

# TIMKEN



## TIMKEN® BALL BEARING HOUSED UNIT CATALOG



# ***TIMKEN® HOUSED UNIT CATALOG INDEX***

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## ***GROW STRONGER WITH TIMKEN***

Every day, people around the world count on the strength of Timken. Our expertise in metallurgy, friction management and mechanical power transmission helps them accelerate improvements in productivity and uptime.

We supply products and services that can help keep your operations moving forward, whether you need drive train kits for commercial vehicles, durable housings for bearings in dirty environments, couplings that avoid metal-to-metal contact between motors and gearboxes, repair services for rail bearings, steel for an aircraft engine shaft, or other products and services for your applications.

When you choose Timken, you receive more than high-quality products and services: You gain a worldwide team of highly trained and experienced Timken people committed to working collaboratively with you to improve your business.

Globally, our 20,000 people provide reliable answers for a wide range of operations in manufacturing, mining, medical equipment, aerospace, transportation, oil and gas – and other diverse industries.



## ***INCREASE YOUR EQUIPMENT UPTIME***

In addition to high-quality bearings, engineered steel and mechanical power transmission components, we provide valuable integrated products and services. For example, we offer repair services and equipment monitoring equipment that can alert you to problems before they impact your uptime.

Additionally, we offer a broad selection of seals, premium lubricants, lubricators, couplings and chain to keep your operations moving smoothly.

Our 10 technology centers in the United States, Europe and Asia help pioneer tomorrow's innovations with extensive basic and applied scientific research programs. Through internal development and strategic acquisition of innovative companies, we continue to expand our portfolio of highly engineered bearings, steel and components.



### ***RUGGED TIMKEN® HOUSED UNITS HELP PROTECT YOUR BEARINGS***

When you choose sturdy Timken housings, your bearings can keep rolling smoothly, even in harsh environments impacted by dirt, debris, water and other contaminants. Timken engineers designed special housings to withstand tough challenges on the job.

Protected inside durable cast iron or steel, our highly engineered Timken® ball and roller bearings work hard to help you manufacture and transport materials, without excessive maintenance due to contaminants.

Choose from our selection of housed units designed with ball, tapered and spherical bearings. Select enhancements like Timken® seals, lubricants and housing covers best suited for each task. Our engineers help you choose the right combination of bearings and accessories to extend bearing life, increase uptime and reduce maintenance costs.

Of course, you can interchange existing products with Timken housed units because our bolt holes and shaft centerline dimensions are designed to conform to industry standards.

Timken® housed units reflect our strengths in metallurgy, engineering and manufacturing. We produce all our bearings in adherence with the Timken Quality Management System for consistency in all our facilities around the world.



## TIMKEN® BALL HOUSED UNITS OFFER EASY INSTALLATION, FLEXIBLE OPTIONS

Timken® ball housed units, available in a variety of sizes and types, feature wide-inner-ring ball bearings that provide additional shaft support and locking options. The Timken® wide-inner-ring ball bearing is designed for straight shafts and can be positioned without shoulders, locknuts or adapters.

For easy installation, our ball housed units can be ordered pre-assembled with bearings, housings, seals and locking systems. Choose from pillow blocks, flanged cartridges, take-up units and cylindrical cartridges. Our cast-iron, pressed-steel and other optional materials give you durable choices for the exterior covers. Timken® locking options include set screws, self-locking collars and concentric collars.

Timken® Shaft Guarding Technology™ deters set-screw damage to shafts by placing a hardened band in the groove along the inner ring of the bearing. The set screws press against the band to transfer gripping pressure onto the shaft, preventing nicks, as well as raised-metal or permanent shaft damage. The stainless-steel band resists corrosion on the shaft. This system is particularly helpful for applications where it would be expensive and time-consuming to replace shafts.

## TYPICAL INDUSTRIES AND APPLICATIONS

Use Timken ball bearing housed units in agricultural applications, fans, blowers, food processing devices and conveyors.



## TIMKEN® TYPE E HOUSED UNITS REPEL CONTAMINANTS, ENHANCE PERFORMANCE

Timken® Type E tapered roller bearing housed units feature double-lip seals and locking collars that protect against water and other contaminants. This double-lip seal design blocks debris and retains grease better than single-lip or triple-lip seals, according to Timken 2012 laboratory tests.

Its cast-iron exterior includes a corrosion-resistant electro-coat finish for the housing and collar, a more durable shield than industry-standard powder coating or black oxide. Set screws with nylon patches reduce back-out, even in rigorous applications.

Premium Timken® tapered roller bearings inside Type E housings are manufactured with advanced technology that results in longer predicted useful bearing life than other housed units with standard bearings. Designed with optimized bearing profiles and improved surface finishes, Timken tapered roller bearings operate efficiently within the housing.

## TYPICAL INDUSTRIES AND APPLICATIONS

Use Timken Type E housings for pulp and paper, power generation, mining, cement and aggregate industries. Our Type E housed units also are widely used in equipment for air-handling and treatment of water and waste water. Other common machine applications include mixers, washers, shredders, mills and oven/furnace roller beds.



## TIMKEN® SPHERICAL ROLLER BEARING SOLID-BLOCK HOUSED UNITS WITHSTAND HARSH CONDITIONS

Timken® spherical roller bearing solid-block housed units stand up to rugged conditions. Composed of solid steel, they withstand most falling debris and handle up to  $\pm 1.5$  degrees of misalignment. The steel used in these products is up to two times stronger than cast iron, which may break or pound out in tough applications.

Timken spherical roller bearing solid-block housed units come in five locking configurations: single and double set screws, eccentric locks for reversing applications, tapered-adaptor locks and double-tapered locks.

Choose from three sealing options: labyrinth seals (for high-speed, high-temperature applications) and triple-lip seals made of either nitrile or urethane. Timken® steel auxiliary covers provide an extra layer of protection, and they can be filled with Timken lubricants.

### TYPICAL INDUSTRIES AND APPLICATIONS

Use Timken spherical roller bearing solid-block housed units in metals mills, aggregate and cement, mining, power generation, agriculture, pulp, paper, sawmills and other forest industries.



## TIMKEN® SAF SPLIT-BLOCK HOUSED UNITS BEAR HEAVY LOADS

Timken® SAF split-block housed units are available in rugged cast iron, ductile iron or cast steel to match a range of industrial environments. Our Timken SAF housed units have separate, matched caps and bases. In larger sizes where housed units are heavier, this split-block design eases installation. Remove the cap using a pry-tool slot for bearing inspection, service and replacement.

Available in a variety of shaft sizes, Timken SAF units offer the choice of tapered-bore design for easy mounting or a straight-bore design for better axial location. The block can be converted from fixed to float by removing the stabilizing ring. Several sealing options protect against contamination, including a standard seal, which is a precision aluminum triple-ring labyrinth seal.

## TYPICAL INDUSTRIES AND APPLICATIONS

Use Timken SAF housed bearings in power generation, coal, mining, aggregate, cement, metals, pulp, paper and other forestry operations, water treatment and food processing industries. Applications include warehousing, conveyors, movable bridges/heavy structures, industrial fans and blowers.



## TIMKEN® SNT SPLIT PLUMMER BLOCKS CARRY HEAVY LOADS

Timken® SNT split plummer blocks are available in metric sizes. Their rugged cast iron, ductile iron or cast steel designs stand up to a range of industrial environments. Our Timken SNT plummer blocks have separate, matched caps and bases. In larger sizes where plummer blocks are heavier, this split-block design eases installation. Remove the cap using a pry-tool slot for bearing inspection, service and replacement.

Available in a variety of metric shaft sizes, Timken SNT plummer block units offer the choice of tapered-bore design for easy mounting or straight-bore design for better axial location. The block can be converted from fixed to float by adding or removing the locating rings. A variety of sealing options help protect against contamination including all-purpose elastomer seals, deflection-type V-ring seals, precision labyrinth seals and heavy-duty taconite seals for highly contaminated environments.

### TYPICAL INDUSTRIES AND APPLICATIONS

Use Timken SNT plummer blocks in power generation (coal), mining, aggregate, cement, metals, pulp, paper and other forestry operations, water treatment and food processing industries. Applications include warehousing, conveyors, bulk material handling and industrial fans and blowers.





## HOW TO USE THIS CATALOG

We designed this catalog to help you find the Timken housed units best suited to your specifications.

Timken offers an extensive range of bearings and accessories in both imperial and metric sizes. For your convenience, size ranges are indicated in millimeters and inches. Contact your Timken engineer to learn more about our complete line for the special needs of your application.

This publication contains dimensions, tolerances and load ratings, as well as engineering sections describing fitting practices for shafts and housings, internal clearances, materials and other bearing features. It provides valuable assistance in the initial consideration of the type and characteristics of the bearings that may best suit your particular needs.

ISO and ANSI/ABMA, as used in this publication, refer to the International Organization for Standardization and the American National Standards Institute/American Bearing Manufacturers Association.

**Updates are made periodically to this catalog. Visit [www.timken.com](http://www.timken.com) for the most recent version of the Timken® Housed Unit Catalog.**

## DISCLAIMER

*This catalog is provided solely to give you analysis tools and data to assist you in your product selection. Product performance is affected by many factors beyond the control of Timken. Therefore, you must validate the suitability and feasibility of all product selections for your applications.*

*Timken products are sold subject to Timken terms and conditions of sale, which include our limited warranty and remedy. You can find these at <http://www.timken.com/en-us/purchase/Pages/TermsandConditionsofSale.aspx>.*

*Please consult with your Timken engineer for more information and assistance.*

*Every reasonable effort has been made to ensure the accuracy of the information in this writing, but no liability is accepted for errors, omissions or for any other reason.*

## ***SHELF LIFE AND STORAGE OF GREASE-LUBRICATED BEARINGS AND COMPONENTS***

To help you get the most value from our products, Timken provides guidelines for the shelf life of grease-lubricated ball and roller bearings, components and assemblies. Shelf life information is based on Timken and industry test data and experience.

### **SHELF LIFE POLICY**

Shelf life should be distinguished from lubricated bearing/component design life as follows:

- Shelf life of the grease-lubricated bearing/component represents the period of time prior to use or installation.
- The shelf life is a portion of the anticipated aggregate design life. It is impossible to accurately predict design life due to variations in lubricant bleed rates, oil migration, operating conditions, installation conditions, temperature, humidity and extended storage.
- Shelf life values, available from Timken, represent a maximum limit and assume adherence to the storage and handling guidelines suggested in this catalog or by a Timken associate. Deviations from the Timken storage and handling guidelines may reduce shelf life. Any specification or operating practice that defines a shorter shelf life should be used.

Timken cannot anticipate the performance of the grease lubricant after the bearing or component is installed or placed in service.

**TIMKEN IS NOT RESPONSIBLE FOR THE SHELF LIFE OF ANY BEARING/COMPONENT LUBRICATED BY ANOTHER PARTY.**

### **European REACH Compliance**

Timken lubricants, greases and similar products sold in standalone containers or delivery systems are subject to the European REACH (**R**egistration, **E**valuation, **A**uthorization and **R**estriction of **C**hemicals) directive. For import into the European Union, Timken can sell and provide only those lubricants and greases that are registered with ECHA (**E**uropean **C**hemical **A**gency). For further information, please contact your Timken engineer.



## STORAGE

Timken suggests the following storage guidelines for our finished products (bearings, components and assemblies, referred to as “products”):

- Unless directed otherwise by Timken, products should be kept in their original packaging until they are ready to be placed into service.
- Do not remove or alter any labels or stencil markings on the packaging.
- Products should be stored in such a way that the packaging is not pierced, crushed or otherwise damaged.
- After a product is removed from its packaging, it should be placed into service as soon as possible.
- When removing a product that is not individually packaged from a bulk pack container, the container should be resealed immediately after the product is removed.



- Do not use product that has exceeded its shelf life as defined in the Timken shelf life guidelines statement.
- The storage area temperature should be maintained between 0° C (32° F) and 40° C (104° F); temperature fluctuations should be minimized.
- The relative humidity should be maintained below 60 percent and the surfaces should be dry.
- The storage area should be kept free from airborne contaminants such as, but not limited to, dust, dirt, harmful vapors, etc.
- The storage area should be isolated from undue vibration.
- Extreme conditions of any kind should be avoided.

Due to the fact that Timken is not familiar with your particular storage conditions, we strongly suggest following these guidelines. However, you may be required by circumstances or applicable government requirements to adhere to stricter storage requirements.

Most bearing components typically ship protected with a corrosion-preventive compound that is not a lubricant. These components may be used in oil-lubricated applications without removal of the corrosion-preventive compound. When using some specialized grease lubrications, we advise you to remove the corrosion-preventive compound before packing the bearing components with suitable grease.

We pre-pack most housed unit types in this catalog with general-purpose grease suitable for their normal applications. It may be necessary for you to frequently replenish the grease for optimum performance.

Be careful in selecting lubrication, however, since different lubricants are often incompatible. You may order housed units pre-lubricated with a specified lubrication.

When you receive a bearing or housed unit shipment, do not remove products from their packaging until they are ready for mounting so they do not become corroded or contaminated.

Store bearings and housed units in an appropriate atmosphere so they remain protected for the intended period.



**WARNING**

***Failure to observe the following warnings could create a risk of death or serious injury.***

Proper maintenance and handling practices are critical. Failure to follow selection recommendations and installation instructions and to maintain proper lubrication can result in equipment failure.

Overheated bearings can ignite explosive atmospheres. Special care must be taken to properly select, install, maintain, and lubricate housed unit bearings that are used in or near atmospheres that may contain explosive levels of combustible gases or accumulations of dust such from grain, coal, or other combustible materials. Consult your equipment designer or supplier for installation and maintenance instructions.

If hammer and bar are used for installation or removal of a part, use a mild steel bar (e.g., 1010 or 1020 grade). Mild steel bars are less likely to cause release of high-speed fragments from the hammer, bar or the part being removed.

**CAUTION**

***Failure to follow these cautions may result in property damage.***

Do not use damaged housed units.

**NOTE**

*Do not use excessive force when mounting or dismounting the unit.*

*Follow all tolerance, fit, and torque recommendations.*

*Always follow the Original Equipment Manufacturer's installation and maintenance guidelines.*

*Ensure proper alignment.*

*Never weld housed units.*

*Do not heat components with an open flame.*

*Do not operate at bearing temperatures above 121° C (250° F).*

Warnings for this product line are in this catalog and posted on [www.timken.com/warnings](http://www.timken.com/warnings).

**A**

## ***BALL BEARING HOUSED UNITS***

Timken® ball bearing housed units feature a wide-inner-ring ball bearing for additional shaft support. Designed for mounting on straight shafts with a slip fit, these housed units are available in an extensive array of types and sizes to accommodate many industrial applications.

When set screws are used, Timken suggests using Shaft Guarding Technology™, a stainless-steel, hardened band that is inserted in a groove on the inner ring. When the set screws are tightened, they press against the band, tightening the grip on the shaft. Unlike traditional set screws, which can dig into the shaft, there are no nicks, raised metal or permanent shaft damage. The stainless band resists the formation of corrosion on the shaft.

Updates are made periodically to this catalog. Visit [www.timken.com](http://www.timken.com) for the most recent version of the Timken® Housed Unit Catalog.

## **TYPICAL INDUSTRIES AND APPLICATIONS**

Common industries and applications include agriculture, food processing, fans, blowers, and conveyors.

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## ENGINEERING

Antifriction bearings possess capabilities involving broad ranges of speed and many combinations of radial and thrust loads. Other important environmental conditions, such as low and high temperatures, dust and dirt, moisture and unusual conditions, affect bearing operation.

This engineering section is not intended to be comprehensive, but it does serve as a useful guide in bearing selection. Where more complex bearing applications are involved, contact your Timken engineer.

To view the complete engineering catalog, please visit [www.timken.com](http://www.timken.com). To order the catalog, please contact your Timken engineer and request a copy of the Timken Engineering Manual, order number 10424.

The following topics are covered within this section:

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## MATERIALS

### TEMPERATURE RANGES, RESISTANCE TO CORROSION AND OTHER OPERATING ENVIRONMENTS

To accommodate the needs of the rapidly expanding industrial world, the capability of bearings in various extreme environments becomes vitally important. No general recommendations can be made to cover all such applications. Each installation must be studied to determine peak and average operating temperatures, length of time at these temperatures, load, oscillation or rotation, and any other factors affecting bearing operation.

### RINGS, BALLS AND ROLLERS

Suggested materials for use in rings, balls and rollers at various operating temperatures together with data on chemical composition, hardness and dimensional stability are listed in table A-1 on page A-5. A temperature of 427° C (800° F) is generally the upper limit for successful bearing operating steels. Above 427° C (800° F), or below where lubricant is not permitted, cast or wrought-cobalt alloys are generally used. Although chosen primarily for their good retention of physical properties, they also possess good oxidation resistance at elevated temperatures.

### CAGES, SHIELDS AND SEALS

Recommended materials for cages, shields and seals with their temperature capabilities are in table A-3 on page A-7.

### DIMENSIONAL STABILITY

Dimensional stability of rings and balls is achieved by tempering the hardened steel until any further growth by transformation of austenite to martensite is balanced by shrinkage from tempering martensite. This balance is never perfect, and some size change will always occur. The amount depends upon the operating time and temperature of the bearings and the composition of and heat-treatment of the steel. The American Bearings Manufacturers Association (ABMA) definition for stabilized rings and balls permits a change of less than 0.0001 inch per inch after exposure to a temperature of 149° C (300° F) for 2500 hours. Rings and balls used at elevated temperatures are defined as stable by ABMA where there is a size change of less than 0.00015 inch per inch after 1500 hours of exposure at temperatures of 232° C, 316° C and 427° C (450° F, 600° F and 800° F).

### CORROSION RESISTANCE

Timken developed a premium coating named TDC™ (thin-dense chrome), which has excellent corrosion resistance, as well as other properties leading to improved bearing life. TDC-coated bearings are intended for use in applications where unprotected bearings do not survive. This proprietary coating, emanating from years of research and testing, is a real problem-solver.

Besides its corrosion resistance feature, this coating has a high hardness (HRC 70-72), reduced coefficient of friction and a dense modular texture.

TDC is resistant to most organic and inorganic compounds. The normal thin coating of less than 0.003 mm (0.0001 in.) will outlast 440C stainless steel. The very high hardness, lower coefficient of friction and surface texture provide extra resistance to wear under less-than-ideal lubrication and thus longer bearing life.

Under normal lubrication conditions, TDC-coated races can provide fatigue life that's two times longer than the life of standard bearings.

To order wide-inner-ring ball bearings with TDC-coated races, stainless-steel balls and nylon retainers, specify suffix TDC or TDCF, which includes food safe grease (i.e., G1100KRRB + COL TDCF). This coating also can be readily applied to various types of tapered, cylindrical and spherical roller bearings.

To ensure proper application of TDC, contact your Timken engineer.

In addition to the bearings mentioned above, Timken is able to supply specially coated housing for applications involving particularly harsh environments where Food and Drug Administration (FDA) and United States Department of Agriculture (USDA) regulations apply. These housings, named Survivor® are available as electroless nickel-plated or polymer depending on the situation. The electroless nickel units are required for food processing, medical and other applications and may be ordered by adding an -NT suffix to the part number. The polymer units are similar to the NT units but offer superior protection against corrosion. Add the suffix -PT to the part when ordering.

Both coatings offer excellent protection to a broad variety of corrosive environments and are vulnerable only to a very few aggressive materials.

A complete review of operating conditions is essential before specifying corrosion-resistance housed units and/or thin-dense chrome (TDC) coated bearings. Consult your Timken engineer for comprehensive recommendations.

## OTHER CONSIDERATIONS

Installations that operate at high temperatures for extended periods may lose the quality of shaft and housing fits. Carefully machined and heat-treated shafts and housings will minimize trouble from this source.

In some applications, the internal clearance of bearings may be partially absorbed. For example, during the first few seconds of rotation, a massive housing may keep the outer race cooler than the inner race and balls, even if the housing is already at some elevated temperature. Also, during heat soakback, when rotation stops, heat may flow back to the bearing along the shaft. If, while stationary, the effects of heat soakback nullify

the radial internal clearance, radial brinelling of the races may occur and the bearing will be rough during subsequent rotation. Bearings with greater internal looseness may be required to compensate for these conditions. Consult your Timken engineer for recommendations.

This table provides standard operating temperatures for common bearing component materials. It should be used for reference purposes only. Other bearing component materials are available on request.

Contact your Timken engineer for further information.

**TABLE A-1. OPERATING TEMPERATURES FOR BEARING COMPONENT MATERIALS—RINGS, BALLS AND ROLLERS**

| Material                                                                                                        | Approximate Chemical Analysis %                                                    | Temp. °C, (°F)                    | Hardness HRC   | -73° C<br>-100° F                                                                                                                                                                                                                                                                                                                      | -54° C<br>-65° F | -17° C<br>0° F | 38° C<br>100° F | 93° C<br>200° F | 121° C<br>250° F | 149° C<br>300° F | 204° C<br>400° F | 260° C<br>500° F | 316° C<br>600° F | 371° C<br>700° F | 427° C<br>800° F |
|-----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------------------------------|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|----------------|-----------------|-----------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Low-alloy carbon-chromium bearing steels. 52100 and others per ASTM A295                                        | 1C<br>0.5 – 1.5Cr<br>0.35Mn                                                        | 21 (70)                           | 60             | STANDARD DIMENSIONAL STABILIZATION<br><0.0001 in./in dimensional change in 2500 hours at 100° C (212° F). Good oxidation resistance.                                                                                                                                                                                                   |                  |                |                 |                 |                  |                  |                  |                  |                  |                  |                  |
| Low-alloy carbon-chromium bearing steels. 52100 and others per ASTM A295                                        | 1C<br>0.5 – 1.5Cr<br>0.35Mn                                                        | 21 (70)<br>177 (350)<br>232 (450) | 58<br>56<br>54 | Heat stabilized per FS136. When given a stabilizing heat treatment, A295 steel is suitable for many applications in the 177°–232° C (350°–450° F) range; however, it is not as stable dimensionally as it is at temperatures below 177° C (350° F). If utmost stability is required, use materials in the 316° C (600° F) group below. |                  |                |                 |                 |                  |                  |                  |                  |                  |                  |                  |
| Deep-hardening steels for heavy sections per ASTM A485                                                          | 1C<br>1 – 1.8Cr<br>1 – 1.5Mn .06Si                                                 | 21 (70)<br>232 (450)<br>316 (600) | 58<br>55<br>52 | After heat-treated and tempered, it is stabilized.                                                                                                                                                                                                                                                                                     |                  |                |                 |                 |                  |                  |                  |                  |                  |                  |                  |
| Carburizing steels per ASTM A534<br>a) low alloy 4118, 8X19, 5019, 8620 (Ni-Moly grades)<br>b) high nickel 3310 | Ni-Moly: 0.2C, 0.4-2.0Mn, 0.3-0.8Cr, 0-2.0Ni, 0-0.3Mo<br>.01C, 1.5Cr, 0.4Mn, 3.5Ni | 21 (70)                           | 58             | Nickel-Moly grades of steel frequently used to achieve extra ductility in inner rings for locking device bearings. 3311 and others used for extra-thick-section rings.                                                                                                                                                                 |                  |                |                 |                 |                  |                  |                  |                  |                  |                  |                  |
| Corrosion-resistant 440C stainless steel per ASTM A756                                                          | 1C 18Cr                                                                            | 21 (70)                           | 58             | Excellent corrosion resistance.                                                                                                                                                                                                                                                                                                        |                  |                |                 |                 |                  |                  |                  |                  |                  |                  |                  |
| Corrosion-resistant 440C stainless steel per ASTM A756                                                          | 1C 18Cr                                                                            | 21 (70)<br>232 (450)<br>316 (600) | 58<br>55<br>52 | Heat stabilized for maximum hardness at high temperatures (FS238). Good oxidation resistance at higher temperatures. Note load capacity drops off more rapidly at higher temperatures than M50 shown below, which should be considered if loads are high.                                                                              |                  |                |                 |                 |                  |                  |                  |                  |                  |                  |                  |
| M-50 medium high speed                                                                                          | 4Cr 4Mo<br>1V 0.8C                                                                 | 21 (70)<br>232 (450)<br>316 (600) | 60<br>59<br>57 | Suggested where stable high hardness at elevated temperature is required.                                                                                                                                                                                                                                                              |                  |                |                 |                 |                  |                  |                  |                  |                  |                  |                  |

NOTE: Bearings have been made of special material for operation at temperatures above 427° C (800° F). Consult your Timken engineer regarding the application. ASTM A295 bearing steels are suitable for many applications up to 212° C (413° F) but are not as dimensionally stable as they are at the temperatures below 100° C (212° F).

## INTERNAL CLEARANCE

### RADIAL INTERNAL CLEARANCE

The radial internal clearance of radial contact ball bearings can be defined as the average outer ring raceway diameter minus the average inner ring raceway diameter minus twice the ball diameter.

### RADIAL BALL BEARINGS

While manufacturing ball bearings, it is standard practice to assemble rings and balls with a specified internal clearance (table A-2). This characteristic is necessary to absorb the effect of press fitting the bearing rings at mounting.

Internal clearance is sometimes utilized to compensate for thermal expansion of bearings, shafts and housings, or to provide a contact angle in the bearing after mounting.

Internal clearance can be measured by gaging either radially or axially.

Radial measurement is accepted as the more significant characteristic because it is more directly related to shaft and housing fits. It also is the method prescribed by the American Bearing Manufacturers Association (ABMA).

Radial internal clearance can be measured mechanically by moving the outer ring horizontally, as shown in fig. A-1. The total movement of the outer ring when the balls are properly seated in the raceways determines the radial internal clearance. Several readings should be taken using different circumferential orientations of the rings to get a comprehensive average reading.

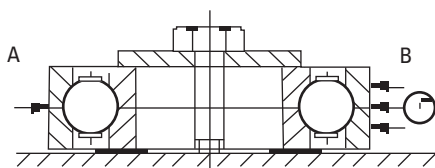


Fig. A-1. Radial internal clearance. A and B are applied forces.

TABLE A-2. LIMITS FOR RADIAL INTERNAL CLEARANCE OF SINGLE-ROW RADIAL CONTACT BALL BEARINGS UNDER NO LOAD (APPLIES TO BEARINGS OF ABEC1 AND ABEC3 TOLERANCES)

All tolerances in micrometers (μm) and ten-thousandths inches (0.0001 in.)

| Timken Prefix<br>(ABMA<br>designation) |       | H (C2)<br>Acceptance<br>Limits |           | R (C0)<br>Acceptance<br>Limits <sup>(1)</sup> |           | P (C3)<br>Acceptance<br>Limits <sup>(1)</sup> |           | J (C4)<br>Acceptance<br>Limits |           | JJ (C5)<br>Acceptance<br>Limits |           |
|----------------------------------------|-------|--------------------------------|-----------|-----------------------------------------------|-----------|-----------------------------------------------|-----------|--------------------------------|-----------|---------------------------------|-----------|
| Basic Bore<br>Dia.                     |       |                                |           |                                               |           |                                               |           |                                |           |                                 |           |
| Over                                   | Incl. | Low                            | High      | Low                                           | High      | Low                                           | High      | Low                            | High      | Low                             | High      |
| mm                                     | mm    | μm<br>in.                      | μm<br>in. | μm<br>in.                                     | μm<br>in. | μm<br>in.                                     | μm<br>in. | μm<br>in.                      | μm<br>in. | μm<br>in.                       | μm<br>in. |
| 2.5                                    | 10    | 0                              | 7         | 2                                             | 13        | 8                                             | 23        | 14                             | 29        | 20                              | 37        |
|                                        |       | 0                              | 3         | 1                                             | 5         | 3                                             | 9         | 6                              | 11        | 8                               | 15        |
| 10                                     | 18    | 0                              | 9         | 3                                             | 18        | 11                                            | 25        | 18                             | 33        | 25                              | 45        |
|                                        |       | 0                              | 3.5       | 1                                             | 7         | 4                                             | 10        | 7                              | 13        | 10                              | 18        |
| 18                                     | 24    | 0                              | 10        | 5                                             | 20        | 13                                            | 28        | 20                             | 36        | 28                              | 48        |
|                                        |       | 0                              | 4         | 2                                             | 8         | 5                                             | 11        | 8                              | 14        | 11                              | 19        |
| 24                                     | 30    | 1                              | 11        | 5                                             | 20        | 13                                            | 28        | 23                             | 41        | 30                              | 53        |
|                                        |       | 0.5                            | 4.5       | 2                                             | 8         | 5                                             | 11        | 9                              | 16        | 12                              | 21        |
| 30                                     | 40    | 1                              | 11        | 6                                             | 20        | 15                                            | 33        | 28                             | 46        | 40                              | 64        |
|                                        |       | 0.5                            | 4.5       | 2                                             | 8         | 6                                             | 13        | 11                             | 18        | 16                              | 25        |
| 40                                     | 50    | 1                              | 11        | 6                                             | 23        | 18                                            | 36        | 30                             | 51        | 45                              | 73        |
|                                        |       | 0.5                            | 4.5       | 2.5                                           | 9         | 7                                             | 14        | 12                             | 20        | 18                              | 29        |
| 50                                     | 65    | 1                              | 15        | 8                                             | 28        | 23                                            | 43        | 38                             | 61        | 55                              | 90        |
|                                        |       | 0.5                            | 6         | 3.5                                           | 11        | 9                                             | 17        | 15                             | 24        | 22                              | 35        |
| 65                                     | 80    | 1                              | 15        | 10                                            | 30        | 25                                            | 51        | 46                             | 71        | 65                              | 105       |
|                                        |       | 0.5                            | 6         | 4                                             | 12        | 10                                            | 20        | 18                             | 28        | 26                              | 41        |
| 80                                     | 100   | 1                              | 18        | 12                                            | 36        | 30                                            | 58        | 53                             | 84        | 75                              | 120       |
|                                        |       | 0.5                            | 7         | 4.5                                           | 14        | 12                                            | 23        | 21                             | 33        | 30                              | 47        |
| 100                                    | 120   | 2                              | 20        | 15                                            | 41        | 36                                            | 66        | 61                             | 97        | 90                              | 140       |
|                                        |       | 1                              | 8         | 6                                             | 16        | 14                                            | 26        | 24                             | 38        | 35                              | 55        |
| 120                                    | 140   | 2                              | 23        | 18                                            | 48        | 41                                            | 81        | 71                             | 114       | 105                             | 160       |
|                                        |       | 1                              | 9         | 7                                             | 19        | 16                                            | 32        | 28                             | 45        | 41                              | 63        |
| 140                                    | 160   | 2                              | 23        | 18                                            | 53        | 46                                            | 91        | 81                             | 130       | 120                             | 180       |
|                                        |       | 1                              | 9         | 7                                             | 21        | 18                                            | 36        | 32                             | 51        | 47                              | 71        |
| 160                                    | 180   | 2                              | 25        | 20                                            | 61        | 53                                            | 102       | 91                             | 147       | 135                             | 200       |
|                                        |       | 1                              | 10        | 8                                             | 24        | 21                                            | 40        | 36                             | 58        | 53                              | 79        |
| 180                                    | 200   | 2                              | 30        | 25                                            | 71        | 63                                            | 117       | 107                            | 163       | 150                             | 230       |
|                                        |       | 1                              | 12        | 10                                            | 28        | 25                                            | 46        | 42                             | 64        | 59                              | 91        |
| 200                                    | 240   | 3                              | 36        | 30                                            | 81        | 74                                            | 137       | 127                            | 193       | 183                             | 267       |
|                                        |       | 1                              | 14        | 12                                            | 32        | 29                                            | 54        | 50                             | 76        | 72                              | 105       |
| 240                                    | 280   | 3                              | 41        | 33                                            | 97        | 86                                            | 157       | 147                            | 224       | 213                             | 310       |
|                                        |       | 1                              | 16        | 13                                            | 38        | 34                                            | 62        | 58                             | 88        | 84                              | 122       |
| 280                                    | 320   | 5                              | 48        | 41                                            | 114       | 104                                           | 180       | 170                            | 257       | 246                             | 353       |
|                                        |       | 2                              | 19        | 16                                            | 45        | 41                                            | 71        | 67                             | 101       | 97                              | 139       |
| 320                                    | 370   | 5                              | 53        | 46                                            | 127       | 117                                           | 208       | 198                            | 295       | 284                             | 409       |
|                                        |       | 2                              | 21        | 18                                            | 50        | 46                                            | 82        | 78                             | 116       | 112                             | 161       |
| 370                                    | 430   | 8                              | 64        | 56                                            | 147       | 137                                           | 241       | 231                            | 340       | 330                             | 475       |
|                                        |       | 3                              | 25        | 22                                            | 58        | 54                                            | 95        | 91                             | 134       | 130                             | 187       |
| 430                                    | 500   | 10                             | 74        | 66                                            | 170       | 160                                           | 279       | 269                            | 396       | 386                             | 551       |
|                                        |       | 4                              | 29        | 26                                            | 67        | 63                                            | 110       | 106                            | 156       | 152                             | 217       |
| 500                                    | 570   | 10                             | 81        | 74                                            | 193       | 183                                           | 318       | 307                            | 450       | 439                             | 630       |
|                                        |       | 4                              | 32        | 29                                            | 76        | 72                                            | 125       | 121                            | 177       | 173                             | 248       |
| 570                                    | 640   | 13                             | 91        | 85                                            | 216       | 206                                           | 356       | 345                            | 505       | 495                             | 706       |
|                                        |       | 5                              | 36        | 33                                            | 85        | 81                                            | 140       | 136                            | 199       | 195                             | 278       |
| 640                                    | 710   | 20                             | 114       | 107                                           | 239       | 229                                           | 394       | 384                            | 564       | 554                             | 780       |
|                                        |       | 8                              | 45        | 42                                            | 94        | 90                                            | 155       | 151                            | 222       | 218                             | 307       |
| 710                                    | 800   | 20                             | 140       | 130                                           | 269       | 259                                           | 445       | 434                            | 630       | 620                             | 879       |
|                                        |       | 8                              | 55        | 51                                            | 106       | 102                                           | 175       | 171                            | 248       | 244                             | 346       |
| 800                                    | 1060  | 28                             | 211       | 201                                           | 353       | 345                                           | 587       | 577                            | 833       | 823                             | 1148      |
|                                        |       | 11                             | 83        | 79                                            | 139       | 136                                           | 231       | 227                            | 328       | 324                             | 452       |

<sup>(1)</sup>Standard fits for Timken® radial ball bearings. P(C3) for bearing O.D. greater than 52 mm (greater than 25 mm bore).

## CAGES

Cages (also referred to as rolling-element retainers) serve several purposes in the proper operation of a rolling-element bearing. Cages separate the rolling elements and prevent rolling-element-on-rolling-element contact and wear. Cages serve to maintain rolling-element spacing in the races of the inner and outer rings of the bearings as the rolling elements pass into and out of the load zones. For handling purposes, cages also can retain the rolling elements on the inner ring assembly to allow for bearing installation.

To meet the needs of the various service requirements of customers, Timken offers two reliable cage types for wide-inner-ring ball bearings – pressed-steel welded cages and molded-nylon finger-type cages.

### PRESSED-STEEL WELDED CAGES

This cage type consists of two formed cage halves welded together (fig. A-2). This type of cage is standard for most radial non-filling-slot ball bearings, providing high strength and rigidity, as well as good uniformity of ball-to-pocket clearance. It is suitable for very high-temperature applications, but does not accommodate application misalignment.



Fig. A-2. Pressed-steel welded cage.

### MOLDED-NYLON FINGER-TYPE CAGES

This type of cage consists of a one-piece molded design (fig. A-3). Rolling elements simply snap into place. Used in the majority of wide-inner-ring ball bearings, these cages are molded of nylon 6/6 that is heat-stabilized and moisture-conditioned. The polymer can withstand continuous operating temperatures up to 120° C (250° F) with spikes up to 150° C (300° F) and provides a non-corrosive, self-lubricating material with good resistance to abrasion, wear, most solvents, oils and greases. This cage type can accommodate application misalignment.

Care needs to be exercised when using aggressive lubricants with extreme-pressure (EP) additives in combination with elevated temperatures greater than 107° C (225° F).



Fig. A-3. Molded-nylon cage.

TABLE A-3. OPERATING TEMPERATURES FOR BEARING COMPONENT MATERIALS—CAGES, SHIELDS AND SEALS

|                                                     | -54° C<br>-65° F | -17° C<br>0° F | 38° C<br>100° F | 93° C<br>200° F | 149° C<br>300° F | 204° C<br>400° F | 260° C<br>500° F | 316° C<br>600° F | 371° C<br>700° F | 427° C<br>800° F |
|-----------------------------------------------------|------------------|----------------|-----------------|-----------------|------------------|------------------|------------------|------------------|------------------|------------------|
| <b>CAGES</b>                                        |                  |                |                 |                 |                  |                  |                  |                  |                  |                  |
| Molded 6/6 nylon (PRB)                              |                  |                |                 |                 |                  |                  |                  |                  |                  |                  |
| Molded 6/6 fiberglass reinforced nylon (PRC)        |                  |                |                 |                 |                  |                  |                  |                  |                  |                  |
| Phenolic resin laminate                             |                  |                |                 |                 |                  |                  |                  |                  |                  |                  |
| Low-carbon pressed steel                            |                  |                |                 |                 |                  |                  |                  |                  |                  |                  |
| Pressed stainless steel                             |                  |                |                 |                 |                  |                  |                  |                  |                  |                  |
| Machined bronze                                     |                  |                |                 |                 |                  |                  |                  |                  |                  |                  |
| Machined iron-silicon bronze                        |                  |                |                 |                 |                  |                  |                  |                  |                  |                  |
| Machined steel                                      |                  |                |                 |                 |                  |                  |                  |                  |                  |                  |
| <b>SHIELDS</b>                                      |                  |                |                 |                 |                  |                  |                  |                  |                  |                  |
| Low-carbon steel                                    |                  |                |                 |                 |                  |                  |                  |                  |                  |                  |
| Stainless steel                                     |                  |                |                 |                 |                  |                  |                  |                  |                  |                  |
| Nylon                                               |                  |                |                 |                 |                  |                  |                  |                  |                  |                  |
| <b>SEALS</b>                                        |                  |                |                 |                 |                  |                  |                  |                  |                  |                  |
| Buna N                                              |                  |                |                 |                 |                  |                  |                  |                  |                  |                  |
| Polyacrylic                                         |                  |                |                 |                 |                  |                  |                  |                  |                  |                  |
| Fluoroelastomer                                     |                  |                |                 |                 |                  |                  |                  |                  |                  |                  |
| Stabilized TFE fluorocarbon <sup>(1)</sup>          |                  |                |                 |                 |                  |                  |                  |                  |                  |                  |
| TFE fluorocarbon <sup>(1)</sup> (with glass fabric) |                  |                |                 |                 |                  |                  |                  |                  |                  |                  |

<sup>(1)</sup>Limited life above these temperatures.

### LUBRICATION SPEED CAPABILITY

There is no precise method for determining the maximum speed at which a ball bearing may operate. Bearing characteristics and features of surrounding parts, shafts, housings and other components, as well as basic service conditions, are all variables that are dependent upon each other for continued satisfactory high-speed performance.

The safe operating speed of a ball bearing is often limited by the temperature within the bearing, which, in turn, is dependent upon the temperature surrounding the application, bearing seals, shaft and housing tolerances, auxiliary parts, etc., and the type and amount of lubricant.

Although the speed values shown in the table A-4 are based on many years of research and accumulated data, numerous bearing applications successfully operate with speed ratings in excess of those tabulated. Such applications should be reviewed by your Timken engineer.

The values in the following table may be used as a general guide for determining the safe maximum speed of standard types of wide-inner-ring ball bearings. To obtain the speed rating for any bearing size with inner ring rotation, multiply the bore in millimeters of the basic size bearing by the speed in revolutions per minute.

**TABLE A-4. MAXIMUM OPERATING SPEED RECOMMENDATIONS**

| Timken Series         | Maximum dN Values              |
|-----------------------|--------------------------------|
| Industrial Duty       |                                |
| R series              | 175000                         |
| Y series              | 175000                         |
| Medium Y series       | 175000                         |
| Special Duty          |                                |
| R-NT series           | 175000                         |
| SAL and SAOL series   | 275000                         |
| RAKH and RAKHL series | 175000                         |
| Severe Duty           |                                |
| R-PT series           | 175000                         |
| Y-PT series           | 175000                         |
| L series              | 250000                         |
| T series              | 500 RPM maximum <sup>(1)</sup> |
| Standard Duty         |                                |
| V series              | 140000                         |
| S series              | 140000                         |

<sup>(1)</sup>Please contact your Timken engineer for applications where speeds may exceed 500 RPM.

#### Example:

Find the maximum operating speed for an LAK1 pillow block.

- Find the maximum dN value for an LAK1 from the above table.  
250000
- Find the bore of an LAK1 in millimeter.  
1 in. = 25.4 mm

- Apply the dN equation.

$$dN \text{ max.} = \text{bearing bore (in.mm)} \times \text{max. operating speed}$$

$$250000 = 25.4 \times \text{maximum operating speed}$$

$$\text{Max. operating speed} = 250000/25.4 = 9840 \text{ RPM}$$

Thus, the maximum operating speed for an LAK1 is 9840 RPM.

### LUBRICANT SELECTION

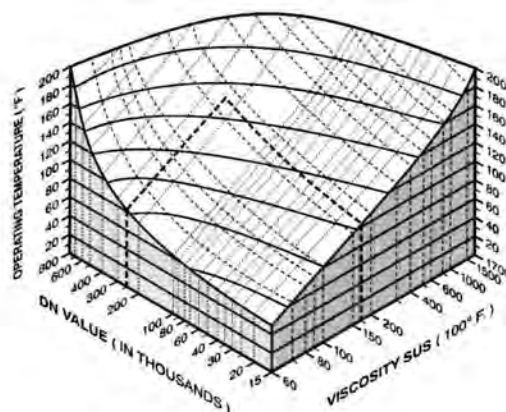
The successful application of lubricating fluids on bearings depends on the physical and chemical properties of the lubricant as they pertain to the bearing, its application, installation and general environmental factors.

### VISCOSITY

Generally, the most important single property of a lubricating fluid is its viscosity. Viscosity is the measure of the relative resistance of a fluid to flow and is a function of speed and temperature (fig. A-4).

The measurement of viscosity can be made by several different instruments called viscosimeters. A common unit of measure is the Saybolt Universal Second (SUS). This is the time, in seconds, required for 60 cc of a fluid to flow through a standardized orifice under a standard head, at a given temperature. The common temperatures for reporting viscosity are 37.78° C to 98.89° C (100° F to 210° F). The higher the viscosity number, the greater the resistance to flow.

Experience indicates that a lubricating fluid with a viscosity of at least 100 SUS at the operating temperature of the application will be adequate for normal bearing lubrication.



**Fig. A-4. Lubrication selection as a function of bearing dN and operating speed.**

## VISCOSITY INDEX

The ideal oil (as far as viscosity is concerned) would be the same viscosity at all temperatures. All oils become less viscous (thin-out) when heated and more viscous (thickened) when cooled.

However, oils do not vary in viscosity to the same extent. Some thicken or thin more rapidly than others.

The term viscosity index, or VI, is used to rate oils according to their temperature-viscosity behavior.

Oils with the highest viscosity index are more resistant to changes in viscosity with changes in temperature than lower viscosity index oils. Obviously, high viscosity-index lubricants are most suitable for bearing applications experiencing wide temperature variations.

The National Lubricating Grease Institute (NLGI) classification of grease consistency is shown below (table A-5):

**TABLE A-5. NLGI CLASSIFICATIONS**

| NLGI Grease Grades | Penetration No. |
|--------------------|-----------------|
| 0                  | 355-385         |
| 1                  | 310-340         |
| 2                  | 265-295         |
| 3                  | 220-250         |
| 4                  | 175-205         |
| 5                  | 130-160         |
| 6                  | 85-115          |

## POUR POINT

The pour point is the lowest temperature at which a fluid will flow or can be poured. It is important in applications exposed to low temperatures that the lubricating fluid selected has a pour point lower than the minimum ambient temperature.



### WARNING

***Failure to observe the following warnings could create a risk of death or serious injury.***

Proper maintenance and handling practices are critical.  
Always follow installation instructions and maintain proper lubrication.

## TYPES OF LUBRICATION

Timken understands the importance of friction management. Our line of application- and environment-specific lubricants has been developed by leveraging our knowledge of tribology and antifriction bearings, as well as how these two elements affect overall system performance.

Timken® lubricants help bearings and related components operate effectively in demanding industrial operations. High-temperature, anti-wear and water-resistant additives offer superior protection in challenging environments.

Similar to our bearings, all Timken lubricants are backed by highly trained customer service and technical support associates. Industrial customers turn to Timken for comprehensive friction management solutions. We help customers analyze performance and suggest options that make sense for their unique operating conditions and maintenance intervals.

**TABLE A-6. STANDARD BALL-BEARING LUBRICATION**

| Bearing Type                                                         | Grease Type                                        | Grease Temperature Range                       |
|----------------------------------------------------------------------|----------------------------------------------------|------------------------------------------------|
| Radial bearings<br>(double shielded, and single and double shielded) | Polyurea thickener<br>Petroleum oil                | -34.44° C to +135° C<br>(-40° to +275° F)      |
| Wide-inner-ring ball bearings<br>(contact seal types)                | Polyurea thickener<br>Petroleum oil                | -34.44° C to +135° C<br>(-40° to +275° F)      |
| Wide-inner-ring ball bearings<br>(labyrinth seal types)              | Synthetic thickener<br>Synthetic hydrocarbon fluid | -53.89° F to +162.75° C<br>(-65° F to +350° F) |

NOTE: Open-type bearings and single-shielded types are not prelubricated. They have a rust-preventative coating only and must be lubricated by the customer or end-user before operation.

Bearings that have been factory pre-lubricated use a high-quality grease. Bearings with contacting lip seals and shields contain No. 2 polyurea base grease. Bearings with non-contacting labyrinth seals (suffix KLL in bearing part number) contain a No. 2 modified clay base grease. For normal conditions of service, these bearings require no further lubrication.

Normal service is considered as operating in a clean, dry environment at temperatures between -34° C to +82° C (-30° F to +180° F) and at dN values (bore in millimeter multiplied by speed in RPM) less than 175000.

If service is considered abnormal due to speed, temperature or exposure to moisture, dirt or corrosive chemicals, periodic relubrication may be advisable. Excessive relubrication may cause high operating temperatures due to grease churning. General guidelines for relubrication are provided in table A-7.

TIMKEN BALL-BEARING PILLOW-BLOCK GREASE

Timken ball-bearing pillow-block grease is an NLGI No. 2 polyurea-thickened grease. It provides outstanding long life and moderately high-temperature lubrication to ball bearings. This grease maintains its mechanical shear stability and provides corrosion resistance, even in the presence of salt water. Timken ball-bearing pillow-block grease features low-noise characteristics and excellent pumpability. This grease does not contain extreme-pressure additives but inhibits rust and oxidation. Operating temperatures range from -40° C to 163° C (-40° F to 400° F). This grease is typically used in lightly loaded ball bearings in pillow blocks and conveyors that operate in high-temperature environments, including kiln and glasswork applications, electric motors, chemical manufacturing and noise-sensitive environments.

SAL/SAOL LUBRICATION

SAL/SAOL housed units are intended for use with oil lubrication and are equipped with a filler cup located on top of the pillow block. Each housing assembly also has an overflow cup and a pipe plug located at the base. These can be interchanged as required to properly locate the overflow cup with respect to shaft rotation. The overflow cup should be placed on the downward side of the shaft rotation. Incorrect placement will cause oil to leak from the overflow cup during operation. Oil should be supplied through the filler cup until overflow is full. Please note to inspect and refill only when the shaft is stationary to avoid overfilling.

Inspection is necessary to determine the frequency of refilling, which is based on a number of factors, including speed, temperature and oil type. To avoid inadequate lubrication, maintain the oil level to the top of the overflow cup.

In general, a high-quality automotive or turbine oil with oxidation inhibitors is recommended. For normal operating conditions, an SAE 30 weight oil or equivalent is adequate. Contact your Timken engineer for abnormal service lubrication recommendations.

SURVIVOR® PT, NT AND PS LUBRICATION

These housed units are specifically designed for use in conditions of corrosion and contamination. The premium bearing insert is factory-prelubricated with aluminum-complex, high-quality, type H1, food-grade grease. This grease is acceptable in applications with incidental food contact.

GENERAL RELUBRICATION SUGGESTIONS

Periodic relubrication is advisable due to the nature of food-grade grease and the corrosive environments for which these units are designed. Consult your equipment manufacturer’s operating manual for the relubrication cycle. General guidelines are found in table A-7.

TABLE A-7. GENERAL RELUBRICATION RECOMMENDATIONS FOR GREASED BEARINGS<sup>(1)</sup>

| Condition                   | Relubrication Interval   |
|-----------------------------|--------------------------|
| Indoor service              | Not required             |
| Outdoor service             | Two/three times per year |
| Severe outdoor exposure     | Once a month             |
| High contamination/washdown | Once a week              |

<sup>(1)</sup>As a guideline, relubricate until the first indication of grease is observed purging from either seal lip.

SINGLE-POINT AND CENTRALIZED MULTI-POINT LUBRICATORS

Proper lubrication is critical to bearing and machine performance. To help prevent damage, Timken G-Power and M-Power single-point lubricators deliver periodic grease to bearings, chains, guideways and other industrial equipment components (fig. A-5). You can choose from gas-powered or electromechanical varieties to meet your operating specifications. C-Power multi-point lubricators are a centralized lubrication system capable of delivering grease to up to six lubrication points (fig. A-6). Oil is not an option for this unit.

G-Power, M-Power and C-Power canisters can be filled with Timken-formulated lubricants or many other types of commercial lubricants. A full line of accessories – including brackets, clamps, brushes, fittings and hose extensions – ease installation and offer a host of mounting options for hard-to-reach locations.



Fig. A-5. G-Power and M-Power lubrication units with activators.



Fig. A-6. C-Power.

## LOAD RATINGS AND LIFE CALCULATIONS

### RADIAL BALL-BEARING LOAD RATINGS

The load ratings published in this catalog are based on ABMA Standard Section 9, but they are increased to reflect improvements in materials and processing. These ratings are referred to as extended basic dynamic load ratings ( $C_E$ ). Care must be taken that the extended basic dynamic load ratings only be used in equations containing  $C_E$ .

### NOTATIONS USED IN THIS SECTION

$C_N$  = Radial load rating of bearings at operating speed  $N$  – pounds or newtons = ( $N_f \times C_E$ )

$C_E$  = Extended basic dynamic load rating – radial ball bearings pounds or newtons

$C_0$  = Basic static load rating – radial ball bearing pounds or newtons<sup>(1)</sup>

$K_T$  = Relative thrust-load factor – ball bearings

$L_f$  = Life factor

$L_r$  = Fatigue life for reliability level  $r$  – hours

$N$  = Operating speed – revolutions per minute (RPM)

$N_f$  = Speed factor

$R$  = Applied radial load on bearing pounds or newtons

$P$  = Equivalent radial load on bearing pounds or newtons

$T$  = Applied thrust load on bearing pounds or newtons

$Y$  = Thrust-load factor

$a_1$  = Life-adjustment factor for reliability<sup>(2)</sup>

$a_2$  = Life-adjustment factor for bearing material<sup>(3)</sup>

$a_3$  = Life-adjustment factor for application conditions<sup>(4)</sup>

$f_B$  = Dynamic load rating adjustment factor for number of adjacently mounted bearings<sup>(5)</sup>

$i_B$  = Number of adjacently mounted bearings

$r$  = Percent reliability of survival life

$\mu$  = Operating viscosity – centistokes

$\mu_R$  = Reference viscosity – centistokes

<sup>(1)</sup> $C_E$  does **not** represent the maximum permissible radial load, which, in general, is equal to  $C_0$ , the static radial load ratings.

<sup>(2)</sup> $L_{10}$  rating life is based upon 90 percent survival of a group of bearings at the specified load and speed. The  $a_1$  value is 1.0 for  $L_{10}$  life calculations.

<sup>(3)</sup>The  $a_2$  value is 1.0 when using typical Timken® bearing steel. Bearings with thin-dense chrome-plated races may use an  $a_2$  factor of 3.0 for calculating life.

<sup>(4)</sup>The  $a_3$  factor of 1.0 may be acceptable to most users, but the factor can be made up of multiple application factors such as adequate lubrication, alignment, temperature or mounting conditions. ABMA standard suggests and  $a_3$  of 0.456 for insert ball bearings slip fitted to the shaft as a result of possible mounting variation.

<sup>(5)</sup> $f_B = 1.0$  for wide-inner-ring ball bearings.

### FATIGUE LIFE

Because of the dispersion in the life of identical bearings operating under identical conditions, a statistical result will be obtained for bearing fatigue life. For most calculations, life is expressed as the number of hours that 90 percent of a group of identical bearings will exceed under a given set of conditions, and is referred to as the  $L_{10}$  life.

The basic equation for radial ball bearings is:

$$L_r = 16667 \times \frac{a_1 \times a_2 \times a_3}{N} \left[ \frac{f_B \times C_E}{P} \right]^3 \quad (\text{Hours}) \quad \text{Formula } \mathbf{1}$$

In life calculations, the first step is to ascertain the equivalent radial load ( $P$ ) applied to the bearing from the following equations:

$$R_e = R \text{ or } P = 0.56R + YT \quad \text{use greater value of } P, \quad \text{Formula } \mathbf{2} \quad \mathbf{3}$$

Values of  $Y$  are selected from table A-8 for the appropriate  $K_T$ . For more intermediate values of  $K_T$ ,  $Y$  may be estimated by linear interpolation.

**TABLE A-8. REQUIRED Y FACTORS  
FOR BALL BEARING DYNAMIC EQUIVALENT RADIAL LOADS**

| $K_T$ | $Y$  |
|-------|------|
| 0.015 | 2.30 |
| 0.020 | 2.22 |
| 0.025 | 2.10 |
| 0.030 | 2.00 |
| 0.040 | 1.86 |
| 0.050 | 1.76 |
| 0.060 | 1.68 |
| 0.080 | 1.57 |
| 0.100 | 1.48 |
| 0.120 | 1.42 |
| 0.150 | 1.34 |
| 0.200 | 1.25 |
| 0.250 | 1.18 |
| 0.300 | 1.13 |
| 0.400 | 1.05 |
| 0.500 | 1.00 |
| 0.600 | —    |
| 0.800 | —    |
| 1.000 | —    |
| 1.200 | —    |

For single-row bearings and tandem mountings:

$$K_T = \frac{T}{i_B C_0}$$

For double-row and preloaded pair mountings:

$$K_T = \frac{T}{C_0}$$

### RADIAL BALL BEARING LIFE

The  $L_{10}$  (expected minimum life for 90 percent of the bearings of a given size and type in a given population) is calculated by the following formula, which is a condensed version of formula 1.

$$L_{10} = \frac{16700}{N} \left( \frac{C_E}{P} \right)^3 \quad \text{(Hours)} \quad \text{Formula 4}$$

The calculation of bearing life also can be performed by using logarithmic factors for rotational speed ( $N_f$ ) and life ( $L_f$ ) based on the formula.

$$L_{10} = 500 \left( \frac{C_N}{P} \right)^3 \quad \text{(Hours)} \quad \text{Formula 5}$$

In cases where the rating at a specific speed is not listed, determine  $C_N$  by  $C_N = N_f \times C_E$ ; thereby:

$$L_{10} = 500 \left( \frac{N_f C_E}{P} \right)^3 \quad \text{Formula 6}$$

where:

$$N_f = \left( \frac{1}{0.03N} \right)^{3/10} \quad \text{Formula 7}$$

The speed factor ( $N_f$ ) can be read directly from scale 1 (fig. A-7).

Scale 2 provides life factors ( $L_f$ ) for practical life requirements, where:

$$L_f = \frac{C_N}{1.44P} \quad \text{or} \quad L_f = \frac{N_f(C_E)}{1.44P}$$

Frequently it is necessary to determine the minimum bearing capacity that will meet a specific application requirement. For this purpose, formula 4 is rewritten:

$$C_E = P \left( \frac{N \times L_{10}}{16700} \right)^{1/3} \quad \text{Formula 8}$$

### BEARING LIFE UNDER VARYING LOADS AND SPEEDS

In many applications, bearings are required to run at a number of different loads and speeds. If the different loads and speeds and the portions of time that are in effect are known, the life can be found from the following relation:

$$L_r = \frac{1}{\frac{p_1}{L_{n1}} + \frac{p_2}{L_{n2}} + \frac{p_3}{L_{n3}} + \dots + \frac{p_n}{L_{nn}}}$$

Note:  $p_1 + p_2 + p_3 + \dots + p_n = 1.0$

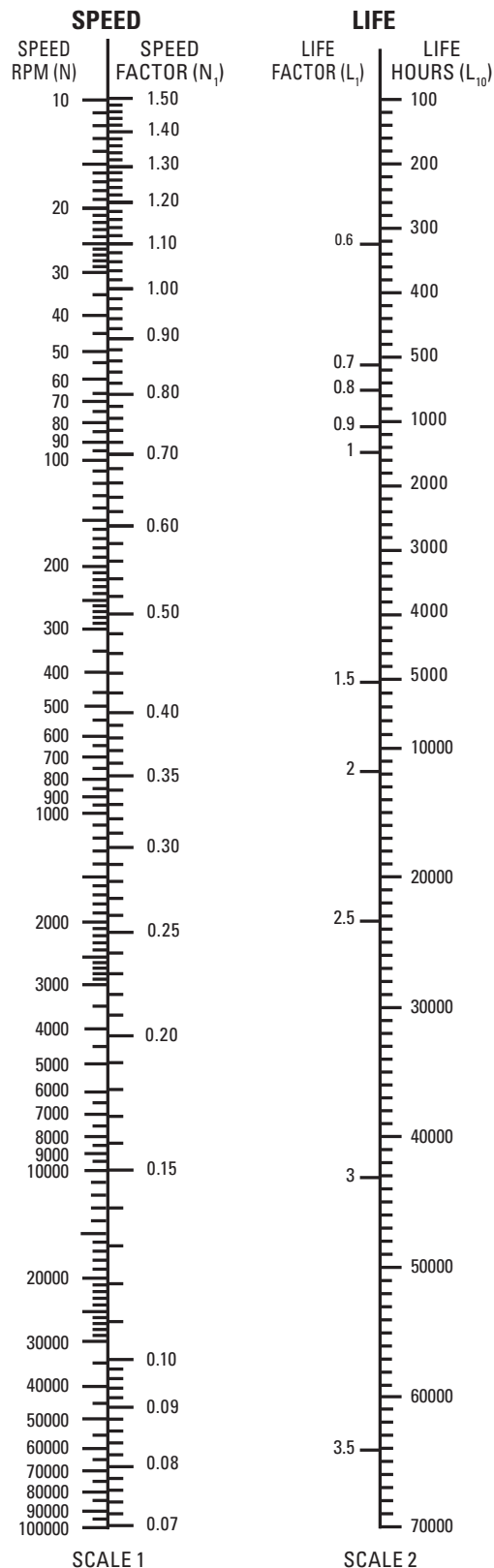


Fig. A-7. Wide-inner-ring ball bearing's speed and life factors.

## FREQUENCY COEFFICIENTS

Predictive application maintenance requires knowledge of the frequencies that a bearing can emit, which are based on its specific design. The table below (table A-9) provides the most commonly used coefficients for this purpose. The frequencies are expressed as Orders. To obtain bearing defect frequencies in Hz, multiply the bearing coefficient by the rotating speed in revolutions per second.

### Example:

9104-series bearing retainer frequency shaft running at 1200 RPM:

$$1200 \text{ RPM} \times 1 \text{ min}/60 \text{ seconds} \times 0.398 = 7.96 \text{ Hz.}$$

## WIDE-INNER-RING BALL BEARINGS

**FTF** **Fundamental Train Frequency:** The frequency at which the retainer will operate with inner ring rotation.

**BSF** **Ball Spin Frequency:** The frequency at which a single defect on a rolling element will be detected.

**BPFO** **Ball Pass Frequency Outer:** The frequency at which a single defect in the outer race will be detected.

**BPFI** **Ball Pass Frequency Inner:** The frequency at which a single defect in the inner race will be detected.

**OR ROT FTF** **Fundamental Train Frequency:** The frequency at which the retainer will operate with outer-ring rotation. Also known as Outer-Ring ROTation.

TABLE A-9. FREQUENCY COEFFICIENTS OF WIDE-INNER-RING BALL BEARINGS

| Basic Outer-Ring Size | FTF   | BSF   | BPFO  | BPFI  | OR ROT FTF | Basic Outer-Ring Size | FTF   | BSF   | BPFO  | BPFI  | OR ROT FTF |
|-----------------------|-------|-------|-------|-------|------------|-----------------------|-------|-------|-------|-------|------------|
| 9104                  | 0.398 | 2.339 | 3.578 | 5.422 | 0.602      | 303K                  | 0.364 | 1.696 | 2.545 | 4.455 | 0.636      |
| 9105                  | 0.397 | 2.328 | 3.574 | 5.426 | 0.603      | 304K                  | 0.368 | 1.757 | 2.574 | 4.426 | 0.632      |
| 9106                  | 0.417 | 2.933 | 4.588 | 6.412 | 0.583      | 305K                  | 0.367 | 2.328 | 3.574 | 5.426 | 0.603      |
| 202K                  | 0.391 | 2.175 | 3.125 | 4.875 | 0.609      | 306K                  | 0.368 | 1.757 | 2.574 | 4.426 | 0.632      |
| 203K                  | 0.382 | 1.994 | 3.053 | 4.947 | 0.618      | 307K                  | 0.376 | 1.888 | 3.006 | 4.994 | 0.624      |
| 204K                  | 0.382 | 1.992 | 3.052 | 4.948 | 0.618      | 308K                  | 0.378 | 1.925 | 3.023 | 4.977 | 0.622      |
| 205K                  | 0.397 | 2.328 | 3.574 | 5.426 | 0.603      | 309K                  | 0.380 | 1.955 | 3.037 | 4.963 | 0.620      |
| 206K                  | 0.396 | 2.311 | 3.568 | 5.432 | 0.604      | 310K                  | 0.381 | 1.981 | 3.047 | 4.953 | 0.619      |
| 207K                  | 0.396 | 2.303 | 3.565 | 5.435 | 0.604      | 311K                  | 0.382 | 2.002 | 3.057 | 4.943 | 0.618      |
| 208K                  | 0.394 | 2.256 | 3.547 | 5.453 | 0.606      | 312K                  | 0.383 | 2.020 | 3.064 | 4.936 | 0.617      |
| 209K                  | 0.402 | 2.461 | 3.621 | 5.379 | 0.598      | 314K                  | 0.385 | 2.050 | 3.076 | 4.924 | 0.615      |
| 210K                  | 0.409 | 2.665 | 4.093 | 5.907 | 0.591      | 315K                  | 0.385 | 2.062 | 3.081 | 4.919 | 0.615      |
| 211K                  | 0.408 | 2.620 | 4.078 | 5.922 | 0.592      | 316K                  | 0.386 | 2.073 | 3.086 | 4.914 | 0.614      |
| 212K                  | 0.407 | 2.584 | 4.066 | 5.934 | 0.593      | 318K                  | 0.387 | 2.091 | 3.093 | 4.907 | 0.613      |
| 213K                  | 0.410 | 2.685 | 4.099 | 5.901 | 0.590      | 318W                  | 0.381 | 1.982 | 4.572 | 7.428 | 0.619      |
| 214K                  | 0.410 | 2.702 | 4.104 | 5.896 | 0.590      | 319W                  | 0.382 | 1.993 | 4.198 | 6.802 | 0.618      |
| 215K                  | 0.415 | 2.850 | 4.148 | 5.852 | 0.585      | 320K                  | 0.384 | 2.041 | 3.073 | 4.927 | 0.616      |
| 216K                  | 0.417 | 2.923 | 4.585 | 6.415 | 0.583      | 320W                  | 0.379 | 1.946 | 4.549 | 7.451 | 0.621      |
| 217K                  | 0.412 | 2.759 | 4.122 | 5.878 | 0.588      | 321W                  | 0.380 | 1.958 | 4.557 | 7.443 | 0.620      |
| 219W                  | 0.410 | 2.692 | 6.562 | 9.438 | 0.590      | 322W                  | 0.382 | 2.002 | 4.203 | 6.797 | 0.618      |
| 220W                  | 0.409 | 2.665 | 6.549 | 9.451 | 0.591      | 326W                  | 0.384 | 2.036 | 4.222 | 6.778 | 0.616      |

### MOUNTING

#### STANDARD SERIES MOUNTING DATA

When shafts are selected for use with wide-inner-ring ball bearings, a minimum slip fit is desirable for the most satisfactory mounting. Special shaft limits are required in certain cases and a variety of standard fits can be used, including a press fit. The recommended figures are noted in table A-10. In some applications, it may be permissible to use increased shaft tolerances. In such cases, applications should be forwarded to your Timken engineer for complete recommendations.

##### Bearing bore tolerances:

½ in. – 2 3/16 in., nominal to +0.013 mm, +0.0005 in.;  
2 ¼ in. – 3 3/16 in., nominal to +0.015 mm, +0.0006 in.;

##### Recommended shaft tolerances:

½ in. – 1 15/16 in., nominal to -0.013 mm, -0.0005 in.;  
2 in. – 2 15/16 in., nominal to -0.025 mm, -0.0010 in.

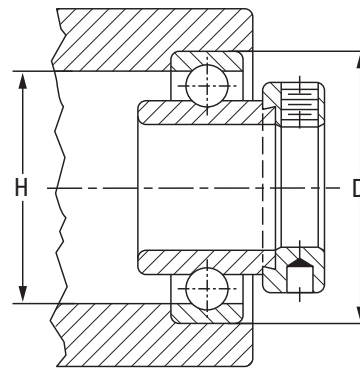
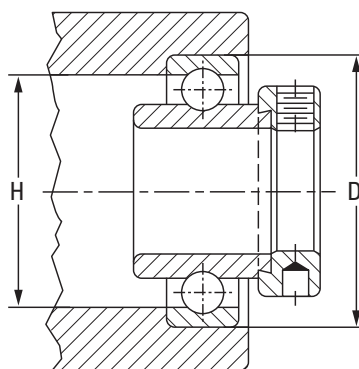


TABLE A-10. HOUSING, SHOULDER AND SHAFT DIAMETERS

| Bearing No. |            |            |             |             | Shaft Dia. | Basic Outer-Ring Size | Stationary Housing <sup>(1)</sup> |                  |                 | Shoulder Dia. |              |
|-------------|------------|------------|-------------|-------------|------------|-----------------------|-----------------------------------|------------------|-----------------|---------------|--------------|
| KRR Type    | G-KRR Type | RA-RR Type | GRA-RR Type | GYA-RR Type |            |                       | Housing Bore D                    |                  | Mean Fit        | H             |              |
|             |            |            |             |             |            |                       | Max.                              | Min.             |                 | Loose         | Max.         |
|             |            |            |             |             | in.<br>mm  |                       | mm<br>in.                         | mm<br>in.        | mm<br>in.       | mm<br>in.     | mm<br>in.    |
| 1008KRR     | —          | RA008RR    | GRA08RR     | GYA008RR    | 1/2        | 203                   | 40.015<br>1.5754                  | 40.000<br>1.5748 | 0.013<br>0.0005 | 34.8<br>1.37  | 34.0<br>1.34 |
| —           | —          | RA009RR    | GRA009RR    | GYA009RR    | 9/16       |                       |                                   |                  |                 |               |              |
| 101KRR(KR)  | G1010KRR   | RA010RR    | GRA010RR    | GYA010RR    | 5/8        |                       |                                   |                  |                 |               |              |
| 1011KRR     | G1011KRR   | —          | —           | —           | 1 1/16     |                       |                                   |                  |                 |               |              |
| E17KRR      | GE17KRR    | RAE17RR    | GRAE17RR    | GYAE17RR    | 17         | 204                   | 47.015<br>1.8510                  | 47.000<br>1.8504 | 0.013<br>0.0005 | 40.9<br>1.61  | 40.6<br>1.60 |
| 1012KRR(KR) | G1012KRR   | RA012RR    | GRA012RR    | GYA012RR    | 3/4        |                       |                                   |                  |                 |               |              |
| E20KRR      | GE20KRR    | RAE20RR    | GRAE20RR    | GYAE20RR    | 20         |                       |                                   |                  |                 |               |              |
| 1013KRR     | —          | RA013RR    | GRA013RR    | GYA013RR    | 13/16      | 205                   | 52.017<br>2.0479                  | 51.999<br>2.0472 | 0.015<br>0.0006 | 46.0<br>1.81  | 45.7<br>1.80 |
| 1014KRR     | G1014KRR   | RA014RR    | GRA014RR    | GYA014RR    | 7/8        |                       |                                   |                  |                 |               |              |
| 1015KRR(KR) | G1015KRR   | RA015RR    | GRA015RR    | GYA015RR    | 15/16      |                       |                                   |                  |                 |               |              |
| 1100KRR(KR) | G1100KRR   | RA100RR    | GRA100RR    | GYA100RR    | 1          |                       |                                   |                  |                 |               |              |
| E25KRR      | GE25KRR    | RAE25RR    | GRAE25RR    | GYAE25RR    | 25         | 206                   | 62.017<br>2.4416                  | 61.999<br>2.4409 | 0.015<br>0.0006 | 56.1<br>2.21  | 54.9<br>2.16 |
| —           | G1101KRR   | RA101RR    | GRA101RR    | GYA101RR    | 1 1/16     |                       |                                   |                  |                 |               |              |
| 1102KRR(KR) | G1102KRR   | RA102RR    | GRA102RR    | GYA102RR    | 1 1/8      |                       |                                   |                  |                 |               |              |
| 1103KRR(KR) | G1103KRR   | RA103RR    | GRA103RR    | GYA103RR    | 1 3/16     |                       |                                   |                  |                 |               |              |
| —           | —          | —          | —           | GYA103RR2   | 1 1/4      |                       |                                   |                  |                 |               |              |
| E30KRR      | GE30KRR    | RAE30RR    | GRAE30RR    | GYAE30RR    | 30         | 207                   | 72.017<br>2.8353                  | 71.999<br>2.8346 | 0.015<br>0.0006 | 65.0<br>2.56  | 54.9<br>2.47 |
| 1104KRR(KR) | G1104KRR   | RA104RR    | GRA104RR    | GYA104RR    | 1 1/4      |                       |                                   |                  |                 |               |              |
| 1105KRR     | —          | RA105RR    | GRA105RR    | GYA105RR    | 1 5/16     |                       |                                   |                  |                 |               |              |
| 1106KRR     | G1106KRR   | RA106RR    | GRA106RR    | GYA106RR    | 1 3/8      |                       |                                   |                  |                 |               |              |
| 1107KRR(KR) | G1107KRR   | RA107RR    | GRA107RR    | GYA107RR    | 1 7/16     |                       |                                   |                  |                 |               |              |
| E35KRR      | GE35KRR    | RAE35RR    | GRAE35RR    | GYAE35RR    | 35         |                       |                                   |                  |                 |               |              |

<sup>(1)</sup>When the housing revolves in relation to the shaft, the housing bore dimensions shown on page 131 of the Timken Engineering Manual (order no. 10424) should be used. Outer ring tolerances and housing fillet radii correspond to equivalent 200-series single-row radial bearings.

Continued on next page.



Continued from previous page.

| Bearing No. |            |            |             |             | Shaft Dia. | Basic Outer-Ring Size | Stationary Housing <sup>(1)</sup> |                   |                 | Shoulder Dia. |               |
|-------------|------------|------------|-------------|-------------|------------|-----------------------|-----------------------------------|-------------------|-----------------|---------------|---------------|
| KRR Type    | G-KRR Type | RA-RR Type | GRA-RR Type | GYA-RR Type |            |                       | Housing Bore D                    |                   | Mean Fit        | H             |               |
|             |            |            |             |             |            |                       | Max.                              | Min.              |                 | Loose         | Max.          |
|             |            |            |             |             | in.<br>mm  |                       | mm<br>in.                         | mm<br>in.         | mm<br>in.       | mm<br>in.     | mm<br>in.     |
| 1108KRR(KR) | G1108KRR   | RA108RR    | GRA108RR    | GYA108RR    | 1 1/2      | 208                   | 80.018<br>3.1503                  | 80.000<br>3.1496  | 0.015<br>0.0006 | 72.9<br>2.87  | 70.6<br>2.78  |
| —           | —          | RA109RR    | GRA109RR    | GYA109RR    | 1 9/16     |                       |                                   |                   |                 |               |               |
| —           | —          | —          | GRAE40RR    | GYAE40RR    | 40         |                       |                                   |                   |                 |               |               |
| 1110KRR     | G1110KRR   | RA110RR    | GRA110RR    | GYA110RR    | 1 5/8      | 209                   | 85.024<br>3.3474                  | 85.001<br>3.3465  | 0.020<br>0.0008 | 78.0<br>3.07  | 75.4<br>2.97  |
| 1111KRR(KR) | G1111KRR   | RA111RR    | GRA111RR    | GYA111RR    | 1 11/16    |                       |                                   |                   |                 |               |               |
| 1112KRR(KR) | G1112KRR   | RA112RR    | GRA112RR    | GYA112RR    | 1 3/4      |                       |                                   |                   |                 |               |               |
| E45KRR      | —          | —          | GRAE45RR    | GYAE45RR    | 45         |                       |                                   |                   |                 |               |               |
| —           | —          | RA113RR    | GRA113RR    | GYA113RR    | 1 13/16    | 210                   | 90.023<br>3.5442                  | 90.000<br>3.5433  | 0.020<br>0.0008 | 83.1<br>3.27  | 81.0<br>3.19  |
| 1114KRR     | —          | RA114RR    | GRA114RR    | GYA114RR    | 1 7/8      |                       |                                   |                   |                 |               |               |
| 1115KRR(KR) | G1115KRR   | RA115RR    | GRA115RR    | GYA115RR    | 1 15/16    |                       |                                   |                   |                 |               |               |
| —           | —          | —          | GRA115RR2   | —           | 2          |                       |                                   |                   |                 |               |               |
| E50KRR      | GE50KRR    | RAE50RR    | GRAE50RR    | GYAE50RR    | 50         | 211                   | 100.023<br>3.9379                 | 100.000<br>3.9370 | 0.020<br>0.0008 | 90.9<br>3.58  | 90.4<br>3.56  |
| 1200KRR(KR) | G1200KRR   | RA200RR    | GRA200RR    | GYA200RR    | 2          |                       |                                   |                   |                 |               |               |
| —           | —          | RA201RR    | GRA201RR    | GYA201RR    | 2 1/16     |                       |                                   |                   |                 |               |               |
| 1202KRR     | —          | RA202RR    | GRA202RR    | GYA202RR    | 2 1/8      |                       |                                   |                   |                 |               |               |
| 1203KRR(KR) | G1203KRR   | RA203RR    | GRA203RR    | GYA203RR    | 2 3/16     |                       |                                   |                   |                 |               |               |
| E55KRR      | GE55KRR    | RAE55RR    | GRAE55RR    | GYAE55RR    | 55         | 212                   | 110.023<br>4.3316                 | 110.000<br>4.3307 | 0.020<br>0.0008 | 101.1<br>3.98 | 98.3<br>3.87  |
| 1204KRR     | —          | —          | —           | —           | 2 1/4      |                       |                                   |                   |                 |               |               |
| 1207KRR(KR) | G1207KRR   | —          | —           | —           | 2 7/16     |                       |                                   |                   |                 |               |               |
| E60KRR      | GE60KRR    | —          | —           | —           | 60         | 215                   | 130.025<br>5.1191                 | 130.000<br>5.1181 | 0.023<br>0.0009 | 120.9<br>4.76 | 116.6<br>4.59 |
| 1215KRR     | —          | —          | —           | —           | 2 15/16    |                       |                                   |                   |                 |               |               |
| E75KRR      | —          | —          | —           | —           | 75         |                       |                                   |                   |                 |               |               |

<sup>(1)</sup>When the housing revolves in relation to the shaft, the housing bore dimensions shown on page 131 of the Timken Engineering Manual (order no. 10424) should be used. Outer ring tolerances and housing fillet radii correspond to equivalent 200-series single-row radial bearings.

### SNAP WIRE MOUNTING

#### KR-KRR SERIES

When shafts are selected for use with wide-inner-ring ball bearings, a minimum slip fit is desirable for the most satisfactory mounting. Special shaft limits are required in certain cases and a variety of standard fits can be used, including a press fit. The recommended figures are noted in table A-11. For requirements, contact your Timken engineer.

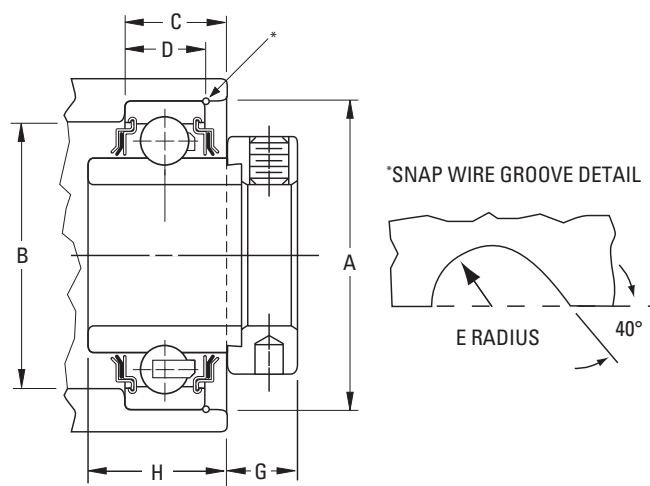
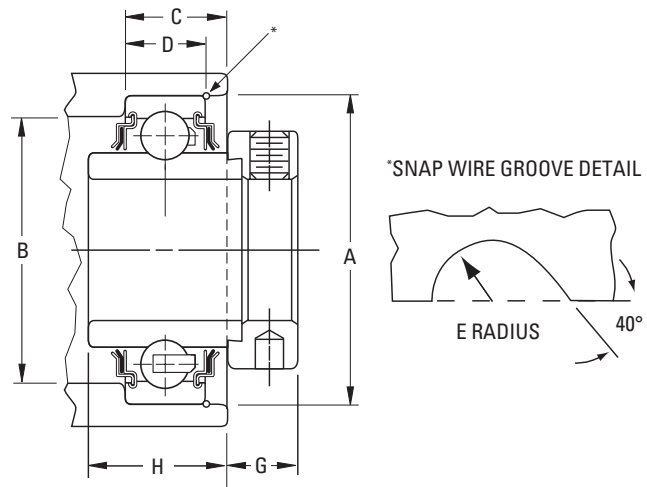


TABLE A-11. R-SEAL STANDARD KR, KRR SERIES

| Bearing No. | Shaft Dia. | Basic Outer-Ring Size | Housing Bore       |                  | Shoulder Dia. |              | C             | D             | Radius      | G             | H               |
|-------------|------------|-----------------------|--------------------|------------------|---------------|--------------|---------------|---------------|-------------|---------------|-----------------|
|             |            |                       | Stationary Housing |                  | B             |              |               |               | E           |               |                 |
|             |            |                       | A <sup>(1)</sup>   |                  |               |              |               |               |             |               |                 |
|             |            |                       | Max.               | Min.             | Max.          | Min.         |               |               |             |               |                 |
|             | in.<br>mm  |                       | mm<br>in.          | mm<br>in.        | mm<br>in.     | mm<br>in.    | mm<br>in.     | mm<br>in.     | mm<br>in.   | mm<br>in.     | mm<br>in.       |
| 1008KRR     | 1/2        | 203                   | 40.015<br>1.5754   | 40.000<br>1.5748 | 36.6<br>1.44  | 35.8<br>1.41 | 17.5<br>11/16 | 9.1<br>23/64  | 1.2<br>3/64 | 11.9<br>15/32 | 25.4<br>1       |
| —           | 9/16       |                       |                    |                  |               |              |               |               |             |               |                 |
| 1010KRR(KR) | 5/8        |                       |                    |                  |               |              |               |               |             |               |                 |
| 1011KRR     | 11/16      |                       |                    |                  |               |              |               |               |             |               |                 |
| E17KRR      | 17         |                       |                    |                  |               |              |               |               |             |               |                 |
| 1012KRR(KR) | 3/4        | 204                   | 47.015<br>1.8510   | 47.000<br>1.8504 | 43.7<br>1.72  | 41.1<br>1.62 | 19.0<br>3/4   | 15.1<br>19/32 | 1.2<br>3/64 | 14.7<br>37/64 | 29.0<br>1 9/64  |
| E20KRR      | 20         |                       |                    |                  |               |              |               |               |             |               |                 |
| 1013KRR(KR) | 13/16      | 205                   | 52.017<br>2.0479   | 51.999<br>2.0472 | 48.5<br>1.91  | 46.7<br>1.84 | 20.6<br>13/16 | 15.9<br>5/8   | 1.2<br>3/64 | 13.9<br>35/64 | 30.6<br>1 13/64 |
| 1014KRR     | 7/8        |                       |                    |                  |               |              |               |               |             |               |                 |
| 1015KRR(KR) | 15/16      |                       |                    |                  |               |              |               |               |             |               |                 |
| 1100KRR(KR) | 1          |                       |                    |                  |               |              |               |               |             |               |                 |
| E25KR       | 25         |                       |                    |                  |               |              |               |               |             |               |                 |
| —           | 1 1/16     | 206                   | 62.017<br>2.4416   | 61.999<br>2.4409 | 57.9<br>2.28  | 56.4<br>2.22 | 21.4<br>27/32 | 17.1<br>43/64 | 1.2<br>3/64 | 16.7<br>21/32 | 31.8<br>1 1/4   |
| 1102KRR(KR) | 1 1/8      |                       |                    |                  |               |              |               |               |             |               |                 |
| 1103KRR(KR) | 1 3/16     |                       |                    |                  |               |              |               |               |             |               |                 |
| 1103KRR3    | 1 1/4      |                       |                    |                  |               |              |               |               |             |               |                 |
| E30KRR      | 30         |                       |                    |                  |               |              |               |               |             |               |                 |
| 1104KRR(KR) | 1 1/4      | 207                   | 72.017<br>2.8353   | 71.999<br>2.8346 | 67.6<br>2.66  | 64.3<br>2.53 | 23.0<br>29/32 | 18.3<br>23/32 | 1.6<br>1/16 | 17.9<br>45/64 | 33.3<br>1 15/16 |
| 1105KRR     | 1 5/16     |                       |                    |                  |               |              |               |               |             |               |                 |
| 1106KRR     | 1 3/8      |                       |                    |                  |               |              |               |               |             |               |                 |
| 1107KRR(KR) | 1 7/16     |                       |                    |                  |               |              |               |               |             |               |                 |
| E35KRR      | 35         |                       |                    |                  |               |              |               |               |             |               |                 |

<sup>(1)</sup>When the housing revolves in relation to the shaft, the housing bore dimensions shown on page 131 of the Timken Engineering Manual (order no. 10424) should be used. Outer ring tolerances and housing fillet radii correspond to equivalent 200-series single-row radial bearings.

Continued on next page.



Continued from previous page.

| Bearing No. | Shaft Dia. | Basic Outer-Ring Size | Housing Bore       |           | Shoulder Dia. |           | C         | D         | Radius    | G         | H         |
|-------------|------------|-----------------------|--------------------|-----------|---------------|-----------|-----------|-----------|-----------|-----------|-----------|
|             |            |                       | Stationary Housing |           | B             |           |           |           | E         |           |           |
|             |            |                       | A <sup>(1)</sup>   |           |               |           |           |           |           |           |           |
|             |            |                       | Max.               | Min.      | Max.          | Min.      |           |           |           |           |           |
|             | in.<br>mm  |                       | mm<br>in.          | mm<br>in. | mm<br>in.     | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. |
| 1108KRR(KR) | 1 1/2      | 208                   | 80.078             | 80.000    | 75.4          | 71.4      | 24.6      | 19.4      | 1.6       | 19.4      | 36.9      |
| 1109KRR     | 1 9/16     |                       | 3.1503             | 3.1496    | 2.97          | 2.81      | 31/32     | 49/64     | 1/16      | 49/64     | 1 29/64   |
| E40KRR      | 40         |                       |                    |           |               |           |           |           |           |           |           |
| 1110KRR     | 1 5/8      | 209                   | 85.024             | 85.001    | 80.3          | 77.0      | 25.4      | 20.2      | 1.6       | 19.0      | 37.3      |
| 1111KRR(KR) | 1 11/16    |                       | 3.3474             | 3.3465    | 3.16          | 3.03      | 1         | 51/64     | 1/16      | 3/4       | 1 15/32   |
| 1112KRR(KR) | 1 3/4      |                       |                    |           |               |           |           |           |           |           |           |
| E45KRR      | 45         |                       |                    |           |               |           |           |           |           |           |           |
| 1114KRR     | 1 7/8      | 210                   | 90.023             | 90.000    | 83.1          | 82.3      | 26.2      | 21.4      | 1.6       | 21.8      | 40.9      |
| 1115KRR(KR) | 1 15/16    |                       | 3.5442             | 3.5433    | 3.27          | 3.24      | 1 1/32    | 37/32     | 1/6       | 55/64     | 1 39/64   |
| E50KRR      | 50         |                       |                    |           |               |           |           |           |           |           |           |
| 1200KRR(KR) | 2          | 211                   | 100.023            | 100.000   | 93.7          | 90.4      | 26.2      | 22.2      | 1.6       | 26.2      | 45.2      |
| 1202KRR     | 2 1/8      |                       | 3.9379             | 3.9370    | 3.69          | 3.56      | 1 1/32    | 7/8       | 1/16      | 1 1/32    | 1 25/32   |
| 1203KRR(KR) | 2 3/16     |                       |                    |           |               |           |           |           |           |           |           |
| E55KRR      | 55         |                       |                    |           |               |           |           |           |           |           |           |
| 1204KRR     | 2 1/4      | 212                   | 110.023            | 110.000   | 101.1         | 99.6      | 28.6      | 23.0      | 1.6       | 29.4      | 48.4      |
| 1207KRR(KR) | 2 7/16     |                       | 4.3316             | 4.3307    | 3.98          | 3.92      | 1 1/8     | 29/32     | 1/16      | 1 5/32    | 1 29/32   |
| E60KRR      | 60         |                       |                    |           |               |           |           |           |           |           |           |

<sup>(1)</sup>When the housing revolves in relation to the shaft, the housing bore dimensions shown on page 131 of the Timken Engineering Manual (order no. 10424) should be used. Outer ring tolerances and housing fillet radii correspond to equivalent 200-series single-row radial bearings.

### G-KRR SERIES

When shafts are selected for use with wide-inner-ring ball bearings, a minimum slip fit is desirable for the most satisfactory mounting. Special shaft limits are required in certain cases and a variety of standard fits can be used, including a press fit. The recommended values are in table A-12. For special requirements, contact your Timken engineer.

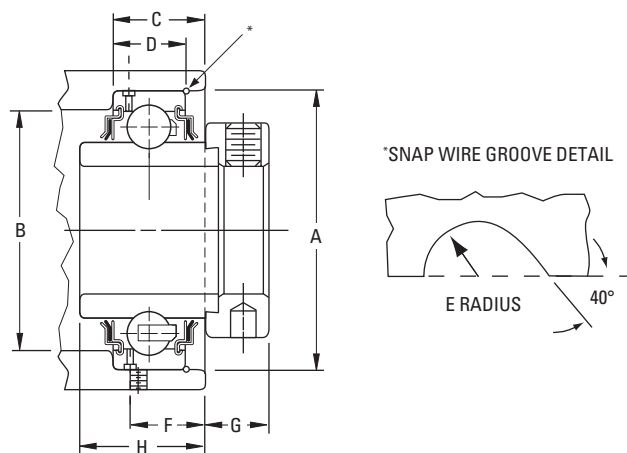


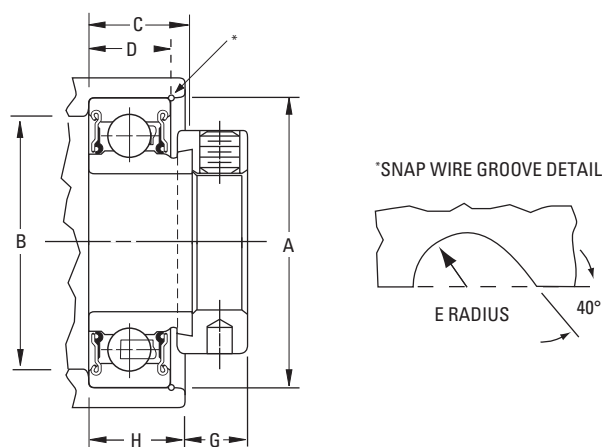
TABLE A-12. R-SEAL STANDARD G-KRR SERIES

| Bearing No. | Shaft Dia. | Basic Outer-Ring Size | Housing Bore       |           | Shoulder Dia. |           | C         | D         | Radius    | F         | G         | H         |
|-------------|------------|-----------------------|--------------------|-----------|---------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|             |            |                       | Stationary Housing |           | B             |           |           |           | E         |           |           |           |
|             |            |                       | A <sup>(1)</sup>   |           | Min.          |           |           |           | Max.      |           |           |           |
|             | in.<br>mm  |                       | mm<br>in.          | mm<br>in. | mm<br>in.     | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. |
| G1010KRR    | 5⁄8        | 203                   | 40.015             | 40.000    | 36.6          | 35.8      | 17.5      | 13.1      | 1.2       | 14.7      | 11.9      | 25.4      |
| G1011KRR    | 11⁄16      |                       | 1.5754             | 1.5748    | 1.44          | 1.41      | 11⁄16     | 33⁄64     | 3⁄64      | 37⁄64     | 15⁄32     | 1         |
| GE17KRR     | 17         |                       |                    |           |               |           |           |           |           |           |           |           |
| G1012KRR    | 3⁄4        | 204                   | 47.015             | 47.000    | 43.7          | 41.1      | 19.0      | 15.1      | 1.2       | 15.9      | 14.7      | 29.0      |
| GE20KRR     | 20         |                       | 1.8510             | 1.8504    | 1.72          | 1.62      | 3⁄4       | 19⁄32     | 3⁄64      | 5⁄8       | 37⁄64     | 1 9⁄64    |
| G1014KRR    | 7⁄8        | 205                   |                    |           |               |           |           |           |           |           |           |           |
| G1015KRR    | 15⁄16      |                       | 52.017             | 51.999    | 48.5          | 46.7      | 20.6      | 15.9      | 1.2       | 16.7      | 13.9      | 30.6      |
| G1100KRR    | 1          |                       | 2.0479             | 2.0472    | 1.91          | 1.84      | 13⁄16     | 5⁄8       | 3⁄64      | 21⁄32     | 35⁄64     | 1 13⁄64   |
| GE25KRR     | 25         |                       |                    |           |               |           |           |           |           |           |           |           |
| G1101KRR    | 1 1⁄16     | 206                   |                    |           |               |           |           |           |           |           |           |           |
| G1102KRR    | 1 1⁄8      |                       | 62.017             | 61.999    | 57.9          | 56.4      | 23.8      | 19.0      | 1.2       | 19.8      | 15.5      | 32.9      |
| G1103KRR    | 1 3⁄16     |                       | 2.4416             | 2.4409    | 2.28          | 2.22      | 15⁄16     | 3⁄4       | 3⁄64      | 25⁄32     | 39⁄64     | 1 19⁄64   |
| GE30KRR     | 30         |                       |                    |           |               |           |           |           |           |           |           |           |
| G1104KRR    | 1 1⁄4      | 207                   |                    |           |               |           |           |           |           |           |           |           |
| G1106KRR    | 1 3⁄8      |                       | 72.017             | 71.999    | 67.6          | 64.3      | 25.4      | 20.2      | 1.6       | 21.4      | 16.7      | 34.5      |
| G1107KRR    | 1 7⁄16     |                       | 2.8353             | 2.8346    | 2.66          | 2.53      | 1         | 51⁄64     | 1⁄16      | 27⁄32     | 21⁄32     | 1 23⁄64   |
| GE35KRR     | 35         |                       |                    |           |               |           |           |           |           |           |           |           |
| G1108KRR    | 1 1⁄2      | 208                   | 80.018             | 80.000    | 75.4          | 71.4      | 27.8      | 22.2      | 1.6       | 23.8      | 17.5      | 38.9      |
| G1109KRR    | 1 9⁄16     |                       | 3.1503             | 3.1496    | 2.97          | 2.81      | 1 3⁄32    | 7⁄8       | 1⁄16      | 15⁄16     | 11⁄16     | 1 17⁄32   |
| GE40KRR     | 40         |                       |                    |           |               |           |           |           |           |           |           |           |
| G1110KRR    | 1 5⁄8      | 209                   |                    |           |               |           |           |           |           |           |           |           |
| G1111KRR    | 1 11⁄16    |                       | 85.024             | 85.001    | 80.3          | 77.0      | 28.6      | 23.4      | 1.6       | 24.2      | 17.5      | 38.9      |
| G1112KRR    | 1 3⁄4      |                       | 3.3474             | 3.3465    | 3.16          | 3.03      | 1 1⁄8     | 59⁄64     | 1⁄16      | 31⁄32     | 11⁄16     | 1 17⁄32   |
| GE45KRR     | 45         |                       |                    |           |               |           |           |           |           |           |           |           |
| G1115KRR    | 1 15⁄16    | 210                   | 90.023             | 90.000    | 83.1          | 82.3      | 29.4      | 24.2      | 1.6       | 24.6      | 20.2      | 42.5      |
| GE50KRR     | 50         |                       | 3.5442             | 3.5433    | 3.27          | 3.24      | 1 5⁄32    | 61⁄64     | 1⁄16      | 31⁄32     | 51⁄64     | 1 43⁄64   |
| G1200KRR    | 2          | 211                   |                    |           |               |           |           |           |           |           |           |           |
| G1203KRR    | 2 3⁄16     |                       | 100.023            | 100.000   | 93.7          | 90.4      | 31.8      | 26.2      | 1.6       | 26.6      | 24.2      | 47.2      |
| GE55KRR     | 55         |                       | 3.9379             | 3.9370    | 3.69          | 3.56      | 1 1⁄4     | 1 1⁄32    | 1⁄16      | 1 3⁄64    | 61⁄64     | 1 55⁄64   |

<sup>(1)</sup>When the housing revolves in relation to the shaft, the housing bore dimensions shown on page 131 of the Timken Engineering Manual (order no. 10424) should be used. Outer ring tolerances and housing fillet radii correspond to equivalent 200-series single-row radial bearings.

### RA-RR SERIES

When shafts are selected for use with wide-inner-ring ball bearings, a minimum slip fit is desirable for the most satisfactory mounting. Special shaft limits are required in certain cases and a variety of standard fits can be used, including even a press fit. The recommended values are in table A-13. For special requirements, contact your Timken engineer.



**TABLE A-13. RA-RR SERIES, NON-RELUBRICATABLE**

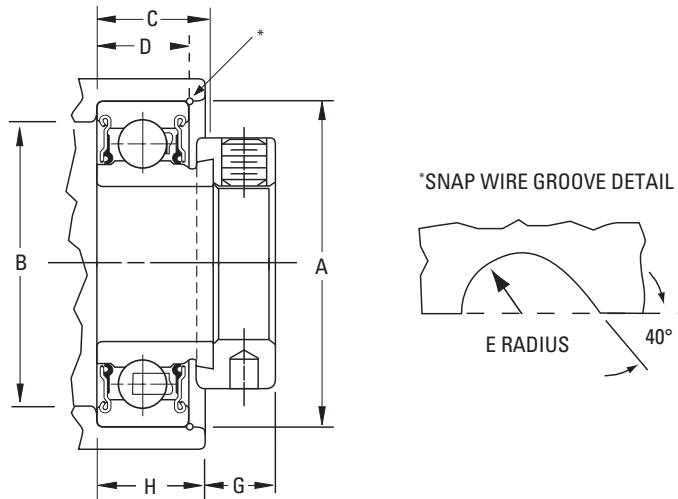
| Bearing No. | Shaft Dia. | Basic Outer-Ring Size | Housing Bore                        |                  | Mean Fit Loose  | Shoulder Dia. |              | C             | D             | H               | Radius      |               |
|-------------|------------|-----------------------|-------------------------------------|------------------|-----------------|---------------|--------------|---------------|---------------|-----------------|-------------|---------------|
|             |            |                       | Stationary Housing A <sup>(1)</sup> |                  |                 | B             |              |               |               |                 | E           | G             |
|             |            |                       | Max.                                | Min.             |                 | Max.          | Min.         |               |               |                 |             |               |
|             | in.<br>mm  |                       | mm<br>in.                           | mm<br>in.        |                 | mm<br>in.     | mm<br>in.    | mm<br>in.     | mm<br>in.     | mm<br>in.       | mm<br>in.   | mm<br>in.     |
| RA008RR     | 1/2        | 203                   | 40.015<br>1.5754                    | 40.000<br>1.5748 | 0.013<br>0.0005 | 35.1<br>1.34  | 34.3<br>1.31 | 19.0<br>3/4   | 14.3<br>9/16  | 16.67<br>21/32  | 1.2<br>3/64 | 9.5<br>3/8    |
| RA009RR     | 9/16       |                       |                                     |                  |                 |               |              |               |               |                 |             |               |
| RA010RR     | 5/8        |                       |                                     |                  |                 |               |              |               |               |                 |             |               |
| RAE17RR     | 17         |                       |                                     |                  |                 |               |              |               |               |                 |             |               |
| RA012RR     | 3/4        | 204                   | 47.015<br>1.8510                    | 47.000<br>1.8504 | 0.013<br>0.0005 | 40.9<br>1.61  | 40.6<br>1.58 | 20.6<br>13/16 | 15.9<br>5/8   | 17.07<br>43/64  | 1.2<br>3/64 | 10.3<br>13/32 |
| RAE20RR     | 20         |                       |                                     |                  |                 |               |              |               |               |                 |             |               |
| RA013RR     | 13/16      | 205                   | 52.017<br>2.0479                    | 51.999<br>2.0472 | 0.015<br>0.0006 | 46.0<br>1.81  | 45.7<br>1.78 | 20.6<br>13/16 | 15.9<br>5/8   | 17.07<br>43/64  | 1.2<br>3/64 | 10.3<br>13/32 |
| RA014RR     | 7/8        |                       |                                     |                  |                 |               |              |               |               |                 |             |               |
| RA015RR     | 15/16      |                       |                                     |                  |                 |               |              |               |               |                 |             |               |
| RA100RR     | 1          |                       |                                     |                  |                 |               |              |               |               |                 |             |               |
| RAE25RR     | 25         | 206                   | 62.017<br>2.4416                    | 61.999<br>2.4409 | 0.015<br>0.0006 | 56.1<br>2.21  | 54.9<br>2.16 | 23.8<br>15/16 | 19.0<br>3/4   | 20.24<br>51/64  | 1.2<br>3/64 | 11.9<br>15/32 |
| RA101RR     | 1 1/16     |                       |                                     |                  |                 |               |              |               |               |                 |             |               |
| RA102RR     | 1 1/8      |                       |                                     |                  |                 |               |              |               |               |                 |             |               |
| RA103RR     | 1 3/16     |                       |                                     |                  |                 |               |              |               |               |                 |             |               |
| RA103RR2    | 1 1/4      |                       |                                     |                  |                 |               |              |               |               |                 |             |               |
| RAE30RR     | 30         | 207                   | 72.017<br>2.8353                    | 71.999<br>2.8346 | 0.015<br>0.0006 | 65.0<br>2.56  | 62.7<br>2.47 | 25.4<br>1     | 20.6<br>13/16 | 22.22<br>7/8    | 1.6<br>1/16 | 13.5<br>17/32 |
| RA104RR     | 1 1/4      |                       |                                     |                  |                 |               |              |               |               |                 |             |               |
| RA105RR     | 1 5/16     |                       |                                     |                  |                 |               |              |               |               |                 |             |               |
| RA106RR     | 1 3/8      |                       |                                     |                  |                 |               |              |               |               |                 |             |               |
| RA107RR     | 1 7/16     |                       |                                     |                  |                 |               |              |               |               |                 |             |               |
| RAE35RR     | 35         | 208                   | 80.018<br>3.1503                    | 80.000<br>3.1496 | 0.015<br>0.0006 | 72.9<br>2.87  | 70.6<br>2.78 | 28.6<br>1 1/8 | 23.0<br>29/32 | 26.19<br>1 1/32 | 1.6<br>1/16 | 15.1<br>19/32 |
| RA108RR     | 1 1/2      |                       |                                     |                  |                 |               |              |               |               |                 |             |               |
| RA109RR     | 1 9/16     |                       |                                     |                  |                 |               |              |               |               |                 |             |               |
| RAE40RR     | 40         | 209                   | 85.024<br>3.3474                    | 85.001<br>3.3465 | 0.020<br>0.0008 | 78.0<br>3.07  | 75.4<br>2.97 | 28.6<br>1 1/8 | 23.0<br>29/32 | 26.19<br>1 1/32 | 1.6<br>1/16 | 15.1<br>19/32 |
| RA110RR     | 1 5/8      |                       |                                     |                  |                 |               |              |               |               |                 |             |               |
| RA111RR     | 1 11/16    |                       |                                     |                  |                 |               |              |               |               |                 |             |               |
| RA112RR     | 1 3/4      |                       |                                     |                  |                 |               |              |               |               |                 |             |               |
| RAE45RR     | 45         |                       |                                     |                  |                 |               |              |               |               |                 |             |               |

<sup>(1)</sup>When the housing revolves in relation to the shaft, the housing bore dimensions shown on page 131 of the Timken Engineering Manual (order no. 10424) should be used. Outer ring tolerances and housing fillet radii correspond to equivalent 200-series single-row radial bearings.

