/insert bearing grease for D > 62 mm |
| SPEED2,6 | KPHC2/3K–40 | Standard spindle bearing grease |
| MULTITOP | KPHC2N–40 | Universal high performance grease |
| TEMP90 | KP3P–40 | Low-noise rolling bearing grease, up to +160 °C |
| TEMP110 | KP2P–30 | Universal grease for higher temperatures |
| TEMP120 | KPHC2R–30 | Grease for high temperatures and high loads |
| TEMP200 | KFKP2U–30 | Rolling bearing grease for T > +150 °C to +260 °C |
| LOAD150 | KP2N–20 | Multi-purpose grease for automotive applications, high performance grease for line contact |
| LOAD220 | KP2N–20 | Heavy duty grease, wide speed range |
| LOAD400 | KP2K–20 | Grease for high loads, shocks |
| LOAD460 | KP1K–30 | Grease for high loads, vibrations, low temperatures |
| LOAD1000 | KP2K–20 | Grease for high loads, shocks, large bearings |
| FOOD2 | KPHC2K–30 | Grease with foodstuffs approval |
| VIB3 | KP3N–30 | Grease for oscillating motion |
| BIO2 | KPE2N–40 | Grease with rapid biodegradability |
| CLEAN-M | KX2R–30 | Clean room grease, grease resistant to radiation |
| MOTION2 | KPFHC2K–40 | High performance grease paste for oscillating applications and plain bearing arrangements |

| Type of grease<br>Thickener<br>Base oil | Operating temperature range<br>°C | Upper continuous limit temperature $T_{upperlimit}$<br>°C | NLGI grade | Speed parameter $n \cdot d_M$<br>$min^{-1} \cdot mm$ | Kinematic viscosity | |
|---|---|---|---|---|---|---|
| | | | | | at 40 °C<br>$mm^2/s$ | at 100 °C<br>$mm^2/s$ |
| Lithium soap<br>Mineral oil | –30 to +120 | +75 | 2 | 500 000 | 110 | 11 |
| Lithium soap<br>Mineral oil | –20 to +120 | +75 | 3 | 500 000 | 110 | 12 |
| Lithium soap<br>Synthetic oil | –40 to +120 | +80 | 2 to 3 | 2 000 000 | 25 | 6 |
| Lithium soap<br>Partially synthetic oil | –40 to +140 | +80 | 2 | 800 000 | 82 | 12,5 |
| Polycarbamide<br>Partially synthetic oil | –40 to +160 | +90 | 3 | 700 000 | 148 | 15,5 |
| Lithium complex soap<br>Partially synthetic oil | –30 to +160 | +110 | 2 | 500 000 | 130 | 14,2 |
| Polycarbamide<br>Synthetic oil | –30 to +180 | +120 | 2 | 300 000 | 400 | 40 |
| PTFE<br>Perfluoropolyether oil | –30 to +260 | +200 | 2 | 300 000 | 550 | 49 |
| Lithium complex soap<br>Mineral oil | –20 to +140 | +95 | 2 | 500 000 | 160 | 15,5 |
| Lithium/calcium soap<br>Mineral oil | –20 to +140 | +80 | 2 | 500 000 | 245 | 20 |
| Lithium/calcium soap<br>Mineral oil | –20 to +120 | +80 | 2 | 400 000 | 400 | 27 |
| Lithium/calcium soap<br>Mineral oil | –30 to +130 | +80 | 1 | 400 000 | 400 | 25 |
| Lithium/calcium soap<br>Mineral oil | –20 to +130 | +80 | 2 | 300 000 | 1 000 | 38 |
| Aluminium complex soap<br>White oil | –30 to +120 | +70 | 2 | 400 000 | 150 | 18 |
| Lithium complex soap<br>Mineral oil | –30 to +150 | +90 | 3 | 350 000 | 170 | 14 |
| Lithium/calcium soap<br>Synthetic oil | –40 to +150 | +80 | 2 | 300 000 | 55 | 10 |
| Polycarbamide<br>Ether | –30 to +180 | +90 | 2 | 850 000 | 103 | 12,8 |
| Lithium soap<br>Synthetic oil | –40 to +130 | +75 | 2 | 500 000 | 50 | 8 |



## Lubrication devices

Lubricators and lubrication systems automatically provide rolling bearings with the correct quantity of lubricant. This prevents the most frequent cause of rolling bearing failure: inadequate or incorrect lubrication. Approximately 90% of bearings are lubricated with grease. Relubrication with the correct quantity of grease at the appropriate intervals gives a significant increase in the life of bearings.

### Lubrication systems

A single-point or multi-point lubrication system can supply lubrication points precisely and irrespective of temperature. The dispensing times can be set variably.

### Lubrication system CONCEPT8

This single-point and multi-point lubrication system can grease up to eight lubrication points, *Figure 2*. LC units are available in the size 800 $cm^3$. The lubrication system controls the greasing of the lubrication points independently of the machine.