Continued on next page.

# BALL BEARING HOUSED UNITS

## ENGINEERING • MOUNTING



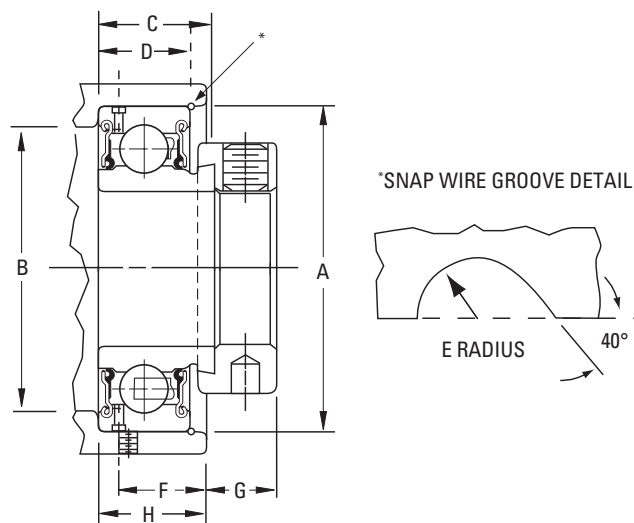
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| Bearing No. | Shaft Dia. | Basic Outer-Ring Size | Housing Bore                        |                   | Mean Fit Loose  | Shoulder Dia. |              | C              | D             | H               | Radius      | G             |
|-------------|------------|-----------------------|-------------------------------------|-------------------|-----------------|---------------|--------------|----------------|---------------|-----------------|-------------|---------------|
|             |            |                       | Stationary Housing A <sup>(1)</sup> |                   |                 | B             |              |                |               |                 | E           |               |
|             |            |                       | Max.                                | Min.              |                 | Max.          | Min.         |                |               |                 |             |               |
|             | in.<br>mm  |                       | mm<br>in.                           | mm<br>in.         |                 | mm<br>in.     | mm<br>in.    | mm<br>in.      | mm<br>in.     | mm<br>in.       | mm<br>in.   | mm<br>in.     |
| RA113RR     | 1 13/16    | 210                   | 90.023<br>3.5442                    | 90.000<br>3.5433  | 0.020<br>0.0008 | 83.1<br>3.27  | 80.5<br>3.17 | 28.6<br>1 1/8  | 23.0<br>29/32 | 26.19<br>1 1/32 | 1.6<br>1/16 | 15.1<br>19/32 |
| RA114RR     | 1 7/8      |                       |                                     |                   |                 |               |              |                |               |                 |             |               |
| RA115RR     | 1 15/16    |                       |                                     |                   |                 |               |              |                |               |                 |             |               |
| RAE50RR     | 50         |                       |                                     |                   |                 |               |              |                |               |                 |             |               |
| RA200RR     | 2          | 211                   | 100.023<br>3.9379                   | 100.000<br>3.9370 | 0.020<br>0.0008 | 93.5<br>3.68  | 90.4<br>3.56 | 31.0<br>1 7/32 | 25.4<br>1     | 28.18<br>1 7/64 | 1.6<br>1/16 | 17.5<br>11/16 |
| RA201RR     | 2 1/16     |                       |                                     |                   |                 |               |              |                |               |                 |             |               |
| RA202RR     | 2 1/8      |                       |                                     |                   |                 |               |              |                |               |                 |             |               |
| RA203RR     | 2 3/16     |                       |                                     |                   |                 |               |              |                |               |                 |             |               |
| RAE55RR     | 55         |                       |                                     |                   |                 |               |              |                |               |                 |             |               |

<sup>(1)</sup>When the housing revolves in relation to the shaft, the housing bore dimensions shown on page 131 of the Timken Engineering Manual (order no. 10424) should be used. Outer ring tolerances and housing fillet radii correspond to equivalent 200-series single-row radial bearings.

### GRA-RR SERIES

When shafts are selected for use with wide-inner-ring ball bearings, a minimum slip fit is desirable for the most satisfactory mounting. Special shaft limits are required in certain cases and a variety of standard fits can be used, including even a press fit. The recommended values are in table A-14. For special requirements, contact your Timken engineer.



**TABLE A-14. GRA-RR SERIES, RELUBRICATABLE**

| Bearing No. | Shaft Dia. | Basic Outer-Ring Size | Housing Bore       |           | Shoulder Dia. |           | C         | D         | H         | Radius    | F         | G         |
|-------------|------------|-----------------------|--------------------|-----------|---------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|             |            |                       | Stationary Housing |           | B             |           |           |           |           | E         |           |           |
|             |            |                       | A <sup>(1)</sup>   |           |               |           |           |           |           |           |           |           |
|             |            |                       | Max.               | Min.      | Max.          | Min.      |           |           |           |           |           |           |
|             | in.<br>mm  |                       | mm<br>in.          | mm<br>in. | mm<br>in.     | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. |
| GRA008RR    | 1/2        | 203                   | 40.015             | 40.000    | 35.1          | 34.3      | 19.0      | 14.3      | 16.67     | 1.2       | 22.32     | 9.5       |
| GRAE17RR    | 17         |                       | 1.5754             | 1.5748    | 1.38          | 1.35      | 3/4       | 9/16      | 21/32     | 3/64      | 0.879     | 3/8       |
| GRA012RR    | 3/4        | 204                   | 47.015             | 47.000    | 40.9          | 40.6      | 20.6      | 15.9      | 17.07     | 1.2       | 25.6      | 10.3      |
| GRAE20RR    | 20         |                       | 1.8510             | 1.8504    | 1.61          | 1.60      | 13/16     | 5/8       | 43/64     | 3/64      | 1.008     | 13/32     |
| GRA014RR    | 7/8        | 205                   | 52.017             | 51.999    | 46.0          | 45.7      | 20.6      | 15.9      | 17.07     | 1.2       | 30.61     | 10.3      |
| GRAE25RR    | 25         |                       | 2.0479             | 2.0472    | 1.81          | 1.80      | 13/16     | 5/8       | 43/64     | 3/64      | 1.205     | 13/32     |
| GRA101RR    | 1 1/16     | 206                   | 62.017             | 61.999    | 56.1          | 54.9      | 23.8      | 19.0      | 20.24     | 1.2       | 37.29     | 11.9      |
| GRAE30RR    | 30         |                       | 2.4416             | 2.4409    | 2.21          | 2.16      | 15/16     | 3/4       | 51/64     | 3/64      | 1.468     | 15/32     |
| GRA104RR    | 1 1/4      | 207                   | 72.017             | 71.999    | 65.0          | 62.7      | 25.4      | 20.6      | 22.22     | 1.6       | 43.08     | 13.5      |
| GRAE35RR    | 35         |                       | 2.8353             | 2.8346    | 2.56          | 2.47      | 1         | 13/16     | 7/8       | 1/16      | 1.696     | 17/32     |

<sup>(1)</sup>When the housing revolves in relation to the shaft, the housing bore dimensions shown on page 131 of the Timken Engineering Manual (order no. 10424) should be used. Outer ring tolerances and housing fillet radii correspond to equivalent 200-series single-row radial bearings.

### INSTALLATION

Ball bearing housed units are available in a wide variety of types and sizes to accommodate a complete range of operating conditions.

These units generally have cast-iron housings and are designed for mounting on straight shafts with a slip fit. The self-locking collar and the set screw inner bearing design provides ease in mounting.

1. Ensure that the shaft is clean, free from burrs, straight and of proper diameter. The bearing should not be mounted on a worn section of the shaft. Using shafts with hardness greater than HRC 45 will reduce effectiveness of locking devices. See table A-15 on page A-23 for recommended shaft tolerances.
2. Align the bearing in its housing and slide the unit into position on the shaft.
3. Bolt housing tightly to its mounting supports using an appropriately sized fastener (table A-17 on page A-23). Flat washers should be used when installing any kind of housed unit. Washers should be properly sized to bolt diameter and should not be an SAE grade, which is smaller.

### BALL HOUSED UNITS MAY BE LOCKED INTO POSITION ON SHAFTS USING EITHER OF THE FOLLOWING METHODS

4. **Eccentric locking-collar bearings:** Slide collar over cammed end of inner ring. Rotate collar to engage cams and lock by lightly tapping with drift pin in the direction of shaft rotation. Tighten set screw to recommended torque levels as shown in table A-16 on page A-23.

In cases where the units are mounted vertically or where they are to assume considerable thrust loading, the unit should be placed so that the collar is forced against the inner ring by the thrust rather than away from it. In these cases, it may be advisable to spot the shaft under the set screw.

To disassemble, loosen set screw and lightly tap collar in direction opposite shaft rotation.

5. **Set screw locking bearings:** Lock bearing to the shaft by tightening each inner ring set screw incrementally to recommended torque levels as shown in table A-16 on page A-23. For concentric collar units, tighten each collar set screw to recommended torque levels in tables. To disassemble, loosen set screw.

### INSTALLATION PROCEDURE FOR HIGH-SPEED OR HIGH-TEMPERATURE SAL/SAOL BEARINGS

- 6a. Remove housing cover gasket, bearing, spacer ring, endplates and packings. Use care when handling gasket and packings. Slide housing and one endplate along shaft. Ensure that the overflow cup, located at the base of the pillow block, is placed on the downward side of shaft rotation. Slide bearing onto shaft and into housing, with cam side outward (facing open end of housing).

**Fixed mounting:** Position bearing against housing shoulder and place spacer ring between bearing aligning ring face and housing cover shoulder face.

**Float mounting:** Position bearing in center of its floating space between housing and housing cover shoulder faces. Do not use spacer ring.

In general, it is preferable for the fixed bearing to be closest to the drive position.

- b. Follow step 4 or 5 on this page to secure bearing to shaft.
- c. Replace gasket and housing cover.
- d. Install packings and endplates. Tighten screws holding endplates to force packings into contact with shaft. This creates an effective seal.
- e. To disassemble, reverse the above operations to remove bearing from the shaft.

#### NOTE

*Do not overtighten packings. If considerable heat develops during operation, loosen packings by loosening the screws holding endplate.*



#### WARNING

***Failure to observe the following warnings could create a risk of death or serious injury.***

Proper maintenance and handling practices are critical. Always follow installation instructions and maintain proper lubrication.

## TECHNICAL DATA

This section provides useful installation details related to shaft tolerance and torque for set screws and bolts.

**TABLE A-15. SUGGESTED SHAFT TOLERANCE<sup>(1)</sup>**

| Shaft Size    |                     | Tolerance                         |
|---------------|---------------------|-----------------------------------|
| in.           | mm                  |                                   |
| 1/2 - 1 15/16 | <b>12.7 - 49.2</b>  | nominal to -0.0005 in., -0.013 mm |
| 2 - 3 15/16   | <b>50.8 - 100.0</b> | nominal to -0.0010 in., -0.025 mm |
| above 4       | <b>101.6</b>        | nominal to -0.0015 in., -0.038 mm |

<sup>(1)</sup>These are for normal service; for heavy loads, high speeds or vertical shaft applications, reduce the suggested shaft tolerance by half.

**TABLE A-16. SUGGESTED SET SCREW TIGHTENING TORQUE**

| Set Screw Size | Standard Steel | Stainless Steel (TDCF inserts) |
|----------------|----------------|--------------------------------|
| in.            | in. - lbs.     | in. - lbs.                     |
| #10            | 35             | 23                             |
| 1/4            | 80             | 60                             |
| 5/16           | 155            | 122                            |
| 3/8            | 275            | 213                            |
| 7/16           | 425            | 340                            |
| mm             | Nm             | Nm                             |
| M5             | 4.0            | 3.1                            |
| M6             | 6.6            | 4.9                            |
| M8             | 15.3           | 11.5                           |
| M10            | 30.0           | 22                             |
| M12            | 49.0           | 37                             |

**TABLE A-17. SUGGESTED BOLT MOUNTING TORQUE**

| Bolt Size | Torque     |
|-----------|------------|
| in.       | ft. - lbs. |
| 3/8       | 27         |
| 1/2       | 65         |
| 5/8       | 130        |
| 3/4       | 230        |
| 7/8       | 573        |
| 1         | 858        |
| 1 1/8     | 1059       |
| mm        | Nm         |
| M10       | 44         |
| M12       | 77         |
| M16       | 192        |
| M20       | 372        |

This is a general guide. For operating conditions outside the ranges identified in table A-18, consult your Timken engineer.

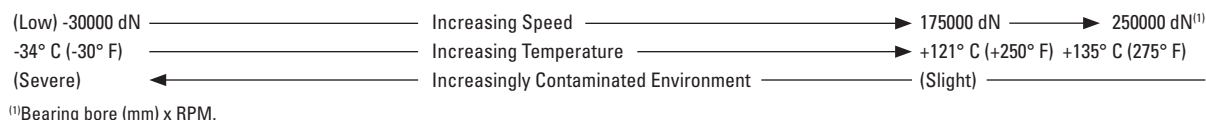
**TABLE A-18. APPLICATION FACTOR**

Table A-19 is an application selection guide for ball-bearing housed units.

**TABLE A-19. BALL-BEARING HOUSED-UNIT SELECTION GUIDE FOR APPLICATIONS**

| Load        | Bearing Types                                                       |             |                                                                     |             |                 |           |                                                                         |                                                                                                             |                     |                                                                                        |                                                                |             |                     |                                                        |                   |              |                                                                                  |                                                  |              |      |  |
|-------------|---------------------------------------------------------------------|-------------|---------------------------------------------------------------------|-------------|-----------------|-----------|-------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|---------------------|----------------------------------------------------------------------------------------|----------------------------------------------------------------|-------------|---------------------|--------------------------------------------------------|-------------------|--------------|----------------------------------------------------------------------------------|--------------------------------------------------|--------------|------|--|
|             | Wide Inner Ring Ball Bearing with Tri-ply Seals Self-Locking Collar |             | Wide-Inner-Ring Ball Bearing With Contact Seals Self-Locking Collar |             |                 |           | Extended Inner Ring Bearing with Contact Seals Self-Locking Collar      |                                                                                                             |                     |                                                                                        | Wide-Inner-Ring Ball Bearing with Contact Seals Set Screw Lock |             |                     | Narrow Width Bearing with Contact Seals Set Screw Lock |                   |              | Wide-Inner-Ring Ball Bearing with Labyrinth or Special Seals Self-Locking Collar |                                                  |              |      |  |
|             | Housing Type                                                        |             | Housing Type                                                        |             |                 |           | Housing Type                                                            |                                                                                                             |                     |                                                                                        | Housing Type                                                   |             |                     | Housing Type                                           |                   |              | Housing Type                                                                     |                                                  |              |      |  |
|             | Pillow Block                                                        | Flange Unit | Pillow Block                                                        | Flange Unit | Take-Up Unit    | Cartridge | Pillow Block                                                            | Flange Unit                                                                                                 | Take-Up Unit        | Cartridge                                                                              | Pillow Block                                                   | Flange Unit | Take-Up Unit        | Pillow Block                                           | Flange Unit       | Take-Up Unit | Pillow Block                                                                     | Flange Unit                                      | Take-Up Unit |      |  |
| Light Duty  |                                                                     |             | RR, RRT <sup>(1)</sup><br>RRTR <sup>(1)</sup><br>GRR                |             |                 |           | PB <sup>(1)</sup><br>PBS <sup>(1)</sup><br>RBG(U)<br>RPB <sup>(1)</sup> | LFST <sup>(1)</sup><br>VFMST <sup>(1)</sup><br>RBGF<br>RA, RAT <sup>(1)</sup><br>RATR <sup>(1)</sup><br>GRA | MSTU <sup>(1)</sup> | RCSM <sup>(1)</sup><br>RCR <sup>(1)</sup><br>LCR <sup>(1)</sup><br>RABR <sup>(1)</sup> |                                                                |             |                     |                                                        |                   |              |                                                                                  |                                                  |              |      |  |
| Normal Duty | TAK<br>TAS                                                          | TCJ<br>TCJT | RAK<br>RAS<br>RAKH<br>RAKHL <sup>(2)</sup><br>DRNR                  | RCJ<br>RCJT | RC<br>RTU<br>TU |           | VAK<br>VAS<br>VTB                                                       | VCJ<br>VCJT                                                                                                 | VTU<br>VNTU         | YAS<br>YAK<br>RASC                                                                     |                                                                |             | YCJ<br>YCJT<br>RCJC | YTU                                                    | SAS<br>SAK<br>STB | SCJ<br>SCJT  | STU                                                                              | LAK<br>LAS<br>LSA<br>SAL <sup>(3)</sup><br>LAKHL | LCJ<br>LCJT  | LTU  |  |
|             |                                                                     |             | RAO<br>RSAO                                                         | RCJO        |                 |           |                                                                         |                                                                                                             |                     |                                                                                        | YASM<br>YCJM                                                   |             |                     |                                                        |                   |              | LAO<br>LSAO<br>SAOL <sup>(3)</sup>                                               |                                                  |              | LCJO |  |

<sup>(1)</sup>Non-relubricatable.

<sup>(2)</sup>Float unit, grease lubrication.

<sup>(3)</sup>Fixed and floating. Oil lubrication, SAL and SAOL units, with adjustable seal packages also can be considered for adverse environments.

NOTE: All bearings or units are double sealed and prelubricated with grease except where noted.

## WIDE-INNER-RING BALL BEARINGS

Wide-inner-ring ball bearings consist of a single-row ball bearing and an extended inner ring. They carry radial, axial and combination loads. The extended inner ring slips onto the shaft and secures with a locking mechanism.

- **Sizes:** Standard series: 15 mm – 75 mm shaft ( $\frac{1}{2}$  –  $2\frac{15}{16}$  in.). Medium and heavy-duty series are available in larger sizes.
- **Industries and applications:** Agriculture, food processing, fans, blowers, and conveyors.
- **Features:** Available with a variety of shaft locking systems: eccentric locking collars, set screws and concentric locking collars.
- **Benefits:** Designed for ease of mounting and maximum shaft support.

|                   |      |
|-------------------|------|
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### INDUSTRIAL SERIES

|                                                                                |      |
|--------------------------------------------------------------------------------|------|
| KR, KRR, KRRB Non-Relubricatable Types .....                                   | A-32 |
| G-KRR, G-KRRB Relubricatable Types .....                                       | A-34 |
| KL, KLB, KLL, KLLB Special Series,<br>Non-Relubricatable Types .....           | A-36 |
| G-KLL, G-KLLB Special Series, Relubricatable Types .....                       | A-37 |
| KLLG Special Series with Wireloc® .....                                        | A-38 |
| Tri-Ply Industrial Series,<br>Non-Relubricatable and Relubricatable Types..... | A-39 |
| GC-KRRB Industrial-Series Concentric Collar,<br>Relubricatable Type.....       | A-40 |
| SM Industrial Series A and B Types/MUA-B Inserts.....                          | A-41 |
| SM-S Industrial Series .....                                                   | A-43 |
| GY-KRRB Set Screw Industrial Series .....                                      | A-44 |
| ER Industrial Series, Relubricatable Types .....                               | A-46 |

### STANDARD SERIES

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| RA-RR, RA-RRB Non-Relubricatable Types.....  | A-48 |
| GRA-RR, GRA-RRB Relubricatable Types .....   | A-50 |
| RA-DD, Non-Relubricatable Types .....        | A-52 |
| YA-RR, YA-RRB Non-Relubricatable Types ..... | A-53 |
| GYA-RR, GYA-RRB Relubricatable Types.....    | A-54 |

### LIGHT SERIES

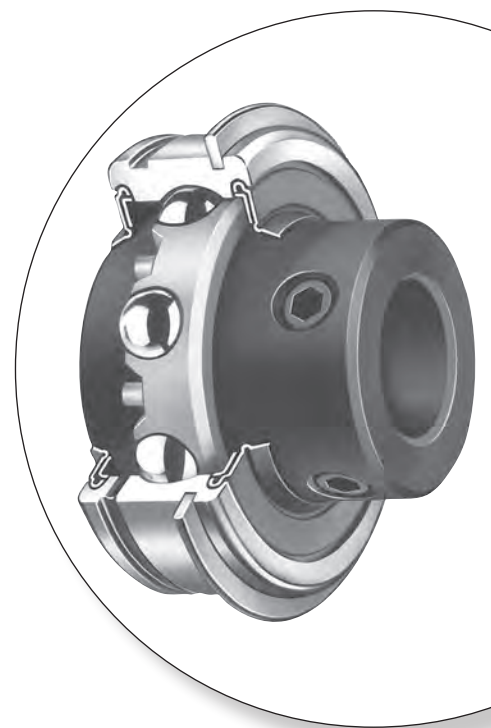
|                                         |      |
|-----------------------------------------|------|
| RAL-NPPB Non-Relubricatable Types ..... | A-55 |
|-----------------------------------------|------|

### MEDIUM SERIES

|                                      |      |
|--------------------------------------|------|
| GYM-KRRB Inserts Set Screw Lock..... | A-56 |
|--------------------------------------|------|

### HEAVY SERIES

|                                        |      |
|----------------------------------------|------|
| GN-KRRB Relubricatable Types .....     | A-57 |
| GN-KLLB Special Duty .....             | A-59 |
| SMN A and B Types/MUOA-B Inserts ..... | A-60 |
| SMN-S Series.....                      | A-62 |



### NOMENCLATURE

#### Prefixes:

##### Basic Series and Additional Features

|               |                                       |
|---------------|---------------------------------------|
| <b>C</b>      | concentric collar                     |
| <b>E</b>      | metric bore                           |
| <b>G</b>      | relubricatable                        |
| <b>1</b>      | standard series (200-series bearings) |
| <b>L</b>      | light series                          |
| <b>N</b>      | heavy series (300-series bearings)    |
| <b>RA</b>     | extended inner ring, one side only    |
| <b>SM</b>     | standard series (open-type bearings)  |
| <b>SMN</b>    | heavy series (open-type bearings)     |
| <b>ER, YA</b> | set screw locking device series       |
| <b>M</b>      | medium-duty set screw lock series     |

#### Suffixes:

##### Internal Construction

|          |                                                 |
|----------|-------------------------------------------------|
| <b>K</b> | full width inner, Conrad, non-filling slot-type |
| <b>W</b> | maximum capacity filling slot-type              |

**G1**

**103**

**K**

**RRB**

**SGT**

#### Numbers:

Last three numbers indicate bore size — first in inches, last two in sixteenths

|            |                |
|------------|----------------|
| <b>015</b> | 15/16 in.      |
| <b>103</b> | 1 3/16 in.     |
| <b>203</b> | 2 3/16 in.     |
| <b>25</b>  | 25 mm (metric) |
| <b>40</b>  | 40 mm (metric) |

#### Additional Features

|                         |                                    |
|-------------------------|------------------------------------|
| <b>L</b>                | one Mechani-Seal                   |
| <b>LL</b>               | two Mechani-Seals                  |
| <b>PP</b>               | two seals                          |
| <b>R</b>                | one land-riding rubber seal        |
| <b>RR</b>               | two land-riding rubber seals       |
| <b>B</b>                | spherical outside diameter         |
| <b>S</b>                | external self-aligning             |
| <b>PP2, 3, 4, etc.,</b> | – tri-ply seals (if preceded by K) |
| <b>TDC™</b>             | thin-dense chrome plate            |
| <b>F</b>                | food-grade grease                  |
| <b>SGT</b>              | Shaft Guarding Technology™         |

Fig. A-8. Wide-inner-ring ball bearing nomenclature.



#### WARNING

*Failure to observe the following warnings could create a risk of death or serious injury.*

Proper maintenance and handling practices are critical. Always follow installation instructions and maintain proper lubrication.

Tensile stresses can be very high in tightly fitted bearing components. Attempting to remove such components by cutting the cone (inner race) may result in a sudden shattering of the component causing fragments of metal to be forcefully expelled. Always use properly guarded presses or bearing pullers to remove bearings from shafts, and always use suitable personal protective equipment, including safety glasses.



#### CAUTION

*Failure to follow this caution could create a risk of injury.*

#### SHAFT GUARDING TECHNOLOGY™

Do not remove band from bore groove. Removal may cause it to release suddenly.

#### NOTE

*The products catalogued are application specific. Any use in applications other than those intended could lead to equipment failure or to reduced equipment life.*

*Use of improper bearing fits may cause damage to equipment. Do not use damaged bearings. The use of a damaged bearing can result in equipment damage.*

## INTRODUCTION

### WIDE-INNER-RING BALL BEARING DESIGN FOR BALL BEARINGS THAT ARE EASILY MOUNTED ON STRAIGHT SHAFTS AND POSITIONED WITHOUT SHOULDERS, LOCKNUTS OR ADAPTERS

The internal bearing construction is basically the same as the deep race, single-row radial type with the ability to carry radial, thrust and combined loads, while providing low-friction qualities. The inner ring is generally extended on both sides of the race to provide additional shaft support, and is locked to the shaft by specially designed set screws, an eccentric self-locking collar or a concentric collar. The wide-inner-ring ball bearings also are available with cylindrical or spherical outside diameters (O.D.). The cylindrical or straight O.D. type is used for mounting in straight-bored housings. The spherical O.D. type must be mounted in a corresponding spherical seat and is used to compensate for shaft or housing misalignments.

### WIDE-INNER-RING BALL BEARINGS WITH ECCENTRIC LOCKING COLLARS

The following series are available with the eccentric cam (self-locking) collar. See installation instructions in table A-20 on page A-29.

#### RR SERIES

These bearings feature the flareout, contact-type R-seal which encloses a synthetic rubber-impregnated washer between two metal caps (fig. A-9). Most sizes incorporate the shroud-seal design. R-seal wide-inner-ring ball bearings are available in the following non-relubricatable variations: KR (one seal, cylindrical O.D.), KRR (two seals, cylindrical O.D.) and KRRB (two seals, spherical O.D.). Relubricatable versions are: G-KRR, G-KRRB and GN-KRRB (heavy-duty).



Fig. A-9. RR series.

#### RA-RR SERIES

The RA-RR series features an extended inner ring and self-locking collar for simple and effective shaft retention in a standard-series bearing (fig. A-10). The positive contact, land-riding R-seal provides improved protection against the heavy contamination encountered in many applications. All sizes have a heat-stabilized, moisture-conditioned 6/6 nylon retainer, which has proven effective under conditions of misalignment. RA-RR extended inner-ring bearings are available as RA-RR (two-seals, straight O.D.) and RA-RRB (two seals, spherical O.D.). Relubricatable versions are GRA-RR and GRA-RRB.



Fig. A-10. RA-RR series.

#### LL SERIES

These bearings are dimensionally interchangeable with the RR series, but have non-contact labyrinth seals and steel cages for low torque, high speed and higher temperature service (up to 177° C [350° F]).

### TRI-PLY SEAL SERIES

Tri-ply seal bearings are designed for environments where severe conditions and moisture are present (fig. A-11). The one-piece tri-ply seals incorporate a highly effective seal design molded to an exterior shroud cap. The shroud cap protects the seal lips from fiber wrap and abrasion while enhancing the overall sealing effectiveness of the unit. All units incorporate the self-locking collar and have a nylon retainer. Tri-ply seal bearings are available in both a non-relubricatable (KPPB) and relubricatable version (G-KPPB).



**Fig. A-11. Tri-ply seal series.**

### EXTERNAL SELF-ALIGNING SERIES

The construction of this series permits the inner assembly, which contains an open-type ball bearing with spherical O.D. to align in the seat of the mating outer ring (fig. A-12). The seat of this outer ring is matched with the spherical O.D. of the ball bearing outer ring providing unrestricted self-alignment and allowing the inner assembly to become square and true with the shaft. Self-aligning units are available in both standard SM-S or heavy SMN-S series.



**Fig. A-12. External self-aligning series.**

### RA-DD-SERIES BEARINGS

The RA-DD-series bearings are extended inner-ring types with cam locking collars (fig. A-13). They incorporate two close-fitting, non-contact grease shields to effectively retain lubricant and provide protection against harmful contaminants. The non-contact metallic shields provide improved high-speed and low-torque performance required for high-speed applications such as printing presses and tissue manufacturing.

The 6/6 molded nylon retainer has proven effective under conditions of misalignment. These bearings are dimensionally interchangeable and have the same load capacities as the RA-RR series. Available in 15.88 mm – 38.10 mm ( $\frac{5}{8}$  in. –  $1\frac{1}{2}$  in.) shaft sizes.



**Fig. A-13. RA-DD series.**

### WIDE-INNER-RING BALL BEARINGS WITH CONCENTRIC COLLARS

#### GC SERIES

The GC series wide-inner-ring ball bearings are relubricatable with spherical outside diameters, nylon retainers and shroud seals (fig. A-14). The metal shroud maintains tight seal contact against the inner ring and shields the rubber seals from damage due to dirt or fiber wrap. The concentric collar is locked to the shaft by two set screws, located 120 degrees apart, mated with threaded holes in the collar and drilled holes in the bearing inner ring.



**Fig. A-14. GC series.**

#### YM MEDIUM-DUTY SERIES

The Timken medium-duty series offers reliable performance and extended life for applications that carry heavier loads (fig. A-15). This series has been designed with a combination of premium features – superfinished raceways and a nylon-patch set screw locking device, designed for demanding conditions. These bearing inserts will operate with reduced levels of noise, vibration and friction and are the choice antifriction component for saw and paper mill applications, fan and blower assemblies, food and grain handling, and conveyor systems.



**Fig. A-15. YM series.**

### CAM (SELF-LOCKING) COLLAR INSTALLATION INSTRUCTIONS

The self-locking collar eliminates the need for locknuts, washers, shoulders, sleeves and adapters. With various seal and inner width variations for many agricultural and industrial applications, self-locking collars are the easiest housed units to install.

The locking collar has a counterbored recess made purposely eccentric to the collar bore. When assembled on the shaft, this eccentric recess engages or mates with an eccentric cam end of a bearing's inner ring. The collar is engaged on the inner cam of the bearing.

This assembly grips the shaft tightly with a positive binding action that increases with use. No adjustments of any kind are necessary. The collar set screw provides supplementary locking.

TABLE A-20. CAM COLLAR INSTALLATION



1. Observe cam design of the wide inner ring and self-locking collar.



2. Mate the cam of the collar with the cam of the wide inner ring.



3. Press the locking collar against the wide inner ring and turn in the direction of shaft rotation until tightly engaged.



4. With drift pin in collar hole, tap lightly in direction of shaft rotation to lock.

For stationary shafts and outer ring rotation, turn the collar in opposite direction of rotation.



5. Tighten set screw in collar.

## **WIDE-INNER-RING BALL BEARINGS WITH SET SCREW LOCKING DEVICE**

The following series are available with the set screw locking device with special set screws that are resistant to loosening during operation.

### **Y SERIES**

Full-width, inner-ring Y-series bearings increase shaft support in heating, ventilation and air conditioning (HVAC) systems, conveyors and other industrial applications (fig. A-16). They feature superfinished raceways, grade-10 balls and anti-backout nylon-patch set screws. Flexible 6/6 nylon retainers and land-riding shroud seals ensure excellent performance. They are factory-prelubricated. Relubricatable set screw mounting feature is ideal for reversing applications. To protect the shaft with Shaft Guarding Technology™ (page A-31), add suffix SGT to the part number when ordering.



**Fig. A-16. Y series.**

### **YA SERIES**

The YA-series relubricatable and non-relubricatable bearings are an extended inner-ring type with specially designed set screws (fig. A-17). Positive-contact, land-riding R-seals provide protection against harmful contaminants and retain lubricant.

Set screw series bearings are available in both non-relubricatable version YA and relubricatable version GYA-RRB. Both types have nylon retainers.



**Fig. A-17. YA series.**

### **ER SERIES**

This series offers industry-standard mounting dimensions and standard nomenclature for a large variety of sizes of relubricatable, extended inner-ring bearings for through-bored housings (fig. A-18). All bearings in this series have nylon retainers and are equipped with snap rings, eliminating the need for machining housing shoulders. ER bearings are designed with a unique set screw locking device that locks the bearing to the shaft and is resistant to loosening during operation. Positive-contact, land-riding R-seals provide protection against harmful contaminants and retain lubricant. All ER bearings are black-oxide-coated for corrosion resistance. Ideal for low-starting and running-torque applications. To protect the shaft with Shaft Guarding Technology (page A-31), add suffix SGT to the part number when ordering.



**Fig. A-18. ER series.**

## SHAFT GUARDING TECHNOLOGY™ FOR SET SCREW LOCKING DEVICES

Housed units with Timken Shaft Guarding Technology use a stainless-steel, hardened band to transfer gripping pressure on the shaft. Unlike traditional set screws, which can dig into the shaft, there are no nicks, raised metal or permanent shaft damage when using Shaft Guarding Technology. The stainless band won't corrode on the shaft.

Timken Shaft Guarding Technology is designed to exceed gripping application requirements, maintain dimensional integrity and reduce fretting corrosion. This is a preferred solution when shaft replacement is costly.

### Housed units with Shaft Guarding Technology™:

- Are faster and easier to install and remove.
- Reduce the number of shaft replacements.
- Decrease overall system costs.

### Tight grip offers protection.

- Two set screws and a nylon patch at a 90-degree separation provide strong holding capability with minimal distortion.
- Groove running beneath the set screws in the inner ring bore keeps the band in place.
- Hardened stainless-steel band helps protect the shaft from damage.
- Longer inner ring along the shaft (ABMA compliant) improves shaft support and reduces bearing misalignment.
- Timken thin-dense chrome (TDC™) optional.
- Seal options include three-piece R-seal for normal-to-high contamination environments and L-seal for higher speeds and temperatures.
- Choice of housing configurations.

### Industries and applications:

- Rubber and plastic.
- Agriculture (combines and implements).
- Forest products (paper, tissue, newsprint, fine paper).
- Industrial machinery.
  - Fans and blowers.
  - Canning and bottling.
  - Conveyors.
  - Food processing.
  - Printing presses.
  - Packaging.
  - Textiles.

### INDUSTRIAL SERIES

#### KR, KRR, KRRB NON-RELUBRICATABLE TYPES

- Designed for extremely dirty or wet conditions.
- Feature R-seals with flared lips that firmly contact the ground O.D. of the inner ring.
- R-seals provide a positive seal against dirt and other contaminants, while effectively retaining the lubricant.
- Equipped with shroud-seals, providing extra effectiveness and protection.
- Extra-wide design provides additional shaft support and extra-large grease capacity.

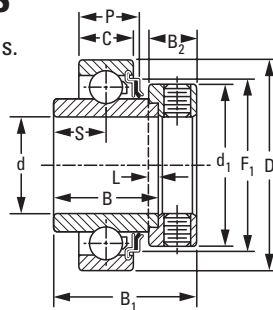
#### Suggested shaft tolerances:

1/2 in. – 1 15/16 in., nominal to -0.013 mm, -0.0005 in.;

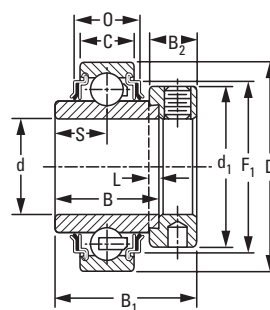
2 in. – 2 15/16 in., nominal to -0.025 mm, -0.0010 in.

#### To order, specify bearing number followed by "+ COL".

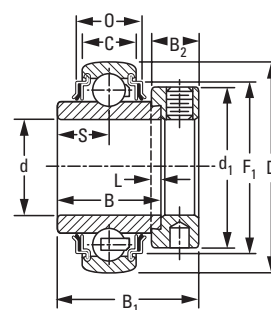
Example: 1103KRRB + COL.



**KR One Seal  
Cylindrical O.D.**



**KRR Two Seals  
Cylindrical O.D.**



**KRRB Two Seals  
Spherical O.D.**

| Bearing No.        |                | Collar No. | Basic Outer-Ring Size | Shaft Dia. | O.D.   | Ring Widths |                      | S      | L      | d <sub>1</sub> | B <sub>2</sub> | B <sub>1</sub> | F <sub>1</sub> | O      | P      | Brg. and Collar Wt. | Static Load Rating | Extended Dynamic Load Rating |
|--------------------|----------------|------------|-----------------------|------------|--------|-------------|----------------------|--------|--------|----------------|----------------|----------------|----------------|--------|--------|---------------------|--------------------|------------------------------|
| Cylindrical O.D.   | Spherical O.D. |            |                       |            |        | Inner       | Outer                |        |        |                |                |                |                |        |        |                     |                    |                              |
|                    |                |            |                       | d          | D      | B           | C                    | mm in. | mm in. | mm in.         | mm in.         | mm in.         | mm in.         | mm in. | mm in. | kg lbs.             | N lbs.             | N lbs.                       |
| – 1008KRR (KRRB)   |                | S1008K     |                       | 1/2        |        |             |                      |        |        |                |                |                |                |        |        | 0.154               | 0.34               |                              |
| 1010KR             | 1010KRR (KRRB) | S1010K     | 203                   | 5/8        | 40     | 27.78       | 12                   | 13.90  | 4.0    | 28.6           | 13.5           | 37.3           | 34.01          | 16.56  | 14.27  | 0.145               | 0.32               | 4700                         |
| – 1011KRR (KRRB)   |                | S1011K     |                       | 11/16      | 1.5748 | 1 3/32      | 0.472                | 35/64  | 5/32   | 11/8           | 17/32          | 1 15/32        | 1.339          | 0.652  | 0.562  | 0.122               | 0.27               | 1060                         |
| – E17KRR (KRRB)    |                | SE17K      |                       | 17         |        |             |                      |        |        |                |                |                |                |        |        | 0.122               | 0.27               |                              |
| 1012KR             | 1012KRR (KRRB) | S1012K     | 204                   | 3/4        | 47     | 34.13       | 14                   | 17.10  | 4.0    | 33.3           | 13.5           | 43.7           | 38.91          | 16.56  | 15.29  | 0.204               | 0.45               | 6200                         |
| – E20KRR (KRRB)    |                | SE20K      |                       | 20         | 1.8504 | 1 11/32     | 0.551                | 43/64  | 5/32   | 1 5/16         | 17/32          | 1 23/32        | 1.532          | 0.652  | 0.602  | 0.204               | 0.45               | 1400                         |
| – 1013KRR (KRRB)   |                | S1013K     |                       | 13/16      |        |             |                      |        |        |                |                |                |                |        |        | 0.286               | 0.63               |                              |
| – 1014KRR (KRRB)   |                | S1014K     |                       | 7/8        |        |             |                      |        |        |                |                |                |                |        |        | 0.272               | 0.60               |                              |
| 1015KR             | 1015KRR (KRRB) | S1015K     | 205                   | 15/16      | 52     | 34.92       | 15                   | 17.50  | 4.0    | 38.1           | 13.5           | 44.1           | 45.19          | 16.66  | 15.82  | 0.254               | 0.56               | 7700                         |
| 1100KR             | 1100KRR (KRRB) | S1100K     |                       | 1          | 2.0472 | 1 3/8       | 0.591                | 11/16  | 5/32   | 1 1/2          | 17/32          | 1 47/64        | 1.779          | 0.656  | 0.623  | 0.231               | 0.51               | 1730                         |
| – E25KRR (KRRB)    |                | SE25K      |                       | 25         |        |             |                      |        |        |                |                |                |                |        |        | 0.231               | 0.51               | 3550                         |
| – 1101 (KRRB)      |                | S1101K     |                       | 1 1/16     |        |             |                      |        |        |                |                |                |                |        |        | 0.413               | 0.91               |                              |
| 1102KR             | 1102KRR (KRRB) | S1102K     |                       | 1 1/8      |        |             |                      |        |        |                |                |                |                |        |        | 0.404               | 0.89               |                              |
| 1103KR             | 1103KRR (KRRB) | S1103K     | 206                   | 1 3/16     | 62     | 36.51       | 16                   | 18.30  | 4.0    | 44.4           | 15.9           | 48.4           | 52.53          | 19.56  | 17.78  | 0.376               | 0.83               | 11100                        |
| – 1103KRR3 (KRRB3) |                | S1103K3    |                       | 1 1/4      | 2.4409 | 1 7/16      | 0.630 <sup>(1)</sup> | 23/32  | 5/32   | 1 3/4          | 5/8            | 1 29/32        | 2.068          | 0.770  | 0.700  | 0.349               | 0.77               | 2500                         |
| – E30KRR (KRRB)    |                | SE30K      |                       | 30         |        |             |                      |        |        |                |                |                |                |        |        | 0.376               | 0.83               | 4900                         |
| 1104KR             | 1104KRR (KRRB) | S1104K     |                       | 1 1/4      |        |             |                      |        |        |                |                |                |                |        |        | 0.653               | 1.44               |                              |
| – 1105KRR (KRRB)   |                | S1105K     |                       | 1 5/16     |        |             |                      |        |        |                |                |                |                |        |        | 0.603               | 1.33               |                              |
| – 1106KRR (KRRB)   |                | S1106K     | 207                   | 1 3/8      | 72     | 37.70       | 17                   | 18.85  | 4.0    | 54.0           | 17.1           | 51.2           | 60.55          | 19.69  | 18.34  | 0.572               | 1.26               | 15100                        |
| 1107KR             | 1107KRR (KRRB) | S1107K     |                       | 1 7/16     | 2.8346 | 1 31/64     | 0.669 <sup>(2)</sup> | 0.742  | 5/32   | 2 1/8          | 43/64          | 2 1/64         | 2.384          | 0.775  | 0.722  | 0.544               | 1.20               | 3400                         |
| – E35KRR (KRRB)    |                | SE35K      |                       | 35         |        |             |                      |        |        |                |                |                |                |        |        | 0.572               | 1.26               | 6400                         |

<sup>(1)</sup>Spherical O.D. outer-ring width is 18 mm (0.709 in.).

<sup>(2)</sup>Spherical O.D. outer-ring width is 19 mm (0.748 in.).

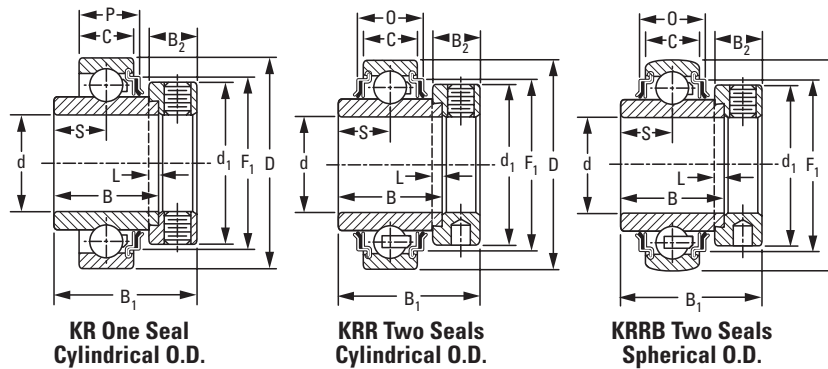
<sup>(3)</sup>Spherical O.D. outer-ring width is 21 mm (0.827 in.).

<sup>(4)</sup>Available with spherical O.D. To order, add suffix B. Example 1115KRRB.

<sup>(5)</sup>Spherical O.D. outer-ring width is 22 mm (0.866 in.).

NOTE: Bore tolerances: 1/2 in. – 2 3/16 in. nominal to +0.013 mm, +0.0005;  
2 1/4 in. – 2 15/16 in. nominal to +0.015 mm, +0.0006 in.

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| Bearing No.           |                |        | Collar No. | Basic Outer-Ring Size | Shaft Dia. | O.D.      | Ring Widths |                      |           |                |                |                |                |                |           |           | Brg. and Collar Wt. | Static Load Rating | Extended Dynamic Load Rating |       |
|-----------------------|----------------|--------|------------|-----------------------|------------|-----------|-------------|----------------------|-----------|----------------|----------------|----------------|----------------|----------------|-----------|-----------|---------------------|--------------------|------------------------------|-------|
| Cylindrical O.D.      | Spherical O.D. | Inner  |            |                       |            |           | Outer       | S                    | L         | d <sub>1</sub> | B <sub>2</sub> | B <sub>1</sub> | F <sub>1</sub> | O              | P         |           |                     |                    |                              |       |
|                       |                |        |            |                       |            |           |             |                      |           |                |                |                |                |                |           |           |                     |                    |                              |       |
|                       |                |        |            |                       | d          | D         | B           | C                    | S         | L              | d <sub>1</sub> | B <sub>2</sub> | B <sub>1</sub> | F <sub>1</sub> | O         | P         |                     | C <sub>o</sub>     | C <sub>E</sub>               |       |
|                       |                |        |            |                       | in.<br>mm  | mm<br>in. | mm<br>in.   | mm<br>in.            | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in.      | mm<br>in.      | mm<br>in.      | mm<br>in. | mm<br>in. | kg<br>lbs.          | N<br>lbs.          | N<br>lbs.                    |       |
| 1108KR                | 1108KRR        | (KRRB) | S1108KT    | 208                   | 1 1/2      | 80        | 42.86       | 18                   | 21.40     | 4.8            | 60.3           | 18.3           | 56.4           | 67.79          | 20.45     | 19.28     | 0.789               | 1.74               | 19600                        | 36000 |
| —                     | 1109KRR        | (KRRB) | S1109KT    |                       | 1 9/16     | 3.1496    | 1 11/16     | 0.709 <sup>(3)</sup> | 27/32     | 3/16           | 2 3/8          | 23/32          | 2 7/32         | 2.669          | 0.805     | 0.757     | 0.739               | 1.63               | 4400                         | 8150  |
| —                     | E40KRR         | (KRRB) | SE40K      |                       | 40         |           |             |                      |           |                |                |                |                |                |           |           | 0.739               | 1.63               |                              |       |
| —                     | 1110KRR        | (KRRB) | S1110K     | 209                   | 1 5/8      |           |             |                      |           |                |                |                |                |                |           |           | 0.898               | 1.98               |                              |       |
| 1111KR                | 1111KRR        | (KRRB) | S1111K     |                       | 1 11/16    | 85        | 42.86       | 19                   | 21.40     | 4.8            | 63.5           | 18.3           | 56.4           | 73.86          | 24.18     | 21.59     | 0.848               | 1.87               | 20000                        | 36000 |
| 1112KR                | 1112KRR        | (KRRB) | S1112K     |                       | 1 3/4      | 3.3465    | 1 11/16     | 0.748                | 27/32     | 3/16           | 2 1/2          | 23/32          | 2 7/32         | 2.908          | 0.952     | 0.850     | 0.825               | 1.82               | 4500                         | 8150  |
| —                     | E45KRR         | (KRRB) | SE45K      |                       | 45         |           |             |                      |           |                |                |                |                |                |           |           | 0.825               | 1.82               |                              |       |
| —                     | 1114KRR        | (KRRB) | S1114K     | 210                   | 1 7/8      | 90        | 49.21       | 20                   | 24.60     | 4.8            | 69.9           | 18.3           | 62.7           | 77.7           | 24.51     | 22.25     | 1.057               | 2.33               | 22709                        | 39000 |
| 1115KR <sup>(4)</sup> | 1115KRR        | (KRRB) | S1115K     |                       | 1 15/16    | 3.5433    | 1 15/16     | 0.787 <sup>(5)</sup> | 31/32     | 3/16           | 2 3/4          | 23/32          | 2 15/32        | 3.059          | 0.965     | 0.876     | 1.000               | 2.18               | 5100                         | 8800  |
| —                     | E50KRR         | (KRRB) | SE50K      |                       | 50         |           |             |                      |           |                |                |                |                |                |           |           | 1.000               | 2.18               |                              |       |
| 1200KR                | 1200KRR        | (KRRB) | S1200K     | 211                   | 2          |           |             |                      |           |                |                |                |                |                |           |           | 1.520               | 3.35               |                              |       |
| —                     | 1202KRR        | (KRRB) | S1202K     |                       | 2 1/8      | 100       | 55.56       | 21                   | 27.80     | 4.8            | 76.2           | 20.6           | 71.4           | 87.17          | 27.41     | 24.21     | 1.356               | 2.99               | 28500                        | 48000 |
| 1203KR                | 1203KRR        | (KRRB) | S1203K     |                       | 2 3/16     | 3.9370    | 2 3/16      | 0.827                | 1 3/32    | 3/16           | 3              | 13/16          | 2 13/16        | 3.432          | 1.079     | 0.953     | 1.306               | 2.88               | 6400                         | 10800 |
| —                     | E55KRR         | (KRRB) | SE55K      |                       | 55         |           |             |                      |           |                |                |                |                |                |           |           | 1.306               | 2.88               |                              |       |
| —                     | 1204KRR        | (KRRB) | S1204K     | 212                   | 2 1/4      | 110       | 61.91       | 22                   | 31.00     | 6.4            | 84.1           | 22.2           | 77.8           | 94.89          | 30.02     | 26.01     | 1.715               | 3.78               | 35600                        | 58500 |
| 1207KR                | 1207KRR        | (KRRB) | S1207K     |                       | 2 7/16     | 4.3307    | 2 7/16      | 0.866                | 1 7/32    | 1/4            | 3 5/16         | 7/8            | 3 1/16         | 3.736          | 1.182     | 1.024     | 1.565               | 3.45               | 8000                         | 13200 |
| —                     | E60KRR         | (KRRB) | SE60K      |                       | 60         |           |             |                      |           |                |                |                |                |                |           |           | 1.615               | 3.56               |                              |       |
| —                     | 1215KRR        | (KRRB) | S1215K     | 215                   | 2 15/16    | 130       | 74.61       | 25                   | 37.30     | 6.4            | 101.6          | 23.8           | 91.2           | 113.13         | 34.03     | —         | 2.640               | 5.82               | 43600                        | 69500 |
| —                     | E75KRR         | (KRRB) | SE75K      |                       | 75         | 5.1181    | 2 15/16     | 0.984                | 1 15/32   | 1/4            | 4              | 15/16          | 3 5/8          | 4.454          | 1.340     |           | 2.640               | 5.82               | 9800                         | 15600 |

<sup>(1)</sup>Spherical O.D. outer-ring width is 18 mm (0.709 in.).

<sup>(2)</sup>Spherical O.D. outer-ring width is 19 mm (0.748 in.).

<sup>(3)</sup>Spherical O.D. outer-ring width is 21 mm (0.827 in.).

<sup>(4)</sup>Available with spherical O.D. To order, add suffix B. Example 1115KRRB.

<sup>(5)</sup>Spherical O.D. outer-ring width is 22 mm (0.866 in.).

NOTE: Bore tolerances: 1/2 in. – 2 3/16 in. nominal to +0.013 mm, +0.0005;  
2 3/4 in. – 2 15/16 in. nominal to +0.015 mm, +0.0006 in.

### G-KRR, G-KRRB RELUBRICATABLE TYPES

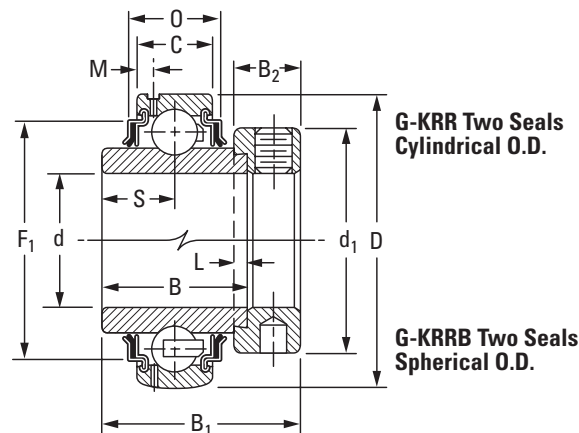
- The G-KRR-series wide-inner-ring ball bearings are the same as the RR series and have a provision for relubrication.
- These bearings are designed for extremely dirty or wet conditions.
- The bearing includes R-seals with flared lips that firmly contact the ground O.D. of the inner ring. The inner ring provides a positive seal against dust, dirt and other contaminants, and effectively retains the lubricant.
- G-KRR-series bearings are equipped with shroud-seals, providing extra effectiveness and protection.
- The extra-wide design provides additional shaft support and extra-large grease capacity.

#### Suggested shaft tolerances:

- 1/2 in. – 1 15/16 in., nominal to -0.013 mm, -0.0005 in.;  
2 in. – 2 15/16 in., nominal to -0.025 mm, -0.0010 in.

#### To order, specify bearing number followed by "+ COL".

Example: G1010KRRB + COL.



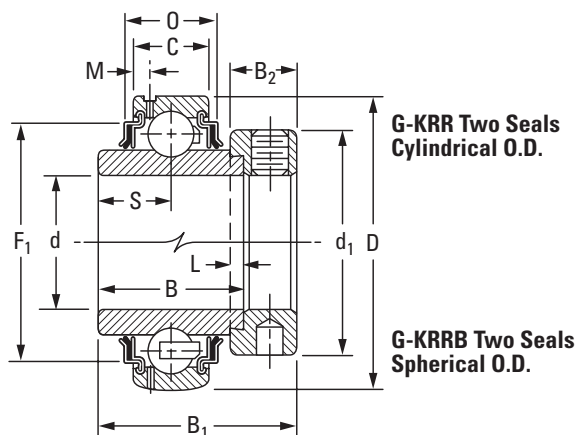
| Bearing No.      |                | Collar No. | Basic Outer-Ring Size | Shaft Dia. | O.D.   | Ring Widths |       |       |      |                |                |       |                |                |       | Brg. and Collar Wt. |      | Static Load Rating | Extended Dynamic Load Rating |
|------------------|----------------|------------|-----------------------|------------|--------|-------------|-------|-------|------|----------------|----------------|-------|----------------|----------------|-------|---------------------|------|--------------------|------------------------------|
| Cylindrical O.D. | Spherical O.D. |            |                       |            |        | Inner       | Outer | S     | L    | d <sub>1</sub> | B <sub>2</sub> | M     | B <sub>1</sub> | F <sub>1</sub> | O     |                     |      |                    |                              |
|                  |                |            |                       | d          | D      | B           | C     |       |      |                |                |       |                |                |       | kg                  | lbs. | C <sub>0</sub>     | C <sub>E</sub>               |
|                  |                |            |                       | in.        | mm     | mm          | mm    | mm    | mm   | mm             | mm             | mm    | mm             | mm             | mm    |                     |      | N                  | N                            |
|                  |                |            |                       | mm         | in.    | in.         | in.   | in.   | in.  | in.            | in.            | in.   | in.            | in.            | in.   |                     |      | lbs.               | lbs.                         |
| –                | G1008KRRB      | S1008K     |                       | 1/2        |        |             |       |       |      |                |                |       |                |                |       | 0.154               | 0.34 |                    |                              |
| –                | G1009KRRB      | S1009K     |                       | 9/16       |        |             |       |       |      |                |                |       |                |                |       | 0.141               | 0.31 |                    |                              |
| G1010KRR         | G1010KRRB      | S1010K     | 203                   | 5/8        | 40     | 27.78       | 12    | 13.90 | 4.0  | 28.6           | 13.5           | 2.72  | 37.3           | 34.01          | 16.56 | 0.141               | 0.31 | 4700               | 10700                        |
| G1011KRR         | G1011KRRB      | S1011K     |                       | 11/16      | 1.5748 | 1 3/32      | 0.472 | 35/64 | 5/32 | 1 1/8          | 17/32          | 0.107 | 1 15/32        | 1.339          | 0.652 | 0.118               | 0.26 | 1060               | 2400                         |
| GE17KRR          | GE17KRRB       | SE17K      |                       | 17         |        |             |       |       |      |                |                |       |                |                |       | 0.118               | 0.26 |                    |                              |
| G1012KRR         | G1012KRRB      | S1012K     | 204                   | 3/4        | 47     | 34.13       | 14    | 17.10 | 4.0  | 33.3           | 13.5           | 3.43  | 43.7           | 38.91          | 17.30 | 0.204               | 0.45 | 6200               | 14300                        |
| GE20KRR          | GE20KRRB       | SE20K      |                       | 20         | 1.8504 | 1 11/32     | 0.551 | 43/64 | 5/32 | 1 5/16         | 17/32          | 0.135 | 1 23/32        | 1.532          | 0.681 | 0.204               | 0.45 | 1400               | 3200                         |
| –                | G1013KRRB      | S1013K     |                       | 13/16      |        |             |       |       |      |                |                |       |                |                |       | 0.286               | 0.63 |                    |                              |
| G1014KRR         | G1014KRRB      | S1014K     |                       | 7/8        |        |             |       |       |      |                |                |       |                |                |       | 0.263               | 0.58 |                    |                              |
| G1015KRR         | G1015KRRB      | S1015K     | 205                   | 15/16      | 52     | 34.92       | 15    | 17.50 | 4.0  | 38.1           | 13.5           | 3.86  | 44.4           | 45.19          | 16.66 | 0.240               | 0.53 | 7700               | 15800                        |
| G1100KRR         | G1100KRRB      | S1100K     |                       | 1          | 2.0472 | 1 3/8       | 0.591 | 11/16 | 5/32 | 1 1/2          | 17/32          | 0.152 | 1 3/4          | 1.779          | 0.656 | 0.227               | 0.50 | 1730               | 3550                         |
| GE25KRR          | GE25KRRB       | SE25K      |                       | 25         |        |             |       |       |      |                |                |       |                |                |       | 0.227               | 0.50 |                    |                              |
| G1101KRR         | G1101KRRB      | S1101K     |                       | 1 1/16     |        |             |       |       |      |                |                |       |                |                |       | 0.417               | 0.92 |                    |                              |
| G1102KRR         | G1102KRRB      | S1102K     |                       | 1 1/8      |        |             |       |       |      |                |                |       |                |                |       | 0.404               | 0.89 |                    |                              |
| G1103KRR         | G1103KRRB      | S1103K     | 206                   | 1 3/16     | 62     | 36.51       | 18    | 18.30 | 4.0  | 44.1           | 15.9           | 3.96  | 48.4           | 52.53          | 21.56 | 0.376               | 0.83 | 11100              | 21800                        |
| –                | G1103KRRB3     | S1103K3    |                       | 1 1/4      | 2.4409 | 1 7/16      | 0.709 | 23/32 | 5/32 | 1 47/64        | 5/8            | 0.156 | 1 29/32        | 2.068          | 0.849 | 0.349               | 0.77 | 2500               | 4900                         |
| GE30KRR          | GE30KRRB       | SE30K      |                       | 30         |        |             |       |       |      |                |                |       |                |                |       | 0.376               | 0.83 |                    |                              |
| G1104KRR         | G1104KRRB      | S1104K     |                       | 1 1/4      |        |             |       |       |      |                |                |       |                |                |       | 0.653               | 1.44 |                    |                              |
| –                | G1105KRRB      | S1105K     |                       | 1 5/16     |        |             |       |       |      |                |                |       |                |                |       | 0.617               | 1.36 |                    |                              |
| G1106KRR         | G1106KRRB      | S1106K     | 207                   | 1 3/8      | 72     | 37.70       | 19    | 18.85 | 4.0  | 54.0           | 17.1           | 3.68  | 51.2           | 60.55          | 21.74 | 0.585               | 1.29 | 15100              | 28500                        |
| G1107KRR         | G1107KRRB      | S1107K     |                       | 1 7/16     | 2.8346 | 1 31/64     | 0.748 | 0.742 | 5/32 | 2 1/8          | 43/64          | 0.145 | 2 1/64         | 2.384          | 0.856 | 0.562               | 1.24 | 3400               | 6400                         |
| GE35KRR          | GE35KRRB       | SE35K      |                       | 35         |        |             |       |       |      |                |                |       |                |                |       | 0.585               | 1.29 |                    |                              |
| G1108KRR         | G1108KRRB      | S1108KT    |                       | 1 1/2      |        |             |       |       |      |                |                |       |                |                |       | 0.812               | 1.79 |                    |                              |
| –                | G1109KRRB      | S1109KT    | 208                   | 1 9/16     | 80     | 42.86       | 21    | 21.40 | 4.8  | 60.3           | 18.3           | 4.06  | 56.4           | 67.79          | 23.44 | 0.771               | 1.70 | 19600              | 36000                        |
| GE40KRR          | GE40KRRB       | SE40K      |                       | 40         | 3.1496 | 1 11/16     | 0.827 | 27/32 | 3/16 | 2 3/8          | 23/32          | 0.160 | 2 7/32         | 2.669          | 0.923 | 0.771               | 1.70 | 4400               | 8150                         |

<sup>(1)</sup>Spherical O.D. outer-ring width is 22 mm, 0.866 in. 2 1/4 in. – 2 15/16 in., nominal to 0.015 mm, +0.0006 in.

<sup>(2)</sup>Spherical O.D. outer-ring width is 24 mm (0.945 in.).

NOTE: Bore tolerances: 1/2 in. – 2 3/16 in., nominal to +0.013 mm, +0.0005 in.

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| Bearing No.      |                | Collar No. | Basic Outer-Ring Size | Shaft Dia.<br>d | O.D.<br>D | Ring Widths |                      |           |           |                |                |           |                |                |           | Brg. and Collar Wt. |      | Static Load Rating<br>C <sub>0</sub> | Extended Dynamic Load Rating<br>C <sub>E</sub> |
|------------------|----------------|------------|-----------------------|-----------------|-----------|-------------|----------------------|-----------|-----------|----------------|----------------|-----------|----------------|----------------|-----------|---------------------|------|--------------------------------------|------------------------------------------------|
| Cylindrical O.D. | Spherical O.D. |            |                       |                 |           | Inner<br>B  | Outer<br>C           | S         | L         | d <sub>1</sub> | B <sub>2</sub> | M         | B <sub>1</sub> | F <sub>1</sub> | O         |                     |      |                                      |                                                |
|                  |                |            |                       | in.<br>mm       | mm<br>in. | mm<br>in.   | mm<br>in.            | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in. | kg<br>lbs.          | lbs. | N<br>lbs.                            | N<br>lbs.                                      |
| G1110KRR         | G1110KRRB      | S1110K     | 209                   | 1 5/8           |           |             |                      |           |           |                |                |           |                |                |           | 0.925               | 2.04 |                                      |                                                |
| G1111KRR         | G1111KRRB      | S1111K     |                       | 1 11/16         | 85        | 42.86       | 22                   | 21.40     | 4.8       | 63.5           | 18.3           | 4.55      | 56.4           | 73.86          | 27.18     | 0.880               | 1.94 | 20500                                | 36300                                          |
| G1112KRR         | G1112KRRB      | S1112K     |                       | 1 3/4           | 3.3465    | 1 11/16     | 0.866                | 27/32     | 3/16      | 2 1/2          | 23/32          | 0.179     | 2 7/32         | 2.908          | 1.07      | 0.835               | 1.84 | 4600                                 | 8160                                           |
| GE45KRR          | GE45KRRB       | SE45K      |                       | 45              |           |             |                      |           |           |                |                |           |                |                |           | 0.835               | 1.84 |                                      |                                                |
| —                | G1113KRR       | S1113K     | 210                   | 1 13/16         |           |             |                      |           |           |                |                |           |                |                |           | 1.116               | 2.46 |                                      |                                                |
| —                | G1114KRRB      | S1114K     |                       | 1 7/8           | 90        | 49.21       | 23                   | 24.60     | 4.8       | 69.9           | 18.3           | 4.70      | 62.7           | 77.70          | 27.51     | 1.034               | 2.28 | 22700                                | 39200                                          |
| G1115KRR         | G1115KRRB      | S1115K     |                       | 1 15/16         | 3.5433    | 1 15/16     | 0.903 <sup>(1)</sup> | 31/32     | 3/16      | 2 3/4          | 23/32          | 0.185     | 2 15/32        | 3.059          | 1.083     | 1.016               | 2.24 | 5100                                 | 8800                                           |
| GE50KRR          | GE50KRRB       | SE50K      |                       | 50              |           |             |                      |           |           |                |                |           |                |                |           | 1.016               | 2.24 |                                      |                                                |
| G1200KRR         | G1200KRRB      | S1200K     | 211                   | 2               |           |             |                      |           |           |                |                |           |                |                |           | 1.583               | 3.49 |                                      |                                                |
| —                | G1201KRRB      | S1201K     |                       | 2 1/16          |           |             |                      |           |           |                |                |           |                |                |           | 1.470               | 3.24 |                                      |                                                |
| —                | G1202KRRB      | S1202K     |                       | 2 1/8           | 100       | 55.56       | 25                   | 27.80     | 4.8       | 76.2           | 20.6           | 5.00      | 71.4           | 87.17          | 29.01     | 1.406               | 3.10 | 28500                                | 48000                                          |
| G1203KRR         | G1203KRRB      | S1203K     |                       | 2 3/16          | 3.9370    | 2 3/16      | 0.983 <sup>(2)</sup> | 1 3/32    | 3/16      | 3              | 13/16          | 0.197     | 2 13/16        | 3.432          | 1.142     | 1.365               | 3.01 | 6400                                 | 10800                                          |
| GE55KRR          | GE55KRRB       | SE55K      |                       | 55              |           |             |                      |           |           |                |                |           |                |                |           | 1.365               | 3.01 |                                      |                                                |
| —                | G1204KRRB      | S1204K     | 212                   | 2 1/4           |           |             |                      |           |           |                |                |           |                |                |           | 2.041               | 4.50 |                                      |                                                |
| —                | G1205KRRB      | S1205K     |                       | 2 5/16          |           |             |                      |           |           |                |                |           |                |                |           | 1.923               | 4.24 |                                      |                                                |
| —                | G1206KRRB      | S1206K     |                       | 2 3/8           | 110       | 61.91       | 27                   | 31.00     | 6.4       | 84.1           | 22.2           | 5.13      | 77.8           | 94.89          | 35.03     | 1.846               | 4.07 | 35600                                | 58800                                          |
| G1207KRR         | G1207KRRB      | S1207K     |                       | 2 7/16          | 4.3307    | 2 7/16      | 1.063                | 1 7/32    | 1/4       | 3 5/16         | 7/8            | 0.202     | 3 1/16         | 3.736          | 1.379     | 1.778               | 3.92 | 8000                                 | 13200                                          |
| GE60KRR          | GE60KRRB       | SE60K      |                       | 60              |           |             |                      |           |           |                |                |           |                |                |           | 1.846               | 4.07 |                                      |                                                |
| —                | G1210KRRB      | S1210K     | 214                   | 2 5/8           |           |             |                      |           |           |                |                |           |                |                |           | 2.681               | 5.91 |                                      |                                                |
| —                | G1211KRRB      | S1211K     |                       | 2 11/16         | 125       | 68.26       | 28                   | 34.10     | 6.4       | 96.8           | 23.8           | 5.08      | 79.4           | 109.17         | 35.94     | 2.585               | 5.70 | 43000                                | 69500                                          |
| —                | GE70KRRB       | SE70K      |                       | 70              | 4.9213    | 2 11/16     | 1.102                | 1 11/32   | 1/4       | 3 13/16        | 15/16          | 0.200     | 3 1/8          | 4.298          | 1.415     | 2.585               | 5.70 | 9650                                 | 15600                                          |
| —                | G1212KRRB      | S1212K     |                       | 2 3/4           |           |             |                      |           |           |                |                |           |                |                |           | 3.084               | 6.80 |                                      |                                                |
| —                | G1213KRRB      | S1213K     | 215                   | 2 13/16         |           |             |                      |           |           |                |                |           |                |                |           | 2.976               | 6.56 |                                      |                                                |
| —                | G1214KRRB      | S1214K     |                       | 2 7/8           | 130       | 74.61       | 29                   | 37.30     | 6.4       | 101.6          | 23.8           | 5.56      | 92.1           | 113.13         | 38.03     | 2.867               | 6.32 | 43600                                | 69500                                          |
| —                | G1215KRRB      | S1215K     |                       | 2 15/16         | 5.1181    | 2 15/16     | 1.142                | 1 15/32   | 1/4       | 4              | 15/16          | 0.219     | 3 5/8          | 4.454          | 1.497     | 2.753               | 6.07 | 9800                                 | 15600                                          |
| —                | GE75KRRB       | SE75K      |                       | 75              |           |             |                      |           |           |                |                |           |                |                |           | 2.753               | 6.07 |                                      |                                                |

<sup>(1)</sup>Spherical O.D. outer-ring width is 22 mm, 0.866 in. 2 1/4 in. — 2 15/16 in., nominal to 0.015 mm, +0.0006 in.

<sup>(2)</sup>Spherical O.D. outer-ring width is 24 mm (0.945 in.).

NOTE: Bore tolerances: 1/2 in. — 2 3/16 in., nominal to +0.013 mm, +0.0005 in.

### KL, KLB, KLL, KLLB SPECIAL SERIES, NON-RELUBRICATABLE TYPES

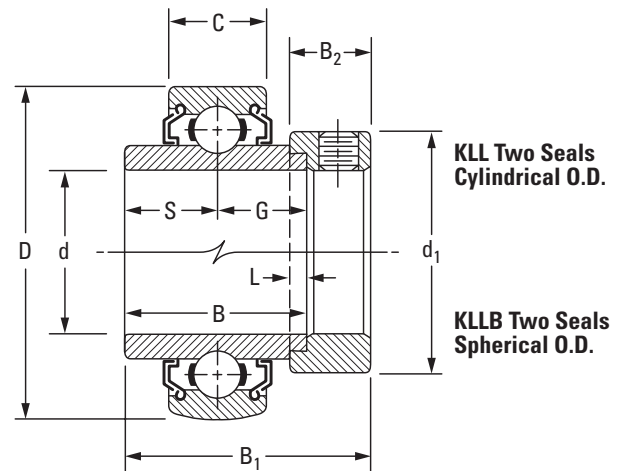
- These wide-inner-ring ball bearings have either one or two Mechani-Seals.
- Types KLB and KLLB have spherical outside diameters permitting self-alignment when mounted in a housing with a corresponding spherical seat.
- All four types are prelubricated at the factory and require no further lubrication.
- These bearings are suitable for higher-speed and/or higher-temperature applications.
- Because they incorporate non-contact seals, these bearings have very low rotational torque.

#### Suggested shaft tolerances:

1/2 in. – 1 15/16 in., nominal to -0.013 mm, -0.0005 in.;  
2 in. – 2 15/16 in., nominal to -0.025 mm, -0.0010 in.

#### To order, specify bearing number followed by "+ COL".

Example: 1100KLL + COL.



| Bearing No.      |                  |         | Collar No. | Basic Outer-Ring Size | Shaft Dia. d | O.D. D | Ring Widths |         | S(G)  | L    | d <sub>1</sub> | B <sub>2</sub> | B <sub>1</sub> | Brg. and Collar Wt. |      | Static Load Rating C <sub>0</sub> | Extended Dynamic Load Rating C <sub>E</sub> |
|------------------|------------------|---------|------------|-----------------------|--------------|--------|-------------|---------|-------|------|----------------|----------------|----------------|---------------------|------|-----------------------------------|---------------------------------------------|
| Cylindrical O.D. | Spherical O.D.   |         |            |                       |              |        | Inner B     | Outer C |       |      |                |                |                | kg                  | lbs. |                                   |                                             |
|                  |                  |         |            |                       | in.          | mm     | in.         | mm      | in.   | mm   | in.            | mm             | in.            |                     |      | N                                 | N                                           |
| 1008KL           | 1008KLL (KLLB)   | S1008K  | 203        | 1/2                   | 40           | 1.5748 | 27.78       | 12      | 13.89 | 3.97 | 28.58          | 13.49          | 37.31          | 0.168               | 0.37 | 4700                              | 10700                                       |
| —                | 1009KLL          | S1009K  |            |                       |              |        |             |         |       |      |                |                |                |                     |      |                                   |                                             |
| 1010KL           | 1010KLL (KLLB)   | S1010K  |            |                       |              |        |             |         |       |      |                |                |                |                     |      |                                   |                                             |
| 1011KL           | 1011KLL (KLLB)   | S1011K  |            |                       |              |        |             |         |       |      |                |                |                |                     |      |                                   |                                             |
| 1012KL           | 1012KLL (KLLB)   | S1012K  | 204        | 3/4                   | 47           | 1.8504 | 34.13       | 14      | 17.06 | 3.97 | 33.34          | 13.50          | 43.70          | 0.209               | 0.46 | 6200                              | 14300                                       |
| —                | —                | S1013K  |            |                       |              |        |             |         |       |      |                |                |                |                     |      |                                   |                                             |
| 1014KL           | 1014KLL (KLLB)   | S1014K  | 205        | 7/8                   | 52           | 2.0472 | 34.92       | 15      | 17.46 | 3.97 | 38.10          | 13.49          | 44.45          | 0.277               | 0.61 | 7700                              | 15800                                       |
| 1015KL           | 1015KLL (KLLB)   | S1015K  |            |                       |              |        |             |         |       |      |                |                |                |                     |      |                                   |                                             |
| 1100KL (KLB)     | 1100KLL (KLLB)   | S1100K  | 206        | 1                     | 62           | 2.4409 | 36.51       | 16      | 18.26 | 3.97 | 44.10          | 15.88          | 48.42          | 0.417               | 0.92 | 11100                             | 21800                                       |
| 1101KL           | —                | S1101K  |            |                       |              |        |             |         |       |      |                |                |                |                     |      |                                   |                                             |
| 1102KL           | 1102KLL (KLLB)   | S1102K  |            |                       |              |        |             |         |       |      |                |                |                |                     |      |                                   |                                             |
| 1103KL (KLB)     | 1103KLL (KLLB)   | S1103K  |            |                       |              |        |             |         |       |      |                |                |                |                     |      |                                   |                                             |
| 1103KL3          | 1103KLL3 (KLLB3) | S1103K3 | 207        | 1 1/4                 | 72           | 2.8346 | 37.70       | 17      | 18.85 | 3.97 | 54.00          | 17.46          | 51.20          | 0.617               | 1.36 | 15100                             | 28500                                       |
| 1104KL           | 1104KLL (KLLB)   | S1104K  |            |                       |              |        |             |         |       |      |                |                |                |                     |      |                                   |                                             |
| —                | 1105KLL (KLLB)   | S1105K  |            |                       |              |        |             |         |       |      |                |                |                |                     |      |                                   |                                             |
| 1106KL           | 1106KLL (KLLB)   | S1106K  |            |                       |              |        |             |         |       |      |                |                |                |                     |      |                                   |                                             |
| 1107KL (KLB)     | 1107KLL (KLLB)   | S1107K  | 208        | 1 1/2                 | 80           | 3.1496 | 42.86       | 18      | 21.43 | 4.76 | 60.32          | 18.26          | 56.36          | 0.821               | 1.81 | 17600                             | 36200                                       |
| 1108KL (KLB)     | 1108KLL (KLLB)   | S1108K  |            |                       |              |        |             |         |       |      |                |                |                |                     |      |                                   |                                             |
| —                | 1109KLL (KLLB)   | S1109K  |            |                       |              |        |             |         |       |      |                |                |                |                     |      |                                   |                                             |
| 1110KL           | 1110KLL (KLLB)   | S1110K  |            |                       |              |        |             |         |       |      |                |                |                |                     |      |                                   |                                             |
| 1111KL           | 1111KLL (KLLB)   | S1111K  | 209        | 1 5/8                 | 85           | 3.3465 | 42.86       | 19      | 21.43 | 4.76 | 60.35          | 18.26          | 56.36          | 0.934               | 2.06 | 20000                             | 36300                                       |
| 1112KL (KLB)     | 1112KLL (KLLB)   | S1112K  |            |                       |              |        |             |         |       |      |                |                |                |                     |      |                                   |                                             |
| 1114KL           | 1114KLL (KLLB)   | S1114K  |            |                       |              |        |             |         |       |      |                |                |                |                     |      |                                   |                                             |
| 1115KL (KLB)     | 1115KLL (KLLB)   | S1115K  |            |                       |              |        |             |         |       |      |                |                |                |                     |      |                                   |                                             |
| 1200KL (KLB)     | 1200KLL (KLLB)   | S1200K  | 210        | 1 7/8                 | 90           | 3.5433 | 49.21       | 20      | 24.61 | 4.76 | 69.90          | 18.26          | 62.71          | 1.075               | 2.37 | 22700                             | 39000                                       |
| —                | 1202KLL (KLLB)   | S1202K  |            |                       |              |        |             |         |       |      |                |                |                |                     |      |                                   |                                             |
| 1203KL           | 1203KLL (KLLB)   | S1203K  |            |                       |              |        |             |         |       |      |                |                |                |                     |      |                                   |                                             |
| —                | 1204KLL (KLLB)   | S1204K  |            |                       |              |        |             |         |       |      |                |                |                |                     |      |                                   |                                             |
| 1207KL           | —                | S1207K  | 211        | 2                     | 100          | 3.9370 | 55.56       | 21      | 27.98 | 4.76 | 76.20          | 20.64          | 71.44          | 1.540               | 3.40 | 28500                             | 48000                                       |
| —                | 1202KLL (KLLB)   | S1202K  |            |                       |              |        |             |         |       |      |                |                |                |                     |      |                                   |                                             |
| 1203KL           | 1203KLL (KLLB)   | S1203K  |            |                       |              |        |             |         |       |      |                |                |                |                     |      |                                   |                                             |
| —                | 1204KLL (KLLB)   | S1204K  |            |                       |              |        |             |         |       |      |                |                |                |                     |      |                                   |                                             |
| 1207KL           | —                | S1207K  | 212        | 2 1/8                 | 110          | 4.3307 | 61.91       | 22      | 30.96 | 6.35 | 84.14          | 22.22          | 77.79          | 1.660               | 3.66 | 35600                             | 58500                                       |
| —                | 1202KLL (KLLB)   | S1202K  |            |                       |              |        |             |         |       |      |                |                |                |                     |      |                                   |                                             |
| 1203KL           | 1203KLL (KLLB)   | S1203K  |            |                       |              |        |             |         |       |      |                |                |                |                     |      |                                   |                                             |
| —                | 1204KLL (KLLB)   | S1204K  |            |                       |              |        |             |         |       |      |                |                |                |                     |      |                                   |                                             |
| —                | 1215KLL (KLLB)   | S1215K  | 215        | 2 15/16               | 130          | 5.1181 | 74.61       | 25      | 37.31 | 6.35 | 101.6          | 23.81          | 91.08          | 2.268               | 5.00 | 43600                             | 69500                                       |
| —                | 1215KLL (KLLB)   | S1215K  |            |                       |              |        |             |         |       |      |                |                |                |                     |      |                                   |                                             |
| —                | 1215KLL (KLLB)   | S1215K  |            |                       |              |        |             |         |       |      |                |                |                |                     |      |                                   |                                             |
| —                | 1215KLL (KLLB)   | S1215K  |            |                       |              |        |             |         |       |      |                |                |                |                     |      |                                   |                                             |

<sup>(1)</sup>Spherical O.D. outer-ring width is 18 mm (0.7087 in.).

<sup>(2)</sup>Spherical O.D. outer-ring width is 19 mm (0.7480 in.).

<sup>(3)</sup>Spherical O.D. outer-ring width is 21 mm (0.8268 in.).

NOTE: Bore tolerance: 1/2 in. – 2 3/16 in., nominal to +0.013 mm, +0.0005 in.  
2 7/16 in. – 2 15/16 in., nominal to +0.015 mm, +0.0006 in.

### G-KLL, G-KLLB SPECIAL SERIES, RELUBRICATABLE TYPES

- These wide-inner-ring ball bearings have two Mechani-Seals and a provision for relubrication.
- Type G-KLL has a cylindrical outside diameter.
- Type G-KLLB has a spherical outside diameter.
- Both are generally suitable for higher-speed and/or higher-temperature applications.
- Because they incorporate non-contact seals, these bearings have very low rotational torque.
- Consult your Timken engineer for suggestions.

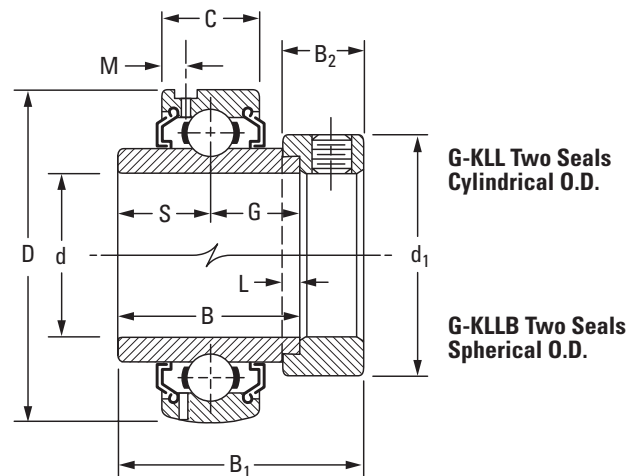
#### Suggested shaft tolerances:

1/2 in. – 1 15/16 in., nominal to -0.013 mm, -0.0005 in.;

2 in. – 2 15/16 in., nominal to -0.025 mm, -0.0010 in.

#### To order, specify bearing number followed by "+ COL".

Example: G1015KLL + COL.



| Bearing No.      |                | Collar No. | Basic Outer-Ring Size | Shaft Dia. | O.D.   | Ring Widths |        |         |      |        |       |       |         | Brg. and Collar Wt. |      | Static Load Rating | Extended Dynamic Load Rating |
|------------------|----------------|------------|-----------------------|------------|--------|-------------|--------|---------|------|--------|-------|-------|---------|---------------------|------|--------------------|------------------------------|
| Cylindrical O.D. | Spherical O.D. |            |                       |            |        | Inner       | Outer  | S(G)    | L    | d1     | B2    | M     | B1      |                     |      |                    |                              |
|                  |                |            |                       | d          | D      | B           | C      |         |      |        |       |       |         | kg                  | lbs. | C0                 | CE                           |
|                  |                |            |                       | in.        | mm     | mm          | mm     | mm      | mm   | mm     | mm    | mm    | mm      |                     |      | N                  | N                            |
| —                | G1008KLLB      | S1008K     | 203                   | 1/2        |        |             |        |         |      |        |       |       |         | 0.150               | 0.33 |                    |                              |
| —                | G1009KLLB      | S1009K     |                       | 9/16       | 40     | 27.78       | 12     | 13.90   | 4.0  | 28.6   | 13.50 | 2.720 | 37.30   | 0.136               | 0.30 | 4700               | 10700                        |
| G1010KLL         | G1010KLLB      | S1010K     |                       | 5/8        | 1.5748 | 1 3/32      | 0.4724 | 35/64   | 5/32 | 1 1/8  | 17/32 | 0.107 | 1 15/32 | 0.141               | 0.31 | 1060               | 2400                         |
| G1011KLL         | G1011KLLB      | S1011K     |                       | 11/16      |        |             |        |         |      |        |       |       |         | 0.118               | 0.26 |                    |                              |
| G1012KLL         | G1012KLLB      | S1012K     | 204                   | 3/4        | 47     | 34.13       | 14     | 17.10   | 4.0  | 33.3   | 13.50 | 3.430 | 43.70   | 0.200               | 0.44 | 6200               | 14300                        |
|                  |                |            |                       |            | 1.8504 | 1 11/32     | 0.5512 | 43/64   | 5/32 | 1 5/16 | 17/32 | 0.135 | 1 23/32 |                     |      | 1400               | 3200                         |
| —                | G1013KLLB      | S1013K     | 205                   | 13/16      |        |             |        |         |      |        |       |       |         | 0.286               | 0.63 |                    |                              |
| G1014KLL         | G1014KLLB      | S1014K     |                       | 7/8        | 52     | 34.92       | 15     | 17.50   | 4.0  | 38.1   | 13.50 | 3.860 | 44.45   | 0.263               | 0.58 | 7700               | 15800                        |
| G1015KLL         | G1015KLLB      | S1015K     |                       | 15/16      | 2.0472 | 1 3/8       | 0.5906 | 1 1/16  | 5/32 | 1 1/2  | 17/32 | 0.152 | 1 3/4   | 0.245               | 0.54 | 1730               | 3550                         |
| G1100KLL         | G1100KLLB      | S1100K     |                       | 1          |        |             |        |         |      |        |       |       |         | 0.222               | 0.49 |                    |                              |
| G1101KLL         | —              | S1101K     | 206                   | 1 1/16     |        |             |        |         |      |        |       |       |         | 0.422               | 0.93 |                    |                              |
| G1102KLL         | G1102KLLB      | S1102K     |                       | 1 1/8      | 62     | 36.51       | 18     | 18.30   | 4.0  | 44.4   | 15.90 | 3.960 | 48.40   | 0.413               | 0.91 | 11100              | 21800                        |
| G1103KLL         | G1103KLLB      | S1103K     |                       | 1 3/16     | 2.4409 | 1 7/16      | 0.7087 | 23/32   | 5/32 | 1 3/4  | 5/8   | 0.156 | 1 29/32 | 0.395               | 0.87 | 2500               | 4900                         |
| —                | G1103KLLB3     | S1103K3    |                       | 1 1/4      |        |             |        |         |      |        |       |       |         | 0.340               | 0.75 |                    |                              |
| G1104KLL         | G1104KLLB      | S1104K     | 207                   | 1 1/4      |        |             |        |         |      |        |       |       |         | 0.649               | 1.43 |                    |                              |
| —                | G1105KLLB      | S1105K     |                       | 1 5/16     | 72     | 37.70       | 19     | 18.85   | 4.0  | 54.0   | 17.46 | 3.430 | 51.20   | 0.622               | 1.37 | 15100              | 28500                        |
| G1106KLL         | G1106KLLB      | S1106K     |                       | 1 3/8      | 2.8346 | 1 31/64     | 0.7480 | 0.742   | 5/32 | 2 1/8  | 11/16 | 0.135 | 2 1/64  | 0.590               | 1.30 | 3400               | 6400                         |
| G1107KLL         | G1107KLLB      | S1107K     |                       | 1 7/16     |        |             |        |         |      |        |       |       |         | 0.549               | 1.21 |                    |                              |
| G1108KLL         | G1108KLLB      | S1108KT    | 208                   | 1 1/2      | 80     | 42.86       | 21     | 21.40   | 4.8  | 60.3   | 18.30 | 4.060 | 56.40   | 0.826               | 1.82 | 17600              | 36200                        |
| G1109KLL         | G1109KLLB      | S1109KT    |                       | 1 9/16     | 3.1496 | 1 11/16     | 0.8268 | 27/32   | 3/16 | 2 3/8  | 23/32 | 0.160 | 2 7/32  | 0.785               | 1.73 | 4000               | 8130                         |
| G1110KLL         | G1110KLLB      | S1110K     |                       | 1 5/8      |        |             |        |         |      |        |       |       |         | 0.949               | 2.09 |                    |                              |
| G1111KLL         | G1111KLLB      | S1111K     |                       | 1 11/16    | 85     | 42.86       | 22     | 21.40   | 4.8  | 63.5   | 18.30 | 4.550 | 56.40   | 0.899               | 1.98 | 20000              | 36300                        |
| G1112KLL         | G1112KLLB      | S1112K     | 209                   | 1 3/4      | 3.3465 | 1 11/16     | 0.8661 | 27/32   | 3/16 | 2 1/2  | 23/32 | 0.179 | 2 7/32  | 0.853               | 1.88 | 4500               | 8160                         |
| —                | G1113KLLB      | S1113K     |                       | 1 13/16    |        |             |        |         |      |        |       |       |         | 1.148               | 2.53 |                    |                              |
| G1114KLL         | G1114KLLB      | S1114K     |                       | 1 7/8      | 90     | 49.21       | 23     | 24.60   | 4.8  | 69.9   | 18.30 | 4.700 | 62.70   | 1.090               | 2.40 | 22700              | 39000                        |
| G1115KLL         | G1115KLLB      | S1115K     |                       | 1 15/16    | 3.5433 | 1 15/16     | 0.9055 | 31/32   | 3/16 | 2 3/4  | 23/32 | 0.185 | 2 15/32 | 1.031               | 2.27 | 5100               | 8800                         |
| G1200KLL         | G1200KLLB      | S1200K     | 211                   | 2          |        |             |        |         |      |        |       |       |         | 1.593               | 3.51 |                    |                              |
| —                | G1201KLLB      | S1201K     |                       | 2 1/16     | 100    | 55.56       | 24     | 27.80   | 4.8  | 76.2   | 20.60 | 5.000 | 71.40   | 1.512               | 3.33 | 28500              | 48000                        |
| —                | G1202KLLB      | S1202K     |                       | 2 1/8      | 3.9370 | 2 3/16      | 0.9450 | 1 3/32  | 3/16 | 3      | 13/16 | 0.197 | 2 13/16 | 1.416               | 3.12 | 6400               | 10800                        |
| G1203KLL         | G1203KLLB      | S1203K     |                       | 2 3/16     |        |             |        |         |      |        |       |       |         | 1.285               | 2.83 |                    |                              |
| G1204KLL         | G1204KLLB      | S1204K     | 212                   | 2 1/4      |        |             |        |         |      |        |       |       |         | 2.030               | 4.47 |                    |                              |
| —                | G1205KLLB      | S1205K     |                       | 2 5/16     | 110    | 61.91       | 27     | 31.00   | 6.4  | 84.1   | 22.20 | 5.130 | 77.80   | 1.938               | 4.27 | 35600              | 58500                        |
| —                | G1206KLLB      | S1206K     |                       | 2 3/8      | 4.3307 | 2 7/16      | 1.0630 | 1 7/32  | 1/4  | 3 5/16 | 7/8   | 0.202 | 3 1/16  | 1.852               | 4.08 | 8000               | 13200                        |
| —                | G1207KLLB      | S1207K     |                       | 2 7/16     |        |             |        |         |      |        |       |       |         | 1.789               | 3.94 |                    |                              |
| —                | G1215KLLB      | S1215K     | 215                   | 2 15/16    | 130    | 74.61       | 25     | 37.30   | 6.4  | 101.6  | 23.80 | 5.560 | 91.20   | 2.837               | 6.25 | 43600              | 69500                        |
|                  |                |            |                       |            | 5.1181 | 2 15/16     | 0.9843 | 1 15/32 | 1/4  | 4      | 15/16 | 0.219 | 3 5/8   |                     |      | 9800               | 15600                        |

NOTE: Bore tolerance: 1/2 in. – 2 3/16 in., nominal to +0.013 mm, +0.0005 in.  
2 1/4 in. – 2 15/16 in., nominal to +0.015 mm, +0.0006 in.

### KLLG SPECIAL SERIES WITH WIRELOC®

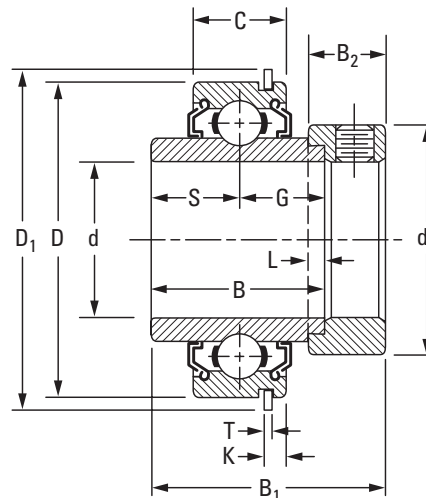
- KLLG wide-inner-ring ball bearings are the same as the KLL type, except for a snap ring, or Wireloc®, in the outer ring.
- The Wireloc mounting provides a convenient method of positively locating a bearing axially.

#### Suggested shaft tolerances:

- 1/2 in. – 1 15/16 in., nominal to -0.013 mm, -0.0005 in.;  
2 in. – 2 7/16 in., nominal to -0.025 mm, -0.0010 in.

#### To order, specify bearing number followed by "+ COL".

Example: 1008KLLG + COL.



| Bearing No. | Collar No. | Basic Outer-Ring Size | Shaft Dia.<br>d | O.D.<br>D | Ring Widths |            | S(G)      | L         | d <sub>1</sub> | B <sub>2</sub> | B <sub>1</sub> | Snap Ring Dimensions |           |           | Brg. and Collar Wt. | Static Load Rating<br>C <sub>0</sub> | Extended Dynamic Load Rating<br>C <sub>E</sub> |
|-------------|------------|-----------------------|-----------------|-----------|-------------|------------|-----------|-----------|----------------|----------------|----------------|----------------------|-----------|-----------|---------------------|--------------------------------------|------------------------------------------------|
|             |            |                       |                 |           | Inner<br>B  | Outer<br>C |           |           |                |                |                | D <sub>1</sub>       | T         | K         |                     |                                      |                                                |
|             |            |                       | in.             | mm<br>in. | mm<br>in.   | mm<br>in.  | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in.      | mm<br>in.            | mm<br>in. | mm<br>in. | kg<br>lbs.          | N<br>lbs.                            | N<br>lbs.                                      |
| 1008KLLG    | S1008K     | 203                   | 1/2             | 40        | 27.78       | 12         | 13.90     | 4.0       | 28.6           | 13.5           | 37.3           | 44.45                | 1.07      | 3.05      | 0.173               | 0.38                                 | 4700<br>10700                                  |
| 1009KLLG    | S1009K     |                       | 9/16            | 1.5748    | 1 3/32      | 0.4724     | 35/64     | 5/32      | 1 1/8          | 17/32          | 115/32         | 1 3/4                | 0.042     | 0.120     | 0.154               | 0.34                                 |                                                |
| 1010KLLG    | S1010K     |                       | 5/8             |           |             |            |           |           |                |                |                |                      |           |           | 0.141               | 0.31                                 |                                                |
| 1011KLLG    | S1011K     |                       | 11/16           |           |             |            |           |           |                |                |                |                      |           |           | 0.132               | 0.29                                 |                                                |
| 1012KLLG    | S1012K     | 204                   | 3/4             | 47        | 34.13       | 14         | 17.10     | 4.0       | 33.3           | 13.5           | 43.7           | 52.39                | 1.07      | 3.45      | 0.204               | 0.45                                 | 6200<br>14300                                  |
|             |            |                       |                 | 1.8504    | 1 11/32     | 0.5512     | 43/64     | 5/32      | 1 5/16         | 17/32          | 1 23/32        | 2 1/16               | 0.042     | 0.136     |                     | 1400                                 | 3200                                           |
| 1013KLLG    | S1013K     | 205                   | 13/16           | 52        | 34.92       | 15         | 17.50     | 4.0       | 38.1           | 13.5           | 44.1           | 57.55                | 1.07      | 3.45      | 0.272               | 0.60                                 | 7700<br>15800                                  |
| 1014KLLG    | S1014K     |                       | 7/8             | 2.0472    | 1 3/8       | 0.5906     | 11/16     | 5/32      | 1 1/2          | 17/32          | 1 47/64        | 2 17/64              | 0.042     | 0.136     | 0.263               | 0.58                                 |                                                |
| 1015KLLG    | S1015K     |                       | 15/16           |           |             |            |           |           |                |                |                |                      |           |           | 0.245               | 0.54                                 |                                                |
| 1100KLLG    | S1100K     |                       | 1               |           |             |            |           |           |                |                |                |                      |           |           | 0.227               | 0.50                                 |                                                |
| 1101KLLG    | S1101K     | 206                   | 1 1/16          | 62        | 36.51       | 16         | 18.30     | 4.0       | 44.4           | 15.9           | 48.4           | 67.47                | 1.65      | 4.83      | 0.427               | 0.94                                 | 11100<br>21800                                 |
| 1102KLLG    | S1102K     |                       | 1 1/8           | 2.4409    | 1 7/16      | 0.6299     | 23/32     | 5/32      | 1 3/4          | 5/8            | 1 29/32        | 2 21/32              | 0.065     | 0.190     | 0.386               | 0.85                                 |                                                |
| 1103KLLG    | S1103K     |                       | 1 3/16          |           |             |            |           |           |                |                |                |                      |           |           | 0.386               | 0.85                                 |                                                |
| 1104KLLG    | S1104K     |                       | 1 1/4           |           |             |            |           |           |                |                |                |                      |           |           | 0.645               | 1.42                                 |                                                |
| 1105KLLG    | S1105K     | 207                   | 1 5/16          | 72        | 37.70       | 17         | 18.85     | 4.0       | 54.0           | 17.1           | 51.2           | 78.18                | 1.65      | 4.83      | 0.604               | 1.33                                 | 15100<br>28500                                 |
| 1106KLLG    | S1106K     |                       | 1 3/8           | 2.8346    | 1 31/64     | 0.6693     | 0.742     | 5/32      | 2 1/8          | 43/64          | 2 1/64         | 3 5/64               | 0.065     | 0.190     | 0.577               | 1.27                                 |                                                |
| 1107KLLG    | S1107K     |                       | 1 7/16          |           |             |            |           |           |                |                |                |                      |           |           | 0.540               | 1.19                                 |                                                |
| 1108KLLG    | S1108KT    |                       | 1 1/2           |           |             |            |           |           |                |                |                |                      |           |           |                     |                                      |                                                |
| 1109KLLG    | S1109KT    | 208                   | 1 9/16          | 80        | 42.86       | 18         | 21.40     | 4.8       | 60.3           | 18.3           | 56.4           | 86.52                | 1.65      | 4.83      | 0.826               | 1.82                                 | 17600<br>36200                                 |
|             |            |                       |                 | 3.1496    | 1 11/16     | 0.7087     | 27/32     | 3/16      | 2 3/8          | 23/32          | 2 7/32         | 3 13/32              | 0.065     | 0.190     | 0.785               | 1.73                                 | 4000<br>8130                                   |
| 1110KLLG    | S1110K     | 209                   | 1 5/8           | 85        | 42.86       | 19         | 21.40     | 4.8       | 63.5           | 18.3           | 56.4           | 91.28                | 1.65      | 4.83      | 0.922               | 2.03                                 | 20000<br>36300                                 |
| 1111KLLG    | S1111K     |                       | 1 11/16         | 3.3465    | 1 11/16     | 0.7480     | 27/32     | 3/16      | 2 1/2          | 23/32          | 2 7/32         | 3 19/32              | 0.065     | 0.190     | 0.881               | 1.94                                 |                                                |
| 1112KLLG    | S1112K     |                       | 1 3/4           |           |             |            |           |           |                |                |                |                      |           |           | 0.844               | 1.86                                 |                                                |
| 1113KLLG    | S1113K     |                       | 1 13/16         |           |             |            |           |           |                |                |                |                      |           |           | 1.035               | 2.28                                 |                                                |
| 1114KLLG    | S1114K     | 210                   | 1 7/8           | 90        | 49.21       | 20         | 24.60     | 4.8       | 69.9           | 18.3           | 62.7           | 96.44                | 2.41      | 5.59      | 1.003               | 2.21                                 | 22700<br>39000                                 |
| 1115KLLG    | S1115K     |                       | 1 15/16         | 3.5433    | 1 15/16     | 0.7874     | 31/32     | 3/16      | 2 3/4          | 23/32          | 2 15/32        | 3 51/64              | 0.095     | 0.220     | 0.971               | 2.14                                 |                                                |
| 1200KLLG    | S1200K     |                       | 2               |           |             |            |           |           |                |                |                |                      |           |           | 1.475               | 3.25                                 |                                                |
| 1201KLLG    | S1201K     |                       | 2 1/16          | 100       | 55.56       | 21         | 27.80     | 4.8       | 76.2           | 20.6           | 71.4           | 106.36               | 2.41      | 5.59      | 1.444               | 3.18                                 |                                                |
| 1202KLLG    | S1202K     | 211                   | 2 1/8           | 3.9370    | 2 3/16      | 0.8268     | 1 3/32    | 3/16      | 3              | 13/16          | 2 13/16        | 4 3/16               | 0.095     | 0.220     | 1.380               | 3.08                                 | 28500<br>48000                                 |
| 1203KLLG    | S1203K     |                       | 2 3/16          |           |             |            |           |           |                |                |                |                      |           |           | 1.353               | 2.98                                 |                                                |
| 1204KLLG    | S1204K     |                       | 2 1/4           |           |             |            |           |           |                |                |                |                      |           |           | 1.793               | 3.95                                 |                                                |
| 1205KLLG    | S1205K     |                       | 2 5/16          | 110       | 61.91       | 22         | 30.96     | 6.4       | 84.1           | 22.2           | 77.8           | 116.28               | 2.41      | 5.59      | 1.743               | 3.84                                 |                                                |
| 1206KLLG    | S1206K     | 212                   | 2 3/8           | 4.3307    | 2 7/16      | 0.8661     | 1 7/32    | 1/4       | 3 5/16         | 7/8            | 3 1/16         | 4 37/64              | 0.095     | 0.220     | 1.711               | 3.77                                 | 35600<br>58500                                 |
| 1207KLLG    | S1207K     |                       | 2 7/16          |           |             |            |           |           |                |                |                |                      |           |           | 1.684               | 3.71                                 |                                                |

NOTE: Bore tolerance: 1/2 in. – 2 3/16 in., nominal to +0.013 mm, +0.0005 in.  
2 1/4 in. – 2 7/16 in., nominal to +0.015 mm, +0.0006 in.

# **TRI-PLY SEAL INDUSTRIAL SERIES, NON-RELUBRICATABLE AND RELUBRICATABLE TYPES**

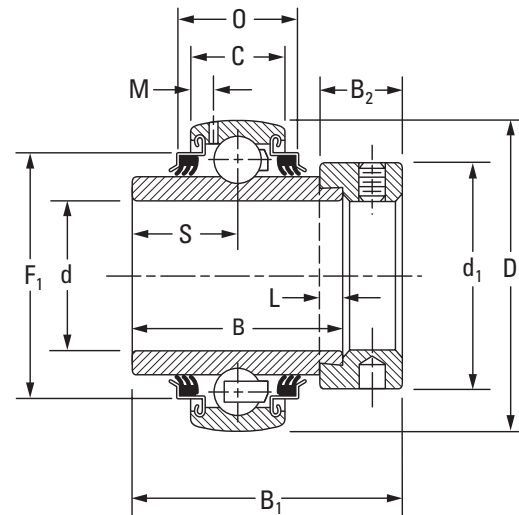
- Tri-ply seal bearings are dimensionally interchangeable with KRRB bearings and can be used with standard housings.
- One-piece tri-ply seals incorporate a highly effective seal design molded to an exterior shroud cap. The shroud cap protects the seal lip from fiber wrap and abrasion.
- Supplied with a self-locking collar, the bearings are most effective in environments with severe contamination and moisture.
- Relubricatable tri-ply seal bearings are dimensionally interchangeable with G-KRRB bearings.
- This design can be used with standard housings.

## **Suggested shaft tolerances:**

- Heavy loads – nominal to -0.025 mm, -0.001 in.;
- Light loads – nominal to -0.050 mm, -0.002 in.

**To order, specify bearing number followed by "+ COL".**

Example: G1115KPPB3 + COL.



| Bearing No.            |                                | Basic<br>Outer-<br>Ring<br>Size | Shaft<br>Dia.<br><br>d | O.D.<br><br>D | Ring Widths      |             |             |                |                |                 |                 |                  |                |                |       |      | Brg. and<br>Collar Wt.<br><br>kg<br>lbs. | Static<br>Load<br>Rating<br><br>C <sub>o</sub><br>N<br>lbs. | Extended<br>Dynamic<br>Load<br>Rating<br><br>C <sub>E</sub><br>N<br>lbs. |  |  |
|------------------------|--------------------------------|---------------------------------|------------------------|---------------|------------------|-------------|-------------|----------------|----------------|-----------------|-----------------|------------------|----------------|----------------|-------|------|------------------------------------------|-------------------------------------------------------------|--------------------------------------------------------------------------|--|--|
| Spherical<br>O.D.      |                                |                                 |                        |               | Inner            | Outer       |             |                |                |                 |                 |                  |                |                |       |      |                                          |                                                             |                                                                          |  |  |
|                        |                                |                                 |                        |               | B                | C           | L           | d <sub>1</sub> | B <sub>2</sub> | S               | B <sub>1</sub>  | M <sup>(1)</sup> | F <sub>1</sub> | O              |       |      |                                          |                                                             |                                                                          |  |  |
| Relubricatable<br>Type | Non-<br>Relubricatable<br>Type |                                 | in.<br>mm              | mm<br>in.     | mm<br>in.        | mm<br>in.   | mm<br>in.   | mm<br>in.      | mm<br>in.      | mm<br>in.       | mm<br>in.       | mm<br>in.        | mm<br>in.      | mm<br>in.      |       |      |                                          |                                                             |                                                                          |  |  |
| G1013KPPB3             | 1013KPPB3                      | 205                             | 13/16                  | 52<br>2.0472  | 34.92<br>1 3/8   | 15<br>0.591 | 3.9<br>5/32 | 38.1<br>1 1/2  | 13.5<br>17/32  | 17.50<br>1 1/16 | 44.4<br>1 3/4   | 3.61<br>0.142    | 45.19<br>1.779 | 16.66<br>0.656 | 0.286 | 0.63 | 7700<br>1730                             | 15800<br>3550                                               |                                                                          |  |  |
| G1014KPPB3             | 1014KPPB3                      |                                 | 7/8                    |               |                  |             |             |                |                |                 |                 |                  |                |                | 0.272 | 0.60 |                                          |                                                             |                                                                          |  |  |
| G1015KPPB3             | 1015KPPB3                      |                                 | 15/16                  |               |                  |             |             |                |                |                 |                 |                  |                |                | 0.254 | 0.56 |                                          |                                                             |                                                                          |  |  |
| G1100KPPB3             | 1100KPPB3                      |                                 | 1                      |               |                  |             |             |                |                |                 |                 |                  |                |                | 0.231 | 0.51 |                                          |                                                             |                                                                          |  |  |
| GE25KPPB3              | E25KPPB3                       |                                 | 25                     |               |                  |             |             |                |                |                 |                 |                  |                |                | 0.231 | 0.51 |                                          |                                                             |                                                                          |  |  |
| G1101KPPB3             | 1101KPPB3                      | 206                             | 1 1/16                 | 62<br>2.4409  | 36.51<br>1 7/16  | 18<br>0.709 | 3.9<br>5/32 | 44.4<br>1 3/4  | 15.9<br>5/8    | 18.30<br>23/32  | 48.4<br>1 29/32 | 4.19<br>0.156    | 52.53<br>2.068 | 21.56<br>0.849 | 0.413 | 0.91 | 11100<br>2500                            | 21800<br>4900                                               |                                                                          |  |  |
| G1102KPPB3             | 1102KPPB3                      |                                 | 1 1/8                  |               |                  |             |             |                |                |                 |                 |                  |                |                | 0.404 | 0.89 |                                          |                                                             |                                                                          |  |  |
| G1103KPPB3             | 1103KPPB3                      |                                 | 1 3/16                 |               |                  |             |             |                |                |                 |                 |                  |                |                | 0.376 | 0.83 |                                          |                                                             |                                                                          |  |  |
| G1103KPPB4             | 1103KPPB4                      |                                 | 1 1/4                  |               |                  |             |             |                |                |                 |                 |                  |                |                | 0.349 | 0.77 |                                          |                                                             |                                                                          |  |  |
| GE30KPPB3              | E30KPPB3                       |                                 | 30                     |               |                  |             |             |                |                |                 |                 |                  |                |                | 0.376 | 0.83 |                                          |                                                             |                                                                          |  |  |
| G1104KPPB2             | 1104KPPB2                      | 207                             | 1 1/4                  | 72<br>2.8346  | 37.70<br>1 31/64 | 19<br>0.748 | 3.9<br>5/32 | 54.0<br>2 1/8  | 17.1<br>43/64  | 18.85<br>0.742  | 51.2<br>2 1/64  | 3.68<br>0.145    | 60.35<br>2.376 | 25.40<br>1.000 | 0.653 | 1.44 | 15100<br>3400                            | 28500<br>6400                                               |                                                                          |  |  |
| G1105KPPB2             | 1105KPPB2                      |                                 | 1 5/16                 |               |                  |             |             |                |                |                 |                 |                  |                |                | 0.603 | 1.33 |                                          |                                                             |                                                                          |  |  |
| G1106KPPB2             | 1106KPPB2                      |                                 | 1 3/8                  |               |                  |             |             |                |                |                 |                 |                  |                |                | 0.572 | 1.26 |                                          |                                                             |                                                                          |  |  |
| G1107KPPB2             | 1107KPPB2                      |                                 | 1 7/16                 |               |                  |             |             |                |                |                 |                 |                  |                |                | 0.544 | 1.20 |                                          |                                                             |                                                                          |  |  |
| GE35KPPB2              | E35KPPB2                       |                                 | 35                     |               |                  |             |             |                |                |                 |                 |                  |                |                | 0.572 | 1.26 |                                          |                                                             |                                                                          |  |  |
| G1108KPPB3             | 1108KPPB3                      | 208                             | 1 1/2                  | 80<br>3.1496  | 42.86<br>1 11/16 | 21<br>0.827 | 4.8<br>3/16 | 60.3<br>2 3/8  | 18.3<br>23/32  | 21.40<br>27/32  | 56.4<br>2 1/32  | 5.66<br>0.223    | 67.79<br>2.669 | 23.44<br>0.923 | 0.789 | 1.74 | 19800<br>4460                            | 20500<br>4600                                               |                                                                          |  |  |
| G1109KPPB3             | 1109KPPB3                      |                                 | 1 9/16                 |               |                  |             |             |                |                |                 |                 |                  |                |                | 0.739 | 1.63 |                                          |                                                             |                                                                          |  |  |
| GE40KPPB3              | E40KPPB3                       |                                 | 40                     |               |                  |             |             |                |                |                 |                 |                  |                |                | 0.739 | 1.63 |                                          |                                                             |                                                                          |  |  |
| G1110KPPB4             | 1110KPPB4                      |                                 | 1 5/8                  |               |                  |             |             |                |                |                 |                 |                  |                |                | 0.898 | 1.98 |                                          |                                                             |                                                                          |  |  |
| G1111KPPB4             | 1111KPPB4                      |                                 | 1 11/16                |               |                  |             |             |                |                |                 |                 |                  |                |                | 0.848 | 1.87 |                                          |                                                             |                                                                          |  |  |
| G1112KPPB4             | 1112KPPB4                      | 209                             | 1 3/4                  | 85<br>3.3465  | 42.86<br>1 11/16 | 22<br>0.866 | 4.8<br>3/16 | 63.5<br>2 1/2  | 18.3<br>23/32  | 21.40<br>27/32  | 56.4<br>2 1/32  | 4.55<br>0.179    | 72.44<br>2.852 | 27.48<br>1.082 | 0.826 | 1.82 | 20500<br>4600                            | 36300<br>8160                                               |                                                                          |  |  |
| GE45KPPB4              | E45KPPB4                       |                                 | 45                     |               |                  |             |             |                |                |                 |                 |                  |                |                | 0.826 | 1.82 |                                          |                                                             |                                                                          |  |  |
| G1113KPPB3             | 1113KPPB3                      |                                 | 1 13/16                |               |                  |             |             |                |                |                 |                 |                  |                |                | 1.116 | 2.46 |                                          |                                                             |                                                                          |  |  |
| G1114KPPB3             | 1114KPPB3                      |                                 | 1 7/8                  |               |                  |             |             |                |                |                 |                 |                  |                |                | 1.034 | 2.28 |                                          |                                                             |                                                                          |  |  |
| G1115KPPB3             | 1115KPPB3                      |                                 | 1 15/16                |               |                  |             |             |                |                |                 |                 |                  |                |                | 1.016 | 2.24 |                                          |                                                             |                                                                          |  |  |
| GE50KPPB3              | E50KPPB3                       | 210                             | 50                     | 90<br>3.5433  | 49.21<br>1 15/16 | 23<br>0.906 | 4.8<br>3/16 | 69.9<br>2 3/4  | 18.3<br>23/32  | 24.60<br>31/32  | 62.7<br>2 15/32 | 4.70<br>0.185    | 77.70<br>3.059 | 27.51<br>1.083 | 1.016 | 2.24 | 22700<br>5100                            | 39200<br>8800                                               |                                                                          |  |  |
| G1200KPPB4             | 1200KPPB4                      |                                 | 2                      |               |                  |             |             |                |                |                 |                 |                  |                |                | 1.583 | 3.49 |                                          |                                                             |                                                                          |  |  |
| G1201KPPB4             | 1201KPPB4                      |                                 | 2 1/16                 |               |                  |             |             |                |                |                 |                 |                  |                |                | 1.470 | 3.24 |                                          |                                                             |                                                                          |  |  |
| G1202KPPB4             | 1202KPPB4                      |                                 | 2 1/8                  |               |                  |             |             |                |                |                 |                 |                  |                |                | 1.406 | 3.10 |                                          |                                                             |                                                                          |  |  |
| G1203KPPB4             | 1203KPPB4                      |                                 | 2 3/16                 |               |                  |             |             |                |                |                 |                 |                  |                |                | 1.365 | 3.01 |                                          |                                                             |                                                                          |  |  |
| GE55KPPB4              | E55KPPB4                       | 211                             | 55                     | 100<br>3.9370 | 55.56<br>2 3/16  | 24<br>0.945 | 4.8<br>3/16 | 76.2<br>3      | 20.6<br>13/16  | 27.80<br>1 3/32 | 71.4<br>2 13/16 | 5.41<br>0.213    | 87.17<br>3.432 | 29.01<br>1.142 | 1.365 | 3.01 | 28500<br>6400                            | 48100<br>10800                                              |                                                                          |  |  |
| G1204KPPB4             | 1204KPPB4                      |                                 | 2 1/2                  |               |                  |             |             |                |                |                 |                 |                  |                |                | 1.470 | 3.24 |                                          |                                                             |                                                                          |  |  |
| G1205KPPB4             | 1205KPPB4                      |                                 | 2 5/8                  |               |                  |             |             |                |                |                 |                 |                  |                |                | 1.406 | 3.10 |                                          |                                                             |                                                                          |  |  |
| G1206KPPB4             | 1206KPPB4                      |                                 | 2 3/4                  |               |                  |             |             |                |                |                 |                 |                  |                |                | 1.365 | 3.01 |                                          |                                                             |                                                                          |  |  |
| GE60KPPB4              | E60KPPB4                       |                                 | 60                     |               |                  |             |             |                |                |                 |                 |                  |                |                | 1.365 | 3.01 |                                          |                                                             |                                                                          |  |  |

<sup>(1)</sup>Applies to relubricatable type only.

NOTE: Suggested max speed – 500 RPM.

NOTE: Bore tolerance: 19/16 in. – 2 3/16 in., nominal to +0.013 mm, +0.0005 in.

### GC-KRRB INDUSTRIAL-SERIES CONCENTRIC COLLAR, RELUBRICATABLE TYPES

- These bearing are relubricatable with spherical outside diameters and shroud seals.
- The metal shroud maintains tight seal contact against the inner ring and shields the rubber seals from damage because of dirt or fiber wrap.
- The concentric collar is locked to the shaft by two set screws located 120 degrees apart, mated with threaded holes in the collar and drilled holes in the bearing inner ring.
- The extra-wide design provides additional shaft support and extra-large grease capacity.

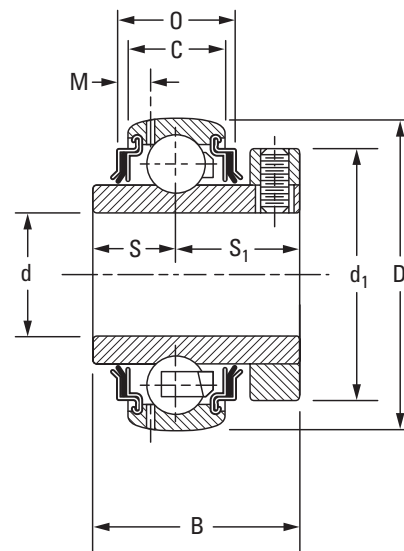
#### Suggested shaft tolerances:

1/2 in. – 1 15/16 in., nominal to -0.013 mm, -0.0005 in.;

2 in. – 2 15/16 in., nominal to -0.025 mm, -0.0010 in.

#### To order, specify bearing number.

Example: GC1103KRRB + COL.



| Bearing No.    | Collar No. | Basic Outer-Ring Size | Shaft Dia. | O.D.   | Ring Widths |        |         |                |                |       |       | Set Screw Size | Brg. and Collar Wt. | Static Load Rating | Extended Dynamic Load Rating |
|----------------|------------|-----------------------|------------|--------|-------------|--------|---------|----------------|----------------|-------|-------|----------------|---------------------|--------------------|------------------------------|
|                |            |                       |            |        | Inner       | Outer  |         |                |                |       |       |                |                     |                    |                              |
| Spherical O.D. |            |                       | d          | D      | B           | C      | S       | S <sub>1</sub> | d <sub>1</sub> | M     | O     |                | kg                  | N                  | N                            |
|                |            |                       | in.        | mm     | mm          | mm     | mm      | mm             | mm             | mm    | mm    | in.            | lbs.                | lbs.               | lbs.                         |
| GC1008KRRB     | C203       | 203                   | 1/2        |        |             |        |         |                |                |       |       |                | 0.154               | 0.34               |                              |
| GC1010KRRB     |            |                       | 5/8        | 40     | 26.59       | 12     |         |                |                |       |       |                | 0.145               | 0.32               | 4700                         |
| GC1011KRRB     |            |                       | 11/16      | 1.5748 | 1 3/64      | 0.4720 | 7/16    | 39/64          | 11/32          | 0.107 | 0.579 | 10-32          | 0.122               | 0.27               | 1060                         |
| GCE17KRRB      |            |                       | 17         |        |             |        |         |                |                |       |       |                | 0.122               | 0.27               | 2360                         |
| GC1012KRRB     | C204       | 204                   | 3/4        | 47     | 30.96       | 14     | 12.3    | 18.7           | 38.1           | 3.43  | 20.68 | M5x0.8         | 0.204               | 0.45               | 6200                         |
| GCE20KRRB      |            |                       | 20         | 1.8504 | 1 7/32      | 0.5510 | 31/64   | 47/64          | 1 1/2          | 0.135 | 0.814 | 10-32          | 0.204               | 0.45               | 14300                        |
| GC1014KRRB     | C205       | 205                   | 7/8        |        |             |        |         |                |                |       |       |                | 0.272               | 0.60               |                              |
| GC1015KRRB     |            |                       | 15/16      | 52     | 34.13       | 15     | 13.9    | 20.2           | 44.4           | 3.61  | 19.74 | M6x1           | 0.254               | 0.56               | 7700                         |
| GC1100KRRB     |            |                       | 1          | 2.0472 | 1 11/32     | 0.5905 | 35/64   | 51/64          | 1 3/4          | 0.142 | 0.777 | 1/4-28         | 0.231               | 0.51               | 15800                        |
| GCE25KRRB      |            |                       | 25         |        |             |        |         |                |                |       |       |                | 0.231               | 0.51               | 3550                         |
| GC1102KRRB     | C206       | 206                   | 1 1/8      |        |             |        |         |                |                |       |       |                | 0.404               | 0.89               |                              |
| GC1103KRRB     |            |                       | 1 3/16     | 62     | 37.31       | 18     | 14.7    | 22.6           | 52.4           | 4.19  | 24.51 | M6x1           | 0.376               | 0.83               | 11100                        |
| GC1103KRRB3    |            |                       | 1 1/4      | 2.4409 | 1 15/32     | 0.7090 | 37/64   | 57/64          | 2 1/16         | 0.156 | 0.965 | 1/4-28         | 0.349               | 0.77               | 21800                        |
| GCE30KRRB      |            |                       | 30         |        |             |        |         |                |                |       |       |                | 0.376               | 0.83               | 4900                         |
| GC1104KRRB     | C207       | 207                   | 1 1/4      |        |             |        |         |                |                |       |       |                | 0.653               | 1.44               |                              |
| GC1106KRRB     |            |                       | 1 3/8      | 72     | 41.28       | 19     | 15.9    | 25.4           | 59.5           | 3.68  | 25.86 | M6x1           | 0.572               | 1.26               | 15100                        |
| GC1107KRRB     |            |                       | 1 7/16     | 2.8346 | 1 5/8       | 0.7481 | 5/8     | 1              | 2 11/32        | 0.145 | 1.018 | 1/4-28         | 0.544               | 1.20               | 28500                        |
| GCE35KRRB      |            |                       | 35         |        |             |        |         |                |                |       |       |                | 0.572               | 1.26               | 6400                         |
| GC1108KRRB     | C208       | 208                   | 1 1/2      | 80     | 44.05       | 21     | 16.7    | 27.4           | 68.3           | 5.66  | 28.42 | M8x1.25        | 0.789               | 1.74               | 19800                        |
| GCE40KRRB      |            |                       | 40         | 3.1496 | 1 47/64     | 0.8270 | 21/32   | 1 5/64         | 2 11/16        | 0.223 | 1.119 | 5/16-24        | 0.739               | 1.63               | 20500                        |
| GC1110KRRB     | C209-2     | 209                   | 1 5/8      |        |             |        |         |                |                |       |       |                | 0.898               | 1.98               |                              |
| GC1111KRRB     |            |                       | 1 11/16    | 85     | 46.83       | 22     | 17.5    | 29.4           | 73.0           | 4.55  | 32.21 | M8x1.25        | 0.848               | 1.87               | 36200                        |
| GC1112KRRB     |            |                       | 1 3/4      | 3.3465 | 1 27/32     | 0.8660 | 1 11/16 | 1 5/32         | 2 7/8          | 0.179 | 1.268 | 5/16-24        | 0.826               | 1.82               | 36300                        |
| GCE45KRRB      |            |                       | 45         |        |             |        |         |                |                |       |       |                | 0.826               | 1.82               | 8160                         |
| GC1115KRRB     | C210       | 210                   | 1 15/16    | 90     | 48.42       | 23     | 18.3    | 30.2           | 79.4           | 4.70  | 32.23 | M8x1.25        | 0.990               | 2.18               | 22700                        |
| GCE50KRRB      |            |                       | 50         | 3.5433 | 1 29/32     | 0.9060 | 23/32   | 1 3/16         | 3 1/8          | 0.185 | 1.269 | 5/16-24        | 0.990               | 2.18               | 39200                        |
| GC1200KRRB     | C211       | 211                   | 2          |        |             |        |         |                |                |       |       |                | 1.520               | 3.35               |                              |
| GC1203KRRB     |            |                       | 2 3/16     | 100    | 53.97       | 24     | 20.6    | 33.3           | 88.9           | 5.41  | 33.73 | M10x1.5        | 1.306               | 2.88               | 28500                        |
| GCE55KRRB      |            |                       | 55         | 3.9370 | 2 1/8       | 0.9450 | 13/16   | 1 5/16         | 3 1/2          | 0.213 | 1.328 | 3/8-24         | 1.306               | 2.88               | 48000                        |
| GC1207KRRB     | C212       | 212                   | 2 7/16     | 110    | 60.32       | 27     | 23.0    | 37.3           | 95.3           | 5.13  | 35.03 | M10x1.5        | 1.565               | 3.45               | 58800                        |
| GCE60KRRB      |            |                       | 60         | 4.3307 | 2 3/8       | 1.0630 | 29/32   | 1 15/32        | 3 3/4          | 0.202 | 1.379 | 3/8-24         |                     | 8000               | 13200                        |
| GC1215KRRB     | C215       | 215                   | 2 15/16    | 130    | 70.64       | 29     | 27.0    | 43.7           | 114.3          | 5.59  | 38.25 | M10x1.5        | 2.640               | 5.82               | 43600                        |
| GCE75KRRB      |            |                       | 75         | 5.1181 | 2 25/32     | 1.1420 | 1 1/16  | 1 23/32        | 4 1/2          | 0.219 | 1.506 | 3/8-20         |                     | 9800               | 69500                        |

NOTE: Bore tolerances: 1 3/16 in. – 2 3/16 in., nominal to +0.013 mm, +0.0005 in.

2 1/4 in. – 3 3/16 in., nominal to +0.015 mm, +0.0006 in.

# **SM INDUSTRIAL SERIES A AND B TYPES/MUA-B INSERTS<sup>(1)</sup>**

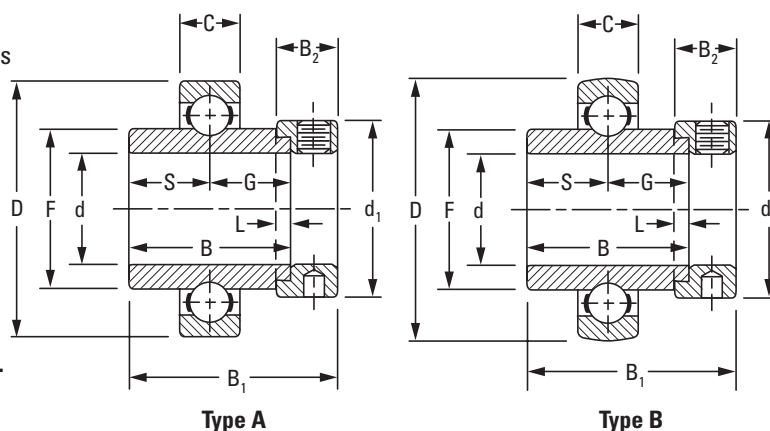
- Standard SM series A and B have the same ring tolerances and corner radii as equivalent 200-series single-row radial ball bearings.
- Type A has cylindrical outside diameters; type B has spherical outside diameters. The letter B appears on the outer ring only.
- The bearings are not prelubricated.

## **Suggested shaft tolerances:**

1/2 in. – 1 15/16 in., nominal to -0.013 mm, -0.0005 in.;  
2 in. – 3 15/16 in., nominal to -0.025 mm, -0.0010 in.

## **To order, specify bearing number followed by "+ COL".**

Example: SM1207KB + COL.



| Bearing No.           |          | Collar No. | Basic Outer-Ring Size | Shaft Dia. d | O.D. D | Ring Widths |                       |        |        |        |                |                |                | Brg. and Collar Wt. |         | Static Load Rating C <sub>0</sub> | Extended Dynamic Load Rating C <sub>E</sub> |
|-----------------------|----------|------------|-----------------------|--------------|--------|-------------|-----------------------|--------|--------|--------|----------------|----------------|----------------|---------------------|---------|-----------------------------------|---------------------------------------------|
| A Type <sup>(2)</sup> | B Type   |            |                       |              |        | Inner B     | Outer C               | S(G)   | F      | L      | d <sub>1</sub> | B <sub>1</sub> | B <sub>2</sub> |                     |         |                                   |                                             |
|                       |          |            |                       | in.          | mm in. | mm in.      | mm in.                | mm in. | mm in. | mm in. | mm in.         | mm in.         | mm in.         | kg lbs.             | kg lbs. | N lbs.                            | N lbs.                                      |
| SM1008K               | SM1008KB | S1008K     | 203                   | 1/2          |        |             |                       |        |        |        |                |                |                | 0.145               | 0.32    |                                   |                                             |
| SM1009K               | SM1009KB | S1009K     |                       | 9/16         | 40     | 27.78       | 12                    | 13.90  | 22.86  | 4.0    | 28.60          | 13.50          | 37.30          | 0.131               | 0.29    | 4700                              | 10600                                       |
| SM1010K               | SM1010KB | S1010K     |                       | 5/8          | 1.5748 | 1 3/32      | 0.4724                | 35/64  | 0.900  | 5/32   | 1 1/8          | 17/32          | 1 15/32        | 0.136               | 0.30    | 1600                              | 2360                                        |
| SM1011K               | SM1011KB | S1011K     |                       | 11/16        |        |             |                       |        |        |        |                |                |                | 0.113               | 0.25    |                                   |                                             |
| SM1012K               | SM1012KB | S1012K     | 204                   | 3/4          | 47     | 34.13       | 14                    | 17.10  | 27.56  | 4.0    | 33.30          | 13.50          | 48.66          | 0.195               | 0.43    | 6200                              | 14300                                       |
|                       |          |            |                       |              | 1.8504 | 1 11/32     | 0.5512                | 43/64  | 1.085  | 5/32   | 1 5/16         | 17/32          | 1 23/32        |                     |         | 1400                              | 3200                                        |
| SM1013K               | SM1013KB | S1013K     | 205                   | 13/16        |        |             |                       |        |        |        |                |                |                | 0.276               | 0.61    |                                   |                                             |
| SM1014K               | SM1014KB | S1014K     |                       | 7/8          | 52     | 34.93       | 15                    | 17.50  | 33.83  | 4.0    | 38.10          | 13.50          | 44.45          | 0.254               | 0.56    | 6950                              | 15600                                       |
| SM1015K               | SM1015KB | S1015K     |                       | 15/16        | 2.0472 | 1 3/8       | 0.5906                | 11/16  | 1.332  | 5/32   | 1 1/2          | 17/32          | 1 3/4          | 0.236               | 0.52    | 1730                              | 3450                                        |
| SM1100K               | SM1100KB | S1100K     |                       | 1            |        |             |                       |        |        |        |                |                |                | 0.217               | 0.48    |                                   |                                             |
| SM1101K               | SM1101KB | S1101K     | 206                   | 1 1/16       | 62     | 36.51       | 16                    | 18.30  | 40.31  | 4.0    | 44.40          | 15.90          | 48.40          | 0.399               | 0.88    |                                   |                                             |
| SM1102K               | SM1102KB | S1102K     |                       | 1 1/8        | 2.4409 | 1 7/16      | 0.6299 <sup>(3)</sup> | 23/32  | 1.587  | 5/32   | 1 3/4          | 5/8            | 1 29/32        | 0.367               | 0.81    | 11100                             | 21600                                       |
| SM1103K               | SM1103KB | S1103K     |                       | 1 3/16       |        |             |                       |        |        |        |                |                |                | 0.331               | 0.73    | 2500                              | 4800                                        |
| SM1104K               | SM1104KB | S1104K     |                       | 1 1/4        |        |             |                       |        |        |        |                |                |                | 0.621               | 1.37    |                                   |                                             |
| SM1105K               | SM1105KB | S1105K     | 207                   | 1 5/16       | 72     | 37.70       | 17                    | 18.85  | 46.13  | 4.0    | 54.00          | 17.46          | 51.20          | 0.589               | 1.30    | 15100                             | 28500                                       |
| SM1106K               | SM1106KB | S1106K     |                       | 1 3/8        | 2.8346 | 1 31/64     | 0.6693 <sup>(4)</sup> | 0.742  | 1.816  | 5/32   | 2 1/8          | 11/16          | 2 1/64         | 0.562               | 1.24    | 3400                              | 6400                                        |
| SM1107K               | SM1107KB | S1107K     |                       | 1 7/16       |        |             |                       |        |        |        |                |                |                | 0.539               | 1.19    |                                   |                                             |
| SM1108KT              | SM1108KB | S1108KT    | 208                   | 1 1/2        | 80     | 42.86       | 18                    | 21.40  | 52.27  | 4.8    | 60.30          | 18.30          | 56.40          | 0.761               | 1.68    | 19600                             | 36000                                       |
| SM1109KT              | —        | S1109KT    |                       | 1 9/16       | 3.1496 | 1 11/16     | 0.7087 <sup>(5)</sup> | 27/32  | 2.058  | 3/16   | 2 3/8          | 23/32          | 2 7/32         | 0.716               | 1.58    | 4400                              | 8150                                        |
| SM1110K               | SM1110KB | S1110K     | 209                   | 1 5/8        |        |             |                       |        |        |        |                |                |                | 0.875               | 1.93    |                                   |                                             |
| SM1111K               | SM1111KB | S1111K     |                       | 1 11/16      | 85     | 42.86       | 19                    | 21.40  | 57.92  | 4.8    | 63.50          | 18.30          | 56.40          | 0.857               | 1.89    | 20000                             | 36000                                       |
| SM1112K               | SM1112KB | S1112K     |                       | 1 3/4        | 3.3465 | 1 11/16     | 0.7480                | 27/32  | 2.280  | 3/16   | 2 1/2          | 23/32          | 2 7/32         | 0.803               | 1.77    | 4500                              | 8150                                        |
|                       |          |            |                       |              |        |             |                       |        |        |        |                |                |                |                     |         |                                   |                                             |

<sup>(1)</sup>See page A-159.

<sup>(2)</sup>Order as MUA assembly suggested.

<sup>(3)</sup>Spherical O.D. outer-ring width is 18 mm (0.7087 in.).

<sup>(4)</sup>Spherical O.D. outer-ring width is 19 mm (0.7480 in.).

<sup>(5)</sup>Spherical O.D. outer-ring width is 21 mm (0.8268 in.).

<sup>(6)</sup>For applications where thrust load exceeds 60 percent of radial load, consult your Timken engineer.

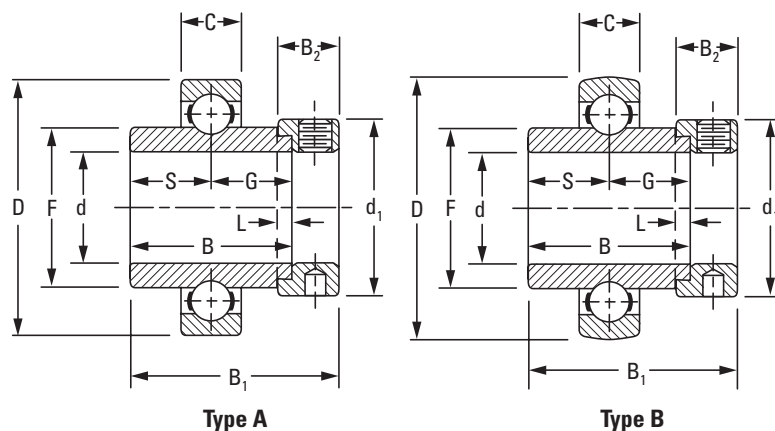
NOTE: Bore tolerance: 1/2 in. – 2 3/16 in., nominal to +0.013 mm, +0.0005 in.

2 1/4 in. – 3 3/16 in., nominal to +0.015 mm, +0.0006 in.

3 1/4 in. – 3 15/16 in., nominal to +0.018 mm, +0.0007 in.

Continued on next page.

### SM INDUSTRIAL SERIES A AND B TYPES/MUA-B INSERTS<sup>(1)</sup> – continued



Continued from previous page.

| Bearing No.           |                            | Collar No. | Basic Outer-Ring Size | Shaft Dia. | O.D.    | Ring Widths |        |         |        |        |                |                |                | Brg. and Collar Wt. |       | Static Load Rating | Extended Dynamic Load Rating |
|-----------------------|----------------------------|------------|-----------------------|------------|---------|-------------|--------|---------|--------|--------|----------------|----------------|----------------|---------------------|-------|--------------------|------------------------------|
| A Type <sup>(2)</sup> | B Type                     |            |                       |            |         | Inner       | Outer  | S(G)    | F      | L      | d <sub>1</sub> | B <sub>1</sub> | B <sub>2</sub> |                     |       |                    |                              |
|                       |                            |            |                       | d          | D       | B           | C      | mm in.  | mm in. | mm in. | mm in.         | mm in.         | mm in.         | kg lbs.             |       | N lbs.             | N lbs.                       |
| SM1113K               | SM1113KB                   | S1113K     |                       | 1 13/16    |         |             |        |         |        |        |                |                |                | 1.075               | 2.37  |                    |                              |
| SM1114K               | SM1114KB                   | S1114K     | 210                   | 1 7/8      | 90      | 49.21       | 20     | 24.60   | 62.84  | 4.8    | 69.90          | 18.30          | 62.70          | 1.012               | 2.23  | 22700              | 39000                        |
| SM1115K               | SM1115KB                   | S1115K     |                       | 1 15/16    | 3.5433  | 1 15/16     | 0.7874 | 3 1/32  | 2.474  | 3/16   | 2 3/4          | 2 3/32         | 2 15/32        | 0.962               | 2.12  | 5100               | 8800                         |
| SM1200K               | SM1200KB                   | S1200K     |                       | 2          |         |             |        |         |        |        |                |                |                | 1.51                | 3.33  |                    |                              |
| SM1201K               | SM1201KB                   | S1201K     | 211                   | 2 1/16     | 100     | 55.56       | 21     | 27.80   | 69.77  | 4.8    | 76.20          | 20.60          | 71.40          | 1.397               | 3.08  | 28500              | 48000                        |
| SM1202K               | SM1202KB                   | S1202K     |                       | 2 1/8      | 3.9370  | 2 3/16      | 0.8268 | 1 3/32  | 2.747  | 3/16   | 3              | 1 13/16        | 2 13/16        | 1.438               | 3.17  | 6400               | 10800                        |
| SM1203K               | SM1203KB                   | S1203K     |                       | 2 3/16     |         |             |        |         |        |        |                |                |                | 1.256               | 2.77  |                    |                              |
| SM1204K               | SM1204KB                   | S1204K     |                       | 2 1/4      |         |             |        |         |        |        |                |                |                | 1.860               | 4.10  |                    |                              |
| SM1205K               | SM1205KB                   | S1205K     | 212                   | 2 5/16     | 110     | 61.91       | 22     | 30.96   | 76.48  | 6.4    | 84.14          | 22.33          | 77.80          | 1.787               | 3.94  | 35600              | 58500                        |
| SM1206K               | SM1206KB                   | S1206K     |                       | 2 3/8      | 4.3307  | 2 7/16      | 0.8661 | 1 7/32  | 3.011  | 1/4    | 3 5/16         | 7/8            | 3 1/16         | 1.692               | 3.73  | 8000               | 13200                        |
| SM1207K               | SM1207KB                   | S1207K     |                       | 2 7/16     |         |             |        |         |        |        |                |                |                | 1.374               | 3.03  |                    |                              |
| SM1208K               | SM1208KB                   | S1208K     | 213                   | 2 1/2      | 120     | 68.26       | 23     | 34.13   | 84.58  | 6.4    | 96.84          | 23.81          | 85.73          | 2.472               | 5.45  | 39200              | 63000                        |
|                       |                            |            |                       | 4.7244     | 2 11/16 | 0.9055      |        | 1 11/32 | 3.330  | 1/4    | 3 13/16        | 15/16          | 3 3/8          |                     |       | 8800               | 14300                        |
| SM1211KT              | SM1211KTB                  | S1211KT    | 214                   | 2 11/16    | 125     | 68.26       | 24     | 34.13   | 86.92  | 6.4    | 96.84          | 23.81          | 85.73          | 2.418               | 5.33  | 43000              | 69500                        |
|                       |                            |            |                       | 4.9213     | 2 11/16 | 0.9449      |        | 1 11/32 | 3.422  | 1/4    | 3 13/16        | 15/16          | 3 3/8          |                     |       | 9650               | 15600                        |
| SM1213K               | SM1213KB                   | S1213K     | 215                   | 2 13/16    | 130     | 74.61       | 25     | 37.30   | 91.92  | 6.4    | 101.60         | 23.81          | 92.08          | 2.858               | 6.30  | 43600              | 68000                        |
| SM1215K               | SM1215KB                   | S1215K     |                       | 2 15/16    | 5.1181  | 2 15/16     | 0.9843 | 1 15/32 | 3.619  | 1/4    | 4              | 1 15/16        | 3 5/8          | 2.803               | 6.18  | 9800               | 15300                        |
| SM1303K               | SM1303KB                   | S1303K     | 216                   | 3 3/16     | 140     | 80.96       | 26     | 40.48   | 98.40  | 6.4    | 111.13         | 25.40          | 100.01         | 3.452               | 7.61  | 53400              | 80000                        |
|                       |                            |            |                       | 5.5118     | 3 3/16  | 1.0236      |        | 1 19/32 | 3.874  | 1/4    | 4 3/8          | 1              | 3 15/16        |                     |       | 12000              | 18000                        |
| SM1307K               | SM1307KB                   | S1307K     | 217                   | 3 7/16     | 150     | 87.31       | 28     | 43.66   | 104.83 | 6.4    | 112.71         | 25.40          | 106.36         | 3.901               | 8.60  | 61000              | 93000                        |
|                       |                            |            |                       | 5.9055     | 3 7/16  | 1.1024      |        | 1 23/32 | 4.127  | 1/4    | 4 7/16         | 1              | 4 3/16         |                     |       | 13700              | 20800                        |
| SM1311W-BR            | SM1311WB-BR <sup>(6)</sup> | S1311K     | 219                   | 3 11/16    | 170     | 93.66       | 32     | 46.83   | 118.34 | 6.4    | 127.00         | 26.99          | 114.30         | 6.078               | 13.40 | 113600             | 150000                       |
|                       |                            |            |                       | 6.6929     | 3 11/16 | 1.2598      |        | 1 27/32 | 4.659  | 1/4    | 5              | 1 1/16         | 4 1/2          |                     |       | 25500              | 34000                        |
| SM1315W-BR            | SM1315WB-BR <sup>(6)</sup> | S1315      | 220                   | 3 15/16    | 180     | 100.01      | 34     | 50.00   | 123.85 | 6.4    | 139.70         | 31.75          | 125.41         | 7.335               | 16.17 | 126900             | 170000                       |
|                       |                            |            |                       | 7.0866     | 3 15/16 | 1.3386      |        | 1 31/32 | 4.876  | 1/4    | 5 1/2          | 1 1/4          | 4 15/16        |                     |       | 28500              | 38000                        |

<sup>(1)</sup>See page A-159.

<sup>(2)</sup>Order as MUA assembly suggested.

<sup>(3)</sup>Spherical O.D. outer-ring width is 18 mm (0.7087 in.).

<sup>(4)</sup>Spherical O.D. outer-ring width is 19 mm (0.7480 in.).

<sup>(5)</sup>Spherical O.D. outer-ring width is 21 mm (0.8268 in.).

<sup>(6)</sup>For applications where thrust load exceeds 60 percent of radial load, consult your Timken engineer.

NOTE: Bore tolerance: 1/2 in. – 2 3/16 in., nominal to +0.013 mm, +0.0005 in.

2 1/4 in. – 3 3/16 in., nominal to +0.015 mm, +0.0006 in.

3 1/4 in. – 3 15/16 in., nominal to +0.018 mm, +0.0007 in.

### SM-S INDUSTRIAL SERIES

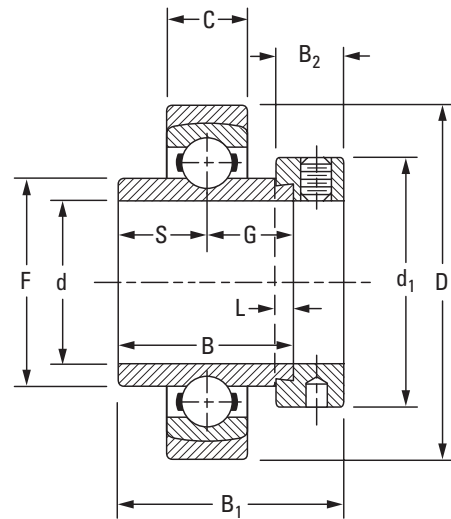
- Standard SM-S series permits the inner assembly to swivel in the outer aligning ring.
- The unrestricted self-alignment is achieved by allowing the inner ring to become square and true with the shaft and assembly.
- The external S-ring is uniquely ground and closely matched to its respective outer-bearing ring. The S-ring of one bearing will not fit the outer ring of another bearing.
- The bearings are not prelubricated.

#### Suggested shaft tolerances:

- 1 in. – 1 15/16 in., nominal to -0.013 mm, -0.0005 in.;
- 2 in. – 3 15/16 in., nominal to -0.025 mm, -0.0010 in.

#### To order, specify bearing number followed by "+ COL".

Example: SM1100KS + COL.



| Bearing No.             | Collar No. | Basic Outer-Ring Size | Shaft Dia.<br>d | O.D.<br>D     | Ring Widths       |              | S(G)             | F               | L           | d <sub>1</sub>   | B <sub>2</sub> | B <sub>1</sub>    | Brg. and Collar Wt. |         | Static Load Rating<br>C <sub>0</sub> | Extended Dynamic Load Rating<br>C <sub>E</sub> |
|-------------------------|------------|-----------------------|-----------------|---------------|-------------------|--------------|------------------|-----------------|-------------|------------------|----------------|-------------------|---------------------|---------|--------------------------------------|------------------------------------------------|
|                         |            |                       |                 |               | Inner<br>B        | Outer<br>C   |                  |                 |             |                  |                |                   |                     |         |                                      |                                                |
|                         |            |                       | in.             | mm in.        | mm in.            | mm in.       | mm in.           | mm in.          | mm in.      | mm in.           | mm in.         | mm in.            | kg lbs.             | kg lbs. | N lbs.                               | N lbs.                                         |
| SM1100KS                | S1100K     | 205                   | 1               | 57<br>2.2441  | 34.93<br>1 3/8    | 15<br>0.5910 | 17.46<br>1 1/16  | 33.83<br>1.332  | 4.0<br>5/32 | 38.10<br>1 1/2   | 13.50<br>17/32 | 44.10<br>1 47/64  | 0.263 0.58          |         | 7700<br>1730                         | 15600<br>3450                                  |
| SM1103KS                | S1103K     | 206                   | 1 3/16          | 68<br>2.6772  | 36.51<br>1 7/16   | 16<br>0.6300 | 18.30<br>23/32   | 39.12<br>1.540  | 4.0<br>5/32 | 44.40<br>1 3/4   | 15.90<br>5/8   | 48.40<br>1 29/32  | 0.418 0.92          |         | 11100<br>2500                        | 21600<br>4800                                  |
| SM1104KS                | S1104K     | 207                   | 1 1/4           | 79            | 37.70             | 17           | 18.85            | 46.13           | 4.0         | 54.40            | 17.46          | 51.20             | 0.726 1.60          |         | 11500                                | 28500                                          |
| SM1107KS                | S1107K     |                       | 1 7/16          | 3.1102        | 1 31/64           | 0.6690       | 0.742            | 1.816           | 5/32        | 2 1/8            | 11/16          | 2 1/64            | 0.658 1.45          |         | 3400                                 | 6400                                           |
| SM1108KS                | S1108KT    | 208                   | 1 1/2           | 88<br>3.4646  | 42.86<br>1 11/16  | 18<br>0.7090 | 21.40<br>27/32   | 52.27<br>2.058  | 4.8<br>3/16 | 60.30<br>2 3/8   | 18.30<br>23/32 | 56.40<br>27/32    | 0.903 1.99          |         | 19600<br>4400                        | 36000<br>8150                                  |
| SM1115KS                | S1115K     | 210                   | 1 15/16         | 100<br>3.9370 | 49.21<br>1 15/16  | 20<br>0.7874 | 24.60<br>31/32   | 62.84<br>2.474  | 4.8<br>3/16 | 69.90<br>2 3/4   | 18.30<br>23/32 | 62.70<br>2 15/32  | 1.185 2.61          |         | 22700<br>5100                        | 39000<br>8800                                  |
| SM1203KS                | S1203K     | 211                   | 2 3/16          | 110<br>4.3307 | 55.56<br>2 3/16   | 21<br>0.8268 | 27.80<br>1 3/32  | 69.77<br>2.747  | 4.8<br>3/16 | 76.20<br>3       | 20.60<br>13/16 | 71.40<br>2 13/16  | 1.748 3.85          |         | 28500<br>6400                        | 48000<br>10800                                 |
| SM1207KS                | S1207K     | 212                   | 2 7/16          | 120<br>4.7244 | 61.91<br>2 7/16   | 22<br>0.8661 | 30.96<br>1 7/32  | 76.48<br>3.011  | 6.4<br>1/4  | 84.14<br>3 5/16  | 22.20<br>7/8   | 77.80<br>3 1/16   | 1.907 4.20          |         | 35600<br>8000                        | 58500<br>13200                                 |
| SM1211KS                | S1211KT    | 214                   | 2 11/16         | 140<br>5.5118 | 68.26<br>2 11/16  | 24<br>0.9449 | 34.13<br>1 11/32 | 86.92<br>3.422  | 6.4<br>1/4  | 96.84<br>3 13/16 | 23.81<br>15/16 | 79.40<br>3 3/8    | 2.974 6.55          |         | 43000<br>9650                        | 69500<br>15600                                 |
| SM1215KS                | S1215K     | 215                   | 2 15/16         | 145<br>5.7087 | 74.61<br>2 15/16  | 25<br>0.9843 | 37.30<br>1 15/32 | 91.92<br>3.619  | 6.4<br>1/4  | 101.60<br>4      | 23.81<br>15/16 | 92.08<br>3 5/8    | 3.541 7.80          |         | 43600<br>9800                        | 68000<br>15300                                 |
| SM1303KS                | S1303K     | 216                   | 3 3/16          | 155<br>6.1024 | 80.96<br>3 3/16   | 26<br>1.0236 | 40.48<br>1 19/32 | 98.40<br>3.874  | 6.4<br>1/4  | 111.13<br>4 3/8  | 25.40<br>1     | 100.01<br>3 15/16 | 4.150 9.14          |         | 53400<br>12000                       | 80000<br>18000                                 |
| SM1307KS                | S1307K     | 217                   | 3 7/16          | 165<br>6.4961 | 87.31<br>3 7/16   | 28<br>1.1024 | 43.66<br>1 23/32 | 104.83<br>4.127 | 6.4<br>1/4  | 112.71<br>4 7/16 | 25.40<br>1     | 106.36<br>4 3/16  | 4.690 10.33         |         | 61000<br>13700                       | 93000<br>20800                                 |
| SM1315WS <sup>(1)</sup> | S1315K     | 220                   | 3 15/16         | 200<br>7.8740 | 100.01<br>3 15/16 | 34<br>1.3386 | 50.00<br>1 31/32 | 123.85<br>4.876 | 6.4<br>1/4  | 139.70<br>5 1/2  | 31.75<br>1 1/4 | 125.41<br>4 15/16 | 8.939 19.69         |         | 126900<br>28500                      | 170000<br>38000                                |

<sup>(1)</sup>For applications where thrust load exceeds 60 percent of radial load, consult your Timken engineer.

NOTE: Bore tolerance: 1 in. – 2 3/16 in., nominal to +0.013 mm, +0.0005 in.

2 1/4 in. – 3 3/16 in., nominal to +0.015 mm, +0.0006 in.

3 1/4 in. – 3 15/16 in., nominal to +0.018 mm, +0.0007 in.

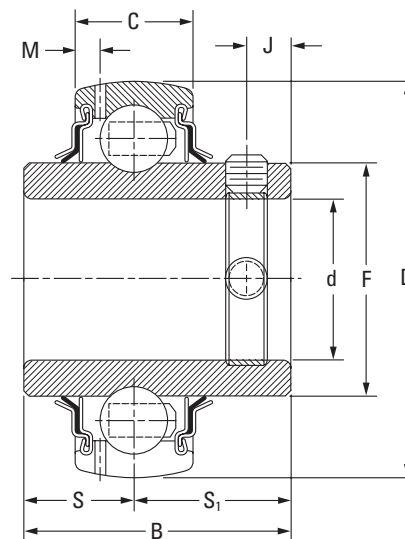
### GY-KRRB SET SCREW INDUSTRIAL SERIES

- Incorporates Shaft Guarding Technology, which reduces replacement time, provides shaft protection and prolongs the life of the shaft.
- The Y-series set screw bearing has increased shaft support for HVAC and other industrial applications.
- The Y series features superfinished raceways, grade-10 balls and anti-back-out nylon-patch set screws; they are factory-prelubricated and relubricatable.
- The set screw mounting feature is ideal for reversing load applications.

#### Suggested shaft tolerances:

1/2 in. – 1 15/16 in., nominal to -0.013 mm, -0.0005 in.;

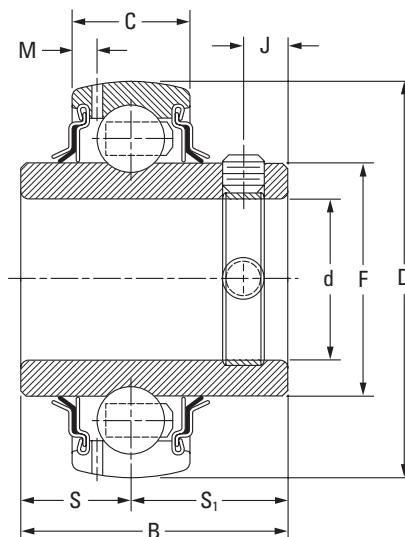
2 in. – 2 15/16 in., nominal to -0.025 mm, -0.0010 in.



| Bearing No.    | Basic Outer-Ring Size | Shaft Dia.<br>d | O.D.<br>D | Ring Widths |            | S         | S <sub>1</sub> | F         | M         | J         | Set Screw Size | Static Load Rating<br>C <sub>0</sub> | Extended Dynamic Load Rating<br>C <sub>E</sub> |
|----------------|-----------------------|-----------------|-----------|-------------|------------|-----------|----------------|-----------|-----------|-----------|----------------|--------------------------------------|------------------------------------------------|
|                |                       |                 |           | Inner<br>B  | Outer<br>C |           |                |           |           |           |                |                                      |                                                |
|                |                       | in.<br>mm       | mm<br>in. | mm<br>in.   | mm<br>in.  | mm<br>in. | mm<br>in.      | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in.      | N<br>lbs.                            | N<br>lbs.                                      |
| GY1008KRRB     | 203                   | 1/2             |           |             |            |           |                |           |           |           |                |                                      |                                                |
| GY1009KRRB     |                       | 9/16            |           |             |            |           |                |           |           |           |                |                                      |                                                |
| GY1010KRRB     |                       | 5/8             | 40        | 27.38       | 12         | 11.50     | 15.88          | 22.86     | 2.72      | 4.55      | M5X.8          | 4400                                 | 10600                                          |
| GY1011KRRB     |                       | 11/16           | 1.5748    | 1.0780      | 0.0472     | 0.453     | 0.6250         | 0.900     | 0.107     | 0.179     | 10 – 32        | 1000                                 | 2360                                           |
| GYE15KRRB      |                       | 15              |           |             |            |           |                |           |           |           |                |                                      |                                                |
| GYE17KRRB      |                       | 17              |           |             |            |           |                |           |           |           |                |                                      |                                                |
| GY1012KRRB SGT | 204                   | 3/4             | 47        | 31.80       | 14         | 12.70     | 19.10          | 27.56     | 3.43      | 5.87      | M5X.8          | 6200                                 | 14300                                          |
| GYE20KRRB SGT  |                       | 20              | 1.8504    | 1.2480      | 0.5500     | 0.500     | 0.7480         | 1.085     | 0.135     | 0.231     | 10 – 32        | 1400                                 | 3200                                           |
| GY1013KRRB     | 205                   | 13/16           |           |             |            |           |                |           |           |           |                |                                      |                                                |
| GY1014KRRB SGT |                       | 7/8             |           |             |            |           |                |           |           |           |                |                                      |                                                |
| GY1015KRRB SGT |                       | 15/16           | 52        | 34.85       | 15         | 14.27     | 20.56          | 33.83     | 3.86      | 6.80      | M6X1           | 7700                                 | 15800                                          |
| GY1100KRRB SGT |                       | 1               | 2.0472    | 1.3717      | 0.5910     | 0.562     | 0.8097         | 1.332     | 0.152     | 0.267     | 1/4 – 28       | 1730                                 | 3550                                           |
| GYE25KRRB SGT  |                       | 25              |           |             |            |           |                |           |           |           |                |                                      |                                                |
| GY1101KRRB     |                       | 1 1/16          |           |             |            |           |                |           |           |           |                |                                      |                                                |
| GY1102KRRB SGT | 206                   | 1 1/8           | 62        | 39.10       | 18         | 15.88     | 23.24          | 40.31     | 3.96      | 8.63      | M6X1           | 11000                                | 21600                                          |
| GY1103KRRB SGT |                       | 1 3/16          | 2.4409    | 1.5400      | 0.7090     | 0.625     | 0.9150         | 1.587     | 0.156     | 0.340     | 1/4 – 28       | 2500                                 | 4800                                           |
| GY1103KRRB3    |                       | 1 1/4           |           |             |            |           |                |           |           |           |                |                                      |                                                |
| GYE30KRRB SGT  |                       | 30              |           |             |            |           |                |           |           |           |                |                                      |                                                |
| GY1104KRRB SGT | 207                   | 1 1/4           |           |             |            |           |                |           |           |           |                |                                      |                                                |
| GY1105KRRB     |                       | 1 5/16          |           |             |            |           |                |           |           |           |                |                                      |                                                |
| GY1106KRRB SGT |                       | 1 3/8           | 72        | 45.41       | 19         | 17.48     | 27.94          | 46.18     | 3.68      | 10.36     | M8X1.25        | 15100                                | 28500                                          |
| GY1107KRRB SGT |                       | 1 7/16          | 2.8346    | 1.7880      | 0.7480     | 0.688     | 1.1000         | 1.816     | 0.145     | 0.408     | 5/16 – 24      | 3400                                 | 6400                                           |
| GYE35KRRB SGT  |                       | 35              |           |             |            |           |                |           |           |           |                |                                      |                                                |
| GY1108KRRB SGT |                       | 1 1/2           |           |             |            |           |                |           |           |           |                |                                      |                                                |
| GY1109KRRB     | 208                   | 1 9/16          | 80        | 49.22       | 21         | 19.05     | 30.17          | 52.27     | 4.06      | 8.00      | M8X1.25        | 19600                                | 36000                                          |
| GYE40KRRB SGT  |                       | 40              | 3.1496    | 1.9380      | 0.8270     | 0.750     | 1.1880         | 2.058     | 0.160     | 0.315     | 5/16 – 24      | 4400                                 | 8150                                           |

NOTE: Bore tolerances: 1/2 in. – 2 3/16 in., nominal to +0.013 mm, +0.0005 in.  
2 1/4 in. – 3 15/16 in., nominal to +0.015 mm, +0.0006 in.

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| Bearing No.    | Basic Outer-Ring Size | Shaft Dia.<br>d | O.D.<br>D | Ring Widths |            | S         | S <sub>1</sub> | F         | M         | J         | Set Screw Size | Static Load Rating<br>C <sub>0</sub> | Extended Dynamic Load Rating<br>C <sub>E</sub> |
|----------------|-----------------------|-----------------|-----------|-------------|------------|-----------|----------------|-----------|-----------|-----------|----------------|--------------------------------------|------------------------------------------------|
|                |                       |                 |           | Inner<br>B  | Outer<br>C |           |                |           |           |           |                |                                      |                                                |
|                |                       | in.<br>mm       | mm<br>in. | mm<br>in.   | mm<br>in.  | mm<br>in. | mm<br>in.      | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in.      | N<br>lbs.                            | N<br>lbs.                                      |
| GY1110KRRB SGT | 209                   | 1 5/8           |           |             |            |           |                |           |           |           |                |                                      |                                                |
| GY1111KRRB SGT |                       | 1 11/16         | 85        | 50.37       | 22         | 19.05     | 31.32          | 57.92     | 4.55      | 9.14      | M8X1.25        | 20000                                | 36000                                          |
| GY1112KRRB SGT |                       | 1 3/4           | 3.3465    | 1.9830      | 0.8661     | 0.750     | 1.2330         | 2.280     | 0.179     | 0.360     | 5/16 – 24      | 4500                                 | 8150                                           |
| GYE45KRRB SGT  |                       | 45              |           |             |            |           |                |           |           |           |                |                                      |                                                |
| GY1113KRRB     | 210                   | 1 13/16         |           |             |            |           |                |           |           |           |                |                                      |                                                |
| GY1114KRRB     |                       | 1 7/8           | 90        | 51.59       | 22         | 19.05     | 32.54          | 62.84     | 4.70      | 10.00     | M10X1.5        | 22700                                | 39000                                          |
| GY1115KRRB SGT |                       | 1 15/16         | 3.5433    | 2.0310      | 0.8661     | 0.750     | 1.2810         | 2.474     | 0.185     | 0.394     | 3/8 – 24       | 5100                                 | 8800                                           |
| GY1115KRRB3    |                       | 2               |           |             |            |           |                |           |           |           |                |                                      |                                                |
| GYE50KRRB SGT  |                       | 50              |           |             |            |           |                |           |           |           |                |                                      |                                                |
| GY1200KRRB SGT | 211                   | 2               |           |             |            |           |                |           |           |           |                |                                      |                                                |
| GY1201KRRB     |                       | 2 1/16          | 100       | 55.55       | 24         | 22.22     | 33.32          | 69.77     | 5.00      | 10.00     | M10X1.5        | 28500                                | 48000                                          |
| GY1202KRRB     |                       | 2 1/8           | 3.9370    | 2.1870      | 0.9450     | 0.875     | 1.3120         | 2.747     | 0.197     | 0.394     | 3/8 – 24       | 6400                                 | 10800                                          |
| GY1203KRRB SGT |                       | 2 3/16          |           |             |            |           |                |           |           |           |                |                                      |                                                |
| GYE55KRRB SGT  |                       | 55              |           |             |            |           |                |           |           |           |                |                                      |                                                |
| GY1204KRRB SGT | 212                   | 2 1/4           |           |             |            |           |                |           |           |           |                |                                      |                                                |
| GY1205KRRB     |                       | 2 5/16          | 110       | 65.07       | 27         | 25.40     | 39.67          | 76.48     | 5.13      | 10.00     | M10X1.5        | 35600                                | 58500                                          |
| GY1206KRRB     |                       | 2 3/8           | 4.3307    | 2.5620      | 1.0630     | 1.000     | 1.5620         | 3.011     | 0.202     | 0.394     | 3/8 – 24       | 8000                                 | 13200                                          |
| GY1207KRRB SGT |                       | 2 7/16          |           |             |            |           |                |           |           |           |                |                                      |                                                |
| GYE60KRRB SGT  |                       | 60              |           |             |            |           |                |           |           |           |                |                                      |                                                |
| GY1210KRRB     | 214                   | 2 5/8           |           |             |            |           |                |           |           |           |                |                                      |                                                |
| GY1211KRRB     |                       | 2 11/16         | 125       | 69.85       | 28         | 26.97     | 42.84          | 86.92     | 5.08      | 12.00     | M12X1.75       | 37500                                | 69500                                          |
| GYE70KRRB      |                       | 70              | 4.9213    | 2.7500      | 1.1020     | 1.062     | 1.6870         | 3.422     | 0.200     | 0.472     | 7/16 – 20      | 8500                                 | 15600                                          |
| GY1212KRRB     | 215                   | 2 3/4           |           |             |            |           |                |           |           |           |                |                                      |                                                |
| GY1214KRRB     |                       | 2 7/8           | 130       | 77.80       | 29         | 33.32     | 44.45          | 91.92     | 5.56      | 12        | M12X1.75       | 43600                                | 69500                                          |
| GY1215KRRB     |                       | 2 15/16         | 5.1181    | 3.0630      | 1.1420     | 1.312     | 1.7500         | 3.619     | 0.219     | 0.472     | 7/16 – 20      | 9800                                 | 15600                                          |
| GYE75KRRB      |                       | 75              |           |             |            |           |                |           |           |           |                |                                      |                                                |

NOTE: Bore tolerances: 1/2 in. – 2 3/16 in., nominal to +0.013 mm, +0.0005 in.  
2 1/4 in. – 3 15/16 in., nominal to +0.015 mm, +0.0006 in.

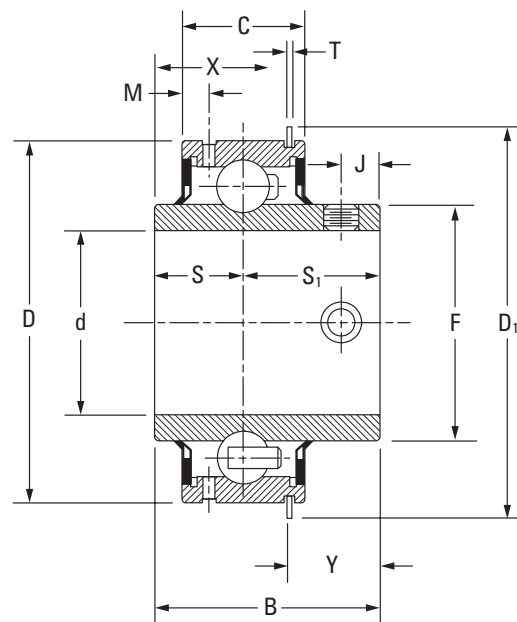
### ER INDUSTRIAL SERIES, RELUBRICATABLE TYPES

- Incorporates (optional) Shaft Guarding Technology, which reduces replacement time, provides shaft protection and prolongs shaft life.
- This bearing is designed for use in applications where low-starting torque and low-running torque are necessary.
- The ER-DD series is for applications where extremely low torque is required.
- Test results indicate an average of 95 percent reduction in start-up torque when using ER-DD instead of the standard ER bearing. Running torque is reduced up to 85–90 percent.

#### Suggested shaft tolerances:

1/2 in. – 1 15/16 in., nominal to -0.013 mm, -0.0005 in.;

2 in. – 3 7/16 in., nominal to -0.025 mm, -0.0010 in.



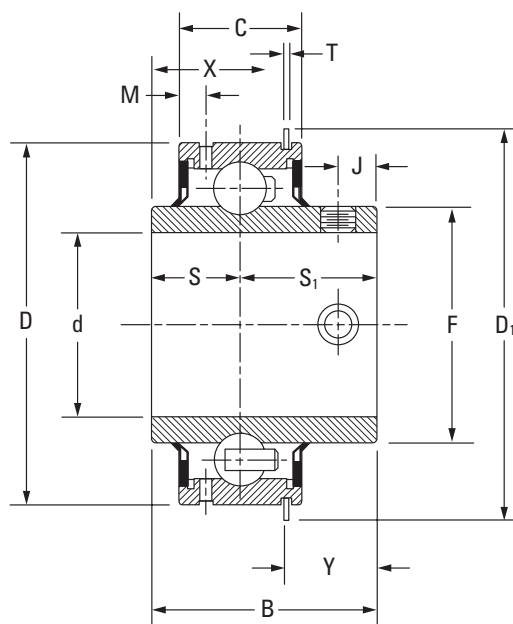
| Bearing No.            | Basic Outer-Ring Size | Shaft Dia.<br><br>d | O.D.<br><br>D | Ring Widths    |                |           |                |           |           |                |           |           |           |           |           | Set Screw Size | Brg. Wt.  |           | Static Load Rating<br><br>C <sub>0</sub> | Extended Dynamic Load Rating<br><br>C <sub>E</sub> |
|------------------------|-----------------------|---------------------|---------------|----------------|----------------|-----------|----------------|-----------|-----------|----------------|-----------|-----------|-----------|-----------|-----------|----------------|-----------|-----------|------------------------------------------|----------------------------------------------------|
|                        |                       |                     |               | Inner<br><br>B | Outer<br><br>C | S         | S <sub>1</sub> | F         | J         | D <sub>1</sub> | Y         | T         | M         | X         |           |                |           |           |                                          |                                                    |
|                        |                       | in.                 | mm<br>in.     | mm<br>in.      | mm<br>in.      | mm<br>in. | mm<br>in.      | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | kg<br>lbs.     | N<br>lbs. | N<br>lbs. |                                          |                                                    |
| ER08 <sup>(1)</sup>    | 204                   | 1/2                 | 47            | 30.963         | 15.817         | 12.700    | 18.263         | 27.546    | 5.131     | 52.400         | 16.612    | 1.067     | 3.861     | 14.351    | M5X.8     | 0.190          | 0.42      |           |                                          |                                                    |
| ER10 <sup>(1)</sup>    |                       | 5/8                 | 1.850         | 1 7/32         | 5/8            | 1/2       | 64/89          | 1 5/64    | 13/64     | 2 6/95         | 1/16      | 3/64      | 5/32      | 9/16      | 10 - 32   | 0.167          | 0.37      | 6571.2    |                                          |                                                    |
| ER12 <sup>(1)(2)</sup> |                       | 3/4                 |               |                |                |           |                |           |           |                |           |           |           |           |           | 0.141          | 0.31      | 1480      |                                          |                                                    |
| ER14 <sup>(1)(2)</sup> | 205                   | 7/8                 | 52            | 34.841         | 18.992         | 14.275    | 20.566         | 33.820    | 6.774     | 57.531         | 17.341    | 1.067     | 3.404     | 17.501    | M6X1      | 0.218          | 0.480     |           |                                          |                                                    |
| ER15 <sup>(2)</sup>    |                       | 15/16               | 2.047         | 1 3/8          | 3/4            | 50/89     | 13/16          | 1 21/64   | 17/64     | 2 17/64        | 11/16     | 3/64      | 9/64      | 11/16     | 1/4 - 28  | 0.195          | 0.43      | 7814.4    |                                          |                                                    |
| ER16 <sup>(1)(2)</sup> |                       | 1                   |               |                |                |           |                |           |           |                |           |           |           |           |           | 0.181          | 0.40      | 1760      |                                          |                                                    |
| ER18 <sup>(2)</sup>    | 206                   | 1 1/8               | 62            | 39.116         | 22.167         | 15.875    | 23.241         | 40.297    | 8.636     | 67.285         | 18.948    | 1.651     | 5.563     | 20.168    | M6X1      | 0.340          | 0.75      | 11233.2   |                                          |                                                    |
| ER19 <sup>(2)</sup>    |                       | 1 3/16              | 2.441         | 1 25/64        | 7/8            | 5/8       | 59/64          | 1 37/64   | 11/32     | 2 41/64        | 3/4       | 1/16      | 7/32      | 51/64     | 1/4 - 28  | 0.313          | 0.69      | 2530      |                                          |                                                    |
| ER20 <sup>(1)(2)</sup> | 207                   | 1 1/4               |               |                |                |           |                |           |           |                |           |           |           |           |           | 0.567          | 1.25      |           |                                          |                                                    |
| ER22 <sup>(1)(2)</sup> |                       | 1 3/8               | 72            | 45.415         | 23.754         | 17.475    | 27.940         | 46.825    | 10.363    | 78.105         | 22.301    | 1.651     | 5.563     | 23.114    | M8X1.25   | 0.499          | 1.10      | 15273.6   |                                          |                                                    |
| ER23 <sup>(1)(2)</sup> |                       | 1 7/16              | 2.834         | 1 25/32        | 15/16          | 11/16     | 1 7/64         | 1 27/32   | 13/32     | 3 5/64         | 7/8       | 1/16      | 7/32      | 29/32     | 5/16 - 24 | 0.476          | 1.05      | 3440      |                                          |                                                    |
| ER24 <sup>(1)(2)</sup> | 208                   | 1 1/2               | 80            | 49.225         | 27.722         | 19.050    | 30.175         | 52.261    | 8.001     | 86.106         | 21.158    | 1.651     | 6.350     | 28.067    | M8X1.25   | 0.671          | 1.48      | 19802.4   |                                          |                                                    |
| ER27 <sup>(2)</sup>    |                       |                     |               | 3.149          | 1 15/16        | 1 3/32    | 3/4            | 1 3/16    | 2 3/64    | 5/16           | 3 25/64   | 53/64     | 1/16      | 1/4       | 1 7/64    | 5/16 - 24      |           |           | 4460                                     |                                                    |
| ER28 <sup>(1)(2)</sup> | 209                   | 1 11/16             | 85            | 50.368         | 27.724         | 19.050    | 31.318         | 57.899    | 9.144     | 91.110         | 22.250    | 1.651     | 6.325     | 28.118    | M8X1.25   | 0.735          | 1.62      | 20424     |                                          |                                                    |
| ER30                   |                       | 1 3/4               | 3.346         | 1 63/64        | 1 3/32         | 3/4       | 1 15/64        | 2 15/64   | 23/64     | 3 37/64        | 7/8       | 1/16      | 1/4       | 1 7/64    | 5/16 - 24 | 0.690          | 1.52      | 4600      |                                          |                                                    |
| ER31 <sup>(2)</sup>    | 210                   | 1 7/8               | 90            | 51.587         | 28.517         | 19.050    | 32.537         | 62.827    | 10.008    | 96.088         | 24.282    | 2.413     | 7.061     | 27.305    | M10X1.5   | 0.853          | 1.88      | 23132.4   |                                          |                                                    |
| ER31 <sup>(2)</sup>    |                       | 1 15/16             | 3.543         | 2 1/32         | 1 1/8          | 3/4       | 1 9/32         | 2 15/32   | 25/64     | 3 25/32        | 31/32     | 3/32      | 9/32      | 1 5/64    | 3/8 - 24  | 0.834          | 1.84      | 5210      |                                          |                                                    |

<sup>(1)</sup>DD low-drag/low-torque version is available.

<sup>(2)</sup>Available with Shaft Guarding Technology modification.

NOTE: Bore tolerances: 1.1874 in. – 2.1874 in. nominal to +0.013 mm, +0.0005 in.  
2.2500 in. – 3.1874 in. nominal to +0.015 mm, +0.0006 in.

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| Bearing No.                                   | Basic Outer-Ring Size | Shaft Dia. | O.D.          | Ring Widths     |                  |                  |                  |                  |                |                  |                |             |                |                  |                       | Set Screw Size | Brg. Wt.     |                 | Static Load Rating | Extended Dynamic Load Rating |
|-----------------------------------------------|-----------------------|------------|---------------|-----------------|------------------|------------------|------------------|------------------|----------------|------------------|----------------|-------------|----------------|------------------|-----------------------|----------------|--------------|-----------------|--------------------|------------------------------|
|                                               |                       |            |               | Inner           | Outer            | S                | S <sub>1</sub>   | F                | J              | D <sub>1</sub>   | Y              | T           | M              | X                |                       |                |              |                 |                    |                              |
|                                               |                       | d          | D             | B               | C                | S                | S <sub>1</sub>   | F                | J              | D <sub>1</sub>   | Y              | T           | M              | X                |                       |                |              |                 |                    |                              |
|                                               |                       | in.        | mm in.        | mm in.          | mm in.           | mm in.           | mm in.           | mm in.           | mm in.         | mm in.           | mm in.         | mm in.      | mm in.         | mm in.           | mm in.                | kg lbs.        | N lbs.       | N lbs.          |                    |                              |
| ER32 <sup>(1)(2)</sup><br>ER35 <sup>(2)</sup> | 211                   | 2 3/16     | 100<br>3.9370 | 55.56<br>2 3/16 | 30.16<br>1 3/16  | 22.22<br>7/8     | 33.34<br>1 5/16  | 69.85<br>2 3/4   | 9.92<br>25/64  | 106.4<br>4 3/16  | 24.28<br>61/64 | 2.4<br>3/32 | 7.14<br>9/32   | 31.27<br>1 15/64 | M10X1.5<br>3/8 - 24   | 1.300<br>1.084 | 2.87<br>2.39 | 29170.8<br>6570 | 47952<br>10800     |                              |
| ER39 <sup>(1)(2)</sup>                        | 212                   | 2 7/16     | 110<br>4.331  | 65.09<br>2 9/16 | 31.75<br>1 1/4   | 25.4<br>1        | 39.69<br>1 9/16  | 76.60<br>3 1/64  | 9.92<br>25/64  | 116.3<br>4 37/64 | 28.24<br>1.11  | 2.4<br>3/32 | 6.75<br>1 7/64 | 36.83<br>1 29/64 | M10X1.5<br>3/8 - 24   | 1.450<br>1.450 | 3.20<br>3.20 | 35875.2<br>8080 | 58164<br>13100     |                              |
| ER47                                          | 215                   | 2 15/16    | 130<br>5.1180 | 77.79<br>3 1/16 | 38.1<br>1 1/2    | 33.33<br>1 5/16  | 44.45<br>1 3/4   | 91.68<br>3 39/64 | 11.91<br>15/32 | 139.7<br>5 1/2   | 33.02<br>1.30  | 2.8<br>7/64 | 6.35<br>1/4    | 44.78<br>1 49/64 | M12X1.75<br>7/16 - 20 | 2.210<br>2.210 | 4.88<br>4.88 | 44844<br>10100  | 68820<br>15500     |                              |
| ER51                                          | 216                   | 3 3/16     | 140<br>5.5110 | 77.79<br>3 1/16 | 42.86<br>1 11/16 | 28.58<br>1 1/8   | 49.21<br>1 15/16 | 98.43<br>3 7/8   | 13.49<br>17/32 | 149.6<br>5 57/64 | 35.32<br>1.39  | 2.8<br>7/64 | 11.11<br>7/16  | 42.47<br>1 43/64 | M12X1.75<br>7/16 - 20 | 3.450<br>3.450 | 7.61<br>7.61 | 54168<br>12200  | 79476<br>17900     |                              |
| ER55                                          | 217                   | 3 7/16     | 150<br>5.905  | 85.72<br>3 3/8  | 49.21<br>1 15/16 | 34.16<br>1 11/32 | 51.57<br>2 1/32  | 104.84<br>4 1/8  | 11.91<br>7/16  | 159.5<br>6 1/4   | 34.53<br>1.36  | 2.8<br>7/64 | 11.02<br>7/16  | 51.21<br>2 1/64  | M12X1.75<br>7/16 - 20 | —<br>—         | —<br>—       | 61716<br>13900  | 92796<br>20900     |                              |

<sup>(1)</sup>DD low-drag/low-torque version is available.

<sup>(2)</sup>Available with Shaft Guarding Technology modification.

NOTE: Bore tolerances: 1.1874 in. – 2.1874 in. nominal to +0.013 mm, +0.0005 in.  
2.2500 in. – 3.1874 in. nominal to +0.015 mm, +0.0006 in.

### STANDARD SERIES

#### RA-RR, RA-RRB NON-RELUBRICATABLE TYPES

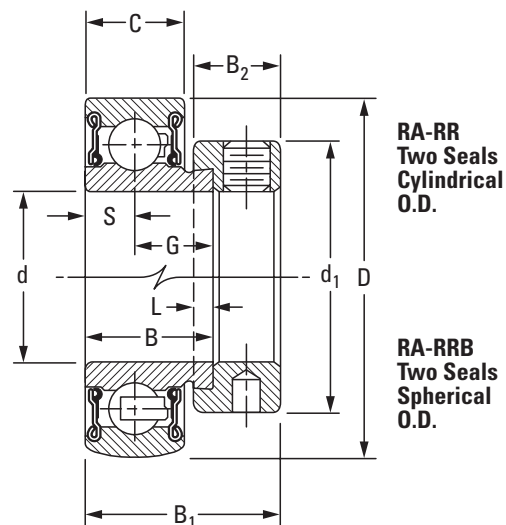
- These bearings are an extended inner-ring type with a self-locking collar.
- Due to the positive contact, the land-riding R-seal provides improved protection against harmful contaminants and retains lubricant under severe operating conditions.
- RA-RR series are factory-prelubricated and have cylindrical outside diameters.
- RA-RRB series have spherical outside diameters for use in housings with corresponding spherical inside surfaces to provide unrestricted initial alignment.

#### Suggested shaft tolerances:

1/2 in. – 1 15/16 in., nominal to -0.013 mm, -0.0005 in.;  
2 in. – 2 3/16 in., nominal to -0.025 mm, -0.0010 in.

#### To order, specify bearing number followed by "+ COL".

Example: RA100RRB + COL.



| Bearing No.      |                | Collar No. | Basic Outer-Ring Size | Shaft Dia.<br>d | O.D.<br>D | Ring Widths |                      | S         | G         | L         | d <sub>1</sub> | B <sub>2</sub> | B <sub>1</sub> | Brg. and Collar Wt.<br>kg lbs. | Static Load Rating<br>C <sub>0</sub><br>N lbs. | Extended Dynamic Load Rating<br>C <sub>E</sub><br>N lbs. |
|------------------|----------------|------------|-----------------------|-----------------|-----------|-------------|----------------------|-----------|-----------|-----------|----------------|----------------|----------------|--------------------------------|------------------------------------------------|----------------------------------------------------------|
| Cylindrical O.D. | Spherical O.D. |            |                       |                 |           | Inner<br>B  | Outer<br>C           |           |           |           |                |                |                |                                |                                                |                                                          |
|                  |                |            |                       | in.<br>mm       | mm<br>in. | mm<br>in.   | mm<br>in.            | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in.      |                                |                                                |                                                          |
| RA008RR          | RA008RRB       | S1008K     | 203                   | 1/2             |           |             |                      |           |           |           |                |                |                | 0.154                          | 0.34                                           |                                                          |
| RA009RR          | RA009RRB       | S1009K     |                       | 9/16            | 40        | 19.05       | 13                   | 6.50      | 12.55     | 4.0       | 28.60          | 13.5           | 28.6           | 0.145                          | 0.32                                           | 4700                                                     |
| RA010RR          | RA010RRB       | S1010K     |                       | 5/8             | 1.5748    | 0.750       | 0.512 <sup>(1)</sup> | 0.256     | 0.494     | 5/32      | 1 1/8          | 17/32          | 1 1/8          | 0.127                          | 0.28                                           | 1060                                                     |
| RAE17RR          | RAE17RRB       | SE17K      |                       | 17              |           |             |                      |           |           |           |                |                |                | 0.127                          | 0.28                                           | 2360                                                     |
| RA012RR          | RA012RRB       | S1012K     | 204                   | 3/4             | 47        | 21.44       | 15                   | 7.49      | 13.92     | 4.0       | 33.30          | 13.5           | 31.0           | 0.132                          | 0.29                                           | 6200                                                     |
| RAE20RR          | RAE20RRB       | SE20K      |                       | 20              | 1.8504    | 0.844       | 0.591 <sup>(2)</sup> | 0.295     | 0.548     | 5/32      | 1 5/16         | 17/32          | 1 7/32         | 0.132                          | 0.29                                           | 1400                                                     |
| RA013RR          | RA013RRB       | S1013K     | 205                   | 13/16           |           |             |                      |           |           |           |                |                |                | 0.231                          | 0.51                                           |                                                          |
| RA014RR          | RA014RRB       | S1014K     |                       | 7/8             | 52        | 21.44       | 15                   | 7.49      | 13.92     | 4.0       | 38.10          | 13.5           | 31.0           | 0.213                          | 0.47                                           | 7700                                                     |
| RA015RR          | RA015RRB       | S1015K     |                       | 15/16           | 2.0472    | 0.844       | 0.591                | 0.295     | 0.548     | 5/32      | 1 1/2          | 17/32          | 1 7/32         | 0.200                          | 0.44                                           | 15800                                                    |
| RA100RR          | RA100RRB       | S1100K     |                       | 1               |           |             |                      |           |           |           |                |                |                | 0.186                          | 0.41                                           | 3550                                                     |
| RAE25RR          | RAE25RRB       | SE25K      |                       | 25              |           |             |                      |           |           |           |                |                |                | 0.186                          | 0.41                                           |                                                          |
| RA101RR          | RA101RRB       | S1101K     | 206                   | 1 1/16          |           |             |                      |           |           |           |                |                |                | 0.349                          | 0.77                                           |                                                          |
| RA102RR          | RA102RRB       | S1102K     |                       | 1 1/8           | 62        | 23.82       | 18                   | 8.99      | 14.81     | 4.0       | 44.10          | 15.9           | 35.7           | 0.327                          | 0.72                                           | 11100                                                    |
| RA103RR          | RA103RRB       | S1103K     |                       | 1 3/16          | 2.4409    | 0.938       | 0.709                | 0.354     | 0.583     | 5/32      | 1 47/64        | 5/8            | 1 13/32        | 0.318                          | 0.70                                           | 21800                                                    |
| RA103RR2         | RA103RRB2      | S1103K3    |                       | 1 1/4           |           |             |                      |           |           |           |                |                |                | 0.295                          | 0.65                                           | 4900                                                     |
| RAE30RR          | RAE30RRB       | SE30K      |                       | 30              |           |             |                      |           |           |           |                |                |                | 0.318                          | 0.70                                           |                                                          |
| RA104RR          | RA104RRB       | S1104K     | 207                   | 1 1/4           |           |             |                      |           |           |           |                |                |                | 0.562                          | 1.24                                           |                                                          |
| RA105RR          | RA105RRB       | S1105K     |                       | 1 5/16          | 72        | 25.40       | 19                   | 9.50      | 15.90     | 4.0       | 54.40          | 17.1           | 38.9           | 0.540                          | 1.19                                           | 15100                                                    |
| RA106RR          | RA106RRB       | S1106K     |                       | 1 3/8           | 2.8346    | 1.000       | 0.748                | 0.374     | 0.626     | 5/32      | 2 1/8          | 43/64          | 1 17/32        | 0.513                          | 1.13                                           | 28500                                                    |
| RA107RR          | RA107RRB       | S1107K     |                       | 1 7/16          |           |             |                      |           |           |           |                |                |                | 0.476                          | 1.05                                           | 6400                                                     |
| RAE35RR          | RAE35RRB       | SE35K      |                       | 35              |           |             |                      |           |           |           |                |                |                | 0.513                          | 1.13                                           |                                                          |

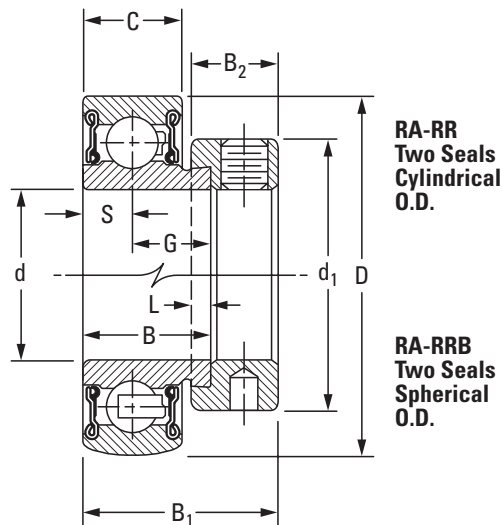
<sup>(1)</sup>Spherical O.D. outer-ring width is 12 mm (0.472 in.).

<sup>(2)</sup>Spherical O.D. outer-ring width is 14 mm (0.551 in.).

<sup>(3)</sup>Spherical O.D. outer-ring width is 21 mm (0.827 in.).

NOTE: Bore tolerance is nominal to +0.013 mm, +0.0005 in.

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| Bearing No.      |                | Collar No. | Basic Outer-Ring Size | Shaft Dia. | O.D.   | Ring Widths |                      |       |       |      |                |                |                | Brg. and Collar Wt. |      | Static Load Rating | Extended Dynamic Load Rating |
|------------------|----------------|------------|-----------------------|------------|--------|-------------|----------------------|-------|-------|------|----------------|----------------|----------------|---------------------|------|--------------------|------------------------------|
| Cylindrical O.D. | Spherical O.D. |            |                       |            |        | Inner       | Outer                | S     | G     | L    | d <sub>1</sub> | B <sub>2</sub> | B <sub>1</sub> |                     |      |                    |                              |
|                  |                |            |                       | d          | D      | B           | C                    |       |       |      |                |                |                | kg                  | lbs. | C <sub>0</sub>     | C <sub>E</sub>               |
|                  |                |            |                       | in.        | mm     | in.         | in.                  | in.   | in.   | in.  | in.            | in.            | in.            |                     |      | N                  | N                            |
|                  |                |            |                       | mm         | in.    | mm          | mm                   | mm    | mm    | mm   | mm             | mm             | mm             |                     |      | lbs.               | lbs.                         |
| RA108RR          | RA108RRB       | S1108K     |                       | 1 1/2      |        |             |                      |       |       |      |                |                |                | 0.694               | 1.53 |                    |                              |
| RA109RR          | RA109RRB       | S1109K     | 208                   | 1 9/16     | 80     | 30.18       | 22                   | 11.00 | 19.18 | 4.8  | 60.30          | 18.3           | 43.7           | 0.649               | 1.43 | 19600              | 36000                        |
| RAE40RR          | RAE40RRB       | SE40K      |                       | 40         | 3.1496 | 1.188       | 0.866 <sup>(3)</sup> | 0.433 | 0.755 | 3/16 | 2 3/8          | 23/32          | 1 23/32        | 0.649               | 1.43 | 4400               | 8150                         |
| RA110RR          | RA110RRB       | S1110K     |                       | 1 5/8      |        |             |                      |       |       |      |                |                |                | 0.780               | 1.72 |                    |                              |
| RA111RR          | RA111RRB       | S1111K     | 209                   | 1 11/16    | 85     | 30.18       | 22                   | 11.00 | 19.18 | 4.8  | 63.50          | 18.3           | 43.7           | 0.735               | 1.62 | 20000              | 36000                        |
| RA112RR          | RA112RRB       | S1112K     |                       | 1 3/4      | 3.3465 | 1.188       | 0.866                | 0.433 | 0.755 | 3/16 | 2 1/2          | 23/32          | 1 23/32        | 0.680               | 1.50 | 4500               | 8150                         |
| RAE45RR          | RAE45RRB       | SE45K      |                       | 45         |        |             |                      |       |       |      |                |                |                | 0.680               | 1.50 |                    |                              |
| RA113RR          | RA113RRB       | S1113K     |                       | 1 13/16    |        |             |                      |       |       |      |                |                |                | 0.880               | 1.94 |                    |                              |
| RA114RR          | RA114RRB       | S1114K     |                       | 1 7/8      |        |             |                      |       |       |      |                |                |                | 0.830               | 1.83 |                    |                              |
| RA115RR          | RA115RRB       | S1115K     | 210                   | 1 15/16    | 90     | 30.18       | 22                   | 11.00 | 19.18 | 4.8  | 69.90          | 18.3           | 43.7           | 0.771               | 1.79 | 22700              | 39200                        |
| RA115RR2         | RA115RRB2      | S1115K2    |                       | 2          | 3.5433 | 1.188       | 0.866                | 0.433 | 0.755 | 3/16 | 2 3/4          | 23/32          | 1 23/32        | 0.717               | 1.58 | 5100               | 8800                         |
| RAE50RR          | RAE50RRB       | SE50K      |                       | 50         |        |             |                      |       |       |      |                |                |                | 0.771               | 1.79 |                    |                              |
| RA200RR          | RA200RRB       | S1200K     |                       | 2          |        |             |                      |       |       |      |                |                |                | 0.962               | 2.12 |                    |                              |
| RA201RR          | RA201RRB       | S1201K     |                       | 2 1/16     |        |             |                      |       |       |      |                |                |                | 0.898               | 1.98 |                    |                              |
| RA202RR          | RA202RRB       | S1202K     | 211                   | 2 1/8      | 100    | 32.54       | 24                   | 11.99 | 20.55 | 4.8  | 76.20          | 20.6           | 48.4           | 0.857               | 1.89 | 28500              | 48000                        |
| RA203RR          | RA203RRB       | S1203K     |                       | 2 3/16     | 3.9370 | 1.281       | 0.945                | 0.472 | 0.809 | 3/16 | 3              | 13/16          | 1 29/32        | 0.807               | 1.78 | 6400               | 10800                        |
| RAE55RR          | RAE55RRB       | SE55K      |                       | 55         |        |             |                      |       |       |      |                |                |                | 0.807               | 1.78 |                    |                              |

<sup>(1)</sup>Spherical O.D. outer-ring width is 12 mm (0.472 in.).

<sup>(2)</sup>Spherical O.D. outer-ring width is 14 mm (0.551 in.).

<sup>(3)</sup>Spherical O.D. outer-ring width is 21 mm (0.827 in.).

NOTE: Bore tolerance is nominal to +0.013 mm, +0.0005 in.

### GRA-RR, GRA-RRB RELUBRICATABLE TYPES

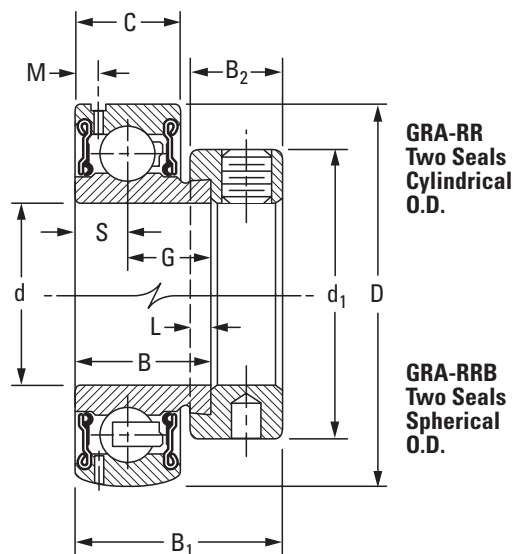
- GRA-RR-series bearings are the same as the RA-RR series and have a provision for relubrication.
- GRA-RR series have cylindrical outside diameters.
- GRA-RRB have spherical outside diameters

#### Suggested shaft tolerances:

1/2 in. – 1 15/16 in., nominal to -0.13 mm, -0.0005 in.;  
2 in. – 2 3/16 in., nominal to -0.025 mm, -0.0010 in.

To order, specify bearing number followed by "+ COL".

Example: GRA100RRB + COL.



| Bearing No.      |                | Collar No. | Basic Outer-Ring Size | Shaft Dia. | O.D.      | Ring Widths |                      |           |           |           |                |                |           |                |            | Brg. and Collar Wt. |                | Static Load Rating | Extended Dynamic Load Rating |
|------------------|----------------|------------|-----------------------|------------|-----------|-------------|----------------------|-----------|-----------|-----------|----------------|----------------|-----------|----------------|------------|---------------------|----------------|--------------------|------------------------------|
| Cylindrical O.D. | Spherical O.D. |            |                       |            |           | Inner       | Outer                | S         | G         | L         | d <sub>1</sub> | B <sub>2</sub> | M         | B <sub>1</sub> |            |                     |                |                    |                              |
|                  |                |            |                       | d          | D         | B           | C                    | S         | G         | L         | d <sub>1</sub> | B <sub>2</sub> | M         | B <sub>1</sub> |            |                     | C <sub>o</sub> | C <sub>E</sub>     |                              |
|                  |                |            |                       | in.<br>mm  | mm<br>in. | mm<br>in.   | mm<br>in.            | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in. | mm<br>in.      | kg<br>lbs. |                     | N<br>lbs.      | N<br>lbs.          |                              |
| GRA008RR         | GRA008RRB      | S1008K     | 203                   | 1/2        |           |             |                      |           |           |           |                |                |           |                | 0.154      | 0.34                |                |                    |                              |
| —                | GRA009RRB      | S1009K     |                       | 9/16       | 40        | 19.05       | 13                   | 6.50      | 12.55     | 4.0       | 28.6           | 13.5           | 2.72      | 28.6           | 0.145      | 0.32                | 4700           | 10600              |                              |
| GRA010RR         | GRA010RRB      | S1010K     |                       | 5/8        | 1.5748    | 0.750       | 0.512 <sup>(1)</sup> | 0.256     | 0.494     | 5/32      | 1 1/8          | 17/32          | 0.107     | 1 1/8          | 0.127      | 0.28                | 1060           | 2360               |                              |
| GRAE17RR         | GRAE17RRB      | SE17K      |                       | 17         |           |             |                      |           |           |           |                |                |           |                | 0.127      | 0.28                |                |                    |                              |
| GRA012RR         | GRA012RRB      | S1012K     | 204                   | 3/4        | 47        | 21.44       | 15                   | 7.49      | 13.92     | 4.0       | 33.3           | 13.5           | 3.05      | 31.0           | 0.132      | 0.29                | 6200           | 14300              |                              |
| GRAE20RR         | GRAE20RRB      | SE20K      |                       | 20         | 1.8504    | 0.844       | 0.591 <sup>(2)</sup> | 0.295     | 0.548     | 5/32      | 1 5/16         | 17/32          | 0.120     | 1 7/32         | 0.132      | 0.29                | 1400           | 3200               |                              |
| —                | GRA013RRB      | S1013K     | 205                   | 13/16      |           |             |                      |           |           |           |                |                |           |                | 0.231      | 0.51                |                |                    |                              |
| GRA014RR         | GRA014RRB      | S1014K     |                       | 7/8        | 52        | 21.44       | 15                   | 7.49      | 13.92     | 4.0       | 38.1           | 13.5           | 3.61      | 31.0           | 0.213      | 0.47                | 7700           | 15800              |                              |
| —                | GRA015RRB      | S1015K     |                       | 15/16      | 2.0472    | 0.844       | 0.591                | 0.295     | 0.548     | 5/32      | 1 1/2          | 17/32          | 0.142     | 1 7/32         | 0.200      | 0.44                | 1730           | 3550               |                              |
| GRA100RR         | GRA100RRB      | S1100K     |                       | 1          |           |             |                      |           |           |           |                |                |           |                | 0.186      | 0.41                |                |                    |                              |
| GRAE25RR         | GRAE25RRB      | SE25K      |                       | 25         |           |             |                      |           |           |           |                |                |           |                | 0.186      | 0.41                |                |                    |                              |
| GRA101RR         | GRA101RRB      | S1101K     | 206                   | 1 1/16     |           |             |                      |           |           |           |                |                |           |                | 0.349      | 0.77                |                |                    |                              |
| GRA102RR         | GRA102RRB      | S1102K     |                       | 1 1/8      | 62        | 23.83       | 18                   | 8.99      | 14.81     | 4.0       | 44.1           | 15.9           | 4.17      | 35.7           | 0.327      | 0.72                | 11100          | 21800              |                              |
| GRA103RR         | GRA103RRB      | S1103K     |                       | 1 3/16     | 2.4409    | 0.938       | 0.709                | 0.354     | 0.583     | 5/32      | 1 47/64        | 5/8            | 0.164     | 1 13/32        | 0.318      | 0.70                | 2500           | 4900               |                              |
| GRA103RR2        | GRA103RRB2     | S1103K3    |                       | 1 1/4      |           |             |                      |           |           |           |                |                |           |                | 0.295      | 0.65                |                |                    |                              |
| GRAE30RR         | GRAE30RRB      | SE30K      |                       | 30         |           |             |                      |           |           |           |                |                |           |                | 0.318      | 0.70                |                |                    |                              |
| GRA104RR         | GRA104RRB      | S1104K     | 207                   | 1 1/4      |           |             |                      |           |           |           |                |                |           |                | 0.562      | 1.24                |                |                    |                              |
| —                | GRA105RRB      | S1105K     |                       | 1 5/16     | 72        | 25.40       | 19                   | 9.50      | 15.90     | 4.0       | 54.0           | 17.1           | 3.68      | 38.9           | 0.540      | 1.19                | 15100          | 28500              |                              |
| —                | GRA106RRB      | S1106K     |                       | 1 3/8      | 2.8346    | 1.000       | 0.748                | 0.374     | 0.626     | 5/32      | 2 1/8          | 43/64          | 0.145     | 1 17/32        | 0.513      | 1.13                | 3400           | 6400               |                              |
| —                | GRA107RRB      | S1107K     |                       | 1 7/16     |           |             |                      |           |           |           |                |                |           |                | 0.476      | 1.05                |                |                    |                              |
| GRAE35RR         | GRAE35RRB      | SE35K      |                       | 35         |           |             |                      |           |           |           |                |                |           |                | 0.513      | 1.13                |                |                    |                              |

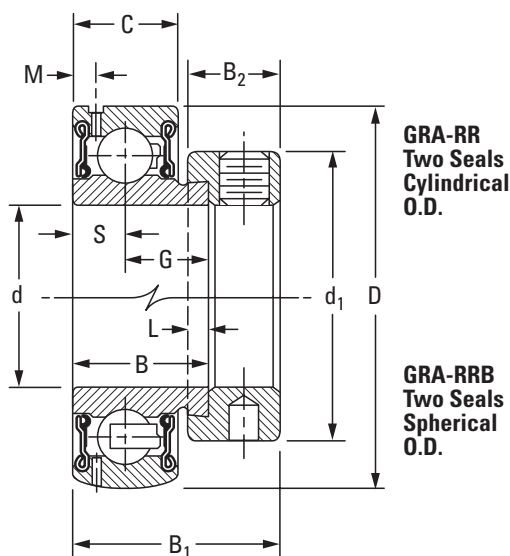
<sup>(1)</sup>Spherical O.D. outer-ring width is 12 mm (0.472 in.).

<sup>(2)</sup>Spherical O.D. outer-ring width is 14 mm (0.551 in.).

<sup>(3)</sup>Spherical O.D. outer-ring width is 21 mm (0.827 in.).

NOTE: Bore tolerance is nominal to +0.013 mm, +0.0005 in.

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| Bearing No.      |                | Collar No. | Basic Outer-Ring Size | Shaft Dia.<br>d | O.D.<br>D     | Ring Widths    |                            |                |                |             |                |                |               |                 |            | Brg. and Collar Wt. | Static Load Rating<br>C <sub>o</sub> | Extended Dynamic Load Rating<br>C <sub>E</sub> |
|------------------|----------------|------------|-----------------------|-----------------|---------------|----------------|----------------------------|----------------|----------------|-------------|----------------|----------------|---------------|-----------------|------------|---------------------|--------------------------------------|------------------------------------------------|
| Cylindrical O.D. | Spherical O.D. |            |                       |                 |               | Inner<br>B     | Outer<br>C                 | S              | G              | L           | d <sub>1</sub> | B <sub>2</sub> | M             | B <sub>1</sub>  |            |                     |                                      |                                                |
|                  |                |            |                       |                 |               |                |                            |                |                |             |                |                |               |                 |            |                     |                                      |                                                |
|                  |                |            |                       | in.<br>mm       | mm<br>in.     | mm<br>in.      | mm<br>in.                  | mm<br>in.      | mm<br>in.      | mm<br>in.   | mm<br>in.      | mm<br>in.      | mm<br>in.     | mm<br>in.       | kg<br>lbs. | N<br>lbs.           | N<br>lbs.                            |                                                |
| GRA108RR         | GRA108RRB      | S1108K     | 208                   | 1 1/2           | 80<br>3.1496  | 30.18<br>1.188 | 22<br>0.866 <sup>(3)</sup> | 11.00<br>0.433 | 19.18<br>0.755 | 4.8<br>3/16 | 60.3<br>2 3/8  | 18.3<br>23/32  | 4.17<br>0.164 | 43.7<br>1 23/32 | 0.694      | 1.53                | 19600<br>4400                        | 36000<br>8150                                  |
| —                | GRA109RRB      | S1109K     |                       | 1 9/16          |               |                |                            |                |                |             |                |                |               |                 | 0.649      | 1.43                |                                      |                                                |
| GRAE40RR         | GRAE40RRB      | SE40K      |                       | 40              |               |                |                            |                |                |             |                |                |               |                 | 0.649      | 1.43                |                                      |                                                |
| —                | GRA110RRB      | S1110K     | 209                   | 1 5/8           | 85<br>3.3465  | 30.18<br>1.188 | 22<br>0.866                | 11.00<br>0.433 | 19.18<br>0.755 | 4.8<br>3/16 | 63.5<br>2 1/2  | 18.3<br>23/32  | 4.55<br>0.179 | 43.7<br>1 23/32 | 0.780      | 1.72                | 20500<br>4600                        | 36300<br>8160                                  |
| —                | GRA111RRB      | S1111K     |                       | 1 11/16         |               |                |                            |                |                |             |                |                |               |                 | 0.735      | 1.62                |                                      |                                                |
| —                | GRA112RRB      | S1112K     |                       | 1 3/4           |               |                |                            |                |                |             |                |                |               |                 | 0.680      | 1.50                |                                      |                                                |
| —                | GRAE45RRB      | SE45K      |                       | 45              |               |                |                            |                |                |             |                |                |               |                 | 0.680      | 1.50                |                                      |                                                |
| —                | GRA113RRB      | S1113K     | 210                   | 1 13/16         | 90<br>3.5433  | 30.18<br>1.188 | 22<br>0.866                | 11.00<br>0.433 | 19.18<br>0.755 | 4.8<br>3/16 | 69.9<br>2 3/4  | 18.3<br>23/32  | 4.44<br>0.175 | 43.7<br>1 23/32 | 0.880      | 1.94                | 22700<br>5100                        | 39200<br>8800                                  |
| —                | GRA114RRB      | S1114K     |                       | 1 7/8           |               |                |                            |                |                |             |                |                |               |                 | 0.830      | 1.83                |                                      |                                                |
| —                | GRA115RRB      | S1115K     |                       | 1 15/16         |               |                |                            |                |                |             |                |                |               |                 | 0.771      | 1.79                |                                      |                                                |
| —                | GRA115RRB2     | S1115K2    |                       | 2               |               |                |                            |                |                |             |                |                |               |                 | 0.717      | 1.58                |                                      |                                                |
| —                | GRAE50RRB      | SE50K      |                       | 50              |               |                |                            |                |                |             |                |                |               |                 | 0.771      | 1.79                |                                      |                                                |
| —                | GRA200RRB      | S1200K     | 211                   | 2               | 100<br>3.9370 | 32.54<br>1.281 | 24<br>0.945                | 11.99<br>0.472 | 20.55<br>0.809 | 4.8<br>3/16 | 76.2<br>3      | 20.6<br>13/16  | 4.90<br>0.193 | 48.4<br>1 29/32 | 0.962      | 2.12                | 28500<br>6400                        | 48000<br>10800                                 |
| —                | GRA201RRB      | S1201K     |                       | 2 1/16          |               |                |                            |                |                |             |                |                |               |                 | 0.898      | 1.98                |                                      |                                                |
| —                | GRA202RRB      | S1202K     |                       | 2 1/8           |               |                |                            |                |                |             |                |                |               |                 | 0.857      | 1.89                |                                      |                                                |
| —                | GRA203RRB      | S1203K     |                       | 2 3/16          |               |                |                            |                |                |             |                |                |               |                 | 0.807      | 1.78                |                                      |                                                |
| —                | GRAE55RRB      | SE55K      |                       | 55              |               |                |                            |                |                |             |                |                |               |                 | 0.807      | 1.78                |                                      |                                                |

<sup>(1)</sup>Spherical O.D. outer-ring width is 12 mm (0.472 in.).