*Figure 2*
Lubrication system CONCEPT8 with 8 outlets

Advantages

The advantages of the lubrication system are as follows:

- suitable for oil and grease up to NLGI 3
- reliable piston pump as delivery pump
- operating temperature from –20 °C to +70 °C
- low operating voltage of 24 DCV
- pressure buildup to max. 70 bar, thereby overcoming any obstructions.

Bearing housings such as split plummer block housings SNS can be connected directly to CONCEPT8, *Figure 3*.




*Figure 3*
Plummer block housing SNS with FAG CONCEPT8

**Further information**

- WL 80382, FAG CONCEPT8
- Catalogue IS 1, Mounting and Maintenance of Rolling Bearings
- Enquiries: industrial-services@schaeffler.com, +49 2407 9149-66.

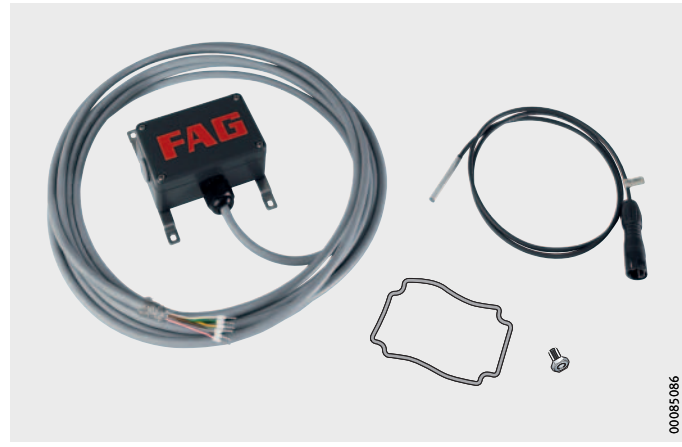
**Online monitoring system SmartCheck**

SMART-CHECK




**Grease sensor GreaseCheck**

GREASE-CHECK



# Condition Monitoring

## Features

The malfunction-free and optimised operation of complex machinery and plant can normally only be achieved by means of condition-based maintenance. By preference, Schaeffler uses vibration diagnosis for this task.

This method makes it possible to detect damage in machinery at a very early stage. This means that, for example, damaged components can be replaced as part of planned downtime. Unscheduled downtime is avoided.

Depending on the type of machine and its importance for the production process, condition monitoring can be carried out by means of either continuous (online) monitoring or regular (offline) monitoring.

## Continuous monitoring

For production-critical machinery, continuous monitoring, *Figure 1*, by means of vibration diagnosis is indispensable in many cases.

In addition to giving advice on selecting the right system, Schaeffler also implements monitoring of the machine. This includes not only hardware selection but also system configuration and, where necessary, its integration into existing systems.

The customer can decide whether to carry out plant monitoring himself or to enlist the services of Schaeffler for online monitoring. Due to the communication options of the monitoring systems, remote analysis can be carried out by the Schaeffler experts.




*Figure 1*
Continuous monitoring

# Condition Monitoring

## Regular monitoring

The failure of so-called “B” or “C” category plant items does not lead directly to downtime and does not therefore necessarily entail expensive secondary damage. In the case of such machine parts, regular monitoring is generally recommended as a more economical option.

In this type of monitoring, machinery is examined and assessed by vibration analysis at regular intervals, for example every four weeks. This regularity gives more in-depth knowledge of the normal condition of the machine. Deviations can thus be detected.
For the monitoring concept, the selection of measurement points and monitoring accessories as well as the measurement interval play a decisive role. If deviations occur during measurement or if trends are to be investigated, the data can be sent to the Schaeffler Diagnosis Centre. Vibration experts will then analyse the data and prepare a diagnosis report. Through working with the Schaeffler experts, customers can build up their own know-how in analysis.

If no personnel are available for data logging, Schaeffler can also offer support in data logging. The Schaeffler experts can then carry out regular measurements on site.

## Troubleshooting

Where malfunctions occur on a machine, defects must be detected and rectified very quickly. Based on many years of experience with different sectors and applications, the Schaeffler diagnosis experts are well versed in such troubleshooting tasks.

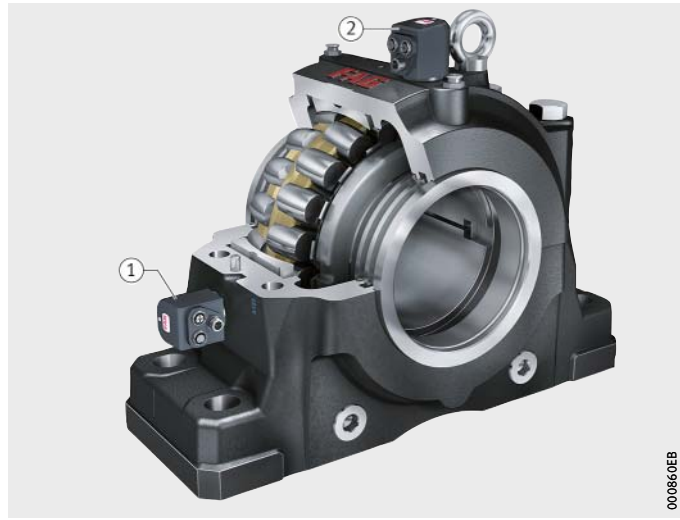
Problems or malfunctions in machine operation often become apparent through changes in vibration behaviour, unusual temperature patterns or similar phenomena. The investigation is closed out by a handover discussion between the diagnosis experts and all relevant employees on site. In addition to the results of the investigation, the recommended countermeasures are discussed in particular.