<sup>(2)</sup>Spherical O.D. outer-ring width is 14 mm (0.551 in.).

<sup>(3)</sup>Spherical O.D. outer-ring width is 21 mm (0.827 in.).

NOTE: Bore tolerance is nominal to +0.013 mm, +0.0005 in.

### RA-DD NON-RELUBRICATABLE TYPES

- These bearings are an extended inner-ring type with a self-locking collar.
- The two non-contact grease shields retain lubricant, provide protection against harmful contaminants and offer improved high-speed, low-torque performance.
- RA-DD series are factory-prelubricated and have cylindrical outside diameters.

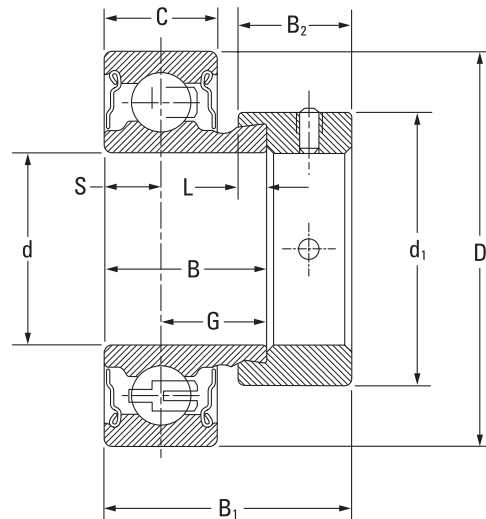
#### Suggested shaft tolerances:

1/2 in. – 1 15/16 in., nominal to -0.013 mm, -0.0005 in.;

2 in. – 2 3/16 in., nominal to -0.025 mm, -0.0010 in.

#### To order, specify bearing number followed by “+ COL”.

Example: RA100DD + COL.



| Bearing No.            | Collar No. | Basic Outer-Ring Size | Shaft Dia.<br>d | O.D.<br>D | Ring Widths |            | S         | G         | L         | d <sub>1</sub> | B <sub>2</sub> | B <sub>1</sub> | Static Load Rating<br>C <sub>0</sub> | Extended Dynamic Load Rating<br>C <sub>E</sub> |
|------------------------|------------|-----------------------|-----------------|-----------|-------------|------------|-----------|-----------|-----------|----------------|----------------|----------------|--------------------------------------|------------------------------------------------|
|                        |            |                       |                 |           | Inner<br>B  | Outer<br>C |           |           |           |                |                |                |                                      |                                                |
|                        |            |                       | in.<br>mm       | mm<br>in. | mm<br>in.   | mm<br>in.  | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in.      | N<br>lbs.                            | N<br>lbs.                                      |
| RA008DD                | S1008K     | 203                   | 1/2             |           |             |            |           |           |           |                |                |                |                                      |                                                |
| RA009DD                | S1009K     |                       | 9/16            | 40.00     | 19.05       | 13.00      | 6.50      | 12.55     | 3.97      | 28.58          | 13.49          | 28.58          | 4400                                 | 10600                                          |
| RA010DD <sup>(1)</sup> | S1010K     |                       | 5/8             | 1.575     | 0.750       | 0.512      | 0.256     | 0.494     | 5/32      | 1 1/8          | 17/32          | 1 1/8          | 1000                                 | 2360                                           |
| RAE17DD                | SE17K      |                       | 17              |           |             |            |           |           |           |                |                |                |                                      |                                                |
| RA012DD                | S1012K     | 204                   | 3/4             | 47.00     | 21.44       | 15.01      | 7.49      | 13.92     | 3.97      | 33.34          | 13.49          | 30.96          | 6200                                 | 14300                                          |
| RAE20DD                | SE20K      |                       | 20              | 1.850     | 0.844       | 0.591      | 0.295     | 0.548     | 5/32      | 1 5/16         | 17/32          | 1 7/32         | 1400                                 | 3200                                           |
| RA013DD                | S1013K     | 205                   | 13/16           |           |             |            |           |           |           |                |                |                |                                      |                                                |
| RA014DD <sup>(1)</sup> | S1014K     |                       | 7/8             | 52.00     | 21.44       | 15.01      | 7.49      | 13.92     | 3.97      | 38.10          | 13.49          | 30.96          | 6950                                 | 15600                                          |
| RA015DD                | S1015K     |                       | 15/16           | 2.047     | 0.844       | 0.591      | 0.295     | 0.548     | 5/32      | 1 1/2          | 17/32          | 1 7/32         | 1560                                 | 3450                                           |
| RA100DD                | S1100K     |                       | 1               |           |             |            |           |           |           |                |                |                |                                      |                                                |
| RAE25DD                | SE25K      |                       | 25              |           |             |            |           |           |           |                |                |                |                                      |                                                |
| RA101DD                | S1101K     | 206                   | 1 1/16          |           |             |            |           |           |           |                |                |                |                                      |                                                |
| RA102DD                | S1102K     |                       | 1 1/8           | 62.00     | 23.83       | 18.01      | 8.99      | 14.81     | 3.97      | 44.45          | 15.88          | 35.72          | 10000                                | 21600                                          |
| RA103DD <sup>(1)</sup> | S1103K     |                       | 1 3/16          | 2.441     | 0.938       | 0.709      | 0.354     | 0.583     | 5/32      | 1 3/4          | 5/8            | 1 13/32        | 2280                                 | 4800                                           |
| RA103DD2               | S1103K3    |                       | 1 1/4S          |           |             |            |           |           |           |                |                |                |                                      |                                                |
| RAE30DD                | SE30K      |                       | 30              |           |             |            |           |           |           |                |                |                |                                      |                                                |
| RA104DD                | S1104K     | 207                   | 1 1/4           |           |             |            |           |           |           |                |                |                |                                      |                                                |
| RA105DD                | S1105K     |                       | 1 5/16          | 72.00     | 25.40       | 19.00      | 9.50      | 15.90     | 3.97      | 53.98          | 17.07          | 38.89          | 13700                                | 28500                                          |
| RA106DD                | S1106K     |                       | 1 3/8           | 2.835     | 1.000       | 0.748      | 0.374     | 0.626     | 5/32      | 2 1/8          | 43/64          | 1 17/32        | 3050                                 | 6400                                           |
| RA107DD <sup>(1)</sup> | S1107K     |                       | 1 7/16          |           |             |            |           |           |           |                |                |                |                                      |                                                |
| RAE35DD                | SE35K      |                       | 35              |           |             |            |           |           |           |                |                |                |                                      |                                                |
| RA108DD <sup>(1)</sup> | S1108K     | 208                   | 1 1/2           | 80.00     | 30.18       | 22.00      | 11.00     | 19.18     | 4.76      | 60.33          | 18.26          | 43.66          | 17600                                | 36000                                          |
| RA109DD                | S1109K     |                       | 1 9/16          | 3.150     | 1.188       | 0.866      | 0.433     | 0.755     | 3/16      | 2 3/8          | 23/32          | 1 23/32        | 4000                                 | 8150                                           |
| RAE40DD                | SE40K      |                       | 40              |           |             |            |           |           |           |                |                |                |                                      |                                                |

<sup>(1)</sup>Popular sizes.

NOTE: Bore tolerance is nominal to +0.013 mm, +0.0005 in.

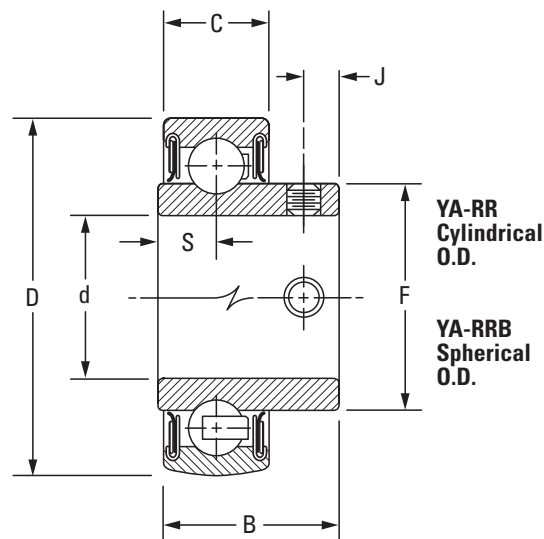
## YA-RR, YA-RRB NON-RELUBRICATABLE TYPES

- These bearings are an extended inner-ring type and have specially designed set screws with unique thread form.
- The thread form in both series locks the bearing to the shaft so they are resistant to loosening during operation.
- A positive contact, land-riding R-seal provides improved protection against harmful contaminants in both series and retains lubricant under severe operating conditions.
- A 6/6 molded nylon retainer has proved effective under conditions of misalignment.
- YA-RR series has cylindrical outside diameters.
- YA-RRB series has spherical outside diameters for use in housings with corresponding spherical inside surfaces. This provides unrestricted initial self-alignment.

### Suggested shaft tolerances:

1/2 in. – 1 15/16 in., nominal to -0.013 mm, -0.0005 in.;

2 in. – 2 3/16 in., nominal to -0.025 mm, -0.0010 in.



| Bearing No.      |                | Basic Outer-Ring Size | Shaft Dia. | O.D.   | Ring Widths |                       |       |         |       | Set Screw Size           | Brg. Wt. | Static Load Rating | Extended Dynamic Load Rating |
|------------------|----------------|-----------------------|------------|--------|-------------|-----------------------|-------|---------|-------|--------------------------|----------|--------------------|------------------------------|
| Cylindrical O.D. | Spherical O.D. |                       |            |        | Inner       | Outer                 | S     | F       | J     |                          |          |                    |                              |
|                  |                |                       | d          | D      | B           | C                     | S     | F       | J     |                          |          | C <sub>0</sub>     | C <sub>E</sub>               |
|                  |                |                       | in.        | mm     | mm          | mm                    | mm    | mm      | mm    | mm                       | kg       | N                  | N                            |
|                  |                |                       | mm         | in.    | in.         | in.                   | in.   | in.     | in.   | in.                      | lbs.     | lbs.               | lbs.                         |
| YA008RR          | YA008RRB       | 203                   | 1/2        | 40     | 23.8        | 13                    | 7.95  | 24.6    | 4.75  | M5X.8                    | 0.09     | 4700               | 10600                        |
| YA010RR          | YA010RRB       |                       | 5/8        | 1.5748 | 0.938       | 0.5120 <sup>(1)</sup> | 0.313 | 31/32   | 0.187 | 10 – 32                  | 0.19     | 1060               | 2360                         |
| YAE17RR          | YAE17RRB       |                       | 17         |        |             |                       |       |         |       |                          |          |                    |                              |
| YA012RR          | YA012RRB       | 204                   | 3/4        | 47     | 27.0        | 15                    | 8.86  | 29.0    | 6.02  | M6X1                     | 0.14     | 6200               | 14300                        |
| YAE20RR          | YAE20RRB       |                       | 20         | 1.8504 | 1.063       | 0.5910 <sup>(2)</sup> | 0.349 | 1 9/64  | 0.237 | 1/4 – 28                 | 0.30     | 1400               | 3200                         |
| YA014RR          | YA014RRB       | 205                   | 7/8        |        |             |                       |       |         |       |                          |          |                    |                              |
| YA015RR          | YA015RRB       |                       | 15/16      | 52     | 28.2        | 15                    | 8.84  | 33.7    | 6.35  | M6X1                     | 0.17     | 7700               | 15800                        |
| YA100RR          | YA100RRB       |                       | 1          | 2.0472 | 1.109       | 0.5910                | 0.348 | 1 21/64 | 0.250 | 1/4 – 28                 | 0.38     | 1730               | 3550                         |
| YAE25RR          | YAE25RRB       |                       | 25         |        |             |                       |       |         |       |                          |          |                    |                              |
| YA102RR          | YA102RRB       | 206                   | 1 1/8      |        |             |                       |       |         |       |                          |          |                    |                              |
| YA103RR          | YA103RRB       |                       | 1 3/16     | 62     | 32.5        | 18                    | 9.65  | 40.1    | 7.87  | M8X1.25                  | 0.26     | 11100              | 21800                        |
| YA103RR2         | YA103RRB2      |                       | 1 1/4      | 2.4409 | 1.281       | 0.7090                | 0.380 | 1 37/64 | 0.310 | 5/16 – 24 <sup>(3)</sup> | 0.58     | 2500               | 4900                         |
| YAE30RR          | YAE30RRB       |                       | 30         |        |             |                       |       |         |       |                          |          |                    |                              |
| YA104RR          | YA104RRB       | 207                   | 1 1/4      |        |             |                       |       |         |       |                          |          |                    |                              |
| YA106RR          | YA106RRB       |                       | 1 3/8      | 72     | 36.5        | 19                    | 10.85 | 46.8    | 7.87  | M8X1.25                  | 0.42     | 15100              | 28500                        |
| YA107RR          | YA107RRB       |                       | 1 7/16     | 2.8346 | 1.444       | 0.7480                | 0.427 | 1 27/32 | 0.310 | 5/16 – 24                | 0.93     | 3400               | 6400                         |
| YAE35RR          | YAE35RRB       |                       | 35         |        |             |                       |       |         |       |                          |          |                    |                              |
| YA108RR          | YA108RRB       | 208                   | 1 1/2      | 80     | 39.3        | 22                    | 11.63 | 52.4    | 7.87  | M8X1.25                  | 0.56     | 17600              | 36000                        |
| YAE40RR          | YAE40RRB       |                       | 40         | 3.1496 | 1.538       | 0.8661 <sup>(4)</sup> | 0.458 | 2 1/16  | 0.310 | 5/16 – 24                | 1.24     | 4000               | 8150                         |
| YA110RR          | YA110RRB       | 209                   | 1 5/8      |        |             |                       |       |         |       |                          |          |                    |                              |
| YA111RR          | YA111RRB       |                       | 1 11/16    | 85     | 42.0        | 22                    | 13.46 | 57.9    | 7.87  | M8X1.25                  | 0.54     | 20500              | 36300                        |
| YA112RR          | YA112RRB       |                       | 1 3/4      | 3.3465 | 1.655       | 0.8861                | 0.530 | 2 9/32  | 0.310 | 5/16 – 24                | 1.18     | 4500               | 8160                         |
| YAE45RR          | YAE45RRB       |                       | 45         |        |             |                       |       |         |       |                          |          |                    |                              |
| YA115RR          | YA115RRB       | 210                   | 1 15/16    |        |             |                       |       |         |       |                          |          |                    |                              |
| YA115RR2         | YA115RRB2      |                       | 2          | 90     | 44.3        | 22                    | 13.46 | 62.7    | 9.02  | M10X1.5                  | 0.57     | 22700              | 39200                        |
| YAE50RR          | YAE50RRB       |                       | 50         | 3.5433 | 1.746       | 0.8661                | 0.530 | 2 15/32 | 0.355 | 3/8 – 24                 | 1.25     | 5100               | 8800                         |
| YA200RR          | YA200RRB       | 211                   | 2          |        |             |                       |       |         |       |                          |          |                    |                              |
| YA203RR          | YA203RRB       |                       | 2 3/16     | 100    | 46.6        | 24                    | 14.60 | 69.8    | 9.02  | M10X1.5                  | 0.58     | 28500              | 48000                        |
| YAE55RR          | YAE55RRB       |                       | 55         | 3.9370 | 1.833       | 0.9449                | 0.575 | 2 3/4   | 0.355 | 3/8 – 24                 | 1.27     | 6400               | 10800                        |

<sup>(1)</sup>Spherical O.D. outer-ring width is 12 mm (0.4724 in.).

<sup>(2)</sup>Spherical O.D. outer-ring width is 14 mm (0.5512 in.).

<sup>(3)</sup>YA103RR2 and YA103RRB2 use 1/4 – 28 in. set screw.

<sup>(4)</sup>Spherical O.D. outer-ring width is 21 mm (0.8268 in.).

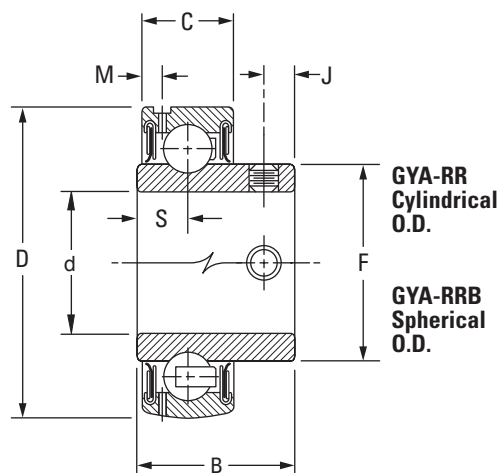
NOTE: Bore tolerance is nominal to +0.013 mm, +0.0005 in.

### GYA-RR, GYA-RRB RELUBRICATABLE TYPES

- GYA-RR-series bearings are dimensionally interchangeable with the YA-RR series.
- Both series have cylindrical outside diameters and can be used in standard cylindrical housings.
- GYA-RRB series have spherical outside diameters, providing unrestricted initial alignment. This series is used in housings with corresponding spherical inside surfaces.

#### Suggested shaft tolerances:

1/2 in. - 1 15/16 in., nominal to -0.013 mm, -0.0005 in.;  
2 in. - 2 3/16 in., nominal to -0.025 mm, -0.0010 in.



| Bearing No.      |                | Basic Outer-Ring Size | Shaft Dia. | O.D.   | Ring Widths |        |       |         |       |       | Set Screw Size           | Brg. Wt. | Static Load Rating | Extended Dynamic Load Rating |
|------------------|----------------|-----------------------|------------|--------|-------------|--------|-------|---------|-------|-------|--------------------------|----------|--------------------|------------------------------|
| Cylindrical O.D. | Spherical O.D. |                       |            |        | Inner       | Outer  | S     | F       | M     | J     |                          |          |                    |                              |
|                  |                |                       | d          | D      | B           | C      | S     | F       | M     | J     |                          |          | C <sub>0</sub>     | C <sub>E</sub>               |
|                  |                |                       | in.        | mm     | mm          | mm     | mm    | mm      | mm    | mm    | mm                       | kg       | N                  | N                            |
|                  |                |                       | mm         | in.    | in.         | in.    | in.   | in.     | in.   | in.   | in.                      | lbs.     | lbs.               | lbs.                         |
| GYA008RR         | GYA008RRB      | 203                   | 1/2        |        |             |        |       |         |       |       |                          |          |                    |                              |
| GYA010RR         | GYA010RRB      |                       | 5/8        | 40     | 23.8        | 12     | 7.95  | 24.6    | 2.72  | 4.75  | M5X.8                    | 0.09     | 4700               | 10600                        |
| GYAE17RR         | GYAE17RRB      |                       | 17         | 1.5748 | 0.938       | 0.4720 | 0.313 | 31/32   | 0.107 | 0.187 | 10 - 32                  | 0.19     | 1060               | 2360                         |
| GYA012RR         | GYA012RRB      | 204                   | 3/4        | 47     | 27.0        | 14     | 8.86  | 29.0    | 3.05  | 6.02  | M6X1                     | 0.14     | 6200               | 14300                        |
| GYAE20RR         | GYAE20RRB      |                       | 20         | 1.8504 | 1.063       | 0.5510 | 0.349 | 1 9/64  | 0.120 | 0.237 | 1/4 - 28                 | 0.30     | 1400               | 3200                         |
| GYA014RR         | GYA014RRB      | 205                   | 7/8        |        |             |        |       |         |       |       |                          |          |                    |                              |
| GYA015RR         | GYA015RRB      |                       | 15/16      | 52     | 28.2        | 15     | 8.84  | 33.7    | 3.61  | 6.35  | M6X1                     | 0.17     | 7700               | 15800                        |
| GYA100RR         | GYA100RRB      |                       | 1          | 2.0472 | 1.109       | 0.5910 | 0.348 | 1 21/64 | 0.142 | 0.250 | 1/4 - 28                 | 0.38     | 1730               | 3550                         |
| GYAE25RR         | GYAE25RRB      |                       | 25         |        |             |        |       |         |       |       |                          |          |                    |                              |
| GYA102RR         | GYA102RRB      | 206                   | 1 1/8      |        |             |        |       |         |       |       |                          |          |                    |                              |
| GYA103RR         | GYA103RRB      |                       | 1 3/16     | 62     | 32.5        | 18     | 9.65  | 40.1    | 4.17  | 7.87  | M8X1.25                  | 0.26     | 11100              | 21800                        |
| GYA103RR2        | GYA103RRB2     |                       | 1 1/4      | 2.4409 | 1.281       | 0.7090 | 0.380 | 1 37/64 | 0.164 | 0.310 | 5/16 - 24 <sup>(1)</sup> | 0.58     | 2500               | 4900                         |
| GYAE30RR         | GYAE30RRB      |                       | 30         |        |             |        |       |         |       |       |                          |          |                    |                              |
| GYA104RR         | GYA104RRB      | 207                   | 1 1/4      |        |             |        |       |         |       |       |                          |          |                    |                              |
| GYA106RR         | GYA106RRB      |                       | 1 3/8      | 72     | 36.5        | 19     | 10.85 | 46.8    | 3.68  | 7.87  | M8X1.25                  | 0.42     | 15100              | 28500                        |
| GYA107RR         | GYA107RRB      |                       | 1 7/16     | 2.8346 | 1.444       | 0.7480 | 0.427 | 1 27/32 | 0.145 | 0.310 | 5/16 - 24                | 0.93     | 3400               | 6400                         |
| GYAE35RR         | GYAE35RRB      |                       | 35         |        |             |        |       |         |       |       |                          |          |                    |                              |
| GYA108RR         | GYA108RRB      | 208                   | 1 1/2      | 80     | 39.3        | 22     | 11.63 | 52.4    | 4.17  | 7.87  | M8X1.25                  | 0.56     | 17600              | 36000                        |
| GYAE40RR         | GYAE40RRB      |                       | 40         | 3.1496 | 1.538       | 0.8661 | 0.458 | 2 1/16  | 0.164 | 0.310 | 5/16 - 24                | 1.24     | 4000               | 8150                         |
| GYA110RR         | GYA110RRB      | 209                   | 1 5/8      |        |             |        |       |         |       |       |                          |          |                    |                              |
| GYA111RR         | GYA111RRB      |                       | 1 11/16    | 85     | 42          | 22     | 13.46 | 57.9    | 4.54  | 7.87  | M8X1.25                  | 0.54     | 20000              | 36000                        |
| GYA112RR         | GYA112RRB      |                       | 1 3/4      | 3.3465 | 1.655       | 0.8661 | 0.530 | 2 9/32  | 0.179 | 0.310 | 5/16 - 24                | 1.18     | 4500               | 8150                         |
| GYAE45RR         | GYAE45RRB      |                       | 45         |        |             |        |       |         |       |       |                          |          |                    |                              |
| GYA115RR         | GYA115RRB      | 210                   | 1 15/16    | 90     | 44.3        | 22     | 13.46 | 62.7    | 4.44  | 9.02  | M10X1.5                  | 0.57     | 22700              | 39200                        |
| GYA115RR2        | GYA115RRB2     |                       | 2          | 3.5433 | 1.746       | 0.8661 | 0.530 | 2 19/32 | 0.175 | 0.355 | 3/8 - 24                 | 1.25     | 5100               | 8800                         |
| GYAE50RR         | GYAE50RRB      |                       | 50         |        |             |        |       |         |       |       |                          |          |                    |                              |
| GYA200RR         | GYA200RRB      | 211                   | 2          |        |             |        |       |         |       |       |                          |          |                    |                              |
| GYA203RR         | GYA203RRB      |                       | 2 3/16     | 100    | 46.6        | 24     | 14.60 | 69.8    | 4.90  | 9.02  | M10X1.5                  | 0.58     | 28500              | 48000                        |
| GYAE55RR         | GYAE55RRB      |                       | 55         | 3.9370 | 1.833       | 0.9449 | 0.575 | 2 3/4   | 0.193 | 0.355 | 3/8 - 24                 | 1.27     | 6400               | 10800                        |

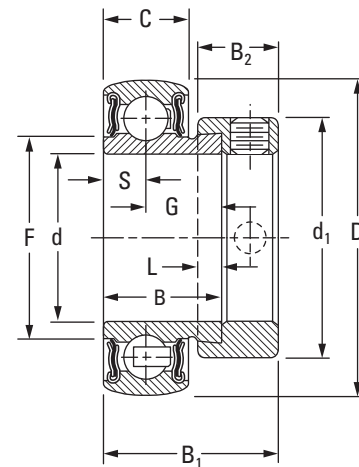
<sup>(1)</sup>GYA103RR2 and GYA103RRB2 use 1/4 - 28 in. set screw.

NOTE: Bore tolerance is nominal to +0.013 mm, +0.0005 in.

## LIGHT SERIES

### RAL-NPPB NON-RELUBRICATABLE TYPES

- RAL series are high-quality, compact, low-cost bearings and are intended for use in lightly loaded applications.
- RAL series are on extended inner-ring type with self-locking collars.
- Prelubricated RAL series incorporate the positive contact, land-riding R-seal. The seal has proved effective in the retention of lubricants and exclusion of foreign matter under extreme service conditions.
- RAL-NPPD-series bearings have spherical outside diameters providing unrestricted initial alignment.
- This bearing is used in housings with corresponding spherical inside surfaces.



#### Suggested shaft tolerances:

1/2 in. – 1 1/4 in., nominal to -0.013 mm, -0.0005 in.

To order, specify bearing number followed by "+ COL".

Example: RAL100NPPB + COL.

| Bearing No.                | Collar No. | Basic Outer-Ring Size | Shaft Dia.<br>d | O.D.<br>D    | Ring Widths    |             |                 |                  |                |             |                 |                |                | Brg. and Collar Wt. |      | Static Load Rating<br>C <sub>0</sub> | Extended Dynamic Load Rating<br>C <sub>E</sub> |
|----------------------------|------------|-----------------------|-----------------|--------------|----------------|-------------|-----------------|------------------|----------------|-------------|-----------------|----------------|----------------|---------------------|------|--------------------------------------|------------------------------------------------|
|                            |            |                       |                 |              | Inner<br>B     | Outer<br>C  | S               | G                | F              | L           | d <sub>1</sub>  | B <sub>2</sub> | B <sub>1</sub> |                     |      |                                      |                                                |
|                            |            |                       | in.             | mm in.       | mm in.         | mm in.      | mm in.          | mm in.           | mm in.         | mm in.      | mm in.          | mm in.         | mm in.         | kg lbs.             |      | N lbs.                               | N lbs.                                         |
| RAL008NPPB <sup>(1)</sup>  | LS008K     | 202                   | 1/2             | 35<br>1.3780 | 15.88<br>5/8   | 11<br>0.433 | 5.502<br>0.2116 | 10.373<br>0.4084 | 20.07<br>0.790 | 4.0<br>5/32 | 25.4<br>1       | 11.1<br>7/16   | 23.8<br>15/16  | —                   | —    | 3000<br>680                          | 7500<br>1700                                   |
| RAL009NPPB                 | LS009K     |                       | 9/16            |              |                |             |                 |                  |                |             |                 |                |                | —                   | —    |                                      |                                                |
| RAL010NPPB <sup>(1)</sup>  | LS010K     |                       | 5/8             |              |                |             |                 |                  |                |             |                 |                |                | 0.06                | 0.13 |                                      |                                                |
| RAL012NPPB <sup>(1)</sup>  | LS012K     | 9104                  | 3/4             | 42<br>1.6535 | 16.67<br>21/32 | 12<br>0.472 | 6.000<br>0.2362 | 10.663<br>0.4198 | 25.15<br>0.990 | 3.2<br>1/8  | 29.8<br>1 11/64 | 11.1<br>7/16   | 24.6<br>31/32  | 0.09                | 0.20 | 4400<br>1000                         | 10400<br>2320                                  |
| RAL013NPPB                 | LS013K     | 9105                  | 13/16           | 47<br>1.8504 | 17.46<br>11/16 | 12<br>0.472 | 6.000<br>0.2362 | 11.476<br>0.4518 | 29.67<br>1.168 | 4.0<br>5/32 | 36.1<br>1 27/64 | 11.9<br>15/32  | 25.4<br>1      | —                   | —    | 4900<br>1120                         | 11000<br>2500                                  |
| RAL014NPPB                 | LS014K     |                       | 7/8             |              |                |             |                 |                  |                |             |                 |                |                | 0.11                | 0.24 |                                      |                                                |
| RAL015NPPB                 | LS015K     |                       | 15/16           |              |                |             |                 |                  |                |             |                 |                |                | —                   | —    |                                      |                                                |
| RAL100NPPB <sup>(1)</sup>  | LS100K     |                       | 1               |              |                |             |                 |                  |                |             |                 |                |                | 0.10                | 0.22 |                                      |                                                |
| RAL101NPPB                 | LS101K     | 9106                  | 1 1/16          | 55<br>2.1654 | 18.27<br>23/32 | 13<br>0.512 | 6.500<br>0.2559 | 11.755<br>0.4628 | 36.32<br>1.430 | 4.0<br>5/32 | 42.5<br>1 43/64 | 11.9<br>15/32  | 26.2<br>1 1/32 | —                   | —    | 6950<br>1560                         | 14600<br>3350                                  |
| RAL102NPPB                 | LS102K     |                       | 1 1/8           |              |                |             |                 |                  |                |             |                 |                |                | 0.13                | 0.29 |                                      |                                                |
| RAL103NPPB                 | LS103K     |                       | 1 3/16          |              |                |             |                 |                  |                |             |                 |                |                | 0.13                | 0.29 |                                      |                                                |
| RAL103NPPB2 <sup>(1)</sup> | LS103K2    |                       | 1 1/4           |              |                |             |                 |                  |                |             |                 |                |                | 0.13                | 0.29 |                                      |                                                |

<sup>(1)</sup>Also available with cylindrical O.D. Delete suffix B.

NOTE: Bore tolerance is nominal to +0.013 mm, +0.0005 in.

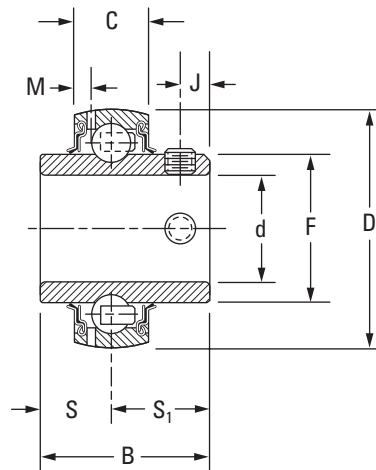
### MEDIUM SERIES

#### GYM-KRRB INSERTS SET SCREW LOCK

- This series is designed to offer extended bearing life despite demanding industrial environments.
- The insert features a full-width inner ring, providing extra support along the shaft.
- The extra support feature, coupled with a flexible nylon retainer, allows the inserts to operate for extended periods with undersized shafts or in misalignment conditions.
- The inserts are equipped with a three-piece seal, protecting against corrosion, contamination and fiber wrap.
- The inserts also include nylon-patch set screws, resisting set screw back-out and providing superior holding power in applications with severe vibration.

#### Suggested shaft tolerances:

- 1 in. – 1 15/16 in., nominal to -0.013 mm, -0.0005 in.;  
2 in. – 3 in., nominal to -0.025 mm, -0.0010 in.



| Bearing No. | Basic Outer-Ring Size | Shaft Dia. | O.D.          | Ring Widths    |             | S              | S <sub>1</sub> | F              | M             | J              | Set Screw Size          | Brg. Wt.      | Static Load Rating | Extended Dynamic Load Rating |
|-------------|-----------------------|------------|---------------|----------------|-------------|----------------|----------------|----------------|---------------|----------------|-------------------------|---------------|--------------------|------------------------------|
|             |                       |            |               | Inner          | Outer       |                |                |                |               |                |                         |               |                    |                              |
|             |                       | d          | D             | B              | C           |                |                |                |               |                |                         |               | C <sub>0</sub>     | C <sub>E</sub>               |
|             |                       | in.        | mm in.        | mm in.         | mm in.      | mm in.         | mm in.         | mm in.         | mm in.        | mm in.         | mm in.                  | kg lbs.       | N lbs.             | N lbs.                       |
| GYM1100KRRB | 206                   | 1          | 62<br>2.4409  | 38.10<br>1.500 | 18<br>0.709 | 15.88<br>0.625 | 22.22<br>0.875 | 40.31<br>1.587 | 3.96<br>0.156 | 7.62<br>0.300  | M6 x 1<br>1/4 – 28      | 0.427<br>0.94 | 11100<br>2500      | 21800<br>4900                |
| GYM1103KRRB | 207                   | 1 3/16     | 72<br>2.8346  | 42.87<br>1.688 | 19<br>0.748 | 17.48<br>0.688 | 25.40<br>1.000 | 46.18<br>1.816 | 3.68<br>0.145 | 7.82<br>0.308  | M8 x 1.25<br>5/16 – 24  | 0.704<br>1.55 | 15100<br>3400      | 28500<br>6400                |
| GYM1107KRRB | 208                   | 1 7/16     | 80<br>3.1496  | 49.22<br>1.938 | 21<br>0.827 | 19.05<br>0.750 | 30.17<br>1.188 | 52.27<br>2.058 | 4.06<br>0.160 | 8.00<br>0.315  | M8 x 1.25<br>5/16 – 24  | 0.817<br>1.80 | 19600<br>4400      | 36300<br>8150                |
| GYM1108KRRB | 209                   | 1 1/2      | 85<br>3.3465  | 49.22<br>1.938 | 22<br>0.866 | 19.05<br>0.750 | 30.17<br>1.188 | 52.27<br>2.280 | 4.55<br>0.179 | 8.00<br>0.315  | M8 x 1.25<br>5/16 – 24  | 0.885<br>1.95 | 20000<br>4500      | 36300<br>8150                |
| GYM1111KRRB | 210                   | 1 11/16    | 90<br>3.5433  | 51.59<br>2.031 | 22<br>0.866 | 19.05<br>0.750 | 32.54<br>1.281 | 62.84<br>2.474 | 4.70<br>0.185 | 10.00<br>0.394 | M10 x 1.5<br>3/8 – 24   | 1.271<br>2.80 | 22700<br>5100      | 39200<br>8800                |
| GYM1112KRRB |                       | 1 3/4      |               |                |             |                |                |                |               |                |                         | 1.203<br>2.65 |                    |                              |
| GYM1115KRRB | 211                   | 1 15/16    | 100<br>3.9370 | 55.55<br>2.187 | 24<br>0.945 | 22.22<br>0.875 | 33.32<br>1.312 | 69.77<br>2.747 | 5.00<br>0.197 | 10.00<br>0.394 | M10 x 1.5<br>3/8 – 24   | 1.634<br>3.60 | 28500<br>6400      | 48100<br>10800               |
| GY1200KRRB  |                       | 2          |               |                |             |                |                |                |               |                |                         | 1.498<br>3.30 |                    |                              |
| GYM1203KRRB | 212                   | 2 3/16     | 110<br>4.3307 | 65.07<br>2.562 | 27<br>1.063 | 25.40<br>1.000 | 39.67<br>1.562 | 76.48<br>3.011 | 5.13<br>0.202 | 10.00<br>0.394 | M10 x 1.5<br>3/8 – 24   | 2.225<br>4.90 | 35600<br>8000      | 58800<br>13200               |
| GY1204KRRB  |                       | 2 1/4      |               |                |             |                |                |                |               |                |                         | 1.952<br>4.30 |                    |                              |
| GYM1207KRRB | 214                   | 2 7/16     | 125<br>4.9213 | 69.85<br>2.750 | 28<br>1.102 | 26.97<br>1.062 | 42.84<br>1.687 | 76.48<br>3.422 | 5.08<br>0.200 | 12.00<br>0.472 | M12 x 1.75<br>7/16 – 20 | 2.996<br>6.60 | 43000<br>9650      | 69500<br>15600               |
| GYM1208KRRB |                       | 2 1/2      |               |                |             |                |                |                |               |                |                         | 2.860<br>6.30 |                    |                              |
| GYM1211KRRB | 215                   | 2 11/16    | 130<br>5.1181 | 77.80<br>3.063 | 29<br>1.142 | 33.32<br>1.312 | 44.45<br>1.750 | 91.92<br>3.619 | 5.56<br>0.219 | 12.00<br>0.472 | M12 x 1.75<br>7/16 – 20 | 3.042<br>6.70 | 43600<br>9800      | 69500<br>15600               |
| GYM1215KRRB | 216                   | 2 15/16    | 140<br>5.5118 | 77.80<br>3.063 | 29<br>1.142 | 33.32<br>1.312 | 44.45<br>1.750 | 91.92<br>3.619 | 5.56<br>0.219 | 12.00<br>0.472 | M12 x 1.75<br>7/16 – 20 | 3.087<br>6.80 | 53400<br>12000     | 80200<br>18000               |
| GYM1300KRRB |                       | 3          |               |                |             |                |                |                |               |                |                         |               |                    |                              |

NOTE: Bore tolerance: 1/2 in. – 2 3/16 in., nominal to +0.013 mm, +0.0005 in.  
2 1/4 in. – 3 in., nominal to +0.015 mm, +0.0006 in.

# HEAVY SERIES

## GN-KRRB RELUBRICATABLE TYPES

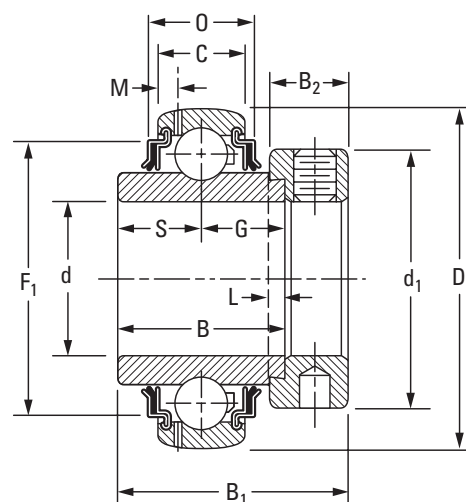
- The heavy series R-seal bearings are similar to the standard series and designed to withstand continuous, heavy or shock loads.
- This series has heavier-section 300-series bearings. They include a considerably thicker sealing member in the contact-type diaphragm seal.
- The design of the series ensures complete retention of the lubricant and positive exclusion of all contaminants.

### Suggested shaft tolerances:

- 1 3/16 in. – 1 15/16 in., nominal to -0.013 mm, -0.0005 in.;
- 2 in. – 3 15/16 in., nominal to -0.025 mm, -0.0010 in.

### To order, specify bearing number followed by "+ COL".

Example: GN303KRRB + COL.



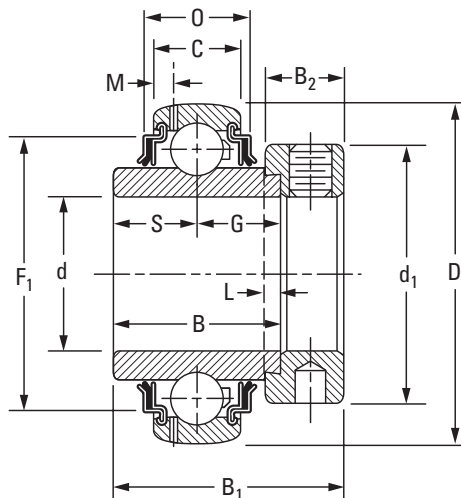
| Bearing No.              | Collar No. | Basic Outer-Ring Size | Shaft Dia.<br><br>d | O.D.<br><br>D | Ring Widths      |                |                |                |             |                 |                |               |                 |                 |                |               | Brg. and Collar Wt. |                | Static Load Rating<br><br>C <sub>o</sub> | Extended Dynamic Load Rating<br><br>C <sub>E</sub> |
|--------------------------|------------|-----------------------|---------------------|---------------|------------------|----------------|----------------|----------------|-------------|-----------------|----------------|---------------|-----------------|-----------------|----------------|---------------|---------------------|----------------|------------------------------------------|----------------------------------------------------|
|                          |            |                       |                     |               | Inner<br><br>B   | Outer<br><br>C | S              | G              | L           | d <sub>1</sub>  | B <sub>2</sub> | M             | B <sub>1</sub>  | F <sub>1</sub>  | O              |               |                     |                |                                          |                                                    |
|                          |            |                       | in.                 | mm in.        | mm in.           | mm in.         | mm in.         | mm in.         | mm in.      | mm in.          | mm in.         | mm in.        | mm in.          | mm in.          | mm in.         | kg lbs.       | lbs.                | N lbs.         | N lbs.                                   |                                                    |
| GN103KRRB                | SN103K     | 306                   | 1 3⁄16              | 72<br>2.8346  | 36.51<br>1 7⁄16  | 20<br>0.787    | 17.5<br>1 1⁄16 | 19.1<br>3⁄4    | 4.0<br>5⁄32 | 49.2<br>1 15⁄16 | 17.5<br>1 1⁄16 | 3.61<br>0.142 | 50.0<br>1 31⁄32 | 60.17<br>2.369  | 23.50<br>0.925 | 0.553<br>1.22 |                     | 15800<br>3560  | 33100<br>7440                            |                                                    |
| GN104KRRB                | SN104K     | 307                   | 1 1⁄4               |               |                  |                |                |                |             |                 |                |               |                 |                 |                | 0.762<br>1.68 |                     | 18300<br>4120  | 37100<br>8340                            |                                                    |
| GN105KRRB                | SN105K     |                       | 1 5⁄16              | 80<br>3.1496  | 38.10<br>1 1⁄2   | 22<br>0.866    | 18.3<br>23⁄32  | 19.8<br>25⁄32  | 4.0<br>5⁄32 | 55.6<br>2 3⁄16  | 17.5<br>1 1⁄16 | 3.96<br>0.156 | 51.6<br>2 1⁄32  | 67.01<br>2.638  | 27.00<br>1.063 | 0.744<br>1.64 |                     |                |                                          |                                                    |
| GN106KRRB                | SN106K     |                       | 1 3⁄8               |               |                  |                |                |                |             |                 |                |               |                 |                 |                | 0.726<br>1.60 |                     |                |                                          |                                                    |
| GN107KRRB                | SN107K     |                       | 1 7⁄16              |               |                  |                |                |                |             |                 |                |               |                 |                 |                | 0.708<br>1.56 |                     |                |                                          |                                                    |
| GN108KRRB <sup>(1)</sup> | SN108K     | 308                   | 1 1⁄2               | 90<br>3.5433  | 41.28<br>1 5⁄8   | 25<br>0.984    | 19.8<br>25⁄32  | 21.4<br>27⁄32  | 4.8<br>3⁄16 | 63.5<br>2 1⁄2   | 20.6<br>13⁄16  | 4.62<br>0.182 | 57.2<br>2 1⁄4   | 75.06<br>2.955  | 26.67<br>1.05  | 1.152<br>2.54 |                     | 26000<br>5850  | 49400<br>11100                           |                                                    |
| GN110KRRB                | SN110K     | 309                   | 1 5⁄8               |               |                  |                |                |                |             |                 |                |               |                 |                 |                | 1.656<br>3.65 |                     | 31700<br>7120  | 58700<br>13200                           |                                                    |
| GN111KRRB                | SN111K     |                       | 1 11⁄16             | 100<br>3.9370 | 42.86<br>1 11⁄16 | 27<br>1.063    | 19.8<br>25⁄32  | 23.0<br>29⁄32  | 4.8<br>3⁄16 | 69.9<br>2 3⁄4   | 20.6<br>13⁄16  | 5.00<br>0.197 | 58.7<br>2 5⁄16  | 82.58<br>3.251  | 28.52<br>1.123 | 1.456<br>3.21 |                     |                |                                          |                                                    |
| GN112KRRB <sup>(1)</sup> | SN112K     |                       | 1 3⁄4               |               |                  |                |                |                |             |                 |                |               |                 |                 |                | 1.388<br>2.95 |                     |                |                                          |                                                    |
| GN114KRRB                | SN114K     | 310                   | 1 7⁄8               | 110<br>4.3307 | 49.21<br>1 15⁄16 | 29<br>1.142    | 24.6<br>31⁄32  | 24.6<br>31⁄32  | 4.8<br>3⁄16 | 75.8<br>2 63⁄64 | 22.2<br>7⁄8    | 5.36<br>0.211 | 66.7<br>2 5⁄8   | 82.87<br>3.654  | 30.86<br>1.215 | 1.973<br>4.35 |                     | 37900<br>8510  | 68500<br>15400                           |                                                    |
| GN115KRRB <sup>(1)</sup> | SN115K     |                       | 1 15⁄16             |               |                  |                |                |                |             |                 |                |               |                 |                 |                | 1.905<br>4.20 |                     |                |                                          |                                                    |
| GN200KRRB                | SN200K     | 311                   | 2                   | 120<br>4.7244 | 55.56<br>2 3⁄16  | 31<br>1.220    | 27.8<br>1 3⁄32 | 27.8<br>1 3⁄32 | 4.8<br>3⁄16 | 82.6<br>3 1⁄4   | 22.2<br>7⁄8    | 5.49<br>0.216 | 73.0<br>2 7⁄8   | 101.78<br>4.007 | 37.47<br>1.475 | 2.132<br>4.70 |                     | 44500<br>10000 | 79200<br>17800                           |                                                    |
| GN203KRRB                | SN203K     |                       | 2 3⁄16              |               |                  |                |                |                |             |                 |                |               |                 |                 |                | 2.368<br>5.22 |                     |                |                                          |                                                    |

<sup>(1)</sup>Also available with cylindrical O.D. Delete suffix B. Example: GN108KRR.

NOTE: Bore tolerances: 1 3/16 in. – 2 3/16 in., nominal to +0.013 mm, +0.0005 in.;  
2 1/4 in. – 3 3/16 in., nominal to +0.015 mm, +0.0006 in.

Continued on next page.

### GN-KRRB RELUBRICATABLE TYPES – continued



Continued from previous page.

| Bearing No. | Collar No. | Basic Outer-Ring Size | Shaft Dia. | O.D.          | Ring Widths       |             |                 |                 |             |                  |                |               |                  |                 |                |                 | Brg. and Collar Wt. | Static Load Rating | Extended Dynamic Load Rating |
|-------------|------------|-----------------------|------------|---------------|-------------------|-------------|-----------------|-----------------|-------------|------------------|----------------|---------------|------------------|-----------------|----------------|-----------------|---------------------|--------------------|------------------------------|
|             |            |                       |            |               | Inner             | Outer       | S               | G               | L           | d <sub>1</sub>   | B <sub>2</sub> | M             | B <sub>1</sub>   | F <sub>1</sub>  | O              |                 |                     |                    |                              |
|             |            |                       | d          | D             | B                 | C           | S               | G               | L           | d <sub>1</sub>   | B <sub>2</sub> | M             | B <sub>1</sub>   | F <sub>1</sub>  | O              |                 |                     | C <sub>o</sub>     | C <sub>E</sub>               |
|             |            |                       | in.        | mm in.        | mm in.            | mm in.      | mm in.          | mm in.          | mm in.      | mm in.           | mm in.         | mm in.        | mm in.           | mm in.          | mm in.         | kg lbs.         |                     | N lbs.             | N lbs.                       |
| GN207KRRB   | SN207K     | 312                   | 2 7/16     | 130<br>5.1181 | 61.91<br>2 7/16   | 33<br>1.299 | 31.0<br>1 7/32  | 31.0<br>1 7/32  | 6.4<br>1/4  | 88.9<br>3 1/2    | 23.8<br>1 5/16 | 5.84<br>0.230 | 79.4<br>3 1/8    | 108.52<br>4.312 | 38.99<br>1.535 | 2.839<br>6.26   | 6.26                | 52000<br>11700     | 90700<br>20400               |
| GN211KRRB   | SO211K     | 314                   | 2 11/16    | 150<br>5.9055 | 68.26<br>2 11/16  | 37<br>1.457 | 34.1<br>1 11/32 | 34.1<br>1 11/32 | 6.4<br>1/4  | 101.6<br>4       | 27.0<br>1 1/16 | 6.73<br>0.265 | 88.9<br>3 1/2    | 126.31<br>4.973 | 44.96<br>1.770 | 4.509<br>9.94   | 9.94                | 68100<br>15300     | 115700<br>26000              |
| GN215KRRB   | SN215K     | 315                   | 2 15/16    | 160<br>6.2992 | 74.61<br>2 15/16  | 39<br>1.535 | 37.3<br>1 15/32 | 37.3<br>1 15/32 | 6.4<br>1/4  | 112.7<br>4 7/16  | 31.8<br>1 1/4  | 6.48<br>0.255 | 100.0<br>3 15/16 | 133.02<br>5.273 | 51.13<br>2.013 | 5.634<br>12.42  | 12.42               | 77000<br>17300     | 125900<br>28300              |
| GN303KRRB   | SN303K     | 316                   | 3 3/16     | 170<br>6.6929 | 80.96<br>3 3/16   | 41<br>1.614 | 40.5<br>1 19/32 | 40.5<br>1 19/32 | 6.4<br>1/4  | 119.1<br>4 11/16 | 31.8<br>1 1/4  | 7.26<br>0.286 | 106.4<br>4 3/16  | 142.82<br>5.623 | 51.05<br>2.010 | 7.126<br>15.71  | 15.71               | 86300<br>19400     | 136600<br>30700              |
| GN307KRRB   | SN307K     | 318                   | 3 7/16     | 190<br>7.4803 | 87.31<br>3 7/16   | 45<br>1.772 | 42.1<br>1 21/32 | 42.1<br>1 21/32 | 7.9<br>5/16 | 133.4<br>5 1/4   | 36.5<br>1 7/16 | 8.18<br>0.322 | 115.9<br>4 9/16  | 161.37<br>6.353 | 52.63<br>2.072 | 9.190<br>20.26  | 20.26               | 107200<br>24100    | 158400<br>35600              |
| GN315KRRB   | SN315K     | 320                   | 3 15/16    | 215<br>8.4646 | 100.01<br>3 15/16 | 49<br>1.929 | 50.0<br>1 31/32 | 50.0<br>1 31/32 | 7.9<br>5/16 | 146.1<br>5 3/4   | 36.5<br>1 7/16 | 7.82<br>0.308 | 129.6<br>5 1/16  | 182.85<br>7.199 | 59.36<br>2.337 | 12.233<br>26.97 | 26.97               | 140600<br>31600    | 191700<br>43100              |

<sup>(1)</sup>Also available with cylindrical O.D. Delete suffix B. Example: GN108KRR.

NOTE: Bore tolerances: 1 3/16 in. – 2 3/16 in., nominal to +0.013 mm, +0.0005 in.;

2 1/4 in. – 3 3/16 in., nominal to +0.015 mm, +0.0006 in.

## GN-KLLB SPECIAL DUTY

- The GN-KLLB-series ball bearings are heavy and are similar in design to the standard LL (Mechani-Seal) wide-inner-ring ball bearings.
- The GN-KLLB series have heavier-section 300-series bearings.
- Unlike standard series, the seal in this heavy series is a three-piece construction and includes two fixed inner members and an external rotation slinger.

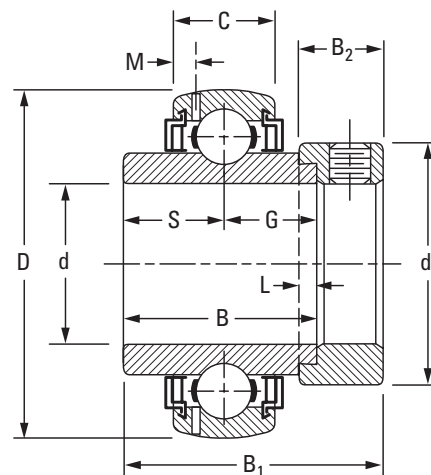
### Suggested shaft tolerances:

1/8 in. – 1 15/16 in., nominal to -0.013 mm, -0.0005 in.;

2 in. – 2 15/16 in., nominal to -0.025 mm, -0.0010 in.

### To order, specify bearing number followed by "+ COL".

Example: GN104KLLB + COL.



| Bearing No. | Collar No. | Basic Outer-Ring Size | Shaft Dia.<br><br>d | O.D.<br><br>D | Ring Widths                 |              |              |                             |                             |                        |                             |                            |               |                              |       | Brg. and Collar Wt.<br><br>kg<br>lbs. | Static Load Rating<br><br>N<br>lbs. | Extended Dynamic Load Rating<br><br>N<br>lbs. |
|-------------|------------|-----------------------|---------------------|---------------|-----------------------------|--------------|--------------|-----------------------------|-----------------------------|------------------------|-----------------------------|----------------------------|---------------|------------------------------|-------|---------------------------------------|-------------------------------------|-----------------------------------------------|
|             |            |                       |                     |               | Inner<br><br>B              | Outer        |              | S                           | G                           | L                      | d <sub>1</sub>              | B <sub>2</sub>             | M             | B <sub>1</sub>               |       |                                       |                                     |                                               |
|             |            |                       |                     |               |                             | N-KLL        | GN-KLLB      |                             |                             |                        |                             |                            |               |                              |       |                                       |                                     |                                               |
|             |            |                       | in.                 | mm in.        | mm in.                      | mm in.       | mm in.       | mm in.                      | mm in.                      | mm in.                 | mm in.                      | mm in.                     | mm in.        | mm in.                       |       |                                       |                                     |                                               |
| GN102KLLB   | SN102K     | 306                   | 1 ⅞                 | 72            | 36.51                       | 19           | 20           | 17.46                       | 19.05                       | 3.9                    | 49.21                       | 17.46                      | 3.61          | 1.97                         | 0.554 | 1.22                                  | 15800                               | 33100                                         |
| GN103KLLB   | SN103K     |                       | 1 ⅜ <sub>16</sub>   | 2.8346        | 1 ⅞ <sub>16</sub>           | 0.7480       | 0.7874       | 1 <sub>16</sub>             | ¾                           | ⅝ <sub>32</sub>        | 1 15 <sub>16</sub>          | 1 <sub>16</sub>            | 0.142         | 1 31 <sub>32</sub>           | 0.604 | 1.33                                  | 3560                                | 7440                                          |
| GN104KLLB   | SN104K     | 307                   | 1 ¼                 | 80<br>3.1496  | 38.10<br>1 ½                | 21<br>0.8268 | 22<br>0.8661 | 18.30<br>23 <sub>32</sub>   | 19.84<br>25 <sub>32</sub>   | 3.9<br>⅝ <sub>32</sub> | 55.60<br>2 ⅜ <sub>16</sub>  | 17.46<br>1 <sub>16</sub>   | 3.96<br>0.156 | 51.59<br>2 ⅓ <sub>32</sub>   | 0.649 | 1.43                                  | 18300<br>4120                       | 37100<br>8340                                 |
| GN106KLLB   | SN106K     |                       | 1 ⅜                 |               |                             |              |              |                             |                             |                        |                             |                            |               |                              | 0.699 | 1.54                                  |                                     |                                               |
| GN107KLLB   | SN107K     |                       | 1 ⅞ <sub>16</sub>   |               |                             |              |              |                             |                             |                        |                             |                            |               |                              | 0.731 | 1.61                                  |                                     |                                               |
| GN108KLLB   | SN108K     | 308                   | 1 ½                 | 90<br>3.5433  | 41.28<br>1 ⅝                | 23<br>0.9055 | 25<br>0.9843 | 19.84<br>25 <sub>32</sub>   | 21.43<br>27 <sub>32</sub>   | 4.8<br>¾ <sub>16</sub> | 63.50<br>2 ½                | 20.64<br>13 <sub>16</sub>  | 4.62<br>0.182 | 57.15<br>2 ¼                 | 1.153 | 2.54                                  | 26000<br>5850                       | 49400<br>11100                                |
| GN111KLLB   | SN111K     | 309                   | 1 11 <sub>16</sub>  | 100<br>3.9370 | 42.86<br>1 11 <sub>16</sub> | 25<br>0.9843 | 27<br>1.0630 | 19.84<br>25 <sub>32</sub>   | 23.02<br>29 <sub>32</sub>   | 4.8<br>¾ <sub>16</sub> | 69.85<br>2 ¾                | 20.64<br>13 <sub>16</sub>  | 4.80<br>0.189 | 58.74<br>2 5 <sub>16</sub>   | 1.457 | 3.21                                  | 31700<br>7120                       | 58700<br>13200                                |
| GN112KLLB   | SN112K     |                       | 1 ¾                 |               |                             |              |              |                             |                             |                        |                             |                            |               |                              | 1.657 | 3.65                                  |                                     |                                               |
| GN115KLLB   | SN115K     | 310                   | 1 15 <sub>16</sub>  | 110<br>4.3307 | 50.00<br>1 31 <sub>32</sub> | 27<br>1.0630 | 29<br>1.1417 | 24.60<br>31 <sub>32</sub>   | 24.60<br>31 <sub>32</sub>   | 4.8<br>¾ <sub>16</sub> | 76.20<br>3                  | 22.23<br>⅞                 | 5.16<br>0.203 | 66.68<br>2 ⅝                 | 1.907 | 4.20                                  | 37900<br>8510                       | 68500<br>15400                                |
| GN203KLLB   | SN203K     | 311                   | 2 ⅜ <sub>16</sub>   | 120<br>4.7244 | 55.56<br>2 3 <sub>16</sub>  | 29<br>1.1417 | 31<br>1.2205 | 27.80<br>1 3 <sub>32</sub>  | 29.37<br>1 5 <sub>32</sub>  | 4.8<br>¾ <sub>16</sub> | 82.55<br>3 ¼                | 22.23<br>⅞                 | 5.49<br>0.216 | 73.02<br>2 ⅞                 | 2.370 | 5.22                                  | 44500<br>10000                      | 79200<br>17800                                |
| GN207KLLB   | SN207K     | 312                   | 2 ⅞ <sub>16</sub>   | 130<br>5.1181 | 61.91<br>2 7 <sub>16</sub>  | 31<br>1.2205 | 33<br>1.2992 | 30.96<br>1 7 <sub>32</sub>  | 30.96<br>1 7 <sub>32</sub>  | 6.4<br>¼               | 88.90<br>3 ½                | 23.80<br>15 <sub>16</sub>  | 5.84<br>0.230 | 79.38<br>3 ⅞                 | 2.841 | 6.26                                  | 52000<br>11700                      | 90700<br>20400                                |
| GN211KLLB   | SN211K     | 314                   | 2 11 <sub>16</sub>  | 150<br>5.9055 | 68.26<br>2 11 <sub>16</sub> | 35<br>1.3780 | 37<br>1.4567 | 34.13<br>1 11 <sub>32</sub> | 34.13<br>1 11 <sub>32</sub> | 6.4<br>¼               | 101.60<br>4                 | 26.99<br>1 ⅓ <sub>16</sub> | 6.73<br>0.265 | 88.90<br>3 ½                 | 4.512 | 9.94                                  | 68100<br>15300                      | 115700<br>26000                               |
| GN215KLLB   | SN215K     | 315                   | 2 15 <sub>16</sub>  | 160<br>6.2992 | 74.61<br>2 15 <sub>16</sub> | —            | 39<br>1.5354 | 37.30<br>1 15 <sub>32</sub> | 37.30<br>1 15 <sub>32</sub> | 6.4<br>¼               | 112.71<br>4 7 <sub>16</sub> | 31.75<br>1 ¼               | 6.48<br>0.255 | 100.01<br>3 15 <sub>16</sub> | 5.638 | 12.42                                 | 77000<br>17300                      | 125900<br>28300                               |

NOTE: Bore tolerance: 1/2 in. – 2 3/16 in., nominal to +0.013 mm, +0.0005 in.  
2 7/16 in. – 2 15/16 in., nominal to +0.015 mm, +0.0006 in.

### SMN A AND B TYPES/MUOA-B INSERTS<sup>(1)</sup>

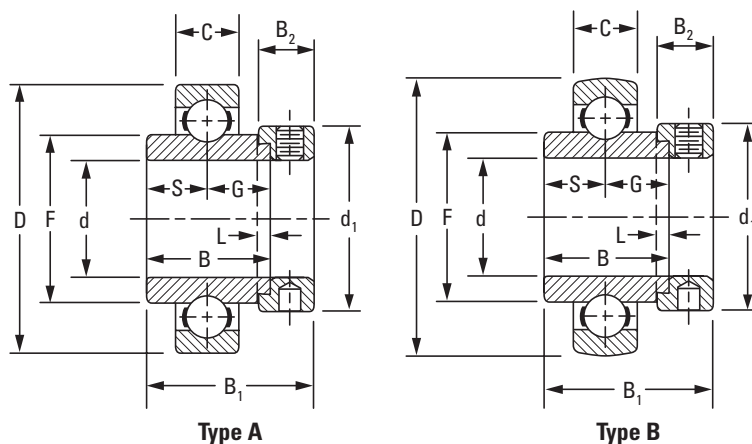
- SMN series types A and B have the same ring tolerances and corner radii as equivalent 300-series single-row radial ball bearings.
- Type A has cylindrical outside diameters; type B has spherical outside diameters. The letter B appears on the outer ring only.
- The bearings are not prelubricated.

#### Suggested shaft tolerances:

5/8 in. – 1 15/16 in., nominal to -0.013 mm, -0.0005 in.;  
 2 3/16 in. – 3 15/16 in., nominal to -0.025 mm, -0.0010 in.  
 For larger sizes, contact your Timken engineer.

#### To order, specify bearing number followed by "+ COL".

Example: SMN102K + COL.



| Bearing No.           |          | Collar No. | Basic Outer-Ring Size | Shaft Dia. | O.D.   | Ring Widths |        |        |        |        |        |                |                |                |         | Brg. and Collar Wt. | Static Load Rating | Extended Dynamic Load Rating |
|-----------------------|----------|------------|-----------------------|------------|--------|-------------|--------|--------|--------|--------|--------|----------------|----------------|----------------|---------|---------------------|--------------------|------------------------------|
| A Type <sup>(2)</sup> | B Type   |            |                       |            |        | Inner       | Outer  | S      | G      | F      | L      | d <sub>1</sub> | B <sub>2</sub> | B <sub>1</sub> |         |                     |                    |                              |
|                       |          |            |                       | d          | D      | B           | C      | S      | G      | F      | L      | d <sub>1</sub> | B <sub>2</sub> | B <sub>1</sub> |         |                     |                    |                              |
|                       |          |            |                       | in.        | mm in. | mm in.      | mm in. | mm in. | mm in. | mm in. | mm in. | mm in.         | mm in.         | mm in.         | kg lbs. | N lbs.              | C <sub>0</sub>     | C <sub>E</sub>               |
| SMN010K               | SMN010KB | SN010K     | 303                   | 5/8        | 47     | 34.13       | 14     | 17.07  | 17.07  | 25.93  | 4.00   | 34.93          | 15.88          | 46.05          | 0.240   | 0.53                | 6550               | 15000                        |
| SMN011K               | SMN011KB | SN011K     |                       | 11/16      | 1.8504 | 1 11/32     | 0.5512 | 43/64  | 43/64  | 1.021  | 5/32   | 1 3/8          | 5/8            | 1 13/16        | 0.218   | 0.48                | 1460               | 3350                         |
| SMN012K               | SMN012KB | SN012K     | 304                   | 3/4        | 52     | 34.93       | 15     | 15.90  | 19.05  | 29.24  | 4.00   | 36.51          | 15.88          | 46.83          | 0.227   | 0.50                | 7800               | 17600                        |
|                       |          |            |                       |            | 2.0472 | 1 3/8       | 0.5906 | 5/8    | 3/4    | 1.151  | 5/32   | 1 7/16         | 5/8            | 1 27/32        |         |                     | 1760               | 4000                         |
| SMN013K               | SMN013KB | SN013K     | 305                   | 13/16      |        |             |        |        |        |        |        |                |                |                | 0.445   | 0.98                |                    |                              |
| SMN014K               | SMN014KB | SN014K     |                       | 7/8        | 62     | 34.93       | 17     | 16.67  | 18.26  | 36.50  | 4.00   | 42.86          | 15.88          | 46.83          | 0.431   | 0.95                | 12200              | 26000                        |
| SMN015K               | SMN015KB | SN015K     |                       | 15/16      | 2.4409 | 1 3/8       | 0.6693 | 21/32  | 23/32  | 1.437  | 5/32   | 1 11/16        | 5/8            | 1 27/32        | 0.413   | 0.91                | 2750               | 5850                         |
| SMN100K               | SMN100KB | SN100K     |                       | 1          |        |             |        |        |        |        |        |                |                |                | 0.404   | 0.86                |                    |                              |
| SMN101K               | SMN101KB | SN101K     | 306                   | 1 1/16     | 72     | 36.51       | 19     | 17.46  | 19.05  | 43.23  | 4.00   | 49.21          | 17.46          | 50.00          | 0.608   | 1.34                | 15600              | 33500                        |
| SMN102K               | SMN102KB | SN102K     |                       | 1 1/8      | 2.8346 | 1 7/16      | 0.7480 | 11/16  | 3/4    | 1.702  | 5/32   | 1 15/16        | 11/16          | 1 31/32        | 0.585   | 1.29                | 3550               | 7500                         |
| SMN103K               | SMN103KB | SN103K     |                       | 1 3/16     |        |             |        |        |        |        |        |                |                |                | 0.567   | 1.25                |                    |                              |
| SMN104K               | SMN104KB | SN104K     |                       | 1 1/4      |        |             |        |        |        |        |        |                |                |                | 0.803   | 1.77                |                    |                              |
| SMN105K               | SMN105KB | SN105K     | 307                   | 1 5/16     | 80     | 38.10       | 21     | 18.26  | 19.84  | 48.95  | 4.00   | 55.60          | 17.46          | 51.59          | 0.757   | 1.67                | 21200              | 40500                        |
| SMN106K               | SMN106KB | SN106K     |                       | 1 3/8      | 3.1496 | 1 1/2       | 0.8268 | 23/32  | 25/32  | 1.927  | 5/32   | 2 3/16         | 11/16          | 2 1/32         | 0.726   | 1.60                | 4750               | 9150                         |
| SMN107K               | SMN107KB | SN107K     |                       | 1 7/16     |        |             |        |        |        |        |        |                |                |                | 0.721   | 1.56                |                    |                              |
| SMN108K               | SMN108KB | SN108K     |                       | 1 1/2      | 90     | 41.28       | 23     | 19.84  | 21.43  | 55.50  | 4.80   | 63.50          | 20.64          | 57.15          | 1.089   | 2.40                | 26100              | 49000                        |
| SMN109K               | SMN109KB | SN109K     | 308                   | 1 9/16     | 3.5433 | 1 5/8       | 0.9055 | 25/32  | 27/32  | 2.185  | 3/16   | 2 1/2          | 13/16          | 2 1/4          | 1.025   | 2.26                | 5850               | 11000                        |
| SMN110K               | SMN110KB | SN110K     | 309                   | 1 5/8      |        |             |        |        |        |        |        |                |                |                | 1.433   | 3.16                |                    |                              |
| SMN111K               | SMN111KB | SN111K     |                       | 1 11/16    | 100    | 42.86       | 25     | 19.84  | 23.02  | 62.05  | 4.80   | 69.90          | 20.64          | 58.74          | 1.361   | 3.00                | 31600              | 58500                        |
| SMN112K               | SMN112KB | SN112K     |                       | 1 3/4      | 3.9370 | 1 11/16     | 0.9843 | 25/32  | 29/32  | 2.443  | 3/16   | 2 3/4          | 13/16          | 25/16          | 1.361   | 3.00                | 7100               | 13200                        |
| SMN113K               | SMN113KB | SN113K     |                       | 1 13/16    |        |             |        |        |        |        |        |                |                |                | 1.896   | 4.18                |                    |                              |
| SMN114K               | SMN114KB | SN114K     | 310                   | 1 7/8      | 110    | 49.21       | 27     | 24.61  | 24.61  | 68.78  | 4.80   | 76.20          | 22.20          | 66.68          | 1.805   | 3.98                | 37900              | 68000                        |
| SMN115K               | SMN115KB | SN115K     |                       | 1 15/16    | 4.3307 | 1 15/16     | 1.0630 | 31/32  | 31/32  | 2.708  | 3/16   | 3              | 7/8            | 2 5/8          | 1.737   | 3.83                | 8500               | 15300                        |

<sup>(1)</sup>See page A-159.

<sup>(2)</sup>Order as MUOA assembly suggested.

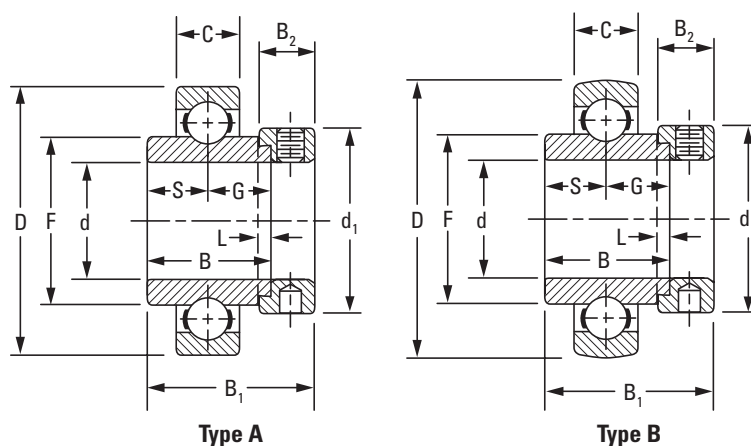
<sup>(3)</sup>For applications where thrust load exceeds 60 percent of radial load, consult your Timken engineer.

NOTE: Bore tolerance: 5/8 in. – 2 3/16 in., nominal to +0.013 mm, +0.0005 in.

3 1/4 in. – 4 3/16 in., nominal to +0.018 mm, +0.0007 in.

4 7/16 in. – 4 15/16 in., nominal to +0.020 mm, +0.0008 in.

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Continued from previous page.

| Bearing No.               |                            | Collar No. | Basic Outer-Ring Size | Shaft Dia.<br>d | O.D.<br>D | Ring Widths |            | S       | G       | F      | L      | d <sub>1</sub> | B <sub>2</sub> | B <sub>1</sub> | Brg. and Collar Wt. |       | Static Load Rating<br>C <sub>0</sub> | Extended Dynamic Load Rating<br>C <sub>E</sub> |
|---------------------------|----------------------------|------------|-----------------------|-----------------|-----------|-------------|------------|---------|---------|--------|--------|----------------|----------------|----------------|---------------------|-------|--------------------------------------|------------------------------------------------|
| A Type <sup>(2)</sup>     | B Type                     |            |                       |                 |           | Inner<br>B  | Outer<br>C |         |         |        |        |                |                |                |                     |       |                                      |                                                |
|                           |                            |            |                       | in.             | mm in.    | mm in.      | mm in.     | mm in.  | mm in.  | mm in. | mm in. | mm in.         | mm in.         | mm in.         | kg lbs.             |       | N lbs.                               | N lbs.                                         |
| SMN200K                   | SMN200KB                   | SN200K     | 311                   | 2               |           |             |            |         |         |        |        |                |                |                | 2.413               | 5.32  |                                      |                                                |
| SMN201K                   | SMN201KB                   | SN201K     |                       | 2 1/16          | 120       | 55.56       | 29         | 27.78   | 27.78   | 75.01  | 4.80   | 82.55          | 22.20          | 73.03          | 2.395               | 5.28  | 43600                                | 80000                                          |
| SMN202K                   | SMN202KB                   | SN202K     |                       | 2 1/8           | 4.7244    | 2 3/16      | 1.1417     | 1 3/32  | 1 3/32  | 2.953  | 3/16   | 3 1/4          | 7/8            | 2 7/8          | 2.331               | 5.14  | 9800                                 | 18000                                          |
| SMN203K                   | SMN203KB                   | SN203K     |                       | 2 3/16          |           |             |            |         |         |        |        |                |                |                | 2.209               | 4.87  |                                      |                                                |
| SMN204K                   | SMN204KB                   | SN204K     | 312W                  | 2 1/4           |           |             |            |         |         |        |        |                |                |                | 3.084               | 6.80  |                                      |                                                |
| SMN205K                   | SMN205KB                   | SN205K     |                       | 2 5/16          | 130       | 61.91       | 31         | 31.00   | 31.00   | 81.53  | 6.40   | 88.90          | 23.81          | 79.38          | 3.012               | 6.64  | 51480                                | 89800                                          |
| SMN206K                   | SMN206KB                   | SN206K     |                       | 2 3/8           | 5.1181    | 2 7/16      | 1.2205     | 1 7/32  | 1 7/32  | 3.210  | 1/4    | 3 1/2          | 15/16          | 3 1/8          | 2.908               | 6.41  | 11700                                | 20400                                          |
| SMN207K                   | SMN207KB                   | SN207K     |                       | 2 7/16          |           |             |            |         |         |        |        |                |                |                | 2.812               | 6.20  |                                      |                                                |
| SMN211K                   | SMN211KB                   | SO211K     | 314                   | 2 11/16         | 150       | 2.69        | 35         | 34.13   | 34.13   | 94.78  | 6.40   | 101.60         | 26.99          | 92.08          | 4.205               | 9.27  | 66800                                | 116000                                         |
|                           |                            |            |                       |                 | 5.9055    | 2 11/16     | 1.3780     | 1 11/32 | 1 11/32 | 3.731  | 1/4    | 4              | 1 1/16         | 3 5/8          |                     |       | 15000                                | 26000                                          |
| SMN215K                   | SMN215KB                   | SN215K     | 315                   | 2 15/16         | 160       | 74.61       | 37         | 37.31   | 37.31   | 100.38 | 6.40   | 112.71         | 31.75          | 100.01         | 5.856               | 12.91 | 75700                                | 125000                                         |
|                           |                            |            |                       |                 | 6.2992    | 2 15/16     | 1.4567     | 1 15/32 | 1 15/32 | 3.952  | 1/4    | 4 7/16         | 1 1/4          | 3 15/16        |                     |       | 17000                                | 28500                                          |
| SMN303K                   | SMN303KB                   | SN303K     | 316                   | 3 3/16          | 170       | 80.96       | 39         | 40.48   | 40.48   | 106.91 | 6.40   | 119.06         | 31.75          | 106.36         | 6.704               | 14.78 | 86000                                | 137000                                         |
|                           |                            |            |                       |                 | 6.6929    | 3 3/16      | 1.5354     | 1 19/32 | 1 19/32 | 4.209  | 1/4    | 4 11/16        | 1 1/4          | 4 3/16         |                     |       | 19300                                | 30500                                          |
| SMN307K                   | SMN307KB                   | SN307K     | 318                   | 3 7/16          | 190       | 87.31       | 43         | 43.66   | 43.66   | 120.12 | 7.94   | 133.35         | 36.51          | 115.89         | 9.984               | 22.01 | 106900                               | 156000                                         |
|                           |                            |            |                       |                 | 7.4803    | 3 7/16      | 1.6929     | 1 23/32 | 1 23/32 | 4.729  | 5/16   | 5 1/4          | 1 7/16         | 4 9/16         |                     |       | 24000                                | 35500                                          |
| SM0311W-BR <sup>(3)</sup> | SM0311WB-BR <sup>(3)</sup> | SO311K     | 319                   | 3 11/16         | 200       | 93.66       | 45         | 38.89   | 54.77   | 126.67 | 7.94   | 139.70         | 36.51          | 122.24         | 11.090              | 24.45 | 173700                               | 224000                                         |
|                           |                            |            |                       |                 | 7.8740    | 3 11/16     | 1.7717     | 1 17/32 | 2 5/32  | 4.987  | 5/16   | 5 1/2          | 1 7/16         | 4 13/16        |                     |       | 39000                                | 50000                                          |
| SMN315K                   | SMN315KB                   | SN315K     | 320                   | 3 15/16         | 215       | 100.01      | 47         | 50.00   | 50.00   | 134.77 | 7.94   | 146.05         | 36.51          | 128.59         | 13.068              | 28.81 | 140300                               | 193000                                         |
|                           |                            |            |                       |                 | 8.4646    | 3 15/16     | 1.8504     | 1 31/32 | 1 31/32 | 5.306  | 5/16   | 5 3/4          | 1 7/16         | 5 1/16         |                     |       | 31500                                | 43000                                          |
| SMN403W-BR <sup>(3)</sup> | SMN403WB-BR                | SN403K     | 321                   | 4 3/16          | 225       | 104.78      | 49         | 48.42   | 56.36   | 141.22 | 7.94   | 157.16         | 42.86          | 139.70         | 15.508              | 34.19 | 202700                               | 250000                                         |
|                           |                            |            |                       |                 | 8.8583    | 4 1/8       | 1.9291     | 1 29/32 | 2 7/32  | 5.560  | 5/16   | 6 3/16         | 1 11/16        | 5 1/2          |                     |       | 45500                                | 56000                                          |
| SMN407W-BR <sup>(3)</sup> | SMN407WB-BR <sup>(3)</sup> | SN407K     | 322                   | 4 7/16          | 240       | 106.36      | 50         | 49.21   | 57.15   | 142.75 | 7.94   | 165.10         | 42.86          | 141.29         | 19.051              | 42.00 | 245000                               | 285100                                         |
|                           |                            |            |                       |                 | 9.4488    | 4 3/16      | 1.9685     | 1 15/16 | 2 1/4   | 5.920  | 5/16   | 6 1/2          | 1 11/16        | 5 9/16         |                     |       | 55000                                | 64000                                          |
| SMN415W-BR <sup>(3)</sup> | SMN415WB-BR <sup>(3)</sup> | SN415K     | 326                   | 4 15/16         | 280       | 106.36      | 59         | 53.98   | 61.91   | 176.56 | 7.94   | 206.38         | 42.86          | 150.81         | 29.660              | 65.39 | 327400                               | 347400                                         |
|                           |                            |            |                       |                 | 11.0236   | 4 3/16      | 2.3228     | 2 1/8   | 2 7/16  | 6.951  | 5/16   | 8 1/8          | 1 11/16        | 5 15/16        |                     |       | 73500                                | 78000                                          |

<sup>(1)</sup>See page A-159.

<sup>(2)</sup>Order as MUOA assembly suggested.

<sup>(3)</sup>For applications where thrust load exceeds 60 percent of radial load, consult your Timken engineer.

NOTE: Bore tolerance: 5/8 in. – 2 3/16 in., nominal to +0.013 mm, +0.0005 in.

3 1/4 in. – 4 3/16 in., nominal to +0.018 mm, +0.0007 in.

4 7/16 in. – 4 15/16 in., nominal to +0.020 mm, +0.0008 in.

### SMN-S SERIES

- The SMN-S heavy-series construction permits its inner assembly to swivel in the outer aligning ring.
- Unrestricted self-alignment is achieved, allowing the inner ring to become square and true with the shaft and assembly.
- The external S-ring is uniquely ground and closely matched to its respective outer-bearing ring so that the S-ring of one bearing will not fit the outer ring of another bearing.
- This bearing has the basic 300-series load capacities.
- The bearings are not prelubricated.

#### Suggested shaft tolerances:

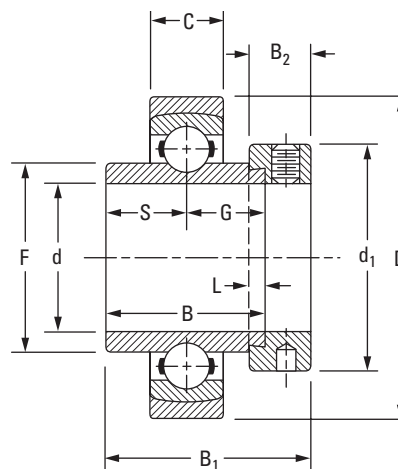
1 <sup>3</sup>/<sub>16</sub> in. – 1 <sup>15</sup>/<sub>16</sub> in., nominal to -0.013 mm, -0.0005 in.;

2 in. – 3 <sup>15</sup>/<sub>16</sub> in., nominal to -0.025 mm, -0.0010 in.

Greater than 3 <sup>15</sup>/<sub>16</sub> in., consult your Timken engineer.

#### To order, specify bearing number followed by "+ COL".

Example: SMN103KS + COL.



| Bearing No.                | Collar No. | Basic Outer-Ring Size | Shaft Dia.<br>d                 | O.D.<br>D      | Ring Widths                               |              | S                                        | G                                        | F               | L            | d <sub>1</sub>                            | B <sub>2</sub>                           | B <sub>1</sub>                            | Brg. and Collar Wt.<br>kg lbs. | Static Load Rating<br>C <sub>0</sub> | Extended Dynamic Load Rating<br>C <sub>E</sub> |
|----------------------------|------------|-----------------------|---------------------------------|----------------|-------------------------------------------|--------------|------------------------------------------|------------------------------------------|-----------------|--------------|-------------------------------------------|------------------------------------------|-------------------------------------------|--------------------------------|--------------------------------------|------------------------------------------------|
|                            |            |                       |                                 |                | Inner<br>B                                | Outer<br>C   |                                          |                                          |                 |              |                                           |                                          |                                           |                                |                                      |                                                |
|                            |            |                       | in.                             | mm in.         | mm in.                                    | mm in.       | mm in.                                   | mm in.                                   | mm in.          | mm in.       | mm in.                                    | mm in.                                   | mm in.                                    |                                | N lbs.                               | N lbs.                                         |
| SMN103KS                   | SN103K     | 306                   | 1 <sup>3</sup> / <sub>16</sub>  | 80<br>3.1496   | 36.51<br>1 <sup>7</sup> / <sub>16</sub>   | 19<br>0.7480 | 17.50<br>1 <sup>1</sup> / <sub>16</sub>  | 19.10<br>3/4                             | 43.23<br>1.702  | 4.0<br>5/32  | 49.20<br>1 <sup>15</sup> / <sub>16</sub>  | 17.50<br>1 <sup>1</sup> / <sub>16</sub>  | 50.00<br>1 <sup>31</sup> / <sub>32</sub>  | 0.654 1.44                     | 15600<br>3550                        | 33500<br>7550                                  |
| SMN107KS                   | SN107K     | 307                   | 1 <sup>7</sup> / <sub>16</sub>  | 88<br>3.4646   | 38.10<br>1 <sup>1</sup> / <sub>2</sub>    | 21<br>0.8268 | 18.30<br>23/32                           | 19.80<br>25/32                           | 48.95<br>1.927  | 4.0<br>5/32  | 55.60<br>2 <sup>3</sup> / <sub>16</sub>   | 17.50<br>1 <sup>1</sup> / <sub>16</sub>  | 51.60<br>2 <sup>1</sup> / <sub>32</sub>   | 0.849 1.87                     | 21200<br>4750                        | 40500<br>9150                                  |
| SMN108KS                   | SN108KT    | 308                   | 1 <sup>1</sup> / <sub>2</sub>   | 100<br>3.9370  | 41.28<br>1 <sup>5</sup> / <sub>8</sub>    | 23<br>0.9055 | 19.80<br>25/32                           | 21.40<br>27/32                           | 55.50<br>2.185  | 4.8<br>3/16  | 63.50<br>2 <sup>1</sup> / <sub>2</sub>    | 20.60<br>13/16                           | 57.20<br>2 <sup>1</sup> / <sub>4</sub>    | 1.344 2.96                     | 26100<br>5850                        | 49000<br>11000                                 |
| SMN111KS                   | SN111K     | 309                   | 1 <sup>11</sup> / <sub>16</sub> | 110<br>4.3307  | 42.86<br>1 <sup>11</sup> / <sub>16</sub>  | 25<br>0.9843 | 19.80<br>25/32                           | 23.00<br>29/32                           | 62.05<br>2.443  | 4.8<br>3/16  | 69.90<br>2 <sup>3</sup> / <sub>4</sub>    | 20.60<br>13/16                           | 58.70<br>2 <sup>5</sup> / <sub>16</sub>   | 1.693 3.73                     | 31600<br>7100                        | 58500<br>13200                                 |
| SMN115KS                   | SN115K     | 310                   | 1 <sup>15</sup> / <sub>16</sub> | 120<br>4.7244  | 49.21<br>1 <sup>15</sup> / <sub>16</sub>  | 27<br>1.0630 | 24.60<br>31/32                           | 24.60<br>31/32                           | 68.78<br>2.708  | 4.8<br>3/16  | 76.20<br>3                                | 22.20<br>7/8                             | 66.70<br>2 <sup>5</sup> / <sub>8</sub>    | 2.147 4.73                     | 37900<br>8500                        | 68000<br>15300                                 |
| SMN203KS                   | SN203K     | 311                   | 2 <sup>3</sup> / <sub>16</sub>  | 130<br>5.1181  | 55.56<br>2 <sup>3</sup> / <sub>16</sub>   | 29<br>1.1417 | 27.80<br>1 <sup>13</sup> / <sub>32</sub> | 27.80<br>1 <sup>13</sup> / <sub>32</sub> | 75.01<br>2.953  | 4.8<br>3/16  | 82.60<br>3 <sup>1</sup> / <sub>4</sub>    | 22.20<br>7/8                             | 73.00<br>2 <sup>7</sup> / <sub>8</sub>    | 2.769 6.10                     | 43600<br>9800                        | 80000<br>18000                                 |
| SMN207KS                   | SN207K     | 312                   | 2 <sup>7</sup> / <sub>16</sub>  | 145<br>5.7087  | 61.91<br>2 <sup>7</sup> / <sub>16</sub>   | 31<br>1.2205 | 31.00<br>1 <sup>17</sup> / <sub>32</sub> | 31.00<br>1 <sup>17</sup> / <sub>32</sub> | 81.53<br>3.210  | 6.4<br>1/4   | 88.90<br>3 <sup>1</sup> / <sub>2</sub>    | 23.80<br>15/16                           | 79.40<br>3 <sup>1</sup> / <sub>8</sub>    | 3.405 7.50                     | 51700<br>11600                       | 90000<br>20400                                 |
| SMN211KS                   | SO211K     | 314                   | 2 <sup>11</sup> / <sub>16</sub> | 165<br>6.4961  | 68.26<br>2 <sup>1</sup> / <sub>16</sub>   | 35<br>1.3780 | 34.10<br>1 <sup>11</sup> / <sub>32</sub> | 34.10<br>1 <sup>11</sup> / <sub>32</sub> | 94.70<br>3.731  | 6.4<br>1/4   | 101.60<br>4                               | 27.00<br>1 <sup>1</sup> / <sub>16</sub>  | 92.10<br>3 <sup>5</sup> / <sub>8</sub>    | 5.185 11.42                    | 66800<br>15000                       | 116000<br>26000                                |
| SMN215KS                   | SN215K     | 315                   | 2 <sup>15</sup> / <sub>16</sub> | 175<br>6.8898  | 74.61<br>2 <sup>15</sup> / <sub>16</sub>  | 37<br>1.4567 | 37.30<br>1 <sup>15</sup> / <sub>32</sub> | 37.30<br>1 <sup>15</sup> / <sub>32</sub> | 100.38<br>3.952 | 6.4<br>1/4   | 112.70<br>4 <sup>7</sup> / <sub>16</sub>  | 31.80<br>1 <sup>1</sup> / <sub>4</sub>   | 100.00<br>3 <sup>15</sup> / <sub>16</sub> | 6.456 14.22                    | 75700<br>17000                       | 125000<br>28500                                |
| SMN303KS                   | SN303K     | 316                   | 3 <sup>3</sup> / <sub>16</sub>  | 190<br>7.4803  | 80.96<br>3 <sup>3</sup> / <sub>16</sub>   | 39<br>1.5354 | 40.50<br>1 <sup>19</sup> / <sub>32</sub> | 40.50<br>1 <sup>19</sup> / <sub>32</sub> | 106.91<br>4.209 | 6.4<br>1/4   | 119.10<br>4 <sup>11</sup> / <sub>16</sub> | 31.80<br>1 <sup>1</sup> / <sub>4</sub>   | 106.40<br>4 <sup>3</sup> / <sub>16</sub>  | 8.040 17.71                    | 86000<br>19300                       | 137000<br>30500                                |
| SMN307KS                   | SN307K     | 318                   | 3 <sup>7</sup> / <sub>16</sub>  | 210<br>8.2677  | 87.31<br>3 <sup>7</sup> / <sub>16</sub>   | 43<br>1.6929 | 43.70<br>1 <sup>23</sup> / <sub>32</sub> | 43.70<br>1 <sup>23</sup> / <sub>32</sub> | 120.12<br>4.729 | 7.9<br>5/16  | 133.40<br>5 <sup>1</sup> / <sub>4</sub>   | 36.50<br>1 <sup>1</sup> / <sub>16</sub>  | 115.90<br>4 <sup>9</sup> / <sub>16</sub>  | 1.790 25.97                    | 106900<br>24000                      | 156000<br>35500                                |
| SMO311WS-BR                | SO311K     | 319                   | 3 <sup>11</sup> / <sub>16</sub> | 220<br>8.6608  | 93.66<br>3 <sup>11</sup> / <sub>16</sub>  | 45<br>1.7680 | 38.89<br>1 <sup>17</sup> / <sub>32</sub> | 54.77<br>2 <sup>5</sup> / <sub>32</sub>  | 126.53<br>4.982 | 7.94<br>5/16 | 139.70<br>5 <sup>1</sup> / <sub>2</sub>   | 36.51<br>1 <sup>1</sup> / <sub>16</sub>  | 122.24<br>4 <sup>13</sup> / <sub>16</sub> | 16.300 33.00                   | 166000<br>37500                      | 224000<br>50000                                |
| SMN315KS                   | SN315K     | 320                   | 3 <sup>15</sup> / <sub>16</sub> | 235<br>9.2520  | 100.01<br>3 <sup>15</sup> / <sub>16</sub> | 47<br>1.8504 | 50.00<br>1 <sup>31</sup> / <sub>32</sub> | 50.00<br>1 <sup>31</sup> / <sub>32</sub> | 134.77<br>5.306 | 7.9<br>5/16  | 146.00<br>5 <sup>3</sup> / <sub>4</sub>   | 36.50<br>1 <sup>1</sup> / <sub>16</sub>  | 128.60<br>5 <sup>1</sup> / <sub>16</sub>  | 15.822 34.85                   | 140300<br>31500                      | 193000<br>43000                                |
| SMN407WS-BR <sup>(1)</sup> | SN407K     | 322                   | 4 <sup>7</sup> / <sub>16</sub>  | 265<br>10.4331 | 106.36<br>4 <sup>3</sup> / <sub>16</sub>  | 50<br>1.9685 | 49.20<br>1 <sup>15</sup> / <sub>16</sub> | 57.20<br>2 <sup>1</sup> / <sub>4</sub>   | 150.37<br>5.920 | 7.9<br>5/16  | 168.30<br>6 <sup>1</sup> / <sub>2</sub>   | 42.90<br>1 <sup>11</sup> / <sub>16</sub> | 141.30<br>5 <sup>9</sup> / <sub>16</sub>  | 21.465 47.28                   | 245000<br>55000                      | 280000<br>63000                                |
| SMN415WS-BR <sup>(1)</sup> | SN415K     | 326                   | 4 <sup>15</sup> / <sub>16</sub> | 300<br>11.8110 | 115.89<br>4 <sup>9</sup> / <sub>16</sub>  | 59<br>2.3228 | 54.00<br>2 <sup>1</sup> / <sub>8</sub>   | 61.90<br>2 <sup>7</sup> / <sub>16</sub>  | 176.56<br>6.951 | 7.9<br>5/16  | 206.40<br>8 <sup>1</sup> / <sub>8</sub>   | 42.90<br>1 <sup>11</sup> / <sub>16</sub> | 150.80<br>5 <sup>15</sup> / <sub>16</sub> | 33.773 74.39                   | 327400<br>73500                      | 345000<br>78000                                |

<sup>(1)</sup>For applications where thrust load exceeds 60 percent of radial load, consult your Timken engineer.

NOTE: Bore tolerance: 1 <sup>5</sup>/<sub>16</sub> in. – 2 <sup>3</sup>/<sub>16</sub> in., nominal to +0.013 mm, +0.0005 in.

2 <sup>1</sup>/<sub>4</sub> in. – 3 <sup>3</sup>/<sub>16</sub> in., nominal to +0.015 mm, +0.0006 in.

3 <sup>1</sup>/<sub>4</sub> in. – 4 <sup>3</sup>/<sub>16</sub> in., nominal to +0.018 mm, +0.0007 in.

4 <sup>7</sup>/<sub>16</sub> in. – 4 <sup>15</sup>/<sub>16</sub> in., nominal to +0.020 mm, +0.0008 in.

## BALL BEARING HOUSED UNITS

Timken® housed units are available in a wide variety of types and sizes to accommodate a complete range of operating conditions.

- **Sizes:** 12.7 mm – 125.4 mm ( $\frac{1}{2}$  in. –  $4\frac{15}{16}$  in.). Size range is dependent upon duty series.
- **Industries and applications:** Agriculture, food processing, conveyors, fans and blowers.
- **Features:** Most popular design features cast-iron housing. Other material options include malleable iron, polymer, pressed-steel or rubber.
- **Benefits:** Combines bearing, housing, seal and locking system into one device for easy installation. Operates even when the shaft is not perfectly aligned with the mounting surface.

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### CAST-IRON HOUSED UNITS

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### CAST-IRON FLANGED UNITS

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### MALLEABLE-IRON FLANGED UNITS

|                                           |       |
|-------------------------------------------|-------|
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| VFD, VFDNR Non-Relubricatable Series..... | A-111 |
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| RFD, RFDNR Non-Relubricatable Series..... | A-112 |



### MALLEABLE-IRON FLANGED UNITS – *continued*

|                                       |       |
|---------------------------------------|-------|
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| VFTD, VFTDR Non-Relubricatable Series | A-113 |
| GRFTD, GRFTDR Relubricatable Series – |       |
| RFTD, RFTDR Non-Relubricatable Series | A-114 |

### PRESSED-STEEL HOUSED UNITS

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### PRESSED-STEEL FLANGED UNITS

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|--------------|-------|
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### RUBBER CARTRIDGES

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| Roller Chain Idler Sprockets | A-158 |

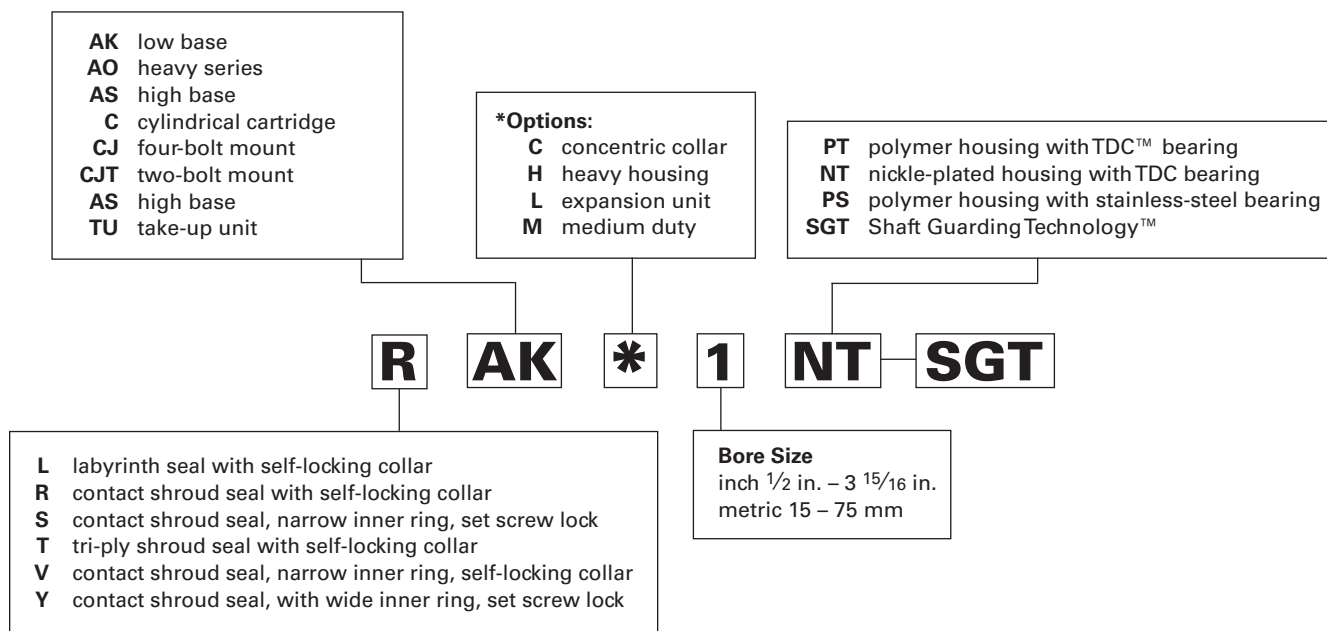
### REPLACEMENT BEARINGS

|                               |       |
|-------------------------------|-------|
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|-------------------------------|-------|

### MACHINE UNITS . . . . . A-161

### TIMKEN® BALL BEARING HOUSED UNIT SAFETY END CAPS MAKE WORKPLACE PROTECTION A SNAP . . . . . A-162

# **NOMENCLATURE**



**Fig. A-19. Wide-inner-ring ball bearing housed unit nomenclature.**

### INTRODUCTION

Ball bearing housed units are available in a wide variety of types and sizes to accommodate a complete range of operating conditions.

These units generally have cast-iron housings and mount on straight shafts with a slip fit. The self-locking collar and the set screw inner-bearing designs make mounting easier. Many of the set screw units include Shaft Guarding Technology™ (see page A-31). Bolt holes in housings take standard bolts to attach units to machinery frames. Several series are available with the concentric locking collar. Most units have a self-aligning feature.

Units incorporating prelubricated wide-inner-ring ball bearings may be furnished without grease fittings.

Several basic types of housed units are available:

- Pillow blocks also known as housed units.
- Flanged cartridges.
- Flangette units.
- Cylindrical cartridges.
- Take-up units.

The choice is determined by application and mounting requirements. Within the basic type selected, variations are available for specific load factors, shaft sizes, mounting surface dimensions, base-to-shaft centerline heights and lubrication requirements.

### PILLOW BLOCKS

Pillow blocks, the most commonly used type of mounted units, provide shaft support where the mounting surface is parallel to the shaft axis (fig. A-20). The bolt holes are usually slotted for easy adjustment during mounting.

Pillow blocks come in a variety of configurations.

- Narrow series (V and S) are lightweight, yet structurally designed to support bearing load.
- Premium width series (R and Y) are three times stronger for rougher environments. They're available in two styles that fit typical applications.
- Pressed steel and rubber pillow blocks are available for light-duty applications.



Fig. A-20. Pillow block.

### FLANGED CARTRIDGES

Flanged cartridges are used where a shaft passes through the machine frame at a right angle (fig. A-21). A four-bolt mounting is the most common; however, where the mounting area is restricted, three- and two-bolt versions are available. A piloted flanged cartridge provides additional mounting accuracy and support.



Fig. A-21. Flanged cartridge.

Flanged cartridges are supplied in both standard and heavy-duty series. Iron- and rubber-flanged cartridges also are available.

A complete line of flangette units or pressed-steel flanged cartridges provides an economical solution for light-duty applications. Two-, three- and four-bolt mountings are available along with a relubricatable version.

### CYLINDRICAL CARTRIDGES

Cylindrical cartridges, like flanged cartridges, provide shaft support where the shaft axis is perpendicular to and passing through a machined housing that is generally very thick (fig. A-22). The outside diameter of the cylindrical cartridges permits mounting with a press fit into a straight, through-bored housing.

Cylindrical cartridges have a machined spherical bearing seat to provide initial shaft alignment in standard-duty applications. Synthetic, conductive rubber cylindrical cartridges are available for applications where low-cost, light-duty, low-noise operation is essential.



Fig. A-22. Cylindrical cartridge.



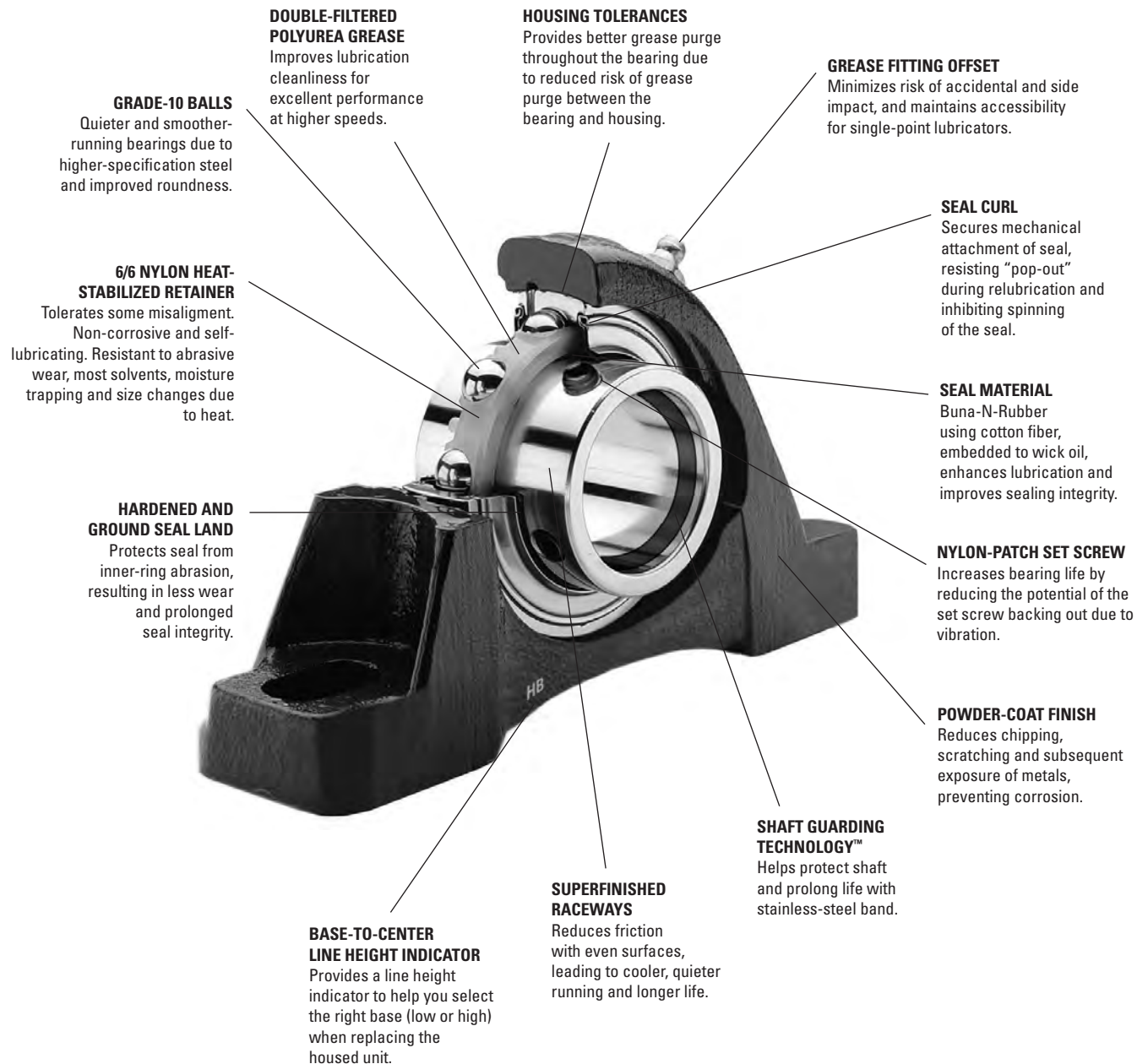
Fig. 23. Take-up unit.

### TAKE-UP UNITS

Take-up units are used where shaft adjustment and belt-tightening devices are required, such as conveyor applications (fig. A-23). Frames for take-up units provide for either side or top mounting.

Take-up units are available in cast-iron for standard-duty applications and pressed steel for economical, light-duty applications.

### FEATURES AND BENEFITS OF TIMKEN® BALL BEARING HOUSED UNITS



#### NOTE

*Failure to follow the mounting/dismounting instructions of your equipment supplier can cause damage to the shaft, leading to premature failure of the equipment.*

[www.timken.com/warning/WIR](http://www.timken.com/warning/WIR)

### TIMKEN SELF-LOCKING COLLAR INSTALLATION

Most Timken housed units come equipped with the self-locking collar to facilitate the mounting of wide-inner-ring ball bearings. This self-locking collar eliminates the need for locknuts, washers, shoulders, sleeves and adapters.

The locking collar has a counterbored recess made purposely eccentric to the bore. The collar recess and the end of the bearing inner ring with which it engages are both machined so that they act as mating cams when on the shaft.

When the collar is engaged to the inner ring, it grips the shaft tightly with a positive binding action that increases with use. No adjustments of any kind are necessary.

### CONCENTRIC COLLAR

For simplified installation of Timken housed units equipped with concentric-collar bearings, the collar is normally assembled to the wide inner ring for shipment. Slip the complete unit on the shaft following steps 1 and 2 (table A-22) described for the self-locking collar procedure, and tighten both set screws.

### TIMKEN SET SCREW LOCKING BEARING

Steps 1 and 2 (table A-22) can be repeated from the self-locking collar installation above. To lock the set screw bearing, simply tighten each inner ring set screw to the suggested torque listed by shaft size. See table A-21.

**TABLE A-21. SET SCREW LOCKING GUIDE.**

| Shaft Size                         |         | SUGGESTED         |
|------------------------------------|---------|-------------------|
| in.                                | mm      | Torque in. - lbs. |
| $\frac{1}{2} - \frac{11}{16}$      | 17      | 35                |
| $\frac{3}{4} - 1$                  | 20 - 25 | 80                |
| $1 \frac{1}{16} - 1 \frac{3}{4}$   | 30 - 45 | 155               |
| $1 \frac{13}{16} - 2 \frac{3}{16}$ | 50 - 55 | 275               |

It may be necessary to rotate the shaft to provide an easy access of the set screw wrench to the set screws. To disassemble, loosen the set screws.

**TABLE A-22. SELF-LOCKING COLLAR INSTALLATION**



1. Slip the shaft through the pillow block or other Timken® housed unit incorporating the wide-inner-ring ball bearing. Be certain the bearing is aligned in position along the shaft to eliminate any possibility of cramping loads.



2. Fasten the unit securely to the base using the proper bolt size.



3. Place the self-locking collar on the shaft with its cam adjacent to the cam on the end of the bearing's inner ring. The eccentric recessed cam will slide over and engage the corresponding cam on the bearing inner ring. Turn the collar in the direction of shaft rotation.



4. Using a lightweight hammer and a drift pin inserted in the drift-pin hole, tap lightly in the direction of shaft rotation to positively engage the collar. The wide inner ring is now locked to the shaft.

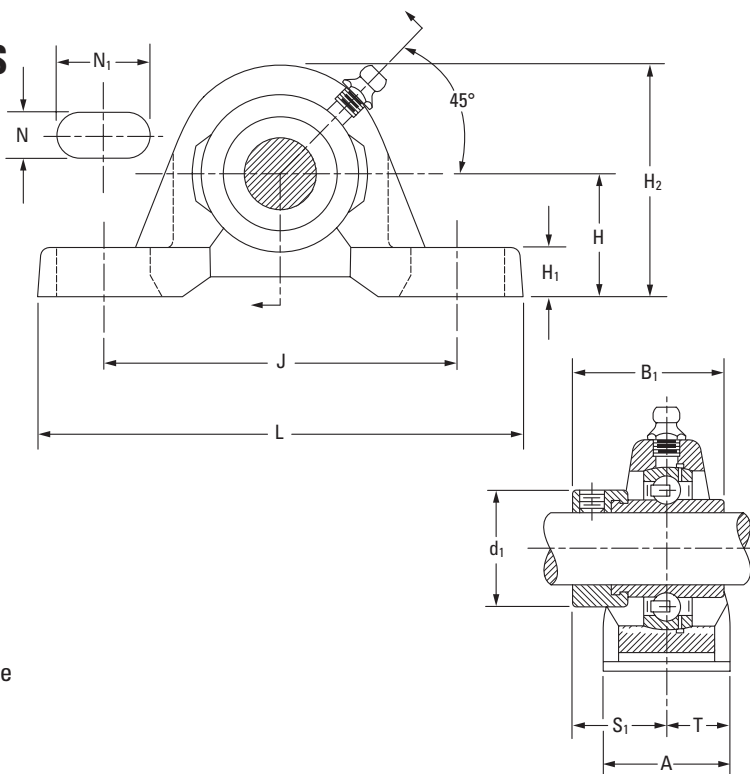


5. As a final step, fully tighten the set screw. It exerts a wedging action to hold the collar always in the engaged position, even under shock load. This design will operate effectively after the cams are tightly locked and in most cases, with no set screws at all.

### CAST-IRON HOUSED UNITS RAK, TAK, LAK INDUSTRIAL SERIES

RAK, TAK and LAK pillow blocks are suggested for industrial applications where normal loads are encountered.

- Heavier than our standard block with solid, flat feet for increased strength.
- Compact, one-piece housing can be mounted in any position.
- Pillow blocks self-align at mounting with the spherical outside diameter of the bearing fitting into the corresponding spherical housing seat.
- Prelubricated and ready for immediate installation.
- Grease fitting for relubrication.
- Self-locking collars supplied with all units.
- RAK pillow block is equipped with G-KRRB (R-seal) wide-inner-ring ball bearings, the TAK with G-KPPB (tri-ply seal) wide-inner-ring ball bearings and the LAK with the G-KLLB (Mechani-seal) wide-inner-ring ball bearings.
- Contact a Timken engineer to discuss highly corrosive applications (food processing, chemical exposure) where Timken thin-dense chrome-coated bearings can be utilized.



#### Suggested shaft tolerances:

- 1/2 in. – 1 15/16 in., nominal to -0.013 mm, -0.0005 in.;
- 2 in. – 2 15/16 in., nominal to -0.025 mm, -0.0010 in.

#### To order, specify UNIT and SHAFT DIAMETER.

Example: RAK 1 7/16 in.

#### BEARING DATA

| Unit | Bearing No. | Dimensions and Load Ratings |
|------|-------------|-----------------------------|
| RAK  | G-KRRB      | Page A-34                   |
| TAK  | G-KPPB      | Page A-39                   |
| LAK  | G-KLLB      | Page A-37                   |

| Unit          | Shaft Dia. | H         | H <sub>2</sub> | B <sub>1</sub> | J         | L         | A         | H <sub>1</sub> | N         | N <sub>1</sub> | d <sub>1</sub> | S <sub>1</sub> | T         | Bolt Size | Bearing No. <sup>(1)</sup> |              | Collar No. | Housing No. | Unit Wt.      |
|---------------|------------|-----------|----------------|----------------|-----------|-----------|-----------|----------------|-----------|----------------|----------------|----------------|-----------|-----------|----------------------------|--------------|------------|-------------|---------------|
|               | in.<br>mm  | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in.      | mm<br>in. | mm<br>in. | RAK                        | (TAK/LAK)    |            | New (Old)   | kg<br>lbs.    |
| RAK, LAK      | 1/2        |           |                |                |           |           |           |                |           |                |                |                |           |           | G1008KRRB                  | (KLLB)       | S1008K     |             |               |
| RAK, LAK      | 5/8        | 26.99     | 53.20          | 37.3           | 92.1      | 123.8     | 30.2      | 8.7            | 11.1      | 22.2           | 28.6           | 23.4           | 15.1      | 10        | G1010KRRB                  | (KLLB)       | S1010K     | T-40238     | 0.454         |
| RAK           | 11/16      | 1 1/16    | 2 3/32         | 1 15/32        | 3 5/8     | 4 7/8     | 1 3/16    | 1 11/32        | 7/16      | 7/8            | 1 1/8          | 59/64          | 19/32     | 3/8       | G1011KRRB                  |              | S1011K     | (T-30595)   | 1.00          |
| RAK           | 17         |           |                |                |           |           |           |                |           |                |                |                |           |           | GE17KRRB                   |              | SE17K      |             |               |
| RAK, LAK      | 3/4        | 31.75     | 64.30          | 43.7           | 96.0      | 127.0     | 33.3      | 13.5           | 11.1      | 20.2           | 33.3           | 26.6           | 16.7      | 10        | G1012KRRB                  | (KLLB)       | S1012K     |             |               |
| RAK           | 20         | 1 1/4     | 2 17/32        | 1 23/32        | 3 25/32   | 5         | 1 5/16    | 1 7/32         | 7/16      | 51/64          | 1 5/16         | 1 3/64         | 21/32     | 3/8       | GE20KRRB                   |              | SE20K      | M96830      | 0.730<br>1.61 |
| RAK, TAK      | 7/8        |           |                |                |           |           |           |                |           |                |                |                |           |           | G1014KRRB                  | (KPPB3)      | S1014K     |             |               |
| RAK, TAK, LAK | 15/16      | 33.34     | 69.80          | 44.4           | 104.8     | 139.7     | 37.3      | 11.9           | 11.1      | 20.6           | 38.1           | 27.0           | 18.7      | 10        | G1015KRRB                  | (KPPB3/KLLB) | S1015K     |             |               |
| RAK, TAK, LAK | 1          | 1 5/16    | 2 3/4          | 1 3/4          | 4 1/8     | 5 1/2     | 1 15/32   | 1 5/32         | 7/16      | 13/16          | 1 1/2          | 1 1/16         | 47/64     | 3/8       | G1100KRRB                  | (KPPB3/KLLB) | S1100K     | M96833      | 0.950<br>2.10 |
| RAK, TAK      | 25         |           |                |                |           |           |           |                |           |                |                |                |           |           | GE25KRRB                   | (KPPB3)      | SE25K      |             |               |
| RAK, TAK      | 1 1/16     |           |                |                |           |           |           |                |           |                |                |                |           |           | G1101KRRB                  | (KPPB3)      | S1101K     |             |               |
| RAK, TAK, LAK | 1 1/8      | 36.68     | 81.70          | 48.4           | 117.5     | 157.2     | 42.9      | 13.5           | 14.3      | 23.8           | 44.1           | 30.1           | 21.4      | 12        | G1102KRRB                  | (KPPB3/KLLB) | S1102K     |             |               |
| RAK, TAK, LAK | 1 3/16     | 1 9/16    | 3 7/32         | 1 29/32        | 4 5/8     | 6 3/16    | 1 11/16   | 1 7/32         | 9/16      | 15/16          | 1 47/64        | 1 3/16         | 27/32     | 1 1/2     | G1103KRRB                  | (KPPB3/KLLB) | S1103K     | M96836      | 1.420<br>3.14 |
| RAK, TAK      | 30         |           |                |                |           |           |           |                |           |                |                |                |           |           | GE30KRRB                   | (KPPB3)      | SE30K      |             |               |
| RAK, TAK, LAK | 1 1/4      |           |                |                |           |           |           |                |           |                |                |                |           |           | G1104KRRB                  | (KPPB2/KLLB) | S1104K     |             |               |
| RAK, TAK      | 1 5/16     | 46.04     | 93.70          | 51.2           | 130.2     | 166.7     | 46.8      | 16.7           | 14.3      | 24.6           | 53.4           | 32.5           | 23.4      | 12        | G1105KRRB                  | (KPPB2)      | S1105K     |             |               |
| RAK, TAK      | 1 3/8      | 1 13/16   | 3 11/16        | 2 1/64         | 5 1/8     | 6 9/16    | 1 27/32   | 2 1/32         | 9/16      | 31/32          | 2 1/8          | 1 9/32         | 59/64     | 1 1/2     | G1106KRRB                  | (KPPB2)      | S1106K     | M96839      | 1.890<br>4.18 |
| RAK, TAK, LAK | 1 7/16     |           |                |                |           |           |           |                |           |                |                |                |           |           | G1107KRRB                  | (KPPB2/KLLB) | S1107K     |             |               |
| RAK, TAK      | 35         |           |                |                |           |           |           |                |           |                |                |                |           |           | GE35KRRB                   | (KPPB2)      | SE35K      |             |               |

<sup>(1)</sup>Bearing number for RAK is G-KRRB. TAK uses G-KPPB. LAK uses G-KLLB.

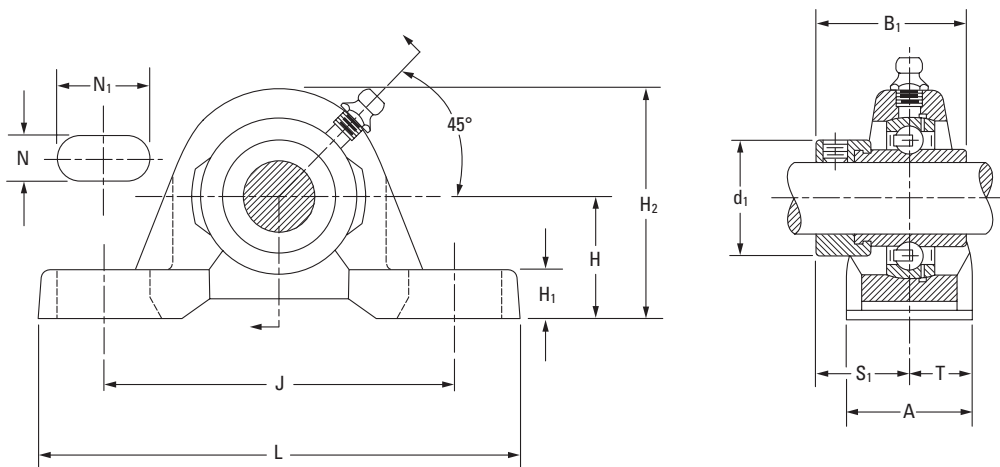
NOTE: All units have 1/8 pipe-thread grease fitting except 1/2 – 1 1/16 and 3/4 units, which have 1/4-28 fitting.

Continued on next page.

# BALL BEARING HOUSED UNITS

BALL BEARING HOUSED UNITS • CAST-IRON HOUSED UNITS • RAK, TAK, LAK

## RAK, TAK, LAK INDUSTRIAL SERIES – continued



Continued from previous page.

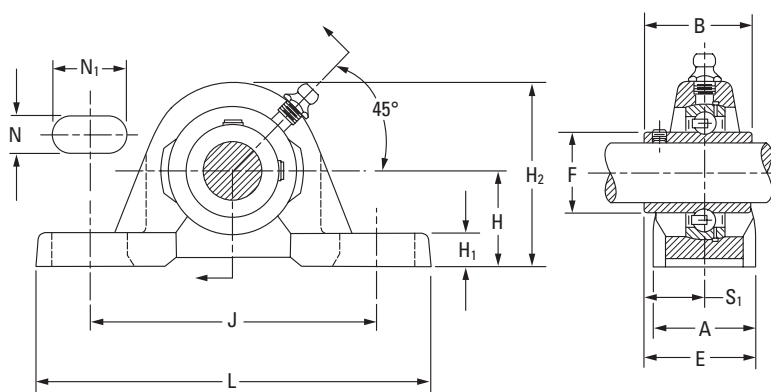
| Unit          | Shaft Dia. | H         | H <sub>2</sub> | B <sub>1</sub> | J         | L         | A         | H <sub>1</sub> | N         | N <sub>1</sub> | d <sub>1</sub> | S <sub>1</sub> | T         | Bolt Size | Bearing No. <sup>(1)</sup> | Collar No. | Housing No. | Unit Wt.     |            |
|---------------|------------|-----------|----------------|----------------|-----------|-----------|-----------|----------------|-----------|----------------|----------------|----------------|-----------|-----------|----------------------------|------------|-------------|--------------|------------|
|               | in.<br>mm  | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in.      | mm<br>in. | mm<br>in. | RAK                        | (TAK/LAK)  |             | New<br>(Old) | kg<br>lbs. |
| RAK, TAK, LAK | 1 1/2      | 49.21     | 101.60         | 56.4           | 136.5     | 179.4     | 51.6      | 19.1           | 14.3      | 26.2           | 60.3           | 34.9           | 25.8      | 12        | G1108KRRB (KPPB3/KLLB)     | S1108KT    |             |              | 2.490      |
| RAK, TAK      | 1 9/16     | 1 15/16   | 4              | 2 7/32         | 5 3/8     | 7 1/16    | 2 1/32    | 3/4            | 9/16      | 1 1/32         | 2 3/8          | 1 3/8          | 1 1/64    | 1/2       | G1109KRRB (KPPB3)          | S1109KT    | M96842      |              | 5.50       |
| RAK, TAK      | 40         |           |                |                |           |           |           |                |           |                |                |                |           |           | GE40KRRB (KPPB3)           | SE40K      |             |              |            |
| RAK, TAK      | 1 5/8      |           |                |                |           |           |           |                |           |                |                |                |           |           | G1110KRRB (KPPB4)          | S1110K     |             |              |            |
| RAK, TAK, LAK | 1 11/16    | 52.39     | 104.80         | 56.4           | 98.4      | 191.3     | 52.4      | 17.5           | 14.3      | 28.6           | 63.5           | 34.9           | 26.2      | 12        | G1111KRRB (KPPB4/KLLB)     | S1111K     | M96844      |              | 3.200      |
| RAK, TAK, LAK | 1 3/4      | 2 1/16    | 4 1/8          | 2 7/32         | 5 7/8     | 7 17/32   | 2 1/16    | 1 1/16         | 9/16      | 1 1/8          | 2 1/2          | 1 3/8          | 1 1/32    | 1/2       | G1112KRRB (KPPB4/KLLB)     | S1112K     |             |              | 7.06       |
| RAK, TAK      | 45         |           |                |                |           |           |           |                |           |                |                |                |           |           | GE45KRRB (KPPB4)           | SE45K      |             |              |            |
| RAK, TAK      | 1 7/8      |           |                |                |           |           |           |                |           |                |                |                |           |           | G1114KRRB (KPPB3)          | S1114K     |             |              |            |
| RAK, TAK, LAK | 1 15/16    | 55.56     | 112.70         | 62.7           | 158.0     | 200.0     | 57.9      | 17.7           | 18.3      | 25.4           | 69.9           | 38.1           | 29.0      | 16        | G1115KRRB (KPPB3/KLLB)     | S1115K     | M96847      |              | 4.010      |
| RAK, TAK      | 50         | 2 3/16    | 4 7/16         | 1 5/32         | 6 7/32    | 7 7/8     | 2 9/32    | 1 1/16         | 2 3/32    | 1              | 2 3/4          | 1 1/2          | 1 9/64    | 5/8       | GE50KRRB (KPPB3)           | SE50K      |             |              | 8.86       |
| RAK, TAK      | 2          |           |                |                |           |           |           |                |           |                |                |                |           |           | G1200KRRB (KPPB4)          | S1200K     |             |              |            |
| RAK, TAK      | 2 1/8      | 61.91     | 126.20         | 71.4           | 176.2     | 222.3     | 60.3      | 19.0           | 18.3      | 29.4           | 76.2           | 43.7           | 30.2      | 16        | G1202KRRB (KPPB4)          | S1202K     | T-40246     |              | 3.901      |
| RAK, TAK, LAK | 2 3/16     | 2 7/16    | 4 31/32        | 2 13/16        | 6 15/16   | 8 3/4     | 2 3/8     | 3/4            | 2 3/32    | 1 5/32         | 3              | 1 23/32        | 1 3/16    | 5/8       | G1203KRRB (KPPB4/KLLB)     | S1203K     | (M96850)    |              | 8.60       |
| RAK, TAK      | 55         |           |                |                |           |           |           |                |           |                |                |                |           |           | GE55KRRB (KPPB4)           | SE55K      |             |              |            |
| RAK           | 2 1/4      |           |                |                |           |           |           |                |           |                |                |                |           |           | G1204KRRB                  | S1204K     |             |              |            |
| RAK           | 2 3/8      | 68.26     | 137.30         | 77.8           | 188.1     | 239.7     | 60.3      | 22.2           | 18.3      | 29.4           | 84.1           | 46.8           | 30.2      | 16        | G1206KRRB                  | S1206K     | T-40247     |              | 5.511      |
| RAK, LAK      | 2 7/16     | 2 11/16   | 5 13/32        | 3 1/16         | 7 13/32   | 9 7/16    | 2 3/8     | 7/8            | 2 3/32    | 1 5/32         | 3 5/16         | 1 27/32        | 1 3/16    | 5/8       | G1207KRRB (KLLB)           | S1207K     | (M99647)    |              | 12.15      |
| RAK           | 60         |           |                |                |           |           |           |                |           |                |                |                |           |           | GE60KRRB                   | SE60K      |             |              |            |
| RAK           | 2 11/16    | 76.20     | 154.00         | 85.7           | 203.2     | 266.7     | 73.0      | 33.3           | 20.6      | 34.9           | 96.8           | 45.2           | 36.5      | 20        | G1211KRRB                  | S1211KT    |             |              |            |
| RAK           | 70         | 3         | 6 1/16         | 3 3/8          | 8         | 10 1/2    | 2 7/8     | 1 5/16         | 1 3/16    | 1 3/8          | 3 13/16        | 1 25/32        | 1 7/16    | 3/4       | GE70KRRB                   | SE70K      | T-22503     |              | 7.920      |
|               |            |           |                |                |           |           |           |                |           |                |                |                |           |           |                            |            |             |              | 17.46      |
| RAK           | 2 15/16    | 84.14     | 163.50         | 92.1           | 241.3     | 304.8     | 82.6      | 38.1           | 22.2      | 31.8           | 101.6          | 54.8           | 41.3      | 20        | G1215KRRB                  | S1215K     |             |              |            |
| RAK           | 75         | 3 5/16    | 6 7/16         | 3 5/8          | 9 1/2     | 12        | 3 1/4     | 1 1/2          | 7/8       | 1 1/4          | 4              | 2 5/32         | 1 5/8     | 3/4       | GE75KRRB                   | SE75K      | T-20134     |              | 9.026      |
|               |            |           |                |                |           |           |           |                |           |                |                |                |           |           |                            |            |             |              | 19.90      |

<sup>(1)</sup>Bearing number for RAK is G-KRRB. TAK uses G-KPPB. LAK uses G-KLLB.

NOTE: All units have 1/8 pipe-thread grease fitting except 1/2 – 1 1/16 and 3/4 units, which have 1/4-28 fitting.

## YAK INDUSTRIAL-SERIES SET SCREW UNITS

- Incorporates Shaft Guarding Technology, which reduces replacement time, provides shaft protection and prolongs the life of the shaft.
- Heavier than our standard block with solid, flat feet for increased strength.
- Timken series low-base set screw pillow blocks feature the GY-KRRB bearing.
- Well-suited for industrial applications with normal loads due to its full-width inner-ring set screw.
- Contact a Timken engineer to discuss highly corrosive applications (food processing, chemical exposure) where Timken thin-dense chrome-coated bearings can be utilized.

**Suggested shaft tolerances:**

1/2 in. – 1 15/16 in., nominal to -0.013 mm, -0.0005 in.;

2 in. – 2 15/16 in., nominal to -0.025 mm, -0.0010 in.

**To order, specify UNIT and SHAFT DIAMETER.**

Example: YAK 1 7/16 in.

**BEARING DATA**

| Unit | Bearing No. | Dimensions and Load Ratings |
|------|-------------|-----------------------------|
| YAK  | GY-KRRB     | Page A-44                   |

| Unit | Shaft Dia.  | H         | H <sub>2</sub> | B         | J         | L         | A         | H <sub>1</sub> | N         | N <sub>1</sub> | F         | S <sub>1</sub> | E         | Bolt Size | Bearing No.     | Housing No. | Unit Wt.   |
|------|-------------|-----------|----------------|-----------|-----------|-----------|-----------|----------------|-----------|----------------|-----------|----------------|-----------|-----------|-----------------|-------------|------------|
|      | in.<br>mm   | mm<br>in. | mm<br>in.      | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in. | mm<br>in.      | mm<br>in. | mm<br>in.      | mm<br>in. | mm<br>in. |                 |             | kg<br>lbs. |
| YAK  | 1/2         | 26.99     | 53.2           | 27.4      | 92.1      | 123.8     | 30.2      | 8.7            | 11.1      | 22.2           | 22.9      | 15.9           | 31.0      | 10        | GY1008KRRB      |             | 0.4536     |
| YAK  | 5/8         | 1 1/16    | 2 3/32         | 1 5/64    | 3 5/8     | 4 7/8     | 1 3/16    | 1 1/32         | 7/16      | 7/8            | 0.900     | 5/8            | 1 7/32    | 3/8       | GY1010KRRB      | T40238      | 1.0000     |
| YAK  | 17          |           |                |           |           |           |           |                |           |                |           |                |           |           | GYE17KRRB       |             |            |
| YAK  | 3/4 SGT     | 31.75     | 64.3           | 31.8      | 96.4      | 127.0     | 33.3      | 13.5           | 11.1      | 20.2           | 27.6      | 19.1           | 35.7      | 10        | GY1012KRRB SGT  |             | 0.6775     |
| YAK  | 20 SGT      | 1 1/4     | 2 17/32        | 1 1/4     | 3 51/64   | 5         | 1 5/16    | 1 7/32         | 7/16      | 51/64          | 1.085     | 3/4            | 1 13/32   | 3/8       | GYE20KRRB SGT   | M96830      | 1.4937     |
| YAK  | 7/8 SGT     |           |                |           |           |           |           |                |           |                |           |                |           |           | GY1014KRRB SGT  |             |            |
| YAK  | 1 1/16 SGT  | 33.34     | 70.0           | 34.9      | 104.8     | 139.7     | 37.3      | 11.9           | 11.1      | 20.6           | 33.8      | 20.6           | 39.3      | 10        | GY1015KRRB SGT  |             | 0.8924     |
| YAK  | 1 SGT       | 1 5/16    | 2 3/4          | 1 3/8     | 4 1/8     | 5 1/2     | 1 13/32   | 1 5/32         | 7/16      | 13/16          | 1.332     | 13/16          | 1 35/64   | 3/8       | GY1100KRRB SGT  | M96833      | 1.9673     |
| YAK  | 25 SGT      |           |                |           |           |           |           |                |           |                |           |                |           |           | GYE25KRRB SGT   |             |            |
| YAK  | 1 1/8 SGT   |           |                |           |           |           |           |                |           |                |           |                |           |           | GY1102KRRB SGT  |             |            |
| YAK  | 1 3/16 SGT  | 39.69     | 81.8           | 39.3      | 117.5     | 157.2     | 42.9      | 13.5           | 14.3      | 23.8           | 40.3      | 23.4           | 44.8      | 12        | GY1103KRRB SGT  |             | 1.3541     |
| YAK  | 1 1/4 S     | 1 9/16    | 3 7/32         | 1 35/64   | 4 5/8     | 6 3/16    | 1 11/16   | 1 7/32         | 9/16      | 15/16          | 1.587     | 59/64          | 1 49/64   | 1/2       | GY1103KRRB3 SGT | M96836      | 2.9853     |
| YAK  | 30 SGT      |           |                |           |           |           |           |                |           |                |           |                |           |           | GYE30KRRB SGT   |             |            |
| YAK  | 1 1/4 SGT   |           |                |           |           |           |           |                |           |                |           |                |           |           | GY1104KRRB SGT  |             |            |
| YAK  | 1 3/8 SGT   | 46.04     | 93.7           | 45.2      | 130.2     | 166.7     | 46.8      | 16.7           | 14.3      | 24.6           | 46.8      | 28.2           | 51.6      | 12        | GY1106KRRB SGT  |             | 1.8434     |
| YAK  | 1 7/16 SGT  | 1 13/16   | 3 11/16        | 1 25/32   | 5 1/8     | 6 9/16    | 1 27/32   | 21/32          | 9/16      | 31/32          | 1.844     | 1 7/64         | 2 1/32    | 1/2       | GY1107KRRB SGT  | M96839      | 4.0639     |
| YAK  | 35 SGT      |           |                |           |           |           |           |                |           |                |           |                |           |           | GYE35KRRB SGT   |             |            |
| YAK  | 1 1/2 SGT   | 49.21     | 101.6          | 49.2      | 136.5     | 179.4     | 51.6      | 19.1           | 14.3      | 26.2           | 52.3      | 30.2           | 56.0      | 12        | GY1108KRRB SGT  |             | 2.4763     |
| YAK  | 40 SGT      | 1 15/16   | 4              | 1 15/16   | 5 3/8     | 7 1/16    | 2 1/32    | 3/4            | 9/16      | 1 1/32         | 2.058     | 1 3/16         | 2 13/34   | 1/2       | GYE40KRRB SGT   | M96842      | 5.4592     |
| YAK  | 1 5/8 SGT   |           |                |           |           |           |           |                |           |                |           |                |           |           | GY1110KRRB SGT  |             |            |
| YAK  | 1 11/16 SGT | 52.39     | 104.8          | 50.4      | 149.2     | 191.3     | 52.4      | 17.5           | 14.3      | 28.6           | 57.9      | 31.4           | 57.5      | 12        | GY1111KRRB SGT  |             | 2.6311     |
| YAK  | 1 3/4 SGT   | 2 1/16    | 4 1/8          | 1 63/64   | 5 7/8     | 7 17/32   | 2 1/16    | 1 11/16        | 9/16      | 1 1/8          | 2.280     | 1 15/64        | 2 17/64   | 1/2       | GY1112KRRB SGT  | M96844      | 5.8005     |
| YAK  | 45 SGT      |           |                |           |           |           |           |                |           |                |           |                |           |           | GYE45KRRB SGT   |             |            |
| YAK  | 1 15/16 SGT |           |                |           |           |           |           |                |           |                |           |                |           |           | GY1115KRRB SGT  |             |            |
| YAK  | 2 S         | 55.56     | 112.7          | 51.6      | 158.0     | 200.2     | 57.9      | 17.5           | 18.3      | 25.4           | 62.8      | 32.5           | 61.5      | 16        | GY1115KRRB2 SGT |             | 3.2579     |
| YAK  | 50 SGT      | 2 3/16    | 4 7/16         | 2 1/32    | 6 7/32    | 7 7/8     | 2 9/32    | 1 11/16        | 23/32     | 1              | 2.474     | 1 9/32         | 2 27/64   | 5/8       | GYE50KRRB SGT   | M96847      | 7.1824     |
| YAK  | 2 SGT       |           |                |           |           |           |           |                |           |                |           |                |           |           | GY1200KRRB SGT  |             |            |
| YAK  | 2 3/16 SGT  | 61.91     | 126.2          | 55.6      | 176.2     | 222.3     | 60.3      | 19.1           | 18.3      | 29.4           | 69.8      | 33.3           | 61.9      | 16        | GY1203KRRB SGT  |             | 3.9009     |
| YAK  | 55 SGT      | 2 7/16    | 4 31/32        | 2 3/16    | 6 15/16   | 8 3/4     | 2 3/8     | 3/4            | 23/32     | 1 5/32         | 2.747     | 1 5/16         | 2 7/16    | 5/8       | GYE55KRRB SGT   | M96850      | 8.6000     |
| YAK  | 2 1/4 SGT   |           |                |           |           |           |           |                |           |                |           |                |           |           | GY1204KRRB SGT  |             |            |
| YAK  | 2 7/16 SGT  | 68.26     | 137.3          | 65.1      | 188.1     | 239.7     | 60.3      | 22.2           | 18.3      | 29.4           | 76.5      | 39.7           | 69.9      | 16        | GY1207KRRB SGT  |             | 4.7718     |
| YAK  | 60 SGT      | 2 11/16   | 5 13/32        | 2 9/16    | 7 13/32   | 9 7/16    | 2 3/8     | 7/8            | 23/32     | 1 5/32         | 3.011     | 1 9/16         | 2 3/4     | 5/8       | GYE60KRRB SGT   | M99647      | 10.5200    |
| YAK  | 2 11/16     | 76.20     | 154.0          | 69.9      | 203.2     | 266.7     | 73.0      | 33.3           | 20.6      | 34.9           | 86.9      | 42.9           | 79.4      | 20        | GY1211KRRB      |             | 7.1259     |
| YAK  | 70          | 3         | 6 1/16         | 2 3/4     | 8         | 10 1/2    | 2 7/8     | 1 5/16         | 13/16     | 1 3/8          | 3.422     | 1 11/16        | 3 1/8     | 3/4       | GYE70KRRB       | T22503      | 15.7100    |
| YAK  | 2 15/16     | 84.14     | 163.5          | 77.8      | 241.3     | 304.8     | 82.6      | 38.1           | 22.2      | 31.8           | 91.9      | 44.5           | 85.7      | 20        | GY1215KRRB      |             | 8.5185     |
| YAK  | 75          | 3 5/16    | 6 7/16         | 1 1/16    | 9 1/2     | 12        | 3 1/4     | 1 1/2          | 7/8       | 1 1/4          | 3.619     | 1 3/4          | 3 3/8     | 3/4       | GY75KRRB        | T20134      | 18.7800    |

NOTE: Shaft diameter with an S = smaller housing.

# BALL BEARING HOUSED UNITS

BALL BEARING HOUSED UNITS • CAST-IRON HOUSED UNITS • VAK

## VAK STANDARD SERIES

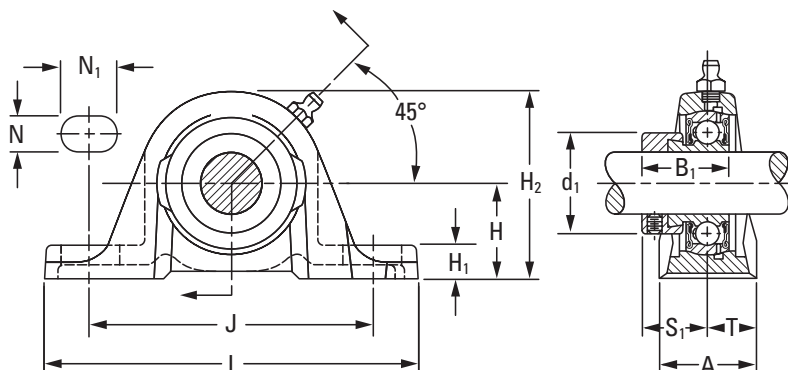
- The streamlined and rugged VAK pillow block unit combines an engineered housing and an RA-RR extended inner ring bearing.
- RA-RR bearing employs a positive-contact, land-riding seal and a Timken self-locking collar. Collar ensures positive shaft retention.
- The pillow block can be mounted to operate in any position.
- Bearing housed units are factory-prelubricated, but a grease fitting is provided to allow for relubrication if required.

### Suggested shaft tolerances:

1/2 in. – 1 15/16 in., nominal to -0.013 mm, -0.0005 in.;  
2 in. – 2 3/16 in., nominal to -0.025 mm, -0.0010 in.

### To order, specify UNIT and SHAFT DIAMETER.

Example: VAK 1 7/16 in.



### BEARING DATA

| Unit | Bearing No. | Dimensions and Load Ratings |
|------|-------------|-----------------------------|
| VAK  | GRA-RRB     | Page A-50                   |

| Unit | Shaft Dia. | H         | H <sub>2</sub> | B <sub>1</sub> | J         | L         | A         | H <sub>1</sub> | N         | N <sub>1</sub> | d <sub>1</sub> | S <sub>1</sub> | T         | Bolt Size | Bearing No. | Collar No. | Housing No.          | Unit Wt.      |
|------|------------|-----------|----------------|----------------|-----------|-----------|-----------|----------------|-----------|----------------|----------------|----------------|-----------|-----------|-------------|------------|----------------------|---------------|
|      | in.<br>mm  | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in.      | mm<br>in. | mm<br>in. |             |            | New<br>(Old)         | kg<br>lbs.    |
| VAK  | 1/2        | 26.99     | 53.2           | 28.6           | 92.1      | 123.8     | 30.2      | 8.7            | 11.1      | 22.2           | 28.6           | 22.2           | 15.1      | 10        | GRA008RRB   | S1008K     |                      |               |
| VAK  | 5/8        | 1 1/16    | 2 3/32         | 1 1/8          | 3 5/8     | 4 7/8     | 1 3/16    | 1 1/32         | 7/16      | 7/8            | 1 1/8          | 7/8            | 1 9/32    | 3/8       | GRA010RRB   | S1010K     | T-40238<br>(T-30595) | 0.454<br>1.00 |
| VAK  | 17         |           |                |                |           |           |           |                |           |                |                |                |           |           | GRAE17RRB   | SE17K      |                      |               |
| VAK  | 3/4        | 31.75     | 62.7           | 31.0           | 96.0      | 127.0     | 31.8      | 11.9           | 11.1      | 19.8           | 33.3           | 23.4           | 15.9      | 10        | GRA012RRB   | S1012K     | T-40239<br>(T-30555) | 0.563<br>1.24 |
| VAK  | 20         | 1 1/4     | 2 15/32        | 1 7/32         | 3 25/32   | 5         | 1 1/4     | 15/32          | 7/16      | 25/32          | 1 5/16         | 59/64          | 5/8       | 3/8       | GRAE20RRB   | SE20K      |                      |               |
| VAK  | 7/8        |           |                |                |           |           |           |                |           |                |                |                |           |           | GRA014RRB   | S1014K     |                      |               |
| VAK  | 15/16      | 33.34     | 68.3           | 31.0           | 104.8     | 139.7     | 35.7      | 11.9           | 11.1      | 20.6           | 38.1           | 23.4           | 17.9      | 10        | GRA015RRB   | S1015K     | T-30365              | 0.758<br>1.67 |
| VAK  | 1          | 1 5/16    | 2 11/16        | 1 7/32         | 4 1/8     | 5 1/2     | 1 13/32   | 15/32          | 7/16      | 13/16          | 1 1/2          | 59/64          | 45/64     | 3/8       | GRA100RRB   | S1100K     |                      |               |
| VAK  | 25         |           |                |                |           |           |           |                |           |                |                |                |           |           | GRAE25RRB   | SE25K      |                      |               |
| VAK  | 1 1/8      |           |                |                |           |           |           |                |           |                |                |                |           |           | GRA102RRB   | S1102K     |                      |               |
| VAK  | 1 3/16     | 39.69     | 80.2           | 35.7           | 117.5     | 157.2     | 39.7      | 13.5           | 14.3      | 23.8           | 44.1           | 27.0           | 19.9      | 12        | GRA103RRB   | S1103K     | T-40241<br>(T-30300) | 1.235<br>2.72 |
| VAK  | 1 1/4 S    | 1 9/16    | 3 5/32         | 1 13/32        | 4 5/8     | 6 3/16    | 1 9/16    | 17/32          | 9/16      | 15/16          | 1 47/64        | 1 1/16         | 25/32     | 1 1/2     | GRA103RRB2  | S1103K3    |                      |               |
| VAK  | 30         |           |                |                |           |           |           |                |           |                |                |                |           |           | GRAE30RRB   | SE30K      |                      |               |
| VAK  | 1 1/4      |           |                |                |           |           |           |                |           |                |                |                |           |           | GRA104RRB   | S1104K     |                      |               |
| VAK  | 1 3/8      | 46.04     | 92.1           | 38.9           | 130.2     | 166.7     | 45.2      | 16.7           | 14.3      | 24.6           | 54.0           | 29.4           | 22.7      | 12        | GRA106RRB   | S1106K     | T-40242<br>(T-30410) | 1.594<br>3.51 |
| VAK  | 1 7/16     | 1 13/16   | 3 3/8          | 1 17/32        | 5 1/8     | 6 9/16    | 1 25/32   | 2 1/32         | 9/16      | 3 1/32         | 2 1/8          | 1 5/32         | 57/64     | 1 1/2     | GRA107RRB   | S1107K     |                      |               |
| VAK  | 35         |           |                |                |           |           |           |                |           |                |                |                |           |           | GRAE35RRB   | SE35K      |                      |               |
| VAK  | 1 1/2      |           |                |                |           |           |           |                |           |                |                |                |           |           | GRA108RRB   | S1108KT    |                      |               |
| VAK  | 1 9/16     | 49.21     | 100.0          | 43.7           | 136.5     | 179.4     | 47.6      | 19.0           | 14.3      | 26.2           | 60.3           | 32.5           | 23.8      | 12        | GRA109RRB   | S1109KT    | T-40243<br>(T-30484) | 2.034<br>4.48 |
| VAK  | 40         | 1 15/16   | 3 15/16        | 1 23/32        | 5 3/8     | 7 1/16    | 1 7/8     | 3/4            | 9/16      | 1 1/32         | 2 3/8          | 1 9/32         | 15/16     | 1 1/2     | GRAE40RRB   | SE40K      |                      |               |
| VAK  | 1 5/8      |           |                |                |           |           |           |                |           |                |                |                |           |           | GRA110RRB   | S1110K     |                      |               |
| VAK  | 1 11/16    | 52.39     | 104.8          | 43.7           | 149.2     | 191.3     | 50.8      | 17.5           | 14.3      | 28.6           | 63.5           | 32.5           | 25.4      | 12        | GRA111RRB   | S1111K     | T-40244<br>(T-30682) | 2.261<br>4.98 |
| VAK  | 1 3/4      | 2 1/16    | 4 1/8          | 1 23/32        | 5 7/8     | 7 17/32   | 2         | 1 1/16         | 9/16      | 1 1/8          | 2 1/2          | 1 9/32         | 1         | 1 1/2     | GRA112RRB   | S1112K     |                      |               |
| VAK  | 45         |           |                |                |           |           |           |                |           |                |                |                |           |           | GRAE45RRB   | SE45K      |                      |               |
| VAK  | 1 7/8      |           |                |                |           |           |           |                |           |                |                |                |           |           | GRA114RRB   | S1114K     |                      |               |
| VAK  | 1 15/16    | 55.56     | 112.7          | 43.7           | 158.0     | 200.0     | 55.6      | 17.5           | 17.5      | 23.8           | 69.8           | 32.5           | 27.8      | 16        | GRA115RRB   | S1115K     | T-40245<br>(T-30706) | 2.774<br>6.11 |
| VAK  | 2 S        | 2 3/16    | 4 7/16         | 1 23/32        | 6 7/8     | 7 7/8     | 2 3/16    | 1 1/16         | 1 1/16    | 15/16          | 2 3/4          | 1 9/32         | 1 3/32    | 5/8       | GRA115RRB2  | S1115K2    |                      |               |
| VAK  | 50         |           |                |                |           |           |           |                |           |                |                |                |           |           | GRAE50RRB   | SE50K      |                      |               |
| VAK  | 2          |           |                |                |           |           |           |                |           |                |                |                |           |           | GRA200RRB   | S1200K     |                      |               |
| VAK  | 2 3/16     | 61.91     | 124.6          | 48.4           | 176.2     | 222.3     | 58.7      | 19.0           | 18.3      | 29.4           | 76.2           | 36.5           | 29.4      | 16        | GRA203RRB   | S1203K     | T-40246<br>(T-30738) | 3.328<br>7.33 |
| VAK  | 55         | 2 7/16    | 4 29/32        | 1 29/32        | 6 15/16   | 8 3/4     | 2 5/16    | 3/4            | 23/32     | 1 5/32         | 3              | 1 7/16         | 1 5/32    | 5/8       | GRAE55RRB   | SE55K      |                      |               |

NOTE: All units have 1/8 pipe-thread grease fitting except 1/2 – 1 15/16 and 3/4 units, which have 1/4-28 fitting.

NOTE: Shaft diameter with an S = smaller housing.

### SAK STANDARD SERIES

- The streamlined, rugged, one-piece pillow block combines an RAK housing and GYA-RRB set screw bearing.
- GYA-RRB bearing employs a positive-contact, land-riding seal and specially designed set screws.
- This pillow block can be mounted to operate in any position.
- Bearing housed units are factory-prelubricated, but a grease fitting is provided to allow for relubrication if required.

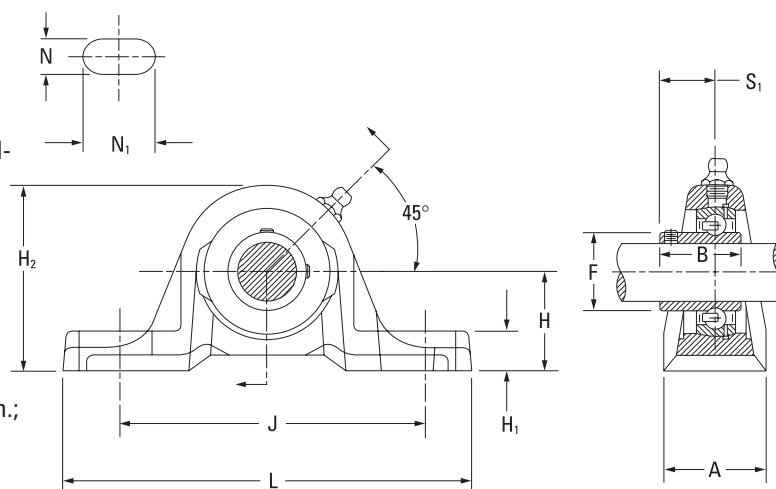
#### Suggested shaft tolerances:

1/2 in. – 1 15/16 in., nominal to -0.013 mm, -0.0005 in.;

2 in. – 2 3/16 in., nominal -0.025 mm, -0.0010 in.

#### To order, specify UNIT and SHAFT DIAMETER.

Example: SAK 1 in.



#### BEARING DATA

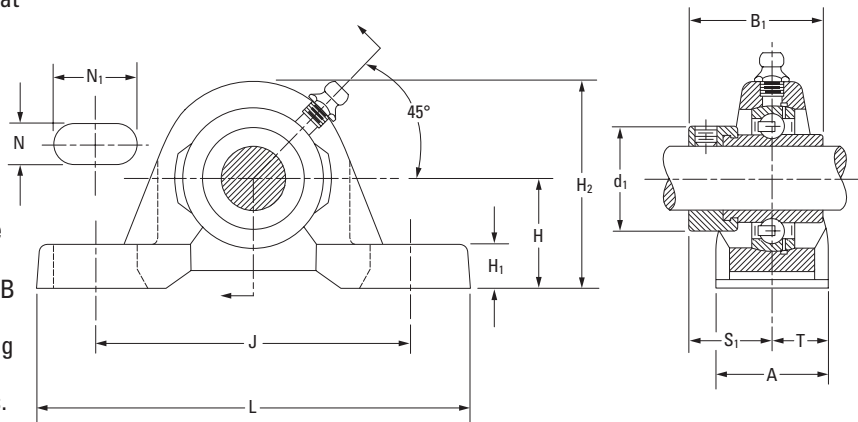
| Unit | Bearing No. | Dimensions and Load Ratings |
|------|-------------|-----------------------------|
| SAK  | GYA-RRB     | Page A-54                   |

| Unit        | Shaft Dia. | Basic Bearing No. | H       | H <sub>2</sub> | S <sub>1</sub> | J       | L       | A       | H <sub>1</sub> | N      | N <sub>1</sub> | F       | B       | Bolt Size | Bearing No. | Housing No.     | Unit Wt.  |
|-------------|------------|-------------------|---------|----------------|----------------|---------|---------|---------|----------------|--------|----------------|---------|---------|-----------|-------------|-----------------|-----------|
|             | in.        | mm                | mm      | mm             | mm             | mm      | mm      | mm      | mm             | mm     | mm             | mm      | mm      |           |             | New (Old)       | kg (lbs.) |
| SAK 1/2     |            |                   | 26.99   | 53.2           | 15.9           | 92.1    | 123.8   | 30.2    | 8.7            | 11.1   | 22.2           | 24.6    | 23.8    | 10        | GYA008RRB   |                 |           |
| SAK 5/8     |            | 203               | 1 1/16  | 2 3/32         | 5/8            | 3 5/8   | 4 7/8   | 1 3/16  | 1 1/32         | 7/16   | 7/8            | 3 1/32  | 1 5/16  | 3/8       | GYA010RRB   | T40238 (T30595) | 0.42      |
| SAK 17      |            |                   |         |                |                |         |         |         |                |        |                |         |         |           | GYAE17RRB   |                 | 0.92      |
| SAK 3/4     |            | 204               | 31.75   | 62.7           | 18.3           | 96.0    | 127     | 31.8    | 11.9           | 11.1   | 19.8           | 29.0    | 31.8    | 10        | GYA012RRB   | T40239 (T30555) | 0.57      |
| SAK 20      |            |                   | 1 1/4   | 2 15/32        | 23/32          | 3 25/32 | 5       | 1 1/4   | 15/32          | 7/16   | 25/32          | 1 9/64  | 1 1/16  | 3/8       | GYAE20RRB   |                 | 1.25      |
| SAK 7/8     |            |                   |         |                |                |         |         |         |                |        |                |         |         |           | GYA014RRB   |                 |           |
| SAK 15/16   |            | 205               | 33.34   | 68             | 19.4           | 104.8   | 139.7   | 35.7    | 11.9           | 11.1   | 20.6           | 33.7    | 34.9    | 10        | GYA015RRB   | T30365          | 0.76      |
| SAK 1       |            |                   | 1 5/16  | 2 11/16        | 49/64          | 4 1/8   | 5 1/2   | 1 13/32 | 15/32          | 7/16   | 13/16          | 1 21/64 | 1 7/64  | 3/8       | GYA100RRB   |                 | 1.67      |
| SAK 25      |            |                   |         |                |                |         |         |         |                |        |                |         |         |           | GYAE25RRB   |                 |           |
| SAK 1 1/8   |            | 206               | 39.69   | 80.2           | 23.0           | 117.5   | 157.2   | 39.7    | 13.5           | 14.3   | 23.8           | 40.1    | 32.5    | 12        | GYA102RRB   |                 |           |
| SAK 1 3/16  |            |                   | 1 9/16  | 3 3/32         | 29/32          | 4 5/8   | 6 3/16  | 1 9/16  | 1 1/32         | 9/16   | 15/16          | 1 37/64 | 1 9/32  | 1 1/2     | GYA103RRB   | T40241 (T30300) | 1.14      |
| SAK 1 1/4 S |            |                   |         |                |                |         |         |         |                |        |                |         |         |           | GYA103RRB2  |                 | 2.52      |
| SAK 30      |            |                   |         |                |                |         |         |         |                |        |                |         |         |           | GYAE30RRB   |                 |           |
| SAK 1 1/4   |            | 207               | 46.04   | 92.1           | 25.8           | 130.2   | 166.7   | 45.2    | 16.7           | 14.3   | 24.6           | 46.8    | 36.5    | 12        | GYA104RRB   |                 |           |
| SAK 1 3/8   |            |                   | 1 13/16 | 3 5/8          | 1 1/64         | 5 1/8   | 6 9/16  | 1 25/32 | 2 1/32         | 9/16   | 3 1/32         | 1 70/63 | 1 7/16  | 1 1/2     | GYA106RRB   | T40242 (T30410) | 1.52      |
| SAK 1 7/16  |            |                   |         |                |                |         |         |         |                |        |                |         |         |           | GYA107RRB   |                 | 3.35      |
| SAK 35      |            |                   |         |                |                |         |         |         |                |        |                |         |         |           | GYAE35RRB   |                 |           |
| SAK 1 1/2   |            | 208               | 49.21   | 100.0          | 27.8           | 136.5   | 179.4   | 47.6    | 19.1           | 14.3   | 26.2           | 52.4    | 39.3    | 12        | GYA108RRB   | T40243 (T30484) | 1.85      |
| SAK 40      |            |                   | 1 15/16 | 3 15/16        | 1 3/32         | 5 3/8   | 7 1/16  | 1 7/8   | 3/4            | 9/16   | 1 1/32         | 2 1/16  | 1 35/64 | 1 1/2     | GYAE40RRB   |                 | 4.08      |
| SAK 1 5/8   |            | 209               | 52.39   | 104.8          | 28.6           | 149.2   | 191.3   | 50.8    | 17.5           | 14.3   | 28.6           | 57.9    | 42.1    | 12        | GYA110RRB   |                 |           |
| SAK 1 11/16 |            |                   | 2 1/16  | 4 1/8          | 1 1/8          | 5 7/8   | 7 17/32 | 2       | 1 1/16         | 9/16   | 1 1/8          | 2 9/32  | 1 21/32 | 1 1/2     | GYA111RRB   | T40244 (T30682) | 2.06      |
| SAK 1 3/4   |            |                   |         |                |                |         |         |         |                |        |                |         |         |           | GYA112RRB   |                 | 4.55      |
| SAK 45      |            |                   |         |                |                |         |         |         |                |        |                |         |         |           | GYAE45RRB   |                 |           |
| SAK 1 15/16 |            | 210               | 55.56   | 112.7          | 31.0           | 158.0   | 200.2   | 55.6    | 17.5           | 17.5   | 23.8           | 62.7    | 44.5    | 16        | GYA115RRB   |                 |           |
| SAK 2S      |            |                   | 2 3/16  | 4 7/16         | 1 7/32         | 6 7/32  | 7 7/8   | 2 3/16  | 1 1/16         | 1 1/16 | 15/16          | 2 15/32 | 1 3/4   | 5/8       | GYA115RRB2  | T40245 (T30706) | 2.54      |
| SAK 50      |            |                   |         |                |                |         |         |         |                |        |                |         |         |           | GYAE50RRB   |                 | 5.60      |
| SAK 2       |            | 211               | 61.91   | 124.6          | 31.8           | 176.2   | 222.3   | 58.7    | 19.1           | 18.3   | 29.4           | 69.9    | 46.4    | 16        | GYA200RRB   |                 |           |
| SAK 2 3/16  |            |                   | 2 7/16  | 4 29/32        | 1 1/4          | 6 15/16 | 8 3/4   | 2 5/16  | 3/4            | 23/32  | 1 5/32         | 2 3/4   | 1 53/64 | 5/8       | GYA203RRB   | T40246 (T30738) | 3.02      |
| SAK 55      |            |                   |         |                |                |         |         |         |                |        |                |         |         |           | GYAE55RRB   |                 | 6.66      |

NOTE: All units have a 1/8 pipe-thread grease fitting except 1/2 – 1 1/16 and 3/4 units which have 1/4-28 fitting.

### RAS, TAS, LAS INDUSTRIAL SERIES

- Heavier than our standard block with solid, flat feet for increased strength.
- Timken RAS, TAS and LAS pillow blocks are similar in design and equal in load-carrying capacity to the RAK, TAK and LAK types.
- RAS, TAS and LAS types have a slightly higher base-to-center height dimension than the RAK, TAK and LAK types, making them interchangeable with other competitive designs.
- The RAS pillow block is equipped with G-KRRB (R-seal) wide-inner-ring ball bearings, the TAS with G-KPPB (tri-ply seal) wide-inner-ring ball bearings, and the LAS with the G-KLLB (Mechani-seal) wide-inner-ring ball bearings.
- Contact your Timken engineer to discuss highly corrosive applications (food processing, chemical exposure) where Timken thin-dense chrome-coated bearings can be utilized.



#### Suggested shaft tolerances:

1/2 in. – 1 15/16 in., nominal to -0.013 mm, -0.0005 in.;  
2 in. – 2 15/16 in., nominal to -0.025 mm, -0.0010 in.

#### To order, specify UNIT and SHAFT DIAMETER.

Example: RAS 1 3/16 in.

#### BEARING DATA

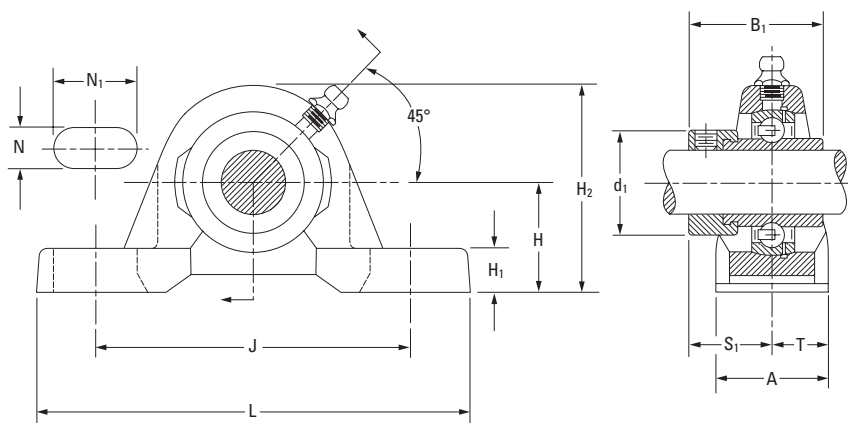
| Unit | Bearing No. | Dimensions and Load Ratings |
|------|-------------|-----------------------------|
| RAS  | G-KRRB      | Page A-34                   |
| TAS  | G-KPPB      | Page A-39                   |
| LAS  | G-KLLB      | Page A-37                   |

| Unit        | Shaft Dia. | H       | H <sub>2</sub> | B <sub>1</sub> | J       | L      | A       | H <sub>1</sub> | N    | N <sub>1</sub> | d <sub>1</sub> | S <sub>1</sub> | T      | Bolt Size | Bearing No. <sup>(1)</sup> | Collar No. | Housing No. | Unit Wt. |
|-------------|------------|---------|----------------|----------------|---------|--------|---------|----------------|------|----------------|----------------|----------------|--------|-----------|----------------------------|------------|-------------|----------|
|             | in.        | mm      | mm             | mm             | mm      | mm     | mm      | mm             | mm   | mm             | mm             | mm             | mm     | mm        | RAS (TAS)                  |            | New (Old)   | kg lbs.  |
| RAS         | 1/2        |         |                |                |         |        |         |                |      |                |                |                |        |           | G1008KRRB                  | S1008K     |             |          |
| RAS         | 5/8        | 30.16   | 56.4           | 37.3           | 92.1    | 123.8  | 30.2    | 11.9           | 11.1 | 22.2           | 28.6           | 23.4           | 15.1   | 10        | G1010KRRB                  | S1010K     | T-40238     | 0.454    |
| RAS         | 11/16      | 1 3/16  | 2 7/32         | 1 15/32        | 3 5/8   | 4 7/8  | 1 3/16  | 1 5/32         | 7/16 | 7/8            | 1 1/8          | 59/64          | 19/32  | 3/8       | G1011KRRB                  | S1011K     | (T-30595)   | 1.00     |
| RAS         | 1 1/8      | 17      |                |                |         |        |         |                |      |                |                |                |        |           | GE17KRRB                   | SE17K      |             |          |
| RAS         | 3/4        | 33.34   | 65.9           | 43.7           | 96.4    | 127.0  | 33.3    | 15.1           | 11.1 | 20.2           | 33.3           | 26.6           | 16.7   | 10        | G1012KRRB                  | S1012K     |             |          |
| RAS         | 20         | 1 5/16  | 2 19/32        | 1 23/32        | 3 51/64 | 5      | 1 5/16  | 1 9/32         | 7/16 | 51/64          | 1 5/16         | 1 3/64         | 21/32  | 3/8       | GE20KRRB                   | SE20K      | M96830      | 0.730    |
| RAS,TAS     | 7/8        |         |                |                |         |        |         |                |      |                |                |                |        |           | G1014KRRB (KPPB3)          | S1014K     |             |          |
| RAS,TAS     | 15/16      | 36.51   | 73.0           | 44.4           | 104.8   | 139.7  | 37.3    | 15.1           | 11.1 | 20.6           | 38.1           | 27.0           | 18.7   | 10        | G1015KRRB (KPPB3)          | S1015K     |             | 1.610    |
| RAS,TAS,LAS | 1          | 1 7/16  | 2 7/8          | 1 3/4          | 4 1/8   | 5 1/2  | 1 15/32 | 1 9/32         | 7/16 | 13/16          | 1 1/2          | 1 1/16         | 47/64  | 3/8       | G1100KRRB (KPPB3)          | S1100K     | M96833      | 0.95     |
| RAS,TAS     | 25         |         |                |                |         |        |         |                |      |                |                |                |        |           | GE25KRRB (KPPB3)           | SE25K      |             | 2.10     |
| RAS,TAS     | 1 1/16     |         |                |                |         |        |         |                |      |                |                |                |        |           | G1101KRRB (KPPB3)          | S1101K     |             |          |
| RAS,TAS     | 1 1/8      | 42.86   | 84.9           | 48.4           | 117.5   | 157.2  | 42.9    | 16.7           | 14.3 | 23.8           | 44.1           | 30.1           | 21.4   | 12        | G1102KRRB (KPPB3)          | S1102K     |             | 1.420    |
| RAS,TAS,LAS | 1 3/16     | 1 11/16 | 3 11/32        | 1 29/32        | 4 5/8   | 6 3/16 | 1 11/16 | 21/32          | 9/16 | 15/16          | 1 47/64        | 1 3/16         | 27/32  | 1/2       | G1103KRRB (KPPB3)          | S1103K     | M96836      | 3.14     |
| RAS,TAS     | 30         |         |                |                |         |        |         |                |      |                |                |                |        |           | GE30KRRB (KPPB3)           | SE30K      |             |          |
| RAS,TAS     | 1 1/4      |         |                |                |         |        |         |                |      |                |                |                |        |           | G1104KRRB (KPPB2)          | S1104K     |             |          |
| RAS,TAS     | 1 5/16     |         |                |                |         |        |         |                |      |                |                |                |        |           | G1105KRRB (KPPB2)          | S1105K     |             |          |
| RAS,TAS     | 1 3/8      | 47.63   | 95.3           | 51.2           | 130.2   | 166.7  | 46.8    | 18.3           | 14.3 | 24.6           | 54.0           | 32.5           | 23.4   | 12        | G1106KRRB (KPPB2)          | S1106K     | M96839      | 1.890    |
| RAS,TAS,LAS | 1 7/16     | 1 7/8   | 3 3/4          | 2 1/64         | 5 1/8   | 6 9/16 | 1 27/32 | 23/32          | 9/16 | 31/32          | 2 1/8          | 1 9/32         | 59/64  | 1/2       | G1107KRRB (KPPB2)          | S1107K     |             | 4.18     |
| RAS,TAS     | 35         |         |                |                |         |        |         |                |      |                |                |                |        |           | GE35KRRB (KPPB2)           | SE35K      |             |          |
| RAS,TAS     | 1 1/2      |         |                |                |         |        |         |                |      |                |                |                |        |           | G1108KRRB (KPPB3)          | S1108KT    |             |          |
| RAS,TAS     | 1 9/16     | 49.21   | 101.6          | 56.4           | 136.5   | 179.4  | 51.6    | 19.1           | 14.3 | 26.2           | 60.3           | 34.9           | 25.8   | 12        | G1109KRRB (KPPB3)          | S1109KT    |             | 2.490    |
| RAS,TAS     | 40         | 1 15/16 | 4              | 2 7/32         | 5 3/8   | 7 1/16 | 2 1/32  | 3/4            | 9/16 | 1 1/32         | 3/8            | 1 3/8          | 1 1/64 | 1/2       | GE40KRRB (KPPB3)           | SE40K      | M96842      | 5.50     |

<sup>(1)</sup>Bearing number for RAS is G-KRRB. TAS uses G-KPPB. LAS uses G-KLLB.

NOTE: All units have 1/8 pipe-thread grease fitting except 1/2 – 1 1/16 and 3/4 units, which have 1/4-28 fitting.

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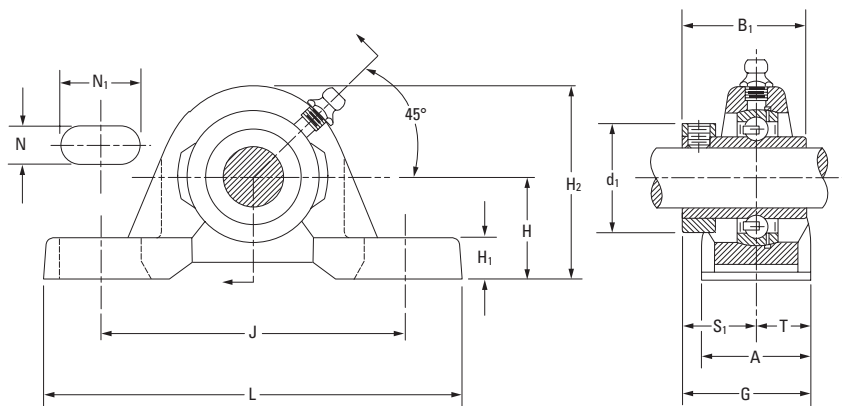
| Unit        | Shaft Dia. | H         | H <sub>2</sub> | B <sub>1</sub> | J         | L         | A         | H <sub>1</sub> | N         | N <sub>1</sub> | d <sub>1</sub> | S <sub>1</sub> | T         | Bolt Size | Bearing No. <sup>(1)</sup> | Collar No. | Housing No. | Unit Wt. |
|-------------|------------|-----------|----------------|----------------|-----------|-----------|-----------|----------------|-----------|----------------|----------------|----------------|-----------|-----------|----------------------------|------------|-------------|----------|
|             | in.<br>mm  | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in.      | mm<br>in. | mm<br>in. | RAS (TAS)                  |            | New (Old)   | kg lbs.  |
| RAS,TAS     | 1 5/8      |           |                |                |           |           |           |                |           |                |                |                |           |           | G1110KRRB (KPPB4)          | S1110K     |             |          |
| RAS,TAS     | 1 11/16    | 53.98     | 106.4          | 56.4           | 149.2     | 191.3     | 52.4      | 19.1           | 14.3      | 28.6           | 63.5           | 34.9           | 26.2      | 12        | G1111KRRB (KPPB4)          | S1111K     | M96844      | 3.200    |
| RAS,TAS     | 1 3/4      | 2 1/8     | 4 3/16         | 2 7/32         | 5 7/8     | 7 17/32   | 2 1/16    | 3/4            | 9/16      | 1 1/8          | 2 1/2          | 1 3/8          | 1 1/32    | 1/2       | G1112KRRB (KPPB4)          | S1112K     |             | 7.06     |
| RAS,TAS     | 45         |           |                |                |           |           |           |                |           |                |                |                |           |           | GE45KRRB (KPPB4)           | SE45K      |             |          |
| RAS,TAS     | 1 7/8      |           |                |                |           |           |           |                |           |                |                |                |           |           | G1114KRRB (KPPB3)          | S1114K     |             |          |
| RAS,TAS,LAS | 1 15/16    | 57.15     | 114.3          | 62.7           | 158.0     | 200.0     | 57.9      | 19.1           | 18.3      | 25.4           | 69.9           | 38.1           | 29.0      | 16        | G1115KRRB (KPPB3)          | S1115K     | M96847      | 4.010    |
| RAS,TAS     | 50         | 2 1/4     | 4 1/2          | 2 15/32        | 6 7/32    | 7 7/8     | 2 9/32    | 3/4            | 23/32     | 1              | 2 3/4          | 1 1/2          | 1 9/64    | 5/8       | GE50KRRB (KPPB3)           | SE50K      |             | 8.86     |
| RAS,TAS     | 2          |           |                |                |           |           |           |                |           |                |                |                |           |           | G1200KRRB (KPPB4)          | S1200K     |             |          |
| RAS,TAS     | 2 1/8      | 63.50     | 127.8          | 71.4           | 176.2     | 222.3     | 60.3      | 20.6           | 18.3      | 29.4           | 76.2           | 43.7           | 30.2      | 16        | G1202KRRB (KPPB4)          | S1202K     | M96850      | 3.901    |
| RAS,TAS     | 2 3/16     | 2 1/2     | 5 1/32         | 2 13/16        | 6 15/16   | 8 3/4     | 2 3/8     | 13/16          | 23/32     | 1 5/32         | 3              | 1 23/32        | 1 3/16    | 5/8       | G1203KRRB (KPPB4)          | S1203K     |             | 8.60     |
| RAS,TAS     | 55         |           |                |                |           |           |           |                |           |                |                |                |           |           | GE55KRRB (KPPB4)           | SE55K      |             |          |
| RAS         | 2 1/4      |           |                |                |           |           |           |                |           |                |                |                |           |           | G1204KRRB                  | S1204K     |             |          |
| RAS         | 2 3/8      | 69.85     | 138.9          | 77.8           | 188.1     | 239.7     | 60.3      | 23.8           | 18.3      | 29.4           | 84.1           | 46.8           | 30.2      | 16        | G1206KRRB                  | S1206K     | M99647      | 5.511    |
| RAS,LAS     | 2 7/16     | 2 3/4     | 5 15/32        | 3 1/16         | 7 13/32   | 9 7/16    | 2 3/8     | 15/16          | 23/32     | 1 5/32         | 3 5/16         | 1 27/32        | 1 3/16    | 5/8       | G1207KRRB                  | S1207K     |             | 12.15    |
| RAS         | 60         |           |                |                |           |           |           |                |           |                |                |                |           |           | GE60KRRB                   | SE60K      |             |          |
| RAS         | 2 15/16    | 82.55     | 164.3          | 92.1           | 215.9     | 269.9     | 69.9      | 25.4           | 22.2      | 31.8           | 101.6          | 54.8           | 34.9      | 20        | G1215KRRB                  | S1215K     | T-23423     | 9.026    |
| RAS         | 75         | 3 1/4     | 6 15/32        | 3 5/8          | 8 1/2     | 10 5/8    | 2 3/4     | 1              | 7/8       | 1 1/4          | 4              | 2 5/32         | 1 3/8     | 3/4       | GE75KRRB                   | SE75K      |             | 19.90    |

<sup>(1)</sup>Bearing number for RAS is G-KRRB. TAS uses G-KPPB. LAS uses G-KLLB.

NOTE: All units have 1/8 pipe-thread grease fitting except 1/2 - 1 1/16 and 3/4 units, which have 1/4-28 fitting.

### RASC INDUSTRIAL-SERIES CONCENTRIC COLLAR

- Heavier than our standard block with solid, flat feet for increased strength.
- All RASC pillow blocks are equipped with GC-KRRB (R-seal) wide-inner-ring ball bearings with concentric collars.
- Pillow blocks self-align at mounting with the spherical outside diameter of the bearing fitting into a corresponding spherical housing seat.
- Units are prelubricated and ready for immediate installation.
- Grease fitting provides for relubrication if required.
- Concentric collars are supplied with all units.



#### Suggested shaft tolerances:

- 1/2 in. – 1 15/16 in., nominal to -0.013 mm, -0.0005 in.;
- 2 in. – 2 15/16 in., nominal to -0.025 mm, -0.0010 in.

#### To order, specify UNIT and SHAFT DIAMETER.

Example: RASC 1 in.

#### BEARING DATA

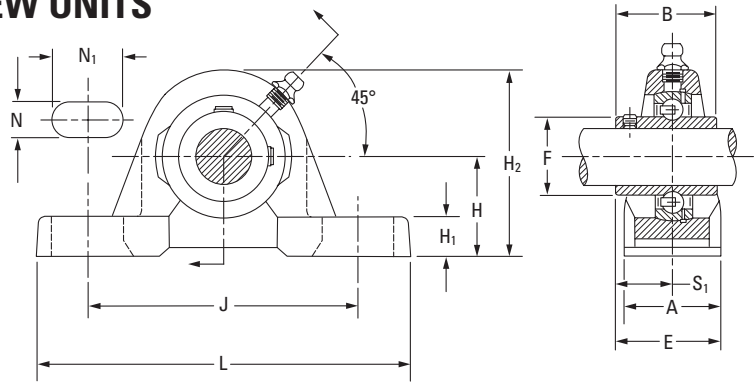
| Unit | Bearing No. | Dimensions and Load Ratings |
|------|-------------|-----------------------------|
| RASC | GC-KRRB     | Page A-40                   |

| Unit | Shaft Dia. | H                | H <sub>2</sub>   | B <sub>1</sub>  | J                | L                | A               | H <sub>1</sub> | N             | N <sub>1</sub> | d <sub>1</sub>  | S <sub>1</sub>  | T               | G                | Bolt Size | Bearing No.                             | Collar No. | Housing No.          | Unit Wt.       |
|------|------------|------------------|------------------|-----------------|------------------|------------------|-----------------|----------------|---------------|----------------|-----------------|-----------------|-----------------|------------------|-----------|-----------------------------------------|------------|----------------------|----------------|
|      | in.        | mm<br>in.        | mm<br>in.        | mm<br>in.       | mm<br>in.        | mm<br>in.        | mm<br>in.       | mm<br>in.      | mm<br>in.     | mm<br>in.      | mm<br>in.       | mm<br>in.       | mm<br>in.       | mm<br>in.        | mm<br>in. |                                         |            | New<br>(Old)         | kg<br>lbs.     |
| RASC | 5/8        | 30.16<br>1 3/16  | 56.4<br>2 1/2    | 26.6<br>1 3/4   | 92.1<br>3 5/8    | 123.8<br>4 7/8   | 30.2<br>1 3/16  | 11.9<br>15/32  | 11.1<br>7/16  | 22.2<br>7/8    | 34.1<br>1 11/32 | 15.5<br>39/64   | 15.08<br>19/32  | 30.53<br>1 13/64 | 10<br>3/8 | GC1010KRRB                              | C203       | T-40238<br>(T-30595) | 0.454<br>1.00  |
| RASC | 3/4        | 33.34<br>1 5/16  | 65.9<br>2 1/2    | 31.0<br>1 1/4   | 96.0<br>25/32    | 127.0<br>5       | 33.3<br>5/16    | 15.1<br>19/32  | 11.1<br>7/16  | 19.8<br>25/32  | 38.1<br>1 1/2   | 18.7<br>47/64   | 16.70<br>21/32  | 35.32<br>1 25/64 | 10<br>3/8 | GC1012KRRB                              | C204       | M96830               | 0.635<br>1.40  |
| RASC | 1          | 36.51<br>1 7/16  | 73.0<br>2 7/8    | 34.1<br>1 11/32 | 104.8<br>4 1/8   | 139.7<br>5 1/2   | 37.3<br>1 15/32 | 15.1<br>19/32  | 11.1<br>7/16  | 20.2<br>13/16  | 44.4<br>1 3/4   | 20.2<br>51/64   | 18.70<br>47/64  | 38.89<br>1 17/32 | 10<br>3/8 | GC1100KRRB                              | C205       | M96833               | 0.803<br>1.77  |
| RASC | 1 1/8      | 42.86<br>1 11/16 | 84.9<br>3 11/32  | 37.3<br>1 15/32 | 117.5<br>4 5/8   | 157.2<br>6 3/16  | 42.9<br>1 11/16 | 16.7<br>21/32  | 14.3<br>9/16  | 23.8<br>15/16  | 52.4<br>2 1/16  | 22.6<br>57/64   | 21.40<br>27/32  | 44.05<br>1 47/64 | 12<br>1/2 | GC1102KRRB<br>GC1103KRRB<br>GC1103KRRB3 | C206       | M96836               | 1.297<br>2.86  |
| RASC | 1 1/4      | 47.62<br>1 7/8   | 95.3<br>3 3/4    | 41.3<br>1 5/8   | 130.2<br>5 1/8   | 166.7<br>6 9/16  | 46.8<br>1 27/32 | 18.3<br>23/32  | 14.3<br>9/16  | 24.6<br>31/32  | 59.5<br>2 11/32 | 25.4<br>1       | 23.40<br>59/64  | 48.81<br>1 59/64 | 12<br>1/2 | GC1104KRRB<br>GC1106KRRB<br>GC1107KRRB  | C207       | M96839               | 1.674<br>3.69  |
| RASC | 1 1/2      | 49.21<br>1 15/16 | 101.6<br>4       | 44.1<br>1 47/64 | 136.5<br>5 3/8   | 179.4<br>7 1/16  | 51.6<br>2 1/32  | 19.1<br>3/4    | 14.3<br>9/16  | 26.2<br>1 1/32 | 68.3<br>2 11/16 | 27.4<br>1 5/64  | 25.80<br>1 1/64 | 53.16<br>2 15/16 | 12<br>1/2 | GC1108KRRB                              | C208       | M96842               | 2.150<br>4.74  |
| RASC | 1 11/16    | 53.98<br>2 1/8   | 106.4<br>4 3/16  | 46.8<br>1 27/32 | 149.2<br>5 7/8   | 191.3<br>7 17/32 | 52.4<br>2 1/16  | 19.1<br>3/4    | 14.3<br>9/16  | 23.0<br>29/32  | 73.0<br>2 7/8   | 29.4<br>1 5/32  | 26.20<br>1 1/32 | 55.55<br>2 3/16  | 12<br>1/2 | GC1111KRRB<br>GC1112KRRB                | C209       | M96844               | 2.409<br>5.31  |
| RASC | 1 15/16    | 57.15<br>2 1/4   | 114.3<br>4 1/2   | 48.4<br>1 29/32 | 158.0<br>6 7/32  | 200.0<br>7 7/8   | 57.9<br>2 9/32  | 19.1<br>3/4    | 17.5<br>11/16 | 23.8<br>15/16  | 79.4<br>3 1/8   | 30.2<br>1 3/16  | 29.00<br>1 9/64 | 59.13<br>2 21/64 | 16<br>5/8 | GC1115KRRB                              | C210       | M96847               | 3.003<br>6.62  |
| RASC | 2          | 63.50<br>2 1/2   | 127.8<br>5 1/32  | 54.0<br>2 1/8   | 176.2<br>6 15/16 | 222.3<br>8 3/4   | 60.3<br>2 3/8   | 20.6<br>13/16  | 18.3<br>23/32 | 29.4<br>1 5/32 | 88.9<br>3 1/2   | 33.3<br>1 5/16  | 30.20<br>1 3/16 | 62.70<br>2 15/32 | 16<br>5/8 | GC1200KRRB<br>GC1203KRRG                | C211       | M96850               | 3.901<br>8.60  |
| RASC | 2 7/16     | 69.85<br>2 3/4   | 138.9<br>5 15/32 | 60.3<br>2 3/8   | 188.1<br>7 13/32 | 239.7<br>9 7/16  | 60.3<br>2 3/8   | 23.8<br>15/16  | 18.3<br>23/32 | 29.4<br>1 5/32 | 95.2<br>3 3/4   | 37.3<br>1 15/32 | 30.20<br>1 3/16 | 67.46<br>2 21/32 | 16<br>5/8 | GC1207KRRB                              | C212       | M99647               | 5.511<br>12.15 |
| RASC | 2 15/16    | 82.55<br>3 1/4   | 164.3<br>6 15/32 | 70.6<br>2 25/32 | 215.9<br>8 1/2   | 269.9<br>10 5/8  | 69.9<br>2 3/4   | 25.4<br>1      | 22.2<br>7/8   | 31.8<br>1 1/4  | 114.3<br>4 1/2  | 43.7<br>1 23/32 | 34.90<br>1 3/8  | 78.60<br>3 3/32  | 20<br>3/4 | GC1215KRRB                              | C215       | T 23423              | 9.060<br>19.91 |

NOTE: All units have 1/8 pipe-thread grease fitting except RASC 1/2 – 1 11/16 and 3/4 units, which have 1/4-28 fitting.

### YAS INDUSTRIAL-SERIES SET SCREW UNITS

- Incorporates Shaft Guarding Technology, which reduces replacement time, provides shaft protection and prolongs the life of the shaft.
- Heavier than our standard block with solid, flat feet for increased strength.
- Timken YAS-series high-base, set screw pillow blocks feature the GY-KRRB bearing.
- This full-width inner ring set screw is well-suited for industrial applications involving wet or dirty environments.
- Housing is designed for two-bolt mounting in any position.
- Contact your Timken engineer to discuss highly corrosive applications (food processing, chemical exposure) where Timken thin-dense chrome-coated bearings can be utilized.



#### Suggested shaft tolerances:

- 1/2 in. – 1 15/16 in., nominal to -0.013 mm, -0.0005 in.;  
2 in. – 2 15/16 in., nominal to -0.025 mm, -0.0010 in.

#### To order, specify UNIT and SHAFT DIAMETER.

Example: YAS 1 7/16 in.

#### BEARING DATA

| Unit | Bearing No. | Dimensions and Load Ratings |
|------|-------------|-----------------------------|
| YAS  | GY-KRRB     | Page A-44                   |

| Unit | Shaft Dia.  | H         | H <sub>2</sub> | B         | L         | J         | A         | H <sub>1</sub> | N         | N <sub>1</sub> | F         | S <sub>1</sub> | E         | Bolt Size | Bearing No.     | Housing No. | Unit Wt.   |
|------|-------------|-----------|----------------|-----------|-----------|-----------|-----------|----------------|-----------|----------------|-----------|----------------|-----------|-----------|-----------------|-------------|------------|
|      | in.<br>mm   | mm<br>in. | mm<br>in.      | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in. | mm<br>in.      | mm<br>in. | mm<br>in.      | mm<br>in. | mm<br>in. |                 |             | kg<br>lbs. |
| YAS  | 1/2         | 30.16     | 56.4           | 27.4      | 123.8     | 92.1      | 30.2      | 11.9           | 11.1      | 22.2           | 22.9      | 15.9           | 31.0      | 10        | GY1008KRRB      |             | 0.4536     |
| YAS  | 5/8         | 1 3/16    | 2 7/32         | 1 5/64    | 4 7/8     | 3 5/8     | 1 3/16    | 1 5/32         | 7/16      | 7/8            | 0.900     | 5/8            | 1 7/32    | 3/8       | GY1010KRRB      | T40238      | 1.0000     |
| YAS  | 17          |           |                |           |           |           |           |                |           |                |           |                |           |           | GYE17KRRB       |             |            |
| YAS  | 3/4 SGT     | 33.34     | 65.9           | 31.8      | 127.0     | 96.4      | 33.3      | 15.1           | 11.1      | 20.2           | 27.6      | 19.1           | 35.7      | 10        | GY1012KRRB SGT  |             | 0.7027     |
| YAS  | 20 SGT      | 1 5/16    | 2 19/32        | 1 1/4     | 5         | 3 51/64   | 1 5/16    | 1 9/32         | 7/16      | 51/64          | 1.085     | 3/4            | 1 13/32   | 3/8       | GYE20KRRB SGT   | M96830      | 1.5491     |
| YAS  | 7/8 SGT     |           |                |           |           |           |           |                |           |                |           |                |           |           | GY1014KRRB SGT  |             |            |
| YAS  | 1 5/16 SGT  | 36.51     | 73.0           | 34.9      | 139.7     | 104.8     | 37.3      | 15.1           | 11.1      | 20.6           | 33.8      | 20.6           | 39.3      | 10        | GY1015KRRB SGT  |             | 0.9535     |
| YAS  | 1 SGT       | 1 7/16    | 2 7/8          | 1 3/8     | 5 1/2     | 4 1/8     | 1 15/32   | 1 9/32         | 7/16      | 13/16          | 1.332     | 13/16          | 1 35/64   | 3/8       | GY1100KRRB SGT  | M96833      | 2.1022     |
| YAS  | 25 SGT      |           |                |           |           |           |           |                |           |                |           |                |           |           | GYE25KRRB SGT   |             |            |
| YAS  | 1 1/8 SGT   |           |                |           |           |           |           |                |           |                |           |                |           |           | GY1102KRRB SGT  |             |            |
| YAS  | 1 3/16 SGT  | 42.86     | 84.9           | 39.3      | 157.2     | 117.5     | 42.9      | 16.7           | 14.3      | 23.8           | 40.3      | 23.4           | 44.8      | 12        | GY1103KRRB SGT  |             | 1.4275     |
| YAS  | 1 1/4 S     | 1 11/16   | 3 11/32        | 1 35/64   | 6 3/16    | 4 5/8     | 1 11/16   | 2 1/32         | 9/16      | 15/16          | 1.587     | 59/64          | 1 49/64   | 1/2       | GY1103KRRB3 SGT | M96836      | 3.1472     |
| YAS  | 30 SGT      |           |                |           |           |           |           |                |           |                |           |                |           |           | GYE30KRRB SGT   |             |            |
| YAS  | 1 1/4 SGT   |           |                |           |           |           |           |                |           |                |           |                |           |           | GY1104KRRB SGT  |             |            |
| YAS  | 1 3/8 SGT   | 47.63     | 95.3           | 45.2      | 166.7     | 130.2     | 46.8      | 18.3           | 14.3      | 24.6           | 46.8      | 28.2           | 51.6      | 12        | GY1106KRRB SGT  |             | 1.8981     |
| YAS  | 1 7/16 SGT  | 1 7/8     | 3 3/4          | 1 25/32   | 6 9/16    | 5 1/8     | 1 27/32   | 23/32          | 9/16      | 31/32          | 1.844     | 1 7/64         | 2 1/32    | 1/2       | GY1107KRRB SGT  | M96839      | 4.1847     |
| YAS  | 35 SGT      |           |                |           |           |           |           |                |           |                |           |                |           |           | GYE35KRRB SGT   |             |            |
| YAS  | 1 1/2 SGT   | 49.21     | 101.6          | 49.2      | 179.4     | 136.5     | 51.6      | 19.1           | 14.3      | 26.2           | 52.3      | 30.2           | 56.0      | 12        | GY1108KRRB SGT  |             | 2.4763     |
| YAS  | 40 SGT      | 1 15/16   | 4              | 1 15/16   | 7 1/16    | 5 3/8     | 2 1/32    | 3/4            | 9/16      | 1 1/32         | 2.058     | 1 3/16         | 2 13/34   | 1/2       | GYE40KRRB SGT   | M96842      | 5.4592     |
| YAS  | 1 5/8 SGT   |           |                |           |           |           |           |                |           |                |           |                |           |           | GY1110KRRB SGT  |             |            |
| YAS  | 1 11/16 SGT | 53.98     | 106.4          | 50.4      | 191.3     | 149.2     | 52.4      | 19.1           | 14.3      | 28.6           | 57.9      | 31.4           | 57.5      | 12        | GY1111KRRB SGT  |             | 2.681      |
| YAS  | 1 3/4 SGT   | 2 1/8     | 4 3/16         | 1 63/64   | 7 17/32   | 5 7/8     | 2 1/16    | 3/4            | 9/16      | 1 1/8          | 2.280     | 1 15/64        | 2 17/64   | 1/2       | GY1112KRRB SGT  | M96844      | 5.9107     |
| YAS  | 45 SGT      |           |                |           |           |           |           |                |           |                |           |                |           |           | GYE45KRRB SGT   |             |            |
| YAS  | 1 15/16 SGT |           |                |           |           |           |           |                |           |                |           |                |           |           | GY1115KRRB SGT  |             |            |
| YAS  | 2S          | 57.15     | 114.3          | 51.6      | 200.2     | 158.0     | 57.9      | 19.1           | 18.3      | 25.4           | 62.8      | 32.5           | 61.5      | 16        | GY1115KRRB2     |             | 3.3136     |
| YAS  | 50 SGT      | 2 1/4     | 4 1/2          | 2 1/32    | 7 7/8     | 6 7/32    | 2 9/32    | 3/4            | 23/32     | 1              | 2.474     | 1 9/32         | 2 27/64   | 5/8       | GYE50KRRB SGT   | M96847      | 7.3053     |
| YAS  | 2 SGT       |           |                |           |           |           |           |                |           |                |           |                |           |           | GY1200KRRB SGT  |             |            |
| YAS  | 2 3/16 SGT  | 63.50     | 127.8          | 55.6      | 222.3     | 176.2     | 60.3      | 20.6           | 18.3      | 29.4           | 69.8      | 33.3           | 61.9      | 16        | GY1203KRRB SGT  |             | 3.9009     |
| YAS  | 55 SGT      | 2 1/2     | 5 1/32         | 2 3/16    | 8 3/4     | 6 15/16   | 2 3/8     | 13/16          | 23/32     | 1 5/32         | 2.747     | 1 5/16         | 2 7/16    | 5/8       | GYE55KRRB SGT   | M96850      | 8.6000     |
| YAS  | 2 1/4 SGT   |           |                |           |           |           |           |                |           |                |           |                |           |           | GY1204KRRB SGT  |             |            |
| YAS  | 2 7/16 SGT  | 69.85     | 138.9          | 65.1      | 239.7     | 188.1     | 60.3      | 23.8           | 18.3      | 29.4           | 76.5      | 39.7           | 69.9      | 16        | GY1207KRRB SGT  |             | 4.7718     |
| YAS  | 60 SGT      | 2 3/4     | 5 15/32        | 2 9/16    | 9 7/16    | 7 13/32   | 2 3/8     | 15/16          | 23/32     | 1 5/32         | 3.011     | 1 9/16         | 2 3/4     | 5/8       | GYE60KRRB SGT   | M99647      | 10.5200    |
| YAS  | 2 15/16     |           |                |           |           |           |           |                |           |                |           |                |           |           | GY1215KRRB      |             |            |
| YAS  | 75          | 82.55     | 164.3          | 69.9      | 269.9     | 215.9     | 69.4      | 25.4           | 14.3      | 34.9           | 91.9      | 30.2           | 79.4      | 20        | GYE75KRRB       | T23423      | 7.9197     |
|      |             | 3 1/4     | 6 15/32        | 2 3/4     | 10 5/8    | 8 1/2     | 2 3/4     | 1              | 7/8       | 1 3/8          | 3.618     | 1 3/4          | 3 1/8     | 3/4       |                 |             | 17.4600    |
| YAS  | 2 15/16 H   | 88.40     | 177.8          | 77.8      | 330.2     | 241.3     | 88.9      | 31.8           | 23.8      | 31.8           | 91.9      | 30.2           | 88.9      | 20        | GY1215KRRB      | T22305      | 8.4187     |
|      |             | 3 1/2     | 7              | 3 1/16    | 13        | 9 1/2     | 3 1/2     | 1 1/4          | 15/16     | 1 1/4          | 3.619     | 1 3/4          | 3 1/2     | 3/4       |                 |             | 18.5600    |

NOTE: Shaft diameter with an S = Smaller housing; Shaft diameter with an H = heavier housing.

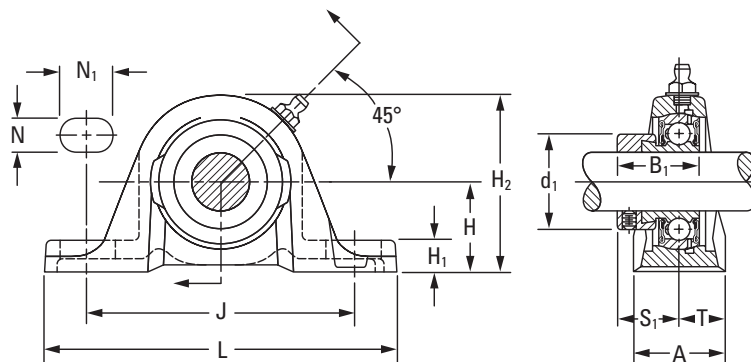
### VAS STANDARD SERIES

- Timken VAS pillow blocks are similar in design and features, and equal in load-carrying capacity, to the VAK series.
- The slightly different base-to-center height dimension makes them interchangeable with certain other competitive designs.
- The units are prelubricated and ready for immediate installation.
- A grease fitting is provided for relubrication if required.

#### Suggested shaft tolerances:

1/2 in. – 1 15/16 in., nominal to -0.013 mm, -0.0005 in.;

2 in. – 2 3/16 in., nominal to -0.025 mm, -0.0010 in.



#### BEARING DATA

| Unit | Bearing No. | Dimensions and Load Ratings |
|------|-------------|-----------------------------|
| VAS  | GRA-RRB     | Page A-50                   |

To order, specify UNIT and SHAFT DIAMETER.

Example: VAS 1 3/16 in.

| Unit | Shaft Dia. | H       | H <sub>2</sub> | B <sub>1</sub> | J       | L       | A       | H <sub>1</sub> | N     | N <sub>1</sub> | d <sub>1</sub> | S <sub>1</sub> | T      | Bolt Size | Bearing No. | Collar No. | Housing No.       | Unit Wt. |
|------|------------|---------|----------------|----------------|---------|---------|---------|----------------|-------|----------------|----------------|----------------|--------|-----------|-------------|------------|-------------------|----------|
|      | in.        | mm      | mm             | mm             | mm      | mm      | mm      | mm             | mm    | mm             | mm             | mm             | mm     | mm        |             |            | New (Old)         | kg lbs.  |
| VAS  | 1/2        |         |                |                |         |         |         |                |       |                |                |                |        |           | GRA008RRB   | S1008K     |                   |          |
| VAS  | 5/8        | 30.16   | 56.4           | 28.6           | 92.1    | 123.8   | 30.2    | 11.9           | 11.1  | 22.2           | 28.6           | 22.2           | 15.1   | 10        | GRA010RRB   | S1010K     | T-40238 (T-30595) | 0.454    |
| VAS  | 17         | 1 3/16  | 2 7/32         | 1 1/8          | 3 5/8   | 4 7/8   | 1 3/16  | 1 5/32         | 7/16  | 7/8            | 1 1/8          | 7/8            | 1 9/32 | 3/8       | GRAE17RRB   | SE17K      |                   | 1.00     |
| VAS  | 3/4        | 33.34   | 64.3           | 31.0           | 96.0    | 127.0   | 31.8    | 13.5           | 11.1  | 19.8           | 33.3           | 23.4           | 15.9   | 10        | GRA012RRB   | S1012K     | T-40239 (T-30555) | 0.563    |
| VAS  | 20         | 1 5/16  | 2 17/32        | 1 7/32         | 3 25/32 | 5       | 1 1/4   | 1 7/32         | 7/16  | 25/32          | 1 5/16         | 59/64          | 5/8    | 3/8       | GRAE20RRB   | SE20K      |                   | 1.24     |
| VAS  | 7/8        |         |                |                |         |         |         |                |       |                |                |                |        |           | GRA014RRB   | S1014K     |                   |          |
| VAS  | 1 5/16     | 36.51   | 71.4           | 31.0           | 104.8   | 139.7   | 35.7    | 15.1           | 11.1  | 20.6           | 38.1           | 23.4           | 17.9   | 10        | GRA015RRB   | S1015K     | T-30365           | 0.758    |
| VAS  | 1          | 1 7/16  | 2 13/16        | 1 7/32         | 4 1/8   | 5 1/2   | 1 13/32 | 1 9/32         | 7/16  | 13/16          | 1 1/2          | 59/64          | 45/64  | 3/8       | GRA100RRB   | S1100K     |                   | 1.67     |
| VAS  | 25         |         |                |                |         |         |         |                |       |                |                |                |        |           | GRAE25RRB   | SE25K      |                   |          |
| VAS  | 1 1/8      |         |                |                |         |         |         |                |       |                |                |                |        |           | GRA102RRB   | S1102K     |                   |          |
| VAS  | 1 3/16     | 42.86   | 83.3           | 35.7           | 117.5   | 157.2   | 39.7    | 16.7           | 14.3  | 23.8           | 44.1           | 27.0           | 19.9   | 12        | GRA103RRB   | S1103K     | T-40241 (T-30300) | 1.235    |
| VAS  | 1 1/4 S    | 1 11/16 | 3 3/32         | 1 13/32        | 4 5/8   | 6 3/16  | 1 9/16  | 2 1/32         | 9/16  | 15/16          | 1 47/64        | 1 1/16         | 25/32  | 1 1/2     | GRA103RRB2  | S1103K3    |                   | 2.72     |
| VAS  | 30         |         |                |                |         |         |         |                |       |                |                |                |        |           | GRAE30RRB   | SE30K      |                   |          |
| VAS  | 1 1/4      |         |                |                |         |         |         |                |       |                |                |                |        |           | GRA104RRB   | S1104K     |                   |          |
| VAS  | 1 3/8      | 47.62   | 93.7           | 38.9           | 130.2   | 166.7   | 45.2    | 18.3           | 14.3  | 24.6           | 54.0           | 29.4           | 22.7   | 12        | GRA106RRB   | S1106K     | T-40242 (T-30410) | 1.594    |
| VAS  | 1 7/16     | 1 7/8   | 3 11/16        | 1 17/32        | 5 1/8   | 6 9/16  | 1 25/32 | 23/32          | 9/16  | 31/32          | 2 1/8          | 1 5/32         | 57/64  | 1 1/2     | GRA107RRB   | S1107K     |                   | 3.51     |
| VAS  | 35         |         |                |                |         |         |         |                |       |                |                |                |        |           | GRAE35RRB   | SE35K      |                   |          |
| VAS  | 1 1/2      | 49.21   | 100.0          | 43.7           | 136.5   | 179.4   | 47.6    | 19.0           | 14.3  | 26.2           | 60.3           | 32.5           | 23.8   | 12        | GRA108RRB   | S1108KT    | T-40243 (T-30484) | 2.034    |
| VAS  | 40         | 1 15/16 | 3 15/16        | 1 23/32        | 5 3/8   | 7 1/16  | 1 7/8   | 3/4            | 9/16  | 1 1/32         | 2 3/8          | 1 9/32         | 15/16  | 1 1/2     | GRAE40RRB   | SE40K      |                   | 4.48     |
| VAS  | 1 5/8      |         |                |                |         |         |         |                |       |                |                |                |        |           | GRA110RRB   | S1110K     |                   |          |
| VAS  | 1 11/16    | 53.98   | 106.4          | 43.7           | 149.2   | 191.3   | 50.8    | 19.0           | 14.3  | 28.6           | 63.5           | 32.5           | 25.4   | 12        | GRA111RRB   | S1111K     | T-40244 (T-30682) | 2.261    |
| VAS  | 1 3/4      | 2 1/8   | 4 3/16         | 1 23/32        | 5 7/8   | 7 17/32 | 2       | 3/4            | 9/16  | 1 1/8          | 1 1/2          | 1 9/32         | 1      | 1 1/2     | GRA112RRB   | S1112K     |                   | 4.98     |
| VAS  | 45         |         |                |                |         |         |         |                |       |                |                |                |        |           | GRAE45RRB   | SE45K      |                   |          |
| VAS  | 1 7/8      |         |                |                |         |         |         |                |       |                |                |                |        |           | GRA114RRB   | S1114K     |                   |          |
| VAS  | 1 15/16    | 57.15   | 114.3          | 43.7           | 158.0   | 200.0   | 55.6    | 19.0           | 18.3  | 29.4           | 69.8           | 32.5           | 27.8   | 16        | GRA115RRB   | S1115K     | T-40245 (T-30706) | 2.774    |
| VAS  | 2 S        | 2 1/4   | 4 1/2          | 1 23/32        | 6 7/32  | 7 7/8   | 2 3/16  | 3/4            | 23/32 | 1 5/32         | 2 3/4          | 1 9/32         | 1 3/32 | 5/8       | GRA115RRB2  | S1115K2    |                   | 6.11     |
| VAS  | 50         |         |                |                |         |         |         |                |       |                |                |                |        |           | GRAE50RRB   | SE50K      |                   |          |
| VAS  | 2          | 63.50   | 126.2          | 48.4           | 176.2   | 222.3   | 58.7    | 20.6           | 18.3  | 29.4           | 76.2           | 36.5           | 29.4   | 16        | GRA200RRB   | S1200K     | T-40246 (T-30738) | 3.328    |
| VAS  | 2 3/16     | 2 1/2   | 4 31/32        | 1 29/32        | 6 15/16 | 8 3/4   | 2 5/16  | 13/16          | 23/32 | 1 5/32         | 3              | 1 7/16         | 1 5/32 | 5/8       | GRA203RRB   | S1203K     |                   | 7.33     |
| VAS  | 55         |         |                |                |         |         |         |                |       |                |                |                |        |           | GRAE55RRB   | SE55K      |                   |          |

NOTE: All units have 1/8 pipe-thread grease fitting except 1/2 – 1 15/16 and 3/4 units, which have 1/4-28 fitting.