## Further information

- Enquiries: industrial-services@schaeffler.com, +49 2407 9149-66.

## Condition monitoring with FAG SmartCheck

For condition-based maintenance, Schaeffler uses vibration diagnosis as a preferred method. FAG SmartCheck is an innovative, economical measuring system for real time monitoring and can be mounted, for example, at predefined positions on plummer block housings SNS, *Figure 2*. The figure shows possible mounting positions, although only 1 FAG SmartCheck is required per housing.




① Preferred position for FAG SmartCheck
② Alternative position for FAG SmartCheck

*Figure 2*
Plummer block housing SNS with FAG SmartCheck

Commissioning, *Figure 3*, is simplified since the device is supplied already loaded with a characteristic value set and predefined configuration templates. These can easily be matched to individual requirements.




*Figure 3*
Commissioning of FAG SmartCheck

**Advantages**

The compact measuring device can be installed quickly, is easy to use and contributes to the reduction of life cycle costs.

Further advantages include:

- reliable real time monitoring of the machine
- intelligent process monitoring
- intuitive user concept
- ease of integration in the controller and control facility
- modular accessories SmartLamp, SmartConnectBox and SmartController
- complete service from a single source.

## Lubricant monitoring with FAG GreaseCheck

Bearing arrangement units comprising a bearing and housing are lubricated with oil or grease. The monitoring of grease condition in ongoing operation can be achieved, for example, using FAG GreaseCheck, *Figure 4*. Due to its special electronic evaluation system, relubrication is no longer carried out as a function of time but as a function of condition. In this way, relubrication can be carried out at the correct time, making it possible to delay and in many cases completely prevent rolling bearing damage.




① Optical probe
② Electronic evaluation system

*Figure 4*
Grease sensor FAG GreaseCheck

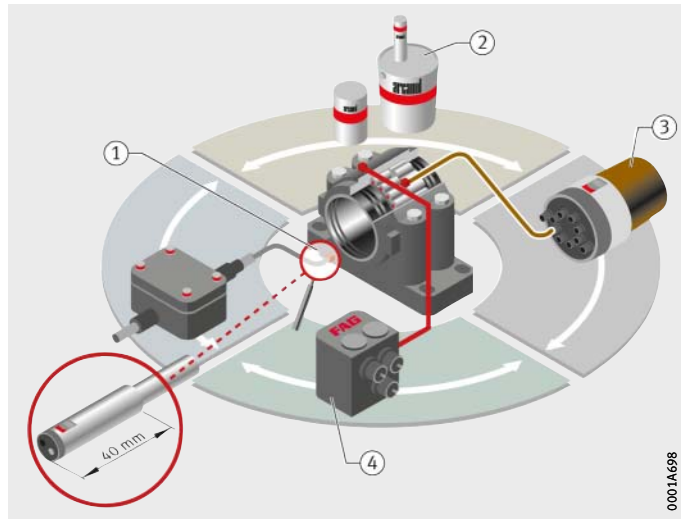
Advantages

FAG GreaseCheck makes it possible to achieve:

- lubrication appropriate to needs
- increased plant availability
- optimised grease quantities and relubrication intervals
- lower lubricant costs
- lower service and maintenance costs.

## Comprehensive monitoring

An innovative system for comprehensive monitoring combines grease and vibration diagnosis with a lubricator that is controlled by the monitoring devices. In this way, any critical change during ongoing operation can be detected and rectified at an early stage before damage occurs in the rolling bearing. In particular, plant that is difficult to access or failure-critical can be comprehensively monitored and always provided with a optimum supply of grease, without the need for skilled personnel to be present on site, *Figure 5*.




① FAG GreaseCheck
② Arcanol greases
③ FAG CONCEPT8
④ FAG SmartCheck

*Figure 5*
Comprehensive monitoring of rolling bearings

# Addresses

**Germany**

Schaeffler Technologies AG & Co. KG
Postfach 1260
97419 Schweinfurt
Georg-Schäfer-Straße 30
97421 Schweinfurt
Tel. +49 2407 9149-66
Fax +49 2407 9149-59
info@schaeffler-iam.com
www.schaeffler-iam.com

**Worldwide**

You can find all
the addresses and contacts
for Schaeffler at
www.schaeffler.com

# Notes

# Notes




**Schaeffler Technologies**
**AG & Co. KG**

Georg-Schäfer-Straße 30
97421 Schweinfurt
Germany
Internet www.fag.com
E-mail faginfo@schaeffler.com

In Germany:
Phone 0180 5003872
Fax 0180 5003873

From other countries:
Phone +49 9721 91-0
Fax +49 9721 91-3435

MATNR 086419374-0000 / GK 1 / GB-D / 2015112 / Printed in Germany by phoenix print