### SAS STANDARD SERIES

- The SAS is a streamlined and rugged one-piece pillow block unit that combines the Timken engineered housing and a GYA-RRB set screw bearing.
- GYA-RRB bearing employs a positive-contact, land-riding seal and specially designed set screws.
- SAS pillow block can be mounted in any position.
- Bearing housed units are factory-prelubricated, but a grease fitting is provided to allow for relubrication if required.

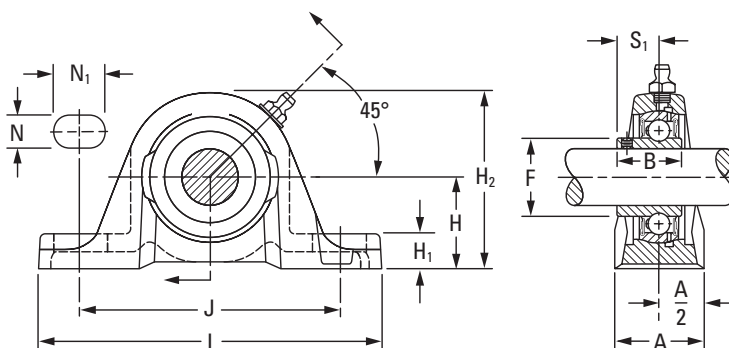
#### Suggested shaft tolerances:

1/2 in. – 1 15/16 in., nominal to -0.013 mm, -0.0005 in.;

2 in. – 2 3/16 in., nominal to -0.025 mm, -0.0010 in.

#### To order, specify UNIT and SHAFT DIAMETER.

Example: SAS 1 in.



#### BEARING DATA

| Unit | Bearing No. | Dimensions and Load Ratings |
|------|-------------|-----------------------------|
| SAS  | GYA-RRB     | Page A-54                   |

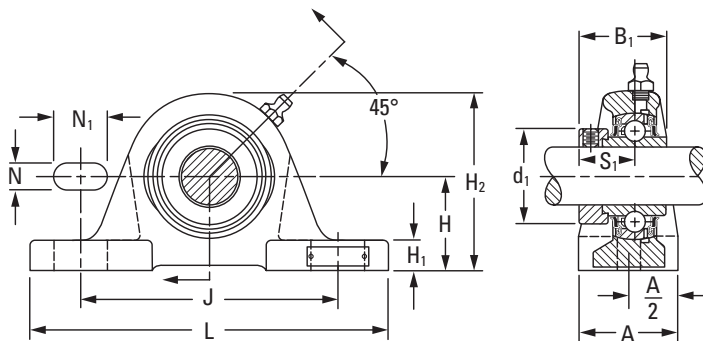
| Unit | Shaft Dia. | H         | H <sub>2</sub> | S <sub>1</sub> | J         | L         | A         | H <sub>1</sub> | N         | N <sub>1</sub> | F         | B         | Bolt Size | Bearing No. | Housing No.  | Unit Wt.   |
|------|------------|-----------|----------------|----------------|-----------|-----------|-----------|----------------|-----------|----------------|-----------|-----------|-----------|-------------|--------------|------------|
|      | in.<br>mm  | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in. | mm<br>in.      | mm<br>in. | mm<br>in. | mm<br>in. |             | New<br>(Old) | kg<br>lbs. |
| SAS  | 1/2        | 30.16     | 56.4           | 15.9           | 92.1      | 123.8     | 30.2      | 11.9           | 11.1      | 22.2           | 24.6      | 23.8      | 10        | GYA008RRB   | T-40238      | 0.42       |
| SAS  | 5/8        | 39.14     | 76.2           | 20.3           | 124.8     | 165.1     | 41.3      | 15.9           | 14.3      | 29.8           | 33.0      | 32.3      | 11        | GYA010RRB   | (T-30595)    | 0.92       |
| SAS  | 17         | 431.75    | 1117.6         | 518.0          | 2350.0    | 3175.0    | 1016.0    | 254.0          | 254.0     | 688.0          | 861.0     | 825.0     | 3/8       | GYAE17RRB   |              |            |
| SAS  | 3/4        | 33.34     | 64.3           | 18.3           | 96.0      | 127.0     | 31.8      | 13.5           | 11.1      | 19.8           | 29.0      | 27.0      | 10        | GYA012RRB   | T-40239      | 0.57       |
| SAS  | 20         | 841.4     | 1638.0         | 465.0          | 2448.0    | 3225.0    | 810.0     | 343.0          | 283.0     | 505.0          | 738.0     | 688.0     | 3/8       | GYAE20RRB   | (T-30555)    | 1.25       |
| SAS  | 7/8        | 44.45     | 88.9           | 22.1           | 108.0     | 141.3     | 35.7      | 15.1           | 11.1      | 20.6           | 33.7      | 28.2      | 10        | GYA014RRB   |              |            |
| SAS  | 15/16      | 39.14     | 71.4           | 19.4           | 104.8     | 139.7     | 35.7      | 15.1           | 11.1      | 20.6           | 33.7      | 28.2      | 10        | GYA015RRB   | T-30365      | 0.75       |
| SAS  | 1          | 41.27     | 82.5           | 20.3           | 104.8     | 141.3     | 39.1      | 16.5           | 12.7      | 22.9           | 36.8      | 31.8      | 11        | GYA100RRB   |              | 1.67       |
| SAS  | 25         | 1041.4    | 2095.0         | 518.0          | 2667.0    | 3541.0    | 1000.0    | 419.0          | 343.0     | 762.0          | 1194.0    | 1118.0    | 3/8       | GYAE25RRB   |              |            |
| SAS  | 1 1/8      | 47.63     | 95.3           | 24.1           | 117.5     | 157.2     | 39.7      | 16.7           | 14.3      | 23.8           | 40.1      | 32.5      | 12        | GYA102RRB   |              |            |
| SAS  | 1 3/16     | 49.51     | 99.1           | 25.4           | 121.9     | 162.7     | 41.3      | 17.4           | 14.9      | 24.8           | 41.9      | 33.8      | 12        | GYA103RRB   | T-40241      | 1.14       |
| SAS  | 1 1/4 S    | 51.18     | 102.4          | 26.2           | 124.8     | 167.6     | 43.0      | 18.0           | 15.2      | 25.4           | 43.8      | 35.4      | 12        | GYA103RRB2  | (T-30300)    | 2.52       |
| SAS  | 30         | 762.0     | 1524.0         | 669.0          | 3175.0    | 4216.0    | 1092.0    | 444.0          | 368.0     | 825.0          | 1219.0    | 1143.0    | 1/2       | GYAE30RRB   |              |            |
| SAS  | 1 1/4      | 47.63     | 93.6           | 25.8           | 130.2     | 166.7     | 45.2      | 18.3           | 14.3      | 24.6           | 46.8      | 36.5      | 12        | GYA104RRB   |              |            |
| SAS  | 1 3/8      | 50.8      | 101.6          | 26.8           | 136.5     | 174.6     | 47.6      | 19.0           | 14.9      | 25.4           | 48.8      | 38.1      | 12        | GYA106RRB   | T-40242      | 1.52       |
| SAS  | 1 7/16     | 52.07     | 104.1          | 27.4           | 139.7     | 177.8     | 48.8      | 19.4           | 15.2      | 26.0           | 50.0      | 39.1      | 12        | GYA107RRB   | (T-30410)    | 3.35       |
| SAS  | 35         | 889.1     | 1778.0         | 695.0          | 3490.0    | 4635.0    | 1194.0    | 476.0          | 381.0     | 854.0          | 1270.0    | 1194.0    | 1/2       | GYAE35RRB   |              |            |
| SAS  | 1 1/2      | 49.21     | 100.0          | 27.8           | 136.5     | 179.4     | 47.6      | 19.0           | 14.3      | 26.2           | 52.4      | 39.3      | 12        | GYA108RRB   | T-40243      | 1.85       |
| SAS  | 40         | 1248.0    | 2540.0         | 701.0          | 3490.0    | 4635.0    | 1194.0    | 476.0          | 381.0     | 854.0          | 1270.0    | 1194.0    | 1/2       | GYAE40RRB   | (T-30484)    | 4.08       |
| SAS  | 1 1/2 H    | 53.90     | 100.0          | 27.8           | 136.5     | 179.4     | 47.6      | 19.0           | 14.3      | 26.2           | 52.4      | 39.3      | 12        | GYA108RRB   | T-39528      | 1.85       |
| SAS  | 1 5/8      | 55.88     | 111.8          | 28.6           | 141.3     | 185.4     | 50.8      | 20.3           | 15.2      | 27.1           | 56.8      | 41.3      | 12        |             |              |            |
| SAS  | 1 11/16    | 53.90     | 106.3          | 28.6           | 149.2     | 191.3     | 51.0      | 19.0           | 14.3      | 28.6           | 57.9      | 42.1      | 12        | GYA110RRB   |              | 2.06       |
| SAS  | 1 3/4      | 57.15     | 114.3          | 30.3           | 157.8     | 203.2     | 54.0      | 20.3           | 15.2      | 30.3           | 61.9      | 44.1      | 12        | GYA111RRB   | T-40244      | 2.06       |
| SAS  | 45         | 1416.0    | 2916.0         | 762.0          | 3990.0    | 5304.0    | 1372.0    | 508.0          | 391.0     | 889.0          | 1318.0    | 1248.0    | 1/2       | GYA112RRB   | (T-30682)    | 4.55       |
| SAS  | 1 15/16    | 57.20     | 114.3          | 30.9           | 158.0     | 200.0     | 55.6      | 19.0           | 17.5      | 23.8           | 62.7      | 44.4      | 16        | GYAE45RRB   |              |            |
| SAS  | 2 S        | 57.20     | 114.3          | 30.9           | 158.0     | 200.0     | 55.6      | 19.0           | 17.5      | 23.8           | 62.7      | 44.4      | 16        | GYA115RRB   | T-40245      | 2.54       |
| SAS  | 50         | 1428.0    | 2916.0         | 781.0          | 4012.0    | 5334.0    | 1372.0    | 508.0          | 391.0     | 889.0          | 1318.0    | 1248.0    | 1/2       | GYA115RRB2  | (T-30706)    | 5.60       |
| SAS  | 2          | 63.50     | 126.2          | 31.7           | 176.2     | 222.3     | 58.7      | 20.6           | 18.3      | 29.4           | 69.8      | 46.4      | 16        | GYAE50RRB   |              |            |
| SAS  | 2 3/16     | 63.50     | 126.2          | 31.7           | 176.2     | 222.3     | 58.7      | 20.6           | 18.3      | 29.4           | 69.8      | 46.4      | 16        | GYA200RRB   | T-40246      | 3.02       |
| SAS  | 55         | 1400.0    | 2838.0         | 813.0          | 4012.0    | 5334.0    | 1372.0    | 508.0          | 391.0     | 889.0          | 1318.0    | 1248.0    | 5/8       | GYA203RRB   | (T-30738)    | 6.66       |
| SAS  | 55         | 1400.0    | 2838.0         | 813.0          | 4012.0    | 5334.0    | 1372.0    | 508.0          | 391.0     | 889.0          | 1318.0    | 1248.0    | 5/8       | GYAE55RRB   |              |            |

NOTE: All units have 1/8 pipe-thread grease fitting except 1/2–1 15/16 and 3/4 units, which have 1/4-28 fitting.

NOTE: Shaft diameter with an S = smaller housing; Shaft diameter with an H = heavier housing.

### RAKH INDUSTRIAL SERIES

- Timken pillow blocks are similar in design to other standard series, but have slightly different dimensions to allow interchangeability with competitive designs.
- These pillow blocks may be used independently or in connection with the RAKHL expansion unit shown at right. Used in this capacity, the RAKH pillow blocks provide fixed shaft location while the RAKHL expansion units allow for axial movement. Maximum operating temperature for the RAKH units is 121° C (250° F).
- The units are supplied with self-locking collars.
- Contact your Timken engineer to discuss highly corrosive applications (food processing, chemical exposure) where Timken thin-dense chrome-coated bearings can be utilized.



#### Suggested shaft tolerances:

1<sup>3</sup>/<sub>16</sub> in. – 1<sup>15</sup>/<sub>16</sub> in., nominal to -0.013 mm, -0.0005 in.;

2 in. – 2<sup>15</sup>/<sub>16</sub> in., nominal to -0.025 mm, -0.0010 in.

#### To order, specify UNIT and SHAFT DIAMETER.

Example: RAKH 1<sup>7</sup>/<sub>16</sub> in.

#### BEARING DATA

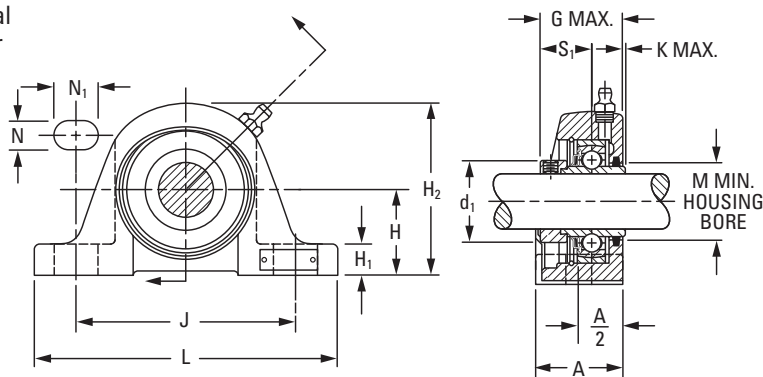
| Unit | Bearing No. | Dimensions and Load Ratings |
|------|-------------|-----------------------------|
| RAKH | G-KRRB      | Page A-34                   |

| Unit <sup>(1)</sup> | Shaft Dia. | H               | H <sub>2</sub>   | B <sub>1</sub>  | J                | L               | A             | H <sub>1</sub> | N             | N <sub>1</sub> | d <sub>1</sub>  | S <sub>1</sub>  | Bolt Size | Bearing No.            | Collar No.       | Housing No. | Unit Wt.         |
|---------------------|------------|-----------------|------------------|-----------------|------------------|-----------------|---------------|----------------|---------------|----------------|-----------------|-----------------|-----------|------------------------|------------------|-------------|------------------|
|                     | in.<br>mm  | mm<br>in.       | mm<br>in.        | mm<br>in.       | mm<br>in.        | mm<br>in.       | mm<br>in.     | mm<br>in.      | mm<br>in.     | mm<br>in.      | mm<br>in.       | mm<br>in.       | mm<br>in. |                        |                  | New         | kg<br>lbs.       |
| RAKH                | 1          | 44.45<br>1 3/4  | 82.6<br>3 1/4    | 44.4<br>1 3/4   | 119.1<br>4 11/16 | 158.8<br>6 1/4  | 50.8<br>2     | 15.9<br>5/8    | 14.3<br>9/16  | 25.4<br>1      | 38.1<br>1 1/2   | 27.0<br>1 1/16  | 12<br>1/2 | G1100KRRB              | S1100K           | T-22295     | 1.689<br>3.720   |
| RAKH                | 1 3/16     | 47.63<br>1 7/8  | 90.5<br>3 9/16   | 48.4<br>2 9/32  | 127.0<br>5       | 174.6<br>6 7/8  | 57.2<br>2 1/4 | 17.5<br>11/16  | 14.3<br>9/16  | 25.4<br>1      | 44.1<br>1 47/64 | 30.2<br>1 3/16  | 12<br>1/2 | G1103KRRB              | S1103K           | T-22216     | 2.184<br>4.810   |
| RAKH                | 1 1/4      | 53.98<br>2 1/8  | 101.6<br>4       | 51.2<br>2 1/64  | 144.5<br>5 11/16 | 203.2<br>8      | 57.2<br>2 1/4 | 19.0<br>3/4    | 14.3<br>9/16  | 30.2<br>1 3/16 | 54.0<br>2 1/8   | 32.5<br>1 9/32  | 12<br>1/2 | G1104KRRB<br>G1107KRRB | S1104K<br>S1107K | T-22212     | 2.915<br>6.420   |
| RAKH                | 1 7/16     | 58.74<br>2 5/16 | 111.1<br>4 3/8   | 56.4<br>2 7/32  | 155.6<br>6 1/8   | 222.2<br>8 3/4  | 66.7<br>2 5/8 | 20.6<br>13/16  | 17.5<br>11/16 | 31.8<br>1 1/4  | 60.3<br>2 3/8   | 34.9<br>1 3/8   | 16<br>5/8 | G1108KRRB              | S1108KT          | T-22291     | 4.004<br>8.820   |
| RAKH                | 1 11/16    | 58.74<br>2 5/16 | 114.3<br>4 1/2   | 56.4<br>2 7/32  | 155.6<br>6 1/8   | 222.2<br>8 3/4  | 66.7<br>2 5/8 | 20.6<br>13/16  | 17.5<br>11/16 | 33.3<br>1 5/16 | 63.5<br>2 1/2   | 34.9<br>1 3/8   | 16<br>5/8 | G1111KRRB<br>G1112KRRB | S1111K<br>S1112K | T-22293     | 4.032<br>8.880   |
| RAKH                | 1 15/16    | 63.50<br>2 1/2  | 122.2<br>4 13/16 | 62.7<br>2 15/32 | 171.4<br>6 3/4   | 241.3<br>9 1/2  | 73.0<br>2 7/8 | 22.2<br>7/8    | 17.5<br>11/16 | 36.5<br>1 7/16 | 69.8<br>2 3/4   | 38.1<br>1 1/2   | 16<br>5/8 | G1115KRRB              | S1115K           | T-22214     | 5.098<br>11.230  |
| RAKH                | 2 3/16     | 69.85<br>2 3/4  | 136.5<br>5 3/8   | 71.4<br>2 13/16 | 184.2<br>7 1/4   | 260.4<br>10 1/4 | 79.4<br>3 1/8 | 27.0<br>1 1/16 | 20.6<br>13/16 | 36.5<br>1 7/16 | 76.2<br>3       | 43.7<br>1 23/32 | 16<br>5/8 | G1203KRRB<br>GE55KRRB  | S1203K<br>SE55K  | T-22297     | 6.728<br>14.820  |
| RAKH                | 55         | 76.20<br>3      | 150.8<br>5 15/16 | 77.8<br>3 1/16  | 203.2<br>8       | 285.8<br>11 1/4 | 82.6<br>3 1/4 | 27.0<br>1 1/16 | 20.6<br>13/16 | 41.3<br>1 5/8  | 84.1<br>3 5/16  | 46.8<br>1 27/32 | 16<br>5/8 | G1207KRRB              | S1207K           | T-22299     | 8.2170<br>18.115 |
| RAKH                | 2 7/16     | 88.90<br>3 1/2  | 171.4<br>6 3/4   | 85.7<br>3 3/8   | 228.6<br>9       | 330.2<br>13     | 88.9<br>3 1/2 | 28.6<br>1 1/8  | 23.8<br>15/16 | 50.8<br>2      | 96.8<br>3 13/16 | 45.2<br>1 25/32 | 20<br>3/4 | G1211KRRB              | S1211K           | T-22303     | 11.495<br>25.320 |
| RAKH                | 2 15/16    | 88.90<br>3 1/2  | 177.8<br>7       | 92.1<br>3 5/8   | 228.6<br>9       | 330.2<br>13     | 88.9<br>3 1/2 | 31.8<br>1 1/4  | 23.8<br>15/16 | 50.8<br>2      | 101.6<br>4      | 54.8<br>2 5/32  | 20<br>3/4 | G1215KRRB              | S1215K           | T-22305     | 11.795<br>25.980 |

<sup>(1)</sup>When used with the expansion unit, specify both units, shaft diameter and suffix.

### RAKHL EXPANSION SERIES

- The RAKH expansion series is designed to allow axial shaft expansion caused by elevated temperatures or other conditions that lead to shaft movement.
- The RAKH expansion-series bearings are designed for use with the RAKH pillow blocks.
- RAKH units provide axial shaft location and the RAKHL allows shaft floatation.
- Due to limitations of the lubricant and seal material, the maximum operating temperature for the RAKHL units is 121° C (250° F).
- Units are supplied with self-locking collars.
- Steel S-ring ensures axial expansion.



#### Suggested shaft tolerances:

1<sup>3</sup>/<sub>16</sub> in. – 1<sup>15</sup>/<sub>16</sub> in., nominal to -0.013 mm, -0.0005 in.;  
2 in. – 2<sup>15</sup>/<sub>16</sub> in., nominal to -0.025 mm, -0.0010 in.

#### To order, specify UNIT and SHAFT DIAMETER.

Example: RAKHL 2<sup>7</sup>/<sub>16</sub> in.

#### BEARING DATA

| Unit  | Bearing No. | Dimensions and Load Ratings |
|-------|-------------|-----------------------------|
| RAKHL | KRS         | Page A-43                   |

| Unit                 | Shaft Dia.                      | Total Float | H              | H <sub>2</sub>  | G                | J                | L                | A              | H <sub>1</sub> | N             | N <sub>1</sub> | K            | d <sub>1</sub> | S <sub>1</sub>  | M                 | Bolt Size | Bearing No.        | Collar No.       | Housing No. | Unit Wt.        |
|----------------------|---------------------------------|-------------|----------------|-----------------|------------------|------------------|------------------|----------------|----------------|---------------|----------------|--------------|----------------|-----------------|-------------------|-----------|--------------------|------------------|-------------|-----------------|
|                      | in.                             | mm in.      | mm in.         | mm in.          | mm in.           | mm in.           | mm in.           | mm in.         | mm in.         | mm in.        | mm in.         | mm in.       | mm in.         | mm in.          | mm in.            | mm in.    |                    |                  | New         | kg lbs.         |
| RAKHL                | 1 <sup>3</sup> / <sub>16</sub>  | 3.2<br>1/8  | 47.63<br>1 7/8 | 96.8<br>3 13/16 | 49.2<br>1 15/16  | 127.0<br>5       | 174.6<br>6 7/8   | 50.8<br>2      | 17.5<br>11/16  | 14.3<br>9/16  | 25.4<br>1      | 2.4<br>3/32  | 44.5<br>1 3/4  | 30.2<br>1 3/16  | 41.70<br>1 41/64  | 12<br>1/2 | 1103KRS            | S1103K           | A11414      | 2.182<br>4.81   |
| RAKHL                | 1 <sup>3</sup> / <sub>8</sub>   | 4.8<br>3/16 | 53.98<br>2 1/8 | 106.4<br>4 3/16 | 55.2<br>2 11/64  | 144.5<br>5 11/16 | 201.6<br>7 15/16 | 51.6<br>2 1/32 | 19.0<br>3/4    | 14.3<br>9/16  | 30.2<br>1 3/16 | 3.2<br>1/8   | 54.0<br>2 1/8  | 32.5<br>1 9/32  | 48.02<br>1 57/64  | 12<br>1/2 | 1106KRS<br>1107KRS | S1106K<br>S1107K | A11199      | 2.912<br>6.42   |
| RAKHL                | 1 <sup>15</sup> / <sub>16</sub> | 6.4<br>1/4  | 63.50<br>2 1/2 | 129.4<br>5 3/32 | 65.1<br>2 9/16   | 171.4<br>6 3/4   | 241.3<br>9 1/2   | 63.5<br>2 1/2  | 22.2<br>7/8    | 17.5<br>11/16 | 36.5<br>1 7/16 | 4.0<br>5/32  | 69.8<br>2 3/4  | 38.1<br>1 1/2   | 63.90<br>2 33/64  | 16<br>5/8 | 1115KRS            | S1115K           | A11357      | 5.094<br>11.23  |
| RAKHL                | 2 <sup>3</sup> / <sub>16</sub>  | 6.4<br>1/4  | 69.85<br>2 3/4 | 142.9<br>5 5/8  | 73.4<br>2 57/64  | 184.2<br>7 1/4   | 260.4<br>10 1/4  | 76.2<br>3      | 27.0<br>1 1/16 | 20.6<br>13/16 | 36.5<br>1 7/16 | 4.4<br>11/64 | 76.2<br>3      | 43.7<br>1 23/32 | 71.00<br>2 51/64  | 16<br>5/8 | 1203KRS            | S1203K           | A11358      | 6.722<br>14.82  |
| RAKHL <sup>(1)</sup> | 2 <sup>7</sup> / <sub>16</sub>  | 6.4<br>1/4  | 76.20<br>3     | 158.8<br>6 1/4  | 78.6<br>3 3/32   | 203.2<br>8       | 285.8<br>11 1/4  | 82.6<br>3 1/4  | 27.0<br>1 1/16 | 20.6<br>13/16 | 41.3<br>1 5/8  | 4.8<br>3/16  | 84.1<br>3 5/16 | 46.8<br>1 27/32 | 78.20<br>3 5/64   | 16<br>5/8 | 1207KRS            | S1207K           | —           | 8.210<br>18.10  |
| RAKHL                | 2 <sup>15</sup> / <sub>16</sub> | 6.4<br>1/4  | 88.90<br>3 1/2 | 181.0<br>7 1/4  | 113.5<br>3 15/32 | 228.6<br>9       | 330.2<br>13      | 88.9<br>3 1/2  | 31.8<br>1 1/4  | 23.8<br>15/16 | 50.8<br>2      | 8.7<br>11/32 | 101.6<br>4     | 54.8<br>2 5/32  | 118.70<br>3 43/64 | 20<br>3/4 | 1215KRS            | S1215K           | T-28261     | 11.785<br>25.98 |

<sup>(1)</sup>Special order.

### YASM MEDIUM-DUTY SERIES SET SCREW LOCK

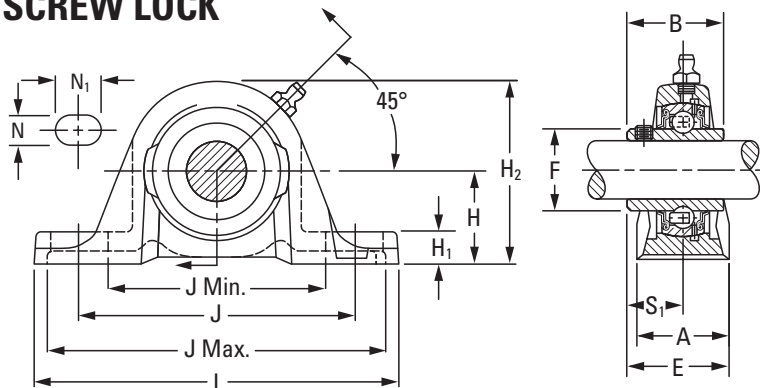
- Timken YASM medium-duty pillow blocks feature the GYM-KRRB bearing inserts.
- Timken YASM medium-duty pillow blocks are ideal for conveyor, fan and blower, sawmill, and feed and grain handling applications.
- The cast-iron housings are durable, powder-coated and maintain an excellent finish, while resisting corrosion, chemicals and weather exposure.
- These pillow blocks incorporate premium features designed to extend bearing life.

#### Suggested shaft tolerances:

- 1 in. – 1 15/16 in., nominal to -0.013 mm, -0.0005 in.;
- 2 in. – 3 in., nominal to -0.025 mm, -0.0010 in.

#### To order, specify UNIT and SHAFT DIAMETER.

Example: YASM 1 7/16 in.



#### BEARING DATA

| Unit | Bearing No. | Dimensions and Load Ratings |
|------|-------------|-----------------------------|
| YASM | GYM-KRRB    | Page A-56                   |

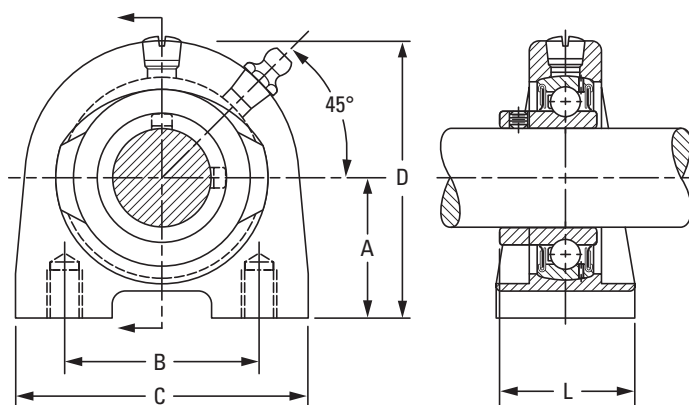
| Unit | Shaft Dia. | H                | H <sub>2</sub>    | B                | L                | J                | J min.            | J max.            | A                | H <sub>1</sub>   | F                 | N               | N <sub>1</sub>  | S <sub>1</sub>   | E                  | Bolt Size | Bearing No. |
|------|------------|------------------|-------------------|------------------|------------------|------------------|-------------------|-------------------|------------------|------------------|-------------------|-----------------|-----------------|------------------|--------------------|-----------|-------------|
|      | in.        | mm in.           | mm in.            | mm in.           | mm in.           | mm in.           | mm in.            | mm in.            | mm in.           | mm in.           | mm in.            | mm in.          | mm in.          | mm in.           | mm in.             | mm in.    |             |
| YASM | 1          | 42.86<br>1 11/16 | 83.30<br>3 9/32   | 38.10<br>1 1/2   | 157.2<br>6 3/16  | 117.5<br>4 5/8   | 93.70<br>3 11/16  | 141.30<br>5 9/16  | 39.70<br>1 9/16  | 16.70<br>2 1/32  | 40.31<br>1.587    | 14.22<br>9/16   | 23.88<br>1 5/16 | 22.20<br>7/8     | 42.070<br>1 21/32  | 12<br>1/2 | GYM1100KRRB |
| YASM | 1 3/16     | 47.62<br>1 7/8   | 93.60<br>3 11/16  | 42.90<br>1 11/16 | 166.7<br>6 9/16  | 130.2<br>5 1/8   | 105.60<br>4 5/32  | 154.80<br>6 3/32  | 45.20<br>1 25/32 | 18.30<br>23/32   | 48.84<br>1.844    | 14.22<br>9/16   | 24.64<br>31/32  | 25.40<br>1       | 48.020<br>1 57/64  | 12<br>1/2 | GYM1103KRRB |
| YASM | 1 7/16     | 53.98<br>2 1/8   | 104.80<br>4 1/8   | 49.20<br>1 15/16 | 179.4<br>7 1/16  | 136.5<br>5 3/8   | 110.30<br>4 11/32 | 162.70<br>6 13/16 | 47.60<br>1 7/8   | 23.00<br>29/32   | 52.27<br>2.058    | 14.22<br>9/16   | 26.16<br>1 1/32 | 30.20<br>1 3/16  | 53.980<br>2 1/8    | 12<br>1/2 | GYM1107KRRB |
| YASM | 1 1/2      | 53.98<br>2 1/8   | 106.30<br>4 3/16  | 49.20<br>1 15/16 | 191.3<br>7 17/32 | 149.2<br>5 7/8   | 120.70<br>4 3/4   | 177.80<br>7       | 50.80<br>2       | 19.10<br>3/4     | 57.92<br>2.280    | 14.22<br>9/16   | 28.45<br>1 1/8  | 30.20<br>1 3/16  | 55.560<br>2 3/16   | 12<br>1/2 | GYM1108KRRB |
| YASM | 1 11/16    | 57.15<br>2 1/4   | 114.30<br>4 1/2   | 51.60<br>2 1/32  | 200.0<br>7 7/8   | 157.9<br>6 7/32  | 134.10<br>5 9/32  | 183.40<br>7 5/32  | 55.60<br>2 3/16  | 19.10<br>3/4     | 62.84<br>2.474    | 17.53<br>1 1/16 | 23.88<br>1 5/16 | 32.50<br>1 9/32  | 60.330<br>2 3/8    | 16<br>5/8 | GYM1111KRRB |
| YASM | 1 3/4      | 57.15<br>2 1/4   | 114.30<br>4 1/2   | 51.60<br>2 1/32  | 200.0<br>7 7/8   | 157.9<br>6 7/32  | 134.10<br>5 9/32  | 183.40<br>7 5/32  | 55.60<br>2 3/16  | 19.10<br>3/4     | 62.84<br>2.474    | 17.53<br>1 1/16 | 23.88<br>1 5/16 | 32.50<br>1 9/32  | 60.330<br>2 3/8    | 16<br>5/8 | GYM1112KRRB |
| YASM | 1 15/16    | 63.50<br>2 1/2   | 126.20<br>4 31/32 | 55.60<br>2 3/16  | 222.3<br>8 3/4   | 176.2<br>6 15/16 | 146.90<br>5 25/32 | 205.60<br>8 3/32  | 54.80<br>2 5/32  | 20.60<br>13/16   | 69.77<br>2.747    | 18.26<br>23/32  | 29.46<br>1 5/32 | 33.30<br>1 5/16  | 61.910<br>2 7/16   | 16<br>5/8 | GYM1115KRRB |
| YASM | 2          | 63.50<br>2 1/2   | 126.20<br>4 31/32 | 55.60<br>2 3/16  | 222.3<br>8 3/4   | 176.2<br>6 15/16 | 146.90<br>5 25/32 | 205.60<br>8 3/32  | 54.80<br>2 5/32  | 20.60<br>13/16   | 69.77<br>2.747    | 18.26<br>23/32  | 29.46<br>1 5/32 | 33.30<br>1 5/16  | 61.910<br>2 7/16   | 16<br>5/8 | GYM1200KRRB |
| YASM | 2 3/16     | 69.85<br>2 3/4   | 138.90<br>5 15/32 | 65.10<br>2 9/16  | 239.7<br>9 7/16  | 188.1<br>7 13/32 | 158.80<br>6 1/4   | 217.50<br>8 9/16  | 60.30<br>2 3/8   | 23.80<br>15/16   | 76.48<br>3.011    | 18.26<br>23/32  | 29.46<br>1 5/32 | 39.10<br>1 9/16  | 69.850<br>2 3/4    | 16<br>5/8 | GYM1203KRRB |
| YASM | 2 1/4      | 69.85<br>2 3/4   | 138.90<br>5 15/32 | 65.10<br>2 9/16  | 239.7<br>9 7/16  | 188.1<br>7 13/32 | 158.80<br>6 1/4   | 217.50<br>8 9/16  | 60.30<br>2 3/8   | 23.80<br>15/16   | 76.48<br>3.011    | 18.26<br>23/32  | 29.46<br>1 5/32 | 39.10<br>1 9/16  | 69.850<br>2 3/4    | 16<br>5/8 | GYM1204KRRB |
| YASM | 2 7/16     | 76.20<br>3       | 153.99<br>6 1/16  | 77.78<br>3 1/16  | 266.7<br>10 1/2  | 203.2<br>8       | 168.28<br>6 5/8   | 238.13<br>9 3/8   | 73.02<br>2 7/8   | 33.34<br>1 5/16  | 86.92<br>3.422    | 20.57<br>13/16  | 35.05<br>1 3/8  | 42.86<br>1 11/16 | 79.375<br>3 1/8    | 20<br>3/4 | GYM1207KRRB |
| YASM | 2 1/2      | 76.20<br>3       | 153.99<br>6 1/16  | 77.78<br>3 1/16  | 266.7<br>10 1/2  | 203.2<br>8       | 168.28<br>6 5/8   | 238.13<br>9 3/8   | 73.02<br>2 7/8   | 33.34<br>1 5/16  | 86.92<br>3.422    | 20.57<br>13/16  | 35.05<br>1 3/8  | 42.86<br>1 11/16 | 79.375<br>3 1/8    | 20<br>3/4 | GYM1208KRRB |
| YASM | 2 11/16    | 88.90<br>3 1/2   | 177.80<br>7       | 93.66<br>3 11/16 | 330.2<br>13      | 228.6<br>9       | 177.80<br>7       | 279.40<br>11      | 88.90<br>3 1/2   | 31.75<br>1 1/4   | 91.90<br>3.618    | 23.88<br>15/16  | 50.08<br>2      | 44.45<br>1 3/4   | 93.660<br>3 11/16  | 20<br>3/4 | GYM1211KRRB |
| YASM | 2 15/16    | 88.90<br>3 1/2   | 177.80<br>7       | 93.66<br>3 11/16 | 330.2<br>13      | 228.6<br>9       | 177.80<br>7       | 279.40<br>11      | 88.90<br>3 1/2   | 31.75<br>1 1/4   | 98.37<br>3.873    | 23.88<br>15/16  | 50.08<br>2      | 49.21<br>1 15/16 | 93.660<br>3 11/16  | 20<br>3/4 | GYM1215KRRB |
| YASM | 3          | 88.90<br>3 1/2   | 177.80<br>7       | 93.66<br>3 11/16 | 330.2<br>13      | 228.6<br>9       | 177.80<br>7       | 279.40<br>11      | 88.90<br>3 1/2   | 31.75<br>1 1/4   | 98.37<br>3.873    | 23.88<br>15/16  | 50.08<br>2      | 49.21<br>1 15/16 | 93.660<br>3 11/16  | 20<br>3/4 | GYM1300KRRB |
| YASM | 3 7/16     | 101.60<br>4      | 209.55<br>8 1/4   | 96.04<br>3 25/32 | 381.0<br>15      | 282.58<br>11 1/8 | 222.25<br>8 3/4   | 342.90<br>13 1/2  | 111.10<br>4 3/8  | 33.34<br>1 15/16 | 111.92<br>4 13/32 | 23.81<br>15/16  | 60.33<br>2 3/8  | 56.36<br>2 7/32  | 111.919<br>4 13/32 | 20<br>3/4 | GYM1307KRRB |
| YASM | 3 15/16    | 127.00<br>5      | 254.00<br>10      | 117.48<br>4 5/8  | 431.8<br>17      | 336.55<br>13 1/4 | 276.23<br>10 7/8  | 396.90<br>15 5/8  | 114.30<br>4 1/2  | 33.34<br>1 15/16 | 131.37<br>5 11/64 | 28.58<br>1 1/8  | 63.50<br>2 1/2  | 68.26<br>2 11/16 | 125.413<br>4 15/16 | 24<br>1   | GYM1315KRRB |

### STB SERIES

- STB two-bolt housed units come assembled and ready for mounting.
- These housed units are ideal for applications where space is limited, bolt screws are accessed from the bottom of the unit, loads are not severe and reversing moments do not occur.
- The units are assembled with GYA-RRB bearings with positive-contact, land-riding seals and set screw locking.
- The units are factory-prelubricated, but a grease fitting is provided for relubrication if required.

To order, specify **UNIT** and **SHAFT DIAMETER**.

Example: STB 1 in.



### BEARING DATA

| Unit | Bearing No. | Dimensions and Load Ratings |
|------|-------------|-----------------------------|
| STB  | GYA-RRB     | Page A-54                   |

| Unit | Shaft Dia. | A         | B         | C         | D         | F         | H         | N         | L         | Bearing No. | Housing No. |
|------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-------------|-------------|
|      | in.<br>mm  | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. |             |             |
| STB  | 3/4        | 32.3      | 50.80     | 73.03     | 71.12     | 18.30     | 36.50     | 3/8-16    | 36.50     | GYA012RRB   | T-90001     |
| STB  | 20         | 1 5/16    | 2         | 2 7/8     | 2 13/32   | 23/32     | 1 7/16    |           | 1 7/16    | GYAE20RRB   |             |
| STB  | 7/8        | 36.5      | 50.80     | 76.20     | 71.44     | 18.30     | 36.50     | 3/8-16    | 37.70     | GYA014RRB   | T-39343     |
| STB  | 15/16      | 1 7/16    | 2         | 3         | 2 13/16   | 23/32     | 1 7/16    |           | 1 31/64   | GYA015RRB   |             |
| STB  | 1          | 1 7/16    | 2         | 3         | 2 13/16   | 23/32     | 1 7/16    |           | 1 31/64   | GYA100RRB   |             |
| STB  | 25         | 1 7/16    | 2         | 3         | 2 13/16   | 23/32     | 1 7/16    |           | 1 31/64   | GYAE25RRB   |             |
| STB  | 1 1/8      | 42.9      | 76.20     | 101.60    | 82.60     | 19.05     | 38.10     | 7/16-14   | 42.07     | GYA102RRB   | T-90003     |
| STB  | 1 3/16     | 1 11/16   | 3         | 4         | 3 1/4     | 3/4       | 1 1/2     |           | 1 21/32   | GYA103RRB   |             |
| STB  | 1 1/4 S    | 1 11/16   | 3         | 4         | 3 1/4     | 3/4       | 1 1/2     |           | 1 21/32   | GYA103RRB2  |             |
| STB  | 30         | 1 11/16   | 3         | 4         | 3 1/4     | 3/4       | 1 1/2     |           | 1 21/32   | GYAE30RRB   |             |
| STB  | 1 1/4      | 47.6      | 82.60     | 107.95    | 93.66     | 22.23     | 44.45     | 1/2-13    | 48.02     | GYA104RRB   | T-40256     |
| STB  | 1 3/8      | 1 7/8     | 3 1/4     | 4 1/4     | 3 11/16   | 7/8       | 1 3/4     |           | 1 57/64   | GYA106RRB   |             |
| STB  | 1 7/16     | 1 7/8     | 3 1/4     | 4 1/4     | 3 11/16   | 7/8       | 1 3/4     |           | 1 57/64   | GYA107RRB3  |             |
| STB  | 35         | 1 7/8     | 3 1/4     | 4 1/4     | 3 11/16   | 7/8       | 1 3/4     |           | 1 57/64   | GYAE35RRB   |             |
| STB  | 1 1/2      | 49.2      | 88.90     | 117.48    | 100.01    | 23.81     | 47.63     | 1/2-13    | 51.20     | GYA108RRB   | T-90005     |
| STB  | 40         | 1 15/16   | 3 1/2     | 4 5/8     | 3 15/16   | 15/16     | 1 7/8     |           | 2 1/64    | GYAE40RRB   |             |
| STB  | 1 5/8      | 54.0      | 95.25     | 127.00    | 107.95    | 25.40     | 50.80     | 1/2-13    | 53.98     | GYA110RRB   | T-90008     |
| STB  | 1 11/16    | 2 1/8     | 3 3/4     | 5         | 4 1/4     | 1         | 2         |           | 2 1/8     | GYA111RRB   |             |
| STB  | 1 3/4      | 2 1/8     | 3 3/4     | 5         | 4 1/4     | 1         | 2         |           | 2 1/8     | GYA112RRB   |             |
| STB  | 45         | 2 1/8     | 3 3/4     | 5         | 4 1/4     | 1         | 2         |           | 2 1/8     | GYAE45RRB   |             |
| STB  | 1 15/16    | 57.2      | 101.60    | 139.70    | 114.30    | 25.40     | 50.80     | 5/8-11    | 56.36     | GYA115RRB   | T-90010     |
| STB  | 2          | 2 1/4     | 4         | 5 1/2     | 4 1/2     | 1         | 2         |           | 2 7/32    | GYA200RRB   |             |
| STB  | 50         | 2 1/4     | 4         | 5 1/2     | 4 1/2     | 1         | 2         |           | 2 7/32    | GYAE50RRB   |             |

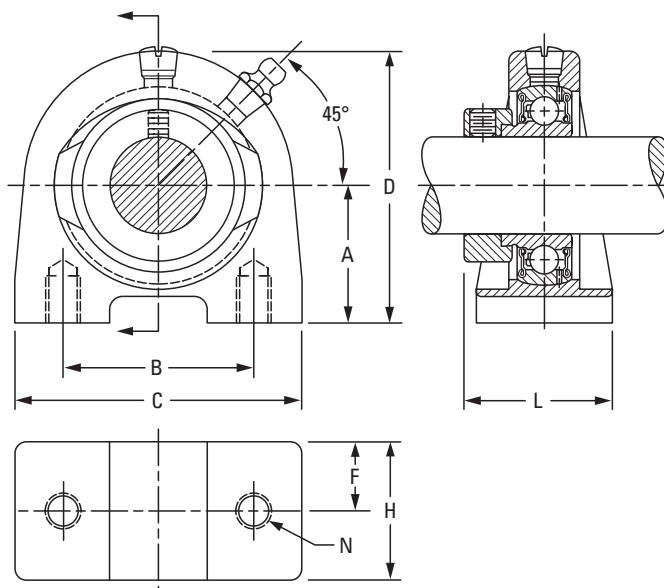
NOTE: Shaft diameter with an S = smaller housing.

### VTB SERIES

- VTB two-bolt housed units are nearly identical to the STB unit, except they are assembled with the GRA-RRB bearings and positive-contact R-seals and locking collar.

To order, specify **UNIT** and **SHAFT DIAMETER**.

Example: VTB 1 in.



#### BEARING DATA

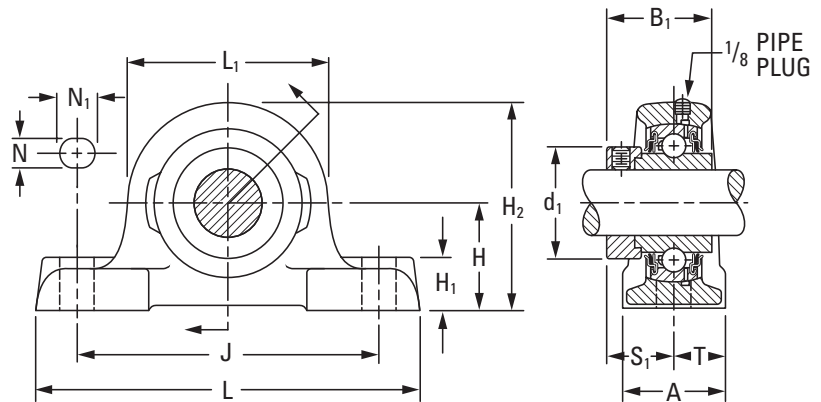
| Unit | Bearing No. | Dimensions and Load Ratings |
|------|-------------|-----------------------------|
| VTB  | GRA-RRB     | Page A-50                   |

| Unit | Shaft Dia. | A         | B         | C         | D         | F         | H         | N         | L         | Bearing No. | Collar No. | Housing No. |
|------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-------------|------------|-------------|
|      | in.<br>mm  | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. |             |            |             |
| VTB  | 3/4        | 32.3      | 50.80     | 73.03     | 71.12     | 18.30     | 36.50     | 3/8-16    | 41.67     | GRA012RRB   | S1012K     | T-90001     |
| VTB  | 20         | 1 5/16    | 2         | 2 7/8     | 2 13/32   | 23/32     | 1 7/16    |           | 1 41/64   | GRAE20RRB   | SE20K      |             |
| VTB  | 7/8        | 36.5      | 50.80     | 76.20     | 71.44     | 18.30     | 36.50     | 3/8-16    | 41.67     | GRA014RRB   | S1014K     |             |
| VTB  | 15/16      | 1 7/16    | 2         | 3         | 2 13/16   | 23/32     | 1 7/16    |           | 1 41/64   | GRA015RRB   | S1015K     | T-39343     |
| VTB  | 1          |           |           |           |           |           |           |           |           | GRA100RRB   | S1100K C2  |             |
| VTB  | 25         |           |           |           |           |           |           |           |           | GRAE25RRB   | SE25K      |             |
| VTB  | 1 1/8      | 42.9      | 76.20     | 101.60    | 82.60     | 19.05     | 38.10     | 7/16-14   | 45.64     | GRA102RRB   | S1102K     |             |
| VTB  | 1 3/16     | 1 11/16   | 3         | 4         | 3 1/4     | 3/4       | 1 1/2     |           | 1 51/64   | GRA103RRB   | S1103K     | T-90003     |
| VTB  | 1 1/4 S    |           |           |           |           |           |           |           |           | GRA103RRB2  | S1103K3    |             |
| VTB  | 30         |           |           |           |           |           |           |           |           | GRAE30RRB   | SE30K      |             |
| VTB  | 1 1/4      | 47.6      | 82.60     | 107.95    | 93.66     | 22.23     | 44.45     | 1/2-13    | 51.60     | GRA104RRB   | S1104K C1  |             |
| VTB  | 13/8       | 1 7/8     | 3 1/4     | 4 1/4     | 3 11/16   | 7/8       | 1 3/4     |           | 2 1/32    | GRA106RRB   | S1106K C1  | T-40256     |
| VTB  | 1 7/16     |           |           |           |           |           |           |           |           | GRA107RRB3  | S1107K C1  |             |
| VTB  | 35         |           |           |           |           |           |           |           |           | GRAE35RRB   | SE35K      |             |
| VTB  | 1 1/2      | 49.2      | 88.90     | 117.48    | 100.01    | 23.81     | 47.63     | 1/2-13    | 56.36     | GRA108RRB   | S1108KT    |             |
| VTB  | 40         | 1 15/16   | 3 1/2     | 4 5/8     | 3 15/16   | 15/16     | 1 7/8     |           | 2 7/32    | GRAE40RRB   | SE40K      | T-90005     |
| VTB  | 1 5/8      | 54.0      | 95.25     | 127.00    | 107.95    | 25.40     | 50.80     | 1/2-13    | 57.94     | GRA110RRB   | S1110K     |             |
| VTB  | 1 11/16    | 2 1/8     | 3 3/4     | 5         | 4 1/4     | 1         | 2         |           | 2 9/32    | GRA111RRB   | S1111K     | T-90008     |
| VTB  | 1 3/4      |           |           |           |           |           |           |           |           | GRA112RRB   | S1112K     |             |
| VTB  | 45         |           |           |           |           |           |           |           |           | GRAE45RRB   | SE45K      |             |
| VTB  | 1 15/16    | 57.2      | 101.60    | 139.70    | 114.30    | 25.40     | 50.80     | 5/8-11    | 57.94     | GRA115RRB   | S1115K     |             |
| VTB  | 2 S        | 2 1/4     | 4         | 5 1/2     | 4 1/2     | 1         | 2         |           | 2 9/32    | GRA200RRB   | S1115K2    | T-90010     |
| VTB  | 50         |           |           |           |           |           |           |           |           | GRAE50RRB   | SE50K      |             |

NOTE: Shaft diameter with an S = smaller housing.

### RAO, LAO HEAVY SERIES

- This is a compact, economic, heavy-duty ball bearing housed unit.
- This series incorporates the tested and proven features of the Timken standard RAK-series pillow block.
- RAO-series bearings are equipped to handle heavy capacity.
- LAO-series bearings are equipped with heavy-series GN-KLLB wide-inner-ring ball bearings.
- The units are supplied with a self-locking collar that eliminates shaft shoulders, machining adapters and sleeves, and locknuts that provide easy mounting.



#### Suggested shaft tolerances:

- 1 3/16 in. – 1 15/16 in., nominal to -0.013 mm, -0.0005 in.;
- 2 in. – 2 15/16 in., nominal to -0.025 mm, -0.0010 in.

#### To order, specify UNIT and SHAFT DIAMETER.

Example: RAO 1 7/16 in.

#### BEARING DATA

| Unit | Bearing No. | Dimensions and Load Ratings |
|------|-------------|-----------------------------|
| RAO  | GN-KRRB     | Page A-57                   |
| LAO  | GN-KLLB     | Page A-59                   |

| Unit <sup>(1)</sup> | Shaft Dia. | H                | H <sub>2</sub>   | B <sub>1</sub>   | L <sub>1</sub>   | J               | L                | A               | H <sub>1</sub> | N           | N <sub>1</sub> | d <sub>1</sub>  | S <sub>1</sub>  | T               | Bolt Size | Bearing No. | Collar No. | Housing No. | Unit Wt.        |
|---------------------|------------|------------------|------------------|------------------|------------------|-----------------|------------------|-----------------|----------------|-------------|----------------|-----------------|-----------------|-----------------|-----------|-------------|------------|-------------|-----------------|
|                     | in.        | mm in            | mm in.           | mm in.           | mm in.           | mm in.          | mm in.           | mm in.          | mm in.         | mm in.      | mm in.         | mm in.          | mm in.          | mm in.          | mm in.    |             |            | New         | kg lbs.         |
| RAO                 | 1 3/16     | 47.63<br>1 7/8   | 93.7<br>3 11/16  | 50.0<br>1 31/32  | 90.5<br>3 9/16   | 136.5<br>5 3/8  | 173.0<br>6 13/16 | 49.2<br>1 15/16 | 22.2<br>7/8    | 15.9<br>5/8 | 19.0<br>3/4    | 49.2<br>1 15/16 | 32.5<br>1 9/32  | 24.6<br>1 31/32 | 12<br>1/2 | GN103KRRB   | SN103K     | T-18798     | 1.898<br>4.18   |
| RAO                 | 1 7/16     | 53.98<br>2 1/8   | 104.0<br>4 3/32  | 51.6<br>2 1/32   | 101.6<br>4       | 152.4<br>6      | 192.1<br>7 9/16  | 54.0<br>2 1/8   | 23.8<br>15/16  | 15.9<br>5/8 | 19.0<br>3/4    | 55.6<br>2 3/16  | 33.3<br>1 5/16  | 27.0<br>1 1/16  | 12<br>1/2 | GN107KRRB   | SN107K     | T-18626     | 2.406<br>5.30   |
| RAO                 | 1 1/2      | 60.33<br>2 3/8   | 117.5<br>4 5/8   | 57.2<br>2 1/4    | 114.3<br>4 1/2   | 171.4<br>6 3/4  | 215.9<br>8 1/2   | 60.3<br>2 3/8   | 27.0<br>1 1/16 | 19.0<br>3/4 | 25.4<br>1      | 63.5<br>2 1/2   | 37.3<br>1 15/32 | 30.2<br>1 3/16  | 16<br>5/8 | GN108KRRB   | SN108K     | T-18800     | 3.755<br>8.27   |
| RAO                 | 1 11/16    | 66.68<br>2 5/8   | 130.2<br>5 1/8   | 58.7<br>2 5/16   | 127.0<br>5       | 190.5<br>7 1/2  | 239.7<br>9 7/16  | 66.7<br>2 5/8   | 30.2<br>1 3/16 | 19.0<br>3/4 | 25.4<br>1      | 69.8<br>2 3/4   | 38.9<br>1 11/32 | 33.3<br>1 5/16  | 16<br>5/8 | GN111KRRB   | SN111K     | T-18802     | 5.030<br>11.08  |
| RAO                 | 1 15/16    | 71.44<br>2 13/16 | 141.3<br>5 9/16  | 66.7<br>2 5/8    | 138.1<br>5 7/16  | 209.6<br>8 1/4  | 265.1<br>10 7/16 | 73.0<br>2 7/8   | 33.3<br>1 5/16 | 19.0<br>3/4 | 25.4<br>1      | 76.2<br>3       | 42.1<br>1 21/32 | 36.5<br>1 7/16  | 16<br>5/8 | GN115KRRB   | SN115K     | T-18804     | 6.265<br>13.80  |
| RAO                 | 2 3/16     | 77.79<br>3 1/16  | 153.2<br>6 1/32  | 73.0<br>2 7/8    | 150.8<br>5 15/16 | 228.6<br>9      | 287.3<br>11 5/16 | 79.4<br>1 1/8   | 36.5<br>1 7/16 | 22.2<br>7/8 | 28.6<br>1 1/8  | 82.6<br>3 1/4   | 45.2<br>1 25/32 | 39.7<br>1 9/16  | 20<br>3/4 | GN203KRRB   | SN203K     | T-18806     | 7.940<br>17.49  |
| RAO                 | 2 7/16     | 84.14<br>3 5/16  | 165.9<br>6 17/32 | 79.4<br>3 1/8    | 163.5<br>6 7/16  | 247.6<br>9 3/4  | 312.7<br>12 5/16 | 84.1<br>3 5/16  | 38.1<br>1 1/2  | 22.2<br>7/8 | 28.6<br>1 1/8  | 88.9<br>3 1/2   | 48.4<br>1 29/32 | 42.1<br>1 21/32 | 20<br>3/4 | GN207KRRB   | SN207K     | T-18808     | 9.761<br>21.50  |
| RAO                 | 2 11/16    | 96.84<br>3 13/16 | 192.1<br>7 9/16  | 88.9<br>3 1/2    | 188.9<br>7 7/16  | 285.8<br>11 1/4 | 360.4<br>14 3/16 | 96.0<br>3 13/16 | 44.4<br>1 3/4  | 25.4<br>1   | 33.3<br>1 5/16 | 101.6<br>4      | 54.8<br>2 5/32  | 48.4<br>1 29/32 | 22<br>7/8 | GN211KRRB   | SO211K     | T-18810     | 15.322<br>33.75 |
| RAO                 | 2 15/16    | 104.78<br>4 1/8  | 204.8<br>8 1/16  | 100.0<br>3 15/16 | 201.6<br>7 15/16 | 304.8<br>12     | 384.2<br>15 1/8  | 103.2<br>4 1/16 | 47.6<br>1 7/8  | 25.4<br>1   | 33.3<br>1 5/16 | 112.7<br>4 1/16 | 62.7<br>2 13/32 | 51.6<br>2 1/32  | 22<br>7/8 | GN215KRRB   | SN215K     | T-18601     | 18.205<br>40.10 |

<sup>(1)</sup>LAO assembled with GN-KLLB bearing.

# BALL BEARING HOUSED UNITS

BALL BEARING HOUSED UNITS • CAST-IRON HOUSED UNITS • RSA, LSA

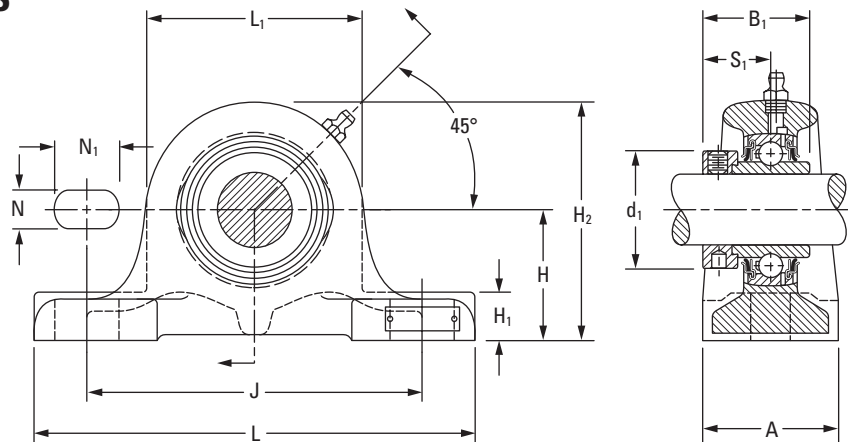
## RSA, LSA INDUSTRIAL SERIES

- RSA series is equipped with G-KRRB wide inner ring ball bearings.
- LSA series is equipped with G-KLLB wide inner ring bearings.
- Pillow blocks are prelubricated and ready for immediate use.
- A grease fitting is provided for relubrication if required.
- All units are supplied with a self-locking collar.

### Suggested shaft tolerances:

1/2 in. – 1 15/16 in.,  
nominal to -0.013 mm, -0.0005 in.;

2 in. – 3 15/16 in.,  
nominal to -0.025 mm, -0.0010 in.



### BEARING DATA

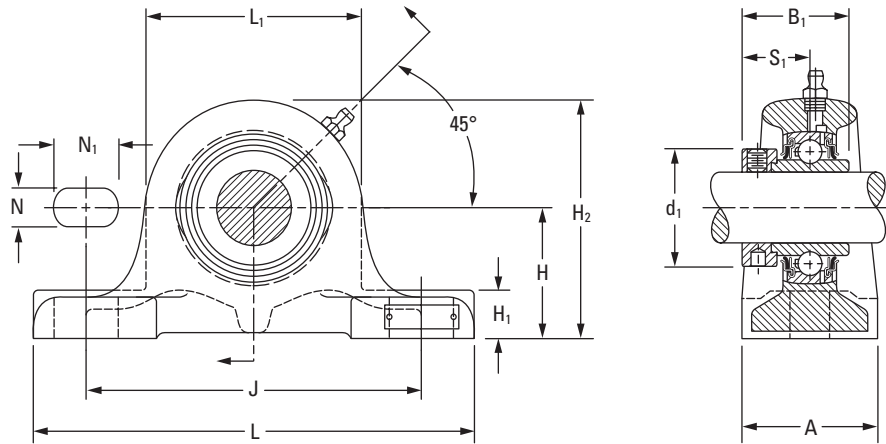
| Unit | Bearing No. | Dimensions and Load Ratings |
|------|-------------|-----------------------------|
| RSA  | G-KRRB      | Page A-34                   |
| LSA  | G-KLLB      | Page A-37                   |

### To order, specify UNIT and SHAFT DIAMETER.

Example: RSA 1 7/16 in.

| Unit     | Shaft Dia. | H         | H <sub>2</sub> | B <sub>1</sub> | L <sub>1</sub> | J         | L         | A         | H <sub>1</sub> | N         | N <sub>1</sub> | d <sub>1</sub> | S <sub>1</sub> | Bolt Size | Bearing No. | Collar No. | Housing No. | Unit Wt.   |
|----------|------------|-----------|----------------|----------------|----------------|-----------|-----------|-----------|----------------|-----------|----------------|----------------|----------------|-----------|-------------|------------|-------------|------------|
|          | in.<br>mm  | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in.      | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in.      | mm<br>in. |             |            | New         | kg<br>lbs. |
| RSA      | 1/2        |           |                |                |                |           |           |           |                |           |                |                |                |           | G1008KRRB   | S1008K     |             |            |
| RSA      | 5/8        | 31.75     | 58.7           | 37.3           | 54.0           | 96.8      | 122.2     | 31.8      | 12.7           | 11.1      | 14.3           | 30.2           | 23.4           | 10        | G1010KRRB   | S1010K     | T-22784     | 0.681      |
| RSA      | 11/16      | 1 1/4     | 2 5/16         | 1 15/32        | 2 1/8          | 3 13/16   | 4 13/16   | 1 1/4     | 1/2            | 7/16      | 9/16           | 1 3/16         | 59/64          | 3/8       | G1011KRRB   | S1011K     |             | 1.50       |
| RSA      | 17         |           |                |                |                |           |           |           |                |           |                |                |                |           | GE17KRRB    | SE17K      |             |            |
| RSA      | 3/4        | 44.45     | 76.2           | 43.7           | 63.5           | 127.0     | 165.1     | 50.8      | 14.3           | 14.3      | 19.0           | 33.3           | 26.6           | 12        | G1012KRRB   | S1012K     | T-22741     | 1.226      |
| RSA      | 20         | 1 3/4     | 3              | 1 23/32        | 2 1/2          | 5         | 6 1/2     | 2         | 9/16           | 9/16      | 3/4            | 1 5/16         | 1 3/64         | 1/2       | GE20KRRB    | SE20K      |             | 2.70       |
| RSA      | 7/8        |           |                |                |                |           |           |           |                |           |                |                |                |           | G1014KRRB   | S1014K     |             |            |
| RSA      | 1 5/16     | 50.80     | 85.7           | 44.4           | 69.8           | 139.7     | 177.8     | 54.0      | 15.9           | 14.3      | 19.0           | 38.1           | 27.0           | 12        | G1015KRRB   | S1015K     | T-22716     | 1.521      |
| RSA      | 1          | 2         | 3 3/8          | 1 3/4          | 2 3/4          | 5 1/2     | 7         | 2 1/8     | 5/8            | 9/16      | 3/4            | 1 1/2          | 1 1/16         | 1/2       | G1100KRRB   | S1100K     |             | 3.35       |
| RSA      | 25         |           |                |                |                |           |           |           |                |           |                |                |                |           | GE25KRRB    | SE25K      |             |            |
| RSA      | 1 1/16     |           |                |                |                |           |           |           |                |           |                |                |                |           | G1101KRRB   | S1101K     |             |            |
| RSA      | 1 1/8      | 50.80     | 91.3           | 48.4           | 81.0           | 139.7     | 177.8     | 54.0      | 17.5           | 15.9      | 20.6           | 44.1           | 30.2           | 12        | G1102KRRB   | S1102K     | T-22725     | 1.789      |
| RSA, LSA | 1 3/16     | 2         | 3 19/32        | 1 29/32        | 3 3/16         | 5 1/2     | 7         | 2 1/8     | 11/16          | 5/8       | 13/16          | 1 47/64        | 1 3/16         | 1/2       | G1103KRRB   | S1103K     |             | 3.94       |
| RSA      | 30         |           |                |                |                |           |           |           |                |           |                |                |                |           | GE30KRRB    | SE30K      |             |            |
| RSA, LSA | 1 1/4      |           |                |                |                |           |           |           |                |           |                |                |                |           | G1104KRRB   | S1104K     |             |            |
| RSA      | 1 5/16     | 60.33     | 111.1          | 51.2           | 101.6          | 158.8     | 209.6     | 66.7      | 22.2           | 19.0      | 31.8           | 54.0           | 32.5           | 16        | G1105KRRB   | S1105K     | T-22382     | 3.260      |
| RSA      | 1 3/8      | 2 3/8     | 4 3/8          | 2 1/64         | 4              | 6 1/4     | 8 1/4     | 2 5/8     | 7/8            | 3/4       | 1 1/4          | 2 1/8          | 1 9/32         | 5/8       | G1106KRRB   | S1106K     |             | 7.18       |
| RSA, LSA | 1 7/16     |           |                |                |                |           |           |           |                |           |                |                |                |           | G1107KRRB   | S1107K     |             |            |
| RSA      | 35         |           |                |                |                |           |           |           |                |           |                |                |                |           | GE35KRRB    | SE35K      |             |            |
| RSA      | 1 1/2      | 60.33     | 111.1          | 56.4           | 101.6          | 168.3     | 209.6     | 60.3      | 19.0           | 19.0      | 22.2           | 60.3           | 34.9           | 16        | G1108KRRB   | S1108KT    | T-22752     | 2.928      |
| RSA      | 1 9/16     | 2 3/8     | 4 3/8          | 2 7/32         | 4              | 6 5/8     | 8 1/4     | 2 3/8     | 3/4            | 3/4       | 7/8            | 2 3/8          | 1 3/8          | 5/8       | G1109KRRB   | S1109KT    |             | 6.45       |
| RSA      | 40         |           |                |                |                |           |           |           |                |           |                |                |                |           | GE40KRRB    | SE40K      |             |            |

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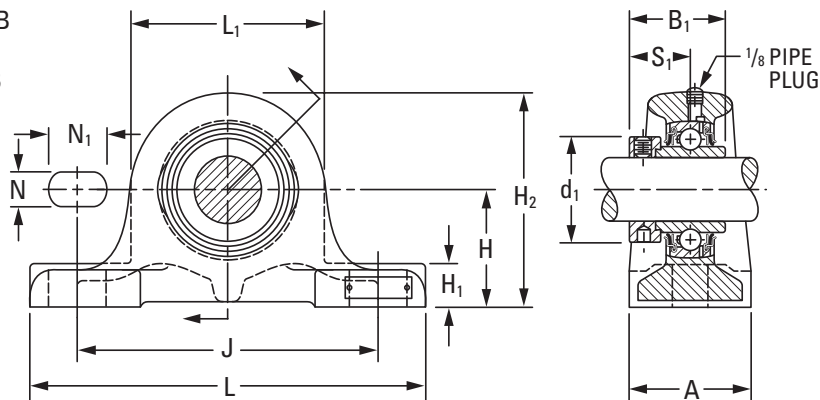


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| Unit     | Shaft Dia. | H         | H <sub>2</sub> | B <sub>1</sub> | L <sub>1</sub> | J         | L         | A         | H <sub>1</sub> | N         | N <sub>1</sub> | d <sub>1</sub> | S <sub>1</sub> | Bolt Size | Bearing No. | Collar No. | Housing No. | Unit Wt.   |
|----------|------------|-----------|----------------|----------------|----------------|-----------|-----------|-----------|----------------|-----------|----------------|----------------|----------------|-----------|-------------|------------|-------------|------------|
|          | in.<br>mm  | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in.      | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in.      | mm<br>in. |             |            | New         | kg<br>lbs. |
| RSA      | 1 5/8      |           |                |                |                |           |           |           |                |           |                |                |                |           | G1110KRRB   | S1110K     |             |            |
| RSA, LSA | 1 11/16    | 60.33     | 114.3          | 56.4           | 108.0          | 168.3     | 209.6     | 60.3      | 20.6           | 19.0      | 23.8           | 63.5           | 34.9           | 16        | G1111KRRB   | S1111K     | T-22701     | 3.064      |
| RSA      | 1 3/4      | 2 3/8     | 4 1/2          | 2 7/32         | 4 1/4          | 6 5/8     | 8 1/4     | 2 3/8     | 13/16          | 3/4       | 15/16          | 2 1/2          | 1 3/8          | 5/8       | G1112KRRB   | S1112K     |             | 6.75       |
| RSA      | 45         |           |                |                |                |           |           |           |                |           |                |                |                |           | GE45KRRB    | SE45K      |             |            |
| RSA      | 1 7/8      |           |                |                |                |           |           |           |                |           |                |                |                |           | G1114KRRB   | S1114K     |             |            |
| RSA, LSA | 1 15/16    | 69.85     | 130.2          | 62.7           | 120.6          | 209.6     | 269.9     | 69.8      | 26.2           | 19.0      | 34.9           | 69.8           | 38.1           | 16        | G1115KRRB   | S1115K     | T-22384     | 4.885      |
| RSA      | 50         | 2 3/4     | 5 1/8          | 2 15/32        | 4 3/4          | 8 1/4     | 10 5/8    | 2 3/4     | 1 1/32         | 3/4       | 1 3/8          | 2 3/4          | 1 1/2          | 5/8       | GE50KRRB    | SE50K      |             | 10.76      |
| RSA      | 2          |           |                |                |                |           |           |           |                |           |                |                |                |           | G1200KRRB   | S1200K     |             |            |
| RSA      | 2 1/8      | 79.38     | 142.1          | 71.4           | 125.4          | 228.6     | 288.9     | 79.4      | 25.4           | 19.0      | 33.3           | 76.2           | 43.7           | 16        | G1202KRRB   | S1202K     | T-22696     | 6.022      |
| RSA, LSA | 2 3/16     | 3 1/8     | 5 19/32        | 2 13/16        | 4 15/16        | 9         | 11 3/8    | 3 1/8     | 1              | 3/4       | 1 5/16         | 3              | 1 23/32        | 5/8       | G1203KRRB   | S1203K     |             | 13.22      |
| RSA      | 55         |           |                |                |                |           |           |           |                |           |                |                |                |           | GE55KRRB    | SE55K      |             |            |
| RSA      | 2 1/4      |           |                |                |                |           |           |           |                |           |                |                |                |           | G1204KRRB   | S1204K     |             |            |
| RSA      | 2 3/8      | 79.38     | 149.2          | 77.8           | 139.7          | 228.6     | 288.9     | 79.4      | 28.6           | 22.2      | 28.6           | 84.1           | 46.8           | 20        | G1206KRRB   | S1206K     | T-22743     | 6.901      |
| RSA, LSA | 2 7/16     | 3 1/8     | 5 7/8          | 3 1/16         | 5 1/2          | 9         | 11 3/8    | 3 1/8     | 1 1/8          | 7/8       | 1 1/8          | 3 5/16         | 1 27/32        | 3/4       | G1207KRRB   | S1207K     |             | 15.20      |
| RSA      | 60         |           |                |                |                |           |           |           |                |           |                |                |                |           | GE60KRRB    | SE60K      |             |            |
| RSA      | 2 11/16    |           |                |                |                |           |           |           |                |           |                |                |                |           | G1211KRRB   | S1211KT    |             |            |
| RSA      | 70         | 95.25     | 173.0          | 82.6           | 155.6          | 260.4     | 320.7     | 88.9      | 33.3           | 22.2      | 34.9           | 96.8           | 45.2           | 20        | GE70KRRB    | SE70K      | T-22748     | 9.997      |
|          |            | 3 3/4     | 6 13/16        | 3 1/4          | 6 1/8          | 10 1/4    | 12 5/8    | 3 1/2     | 1 5/16         | 7/8       | 1 3/8          | 3 13/16        | 1 25/32        | 3/4       |             |            |             | 22.02      |
| RSA      | 2 15/16    |           |                |                |                |           |           |           |                |           |                |                |                |           | G1215KRRB   | S1215K     |             |            |
| RSA      | 75         | 95.25     | 177.8          | 92.1           | 196.1          | 206.4     | 320.7     | 88.9      | 38.1           | 22.2      | 31.8           | 101.6          | 54.8           | 20        | GE75KRRB    | SE75K      | T-22386     | 10.683     |
|          |            | 3 3/4     | 7              | 3 5/8          | 7 23/32        | 10 1/4    | 12 5/8    | 3 1/2     | 1 1/2          | 7/8       | 1 1/4          | 4              | 2 5/32         | 3/4       |             |            |             | 23.53      |

### RSAO, LSAO HEAVY SERIES

- RSAO pillow blocks are equipped with GN-KRRB wide-inner-ring ball bearings.
- LSAO pillow blocks are equipped with GN-KLLB wide-inner-ring ball bearings.
- All units are suited for installations where the load is heavy in proportion to the shaft diameter or where considerable shock loads exist.
- All units are for use in wet or extremely dirty conditions.
- These units are prelubricated and ready for immediate use. A grease fitting is also provided for relubrication if required.
- All units are supplied with a self-locking collar.



#### Suggested shaft tolerances:

- 1 1/16 in., nominal to -0.013 mm, -0.0005 in.;
- 2 in. – 3 15/16 in., nominal to -0.025 mm, -0.0010 in.

#### To order, specify UNIT and SHAFT DIAMETER.

Example: RSAO 1 7/16 in.

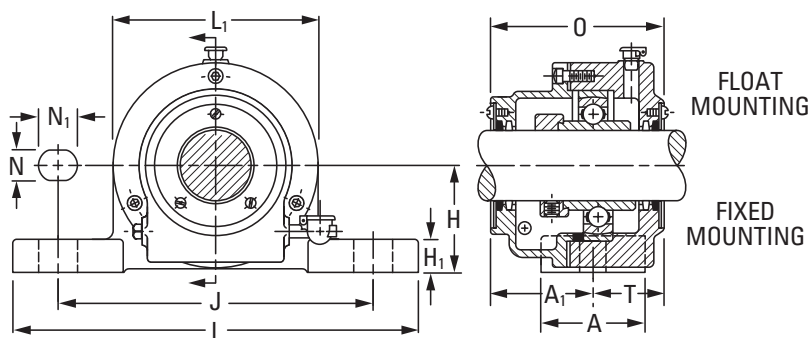
#### BEARING DATA

| Unit | Bearing No. | Dimensions and Load Ratings |
|------|-------------|-----------------------------|
| RSAO | GN-KRRB     | Page A-57                   |
| LSAO | GN-KLLB     | Page A-59                   |

| Unit       | Shaft Dia. | H              | H <sub>2</sub> | B <sub>1</sub> | L <sub>1</sub> | J            | L             | A           | H <sub>1</sub> | N          | N <sub>1</sub> | d <sub>1</sub> | S <sub>1</sub> | Bolt Size | Bearing No.      | Collar No. | Housing No. | Unit Wt.     |
|------------|------------|----------------|----------------|----------------|----------------|--------------|---------------|-------------|----------------|------------|----------------|----------------|----------------|-----------|------------------|------------|-------------|--------------|
|            | in.        | mm in.         | mm in.         | mm in.         | mm in.         | mm in.       | mm in.        | mm in.      | mm in.         | mm in.     | mm in.         | mm in.         | mm in.         | mm in.    | RSAO LSAO        |            | New         | kg lbs.      |
| RSAO, LSAO | 1 3/16     | 60.33 2 3/8    | 108.0 4 1/4    | 50.0 1 31/32   | 95.2 3 3/4     | 168.3 6 5/8  | 209.6 8 1/4   | 60.3 2 3/8  | 22.2 7/8       | 15.9 5/8   | 25.4 1         | 48.7 1.918     | 32.5 1.280     | 12 1/2    | GN103KRRB (KLLB) | SN103K     | T-22678     | 2.937 6.47   |
| RSAO, LSAO | 1 7/16     | 69.85 2 3/4    | 122.2 4 13/16  | 51.6 2 1/32    | 104.8 4 1/8    | 209.6 8 1/4  | 269.9 10 5/8  | 69.8 2 3/4  | 23.8 1 5/16    | 19.0 3/4   | 28.6 1 1/8     | 55.1 2.168     | 33.3 1 5/16    | 16 5/8    | GN107KRRB (KLLB) | SN107K     | T-22496     | 4.154 9.15   |
| RSAO, LSAO | 1 1/2      | 79.38 3 1/8    | 136.6 5 3/8    | 57.2 2 1/4     | 114.3 4 1/2    | 228.6 9      | 288.9 11 3/8  | 79.4 3 1/8  | 27.0 1 1/16    | 19.0 3/4   | 28.6 1 1/8     | 63.0 2.480     | 37.3 1 15/32   | 16 5/8    | GN108KRRB (KLLB) | SN108K     | T-22672     | 5.857 12.90  |
| RSAO, LSAO | 1 11/16    | 79.38 3 1/8    | 142.9 5 5/8    | 58.7 2 5/16    | 127.0 5        | 228.6 9      | 288.9 11 3/8  | 79.4 3 1/8  | 30.2 1 3/16    | 19.0 3/4   | 28.6 1 1/8     | 69.3 2.730     | 38.9 1 17/32   | 16 5/8    | GN111KRRB (KLLB) | SN111K     | T-22498     | 6.560 14.45  |
| RSAO       | 1 3/4      | 79.38 3 1/8    | 148.4 5 27/32  | 66.7 2 5/8     | 138.1 5 7/16   | 228.6 9      | 288.9 11 3/8  | 79.4 3 1/8  | 33.3 1 5/16    | 19.0 3/4   | 28.6 1 1/8     | 75.7 2.980     | 42.1 1 21/32   | 16 5/8    | GN115KRRB (KLLB) | SN115K     | T-22502     | 7.246 15.96  |
| RSAO       | 2          | 95.25 3 3/4    | 170.7 6 23/32  | 73.0 2 7/8     | 150.8 5 15/16  | 260.4 10 1/4 | 320.7 12 5/8  | 88.9 3 1/2  | 36.5 1 7/16    | 22.2 7/8   | 34.9 1 3/8     | 82.0 3.230     | 45.2 1 25/32   | 20 3/4    | GN200KRRB –      | SN200K     | T-22500     | 10.192 22.45 |
| RSAO, LSAO | 2 3/16     | 104.78 4 1/8   | 186.5 7 11/32  | 79.4 3 1/8     | 163.5 6 7/16   | 285.8 11 1/4 | 349.2 13 3/4  | 101.6 4     | 38.1 1 1/2     | 22.2 7/8   | 34.9 1 3/8     | 88.4 3.480     | 48.4 1 29/32   | 20 3/4    | GN203KRRB (KLLB) | SN203K     | T-22494     | 16.144 35.56 |
| RSAO, LSAO | 2 7/16     | 115.89 4 9/16  | 210.3 8 9/32   | 88.9 3 1/2     | 188.9 7 7/16   | 304.8 12     | 390.5 15 3/8  | 111.1 4 3/8 | 44.4 1 3/4     | 25.4 1     | 34.9 1 3/8     | 101.1 3.980    | 54.8 2 5/32    | 22 7/8    | GN207KRRB (KLLB) | SN207K     | T-22494     | 19.295 42.50 |
| RSAO, LSAO | 2 11/16    | 115.89 4 9/16  | 217.5 8 9/16   | 100.0 3 15/16  | 203.2 8        | 314.3 12 3/8 | 390.5 15 3/8  | 111.1 4 3/8 | 47.6 1 7/8     | 25.4 1     | 34.9 1 3/8     | 112.2 4.418    | 62.7 2 15/32   | 22 7/8    | GN211KRRB (KLLB) | SO211K     | T-22492     | 20.090 44.25 |
| RSAO, LSAO | 2 15/16    | 115.89 4 9/16  | 223.0 8 25/32  | 106.4 4 3/16   | 214.3 8 7/16   | 314.3 12 3/8 | 390.5 15 3/8  | 111.1 4 3/8 | 49.2 1 15/16   | 25.4 1     | 34.9 1 3/4     | 119.1 4.688    | 65.9 2 19/32   | 22 7/8    | GN215KRRB (KLLB) | SN215K     | T-22490     | 22.814 50.25 |
| RSAO       | 3 3/16     | 130.18 5 1/8   | 250.8 9 7/8    | 115.9 4 9/16   | 241.3 9 1/2    | 339.7 13 3/8 | 409.6 16 1/8  | 120.6 4 3/4 | 57.2 2 1/4     | 28.6 1 1/8 | 54.0 2 1/8     | 133.4 5.250    | 73.8 2 29/32   | 24 1      | GN303KRRB –      | SN303K     | T-22444     | 30.986 68.25 |
| RSAO       | 3 7/16     | 144.46 5 11/16 | 281.0 11 1/16  | 128.6 5 1/16   | 273.0 10 3/4   | 374.6 14 3/4 | 439.7 17 5/16 | 130.2 5 1/8 | 65.1 2 9/16    | 28.6 1 1/8 | 44.4 1 3/4     | 146.0 5.750    | 78.6 3 3/32    | 24 1      | GN307KRRB –      | SN307K     | T-22446     | 40.633 89.50 |
| RSAO       | 3 15/16    | 144.46 5 11/16 | 281.0 11 1/16  | 128.6 5 1/16   | 273.0 10 3/4   | 374.6 14 3/4 | 439.7 17 5/16 | 130.2 5 1/8 | 65.1 2 9/16    | 28.6 1 1/8 | 44.4 1 3/4     | 146.0 5.750    | 78.6 3 3/32    | 24 1      | GN315KRRB –      | SN315K     | T-22448     | 40.633 89.50 |

## SAL INDUSTRIAL SERIES, FIXED AND FLOATING TYPES

- These types are designed for applications where normal to high temperatures are encountered and applications where one or more floating bearing units are required.
- The floating unit allows the bearing to move axially as the shaft expands from rising temperatures. The fixed unit maintains shaft location.
- The bearings have a loose internal fit.
- The SAL unit is equipped with a self-aligning SM wide-inner-ring bearing and a self-locking collar.
- The external aligning ring is fitted to the spherical surface of the outer ring.
- These types are equipped with oil-tight seals. They're normally fitted for oil lubrication, but they can be equipped for grease lubrication when specified.
- Before installation, lubricate with high-grade automotive oil, turbine oil or ball-bearing grease.
- The units are assembled with a spacer ring (fixed type). By removing the spacer ring, the assembly becomes a floating unit.



### Suggested shaft tolerances:

- 1 3/16 in. – 1 15/16 in., nominal to -0.013 mm, -0.0005 in.;  
2 in. – 3 7/16 in., nominal to -0.025 mm, -0.0010 in.

**To order, specify UNIT and SHAFT DIAMETER and whether fixed or floating.**

Example: SAL 1 7/16 in. (one fixed, one floating).

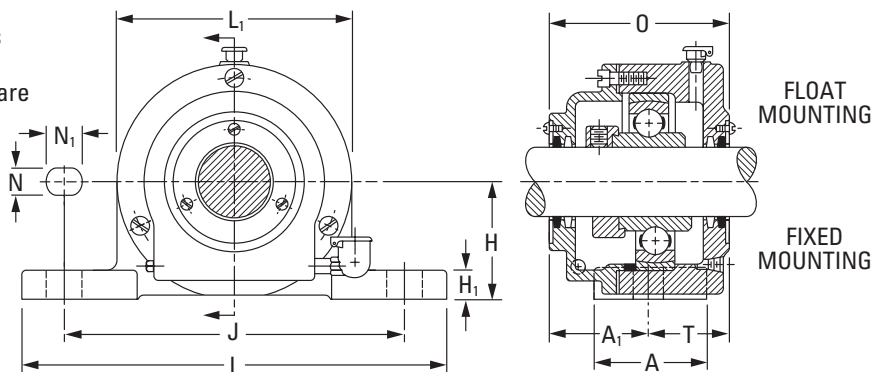
### BEARING DATA

| Unit | Bearing No. | Dimensions and Load Ratings |
|------|-------------|-----------------------------|
| SAL  | SM-KS       | Page A-43                   |

| Unit | Shaft Dia. | Total Float  | H                | O                | L <sub>1</sub>  | A              | J               | L               | N           | N <sub>1</sub> | H <sub>1</sub> | A <sub>1</sub>   | T               | Bolt Size | Bearing No. | Collar No. | Housing No. | Unit Wt.        |
|------|------------|--------------|------------------|------------------|-----------------|----------------|-----------------|-----------------|-------------|----------------|----------------|------------------|-----------------|-----------|-------------|------------|-------------|-----------------|
|      | in.        | mm           | mm               | mm               | mm              | mm             | mm              | mm              | mm          | mm             | mm             | mm               | mm              | mm        |             |            | New         | kg              |
| SAL  | 1 3/16     | 6.4<br>1/4   | 50.80<br>2       | 97.6<br>3 27/32  | 96.8<br>3 13/16 | 54.0<br>2 1/8  | 139.7<br>5 1/2  | 177.8<br>7      | 15.9<br>5/8 | 19.0<br>3/4    | 17.5<br>11/16  | 56.4<br>2 1/2    | 41.3<br>1 5/8   | 12<br>1/2 | SM1103KS    | S1103K     | T-12127     | 3.768<br>8.30   |
| SAL  | 1 1/4      | 6.4<br>1/4   | 60.33<br>2 3/8   | 104.8<br>4 1/8   | 108.0<br>4 1/4  | 60.3<br>2 3/8  | 158.8<br>6 1/4  | 210.0<br>8 1/4  | 19.0<br>3/4 | 25.4<br>1      | 19.0<br>3/4    | 62.7<br>2 15/32  | 42.1<br>1 21/32 | 16<br>5/8 | SM1104KS    | S1104K     | T-13108     | 5.239<br>11.54  |
| SAL  | 1 7/16     | 6.4<br>1/4   | 60.33<br>2 3/8   | 104.8<br>4 1/8   | 108.0<br>4 1/4  | 60.3<br>2 3/8  | 158.8<br>6 1/4  | 210.0<br>8 1/4  | 19.0<br>3/4 | 25.4<br>1      | 19.0<br>3/4    | 62.7<br>2 15/32  | 42.1<br>1 21/32 | 16<br>5/8 | SM1107KS    | S1107K     | T-13108     | 5.239<br>11.54  |
| SAL  | 1 1/2      | 7.9<br>5/16  | 60.33<br>2 3/8   | 108.0<br>4 1/4   | 120.6<br>4 3/4  | 60.3<br>2 3/8  | 168.3<br>6 5/8  | 210.0<br>8 1/4  | 19.0<br>3/4 | 25.4<br>1      | 19.0<br>3/4    | 63.5<br>2 1/2    | 44.4<br>1 3/4   | 16<br>5/8 | SM1108KTS   | S1108KT    | T-12121     | 6.143<br>13.53  |
| SAL  | 1 11/16    | 7.9<br>5/16  | 60.33<br>2 3/8   | 110.3<br>4 11/32 | 120.6<br>4 3/4  | 60.3<br>2 3/8  | 168.3<br>6 5/8  | 210.0<br>8 1/4  | 19.0<br>3/4 | 25.4<br>1      | 19.0<br>3/4    | 65.9<br>2 19/32  | 44.4<br>1 3/4   | 16<br>5/8 | SM1111KS    | S1111K     | T-12121     | 5.866<br>12.92  |
| SAL  | 1 15/16    | 7.9<br>5/16  | 69.85<br>2 3/4   | 116.7<br>4 19/32 | 133.4<br>5 1/4  | 69.8<br>2 3/4  | 210.0<br>8 1/4  | 269.9<br>10 5/8 | 19.0<br>3/4 | 25.4<br>1      | 22.2<br>7/8    | 69.1<br>2 23/32  | 47.6<br>1 7/8   | 16<br>5/8 | SM1115KS    | S1115K     | T-12313     | 8.113<br>17.87  |
| SAL  | 2 3/16     | 7.9<br>5/16  | 79.38<br>3 1/8   | 137.3<br>5 13/32 | 146.0<br>5 3/4  | 79.4<br>3 1/8  | 228.6<br>9      | 288.9<br>11 3/8 | 19.0<br>3/4 | 25.4<br>1      | 22.2<br>7/8    | 79.4<br>3 1/8    | 57.9<br>2 9/32  | 16<br>5/8 | SM1203KS    | S1203K     | A-5845      | 10.978<br>24.18 |
| SAL  | 2 7/16     | 9.5<br>3/8   | 79.38<br>3 1/8   | 150.0<br>5 29/32 | 158.8<br>6 1/4  | 79.4<br>3 1/8  | 228.6<br>9      | 288.9<br>11 3/8 | 19.0<br>3/4 | 25.4<br>1      | 22.2<br>7/8    | 88.9<br>3 1/2    | 61.1<br>2 13/32 | 16<br>5/8 | SM1207KS    | S1207K     | A-5083      | 12.894<br>28.40 |
| SAL  | 2 11/16    | 7.1<br>9/32  | 95.25<br>3 3/4   | 156.4<br>6 5/32  | 171.4<br>6 3/4  | 88.9<br>3 1/2  | 259.7<br>10 1/4 | 320.7<br>12 5/8 | 22.2<br>7/8 | 28.6<br>1 1/8  | 27.0<br>1 1/16 | 92.1<br>3 5/8    | 64.3<br>2 17/32 | 20<br>3/4 | SM1211KTS   | S1211K     | T-18940     | 15.889<br>35.02 |
| SAL  | 2 15/16    | 9.9<br>25/64 | 95.25<br>3 3/4   | 173.8<br>6 27/32 | 190.5<br>7 1/2  | 88.9<br>3 1/2  | 259.7<br>10 1/4 | 320.7<br>12 5/8 | 22.2<br>7/8 | 28.6<br>1 1/8  | 27.0<br>1 1/16 | 100.8<br>3 31/32 | 73.0<br>2 7/8   | 20<br>3/4 | SM1215KS    | S1215K     | A-5088      | 20.203<br>44.50 |
| SAL  | 3 7/16     | 9.5<br>3/8   | 115.89<br>4 9/16 | 186.5<br>7 11/32 | 212.7<br>8 3/8  | 111.1<br>4 3/8 | 314.3<br>12 3/8 | 390.6<br>15 3/8 | 25.4<br>1   | 31.8<br>1 1/4  | 31.8<br>1 1/4  | 107.2<br>4 1/8   | 79.4<br>3 1/8   | 22<br>7/8 | SM1307KS    | S1307K     | A-5206      | 33.482<br>73.75 |

### SAOL HEAVY SERIES, FIXED AND FLOATING TYPES

- These types are designed for applications with higher- than-usual temperatures or where one or more floating bearing units are required.
- The floating unit allows the bearing to move axially as the shaft expands from rising temperatures. The fixed unit maintains shaft location.
- The bearings have a loose internal fit.
- The SAOL unit is equipped with a self-aligning SMN wide-inner-ring ball bearing and a self-locking collar.
- The external aligning ring is fitted to the spherical surface of the outer ring.
- These types are equipped with oil-type seals. They're normally fitted for oil lubrication, but they can be equipped for grease lubrication when specified.
- Before installation, lubricate with high-grade automotive oil, turbine oil or ball-bearing grease.
- The units are assembled with a spacer ring (fixed type). By removing the spacer ring, the assembly becomes a floating unit.



#### Suggested shaft tolerances:

1 3/16 in. – 1 15/16 in., nominal to -0.013 mm, -0.0005 in.;  
2 in. – 3 15/16 in., nominal to -0.025 mm, -0.0010 in.  
Larger sizes, consult your Timken engineer.

To order, specify **UNIT** and **SHAFT DIAMETER** and whether **fixed** or **floating**.

Example: SAOL 1 7/16 in. (one fixed, one floating).

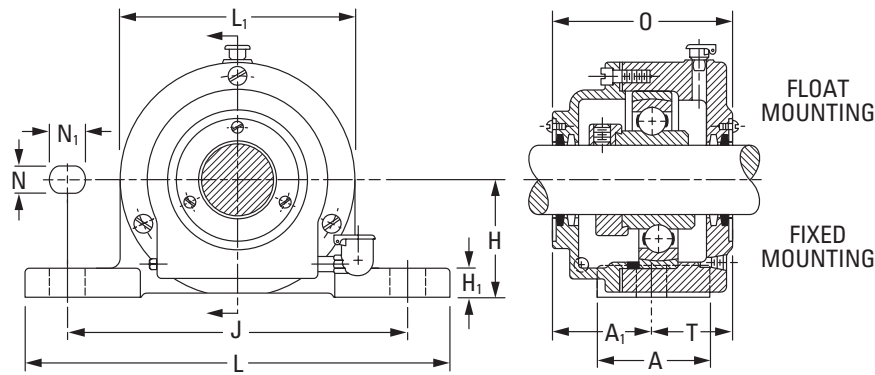
#### BEARING DATA

| Unit | Bearing No. | Dimensions and Load Ratings |
|------|-------------|-----------------------------|
| SAOL | SMN-KS      | Page A-62                   |

| Unit | Shaft Dia. | Total Float  | H                | O                | L <sub>1</sub> | A              | J               | L               | N           | N <sub>1</sub> | H <sub>1</sub> | A <sub>1</sub>  | T               | J <sub>1</sub> <sup>(1)</sup> | Bolt No. | Bolt Size | Bearing No. | Collar No. | Housing No. | Unit Wt.        |
|------|------------|--------------|------------------|------------------|----------------|----------------|-----------------|-----------------|-------------|----------------|----------------|-----------------|-----------------|-------------------------------|----------|-----------|-------------|------------|-------------|-----------------|
|      | in.        | mm in.       | mm in.           | mm in.           | mm in.         | mm in.         | mm in.          | mm in.          | mm in.      | mm in.         | mm in.         | mm in.          | mm in.          | mm in.                        |          | mm in.    |             |            | New         | kg lbs.         |
| SAOL | 1 3/16     | 7.9<br>5/16  | 60.33<br>2 3/8   | 103.2<br>4 1/16  | 111.1<br>4 3/8 | 60.3<br>2 3/8  | 168.3<br>6 5/8  | 210.0<br>8 1/4  | 15.9<br>5/8 | 22.2<br>7/8    | 17.5<br>11/16  | 60.3<br>2 3/8   | 42.9<br>1 11/16 | —                             | 2        | 12<br>1/2 | SMN103KS    | SN103K     | T-12389     | 5.521<br>12.16  |
| SAOL | 1 7/16     | 9.1<br>23/64 | 69.80<br>2 3/4   | 111.1<br>4 3/8   | 120.6<br>4 3/4 | 69.8<br>2 3/4  | 209.6<br>8 1/4  | 269.9<br>10 5/8 | 19.0<br>3/4 | 25.4<br>1      | 20.6<br>13/16  | 69.1<br>2 23/32 | 42.1<br>1 21/32 | —                             | 2        | 16<br>5/8 | SMN107KS    | SN107K     | A-4779      | 7.037<br>15.50  |
| SAOL | 1 1/2      | 9.5<br>3/8   | 79.40<br>3 1/8   | 123.8<br>4 7/8   | 146.0<br>5 3/4 | 79.4<br>3 1/8  | 228.6<br>9      | 288.9<br>11 3/8 | 19.0<br>3/4 | 25.4<br>1      | 20.6<br>13/16  | 74.6<br>2 15/16 | 49.2<br>1 15/16 | —                             | 2        | 16<br>5/8 | SMN108KS    | SN108K     | A-4778A     | 11.350<br>25.00 |
| SAOL | 1 11/16    | 9.5<br>3/8   | 79.40<br>3 1/8   | 123.8<br>4 7/8   | 146.0<br>5 3/4 | 79.4<br>3 1/8  | 228.6<br>9      | 288.9<br>11 3/8 | 19.0<br>3/4 | 25.4<br>1      | 20.6<br>13/16  | 74.6<br>2 15/16 | 49.2<br>1 15/16 | —                             | 2        | 16<br>5/8 | SMN111KS    | SN111K     | A-4778      | 11.150<br>24.56 |
| SAOL | 1 15/16    | 9.5<br>3/8   | 79.40<br>3 1/8   | 122.2<br>4 13/16 | 158.8<br>6 1/4 | 79.4<br>3 1/8  | 228.6<br>9      | 288.9<br>11 3/8 | 19.0<br>3/4 | 25.4<br>1      | 20.6<br>13/16  | 73.8<br>2 29/32 | 48.4<br>1 29/32 | —                             | 2        | 16<br>5/8 | SMN115KS    | SN115K     | A-3818      | 12.462<br>27.45 |
| SAOL | 2 3/16     | 9.1<br>23/64 | 95.25<br>3 3/4   | 139.7<br>5 1/2   | 171.4<br>6 3/4 | 88.9<br>3 1/2  | 259.7<br>10 1/4 | 320.7<br>12 5/8 | 22.2<br>7/8 | 31.8<br>1 1/4  | 27.0<br>1 1/16 | 82.6<br>3 1/4   | 57.2<br>2 1/4   | —                             | 2        | 20<br>3/4 | SMN203KS    | SN203K     | A-4755      | 15.409<br>33.94 |
| SAOL | 2 7/16     | 8.7<br>11/32 | 104.80<br>4 1/8  | 150.0<br>5 29/32 | 190.5<br>7 1/2 | 101.6<br>4     | 285.8<br>11 1/4 | 349.2<br>13 3/4 | 22.2<br>7/8 | 31.8<br>1 1/4  | 27.0<br>1 1/16 | 91.3<br>3 19/32 | 58.7<br>2 5/16  | —                             | 2        | 20<br>3/4 | SMN207KS    | SN207K     | A-3819      | 18.841<br>41.50 |
| SAOL | 2 11/16    | 9.5<br>3/8   | 115.89<br>4 9/16 | 174.6<br>6 7/8   | 215.9<br>8 1/2 | 111.1<br>4 3/8 | 304.8<br>12     | 390.6<br>15 3/8 | 25.4<br>1   | 31.8<br>1 1/4  | 31.8<br>1 1/4  | 109.5<br>4 5/16 | 65.1<br>2 9/16  | —                             | 2        | 22<br>7/8 | SMN211KS    | SO211K     | A-4709      | 26.332<br>58.00 |
| SAOL | 2 15/16    | 12.7<br>1/2  | 115.89<br>4 9/16 | 177.8<br>7       | 225.4<br>8 7/8 | 111.1<br>4 3/8 | 314.3<br>12 3/8 | 390.6<br>15 3/8 | 25.4<br>1   | 31.8<br>1 1/4  | 31.8<br>1 1/4  | 104.8<br>4 1/8  | 73.0<br>2 7/8   | —                             | 2        | 22<br>7/8 | SMN215KS    | SN215K     | A-4798      | 33.823<br>74.50 |

<sup>(1)</sup>When four bolts are used, dimension J<sub>1</sub> is the distance between centers, and A<sub>1</sub> and T are measured from the center of the base.

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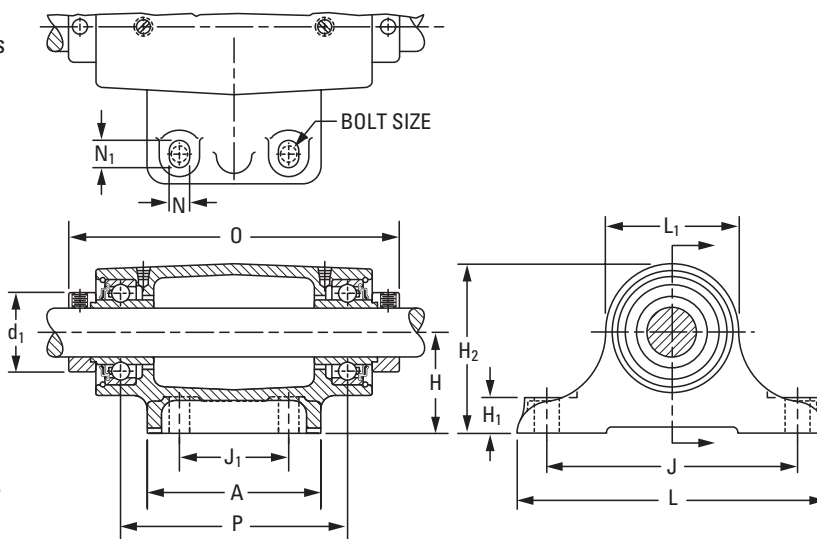
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| Unit | Shaft Dia. | Total Float     | H                | O                | L <sub>1</sub>  | A                | J                 | L                 | N             | N <sub>1</sub> | H <sub>1</sub> | A <sub>1</sub>  | T               | J <sub>1</sub> <sup>(1)</sup> | Bolt No. | Bolt Size   | Bearing No. | Collar No. | Housing No. | Unit Wt.         |
|------|------------|-----------------|------------------|------------------|-----------------|------------------|-------------------|-------------------|---------------|----------------|----------------|-----------------|-----------------|-------------------------------|----------|-------------|-------------|------------|-------------|------------------|
|      | in.        | mm in.          | mm in.           | mm in.           | mm in.          | mm in.           | mm in.            | mm in.            | mm in.        | mm in.         | mm in.         | mm in.          | mm in.          | mm in.                        |          | mm in.      |             |            | New         | kg lbs.          |
| SAOL | 3 3/16     | 13.1<br>33/64   | 115.89<br>4 9/16 | 184.2<br>7 1/4   | 241.3<br>9 1/2  | 111.1<br>4 3/8   | 314.3<br>12 3/8   | 390.6<br>15 3/8   | 25.4<br>1     | 31.8<br>1 1/4  | 31.8<br>1 1/4  | 108.0<br>4 1/4  | 76.2<br>3       | 57.2<br>2 1/4                 | 4        | 22<br>7/8   | SMN303KS    | SN303K     | A-4780      | 35.298<br>77.75  |
| SAOL | 3 7/16     | 13.5<br>17/32   | 130.2<br>5 1/8   | 190.5<br>7 1/2   | 260.4<br>10 1/4 | 120.6<br>4 3/4   | 339.7<br>13 3/8   | 409.6<br>16 1/8   | 25.4<br>1     | 31.8<br>1 1/4  | 31.8<br>1 1/4  | 111.1<br>4 3/8  | 79.4<br>3 1/8   | 76.2<br>3                     | 4        | 22<br>7/8   | SMN307KS    | SN307K     | A-4155      | 48.805<br>107.5  |
| SAOL | 3 11/16    | 12.7<br>1/2     | 144.5<br>5 11/16 | 213.5<br>8 13/32 | 279.4<br>11     | 125.4<br>4 15/16 | 374.6<br>14 3/4   | 439.7<br>17 5/16  | 28.6<br>1 1/8 | 38.1<br>1 1/2  | 31.8<br>1 1/4  | 133.4<br>5 1/4  | 80.2<br>3 1/2   | —                             | 2        | 24<br>1     | SMO311WS    | SO311K     | A-4156      | 54.48<br>120.0   |
| SAOL | 3 15/16    | 17.5<br>11/16   | 152.4<br>6       | 219.9<br>8 21/32 | 298.4<br>11 3/4 | 133.4<br>5 1/4   | 393.1<br>15 1/2   | 469.9<br>18 1/2   | 28.6<br>1 1/8 | 38.1<br>1 1/2  | 34.9<br>1 3/8  | 127.0<br>5      | 92.9<br>3 21/32 | 82.6<br>3 1/4                 | 4        | 24<br>1     | SMN315KS    | SN315K     | A-4795      | 70.824<br>156.0  |
| SAOL | 4 3/16     | 15.9<br>5/8     | 165.1<br>6 1/2   | 225.4<br>8 7/8   | 317.5<br>12 1/2 | 158.8<br>6 1/4   | 449.3<br>17 11/16 | 539.8<br>21 1/4   | 28.6<br>1 1/8 | 38.1<br>1 1/2  | 38.1<br>1 1/2  | 134.1<br>5 9/32 | 91.3<br>3 19/32 | 101.6<br>4                    | 4        | 24<br>1     | SMN403WS    | SN403K     | T-14342     | 88.076<br>194.0  |
| SAOL | 4 7/16     | 14.3<br>9/16    | 177.8<br>7       | 228.6<br>9       | 327.0<br>12 7/8 | 171.4<br>6 3/4   | 449.3<br>17 11/16 | 539.8<br>21 1/4   | 31.8<br>1 1/4 | 44.4<br>1 3/4  | 44.4<br>1 3/4  | 134.9<br>5 5/16 | 93.6<br>3 11/16 | 108.0<br>4 1/4                | 4        | 27<br>1 1/8 | SMN407WS    | SN407K     | T-11469     | 95.34<br>210.0   |
| SAOL | 4 15/16    | 31.4<br>1 15/64 | 209.6<br>8 1/4   | 261.9<br>10 5/16 | 381.0<br>15     | 184.2<br>7 1/4   | 514.4<br>20 1/4   | 630.2<br>24 13/16 | 31.8<br>1 1/4 | 44.4<br>1 3/4  | 50.8<br>2      | 152.4<br>6      | 109.5<br>4 5/16 | 120.6<br>4 3/4                | 4        | 27<br>1 1/8 | SMN415WS    | SN415K     | T-11783     | 160.262<br>353.0 |

<sup>(1)</sup>When four bolts are used, dimension J<sub>1</sub> is the distance between centers, and A<sub>1</sub> and T are measured from the center of the base.

### DRNR INDUSTRIAL SERIES

- This rigid double pillow block is designed to provide a sturdy two-bearing mounting for fans and blowers, bench grinders, buffers, vertical shafts and similar heavy-duty applications.
- The compact, one-piece housing is equipped with two wide-inner-ring ball bearings with integral R-seals and a self-locking collar.
- Individual grease chambers are provided for both bearings.
- The close clearance baffles allow excess grease to work into the center chamber of the housing.
- The grease fittings that take the place of standard pipe plugs provide the means of relubrication.
- This pillow block can be mounted in any position, with ample radial and thrust capacity.



#### Suggested shaft tolerances:

1<sup>5</sup>/<sub>16</sub> in. – 1<sup>15</sup>/<sub>16</sub> in., nominal to -0.013 mm, -0.0005 in.;

2 in. – 2<sup>3</sup>/<sub>16</sub> in., nominal to -0.025 mm, -0.0010 in.

#### To order, specify UNIT and SHAFT DIAMETER.

Example: DRNR 1<sup>7</sup>/<sub>16</sub> in.

#### BEARING DATA

| Unit | Bearing No. | Dimensions and Load Ratings |
|------|-------------|-----------------------------|
| DRNR | KR          | Page A-32                   |

| Unit | Shaft Dia.                     | H             | H <sub>2</sub>  | O               | L <sub>1</sub>  | J              | L              | A              | H <sub>1</sub> | N             | N <sub>1</sub> | J <sub>1</sub> | d <sub>1</sub>  | P                | Bolt (4 req'd) | Bearing No. (2 req'd) | Collar No. | Housing No. | Unit Wt.        |
|------|--------------------------------|---------------|-----------------|-----------------|-----------------|----------------|----------------|----------------|----------------|---------------|----------------|----------------|-----------------|------------------|----------------|-----------------------|------------|-------------|-----------------|
|      | in.                            | mm in.        | mm in.          | mm in.          | mm in.          | mm in.         | mm in.         | mm in.         | mm in.         | mm in.        | mm in.         | mm in.         | mm in.          | mm in.           | mm in.         |                       |            | New         | kg lbs.         |
| DRNR | 1 <sup>5</sup> / <sub>16</sub> | 63.5<br>2 1/2 | 99.2<br>3 29/32 | 200.0<br>7 7/8  | 71.4<br>2 13/16 | 158.8<br>6 1/4 | 196.8<br>7 3/4 | 108.0<br>4 1/4 | 19.0<br>3/4    | 12.7<br>1/2   | 15.9<br>5/8    | 69.8<br>2 3/4  | 38.1<br>1 1/2   | 146.0<br>5 3/4   | 10             | 1015KR                | S1015K     | T-19189     | 4.812<br>10.60  |
| DRNR | 1 3/16                         | 63.5<br>2 1/2 | 105.6<br>4 5/32 | 203.2<br>8      | 84.1<br>3 5/16  | 158.8<br>6 1/4 | 196.8<br>7 3/4 | 108.0<br>4 1/4 | 22.2<br>7/8    | 12.7<br>1/2   | 15.9<br>5/8    | 69.8<br>2 3/4  | 44.1<br>1 47/64 | 142.9<br>5 5/8   | 10             | 1103KR                | S1103K     | T-19191     | 5.167<br>11.38  |
| DRNR | 1 7/16                         | 76.2<br>3     | 123.8<br>4 7/8  | 276.2<br>10 7/8 | 95.2<br>3 3/4   | 203.2<br>8     | 254.0<br>10    | 139.7<br>5 1/2 | 25.4<br>1      | 15.9<br>5/8   | 22.2<br>7/8    | 88.9<br>3 1/2  | 54.0<br>2 1/8   | 211.5<br>8 21/64 | 12             | 1107KR                | S1107K     | T-19193     | 9.625<br>21.20  |
| DRNR | 1 11/16                        | 76.2<br>3     | 133.4<br>5 1/4  | 279.4<br>11     | 114.3<br>4 1/2  | 203.2<br>8     | 254.0<br>10    | 139.7<br>5 1/2 | 25.4<br>1      | 15.9<br>5/8   | 22.2<br>7/8    | 88.9<br>3 1/2  | 63.5<br>2 1/2   | 209.6<br>8 1/4   | 12             | 1111KR                | S1111K     | T-19197     | 11.690<br>25.75 |
| DRNR | 1 15/16                        | 88.9<br>3 1/2 | 150.8<br>5 5/16 | 352.4<br>13 7/8 | 123.8<br>4 7/8  | 241.3<br>9 1/2 | 304.8<br>12    | 177.8<br>7     | 28.5<br>1 1/8  | 17.5<br>11/16 | 28.5<br>1 1/8  | 114.3<br>4 1/2 | 69.8<br>2 3/4   | 276.2<br>10 7/8  | 16             | 1115KR                | S1115K     | T-19195     | 18.841<br>41.50 |
| DRNR | 2 3/16                         | 88.9<br>3 1/2 | 158.8<br>6 1/4  | 355.6<br>14     | 133.4<br>5 1/4  | 241.3<br>9 1/2 | 304.8<br>12    | 177.8<br>7     | 31.8<br>1 1/4  | 17.5<br>11/16 | 28.5<br>1 1/8  | 114.3<br>4 1/2 | 76.2<br>3       | 268.3<br>10 9/16 | 16             | 1203KR                | S1203K     | A-9598      | 23.608<br>52.00 |

## CAST-IRON FLANGED UNITS

### RCJ, TCJ, LCJ INDUSTRIAL SERIES

- Timken cartridges are used in applications where a minimum amount of machining is to be done.
- Each unit comes assembled and ready for mounting, with bolts through the flange.
- These are wide-inner-ring ball bearings, self-aligning B-types, which compensate for shaft misalignment.
- The RCJ flange cartridge is equipped with G-KRRB (R-seal) wide-inner-ring ball bearings. The TCJ is equipped with G-KPPB (tri-ply seal) wide-inner-ring ball bearings. The LCJ is equipped with the G-KLLB (Mechani-seal) wide-inner-ring ball bearings.
- The TCJ flange cartridges are identical to RCJ units, except they use the tri-ply seal bearing. Tri-ply units offer the best protection in dirty environments.
- The units are factory-prelubricated, but a grease fitting is provided for relubrication if required. The units are supplied with self-locking collars.

- Contact a Timken engineer to discuss highly corrosive applications (food processing, chemical exposure) where Timken thin-dense chrome-coated bearings can be used.
- Safety end caps are available for selected sizes.

#### Suggested shaft tolerances:

1 <sup>13</sup>/<sub>16</sub> in. – 1 <sup>15</sup>/<sub>16</sub> in., nominal to -0.013 mm, -0.0005 in.;  
2 in. – 2 <sup>15</sup>/<sub>16</sub> in., nominal to -0.025 mm, -0.0010 in.

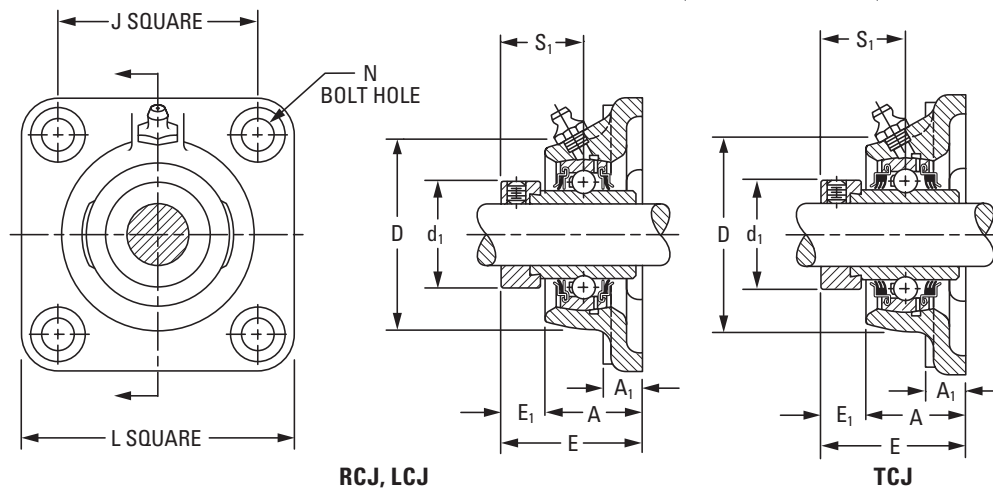
For larger sizes, consult your Timken engineer.

#### To order, specify UNIT and SHAFT DIAMETER.

Example: RCJ 1 <sup>3</sup>/<sub>16</sub> in.

#### BEARING DATA

| Unit | Bearing No. | Dimensions and Load Ratings |
|------|-------------|-----------------------------|
| RCJ  | G-KRRB      | Page A-34                   |
| TCJ  | G-KPPB      | Page A-39                   |
| LCJ  | G-KLLB      | Page A-37                   |



| Unit <sup>(1)</sup> | Shaft Dia. | L         | J         | A <sub>1</sub> | A         | E         | N         | E <sub>1</sub> | S <sub>1</sub> | D         | d <sub>1</sub> | Bolt Size | Bearing No. <sup>(2)</sup> | Collar No. | Housing No.  | Unit Wt.   |
|---------------------|------------|-----------|-----------|----------------|-----------|-----------|-----------|----------------|----------------|-----------|----------------|-----------|----------------------------|------------|--------------|------------|
|                     | in.<br>mm  | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in. | mm<br>in.      | mm<br>in. | RCJ                        | (TCJ)      | New<br>(Old) | kg<br>lbs. |
| RCJ                 | 1/2        |           |           |                |           |           |           |                |                |           |                |           | G1008KRRB                  | S1008K     |              |            |
| RCJ                 | 5/8        | 76.2      | 54.0      | 9.5            | 23.6      | 40.6      | 10.7      | 13.9           | 23.4           | 52.4      | 28.1           | 10        | G1010KRRB                  | S1010K     | T-40278      | 0.526      |
| RCJ                 | 1 1/16     | 3         | 2 1/8     | 13/32          | 0.929     | 1.599     | 27/64     | 35/64          | 59/64          | 2 1/16    | 1.105          | 3/8       | G1011KRRB                  | S1011K     | (T-16659)    | 1.16       |
| RCJ                 | 1 7/8      |           |           |                |           |           |           |                |                |           |                |           | GE17KRRB                   | SE17K      |              |            |
| RCJ                 | 3/4        | 85.7      | 63.5      | 11.1           | 27.8      | 46.4      | 10.7      | 16.3           | 26.6           | 60.3      | 32.8           | 10        | G1012KRRB                  | S1012K     | T-40267      | 0.726      |
| RCJ                 | 20         | 3 3/8     | 2 1/2     | 7/16           | 1.094     | 1.828     | 27/64     | 41/64          | 1 3/64         | 2 3/8     | 1.292          | 3/8       | GE20KRRB                   | SE20K      | (T-16661)    | 1.60       |
| RCJ, TCJ            | 7/8        |           |           |                |           |           |           |                |                |           |                |           | G1014KRRB                  | (KPPB3)    | S1014K       |            |
| RCJ, TCJ            | 1 5/16     | 95.2      | 69.8      | 12.7           | 27.9      | 46.6      | 11.5      | 15.9           | 27.0           | 65.1      | 37.6           | 10        | G1015KRRB                  | (KPPB3)    | S1015K       | T-40262    |
| RCJ, TCJ            | 1          | 3 3/4     | 2 3/4     | 1/2            | 1.100     | 1.834     | 29/64     | 5/8            | 1 1/16         | 2 9/16    | 1.480          | 3/8       | G1100KRRB                  | (KPPB3)    | S1100K       | (T-16663)  |
| RCJ, TCJ            | 25         |           |           |                |           |           |           |                |                |           |                |           | GE25KRRB                   | (KPPB3)    | SE25K        |            |
| RCJ, TCJ            | 1 1/16     |           |           |                |           |           |           |                |                |           |                |           | G1101KRRB                  | (KPPB3)    | S1101K       |            |
| RCJ, TCJ            | 1 1/8      | 107.9     | 82.6      | 13.5           | 29.9      | 50.5      | 11.5      | 17.5           | 30.2           | 76.2      | 43.9           | 10        | G1102KRRB                  | (KPPB3)    | S1102K       | T-40266    |
| RCJ, TCJ            | 1 3/16     | 4 1/4     | 3 1/4     | 17/32          | 1.178     | 1.990     | 29/64     | 1 1/16         | 1 3/16         | 3         | 1.730          | 3/8       | G1103KRRB                  | (KPPB3)    | S1103K       | (T-16664)  |
| RCJ, TCJ            | 30         |           |           |                |           |           |           |                |                |           |                |           | GE30KRRB                   | (KPPB3)    | SE30K        | 2.87       |

<sup>(1)</sup>Type LCJ uses G-KLLB.

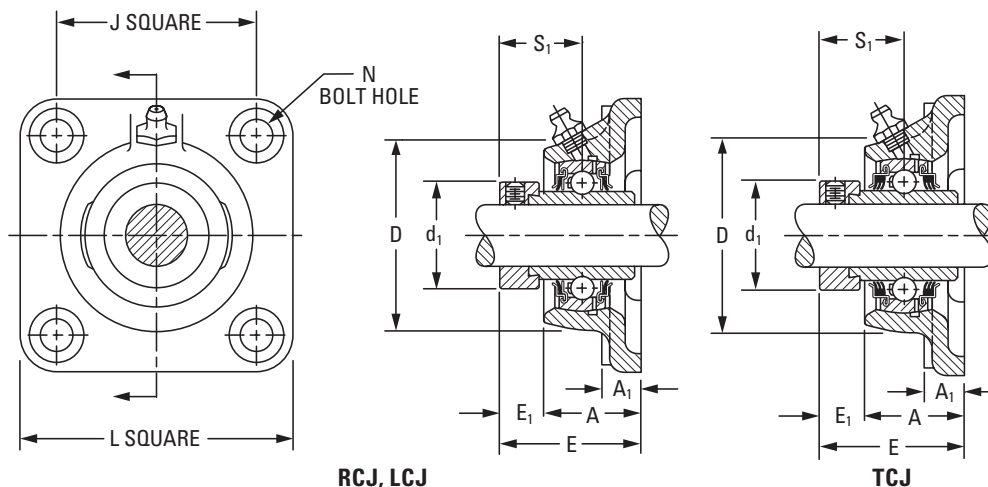
<sup>(2)</sup>Bearing number for RCJ is G-KRRB. TCJ uses G-KPPB.

Continued on next page.

# BALL BEARING HOUSED UNITS

BALL BEARING HOUSED UNITS • CAST-IRON FLANGED UNITS • RCJ, TCJ, LCJ

## RCJ, TCJ, LCJ INDUSTRIAL SERIES – continued



Continued from previous page.

| Unit <sup>(1)</sup> | Shaft Dia. | L              | J              | A <sub>1</sub> | A             | E             | N             | E <sub>1</sub> | S <sub>1</sub>  | D               | d <sub>1</sub> | Bolt Size | Bearing No. <sup>(2)</sup> | Collar No. | Housing No.          | Unit Wt.        |
|---------------------|------------|----------------|----------------|----------------|---------------|---------------|---------------|----------------|-----------------|-----------------|----------------|-----------|----------------------------|------------|----------------------|-----------------|
|                     | in.<br>mm  | mm<br>in.      | mm<br>in.      | mm<br>in.      | mm<br>in.     | mm<br>in.     | mm<br>in.     | mm<br>in.      | mm<br>in.       | mm<br>in.       | mm<br>in.      | mm<br>in. | RCJ<br>(TCJ)               |            | New<br>(Old)         | kg<br>lbs.      |
| RCJ, TCJ            | 1 1/4      |                |                |                |               |               |               |                |                 |                 |                |           | G1104KRRB (KPPB2)          | S1104K     |                      |                 |
| RCJ, TCJ            | 1 5/16     |                |                |                |               |               |               |                |                 |                 |                |           | G1105KRRB (KPPB2)          | S1105K     |                      |                 |
| RCJ, TCJ            | 1 3/8      | 117.5<br>4 5/8 | 92.1<br>3 5/8  | 13.5<br>17/32  | 31.8<br>1.254 | 53.5<br>2.106 | 13.1<br>33/64 | 19.0<br>3/4    | 32.5<br>1 9/32  | 88.9<br>3 1/2   | 53.6<br>2.112  | 12<br>1/2 | G1106KRRB (KPPB2)          | S1106K     | T-40253<br>(T-16617) | 1.787<br>3.94   |
| RCJ, TCJ            | 1 7/16     |                |                |                |               |               |               |                |                 |                 |                |           | G1107KRRB (KPPB2)          | S1107K     |                      |                 |
| RCJ, TCJ            | 35         |                |                |                |               |               |               |                |                 |                 |                |           | GE35KRRB (KPPB2)           | SE35K      |                      |                 |
| RCJ, TCJ            | 1 1/2      | 130.2<br>5 1/8 | 101.6<br>4     | 14.3<br>9/16   | 38.1<br>1.500 | 59.3<br>2.334 | 13.1<br>33/64 | 20.6<br>13/16  | 34.9<br>1 3/8   | 98.4<br>3 7/8   | 58.2<br>2.292  | 12<br>1/2 | G1108KRRB (KPPB3)          | S1108KT    |                      |                 |
| RCJ, TCJ            | 1 9/16     |                |                |                |               |               |               |                |                 |                 |                |           | G1109KRRB (KPPB3)          | S1109KT    | T-40263<br>(T-16666) | 2.291<br>5.05   |
| RCJ, TCJ            | 40         |                |                |                |               |               |               |                |                 |                 |                |           | GE40KRRB (KPPB3)           | SE40K      |                      |                 |
| RCJ, TCJ            | 1 5/8      |                |                |                |               |               |               |                |                 |                 |                |           | G1110KRRB (KPPB4)          | S1110K     |                      |                 |
| RCJ, TCJ            | 1 11/16    | 136.5<br>5 3/8 | 104.8<br>4 1/8 | 14.3<br>9/16   | 38.9<br>1.531 | 59.3<br>2.334 | 13.1<br>33/64 | 19.8<br>25/32  | 34.9<br>1 3/8   | 104.8<br>4 1/8  | 63.0<br>2.480  | 12<br>1/2 | G1111KRRB (KPPB4)          | S1111K     |                      |                 |
| RCJ, TCJ            | 1 3/4      |                |                |                |               |               |               |                |                 |                 |                |           | G1112KRRB (KPPB4)          | S1112K     | T-40264<br>(T-16667) | 2.585<br>5.70   |
| RCJ, TCJ            | 45         |                |                |                |               |               |               |                |                 |                 |                |           | GE45KRRB (KPPB4)           | SE45K      |                      |                 |
| RCJ, TCJ            | 1 7/8      | 142.9<br>5 5/8 | 111.1<br>4 3/8 | 14.3<br>9/16   | 42.9<br>1.688 | 66.4<br>2.615 | 17.1<br>43/64 | 23.0<br>29/32  | 38.1<br>1 1/2   | 112.7<br>4 7/16 | 69.3<br>2.730  | 16<br>5/8 | G1114KRRB (KPPB3)          | S1114K     |                      |                 |
| RCJ, TCJ            | 1 15/16    |                |                |                |               |               |               |                |                 |                 |                |           | G1115KRRB (KPPB3)          | S1115K     | T-40265<br>(T-16668) | 3.016<br>6.65   |
| RCJ, TCJ            | 50         |                |                |                |               |               |               |                |                 |                 |                |           | GE50KRRB (KPPB3)           | SE50K      |                      |                 |
| RCJ, TCJ            | 2          |                |                |                |               |               |               |                |                 |                 |                |           | G1200KRRB (KPPB4)          | S1200K     |                      |                 |
| RCJ, TCJ            | 2 1/8      | 161.9<br>6 3/8 | 130.2<br>5 1/8 | 16.7<br>21/32  | 46.8<br>1.844 | 75.1<br>2.958 | 17.1<br>43/64 | 27.8<br>1 3/32 | 43.7<br>1 23/32 | 120.6<br>4 3/4  | 75.7<br>2.980  | 16<br>5/8 | G1202KRRB (KPPB4)          | S1202K     |                      |                 |
| RCJ, TCJ            | 2 3/16     |                |                |                |               |               |               |                |                 |                 |                |           | G1203KRRB (KPPB4)          | S1203K     | T-40268<br>(T-16683) | 3.842<br>8.47   |
| RCJ, TCJ            | 55         |                |                |                |               |               |               |                |                 |                 |                |           | GE55KRRB (KPPB4)           | SE55K      |                      |                 |
| RCJ                 | 2 1/4      |                |                |                |               |               |               |                |                 |                 |                |           | G1204KRRB                  | S1204K     |                      |                 |
| RCJ                 | 2 3/8      | 174.6<br>6 7/8 | 142.9<br>5 5/8 | 17.5<br>11/16  | 49.2<br>1.937 | 81.6<br>3.214 | 17.1<br>43/64 | 31.8<br>1 1/4  | 46.8<br>1 27/32 | 136.5<br>5 3/8  | 83.6<br>3.292  | 16<br>5/8 | G1206KRRB                  | S1206K     |                      |                 |
| RCJ                 | 2 7/16     |                |                |                |               |               |               |                |                 |                 |                |           | G1207KRRB                  | S1207K     | T-40269<br>(T-17648) | 5.048<br>11.13  |
| RCJ                 | 60         |                |                |                |               |               |               |                |                 |                 |                |           | GE60KRRB                   | SE60K      |                      |                 |
| RCJ                 | 2 11/16    | 187.3<br>7 3/8 | 149.2<br>5 7/8 | 19.1<br>3/4    | 63.5<br>2.500 | 90.3<br>3.557 | 16.3<br>41/64 | 25.4<br>1      | 45.2<br>1 25/32 | 152.4<br>6      | 96.3<br>3.792  | 16<br>5/8 | G1211KRRB                  | S1211K     |                      |                 |
| RCJ                 | 70         |                |                |                |               |               |               |                |                 |                 |                |           | GE70KRRB                   | SE70K      | T-22530<br>(T-22270) | 6.885<br>15.18  |
| RCJ                 | 2 15/16    | 196.8<br>7 3/4 | 152.4<br>6     | 22.2<br>7/8    | 66.7<br>2.625 | 96.7<br>3.807 | 19.8<br>25/32 | 26.2<br>1 1/32 | 54.8<br>2 5/32  | 161.9<br>6 3/8  | 101.1<br>3.980 | 16<br>5/8 | G1215KRRB                  | S1215K     |                      |                 |
| RCJ                 | 75         |                |                |                |               |               |               |                |                 |                 |                |           | GE75KRRB                   | SE75K      | T-21620<br>(T-21620) | 8.210<br>18.100 |

<sup>(1)</sup>Type LCJ uses G-KLLB.

<sup>(2)</sup>Bearing number for RCJ is G-KRRB. TCJ uses G-KPPB.

### RCJC INDUSTRIAL-SERIES CONCENTRIC COLLAR

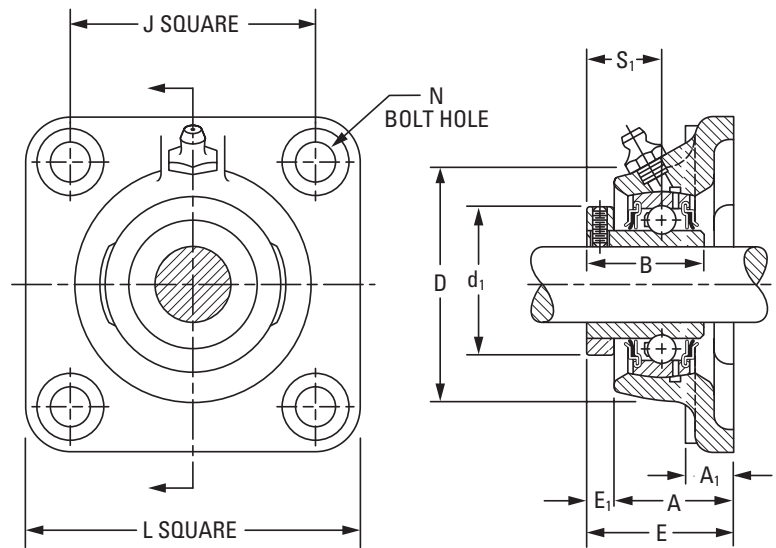
- These units have the same basic design as the RCJ series, except a concentric collar is used as the shaft-locking device instead of a self-locking cam collar.
- All RCJC units are equipped with GC-KRRB wide inner ring, concentric-collar bearings.
- The spherical outside diameter of the bearings is mounted in corresponding machined housing seats to provide the initial self-alignment.
- The bolt-hole spacing dimensions are interchangeable with the RCJ series and most competitive units.
- The units are factory-prelubricated, but a grease fitting is provided for relubrication if required.
- Concentric collars are supplied with all units.
- Safety end caps are available for selected sizes.

#### Suggested shaft tolerances:

- 1/2 in. – 1 15/16 in., nominal to -0.013 mm, -0.0005 in.;  
2 in. – 2 15/16 in., nominal to -0.025 mm, -0.0010 in.

#### To order, specify UNIT and SHAFT DIAMETER.

Example: RCJC 1 3/16 in.



#### BEARING DATA

| Unit | Bearing No. | Dimensions and Load Ratings |
|------|-------------|-----------------------------|
| RCJC | GC-KRRB     | Page A-40                   |

| Unit | Shaft Dia. | L              | J               | A <sub>1</sub> | A               | E               | N             | E <sub>1</sub> | B               | D               | d <sub>1</sub>  | S <sub>1</sub>  | Bolt Size | Bearing No.                             | Collar No. | Housing No. | Unit Wt.       |
|------|------------|----------------|-----------------|----------------|-----------------|-----------------|---------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------|-----------------------------------------|------------|-------------|----------------|
|      | in.        | mm in.         | mm in.          | mm in.         | mm in.          | mm in.          | mm in.        | mm in.         | mm in.          | mm in.          | mm in.          | mm in.          |           |                                         |            |             | kg lbs.        |
| RCJC | 5/8        | 76.2<br>3      | 53.98<br>2 1/8  | 11.1<br>7/16   | 22.2<br>7/8     | 30.2<br>1 3/16  | 9.9<br>25/64  | 7.9<br>5/16    | 26.6<br>1 3/64  | 52.4<br>2 1/16  | 34.1<br>1 11/32 | 15.5<br>39/64   | 10<br>3/8 | GC1010KRRB                              | C203       | T-27113     | 0.486<br>1.07  |
| RCJC | 3/4        | 85.7<br>3 3/8  | 63.5<br>2 1/2   | 11.1<br>7/16   | 25.8<br>1 1/64  | 32.5<br>1 9/32  | 9.9<br>25/64  | 6.7<br>17/64   | 31.0<br>1 7/32  | 60.3<br>2 3/8   | 38.1<br>1 1/2   | 18.7<br>47/64   | 10<br>3/8 | GC1012KRRB                              | C204       | T-26605     | 0.645<br>1.42  |
| RCJC | 1          | 95.2<br>3 3/4  | 69.85<br>2 3/4  | 11.1<br>7/16   | 28.6<br>1 1/8   | 36.1<br>1 27/64 | 11.5<br>29/64 | 7.5<br>19/64   | 34.1<br>1 11/32 | 65.1<br>2 9/16  | 44.4<br>1 3/4   | 20.2<br>51/64   | 10<br>3/8 | GC1100KRRB                              | C205       | T-26614     | 0.781<br>1.72  |
| RCJC | 1 1/8      | 107.9<br>4 1/4 | 82.55<br>3 1/4  | 12.7<br>1/2    | 30.2<br>1 3/16  | 39.3<br>1 39/64 | 11.5<br>29/64 | 9.1<br>23/64   | 37.3<br>1 15/32 | 76.2<br>3       | 52.4<br>2 1/16  | 22.6<br>57/64   | 10<br>3/8 | GC1102KRRB<br>GC1103KRRB<br>GC1103KRRB3 | C206       | T-26630     | 1.135<br>2.50  |
| RCJC | 1 1/4      | 117.5<br>4 5/8 | 92.08<br>3 5/8  | 14.3<br>9/16   | 34.1<br>1 11/32 | 44.4<br>1 3/4   | 13.1<br>33/64 | 10.3<br>13/32  | 41.3<br>1 5/8   | 88.9<br>3 1/2   | 59.5<br>2 11/32 | 25.4<br>1       | 12<br>1/2 | GC1104KRRB<br>GC1106KRRB<br>GC1107KRRB  | C207       | T-26665     | 1.707<br>3.76  |
| RCJC | 1 1/2      | 130.2<br>5 1/8 | 101.60<br>4     | 17.5<br>11/16  | 40.5<br>1 19/32 | 51.2<br>2 1/64  | 13.1<br>33/64 | 10.7<br>27/64  | 44.1<br>1 47/64 | 98.4<br>3 7/8   | 68.3<br>2 11/16 | 27.4<br>1 5/64  | 12<br>1/2 | GC1108KRRB                              | C208       | T-16666A    | 2.238<br>4.93  |
| RCJC | 1 11/16    | 136.5<br>5 3/8 | 104.78<br>4 1/8 | 17.5<br>11/16  | 41.3<br>1 5/8   | 53.2<br>2 3/32  | 13.1<br>33/64 | 11.9<br>15/32  | 46.8<br>1 27/32 | 104.8<br>4 1/8  | 73.0<br>2 7/8   | 29.4<br>1 5/32  | 12<br>1/2 | GC1111KRRB<br>GC1112KRRB                | C209       | T-16667A    | 2.538<br>5.59  |
| RCJC | 1 5/16     | 142.9<br>5 5/8 | 111.12<br>4 3/8 | 15.9<br>5/8    | 42.1<br>1 21/32 | 54.8<br>2 5/32  | 17.1<br>43/64 | 12.7<br>1/2    | 48.4<br>1 29/32 | 112.7<br>4 7/16 | 79.4<br>3 1/8   | 30.2<br>1 3/16  | 16<br>5/8 | GC1115KRRB                              | C210       | T-26700     | 2.797<br>6.16  |
| RCJC | 2          | 161.9<br>6 3/8 | 130.18<br>5 1/8 | 19.0<br>3/4    | 44.4<br>1 3/4   | 58.7<br>2 5/16  | 17.1<br>43/64 | 14.3<br>9/16   | 54.0<br>2 1/8   | 120.6<br>4 3/4  | 88.9<br>3 1/2   | 33.33<br>1 5/16 | 16<br>5/8 | GC1200KRRB<br>GC1203KRRB                | C211       | T-26712     | 4.036<br>8.89  |
| RCJC | 2 7/16     | 174.6<br>6 7/8 | 142.88<br>5 5/8 | 19.0<br>3/4    | 47.6<br>1 7/8   | 65.9<br>2 19/32 | 16.3<br>41/64 | 18.3<br>23/32  | 60.3<br>2 3/8   | 136.5<br>5 3/8  | 95.2<br>3 3/4   | 37.3<br>1 15/32 | 16<br>5/8 | GC1207KRRB                              | C212       | T-26726     | 4.926<br>10.85 |
| RCJC | 2 15/16    | 196.8<br>7 3/4 | 152.40<br>6     | 22.2<br>7/8    | 54.0<br>2 1/8   | 75.4<br>2 31/32 | 19.8<br>29/32 | 21.4<br>27/32  | 70.6<br>2 25/32 | 161.9<br>6 3/8  | 114.3<br>4 1/2  | 43.7<br>1 23/32 | 16<br>5/8 | GC1215KRRB                              | C215       | T-27128     | 7.473<br>16.46 |

NOTE: Shaft diameter with an S = smaller housing.

### YCJ INDUSTRIAL SET SCREW SERIES

- Incorporates Shaft Guarding Technology, which reduces replacement time, provides shaft protection and prolongs the life of the shaft.
- The same basic design as the RCJ series, except specially designed set screws are used as the locking device instead of an eccentric collar.
- All units are equipped with GY-KRRB wide-inner-ring set screw bearings.
- Spherical outside diameter of the bearings mounted in the corresponding machined housing seats provides the initial self-alignment.
- Bolt-hole spacing dimensions are interchangeable with the RCJ series and most competitive units.
- Units are factory-prelubricated, but a grease fitting is provided for relubrication if required.
- Safety end caps are available for selected sizes.

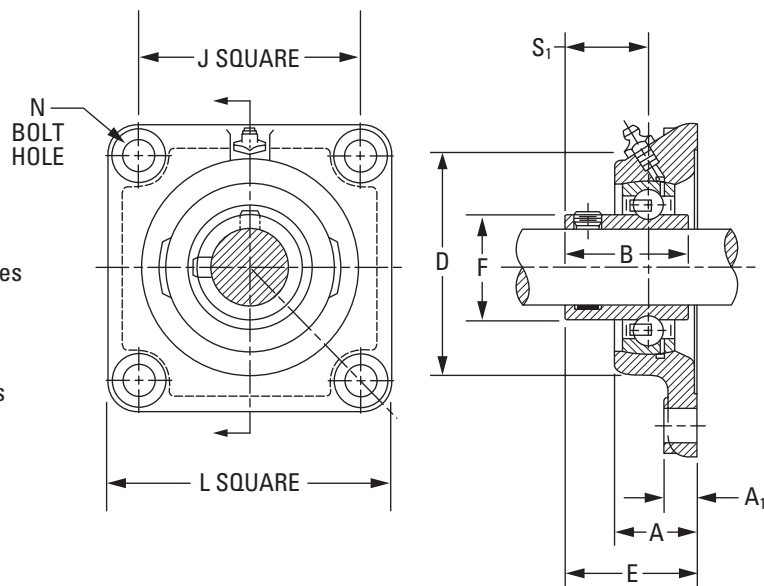
#### Suggested shaft tolerances:

1/2 in. – 1 15/16 in., nominal to -0.013 mm, -0.0005 in.;

2 in. – 2 15/16 in., nominal to -0.025 mm, -0.0010 in.

#### To order, specify UNIT and SHAFT DIAMETER.

Example: YCJ 1 7/16 in.



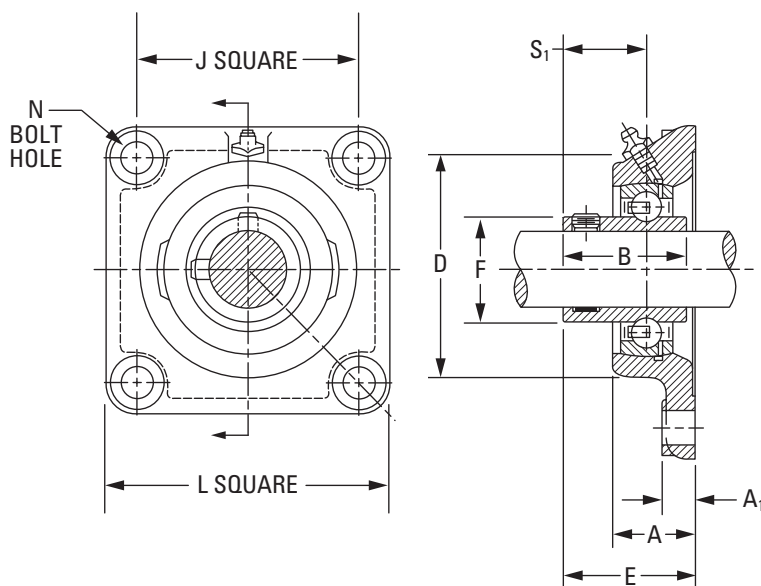
#### BEARING DATA

| Unit | Bearing No. | Dimensions and Load Ratings |
|------|-------------|-----------------------------|
| YCJ  | GY-KRRB     | Page A-44                   |

| Unit    | Shaft Dia. | L         | J         | A <sub>1</sub> | A         | E         | N         | B         | D         | F         | S <sub>1</sub> | Bolt Size | Bearing No.    |
|---------|------------|-----------|-----------|----------------|-----------|-----------|-----------|-----------|-----------|-----------|----------------|-----------|----------------|
|         | in.<br>mm  | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in. |                |
| YCJ     | 1/2        | 76.2      | 54.0      | 10.3           | 23.6      | 32.50     | 10.72     | 27.40     | 52.4      | 23.90     | 15.9           | 10        | GY1008KRRB     |
| YCJ     | 5/8        |           |           |                |           |           |           |           |           |           |                |           | GY1010KRRB     |
| YCJ     | 17         | 3         | 2 1/8     | 13/32          | 0.929     | 1.296     | 27/64     | 1 5/64    | 2 1/16    | 0.941     | 5/8            | 10 3/8    | GYE17KRRB      |
| YCJ SGT | 3/4        | 85.7      | 63.5      | 11.1           | 27.8      | 38.40     | 10.72     | 31.80     | 60.3      | 27.56     | 19.1           | 10        | GY1012KRRB SGT |
| YCJ SGT | 20         | 3 3/8     | 2 1/2     | 7/16           | 1.094     | 1.513     | 27/64     | 1 1/4     | 2 3/8     | 1.085     | 3/4            | 10 3/8    | GYE20KRRB SGT  |
| YCJ SGT | 7/8        |           |           |                |           |           |           |           |           |           |                |           | GY1014KRRB SGT |
| YCJ SGT | 15/16      | 95.2      | 69.8      | 12.7           | 27.9      | 40.00     | 11.51     | 34.90     | 65.1      | 33.88     | 20.6           | 10        | GY1015KRRB SGT |
| YCJ SGT | 1          | 3 3/4     | 2 49/64   | 1/2            | 1.100     | 1.575     | 29/64     | 1 3/8     | 2 9/16    | 1.331     | 13/16          | 10 3/8    | GY1100KRRB SGT |
| YCJ SGT | 25         |           |           |                |           |           |           |           |           |           |                |           | GYE25KRRB SGT  |
| YCJ SGT | 1 1/8      |           |           |                |           |           |           |           |           |           |                |           | GY1102KRRB SGT |
| YCJ SGT | 1 3/16     | 107.9     | 82.6      | 13.5           | 29.9      | 43.46     | 11.51     | 39.29     | 76.2      | 40.31     | 23.4           | 10        | GY1103KRRB SGT |
| YCJ     | 1 1/4 S    | 4 1/4     | 3 1/4     | 17/32          | 1.178     | 1.711     | 29/64     | 1 35/64   | 3         | 1.587     | 59/64          | 10 3/8    | GY1103KRRB3    |
| YCJ SGT | 30         |           |           |                |           |           |           |           |           |           |                |           | GYE30KRRB SGT  |
| YCJ SGT | 1 1/4      |           |           |                |           |           |           |           |           |           |                |           | GY1104KRRB SGT |
| YCJ SGT | 1 3/8      | 117.5     | 92.1      | 13.5           | 31.8      | 48.95     | 13.10     | 45.20     | 88.9      | 46.81     | 28.2           | 12        | GY1106KRRB SGT |
| YCJ SGT | 1 7/16     | 4 5/8     | 3 5/8     | 17/32          | 1.254     | 1.927     | 33/64     | 1 25/32   | 3 1/2     | 1.843     | 1 7/16         | 12 1/2    | GY1107KRRB SGT |
| YCJ SGT | 35         |           |           |                |           |           |           |           |           |           |                |           | GYE35KRRB SGT  |
| YCJ SGT | 1 1/2      | 130.2     | 101.6     | 14.3           | 38.1      | 54.40     | 13.10     | 49.20     | 98.4      | 52.27     | 30.2           | 12        | GY1108KRRB SGT |
| YCJ SGT | 40         | 5 1/8     | 4         | 9/16           | 1.500     | 2.141     | 33/64     | 1 15/16   | 3 7/8     | 2.057     | 1 3/16         | 12 1/2    | GYE40KRRB SGT  |

NOTE: Shaft diameter with an S = smaller housing.

Continued on next page.



Continued from previous page.

| Unit    | Shaft Dia. | L            | J            | A <sub>1</sub> | A           | E            | N            | B            | D            | F            | S <sub>1</sub> | Bolt Size | Bearing No.    |
|---------|------------|--------------|--------------|----------------|-------------|--------------|--------------|--------------|--------------|--------------|----------------|-----------|----------------|
|         | in.<br>mm  | mm<br>in.    | mm<br>in.    | mm<br>in.      | mm<br>in.   | mm<br>in.    | mm<br>in.    | mm<br>in.    | mm<br>in.    | mm<br>in.    | mm<br>in.      | mm<br>in. |                |
| YCJ SGT | 1 5/8      |              |              |                |             |              |              |              |              |              |                |           | GY1110KRRB SGT |
| YCJ SGT | 1 11/16    | <b>136.5</b> | <b>104.8</b> | <b>14.3</b>    | <b>38.9</b> | <b>55.52</b> | <b>13.10</b> | <b>50.40</b> | <b>104.8</b> | <b>57.92</b> | <b>31.4</b>    | <b>12</b> | GY1111KRRB SGT |
| YCJ SGT | 1 3/4      | 5 3/8        | 4 1/8        | 9/16           | 1.531       | 2.186        | 33/64        | 1 63/64      | 4 1/8        | 2.279        | 1 15/16        | 1/2       | GY1112KRRB SGT |
| YCJ SGT | <b>45</b>  |              |              |                |             |              |              |              |              |              |                |           | GYE45KRRB SGT  |
| YCJ SGT | 1 15/16    |              |              |                |             |              |              |              |              |              |                |           | GY1115KRRB SGT |
| YCJ     | 2 S        | <b>142.9</b> | <b>111.1</b> | <b>14.3</b>    | <b>42.9</b> | <b>60.70</b> | <b>17.07</b> | <b>51.60</b> | <b>112.7</b> | <b>62.84</b> | <b>32.5</b>    | <b>16</b> | GY1115KRRB3    |
| YCJ SGT | <b>50</b>  | 5 5/8        | 4 3/8        | 9/16           | 1.688       | 2.390        | 43/64        | 2 1/32       | 4 7/16       | 2.473        | 1 9/32         | 5/8       | GYE50KRRB SGT  |
| YCJ SGT | 2          |              |              |                |             |              |              |              |              |              |                |           | GY1200KRRB SGT |
| YCJ SGT | 2 3/16     | <b>161.9</b> | <b>130.2</b> | <b>16.7</b>    | <b>46.8</b> | <b>64.70</b> | <b>17.07</b> | <b>55.60</b> | <b>120.7</b> | <b>69.77</b> | <b>33.3</b>    | <b>16</b> | GY1203KRRB SGT |
| YCJ SGT | <b>55</b>  | 6 3/8        | 5 1/8        | 21/32          | 1.844       | 2.546        | 43/64        | 2 3/16       | 4 3/4        | 2.747        | 1 5/16         | 5/8       | GYE55KRRB SGT  |
| YCJ SGT | 2 7/16     |              |              |                |             |              |              |              |              |              |                |           | GY1207KRRB SGT |
| YCJ SGT | <b>60</b>  | <b>174.6</b> | <b>142.9</b> | <b>17.5</b>    | <b>49.2</b> | <b>74.20</b> | <b>17.07</b> | <b>65.10</b> | <b>136.5</b> | <b>76.48</b> | <b>39.1</b>    | <b>16</b> | GYE60KRRB SGT  |
|         |            | 6 7/8        | 5 5/8        | 1 1/16         | 1.937       | 2.921        | 43/64        | 2 9/16       | 5 3/8        | 3.011        | 1 9/16         | 5/8       |                |
| YCJ     | 2 11/16    |              |              |                |             |              |              |              |              |              |                |           | GY1211KRRB     |
| YCJ     | <b>70</b>  | <b>187.3</b> | <b>149.2</b> | <b>19.0</b>    | <b>63.5</b> | <b>81.40</b> | <b>16.27</b> | <b>69.90</b> | <b>152.4</b> | <b>86.92</b> | <b>42.9</b>    | <b>16</b> | GYE70KRRB      |
|         |            | 7 3/8        | 5 7/8        | 3/4            | 2.500       | 3.204        | 41/64        | 2 3/4        | 6            | 3.422        | 1 11/16        | 5/8       |                |
| YCJ     | 2 15/16    |              |              |                |             |              |              |              |              |              |                |           | GY1215KRRB     |
| YCJ     | <b>75</b>  | <b>196.8</b> | <b>152.4</b> | <b>23.8</b>    | <b>66.7</b> | <b>86.20</b> | <b>19.84</b> | <b>77.80</b> | <b>161.9</b> | <b>91.92</b> | <b>44.4</b>    | <b>20</b> | GYE75KRRB      |
|         |            | 7 3/4        | 6            | 15/16          | 2.625       | 3.392        | 25/32        | 3 1/16       | 6 3/8        | 3.619        | 1 3/4          | 3/4       |                |

NOTE: Shaft diameter with an S = smaller housing.

# BALL BEARING HOUSED UNITS

## BALL BEARING HOUSED UNITS • CAST-IRON FLANGED UNITS • VCJ

### VCJ STANDARD SERIES

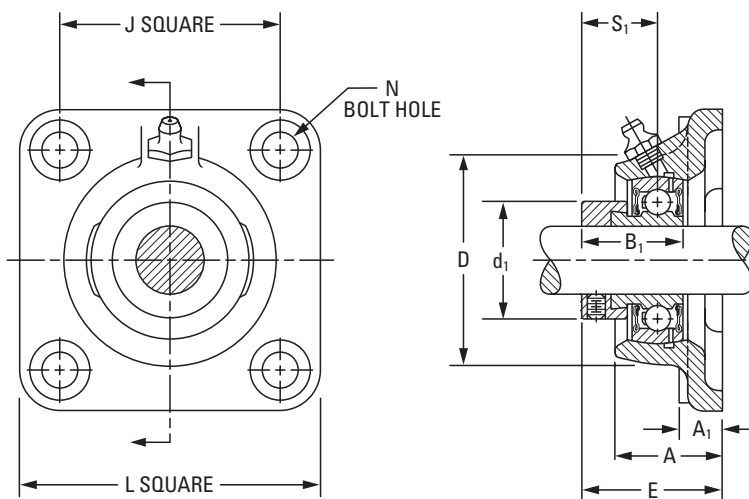
- The flange cartridges come assembled and ready for mounting by using four bolts through the flange.
- The VCJ-series flange cartridges require minimal machining.
- The units are assembled with GRA-RRB bearings with positive-contact, land-riding seals and self-locking collars.
- The units are factory-prelubricated, but a grease fitting is provided for relubrication if required.
- Safety end caps are available for selected sizes.

#### Suggested shaft tolerances:

1/2 in. – 1 15/16 in., nominal to -0.013 mm, -0.0005 in.;  
2 in. – 2 3/16 in., nominal to -0.025 mm, -0.0010 in.

#### To order, specify UNIT and SHAFT DIAMETER.

Example: VCJ 1 in.



### BEARING DATA

| Unit | Bearing No. | Dimensions and Load Ratings |
|------|-------------|-----------------------------|
| VCJ  | GRA-RRB     | Page A-50                   |

| Unit | Shaft Dia. | L         | J         | A <sub>1</sub> | A         | E         | N         | B <sub>1</sub> | D         | d <sub>1</sub> | S <sub>1</sub> | Bolt Size | Bearing No. | Collar No. | Housing No.  | Unit Wt.   |
|------|------------|-----------|-----------|----------------|-----------|-----------|-----------|----------------|-----------|----------------|----------------|-----------|-------------|------------|--------------|------------|
|      | in.<br>mm  | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in. |             |            | New<br>(Old) | kg<br>lbs. |
| VCJ  | 1/2        | 76.2      | 53.98     | 10.3           | 23.6      | 39.3      | 10.7      | 28.6           | 52.4      | 28.1           | 22.2           | 10        | GRA008RRB   | S1008K     | T-40278      | 0.527      |
| VCJ  | 5/8        |           |           |                |           |           |           |                |           |                |                |           | GRA010RRB   | S1010K     | (T-16659)    | 1.16       |
| VCJ  | 17         | 3         | 2 1/8     | 13/32          | 0.929     | 1.548     | 27/64     | 1 1/8          | 2 1/16    | 1.105          | 7/8            | 3/8       | GRAE17RRB   | SE17K      |              |            |
| VCJ  | 3/4        | 85.7      | 63.50     | 11.1           | 27.8      | 43.3      | 10.7      | 31.0           | 60.3      | 32.8           | 23.4           | 10        | GRA012RRB   | S1012K     | T-40267      | 0.654      |
| VCJ  | 20         | 3 3/8     | 2 1/2     | 7/16           | 1.094     | 1.706     | 27/64     | 1 7/32         | 2 3/8     | 1.292          | 59/64          | 3/8       | GRAE20RRB   | SE20K      | (T-16661A)   | 1.44       |
| VCJ  | 7/8        |           |           |                |           |           |           |                |           |                |                |           | GRA014RRB   | S1014K     |              |            |
| VCJ  | 15/16      | 95.2      | 69.85     | 12.7           | 27.9      | 43.1      | 11.5      | 31.0           | 65.1      | 37.6           | 23.4           | 10        | GRA015RRB   | S1015K     | T-40262      | 0.894      |
| VCJ  | 1          | 3 3/4     | 2 3/4     | 1/2            | 1.100     | 1.696     | 29/64     | 1 7/32         | 2 9/16    | 1.480          | 59/64          | 3/8       | GRA100RRB   | S1100K     | (T-16663A)   | 1.97       |
| VCJ  | 25         |           |           |                |           |           |           |                |           |                |                |           | GRAE25RRB   | SE25K      |              |            |
| VCJ  | 1 1/8      |           |           |                |           |           |           |                |           |                |                |           | GRA102RRB   | S1102K     |              |            |
| VCJ  | 1 3/16     | 107.9     | 82.55     | 13.5           | 29.9      | 47.1      | 11.5      | 35.7           | 76.2      | 43.9           | 27.0           | 10        | GRA103RRB   | S1103K     | T-40266      | 1.239      |
| VCJ  | 1 1/4 S    | 4 1/4     | 3 1/4     | 17/32          | 1.178     | 1.856     | 29/64     | 1 13/32        | 3         | 1.730          | 1 1/16         | 3/8       | GRA103RRB2  | S1103K3    | (T-16664A)   | 2.73       |
| VCJ  | 30         |           |           |                |           |           |           |                |           |                |                |           | GRAE30RRB   | SE30K      |              |            |
| VCJ  | 1 1/4      |           |           |                |           |           |           |                |           |                |                |           | GRA104RRB   | S1104K     |              |            |
| VCJ  | 1 3/8      | 117.5     | 92.08     | 13.5           | 31.8      | 50.5      | 13.1      | 38.9           | 88.9      | 53.6           | 29.4           | 12        | GRA106RRB   | S1106K     | T-40253      | 1.707      |
| VCJ  | 1 7/16     | 4 5/8     | 3 5/8     | 17/32          | 1.254     | 1.989     | 33/64     | 1 17/32        | 3 1/2     | 2.112          | 1 5/32         | 1/2       | GRA107RRB   | S1107      | (T-16617A)   | 3.76       |
| VCJ  | 35         |           |           |                |           |           |           |                |           |                |                |           | GRAE35RRB   | SE35K      |              |            |
| VCJ  | 1 1/2      | 130.2     | 101.60    | 14.3           | 38.1      | 58.3      | 13.1      | 43.7           | 98.4      | 58.2           | 32.5           | 12        | GRA108RRB   | S1108KT    | T-40263      | 2.175      |
| VCJ  | 40         | 5 1/8     | 4         | 9/16           | 1.500     | 2.297     | 33/64     | 1 23/32        | 3 7/8     | 2.292          | 1 9/32         | 1/2       | GRAE40RRB   | SE40K      | (T-16666A)   | 4.79       |
| VCJ  | 1 5/8      |           |           |                |           |           |           |                |           |                |                |           | GRA110RRB   | S1110K     |              |            |
| VCJ  | 1 11/16    | 136.5     | 104.78    | 14.3           | 38.9      | 57.0      | 13.1      | 43.7           | 104.8     | 63.0           | 32.5           | 12        | GRA111RRB   | S1111K     | T-40264      | 2.438      |
| VCJ  | 1 3/4      | 5 3/8     | 4 1/8     | 9/16           | 1.531     | 2.244     | 33/64     | 1 23/32        | 4 1/8     | 2.480          | 1 9/32         | 1/2       | GRA112RRB   | S1112K     | (T-16667A)   | 5.37       |
| VCJ  | 45         |           |           |                |           |           |           |                |           |                |                |           | GRAE45RRB   | SE45K      |              |            |
| VCJ  | 1 7/8      |           |           |                |           |           |           |                |           |                |                |           | GRA114RRB   | S1114K     |              |            |
| VCJ  | 1 15/16    | 142.9     | 111.12    | 14.3           | 42.9      | 61.0      | 17.1      | 43.7           | 112.7     | 69.3           | 32.5           | 16        | GRA115RRB   | S1115K     | T-40265      | 2.788      |
| VCJ  | 2 S        | 5 5/8     | 4 3/8     | 9/16           | 1.688     | 2.400     | 43/64     | 1 23/32        | 4 7/16    | 2.730          | 1 9/32         | 5/8       | GRA115RRB2  | S1115K2    | (T-16668A)   | 6.14       |
| VCJ  | 50         |           |           |                |           |           |           |                |           |                |                |           | GRAE50RRB   | SE50K      |              |            |
| VCJ  | 2          | 161.9     | 130.18    | 16.7           | 46.8      | 67.9      | 17.1      | 48.4           | 120.6     | 75.7           | 36.5           | 16        | GRA200RRB   | S1200K     | T-40236      | 3.269      |
| VCJ  | 2 3/16     | 6 3/8     | 5 1/8     | 21/32          | 1.844     | 2.672     | 43/64     | 1 29/32        | 4 3/4     | 2.980          | 1 7/16         | 5/8       | GRA203RRB   | S1203K     | (T-16683A)   | 7.20       |
| VCJ  | 55         |           |           |                |           |           |           |                |           |                |                |           | GRAE55RRB   | SE55K      |              |            |

NOTE: Shaft diameter with an S = smaller housing.

### SCJ STANDARD SERIES

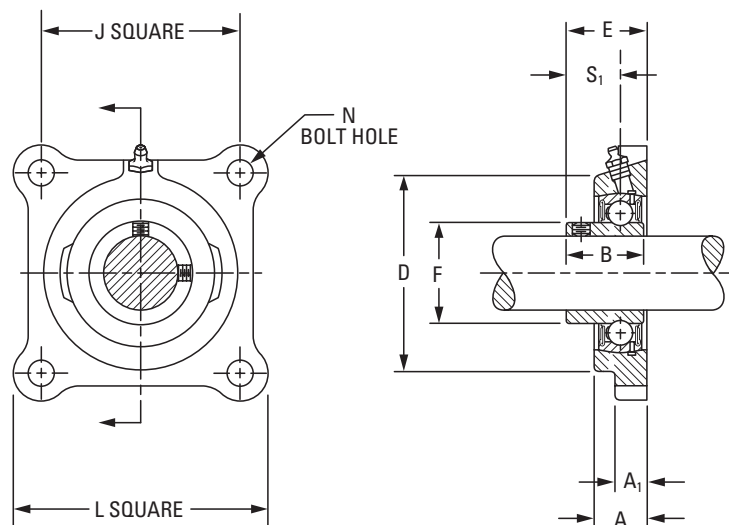
- The flange cartridges come assembled and ready for mounting by using four bolts through the flange.
- The units are ideal for applications where minimum shaft length is required.
- The units are assembled with GYA-RRB bearings with positive-contact, land-riding seals and set screw locking.
- The units are factory-prelubricated, but a grease fitting is provided for relubrication if required.
- Safety end caps are available for selected sizes.

#### Suggested shaft tolerances:

1/2 in. – 1 15/16 in.,  
nominal to -0.013 mm, -0.0005 in.;  
2 in. – 2 3/16 in., nominal to -0.025 mm, -0.0010 in.

#### To order, specify UNIT and SHAFT DIAMETER.

Example: SCJ 1 in.



#### BEARING DATA

| Unit | Bearing No. | Dimensions and Load Ratings |
|------|-------------|-----------------------------|
| SCJ  | GYA-RRB     | Page A-54                   |

| Unit | Shaft Dia. | L         | J         | A <sub>1</sub> | A         | E         | N         | B         | D         | F         | S <sub>1</sub> | Bolt Size | Bearing No. | Housing No. | Unit Wt.   |
|------|------------|-----------|-----------|----------------|-----------|-----------|-----------|-----------|-----------|-----------|----------------|-----------|-------------|-------------|------------|
|      | in.<br>mm  | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in. |             |             | kg<br>lbs. |
| SCJ  | 1/2        | 76.2      | 53.98     | 11.1           | 17.9      | 25.4      | 10.7      | 23.8      | 52.4      | 24.6      | 15.9           | 10        | GYA008RRB   | T-40124     | 0.47       |
| SCJ  | 5/8        |           |           |                |           |           |           |           |           |           |                |           | GYA010RRB   |             | 1.03       |
| SCJ  | 17         | 3         | 2 1/8     | 7/16           | 45/64     | 1         | 27/64     | 15/16     | 2 1/16    | 31/32     | 5/8            | 3/8       | GYAE17RRB   |             |            |
| SCJ  | 3/4        | 85.7      | 63.50     | 11.1           | 19.0      | 28.6      | 10.7      | 27.0      | 60.3      | 29.0      | 18.3           | 10        | GYA012RRB   | T-40126     | 0.52       |
| SCJ  | 20         | 3 3/8     | 2 1/2     | 7/16           | 3/4       | 1 1/8     | 27/64     | 1 1/16    | 2 3/8     | 1 9/64    | 23/32          | 3/8       | GYAE20RRB   |             | 1.14       |
| SCJ  | 7/8        |           |           |                |           |           |           |           |           |           |                |           | GYA014RRB   |             |            |
| SCJ  | 15/16      | 95.2      | 69.85     | 13.5           | 19.8      | 29.8      | 11.5      | 28.2      | 65.1      | 33.7      | 19.4           | 10        | GYA015RRB   | T-40128     | 0.68       |
| SCJ  | 1          | 3 3/4     | 2 3/4     | 17/32          | 25/32     | 1 11/64   | 29/64     | 1 7/64    | 2 9/16    | 1 21/64   | 49/64          | 3/8       | GYA100RRB   |             | 1.50       |
| SCJ  | 25         |           |           |                |           |           |           |           |           |           |                |           | GYAE25RRB   |             |            |
| SCJ  | 1 1/8      |           |           |                |           |           |           |           |           |           |                |           | GYA102RRB   |             |            |
| SCJ  | 1 3/16     | 107.9     | 82.55     | 14.3           | 21.4      | 34.1      | 11.5      | 32.5      | 76.2      | 40.1      | 23.0           | 10        | GYA103RRB   | T-40130     | 1.19       |
| SCJ  | 1 1/4 S    | 4 1/4     | 3 1/4     | 9/16           | 27/32     | 1 11/32   | 29/64     | 1 9/32    | 3         | 1 37/64   | 29/32          | 3/8       | GYA103RRB2  |             | 2.62       |
| SCJ  | 30         |           |           |                |           |           |           |           |           |           |                |           | GYAE30RRB   |             |            |
| SCJ  | 1 1/4      |           |           |                |           |           |           |           |           |           |                |           | GYA104RRB   |             |            |
| SCJ  | 1 3/8      | 117.5     | 92.08     | 15.1           | 24.6      | 38.1      | 13.1      | 36.5      | 88.9      | 46.8      | 25.8           | 12        | GYA106RRB   | T-40132     | 1.35       |
| SCJ  | 1 7/16     | 4 5/8     | 3 5/8     | 19/32          | 31/32     | 1 1/2     | 33/64     | 1 7/16    | 3 1/2     | 1 27/32   | 1 1/64         | 1/2       | GYA107RRB   |             | 2.98       |
| SCJ  | 35         |           |           |                |           |           |           |           |           |           |                |           | GYAE35RRB   |             |            |
| SCJ  | 1 1/2      | 130.2     | 101.60    | 15.9           | 26.2      | 40.9      | 13.1      | 39.3      | 98.4      | 52.4      | 27.8           | 12        | GYA108RRB   | T-40134     | 2.10       |
| SCJ  | 40         | 5 1/8     | 4         | 5/8            | 1 1/32    | 1 39/64   | 33/64     | 1 35/64   | 3 7/8     | 2 1/16    | 1 3/32         | 1/2       | GYAE40RRB   |             | 4.63       |
| SCJ  | 1 5/8      |           |           |                |           |           |           |           |           |           |                |           | GYA110RRB   |             |            |
| SCJ  | 1 11/16    | 136.5     | 104.78    | 15.9           | 28.6      | 43.6      | 13.1      | 42.1      | 104.8     | 57.9      | 28.6           | 12        | GYA111RRB   | T-40164     | 2.24       |
| SCJ  | 1 3/4      | 5 3/8     | 4 1/8     | 5/8            | 1 1/8     | 1 23/32   | 33/64     | 1 21/32   | 4 1/8     | 2 9/32    | 1 1/8          | 1/2       | GYA112RRB   |             | 4.94       |
| SCJ  | 45         |           |           |                |           |           |           |           |           |           |                |           | GYAE45RRB   |             |            |
| SCJ  | 1 15/16    |           |           |                |           |           |           |           |           |           |                |           | GYA115RRB   |             |            |
| SCJ  | 2 S        | 142.9     | 111.12    | 16.7           | 28.6      | 46.0      | 17.1      | 44.4      | 112.7     | 62.6      | 30.9           | 16        | GYA115RRB2  | T-40166     | 2.55       |
| SCJ  | 50         | 5 5/8     | 4 3/8     | 21/32          | 1 1/8     | 1 13/16   | 43/64     | 1 3/4     | 4 7/16    | 2 15/32   | 1 7/32         | 5/8       | GYAE50RRB   |             | 5.63       |
| SCJ  | 2          |           |           |                |           |           |           |           |           |           |                |           | GYA200RRB   |             |            |
| SCJ  | 2 3/16     | 161.9     | 130.18    | 18.2           | 30.9      | 48.0      | 17.1      | 46.4      | 120.6     | 69.8      | 31.7           | 16        | GYA203RRB   | T-40168     | 2.96       |
| SCJ  | 55         | 6 3/8     | 5 1/8     | 23/32          | 1 7/32    | 1 57/64   | 43/64     | 1 53/64   | 4 3/4     | 2 3/4     | 1 1/4          | 5/8       | GYAE55RRB   |             | 6.53       |

NOTE: Shaft diameter with an S = smaller housing.

# BALL BEARING HOUSED UNITS

BALL BEARING HOUSED UNITS • CAST-IRON FLANGED UNITS • RCJO, LCJO

## RCJO, LCJO HEAVY SERIES

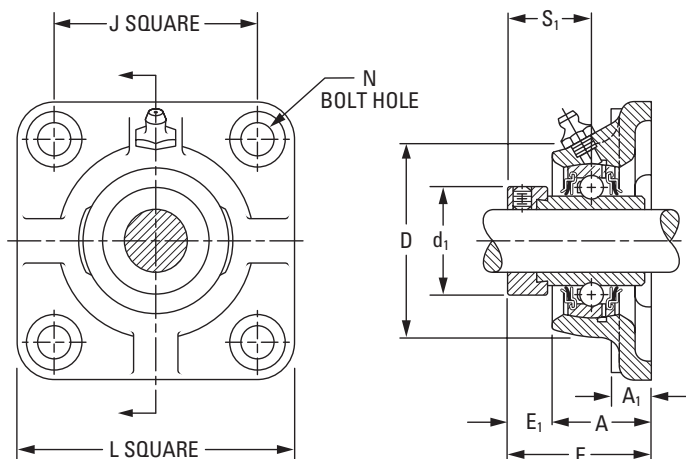
- The flange cartridges are similar in design to the standard series.
- The units are ideal for applications where minimum machining is to be done.
- The units come assembled and ready for mounting by using four bolts through the flange.
- The RCJO units are assembled with GN-KRRB (R-seal) wide-inner-ring bearings. LCJO units are equipped with GN-KLLB (L-seal) wide-inner-ring ball bearings.
- The units are factory-prelubricated, but a grease fitting is provided for relubrication if required.
- The units are supplied with self-locking collars and are dimensionally interchangeable.

### Suggested shaft tolerances:

1 3/16 in. – 1 15/16 in., nominal to -0.013 mm, -0.0005 in.;  
2 in. – 3 15/16 in., nominal to -0.025 mm, -0.0010 in.

### To order, specify UNIT and SHAFT DIAMETER.

Example: RCJO 1 7/16 in., LCJO 1 11/16 in.



### BEARING DATA

| Unit | Bearing No. | Dimensions and Load Ratings |
|------|-------------|-----------------------------|
| RCJO | GN-KRRB     | Page A-57                   |
| LCJO | GN-KLLB     | Page A-59                   |

| Unit       | Shaft Dia. | L               | J              | A <sub>1</sub> | A             | E              | N              | E <sub>1</sub> | S <sub>1</sub>  | D                | d <sub>1</sub> | Bolt Size   | Bearing No.      | Collar No. | Housing No. | Unit Wt.        |
|------------|------------|-----------------|----------------|----------------|---------------|----------------|----------------|----------------|-----------------|------------------|----------------|-------------|------------------|------------|-------------|-----------------|
|            | in.        | mm in.          | mm in.         | mm in.         | mm in.        | mm in.         | mm in.         | mm in.         | mm in.          | mm in.           | mm in.         | mm in.      | RCJO LCJO        |            |             | kg lbs.         |
| RCJO, LCJO | 1 3/16     | 120.6<br>4 3/4  | 92.1<br>3 5/8  | 14.3<br>9/16   | 38.1<br>1.500 | 53.7<br>2.115  | 14.3<br>9/16   | 15.1<br>19/32  | 32.5<br>1 9/32  | 96.8<br>3 13/16  | 48.7<br>1.918  | 12<br>1/2   | GN103KRRB (KLLB) | SN103K     | T-19165     | 1.816<br>4.00   |
| RCJO, LCJO | 1 7/16     | 130.2<br>5 1/8  | 101.6<br>4     | 15.9<br>5/8    | 40.5<br>1.594 | 55.3<br>2.177  | 14.3<br>9/16   | 14.3<br>9/16   | 33.3<br>1 5/16  | 104.8<br>4 1/8   | 55.1<br>2.168  | 12<br>1/2   | GN107KRRB (KLLB) | SN107      | T-19167     | 2.497<br>5.50   |
| RCJO, LCJO | 1 1/2      | 136.5<br>5 3/8  | 104.8<br>4 1/8 | 15.9<br>5/8    | 44.4<br>1.750 | 60.8<br>2.396  | 15.9<br>5/8    | 15.9<br>5/8    | 37.3<br>1 15/32 | 114.3<br>4 1/2   | 63.0<br>2.480  | 14<br>9/16  | GN108KRRB (KLLB) | SN108K     | T-19169     | 3.133<br>6.90   |
| RCJO, LCJO | 1 11/16    | 142.9<br>5 5/8  | 111.1<br>4 3/8 | 17.5<br>11/16  | 46.8<br>1.844 | 62.4<br>2.458  | 15.9<br>5/8    | 15.1<br>19/32  | 38.9<br>1 17/32 | 123.8<br>4 7/8   | 69.3<br>2.730  | 14<br>9/16  | GN111KRRB (KLLB) | SN111K     | T-19171     | 3.573<br>7.87   |
| RCJO       | 1 15/16    | 165.1<br>6 1/2  | 130.2<br>5 1/8 | 17.5<br>11/16  | 53.2<br>2.094 | 70.4<br>2.771  | 17.5<br>11/16  | 16.7<br>21/32  | 42.1<br>1 21/32 | 141.3<br>5 9/16  | 75.7<br>2.980  | 16<br>5/8   | GN115KRRB        | SN115K     | T-19173     | 5.185<br>11.42  |
| RCJO       | 2 3/16     | 177.8<br>7      | 142.9<br>5 5/8 | 17.5<br>11/16  | 58.7<br>2.312 | 76.7<br>3.021  | 17.5<br>11/16  | 17.5<br>11/16  | 45.2<br>1 25/32 | 154.0<br>6 1/16  | 82.0<br>3.230  | 16<br>5/8   | GN203KRRB        | SN203K     | T-19175     | 6.424<br>14.15  |
| RCJO       | 2 7/16     | 190.5<br>7 1/2  | 149.2<br>5 7/8 | 19.0<br>3/4    | 65.1<br>2.562 | 84.7<br>3.333  | 20.6<br>13/16  | 19.0<br>3/4    | 48.4<br>1 29/32 | 160.3<br>6 5/16  | 88.4<br>3.480  | 20<br>3/4   | GN207KRRB        | SN207K     | T-19177     | 7.409<br>16.32  |
| RCJO       | 2 11/16    | 225.4<br>8 7/8  | 177.8<br>7     | 22.2<br>7/8    | 72.2<br>2.844 | 89.4<br>3.521  | 23.8<br>15/16  | 21.4<br>27/32  | 54.8<br>2 5/32  | 185.7<br>7 5/16  | 101.1<br>3.980 | 22<br>7/8   | GN211KRRB        | SO211K     | T-19179     | 9.534<br>21.00  |
| RCJO       | 2 15/16    | 231.8<br>9 1/8  | 184.2<br>7 1/4 | 22.2<br>7/8    | 77.8<br>3.062 | 105.3<br>4.146 | 23.8<br>15/16  | 27.0<br>1 1/16 | 62.7<br>2 15/32 | 198.4<br>7 13/16 | 112.2<br>4.418 | 22<br>7/8   | GN215KRRB        | SN215K     | T-19181     | 14.128<br>31.12 |
| RCJO       | 3 7/16     | 279.4<br>11     | 215.9<br>8 1/2 | 28.6<br>1 1/8  | 84.1<br>3.312 | 121.2<br>4.770 | 27.0<br>1 1/16 | 36.5<br>1 7/16 | 73.8<br>2 29/32 | 228.6<br>9       | 132.3<br>5.210 | 24<br>1     | GN307KRRB        | SN307K     | T-24475     | 21.474<br>47.30 |
| RCJO       | 3 15/16    | 317.5<br>12 1/2 | 241.3<br>9 1/2 | 31.8<br>1 1/4  | 96.8<br>3.812 | 133.6<br>5.260 | 30.2<br>1 3/16 | 36.5<br>1 7/16 | 78.6<br>3 3/32  | 266.7<br>10 1/2  | 145.5<br>5.730 | 27<br>1 1/8 | GN315KRRB        | SN315K     | T-24477     | 30.645<br>67.50 |

### YCJM MEDIUM-DUTY SERIES SET SCREW LOCK

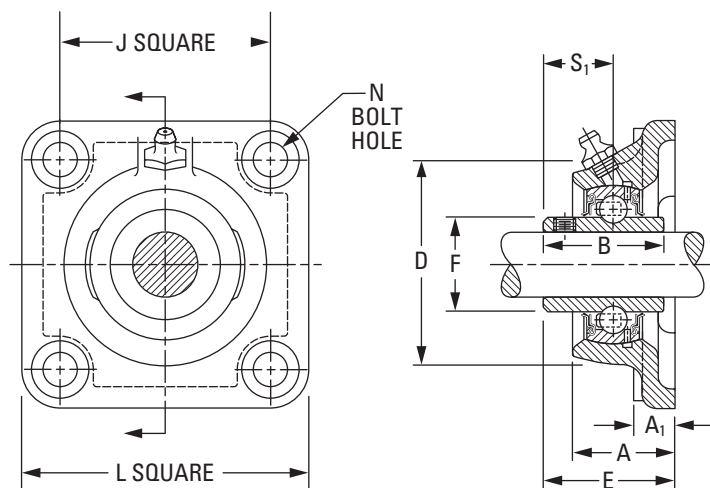
- This series includes four-bolt flanged cartridges featuring GYM-KRRB bearing inserts.
- This series is ideal for conveyor, fan and blower, sawmill, and feed and grain-handling applications.
- The durable cast-iron housings are powder-coated and maintain an excellent finish while resisting corrosion, chemicals and weather exposure.
- The industrial-duty flanged cartridges incorporate premium features designed to extend bearing life.

#### Suggested shaft tolerances:

- 1 in. – 1 <sup>15</sup>/<sub>16</sub> in., nominal to -0.013 mm, -0.0005 in.;
- 2 in. – 3 <sup>15</sup>/<sub>16</sub> in., nominal to -0.025 mm, -0.0010 in.

#### To order, specify UNIT and SHAFT DIAMETER.

Example: YCJM 1 <sup>7</sup>/<sub>16</sub> in.



#### BEARING DATA

| Unit | Bearing No. | Dimensions and Load Ratings |
|------|-------------|-----------------------------|
| YCJM | GYM-KRRB    | Page A-56                   |

| Unit | Shaft Dia. | L                | J               | A <sub>1</sub> | A             | E              | N               | B                | D               | F               | S <sub>1</sub>  | Bolt Size | Bearing No. |
|------|------------|------------------|-----------------|----------------|---------------|----------------|-----------------|------------------|-----------------|-----------------|-----------------|-----------|-------------|
|      | in.        | mm in.           | mm in.          | mm in.         | mm in.        | mm in.         | mm in.          | mm in.           | mm in.          | mm in.          | mm in.          | mm in.    |             |
| YCJM | 1          | 107.9<br>4 1/4   | 82.6<br>3 1/4   | 13.5<br>17/32  | 29.9<br>1.178 | 42.4<br>1.671  | 11.51<br>29/64  | 38.10<br>1 1/2   | 76.2<br>3       | 40.31<br>1.587  | 22.2<br>7/8     | 10<br>3/8 | GYM1100KRRB |
| YCJM | 1 3/16     | 117.5<br>4 5/8   | 92.1<br>3 5/8   | 13.5<br>17/32  | 31.8<br>1.254 | 46.4<br>1.827  | 13.10<br>33/64  | 42.90<br>1 11/16 | 88.9<br>3 1/2   | 46.81<br>1.843  | 25.4<br>1       | 12<br>1/2 | GYM1103KRRB |
| YCJM | 1 7/16     | 130.2<br>5 1/8   | 101.6<br>4      | 14.8<br>9/16   | 38.1<br>1.500 | 54.4<br>2.141  | 13.10<br>33/64  | 49.20<br>1 15/16 | 98.4<br>3 7/8   | 52.27<br>2.058  | 30.2<br>1 3/16  | 12<br>1/2 | GYM1107KRRB |
| YCJM | 1 1/2      | 136.5<br>5 3/8   | 104.8<br>4 1/8  | 14.3<br>9/16   | 38.9<br>1.531 | 54.4<br>2.141  | 13.10<br>33/64  | 49.20<br>1 15/16 | 104.8<br>4 1/8  | 57.92<br>2.280  | 30.2<br>1 3/16  | 12<br>1/2 | GYM1108KRRB |
| YCJM | 1 11/16    | 142.9<br>5 5/8   | 111.1<br>4 3/8  | 14.3<br>9/16   | 42.9<br>1.688 | 60.7<br>2.390  | 17.07<br>43/64  | 51.60<br>2 1/32  | 112.7<br>4 7/16 | 62.84<br>2.474  | 32.5<br>1 9/32  | 16<br>5/8 | GYM1111KRRB |
| YCJM | 1 3/4      | 142.9<br>5 5/8   | 111.1<br>4 3/8  | 14.3<br>9/16   | 42.9<br>1.688 | 60.7<br>2.390  | 17.07<br>43/64  | 51.60<br>2 1/32  | 112.7<br>4 7/16 | 62.84<br>2.474  | 32.5<br>1 9/32  | 16<br>5/8 | GYM1112KRRB |
| YCJM | 1 15/16    | 161.9<br>6 3/8   | 130.2<br>5 1/8  | 16.7<br>21/32  | 46.8<br>1.844 | 64.7<br>2.546  | 17.07<br>43/64  | 55.60<br>2 3/16  | 120.7<br>4 3/4  | 69.77<br>2.747  | 33.3<br>1 15/16 | 16<br>5/8 | GYM1115KRRB |
| YCJM | 2          | 161.9<br>6 3/8   | 130.2<br>5 1/8  | 16.7<br>21/32  | 46.8<br>1.844 | 64.7<br>2.546  | 17.07<br>43/64  | 55.60<br>2 3/16  | 120.7<br>4 3/4  | 69.77<br>2.747  | 33.3<br>1 15/16 | 16<br>5/8 | GY1200KRRB  |
| YCJM | 2 3/16     | 174.6<br>6 7/8   | 142.9<br>5 5/8  | 17.5<br>11/16  | 49.2<br>1.937 | 74.3<br>2.926  | 17.07<br>43/64  | 65.10<br>2 9/16  | 136.5<br>5 3/8  | 76.48<br>3.011  | 39.1<br>1 9/16  | 16<br>5/8 | GYM1203KRRB |
| YCJM | 2 1/4      | 174.6<br>6 7/8   | 142.9<br>5 5/8  | 17.5<br>11/16  | 49.2<br>1.937 | 74.3<br>2.926  | 17.07<br>43/64  | 65.10<br>2 9/16  | 136.5<br>5 3/8  | 76.48<br>3.011  | 39.1<br>1 9/16  | 16<br>5/8 | GY1204KRRB  |
| YCJM | 2 7/16     | 187.3<br>7 3/8   | 149.2<br>5 7/8  | 19.0<br>3/4    | 63.5<br>2.500 | 81.5<br>3.208  | 17.07<br>43/64  | 69.90<br>2 3/4   | 152.4<br>6      | 86.92<br>3.422  | 42.9<br>1 11/16 | 16<br>5/8 | GYM1207KRRB |
| YCJM | 2 1/2      | 187.3<br>7 3/8   | 149.2<br>5 7/8  | 19.0<br>3/4    | 63.5<br>2.500 | 81.5<br>3.208  | 17.07<br>43/64  | 69.90<br>2 3/4   | 152.4<br>6      | 86.92<br>3.422  | 42.9<br>1 11/16 | 16<br>5/8 | GYM1208KRRB |
| YCJM | 2 11/16    | 196.8<br>7 3/4   | 152.4<br>6      | 22.2<br>7/8    | 66.7<br>2.625 | 86.2<br>3.396  | 19.84<br>25/32  | 77.80<br>3 1/16  | 161.9<br>6 3/8  | 91.92<br>3.619  | 44.4<br>1 3/4   | 20<br>3/4 | GYM1211KRRB |
| YCJM | 2 15/16    | 196.8<br>7 3/4   | 152.4<br>6      | 22.2<br>7/8    | 66.7<br>2.625 | 90.8<br>3.576  | 19.84<br>25/32  | 77.80<br>3 1/16  | 179.4<br>7 1/16 | 98.37<br>3.873  | 44.4<br>1 15/16 | 20<br>3/4 | GYM1215KRRB |
| YCJM | 3          | 196.8<br>7 3/4   | 152.4<br>6      | 22.2<br>7/8    | 66.7<br>2.625 | 90.8<br>3.576  | 19.84<br>25/32  | 77.80<br>3 1/16  | 179.4<br>7 1/16 | 98.37<br>3.873  | 44.4<br>1 15/16 | 20<br>3/4 | GYM1300KRRB |
| YCJM | 3 7/16     | 214.3<br>8 7/16  | 171.4<br>6 3/4  | 25.4<br>1      | 70.5<br>2.776 | 101.1<br>3.981 | 19.84<br>25/32  | 95.94<br>3 25/32 | 196.8<br>7 3/4  | 111.68<br>4.397 | 56.4<br>2 7/32  | 20<br>3/4 | GYM1307KRRB |
| YCJM | 3 15/16    | 268.3<br>10 9/16 | 211.1<br>8 5/16 | 31.8<br>1 1/4  | 95.4<br>3.755 | 127.3<br>5.014 | 26.19<br>1 1/32 | 117.35<br>4 5/8  | 235.0<br>9 1/4  | 131.30<br>5.171 | 68.3<br>2 11/16 | 24<br>1   | GYM1315KRRB |

YCJTM MEDIUM-DUTY SERIES  
SET SCREW LOCK

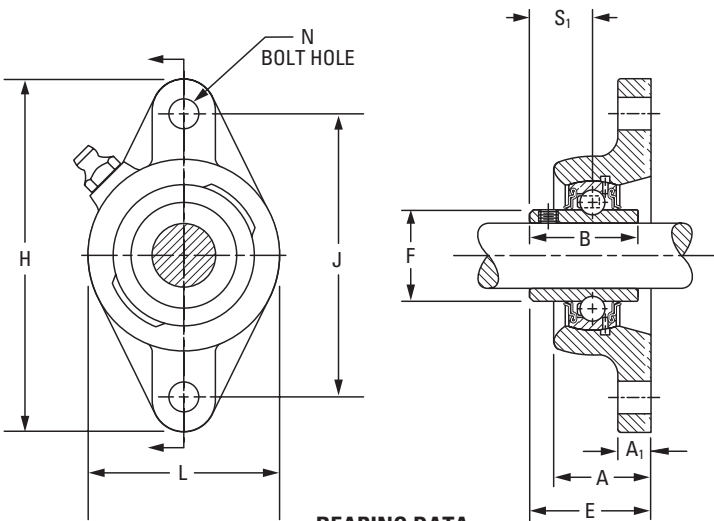
- The medium-duty, two-bolt flanged cartridges feature GYM-KRRB bearing inserts.
- This series is ideal for conveyor, fan and blower, sawmill, and feed and grain-handling applications.
- The durable cast-iron housings are powder-coated and maintain an excellent finish while resisting corrosion, chemicals and weather exposure.
- The industrial-duty flanged cartridge units incorporate premium features designed to extend bearing life. They can replace competitive designs.

Suggested shaft tolerances:

- 1 – 1 15/16 in., nominal to -0.013 mm, -0.0005 in.;
- 2 in., nominal to -0.025 mm, -0.0010 in.

To order, specify UNIT and SHAFT DIAMETER.

Example: YCJTM 1 7/16 in.



BEARING DATA

| Unit  | Bearing No. | Dimensions and Load Ratings |
|-------|-------------|-----------------------------|
| YCJTM | GYM-KRRB    | Page A-56                   |

| Unit  | Shaft Dia. | H            | J             | L            | A          | E          | N           | B            | A <sub>1</sub> | F           | S <sub>1</sub> | Bolt Size | Bearing No. |
|-------|------------|--------------|---------------|--------------|------------|------------|-------------|--------------|----------------|-------------|----------------|-----------|-------------|
|       | in.        | mm in.       | mm in.        | mm in.       | mm in.     | mm in.     | mm in.      | mm in.       | mm in.         | mm in.      | mm in.         | mm in.    |             |
| YCJTM | 1          | 141.3 5 9/16 | 116.7 4 19/32 | 79.5 3 1/8   | 29.9 1.178 | 42.4 1.671 | 11.51 29/64 | 38.1 1 1/2   | 13.5 17/32     | 40.31 1.587 | 22.2 7/8       | 10 3/8    | GYM1100KRRB |
| YCJTM | 1 3/16     | 155.6 6 1/8  | 130.2 5 1/8   | 92.1 3 5/8   | 31.8 1.254 | 46.4 1.827 | 13.10 33/64 | 42.9 1 11/16 | 11.9 15/32     | 46.79 1.843 | 25.4 1         | 12 1/2    | GYM1103KRRB |
| YCJTM | 1 7/16     | 171.5 6 3/4  | 143.7 5 21/32 | 104.8 4 1/8  | 38.1 1.500 | 54.4 2.141 | 13.10 33/64 | 49.2 1 15/16 | 12.7 1/2       | 52.27 2.058 | 30.2 1 3/16    | 12 1/2    | GYM1107KRRB |
| YCJTM | 1 1/2      | 179.4 7 1/16 | 148.4 5 27/32 | 111.1 4 3/8  | 38.9 1.531 | 54.4 2.141 | 13.10 33/64 | 49.2 1 15/16 | 12.7 1/2       | 57.92 2.280 | 30.2 1 3/16    | 12 1/2    | GYM1108KRRB |
| YCJTM | 1 11/16    | 188.9 7 7/16 | 157.2 6 3/16  | 115.9 4 9/16 | 42.9 1.688 | 60.7 2.390 | 17.07 43/64 | 51.6 2 1/32  | 12.7 1/2       | 62.81 2.473 | 32.5 1 9/32    | 16 5/8    | GYM1111KRRB |
| YCJTM | 1 3/4      |              |               |              |            |            |             |              |                |             |                |           | GYM1112KRRB |
| YCJTM | 1 15/16    | 215.9 8 1/2  | 184.2 7 1/4   | 127.0 5      | 46.8 1.844 | 64.7 2.546 | 17.07 43/64 | 55.6 2 3/16  | 16.7 21/32     | 69.77 2.747 | 33.3 1 15/16   | 16 5/8    | GYM1115KRRB |
| YCJTM | 2          |              |               |              |            |            |             |              |                |             |                |           | GY1200KRRB  |

### RCJT, TCJT, LCJT INDUSTRIAL SERIES

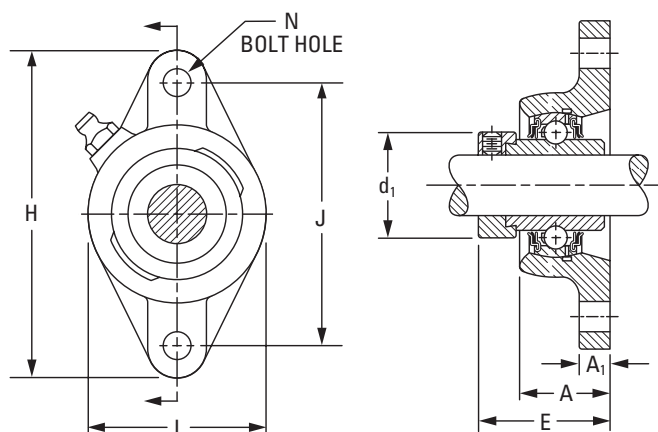
- The cartridges are the same basic design as RCJ, TCJ, and LCJ types, except they have two bolt holes instead of four.
- This series is primarily designed for applications where the mounting area is restricted.
- The RCJT cartridge is equipped with G-KRRB (R-seal) wide-inner-ring ball bearings. The TCJT is equipped with G-KPPB (tri-ply seal) wide-inner-ring ball bearings. The LCJT is equipped with the G-KLLB (Mechani-seal) wide-inner-ring ball bearings.
- The units are factory-prelubricated, but a grease fitting is provided for relubrication.
- Safety end caps are available for selected sizes.

#### Suggested shaft tolerances:

1/2 in. – 1 15/16 in., nominal to -0.013 mm, -0.0005 in.;  
2 in. – 2 3/16 in., nominal to -0.025 mm, -0.0010 in.

#### To order, specify UNIT and SHAFT DIAMETER.

Example: RCJT 1 3/16 in., TCJT 1 3/16 in.



BEARING DATA

| Unit | Bearing No. | Dimensions and Load Ratings |
|------|-------------|-----------------------------|
| RCJT | G-KRRB      | Page A-34                   |
| TCJT | G-KPPB      | Page A-39                   |
| LCJT | G-KLLB      | Page A-37                   |

| Unit             | Shaft Dia. | H         | J         | L         | A         | N         | E         | A <sub>1</sub> | d <sub>1</sub> | Bolt Size | Bearing No. |            |            | Collar No.            | Housing No.           | Unit Wt.   |
|------------------|------------|-----------|-----------|-----------|-----------|-----------|-----------|----------------|----------------|-----------|-------------|------------|------------|-----------------------|-----------------------|------------|
|                  | in.<br>mm  | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in. | RCJT        | TCJT       | LCJT       |                       | New<br>(Old)          | kg<br>lbs. |
| RCJT             | 1/2        |           |           |           |           |           |           |                |                |           | G1008KRRB   |            |            | S1008K                |                       |            |
| RCJT             | 5/8        | 98.4      | 76.2      | 54.0      | 23.6      | 10.7      | 40.6      | 10.3           | 28.1           | 10        | G1010KRRB   | —          | —          | S1010K                | T-40219               | 0.590      |
| RCJT             | 1 1/16     | 3 7/8     | 3         | 2 1/8     | 0.929     | 27/64     | 1.599     | 13/32          | 1.105          | 3/8       | G1011KRRB   |            |            | S1011K                |                       | 1.30       |
| RCJT             | 17         |           |           |           |           |           |           |                |                |           | GE17KRRB    |            |            | SE17K                 |                       |            |
| RCJT             | 3/4        | 111.9     | 89.7      | 60.5      | 27.8      | 10.7      | 46.4      | 11.1           | 32.8           | 10        | G1012KRRB   | —          | —          | S1012K                | T-40220               | 0.590      |
| RCJT             | 20         | 4 13/32   | 3 17/32   | 2 3/8     | 1.094     | 27/64     | 1.828     | 7/16           | 1.292          | 3/8       | GE20KRRB    |            |            | SE20K                 |                       | 1.30       |
| RCJT, TCJT, LCJT | 13/16      |           |           |           |           |           |           |                |                |           | G1013KRRB   | G1013KPPB3 | G1013KLLB  | S1013K                |                       |            |
| RCJT, TCJT, LCJT | 7/8        | 123.8     | 99.2      | 69.8      | 27.9      | 11.5      | 46.7      | 11.1           | 23.9           | 10        | G1014KRRB   | G1014KPPB3 | G1014KLLB  | S1014K                | T-40221<br>(T-21412P) | 0.785      |
| RCJT, TCJT, LCJT | 15/16      | 4 7/8     | 3 29/32   | 2 3/4     | 1.100     | 29/64     | 1.839     | 7/16           | 1.480          | 3/8       | G1015KRRB   | G1015KPPB3 | G1015KLLB  | S1015K                |                       | 1.73       |
| RCJT, TCJT, LCJT | 1          |           |           |           |           |           |           |                |                |           | G1100KRRB   | G1100KPPB3 | G1100KLLB  | S1100K                |                       |            |
| RCJT, TCJT, LCJT | 25         |           |           |           |           |           |           |                |                |           | GE25KRRB    | GE25KPPB3  | GE25KLLB   | SE25K                 |                       |            |
| RCJT, TCJT, LCJT | 1 1/16     |           |           |           |           |           |           |                |                |           | G1101KRRB   | G1101KPPB3 | G1101KLLB  | S1101K                |                       |            |
| RCJT, TCJT, LCJT | 1 1/8      | 141.3     | 116.7     | 79.4      | 29.9      | 11.5      | 50.5      | 11.9           | 43.7           | 10        | G1102KRRB   | G1102KPPB3 | G1102KLLB  | S1102K                | T-40222<br>(T-21548P) | 1.090      |
| RCJT, TCJT, LCJT | 1 3/16     | 5 9/16    | 4 19/32   | 3 1/8     | 1.178     | 29/64     | 1.990     | 15/32          | 1.730          | 3/8       | G1103KRRB   | G1103KPPB3 | G1103KLLB  | S1103K                |                       | 2.40       |
| RCJT, TCJT, LCJT | 1 1/4 S    |           |           |           |           |           |           |                |                |           | G1103KRRB3  | G1103KPPB4 | G1103KLLB3 | S1103K3               |                       |            |
| RCJT, TCJT, LCJT | 30         |           |           |           |           |           |           |                |                |           | GE30KRRB    | GE30KPPB3  | GE30KLLB   | SE30K                 |                       |            |
| RCJT, TCJT, LCJT | 1 1/4      |           |           |           |           |           |           |                |                |           | G1104KRRB   | G1104KPPB2 | G1104KLLB  | S1104K <sup>(1)</sup> |                       |            |
| RCJT, TCJT, LCJT | 1 5/16     | 155.6     | 130.2     | 92.1      | 31.8      | 13.1      | 53.5      | 11.9           | 53.6           | 12        | G1105KRRB   | G1105KPPB2 | G1105KLLB  | S1105K <sup>(1)</sup> | T-40223<br>(T-21414)  | 1.444      |
| RCJT, TCJT, LCJT | 1 3/8      | 6 1/8     | 5 1/8     | 3 5/8     | 1.254     | 33/64     | 2.106     | 15/32          | 2.112          | 1 1/2     | G1106KRRB   | G1106KPPB2 | G1106KLLB  | S1106K <sup>(1)</sup> |                       | 3.18       |
| RCJT, TCJT, LCJT | 1 7/16     |           |           |           |           |           |           |                |                |           | G1107KRRB   | G1107KPPB2 | G1107KLLB  | S1107K <sup>(1)</sup> |                       |            |
| RCJT, TCJT, LCJT | 35         |           |           |           |           |           |           |                |                |           | GE35KRRB    | GE35KPPB2  | GE35KLLB   | SE35K                 |                       |            |
| RCJT, TCJT, LCJT | 1 1/2      | 171.4     | 143.6     | 104.7     | 38.1      | 13.1      | 59.3      | 12.7           | 58.2           | 12        | G1108KRRB   | G1108KPPB3 | G1108KLLB  | S1108KT               | T-40224<br>(T-22529)  | 2.193      |
| RCJT, TCJT, LCJT | 1 9/16     | 6 3/4     | 5 21/32   | 4 1/8     | 1.500     | 33/64     | 2.334     | 1/2            | 2.292          | 1 1/2     | G1109KRRB   | G1109KPPB3 | G1109KLLB  | S1109KT               |                       | 4.83       |
| RCJT, TCJT, LCJT | 40         |           |           |           |           |           |           |                |                |           | GE40KRRB    | GE40KPPB3  | GE40KLLB   | SE40K                 |                       |            |
| RCJT, TCJT, LCJT | 1 5/8      |           |           |           |           |           |           |                |                |           | G1110KRRB   | G1110KPPB4 | G1110KLLB  | S1110K                |                       |            |
| RCJT, TCJT, LCJT | 1 11/16    | 179.4     | 148.0     | 111.1     | 38.9      | 13.1      | 59.3      | 12.7           | 63.0           | 12        | G1111KRRB   | G1111KPPB4 | G1111KLLB  | S1111K                | T-40225<br>(T-21416)  | 2.379      |
| RCJT, TCJT, LCJT | 1 3/4      | 7 1/16    | 5 27/32   | 4 3/8     | 1.531     | 33/64     | 2.334     | 1/2            | 2.480          | 1 1/2     | G1112KRRB   | G1112KPPB4 | G1112KLLB  | S1112K                |                       | 5.24       |
| RCJT, TCJT, LCJT | 45         |           |           |           |           |           |           |                |                |           | GE45KRRB    | GE45KPPB4  | GE45KLLB   | SE45K                 |                       |            |
| RCJT, TCJT, LCJT | 1 7/8      | 188.9     | 157.2     | 115.9     | 42.9      | 17.1      | 66.4      | 12.7           | 69.3           | 16        | G1114KRRB   | G1114KPPB3 | G1114KLLB  | S1114K                | T-40226<br>(T-21418)  | 2.724      |
| RCJT, TCJT, LCJT | 1 15/16    | 7 7/16    | 6 3/16    | 4 9/16    | 1.688     | 43/64     | 2.615     | 1/2            | 2.730          | 5/8       | G1115KRRB   | G1115KPPB3 | G1115KLLB  | S1115K                |                       | 6.00       |
| RCJT, TCJT, LCJT | 50         |           |           |           |           |           |           |                |                |           | GE50KRRB    | GE50KPPB3  | GE50KLLB   | SE50K                 |                       |            |
| RCJT, TCJT, LCJT | 2          |           |           |           |           |           |           |                |                |           | G1200KRRB   | G1200KPPB4 | G1200KLLB  | S1200K                |                       |            |
| RCJT, TCJT, LCJT | 2 1/8      | 215.9     | 184.1     | 127.0     | 46.8      | 17.1      | 75.1      | 16.7           | 75.7           | 16        | G1202KRRB   | G1202KPPB4 | G1202KLLB  | S1202K                | T-40227<br>(T-23788)  | 3.668      |
| RCJT, TCJT, LCJT | 2 3/16     | 8 1/2     | 7 1/4     | 5         | 1.844     | 43/64     | 2.958     | 21/32          | 2.980          | 5/8       | G1203KRRB   | G1203KPPB4 | G1203KLLB  | S1203K                |                       | 8.08       |
| RCJT, TCJT, LCJT | 55         |           |           |           |           |           |           |                |                |           | GE55KRRB    | GE55KPPB4  | GE55KLLB   | SE55K                 |                       |            |

<sup>(1)</sup>Add C1 suffix to collar numbers for G-KPPB2 bearings (TCJT).

NOTE: Shaft diameter with an S = smaller housing.

### RCJTC INDUSTRIAL-SERIES CONCENTRIC COLLAR

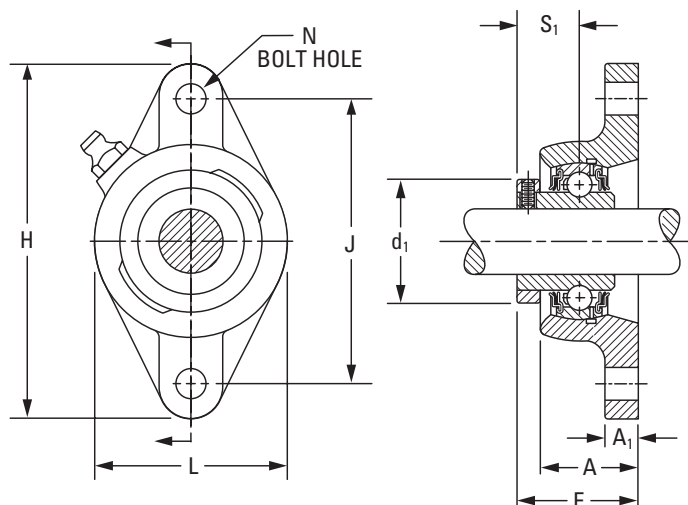
- This series has the same basic design as RCJT, except it uses the concentric collar rather than the self-locking eccentric collar as the shaft-locking device.
- All units are equipped with GC-KRRB wide inner ring concentric collars.
- The spherical outside diameter mounted in the corresponding machined housing seats provides the initial self-alignment.
- The bolt-hole spacing dimensions are interchangeable with the RCJT series and most competitive units.
- The units are factory-prelubricated. A grease fitting is provided for relubrication.
- Safety end caps are available for selected sizes.

#### Suggested shaft tolerances:

1/2 in. – 1 15/16 in., nominal to -0.013 mm, -0.0005 in.;

#### To order, specify UNIT and SHAFT DIAMETER.

Example: RCJTC 1 3/16 in.



#### BEARING DATA

| Unit  | Bearing No. | Dimensions and Load Ratings |
|-------|-------------|-----------------------------|
| RCJTC | GC-KRRB     | Page A-40                   |

| Unit  | Shaft Dia. | H                | J                 | L               | A             | E             | N             | A <sub>1</sub> | d <sub>1</sub> | S <sub>1</sub> | Bolt Size | Bearing No.                             | Collar No. | Housing No.           | Unit Wt.      |
|-------|------------|------------------|-------------------|-----------------|---------------|---------------|---------------|----------------|----------------|----------------|-----------|-----------------------------------------|------------|-----------------------|---------------|
|       | in.        | mm in.           | mm in.            | mm in.          | mm in.        | mm in.        | mm in.        | mm in.         | mm in.         | mm in.         | mm in.    |                                         |            | New (Old)             | kg lbs.       |
| RCJTC | 5/8        | 98.4<br>3 7/8    | 76.20<br>3        | 60.3<br>2 3/8   | 23.6<br>0.929 | 32.7<br>1.287 | 9.9<br>25/64  | 8.3<br>21/64   | 33.8<br>1.329  | 15.5<br>39/64  | 10<br>3/8 | GC1010KRRB                              | C203       | T-40270<br>(T-27181)  | 0.368<br>0.81 |
| RCJTC | 3/4        | 111.9<br>4 13/32 | 89.70<br>3 17/32  | 60.3<br>2 3/8   | 27.8<br>1.094 | 38.2<br>1.502 | 9.9<br>25/64  | 11.1<br>7/16   | 37.7<br>1.485  | 18.7<br>47/64  | 10<br>3/8 | GC1012KRRB                              | C204       | T-40271<br>(T-27183)  | 0.545<br>1.20 |
| RCJTC | 1          | 123.8<br>4 7/8   | 98.81<br>3 57/64  | 69.8<br>2 3/4   | 27.9<br>1.100 | 39.8<br>1.569 | 11.9<br>15/32 | 13.5<br>17/32  | 44.1<br>1.735  | 20.2<br>51/64  | 10<br>3/8 | GC1100KRRB                              | C205       | T-40272<br>(T-27200)  | 0.717<br>1.58 |
| RCJTC | 1 1/8      | 141.3<br>5 9/16  | 116.70<br>4 19/32 | 81.0<br>3 3/16  | 29.9<br>1.178 | 43.0<br>1.693 | 11.5<br>29/64 | 13.5<br>17/32  | 52.3<br>2.058  | 22.6<br>57/64  | 10<br>3/8 | GC1102KRRB<br>GC1103KRRB<br>GC1103KRRB3 | C206       | T-401273<br>(T-27197) | 1.035<br>2.28 |
| RCJTC | 1 1/4      | 155.6<br>6 1/8   | 130.20<br>5 1/8   | 92.1<br>3 5/8   | 31.8<br>1.254 | 46.6<br>1.834 | 13.1<br>33/64 | 14.3<br>9/16   | 58.2<br>2.292  | 25.4<br>1      | 12<br>1/2 | GC1104KRRB<br>GC1106KRRB<br>GC1107KRRB  | C207       | T-40252               | 1.498<br>3.30 |
| RCJTC | 1 11/16    | 179.4<br>7 1/16  | 148.40<br>5 27/32 | 111.1<br>4 3/8  | 38.9<br>1.531 | 53.7<br>2.116 | 13.1<br>33/64 | 14.3<br>9/16   | 72.9<br>2.871  | 29.4<br>1 5/32 | 12<br>1/2 | GC1111KRRB                              | C209       | T-40275               | 2.097<br>4.62 |
| RCJTC | 1 15/16    | 188.9<br>7 7/16  | 157.20<br>6 3/16  | 115.9<br>4 9/16 | 42.9<br>1.688 | 58.5<br>2.303 | 17.1<br>43/64 | 14.3<br>9/16   | 79.3<br>3.121  | 30.2<br>1 3/16 | 16<br>5/8 | GC1115KRRB                              | C210       | T-40276               | 2.497<br>5.50 |

NOTE: Shaft diameter with an S = smaller housing.

### VCJT STANDARD SERIES

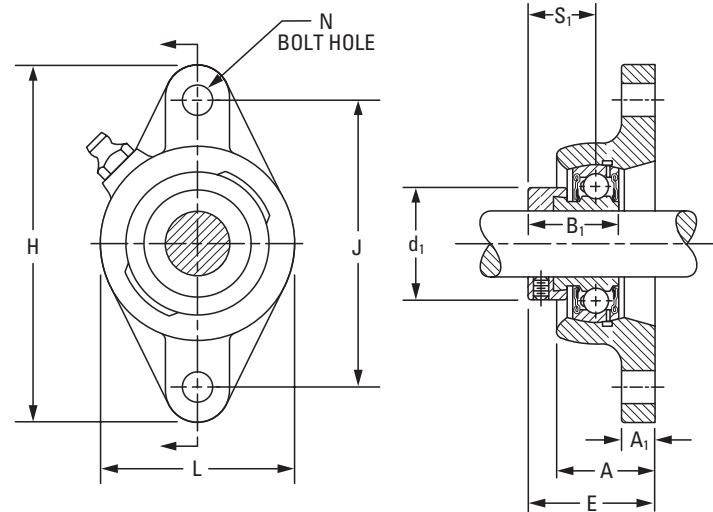
- This series has the same design and features as the VCJ type, but has two bolt holes instead of four. This allows mounting in restricted areas.
- This series is assembled with GRA-RRB bearings with positive-contact, land-riding seals and self-locking collars.
- The units are factory-prelubricated. A grease fitting is provided for relubrication.
- Safety end caps are available for selected sizes.

#### Suggested shaft tolerances:

1/2 in. – 1 15/16 in., nominal to -0.013 mm, -0.0005 in.;  
2 in. – 2 3/16 in., nominal to -0.025 mm, -0.0010 in.

#### To order, specify UNIT and SHAFT DIAMETER.

Example: VCJT 1 in.



#### BEARING DATA

| Unit | Bearing No. | Dimensions and Load Ratings |
|------|-------------|-----------------------------|
| VCJT | GRA-RRB     | Page A-50                   |

| Unit | Shaft Dia. | H         | J         | L         | A         | E         | N         | B <sub>1</sub> | A <sub>1</sub> | d <sub>1</sub> | S <sub>1</sub> | Bolt Size | Bearing No. | Collar No. | Housing No.  | Unit Wt.   |
|------|------------|-----------|-----------|-----------|-----------|-----------|-----------|----------------|----------------|----------------|----------------|-----------|-------------|------------|--------------|------------|
|      | in.<br>mm  | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in.      | mm<br>in.      | mm<br>in. |             |            | New<br>(Old) | kg<br>lbs. |
| VCJT | 1/2        |           |           |           |           |           |           |                |                |                |                |           | GRA008RRB   | S1008K     |              |            |
| VCJT | 5/8        | 98.4      | 76.2      | 53.9      | 23.6      | 39.3      | 10.7      | 28.6           | 10.3           | 28.1           | 22.2           | 10        | GRA010RRB   | S1010K     | T-40219      | 0.590      |
| VCJT | 17         | 3 7/8     | 3         | 2 1/8     | 0.929     | 1.548     | 27/64     | 1 1/8          | 13/32          | 1.105          | 7/8            | 3/8       | GRAE17RRB   | SE17K      | (T-22244P)   | 1.30       |
| VCJT | 3/4        | 111.9     | 89.7      | 60.3      | 27.8      | 43.3      | 9.9       | 31.0           | 11.1           | 32.8           | 23.4           | 10        | GRA012RRB   | S1012K     | T-40220      | 0.518      |
| VCJT | 20         | 4 13/32   | 3 17/32   | 2 3/8     | 1.094     | 1.706     | 25/64     | 1 7/32         | 7/16           | 1.292          | 59/64          | 3/8       | GRAE20RRB   | SE20K      | (T-21409P)   | 1.44       |
| VCJT | 7/8        |           |           |           |           |           |           |                |                |                |                |           | GRA014RRB   | S1014K     |              |            |
| VCJT | 15/16      | 123.8     | 99.2      | 69.8      | 27.9      | 43.2      | 11.5      | 31.0           | 11.1           | 23.9           | 23.4           | 10        | GRA015RRB   | S1015K     | T-40221      | 0.740      |
| VCJT | 1          | 4 7/8     | 3 29/32   | 2 3/4     | 1.100     | 1.701     | 29/64     | 1 7/32         | 7/16           | 1.480          | 59/64          | 3/8       | GRA100RRB   | S1100K     | (T-21412P)   | 1.63       |
| VCJT | 25         |           |           |           |           |           |           |                |                |                |                |           | GRAE25RRB   | SE25K      |              |            |
| VCJT | 1 1/8      |           |           |           |           |           |           |                |                |                |                |           | GRA102RRB   | S1102K     |              |            |
| VCJT | 1 3/16     | 141.3     | 116.7     | 79.4      | 29.9      | 47.1      | 11.5      | 35.7           | 11.9           | 43.7           | 27.0           | 10        | GRA103RRB   | S1103K     | T-40222      | 1.026      |
| VCJT | 1 1/4 S    | 5 9/16    | 4 19/32   | 3 1/8     | 1.178     | 1.856     | 29/64     | 1 13/32        | 15/32          | 1.730          | 1 1/16         | 3/8       | GRA103RRB2  | S1103K3    | (T-21548P)   | 2.26       |
| VCJT | 30         |           |           |           |           |           |           |                |                |                |                |           | GRAE30RRB   | SE30K      |              |            |
| VCJT | 1 1/4      |           |           |           |           |           |           |                |                |                |                |           | GRA104RRB   | S1104K     |              |            |
| VCJT | 1 3/8      | 155.6     | 130.2     | 92.1      | 31.8      | 50.5      | 13.1      | 38.9           | 11.9           | 53.6           | 29.4           | 12        | GRA106RRB   | S1106K     | T-40223      | 1.362      |
| VCJT | 1 7/16     | 6 1/8     | 5 1/8     | 3 5/8     | 1.254     | 1.989     | 33/64     | 1 17/32        | 15/32          | 2.112          | 1 5/32         | 1/2       | GRA107RRB   | S1107K     | (T-21414)    | 3.00       |
| VCJT | 35         |           |           |           |           |           |           |                |                |                |                |           | GRAE35RRB   | SE35K      |              |            |
| VCJT | 1 1/2      | 171.4     | 143.6     | 104.7     | 38.1      | 56.9      | 13.1      | 43.7           | 12.7           | 58.2           | 32.5           | 12        | GRA108RRB   | S1108KT    | T-40224      | 2.075      |
| VCJT | 40         | 6 3/4     | 5 21/32   | 4 1/8     | 1.500     | 2.243     | 33/64     | 1 23/32        | 1/2            | 2.292          | 1 9/32         | 1/2       | GRAE40RRB   | SE40K      | (T-22529)    | 4.57       |
| VCJT | 1 5/8      |           |           |           |           |           |           |                |                |                |                |           | GRA110RRB   | S1110K     |              |            |
| VCJT | 1 11/16    | 179.4     | 148.0     | 111.1     | 38.9      | 57.0      | 13.1      | 43.7           | 12.7           | 63.0           | 32.5           | 12        | GRA111RRB   | S1111K     | T-40225      | 2.229      |
| VCJT | 1 3/4      | 7 1/16    | 5 27/32   | 4 3/8     | 1.531     | 2.244     | 33/64     | 1 23/32        | 1/2            | 2.480          | 1 9/32         | 1/2       | GRA112RRB   | S1112K     | (T-21416)    | 4.91       |
| VCJT | 45         |           |           |           |           |           |           |                |                |                |                |           | GRAE45RRB   | SE45K      |              |            |
| VCJT | 1 7/8      |           |           |           |           |           |           |                |                |                |                |           | GRA114RRB   | S1114K     |              |            |
| VCJT | 1 15/16    | 188.9     | 157.2     | 115.8     | 42.9      | 61.0      | 17.1      | 43.7           | 12.7           | 69.3           | 32.5           | 16        | GRA115RRB   | S1115K     | T-40226      | 2.492      |
| VCJT | 2 S        | 7 7/16    | 6 3/16    | 4 9/16    | 1.688     | 2.400     | 43/64     | 1 23/32        | 1/2            | 2.730          | 1 9/32         | 5/8       | GRA115RRB2  | S1115K2    | (T-21418)    | 5.49       |
| VCJT | 50         |           |           |           |           |           |           |                |                |                |                |           | GRAE50RRB   | SE50K      |              |            |
| VCJT | 2          | 215.9     | 184.1     | 127.0     | 46.8      | 67.9      | 17.1      | 48.4           | 16.7           | 75.7           | 36.5           | 16        | GRA200RRB   | S1200K     |              |            |
| VCJT | 2 3/16     | 8 1/2     | 7 1/4     | 5         | 1.844     | 2.672     | 43/64     | 1 29/32        | 21/32          | 2.980          | 27/16          | 5/8       | GRA203RRB   | S1203K     | T-40227      | 3.092      |
| VCJT | 55         |           |           |           |           |           |           |                |                |                |                |           | GRAE55RRB   | SE55K      | (T-23788)    | 6.81       |

NOTE: Shaft diameter with an S = smaller housing.

### YCJT INDUSTRIAL SET SCREW SERIES

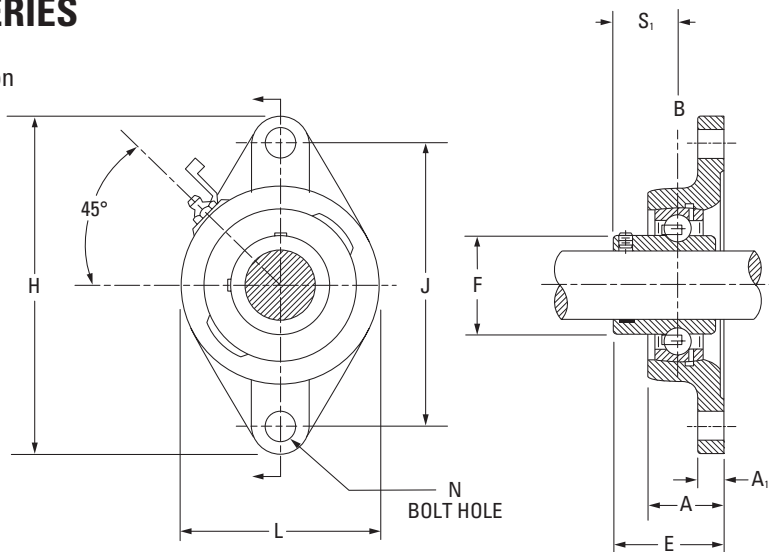
- Incorporates Shaft Guarding Technology, which reduces replacement time, provides shaft protection and prolongs the life of the shaft.
- This series has the same design as the YCJ series, but is mounted with two bolts instead of four.
- All units are equipped with GY-KRRB wide inner ring, set screw bearings.
- The spherical outside diameter mounted in the corresponding machined housings seats provides the initial self-alignment.
- The units are factory-prelubricated. A grease fitting is provided for relubrication.
- Safety end caps are available for selected sizes.

#### Suggested shaft tolerances:

1/2 in. – 1 15/16 in., nominal to -0.013 mm, -0.0005 in.;  
2 in. – 2 3/16 in., nominal to -0.025 mm, -0.0010 in.

#### To order, specify UNIT and SHAFT DIAMETER.

Example: YCJT 1 7/16 in.



#### BEARING DATA

| Unit | Bearing No. | Dimensions and Load Ratings |
|------|-------------|-----------------------------|
| YCJT | GY-KRRB     | Page A-44                   |

| Unit     | Shaft Dia. | H         | J         | L         | A         | E         | B         | A <sub>1</sub> | F         | N         | S <sub>1</sub> | Bolt Size | Bearing No.    |
|----------|------------|-----------|-----------|-----------|-----------|-----------|-----------|----------------|-----------|-----------|----------------|-----------|----------------|
|          | in.<br>mm  | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in. |                |
| YCJT     | 1/2        | 98.4      | 76.2      | 54.00     | 23.6      | 32.90     | 27.40     | 11.1           | 23.9      | 10.0      | 15.9           | 10        | GY1008KRRB     |
| YCJT     | 5/8        | 3 3/8     | 3         | 2 1/8     | 0.929     | 1.296     | 1 5/64    | 7/16           | 0.941     | 27/64     | 5/8            | 3/8       | GY1010KRRB     |
| YCJT     | 17         |           |           |           |           |           |           |                |           |           |                |           | GYE17KRRB      |
| YCJT SGT | 3/4        | 111.9     | 89.7      | 60.30     | 27.8      | 38.40     | 31.80     | 11.1           | 27.6      | 10.0      | 19.1           | 10        | GY1012KRRB SGT |
| YCJT SGT | 20         | 4 13/32   | 3 17/32   | 2 3/8     | 1.094     | 1.513     | 1 1/4     | 7/16           | 1.085     | 27/64     | 3/4            | 3/8       | GYE20KRRB SGT  |
| YCJT SGT | 7/8        |           |           |           |           |           |           |                |           |           |                |           | GY1014KRRB SGT |
| YCJT SGT | 15/16      | 123.8     | 99.2      | 69.90     | 27.9      | 40.00     | 34.90     | 12.7           | 33.8      | 11.5      | 20.6           | 12        | GY1015KRRB SGT |
| YCJT SGT | 1          | 4 7/8     | 3 29/32   | 2 3/4     | 1.100     | 1.575     | 1 3/8     | 1/2            | 1.331     | 29/64     | 13/16          | 1/2       | GY1100KRRB SGT |
| YCJT SGT | 25         |           |           |           |           |           |           |                |           |           |                |           | GYE25KRRB SGT  |
| YCJT SGT | 1 1/8      |           |           |           |           |           |           |                |           |           |                |           | GY1102KRRB SGT |
| YCJT SGT | 1 3/16     | 141.3     | 116.7     | 79.45     | 29.9      | 43.46     | 39.29     | 13.5           | 40.3      | 11.5      | 23.4           | 12        | GY1103KRRB SGT |
| YCJT     | 1 1/4 S    | 5 9/16    | 4 19/32   | 3 1/8     | 1.178     | 1.711     | 1 35/64   | 17/32          | 1.587     | 29/64     | 59/64          | 1/2       | GY1103KRRB3    |
| YCJT SGT | 30         |           |           |           |           |           |           |                |           |           |                |           | GYE30KRRB SGT  |
| YCJT SGT | 1 1/4      |           |           |           |           |           |           |                |           |           |                |           | GY1104KRRB SGT |
| YCJT SGT | 1 3/8      | 155.6     | 130.2     | 92.10     | 31.8      | 48.95     | 45.20     | 13.5           | 46.8      | 13.0      | 27.9           | 12        | GY1106KRRB SGT |
| YCJT SGT | 1 7/16     | 6 1/8     | 5 1/8     | 3 5/8     | 1.254     | 1.927     | 1 25/32   | 17/32          | 1.843     | 33/64     | 1 1/10         | 1/2       | GY1107KRRB SGT |
| YCJT SGT | 35         |           |           |           |           |           |           |                |           |           |                |           | GYE35KRRB SGT  |
| YCJT SGT | 1 1/2      | 171.5     | 143.7     | 104.80    | 38.1      | 54.40     | 49.20     | 14.3           | 52.2      | 13.0      | 30.2           | 12        | GY1108KRRB SGT |
| YCJT SGT | 40         | 6 3/4     | 5 21/32   | 4 1/8     | 1.500     | 2.141     | 1 15/16   | 9/16           | 2.057     | 33/64     | 1 3/16         | 1/2       | GYE40KRRB SGT  |
| YCJT SGT | 1 5/8      |           |           |           |           |           |           |                |           |           |                |           | GY1110KRRB SGT |
| YCJT SGT | 1 11/16    | 179.4     | 148.4     | 111.10    | 38.9      | 55.52     | 50.40     | 14.3           | 57.9      | 13.0      | 31.4           | 12        | GY1111KRRB SGT |
| YCJT SGT | 1 3/4      | 7 1/16    | 5 27/32   | 4 3/8     | 1.531     | 2.186     | 1 63/64   | 9/16           | 2.279     | 33/64     | 1 15/64        | 1/2       | GY1112KRRB SGT |
| YCJT SGT | 45         |           |           |           |           |           |           |                |           |           |                |           | GYE45KRRB SGT  |
| YCJT SGT | 1 15/16    |           |           |           |           |           |           |                |           |           |                |           | GY1115KRRB SGT |
| YCJT     | 2 S        | 188.9     | 157.2     | 115.90    | 42.9      | 60.70     | 51.60     | 14.3           | 62.8      | 17.0      | 32.5           | 12        | GY1115KRRB3    |
| YCJT SGT | 50         | 7 7/16    | 6 3/16    | 4 9/16    | 1.688     | 2.390     | 2 1/32    | 9/16           | 2.473     | 43/64     | 1 9/32         | 1/2       | GYE50KRRB SGT  |
| YCJT SGT | 2          |           |           |           |           |           |           |                |           |           |                |           | GY1200KRRB SGT |
| YCJT SGT | 2 3/16     | 215.9     | 184.2     | 127.00    | 46.8      | 64.70     | 55.60     | 16.7           | 69.7      | 17.0      | 33.3           | 16        | GY1203KRRB SGT |
| YCJT SGT | 55         | 8 1/2     | 7 1/4     | 5         | 1.844     | 2.547     | 2 3/16    | 21/32          | 2.745     | 43/64     | 1 5/16         | 5/8       | GYE55KRRB SGT  |

NOTE: Shaft diameter with an S = smaller housing.

### SCJT STANDARD SERIES

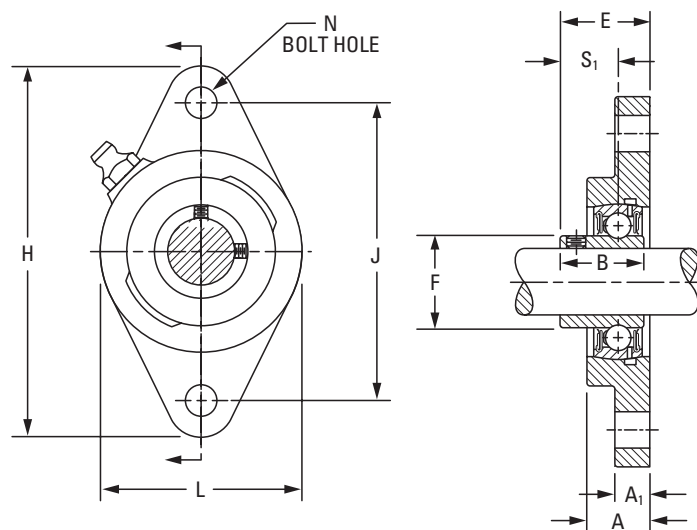
- This series has the same construction and design as SCJ type, but is mounted with two bolts instead of four.
- This series is assembled with GYA-RRB bearings with positive-contact, land-riding seals and set screw locking.
- The units are factory-prelubricated. A grease fitting is provided for relubrication.

#### Suggested shaft tolerances:

1/2 in. – 1 15/16 in., nominal to -0.013 mm, -0.0005 in.;  
2 in. – 2 3/16 in., nominal to -0.025 mm, -0.0010 in.

#### To order, specify UNIT and SHAFT DIAMETER.

Example: SCJT 1 in.



#### BEARING DATA

| Unit | Bearing No. | Dimensions and Load Ratings |
|------|-------------|-----------------------------|
| SCJT | GYA-RRB     | Page A-54                   |

| Unit | Shaft Dia. | H         | J         | L         | A         | E         | N         | B         | A <sub>1</sub> | F         | S <sub>1</sub> | Bolt Size | Bearing No. | Housing No. | Unit Wt.   |
|------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------------|-----------|----------------|-----------|-------------|-------------|------------|
|      | in.<br>mm  | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in. | mm<br>in.      | mm<br>in. |             |             | kg<br>lbs. |
| SCJT | 1/2        | 98.4      | 76.20     | 60.3      | 17.9      | 25.4      | 9.9       | 23.8      | 11.1           | 24.6      | 15.9           | 10        | GYA008RRB   |             | 0.34       |
| SCJT | 5/8        | 3 7/8     | 3         | 2 3/8     | 4 5/64    | 1         | 2 5/64    | 1 5/16    | 7/16           | 3 1/32    | 5/8            | 3/8       | GYA010RRB   | T-40136     | 0.75       |
| SCJT | 17         |           |           |           |           |           |           |           |                |           |                |           | GYAE17RRB   |             |            |
| SCJT | 3/4        | 111.9     | 89.69     | 65.1      | 19.0      | 28.6      | 9.9       | 27.0      | 11.1           | 29.0      | 18.3           | 10        | GYA012RRB   | T-40138     | 0.43       |
| SCJT | 20         | 4 13/32   | 3 17/32   | 2 9/16    | 3/4       | 1 1/8     | 2 5/64    | 1 1/16    | 7/16           | 1 9/64    | 2 3/32         | 3/8       | GYAE20RRB   |             | 0.94       |
| SCJT | 7/8        |           |           |           |           |           |           |           |                |           |                |           | GYA014RRB   |             |            |
| SCJT | 1 5/16     | 123.8     | 98.82     | 69.9      | 19.8      | 29.8      | 11.9      | 28.2      | 11.1           | 33.7      | 19.4           | 10        | GYA015RRB   | T-40140     | 0.48       |
| SCJT | 1          | 4 7/8     | 3 57/64   | 2 3/4     | 2 5/32    | 1 11/64   | 1 5/32    | 1 7/64    | 7/16           | 1 21/64   | 4 9/64         | 3/8       | GYA100RRB   |             | 1.07       |
| SCJT | 25         |           |           |           |           |           |           |           |                |           |                |           | GYAE25RRB   |             |            |
| SCJT | 1 1/8      |           |           |           |           |           |           |           |                |           |                |           | GYA102RRB   |             |            |
| SCJT | 1 3/16     | 141.3     | 116.68    | 79.4      | 21.4      | 34.1      | 11.5      | 32.5      | 13.5           | 40.1      | 23.0           | 10        | GYA103RRB   | T-40142     | 0.72       |
| SCJT | 1 1/4 S    | 5 9/16    | 4 19/32   | 3 1/8     | 2 1/32    | 1 11/32   | 2 9/64    | 1 9/32    | 1 7/32         | 1 37/64   | 2 9/32         | 3/8       | GYA103RRB3  |             | 1.58       |
| SCJT | 30         |           |           |           |           |           |           |           |                |           |                |           | GYAE30RRB   |             |            |
| SCJT | 1 1/4      |           |           |           |           |           |           |           |                |           |                |           | GYA104RRB   |             |            |
| SCJT | 1 3/8      | 155.6     | 130.18    | 92.1      | 24.6      | 38.1      | 13.1      | 36.5      | 14.3           | 46.8      | 25.8           | 12        | GYA106RRB   | T-40144     | 1.08       |
| SCJT | 1 7/16     | 6 1/8     | 5 1/8     | 3 5/8     | 3 1/32    | 1 1/2     | 3 3/64    | 1 7/16    | 9/16           | 1 27/32   | 1 1/64         | 1/2       | GYA107RRB   |             | 2.37       |
| SCJT | 35         |           |           |           |           |           |           |           |                |           |                |           | GYAE35RRB   |             |            |
| SCJT | 1 1/2      | 171.5     | 143.67    | 104.8     | 26.2      | 40.9      | 13.1      | 39.3      | 14.3           | 52.4      | 27.8           | 12        | GYA108RRB   | T-40146     | 1.97       |
| SCJT | 40         | 6 3/4     | 5 21/32   | 4 1/8     | 1 1/32    | 1 39/64   | 3 3/64    | 1 35/64   | 9/16           | 2 1/16    | 1 3/32         | 1/2       | GYAE40RRB   |             | 4.34       |
| SCJT | 1 5/8      |           |           |           |           |           |           |           |                |           |                |           | GYA110RRB   |             |            |
| SCJT | 1 11/16    | 179.4     | 148.00    | 111.1     | 28.6      | 43.6      | 13.1      | 42.1      | 15.8           | 57.9      | 28.6           | 12        | GYA111RRB   | T-40170     | 2.03       |
| SCJT | 1 3/4      | 7 1/16    | 5 27/32   | 4 3/8     | 1 1/8     | 1 23/32   | 3 3/64    | 1 21/32   | 5/8            | 2 5/32    | 1 7/8          | 1/2       | GYA112RRB   |             | 4.48       |
| SCJT | 45         |           |           |           |           |           |           |           |                |           |                |           | GYAE45RRB   |             |            |
| SCJT | 1 15/16    |           |           |           |           |           |           |           |                |           |                |           | GYA115RRB   |             |            |
| SCJT | 2 S        | 189.9     | 157.16    | 115.8     | 28.6      | 46.0      | 17.1      | 44.4      | 16.6           | 62.7      | 30.9           | 16        | GYA115RRB2  | T-40172     | 2.26       |
| SCJT | 50         | 7 7/16    | 6 3/16    | 4 9/16    | 1 1/8     | 1 13/16   | 4 3/64    | 1 3/4     | 2 1/32         | 2 15/32   | 1 7/32         | 5/8       | GYAE50RRB   |             | 4.98       |
| SCJT | 2          |           |           |           |           |           |           |           |                |           |                |           | GYA200RRB   |             |            |
| SCJT | 2 3/16     | 215.9     | 184.15    | 127.0     | 30.9      | 48.0      | 17.1      | 46.4      | 18.2           | 69.8      | 31.7           | 16        | GYA203RRB   | T-40174     | 2.79       |
| SCJT | 55         | 8 1/2     | 7 1/4     | 5         | 1 7/32    | 1 57/64   | 4 3/64    | 1 53/64   | 2 3/32         | 2 3/4     | 1 1/4          | 5/8       | GYAE55RRB   |             | 6.14       |

NOTE: Shaft diameter with an S = smaller housing.

### FLCT STANDARD SERIES

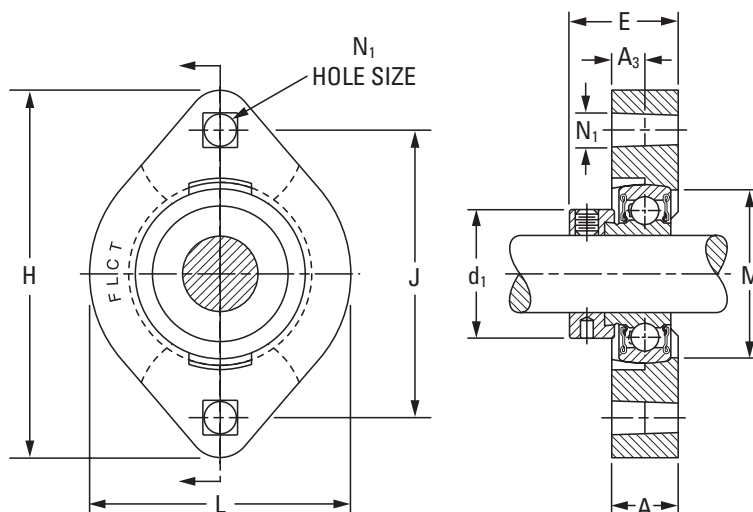
- These versatile power-transmission units are designed to provide sturdy shaft support in minimum space at minimum cost.
- The space-saving, two-bolt unit mounts flush against the frame.
- The bolt-hole spacing and size is the same as the pressed-steel flangette unit.
- The series is equipped with RA-RRB extended inner ring ball bearings with positive-contact, land-riding seals.
- The series is permanently prelubricated.

#### Suggested shaft tolerances:

1/2 in. – 1 7/16 in., nominal to -0.013 mm, -0.0005 in.;

#### To order, specify UNIT and SHAFT DIAMETER.

Example: FLCT 1 3/16 in.



#### BEARING DATA

| Unit | Bearing No. | Dimensions and Load Ratings |
|------|-------------|-----------------------------|
| FLCT | RA-RRB      | Page A-48                   |

| Unit | Shaft Dia. | H         | J         | L         | E         | A         | A <sub>3</sub> | N <sub>1</sub><br>Sq. | d <sub>1</sub> | M         | Bolt Size | Bearing No. | Collar No. | Housing No. | Unit Wt.   |
|------|------------|-----------|-----------|-----------|-----------|-----------|----------------|-----------------------|----------------|-----------|-----------|-------------|------------|-------------|------------|
|      | in.<br>mm  | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in.             | mm<br>in.      | mm<br>in. | mm<br>in. |             |            |             | kg<br>lbs. |
| FLCT | 1/2        | 81.0      | 63.5      | 58.7      | 30.2      | 14.7      | 7.1            | 7.1                   | 28.6           | 38.1      | 6         | RA008RRB    | S1008K     |             | 0.322      |
| FLCT | 5/8        | 3 3/16    | 2 1/2     | 2 5/16    | 1 3/16    | 37/64     | 9/32           | 9/32                  | 1 1/8          | 1 1/2     | 1/4       | RA010RRB    | S1010K     | T-34124     | 0.71       |
| FLCT | 17         |           |           |           |           |           |                |                       |                |           |           | RAE17RRB    | SE17K      |             |            |
| FLCT | 3/4        | 90.5      | 71.4      | 66.7      | 32.9      | 17.1      | 8.7            | 8.7                   | 33.3           | 45.2      | 8         | RA012RRB    | S1012K     |             | 0.445      |
| FLCT | 20         | 3 9/16    | 2 13/16   | 2 5/8     | 1 19/64   | 43/64     | 11/32          | 11/32                 | 1 5/16         | 1 25/32   | 5/16      | RAE20RRB    | SE20K      | T-34122     | 0.98       |
| FLCT | 7/8        |           |           |           |           |           |                |                       |                |           |           | RA014RRB    | S1014K     |             |            |
| FLCT | 15/16      | 95.2      | 76.2      | 71.0      | 34.5      | 17.5      | 8.7            | 8.7                   | 38.1           | 50.4      | 8         | RA015RRB    | S1015K     |             | 0.499      |
| FLCT | 1          | 3 3/4     | 3         | 2 51/64   | 1 23/64   | 11/16     | 11/32          | 11/32                 | 1 1/2          | 1 63/64   | 5/16      | RA100RRB    | S1100K     | T-33753     | 1.10       |
| FLCT | 25         |           |           |           |           |           |                |                       |                |           |           | RAE25RRB    | SE25K      |             |            |
| FLCT | 1 1/8      |           |           |           |           |           |                |                       |                |           |           | RA102RRB    | S1102K     |             |            |
| FLCT | 1 3/16     | 112.7     | 90.5      | 84.1      | 38.5      | 20.6      | 10.3           | 10.3                  | 44.4           | 59.5      | 10        | RA103RRB    | S1103K     |             | 0.835      |
| FLCT | 1 1/4 S    | 4 7/16    | 3 9/16    | 3 5/16    | 1 33/64   | 13/16     | 13/32          | 13/32                 | 1 3/4          | 2 11/32   | 3/8       | RA103RRB2   | S1103K3    | T-34120     | 1.84       |
| FLCT | 30         |           |           |           |           |           |                |                       |                |           |           | RAE30RRB    | SE30K      |             |            |
| FLCT | 1 1/4      |           |           |           |           |           |                |                       |                |           |           | RA104RRB    | S1104K     |             |            |
| FLCT | 1 3/8      | 125.4     | 100.0     | 93.7      | 41.1      | 22.2      | 11.1           | 10.3                  | 54.0           | 69.5      | 10        | RA106RRB    | S1106K     |             | 1.075      |
| FLCT | 1 7/16     | 4 15/16   | 3 15/16   | 3 11/16   | 1 21/32   | 7/8       | 7/16           | 13/32                 | 2 1/8          | 2 47/64   | 3/8       | RA107RRB    | S1107K     | T-34118     | 2.37       |
| FLCT | 35         |           |           |           |           |           |                |                       |                |           |           | RAE35RRB    | SE35K      |             |            |

NOTE: Shaft diameter with an S = smaller housing.

### RFC INDUSTRIAL PILOTED-SERIES CONCENTRIC COLLAR

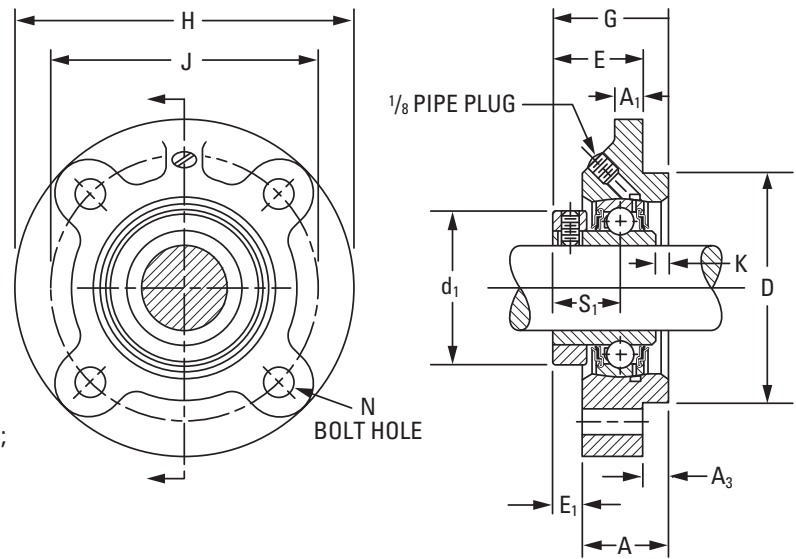
- The piloted flange cartridges ensure accurate mounting fits and provide better support for heavy loads.
- The cast-iron units are suited for applications such as material handling, industrial conveyor equipment, and farm and construction equipment.
- This series is assembled with R-seal (GC-KRRB) bearings with a concentric-locking collar.
- The units are factory-prelubricated. A grease fitting is provided for relubrication if required.

#### Suggested shaft tolerances:

1/2 in. – 1 15/16 in., nominal to -0.013 mm, -0.0005 in.;  
2 in. – 2 3/16 in., nominal to -0.025 mm, -0.0010 in.

#### To order, specify UNIT and SHAFT DIAMETER.

Example: RFC 1 7/16 in.



#### BEARING DATA

| Unit | Bearing No. | Dimensions and Load Ratings |
|------|-------------|-----------------------------|
| RFC  | GC-KRRB     | Page A-40                   |

| Unit | Shaft Dia. | D               | J              | H              | S <sub>1</sub> | K           | N             | G               | A               | E <sub>1</sub> | A <sub>3</sub> | E               | A <sub>1</sub> | d <sub>1</sub>  | Bolt Size | Bearing No.                             | Collar No. | Housing No. | Unit Wt.      |
|------|------------|-----------------|----------------|----------------|----------------|-------------|---------------|-----------------|-----------------|----------------|----------------|-----------------|----------------|-----------------|-----------|-----------------------------------------|------------|-------------|---------------|
|      | in.        | mm in.          | mm in.         | mm in.         | mm in.         | mm in.      | mm in.        | mm in.          | mm in.          | mm in.         | mm in.         | mm in.          | mm in.         | mm in.          | mm in.    |                                         |            |             | kg lbs.       |
| RFC  | 1          | 76.20<br>3.000  | 92.1<br>3 5/8  | 111.1<br>4 3/8 | 20.2<br>51/64  | 3.6<br>9/64 | 10.3<br>13/32 | 37.7<br>1 31/64 | 28.2<br>1 7/64  | 9.5<br>3/8     | 6.4<br>1/4     | 31.4<br>1 15/64 | 9.5<br>3/8     | 44.4<br>1 3/4   | 10<br>3/8 | GC1100KRRB                              | C205       | T-27031     | 1.152<br>2.54 |
| RFC  | 1 1/8      | 85.72<br>3.375  | 104.8<br>4 1/8 | 127.0<br>5     | 22.6<br>57/64  | 3.6<br>9/64 | 11.9<br>15/32 | 40.9<br>1 39/64 | 30.6<br>1 13/64 | 10.3<br>13/32  | 10.7<br>27/64  | 30.2<br>1 3/16  | 9.5<br>3/8     | 52.4<br>2 1/16  | 10<br>3/8 | GC1102KRRB<br>GC1103KRRB<br>GC1103KRRB3 | C206       | T-27021     | 1.742<br>3.84 |
| RFC  | 1 1/4      | 92.08<br>3.625  | 111.1<br>4 3/8 | 133.4<br>5 1/4 | 25.4<br>1      | 3.2<br>1/8  | 11.9<br>15/32 | 44.4<br>1 3/4   | 34.1<br>1 11/32 | 10.3<br>13/32  | 11.9<br>15/32  | 32.5<br>1 9/32  | 12.7<br>1/2    | 59.5<br>2 11/32 | 10<br>3/8 | GC1104KRRB<br>GC1106KRRB<br>GC1107KRRB  | C207       | T-26730     | 1.864<br>4.11 |
| RFC  | 1 1/2      | 92.08<br>3.625  | 111.1<br>4 3/8 | 133.4<br>5 1/4 | 27.4<br>1 1/8  | 4.8<br>3/16 | 11.9<br>15/32 | 48.8<br>1 59/64 | 38.1<br>1 1/2   | 10.7<br>27/64  | 11.9<br>15/32  | 36.9<br>1 29/64 | 12.7<br>1/2    | 68.3<br>2 11/16 | 10<br>3/8 | GC1108KRRB                              | C208       | T-26587     | 2.141<br>4.72 |
| RFC  | 1 11/16    | 107.95<br>4.250 | 130.2<br>5 1/8 | 155.6<br>6 1/8 | 29.4<br>1 5/32 | —           | 13.5<br>17/32 | 46.8<br>1 27/32 | 34.1<br>1 11/32 | 12.7<br>1/2    | 11.9<br>15/32  | 34.9<br>1 3/8   | 11.5<br>29/64  | 73.0<br>2 7/8   | 12<br>1/2 | GC1111KRRB<br>GC1112KRRB                | C209       | T-27276     | 2.817<br>6.21 |
| RFC  | 1 3/4      | 114.30<br>4.500 | 136.5<br>5 3/8 | 161.9<br>6 3/8 | 30.2<br>1 3/16 | 6.4<br>1/4  | 13.5<br>17/32 | 54.8<br>2 5/32  | 42.9<br>1 11/16 | 11.9<br>15/32  | 15.9<br>5/8    | 38.9<br>1 17/32 | 12.7<br>1/2    | 79.4<br>3 1/8   | 12<br>1/2 | GC1115KRRB                              | C210       | T-26743     | 3.211<br>7.08 |
| RFC  | 1 15/16    | 127.00<br>5.000 | 152.4<br>6     | 181.0<br>7 1/8 | 33.3<br>1 5/16 | 7.1<br>9/32 | 15.1<br>19/32 | 61.1<br>2 13/32 | 44.4<br>1 3/4   | 16.7<br>21/32  | 22.2<br>7/8    | 38.9<br>1 17/32 | 12.7<br>1/2    | 88.9<br>3 1/2   | 12<br>1/2 | GC1200KRRB<br>GC1203KRRB                | C211       | T-28287     | 4.082<br>9.00 |

NOTE: Shaft diameter with an S = smaller housing.

# BALL BEARING HOUSED UNITS

## BALL BEARING HOUSED UNITS • CAST-IRON FLANGED UNITS • RC

### RC SERIES

- The RC series is convenient for mounting in straight-bore housings.
- The bearing features a self-locking collar and spherical outside diameter fitted to a corresponding spherical seat in the cartridge that provides self-alignment.
- The unit is equipped with a G-KRRB (R-seal) bearing.

#### Suggested housing bore:

Shaft Rotating: nominal +.025 mm to +.076 mm, +.001 in. to +.003 in.

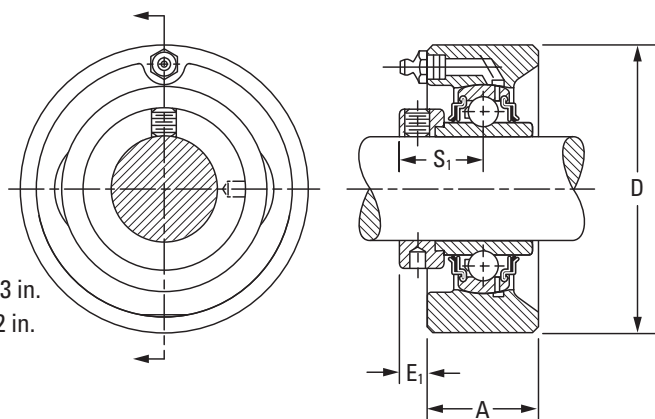
Shaft Stationary: nominal +.00 mm to -.050 mm, +.000 in. to -.002 in.

Avoid excessive tightening of anchor bolts.

#### Suggested shaft tolerances:

1/2 in. – 1 15/16 in., nominal to -0.013 mm, -0.0005 in.;

2 in. – 2 7/16 in., nominal to -0.025 mm, -0.0010 in.



### BEARING DATA

| To order, specify UNIT and SHAFT DIAMETER.<br>Example: RC 1 3⁄16 in. |            |                  |                |                |                | Unit        | Bearing No. | Dimensions and Load Ratings |                |
|----------------------------------------------------------------------|------------|------------------|----------------|----------------|----------------|-------------|-------------|-----------------------------|----------------|
|                                                                      |            |                  |                |                |                | RC          | G-KRRB      | Page A-34                   |                |
| Unit <sup>(1)</sup>                                                  | Shaft Dia. | D                | A              | E <sub>1</sub> | S <sub>1</sub> | Bearing No. | Collar No.  | Housing No.                 | Unit Wt.       |
|                                                                      | in.<br>mm  | mm<br>in.        | mm<br>in.      | mm<br>in.      | mm<br>in.      |             |             |                             | kg<br>lbs.     |
| RC                                                                   | 1⁄2        |                  |                |                |                | G1008KRRB   | S1008K      |                             |                |
| RC                                                                   | 5⁄8        | 68.27            | 30.2           | 8.3            | 23.4           | G1010KRRB   | S1010K      | T-16793                     | 0.549<br>1.21  |
| RC                                                                   | 11⁄16      | 2 11⁄16          | 1 3⁄16         | 21⁄64          | 59⁄64          | G1011KRRB   | S1011K      |                             |                |
| RC                                                                   | 17         |                  |                |                |                | GE17KRRB    | SE17K       |                             |                |
| RC                                                                   | 3⁄4        | 74.61            | 36.5           | 8.3            | 26.6           | G1012KRRB   | S1012K      | T-16795                     | 0.804<br>1.77  |
| RC                                                                   | 20         | 2 15⁄16          | 1 7⁄16         | 21⁄64          | 1 3⁄64         | GE20KRRB    | SE20K       |                             |                |
| RC                                                                   | 7⁄8        |                  |                |                |                | G1014KRRB   | S1014K      | T-16797                     | 0.876<br>1.93  |
| RC                                                                   | 15⁄16      | 79.38            | 38.1           | 7.9            | 27.0           | G1015KRRB   | S1015K      |                             |                |
| RC                                                                   | 1          | 3 1⁄8            | 1 1⁄2          | 5⁄16           | 1 1⁄16         | G1100KRRB   | S1100K      |                             |                |
| RC                                                                   | 25         |                  |                |                |                | GE25KRRB    | SE25K       |                             |                |
| RC                                                                   | 1 1⁄16     |                  |                |                |                | G1101KRRB   | S1101K      | T-16798                     | 1.171<br>2.58  |
| RC                                                                   | 1 1⁄8      | 88.90            | 38.1           | 11.1           | 30.2           | G1102KRRB   | S1102K      |                             |                |
| RC                                                                   | 1 3⁄16     | 3 1⁄2            | 1 1⁄2          | 7⁄16           | 1 3⁄16         | G1103KRRB   | S1103K      |                             |                |
| RC                                                                   | 30         |                  |                |                |                | GE30KRRB    | SE30K       |                             |                |
| RC                                                                   | 1 1⁄4      |                  |                |                |                | G1104KRRB   | S1104K      | T-16686                     | 1.448<br>3.19  |
| RC                                                                   | 1 5⁄16     | 98.43<br>3 7⁄8   | 39.7<br>1 9⁄16 | 12.7<br>1⁄2    | 32.5<br>1 9⁄32 | G1105KRRB   | S1105K      |                             |                |
| RC                                                                   | 1 3⁄8      |                  |                |                |                | G1106KRRB   | S1106K      |                             |                |
| RC                                                                   | 1 7⁄16     |                  |                |                |                | G1107KRRB   | S1107K      |                             |                |
| RC                                                                   | 35         |                  |                |                |                | GE35KRRB    | SE35K       |                             |                |
| RC                                                                   | 1 1⁄2      | 106.36           | 44.4           | 12.7           | 34.9           | G1108KRRB   | S1108KT     | T-16800                     | 1.870<br>4.12  |
| RC                                                                   | 1 9⁄16     | 4 3⁄16           | 1 3⁄4          | 1⁄2            | 1 3⁄8          | G1109KRRB   | S1109KT     |                             |                |
| RC                                                                   | 40         |                  |                |                |                | GE40KRRB    | SE40K       |                             |                |
| RC                                                                   | 1 5⁄8      |                  |                |                |                | G1110KRRB   | S1110K      | T-16687                     | 1.970<br>4.34  |
| RC                                                                   | 1 11⁄16    | 111.13           | 44.4           | 12.7           | 34.9           | G1111KRRB   | S1111K      |                             |                |
| RC                                                                   | 1 3⁄4      | 4 3⁄8            | 1 3⁄4          | 1⁄2            | 1 3⁄8          | G1112KRRB   | S1112K      |                             |                |
| RC                                                                   | 45         |                  |                |                |                | GE45KRRB    | SE45K       |                             |                |
| RC                                                                   | 1 7⁄8      | 115.89<br>4 9⁄16 | 52.4<br>2 1⁄16 | 11.9<br>15⁄32  | 38.1<br>1 1⁄2  | G1114KRRB   | S1114K      | T-16802                     | 2.452<br>5.40  |
| RC                                                                   | 1 15⁄16    |                  |                |                |                | G1115KRRB   | S1115K      |                             |                |
| RC                                                                   | 50         |                  |                |                |                | GE50KRRB    | SE50K       |                             |                |
| RC                                                                   | 2          |                  |                |                |                | G1200KRRB   | S1200K      | T-16804                     | 3.164<br>6.97  |
| RC                                                                   | 2 1⁄8      | 125.41           | 58.7           | 14.3           | 43.7           | G1202KRRB   | S1202K      |                             |                |
| RC                                                                   | 2 3⁄16     | 4 15⁄16          | 2 5⁄16         | 9⁄16           | 1 23⁄32        | G1203KRRB   | S1203K      |                             |                |
| RC                                                                   | 55         |                  |                |                |                | GE55KRRB    | SE55K       |                             |                |
| RC                                                                   | 2 7⁄16     | 149.23           | 65.1           | 14.3           | 46.8           | G1207KRRB   | S1207K      | T-17927                     | 5.130<br>11.30 |
| RC                                                                   | 60         | 5 7⁄8            | 2 9⁄16         | 9⁄16           | 1 27⁄32        | GE60KRRB    | SE60K       |                             |                |

<sup>(1)</sup>All units have 1/4-28 grease fittings.

### MALLEABLE-IRON FLANGED UNITS

### GVFD, GVFDR RELUBRICATABLE SERIES – VFD, VFDR NON-RELUBRICATABLE SERIES

- The malleable-iron flange cartridges provide self-alignment and rigid support for medium-duty applications.
- The mounting bolt holes are interchangeable with pressed-steel flangette units of corresponding size.

#### BEARING DATA

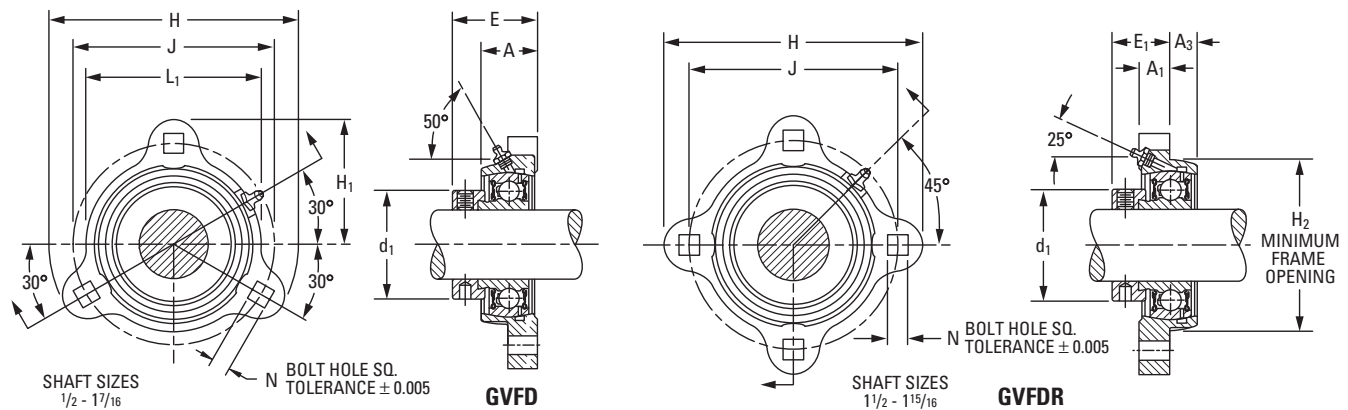
| Unit        | Bearing No. | Dimensions and Load Ratings |
|-------------|-------------|-----------------------------|
| VFD, VFDR   | RA-RRB      | Page A-48                   |
| GVFD, GVFDR | GRA-RRB     | Page A-50                   |

**Suggested shaft tolerances:** nominal to -0.013 mm, -0.0005 in.

**To order, specify UNIT and SHAFT DIAMETER.**

**For the non-relubricatable series, omit the G prefix on the unit and bearing number.**

Example: VFD 1 3/16 in. or VFDR 1 3/16 in.; GVFD 1 3/16 in. or GVFDR 1 3/16 in.



| Unit                                 |                      | Shaft Dia. | H <sub>1</sub> | L <sub>1</sub> | H         | J         | N         | H <sub>2</sub> | E         | A         | E <sub>1</sub> | A <sub>3</sub> | A <sub>1</sub> | d <sub>1</sub> | Bearing No. | Collar No. | Unit Wt.   |
|--------------------------------------|----------------------|------------|----------------|----------------|-----------|-----------|-----------|----------------|-----------|-----------|----------------|----------------|----------------|----------------|-------------|------------|------------|
| Face Mounted                         | Reverse Mounted      | in.<br>mm  | mm<br>in.      | mm<br>in.      | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in.      | mm<br>in.      |             |            | kg<br>lbs. |
| RELUBRICATABLE SERIES <sup>(1)</sup> |                      |            |                |                |           |           |           |                |           |           |                |                |                |                |             |            |            |
| GVFD <sup>(2)</sup>                  | GVFDR <sup>(2)</sup> | 1/2        | 40.5           | 53.2           | 81.0      | 63.5      | 7.1       | 47.6           | 31.8      | 17.5      | 22.2           | 7.9            | 9.5            | 28.6           | GRA008RRB   | S1008K     | 2.63       |
| GVFD <sup>(2)</sup>                  | GVFDR <sup>(2)</sup> | 5/8        | 1 19/32        | 2 3/32         | 3 3/16    | 2 1/2     | 9/32      | 1 7/8          | 1 1/4     | 1 1/16    | 7/8            | 5/16           | 3/8            | 1 1/8          | GRA010RRB   | S1010K     | 0.58       |
| GVFD <sup>(2)</sup>                  | GVFDR <sup>(2)</sup> | 17         |                |                |           |           |           |                |           |           |                |                |                |                | GRAE17RRB   | SE17K      |            |
| GVFD <sup>(2)</sup>                  | GVFDR                | 3/4        | 45.2           | 60.3           | 90.5      | 71.4      | 8.7       | 54.8           | 34.1      | 19.8      | 23.4           | 9.1            | 10.7           | 33.3           | GRA012RRB   | S1012K     | 0.336      |
| GVFD <sup>(2)</sup>                  | GVFDR                | 20         | 1 25/32        | 2 3/8          | 3 9/16    | 2 13/16   | 1 1/32    | 2 5/32         | 1 11/32   | 2 5/32    | 59/64          | 23/64          | 27/64          | 1 5/16         | GRAE20RRB   | SE20K      | 0.74       |
| GVFD                                 | GVFDR                | 7/8        |                |                |           |           |           |                |           |           |                |                |                |                | GRA014RRB   | S1014K     |            |
| GVFD                                 | GVFDR                | 15/16      | 47.6           | 66.7           | 95.2      | 76.2      | 8.7       | 60.3           | 34.1      | 19.8      | 23.4           | 9.1            | 10.7           | 38.1           | GRA015RRB   | S1015K     | 0.386      |
| GVFD                                 | GVFDR                | 1          | 1 7/8          | 2 5/8          | 3 3/4     | 3         | 1 1/32    | 2 3/8          | 1 11/32   | 2 5/32    | 59/64          | 23/64          | 27/64          | 1 1/2          | GRA100RRB   | S1100K     | 0.85       |
| GVFD                                 | GVFDR                | 25         |                |                |           |           |           |                |           |           |                |                |                |                | GRAE25RRB   | SE25K      |            |
| GVFD                                 | GVFDR                | 1 1/8      |                |                |           |           |           |                |           |           |                |                |                |                | GRA102RRB   | S1102K     |            |
| GVFD                                 | GVFDR                | 1 3/16     | 56.4           | 78.6           | 112.7     | 90.5      | 10.3      | 71.4           | 38.9      | 22.2      | 26.6           | 10.7           | 11.9           | 44.5           | GRA103RRB   | S1103K     | 0.608      |
| GVFD                                 | GVFDR                | 1 1/4 S    | 2 1/32         | 3 3/32         | 4 7/16    | 3 9/16    | 1 3/32    | 2 13/16        | 1 17/32   | 7/8       | 1 3/64         | 27/64          | 15/32          | 1 3/4          | GRA103RRB2  | S1103K3    | 1.34       |
| GVFD                                 | GVFDR                | 30         |                |                |           |           |           |                |           |           |                |                |                |                | GRAE30RRB   | SE30K      |            |
| GVFD                                 | GVFDR                | 1 1/4      |                |                |           |           |           |                |           |           |                |                |                |                | GRA104RRB   | S1104K     |            |
| GVFD                                 | GVFDR                | 1 3/8      | 61.1           | 88.9           | 122.2     | 100.0     | 10.3      | 81.8           | 42.1      | 23.8      | 29.4           | 11.1           | 12.7           | 54.0           | GRA106RRB   | S1106K     | 0.821      |
| GVFD                                 | GVFDR                | 1 7/16     | 2 13/32        | 3 1/2          | 4 13/16   | 3 15/16   | 1 3/32    | 3 7/32         | 1 21/32   | 15/16     | 1 5/32         | 7/16           | 1/2            | 2 1/8          | GRA107RRB   | S1107      | 1.81       |
| GVFD                                 | GVFDR                | 35         |                |                |           |           |           |                |           |           |                |                |                |                | GRAE35RRB   | SE35K      |            |
| GVFD                                 | GVFDR                | 1 1/2      | 73.8           | 98.4           | 147.6     | 119.1     | 13.5      | 89.7           | 48.4      | 28.6      | 32.5           | 12.7           | 15.9           | 60.3           | GRA108RRB   | S1108KT    | 1.334      |
| GVFD                                 | GVFDR                | 40         | 2 29/32        | 3 7/8          | 5 13/16   | 4 11/16   | 1 7/32    | 3 17/32        | 1 29/32   | 1 1/8     | 1 9/32         | 1/2            | 5/8            | 2 3/8          | GRAE40RRB   | SE40K      | 2.94       |
| GVFD                                 | GVFDR                | 1 5/8      |                |                |           |           |           |                |           |           |                |                |                |                | GRA110RRB   | S1110K     |            |
| GVFD                                 | GVFDR                | 1 11/16    | 74.6           | 107.2          | 149.2     | 120.6     | 13.5      | 96.0           | 48.4      | 28.6      | 32.5           | 12.7           | 15.9           | 63.5           | GRA111RRB   | S1111K     | 1.361      |
| GVFD                                 | GVFDR                | 1 3/4      | 2 15/16        | 4 7/32         | 5 7/8     | 4 3/4     | 1 7/32    | 3 25/32        | 1 29/32   | 1 1/8     | 1 9/32         | 1/2            | 5/8            | 2 1/2          | GRA112RRB   | S1112K     | 3.00       |
| GVFD                                 | GVFDR                | 45         |                |                |           |           |           |                |           |           |                |                |                |                | GRAE45RRB   | SE45K      |            |
| GVFD                                 | GVFDR                | 1 7/8      |                |                |           |           |           |                |           |           |                |                |                |                | GRA114RRB   | S1114K     |            |
| GVFD                                 | GVFDR                | 1 15/16    | 77.8           | 113.5          | 155.6     | 127.0     | 13.5      | 100.8          | 48.4      | 28.6      | 32.5           | 12.7           | 15.9           | 69.8           | GRA115RRB   | S1115K     | 1.451      |
| GVFD                                 | GVFDR                | 50         | 3 1/16         | 4 15/32        | 6 1/8     | 5         | 1 7/32    | 3 31/32        | 1 29/32   | 1 1/8     | 1 9/32         | 1/2            | 5/8            | 2 3/4          | GRAE50RRB   | SE50K      | 3.20       |

<sup>(1)</sup>All units have a 1/4-28 grease fitting, except as noted.

<sup>(2)</sup>10-32 grease fitting.

NOTE: Shaft diameter with an S = smaller housing.

### GRFD, GRFDR RELUBRICATABLE SERIES – RFD, RFDR NON-RELUBRICATABLE SERIES

- The malleable-iron flange cartridges provide self-alignment and rigid support for medium-duty applications.

**Suggested shaft tolerances:** nominal to -0.013 mm, -0.0005 in.

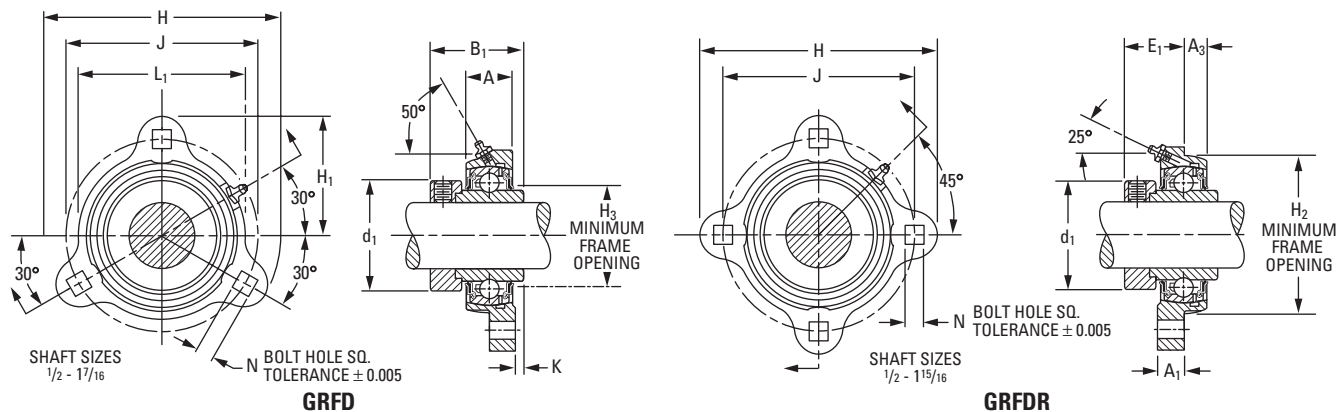
**To order, specify UNIT and SHAFT DIAMETER.**

**For the non-relubricatable series, omit G prefix on unit and bearing number.**

Example: GRFD 1 3/16 in. or GRFDR 1 3/16 in.; RFD 1 3/16 in. or RFDR 1 3/16 in.

#### BEARING DATA

| Unit        | Bearing No. | Dimensions and Load Ratings |
|-------------|-------------|-----------------------------|
| RFD, RFDR   | -KRRB       | Page A-32                   |
| GRFD, GRFDR | G-KRRB      | Page A-34                   |



| Unit                                 |                      | Shaft Dia. | H <sub>1</sub> L <sub>1</sub> H J N H <sub>2</sub> B <sub>1</sub> A E <sub>1</sub> A <sub>3</sub> A <sub>1</sub> d <sub>1</sub> H <sub>3</sub> K |         |         |         |        |         |         |        |        |        |        |        |         |        | Bearing No. | Collar No. | Unit Wt. |       |
|--------------------------------------|----------------------|------------|--------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------|---------|--------|---------|---------|--------|--------|--------|--------|--------|---------|--------|-------------|------------|----------|-------|
| Face Mounted                         | Reverse Mounted      | in. mm     | mm in.                                                                                                                                           | mm in.  | mm in.  | mm in.  | mm in. | mm in.  | mm in.  | mm in. | mm in. | mm in. | mm in. | mm in. | mm in.  | mm in. |             |            | kg lbs.  |       |
| RELUBRICATABLE SERIES <sup>(1)</sup> |                      |            |                                                                                                                                                  |         |         |         |        |         |         |        |        |        |        |        |         |        |             |            |          |       |
| GRFD <sup>(2)</sup>                  | GRFDR <sup>(2)</sup> | 1/2        |                                                                                                                                                  |         |         |         |        |         |         |        |        |        |        |        |         |        | G1008KRRB   | S1008K     |          |       |
| GRFD <sup>(2)</sup>                  | GRFDR <sup>(2)</sup> | 5/8        | 40.5                                                                                                                                             | 53.2    | 81.0    | 63.5    | 7.1    | 47.6    | 37.3    | 17.5   | 23.4   | 7.9    | 9.5    | 28.6   | 29.4    | 4.4    | G1010KRRB   | S1010K     | 0.259    |       |
| GRFD <sup>(2)</sup>                  | GRFDR <sup>(2)</sup> | 11/16      | 1 19/32                                                                                                                                          | 2 3/32  | 3 3/16  | 2 1/2   | 9/32   | 1 7/8   | 1 15/32 | 1 1/16 | 59/64  | 5/16   | 3/8    | 1 1/8  | 1 5/32  | 1 1/64 | G1011KRRB   | S1011K     | 0.57     |       |
| GRFD <sup>(2)</sup>                  | GRFDR <sup>(2)</sup> | 17         |                                                                                                                                                  |         |         |         |        |         |         |        |        |        |        |        |         |        | GE17KRRB    | SE17K      |          |       |
| GRFD <sup>(2)</sup>                  | GRFDR                | 3/4        | 45.2                                                                                                                                             | 60.3    | 90.5    | 71.4    | 8.7    | 54.8    | 43.7    | 19.8   | 26.6   | 9.1    | 10.7   | 33.3   | 34.1    | 6.4    | G1012KRRB   | S1012K     | 0.395    |       |
| GRFD <sup>(2)</sup>                  | GRFDR                | 20         | 1 25/32                                                                                                                                          | 2 3/8   | 3 9/16  | 2 13/16 | 11/32  | 2 5/32  | 1 23/32 | 25/32  | 1 3/64 | 23/64  | 27/64  | 1 5/16 | 1 11/32 | 1/4    | GE20KRRB    | SE20K      | 0.87     |       |
| GRFD                                 | GRFDR                | 7/8        |                                                                                                                                                  |         |         |         |        |         |         |        |        |        |        |        |         |        | G1014KRRB   | S1014K     |          |       |
| GRFD                                 | GRFDR                | 15/16      | 47.6                                                                                                                                             | 66.7    | 95.2    | 76.2    | 8.7    | 60.3    | 44.4    | 19.8   | 27.0   | 9.1    | 10.7   | 38.1   | 38.9    | 6.7    | G1015KRRB   | S1015K     | 0.463    |       |
| GRFD                                 | GRFDR                | 1          | 1 7/8                                                                                                                                            | 2 5/8   | 3 3/4   | 3       | 11/32  | 2 3/8   | 1 3/4   | 25/32  | 1 1/16 | 23/64  | 27/64  | 1 1/2  | 1 17/32 | 1 7/64 | G1100KRRB   | S1100K     | 1.02     |       |
| GRFD                                 | GRFDR                | 25         |                                                                                                                                                  |         |         |         |        |         |         |        |        |        |        |        |         |        | GE25KRRB    | SE25K      |          |       |
| GRFD                                 | GRFDR                | 1 1/16     |                                                                                                                                                  |         |         |         |        |         |         |        |        |        |        |        |         |        | G1101KRRB   | S1101K     |          |       |
| GRFD                                 | GRFDR                | 1 1/8      | 56.4                                                                                                                                             | 78.6    | 112.7   | 90.5    | 10.3   | 71.4    | 48.4    | 22.2   | 30.2   | 10.7   | 11.9   | 44.5   | 46.0    | 6.4    | G1102KRRB   | S1102K     | 6.260    |       |
| GRFD                                 | GRFDR                | 1 3/16     | 2 7/32                                                                                                                                           | 3 3/32  | 4 7/16  | 3 9/16  | 13/32  | 2 13/16 | 1 29/32 | 7/8    | 1 3/16 | 27/64  | 15/32  | 1 3/4  | 1 13/16 | 1/4    | G1103KRRB   | S1103K     | 1.38     |       |
| GRFD                                 | GRFDR                | 1 1/4 S    |                                                                                                                                                  |         |         |         |        |         |         |        |        |        |        |        |         |        | G1103KRRB3  | S1103K3    |          |       |
| GRFD                                 | GRFDR                | 30         |                                                                                                                                                  |         |         |         |        |         |         |        |        |        |        |        |         |        | GE30KRRB    | SE30K      |          |       |
| GRFD                                 | GRFDR                | 1 1/4      |                                                                                                                                                  |         |         |         |        |         |         |        |        |        |        |        |         |        | G1104KRRB   | S1104K     |          |       |
| GRFD                                 | GRFDR                | 1 5/16     | 61.1                                                                                                                                             | 88.9    | 122.2   | 100.0   | 10.3   | 81.8    | 51.2    | 23.8   | 32.5   | 11.1   | 12.7   | 54.0   | 2       | 53.2   | 6.4         | G1105KRRB  | S1105K   | 0.857 |
| GRFD                                 | GRFDR                | 1 3/8      | 2 13/32                                                                                                                                          | 3 1/2   | 4 13/16 | 3 15/16 | 13/32  | 3 7/32  | 2 1/64  | 15/16  | 1 9/32 | 7/16   | 1/2    | 1 1/8  | 2 3/32  | 1/4    | G1106KRRB   | S1106K     | 1.89     |       |
| GRFD                                 | GRFDR                | 1 7/16     |                                                                                                                                                  |         |         |         |        |         |         |        |        |        |        |        |         |        | G1107KRRB   | S1107K     |          |       |
| GRFD                                 | GRFDR                | 35         |                                                                                                                                                  |         |         |         |        |         |         |        |        |        |        |        |         |        | GE35KRRB    | SE35K      |          |       |
| GRFD                                 | GRFDR                | 1 1/2      |                                                                                                                                                  |         |         |         |        |         |         |        |        |        |        |        |         |        | G1108KRRB   | S1108KT    | 1.138    |       |
| GRFD                                 | GRFDR                | 1 9/16     | 73.8                                                                                                                                             | 98.4    | 147.6   | 119.1   | 13.5   | 89.7    | 56.4    | 28.6   | 34.9   | 12.7   | 15.9   | 60.3   | 59.5    | 5.6    | G1109KRRB   | S1109KT    | 2.50     |       |
| GRFD                                 | GRFDR                | 40         | 2 29/32                                                                                                                                          | 3 7/8   | 5 13/16 | 4 11/16 | 17/32  | 3 17/32 | 2 7/32  | 1 1/8  | 1 3/8  | 1/2    | 5/8    | 2 3/8  | 2 11/32 | 7/32   | GE40KRRB    | SE40K      |          |       |
| GRFD                                 | GRFDR                | 1 5/8      |                                                                                                                                                  |         |         |         |        |         |         |        |        |        |        |        |         |        | G1110KRRB   | S1110K     |          |       |
| GRFD                                 | GRFDR                | 1 11/16    | 74.6                                                                                                                                             | 107.2   | 149.2   | 120.6   | 13.5   | 96.0    | 56.4    | 28.6   | 34.9   | 12.7   | 15.9   | 63.5   | 65.1    | 5.6    | G1111KRRB   | S1111K     | 1.488    |       |
| GRFD                                 | GRFDR                | 1 3/4      | 2 15/16                                                                                                                                          | 4 7/32  | 5 7/8   | 4 3/4   | 17/32  | 3 25/32 | 2 7/32  | 1 1/8  | 1 3/8  | 1/2    | 5/8    | 2 1/2  | 2 9/16  | 7/32   | G1112KRRB   | S1112K     | 3.28     |       |
| GRFD                                 | GRFDR                | 45         |                                                                                                                                                  |         |         |         |        |         |         |        |        |        |        |        |         |        | GE45KRRB    | SE45K      |          |       |
| GRFD                                 | GRFDR                | 1 7/8      |                                                                                                                                                  |         |         |         |        |         |         |        |        |        |        |        |         |        | G1114KRRB   | S1114K     |          |       |
| GRFD                                 | GRFDR                | 1 15/16    | 77.8                                                                                                                                             | 113.5   | 155.6   | 127.0   | 13.5   | 100.8   | 62.7    | 28.6   | 38.1   | 12.7   | 15.9   | 69.8   | 2       | 69.8   | 8.7         | G1115KRRB  | S1115K   | 1.692 |
| GRFD                                 | GRFDR                | 50         | 3 1/16                                                                                                                                           | 4 15/32 | 6 1/8   | 5       | 17/32  | 3 31/32 | 2 15/32 | 1 1/8  | 1 1/2  | 1/2    | 5/8    | 3/4    | 2 3/4   | 1 1/32 | GE50KRRB    | SE50K      | 3.73     |       |

<sup>(1)</sup>All units have a 1/4-28 grease fitting, except as noted.

<sup>(2)</sup>10-32 grease fitting.

NOTE: Shaft diameter with an S = smaller housing.

### GVFTD, GVFTDR RELUBRICATABLE SERIES – VFTD, VFTDR NON-RELUBRICATABLE SERIES

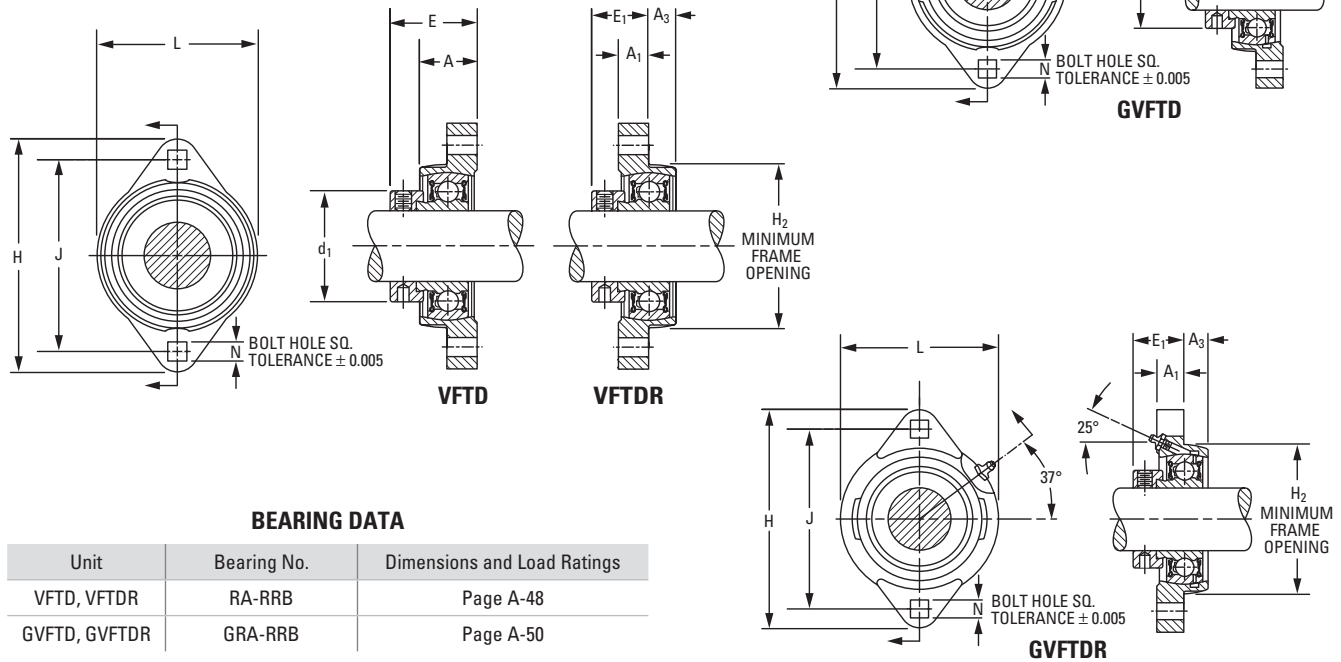
- The malleable-iron flange cartridges provide self-alignment and rigid support for medium-duty applications.

**Suggested shaft tolerances:** nominal to -0.013 mm, -0.0005 in.

**To order, specify UNIT and SHAFT DIAMETER.**

**For the non-relubricatable series, omit G prefix on unit and bearing number.**

Example: VFTD 1 3/16 in. or VFTDR 1 3/16 in.; GVFTD 1 3/16 in. or GVFTDR 1 3/16 in.



#### BEARING DATA

| Unit          | Bearing No. | Dimensions and Load Ratings |
|---------------|-------------|-----------------------------|
| VFTD, VFTDR   | RA-RRB      | Page A-48                   |
| GVFTD, GVFTDR | GRA-RRB     | Page A-50                   |

| Unit                                 |                 | Shaft Dia. | H         | J         | L         | N         | H <sub>2</sub> | E         | A         | E <sub>1</sub> | A <sub>3</sub> | A <sub>1</sub> | d <sub>1</sub> | Bearing No. | Collar No. | Unit Wt.      |
|--------------------------------------|-----------------|------------|-----------|-----------|-----------|-----------|----------------|-----------|-----------|----------------|----------------|----------------|----------------|-------------|------------|---------------|
| Face Mounted                         | Reverse Mounted | in.<br>mm  | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in.      | mm<br>in.      |             |            | kg<br>lbs.    |
| RELUBRICATABLE SERIES <sup>(1)</sup> |                 |            |           |           |           |           |                |           |           |                |                |                |                |             |            |               |
| GVFTD                                | GVFTDR          | 1/2        | 81.0      | 63.5      | 53.2      | 7.1       | 47.6           | 31.8      | 17.5      | 22.2           | 7.9            | 9.5            | 28.6           | GRA008RRB   | S1008K     | 0.245<br>0.54 |
| GVFTD                                | GVFTDR          | 5/8        | 3 3/16    | 2 1/2     | 2 3/32    | 9/32      | 1 7/8          | 1 1/4     | 1 1/16    | 7/8            | 5/16           | 3/8            | 1 1/8          | GRA010RRB   | S1010K     |               |
| GVFTD                                | GVFTDR          | 17         |           |           |           |           |                |           |           |                |                |                |                | GRAE17RRB   | SE17K      |               |
| GVFTD                                | GVFTDR          | 3/4        | 90.5      | 71.4      | 60.3      | 8.7       | 54.8           | 34.1      | 19.8      | 23.4           | 9.1            | 10.7           | 33.3           | GRA012RRB   | S1012K     | 0.331<br>0.73 |
| GVFTD                                | GVFTDR          | 20         | 3 9/16    | 2 13/16   | 2 3/8     | 1 1/32    | 2 5/32         | 1 11/32   | 2 5/32    | 59/64          | 23/64          | 27/64          | 1 5/16         | GRAE20RRB   | SE20K      |               |
| GVFTD                                | GVFTDR          | 7/8        | 95.2      | 76.2      | 66.7      | 8.7       | 60.3           | 34.1      | 19.8      | 23.4           | 9.1            | 10.7           | 38.1           | GRA014RRB   | S1014K     | 0.363<br>0.80 |
| GVFTD                                | GVFTDR          | 15/16      | 3 3/4     | 3         | 2 5/8     | 1 1/32    | 2 3/8          | 1 11/32   | 2 5/32    | 59/64          | 23/64          | 27/64          | 1 1/2          | GRA015RRB   | S1015K     |               |
| GVFTD                                | GVFTDR          | 1          |           |           |           |           |                |           |           |                |                |                |                | GRA100RRB   | S1100K     |               |
| GVFTD                                | GVFTDR          | 25         |           |           |           |           |                |           |           |                |                |                |                | GRAE25RRB   | SE25K      | 0.608<br>1.34 |
| GVFTD                                | GVFTDR          | 1 1/8      | 112.7     | 90.5      | 78.6      | 10.3      | 71.4           | 38.9      | 22.2      | 26.6           | 10.7           | 11.9           | 44.5           | GRA102RRB   | S1102K     |               |
| GVFTD                                | GVFTDR          | 1 3/16     | 4 7/16    | 3 9/16    | 3 3/32    | 1 3/32    | 2 13/16        | 1 17/32   | 7/8       | 1 3/64         | 27/64          | 15/32          | 1 3/4          | GRA103RRB   | S1103K     |               |
| GVFTD                                | GVFTDR          | 1 1/4 S    |           |           |           |           |                |           |           |                |                |                |                | GRA103RRB2  | S1103K3    |               |
| GVFTD                                | GVFTDR          | 30         |           |           |           |           |                |           |           |                |                |                |                | GRAE30RRB   | SE30K      | 0.862<br>1.90 |
| GVFTD                                | GVFTDR          | 1 1/4      | 122.2     | 100.0     | 88.9      | 10.3      | 81.8           | 42.1      | 23.8      | 29.4           | 11.1           | 12.7           | 54.0           | GRA104RRB   | S1104K     |               |
| GVFTD                                | GVFTDR          | 1 3/8      | 4 13/16   | 3 15/16   | 3 1/2     | 1 3/32    | 3 7/32         | 1 21/32   | 15/16     | 1 5/32         | 7/16           | 1/2            | 2 1/8          | GRA106RRB   | S1106K     |               |
| GVFTD                                | GVFTDR          | 1 7/16     |           |           |           |           |                |           |           |                |                |                |                | GRA107RRB   | S1107K     |               |
| GVFTD                                | GVFTDR          | 35         |           |           |           |           |                |           |           |                |                |                |                | GRAE35RRB   | SE35K      |               |

<sup>(1)</sup>All units have a 1/4-28 grease fitting.

NOTE: Shaft diameter with an S = smaller housing.

# BALL BEARING HOUSED UNITS

BALL BEARING HOUSED UNITS • MALLEABLE-IRON FLANGED UNITS • GRFTD, GRFTDR, RFTD, RFTDR

## GRFTD, GRFTDR RELUBRICATABLE SERIES – RFTD, RFTDR NON-RELUBRICATABLE SERIES

- The malleable-iron flange cartridges provide self-alignment and rigid support for medium-duty applications.

**Suggested shaft tolerances:** nominal to -0.013 mm, -0.0005 in.

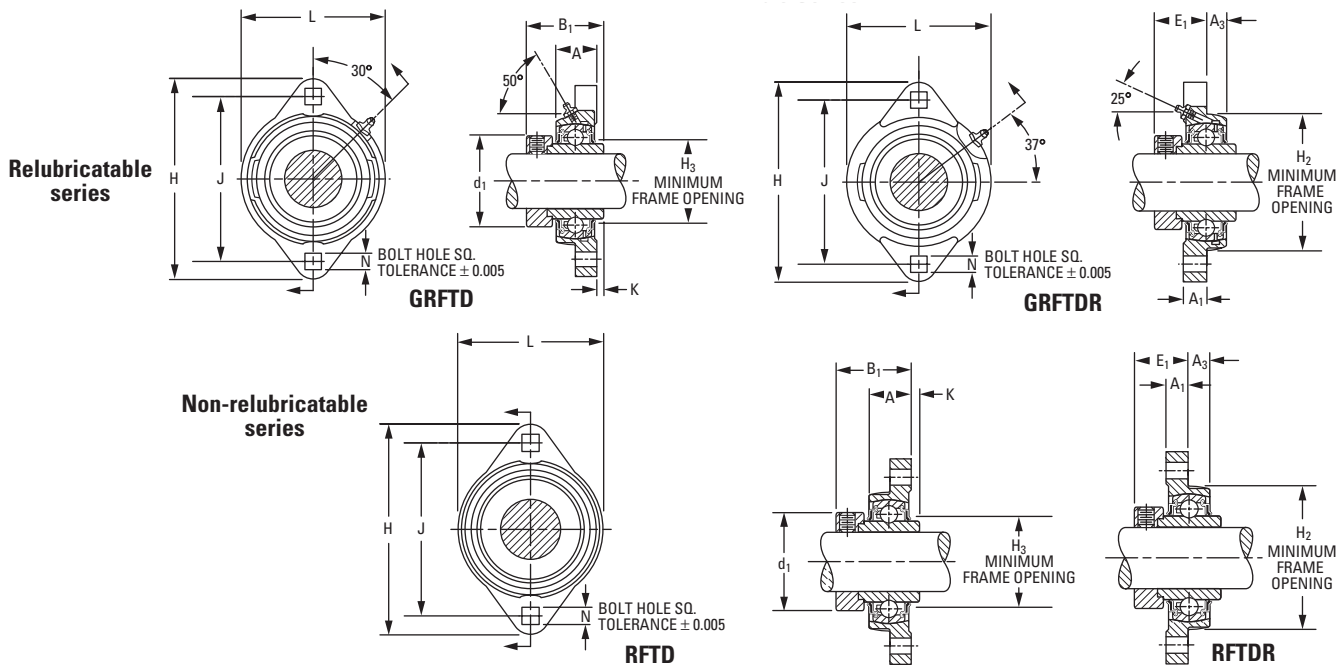
**To order, specify UNIT and SHAFT DIAMETER.**

**For the non-relubricatable series, omit G prefix on unit and bearing number.**

Example: RFTD 1 3/16 in. or RFTDR 1 3/16 in.; GRFTD 1 3/16 in. or GRFTDR 1 3/16 in.

### BEARING DATA

| Unit          | Bearing No. | Dimensions and Load Ratings |
|---------------|-------------|-----------------------------|
| RFTD, RFTDR   | -KRRB       | Page A-32                   |
| GRFTD, GRFTDR | G-KRRB      | Page A-34                   |



| Unit                                 |                 | Shaft Dia. | H         | J         | L         | N         | H <sub>2</sub> | B <sub>1</sub> | A         | E <sub>1</sub> | A <sub>3</sub> | A <sub>1</sub> | d <sub>1</sub> | H <sub>3</sub> | K         | Bearing No. | Collar No. | Unit Wt.   |
|--------------------------------------|-----------------|------------|-----------|-----------|-----------|-----------|----------------|----------------|-----------|----------------|----------------|----------------|----------------|----------------|-----------|-------------|------------|------------|
| Face Mounted                         | Reverse Mounted | in.<br>mm  | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in.      | mm<br>in.      | mm<br>in.      | mm<br>in. |             |            | kg<br>lbs. |
| RELUBRICATABLE SERIES <sup>(1)</sup> |                 |            |           |           |           |           |                |                |           |                |                |                |                |                |           |             |            |            |
| GRFTD                                | GRFTDR          | 1/2        |           |           |           |           |                |                |           |                |                |                |                |                |           | G1008KRRB   | S1008K     |            |
| GRFTD                                | GRFTDR          | 5/8        | 81.0      | 63.5      | 53.2      | 7.1       | 47.6           | 37.3           | 15.9      | 23.4           | 7.9            | 9.5            | 28.6           | 29.4           | 4.4       | G1010KRRB   | S1010K     | 0.254      |
| GRFTD                                | GRFTDR          | 1 1/16     | 3 3/16    | 2 1/2     | 2 3/32    | 9/32      | 1 7/8          | 1 15/32        | 5/8       | 59/64          | 5/16           | 3/8            | 1 1/8          | 1 5/32         | 1 1/64    | G1011KRRB   | S1011K     | 0.56       |
| GRFTD                                | GRFTDR          | 17         |           |           |           |           |                |                |           |                |                |                |                |                |           | GE17KRRB    | SE17K      |            |
| GRFTD                                | GRFTDR          | 3/4        | 90.5      | 71.4      | 60.3      | 8.7       | 54.8           | 43.7           | 19.8      | 26.6           | 9.1            | 10.7           | 33.3           | 34.1           | 6.4       | G1012KRRB   | S1012K     | 0.386      |
| GRFTD                                | GRFTDR          | 20         | 3 9/16    | 2 13/16   | 2 3/8     | 1 1/32    | 2 5/32         | 1 23/32        | 25/32     | 1 3/64         | 23/64          | 27/64          | 1 5/16         | 1 11/32        | 1/4       | GE20KRRB    | SE20K      | 0.85       |
| GRFTD                                | GRFTDR          | 7/8        |           |           |           |           |                |                |           |                |                |                |                |                |           | G1014KRRB   | S1014K     |            |
| GRFTD                                | GRFTDR          | 1 5/16     | 95.2      | 76.2      | 66.7      | 8.7       | 60.3           | 44.4           | 19.8      | 27.0           | 9.1            | 10.7           | 38.1           | 38.9           | 6.7       | G1015KRRB   | S1015K     | 0.386      |
| GRFTD                                | GRFTDR          | 1          | 3 3/4     | 3         | 2 5/8     | 1 1/32    | 2 3/8          | 1 3/4          | 25/32     | 1 1/16         | 23/64          | 27/64          | 1 1/2          | 1 17/32        | 17/64     | G1100KRRB   | S1100K     | 0.85       |
| GRFTD                                | GRFTDR          | 25         |           |           |           |           |                |                |           |                |                |                |                |                |           | GE25KRRB    | SE25K      |            |
| GRFTD                                | GRFTDR          | 1 1/16     |           |           |           |           |                |                |           |                |                |                |                |                |           | G1101KRRB   | S1101K     |            |
| GRFTD                                | GRFTDR          | 1 1/8      | 112.7     | 90.5      | 78.6      | 10.3      | 71.4           | 48.4           | 22.2      | 30.2           | 10.7           | 11.9           | 44.5           | 46.0           | 6.4       | G1102KRRB   | S1102K     | 0.712      |
| GRFTD                                | GRFTDR          | 1 3/16     | 4 7/16    | 3 9/16    | 3 3/32    | 13/32     | 2 13/16        | 1 29/32        | 7/8       | 1 3/16         | 27/64          | 15/32          | 1 3/4          | 1 13/16        | 1/4       | G1103KRRB   | S1103K     | 1.57       |
| GRFTD                                | GRFTDR          | 1 1/4 S    |           |           |           |           |                |                |           |                |                |                |                |                |           | G1103KRRB3  | S1103K3    |            |
| GRFTD                                | GRFTDR          | 30         |           |           |           |           |                |                |           |                |                |                |                |                |           | GE30KRRB    | SE30K      |            |
| GRFTD                                | GRFTDR          | 1 1/4      |           |           |           |           |                |                |           |                |                |                |                |                |           | G1104KRRB   | S1104K     |            |
| GRFTD                                | GRFTDR          | 1 5/16     | 122.2     | 100.0     | 88.9      | 10.3      | 81.8           | 51.2           | 23.8      | 32.5           | 11.1           | 12.7           | 54.0           | 53.2           | 6.4       | G1105KRRB   | S1105K     | 0.962      |
| GRFTD                                | GRFTDR          | 1 3/8      | 4 13/16   | 3 15/16   | 3 1/2     | 13/32     | 3 7/32         | 2 1/64         | 15/16     | 1 9/32         | 7/16           | 1/2            | 2 1/8          | 2 3/32         | 1/4       | G1106KRRB   | S1106K     | 2.12       |
| GRFTD                                | GRFTDR          | 1 7/16     |           |           |           |           |                |                |           |                |                |                |                |                |           | G1107KRRB   | S1107K     |            |
| GRFTD                                | GRFTDR          | 35         |           |           |           |           |                |                |           |                |                |                |                |                |           | GE35KRRB    | SE35K      |            |

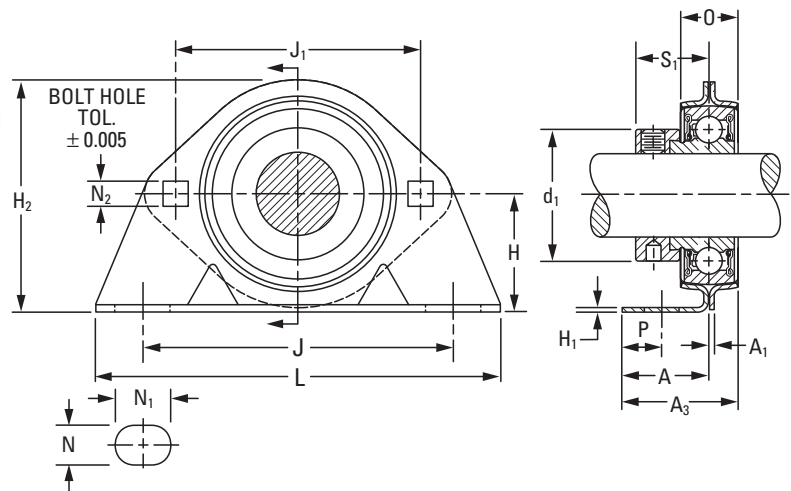
<sup>(1)</sup>All units have a 1/4-28 grease fitting.

NOTE: Shaft diameter with an S = smaller housing.

# **PRESSED-STEEL HOUSED UNITS**

## **PBS SERIES**

- The PBS series has an economical transmission unit for light-duty, moderate-speed requirements.
- The housing includes two heavy-gage, zinc-plated steel stampings. One is a standard stamping used in the MST two-bolt flangette unit.
- The RA-RRB (extended inner-ring) bearings are regularly furnished with this bearing. RR wide inner rings also can be used.
- The Timken self-locking collar completes the assembly.
- This series is made with a precision bearing seat and dimensions are held to close tolerances. This provides an accurate bearing-to-housing fit and ensures proper alignment of parts.
- The RA-RRB bearing used in the PBS pillow block has positive-contact land-riding seals. It includes a shroud cap design and is permanently prelubricated.
- The base-to-center height and bolt spacing are interchangeable with many other pillow blocks on the market.



**Suggested shaft tolerances:** nominal to -0.013 mm, -0.0005 in.

**To order, specify UNIT and SHAFT DIAMETER.**

Example: PBS 1 7/16 in.

### **BEARING DATA**

| Unit | Bearing No. | Dimensions and Load Ratings |
|------|-------------|-----------------------------|
| PBS  | RA-RRB      | Page A-48                   |

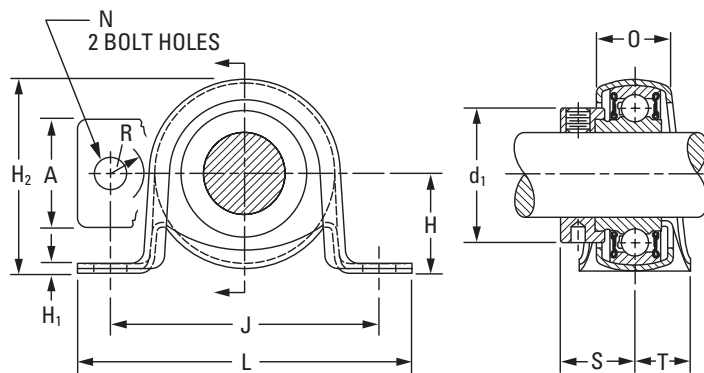
| Unit        | Shaft Dia. | H       | J       | N <sub>1</sub> | L     | H <sub>2</sub> | J <sub>1</sub> | d <sub>1</sub> | S <sub>1</sub> | O     | A      | H <sub>1</sub> | A <sub>1</sub> | A <sub>3</sub> | N <sub>2</sub> | P     | N     | Bearing No. | Flangette No. | Stamping Radial Load Rating <sup>(1)</sup> | Unit Wt. |
|-------------|------------|---------|---------|----------------|-------|----------------|----------------|----------------|----------------|-------|--------|----------------|----------------|----------------|----------------|-------|-------|-------------|---------------|--------------------------------------------|----------|
|             | in.        | mm      | mm      | mm             | mm    | mm             | mm             | mm             | mm             | mm    | mm     | mm             | mm             | mm             | mm             | mm    | mm    |             |               | N lbs.                                     | kg lbs.  |
| PBS 1/2     |            | 30.2    | 92.1    | 15.9           | 123.8 | 59.5           | 63.5           | 28.6           | 22.2           | 14.3  | 25.4   | 2.64           | 1.90           | 32.5           | 7.1            | 10.3  | 10.3  | RA008RRB    | 40            | 2650                                       | 0.340    |
| PBS 5/8     |            | 1 3/16  | 3 5/8   | 5/8            | 4 7/8 | 2 11/32        | 2 1/2          | 1 1/8          | 7/8            | 9/16  | 1      | 0.104          | 0.075          | 1 9/32         | 9/32           | 13/32 | 13/32 | RA010RRB    | MST-(ZP)      | 600                                        | 0.75     |
| PBS 17      |            |         |         |                |       |                |                |                |                |       |        |                |                |                |                |       |       | RAE17RRB    |               |                                            |          |
| PBS 3/4     |            | 33.3    | 96.8    | 15.9           | 127.0 | 68.3           | 71.4           | 33.3           | 23.4           | 15.9  | 25.4   | 3.02           | 2.11           | 33.3           | 8.7            | 10.3  | 10.3  | RA012RRB    | 47            | 3100                                       | 0.440    |
| PBS 20      |            | 1 5/16  | 3 13/16 | 5/8            | 5     | 2 11/16        | 2 13/16        | 1 5/16         | 59/64          | 5/8   | 1      | 0.119          | 0.083          | 1 5/16         | 11/32          | 13/32 | 13/32 | RAE20RRB    | MST-(ZP)      | 700                                        | 0.97     |
| PBS 7/8     |            |         |         |                |       |                |                |                |                |       |        |                |                |                |                |       |       | RA014RRB    |               |                                            |          |
| PBS 1 5/16  |            | 36.5    | 95.2    | 20.6           | 133.4 | 72.2           | 76.2           | 38.1           | 23.4           | 17.5  | 25.4   | 3.40           | 2.11           | 34.1           | 8.7            | 11.1  | 11.1  | RA015RRB    | 52            | 3550                                       | 0.544    |
| PBS 1       |            | 1 7/16  | 3 3/4   | 13/16          | 5 1/4 | 2 27/32        | 3              | 1 1/2          | 59/64          | 11/16 | 1      | 0.134          | 0.083          | 1 11/32        | 11/32          | 7/16  | 7/16  | RA100RRB    | MST-(ZP)      | 800                                        | 1.20     |
| PBS 25      |            |         |         |                |       |                |                |                |                |       |        |                |                |                |                |       |       | RAE25RRB    |               |                                            |          |
| PBS 1 1/8   |            |         |         |                |       |                |                |                |                |       |        |                |                |                |                |       |       | RA102RRB    |               |                                            |          |
| PBS 1 3/16  |            | 42.9    | 119.1   | 22.2           | 158.8 | 84.9           | 90.5           | 44.4           | 26.6           | 17.5  | 30.2   | 3.40           | 2.64           | 37.3           | 10.3           | 14.3  | 14.3  | RA103RRB    | 62            | 3550                                       | 0.744    |
| PBS 1 1/4 S |            | 1 11/16 | 4 11/16 | 7/8            | 6 1/4 | 3 11/32        | 3 9/16         | 1 3/4          | 1 3/64         | 11/16 | 1 3/16 | 0.134          | 0.104          | 1 15/32        | 13/32          | 9/16  | 9/16  | RA103RRB2   | MST-(ZP)      | 800                                        | 1.64     |
| PBS 30      |            |         |         |                |       |                |                |                |                |       |        |                |                |                |                |       |       | RAE30RRB    |               |                                            |          |
| PBS 1 1/4   |            |         |         |                |       |                |                |                |                |       |        |                |                |                |                |       |       | RA104RRB    |               |                                            |          |
| PBS 1 3/8   |            | 47.6    | 127.0   | 22.2           | 165.1 | 94.5           | 100.0          | 54.0           | 29.4           | 22.2  | 34.9   | 3.78           | 2.64           | 46.0           | 10.3           | 14.3  | 14.3  | RA106RRB    | 72            | 4000                                       | 1.089    |
| PBS 1 7/16  |            | 1 7/8   | 5       | 7/8            | 6 1/2 | 3 23/32        | 3 15/16        | 2 1/8          | 1 5/32         | 7/8   | 1 3/8  | 0.149          | 0.104          | 1 13/16        | 13/32          | 9/16  | 9/16  | RA107RRB    | MST-(ZP)      | 900                                        | 2.40     |
| PBS 35      |            |         |         |                |       |                |                |                |                |       |        |                |                |                |                |       |       | RAE35RRB    |               |                                            |          |

<sup>(1)</sup>Stamping thrust rating is 1/5 of stamping radial load rating.

NOTE: Shaft diameter with an S = smaller housing.

### PB SERIES – RPB SERIES

- The PB series provides the advantages of ball bearings at an economical price.
- They are used for light-duty applications.
- The PB series consists of a two-piece separable zinc-plated steel housing with a spherical bearing seat. This allows the spherically ground bearing to have initial self-alignment in all directions.
- The ball bearing is an RA-RRB extended inner-ring-type with positive-contact, land-riding seals and a self-locking collar.
- The series incorporates an improved shroud-cap design and comes permanently prelubricated.
- RPB has the same construction as the PB-type, but with a thick, electrically conductive rubber inner liner.
- The bearings in the RPB unit are designated as RA-RRB FS450 and have a special ball and race finish for quiet operation.
- The RABR unit consists of the bearing with the rubber interliner.



**PB Series**

### BEARING DATA

| Unit | Bearing No. | Dimensions and Load Ratings |
|------|-------------|-----------------------------|
| PB   | RA-RRB      | Page A-48                   |
| RPB  | RA-RRB      | Page A-48                   |

**Suggested shaft tolerances:** nominal to -0.013 mm, -0.0005 in.

**To order, specify UNIT and SHAFT DIAMETER.**

Example: PB 1 3/16 in. or RPB 1 3/16 in.

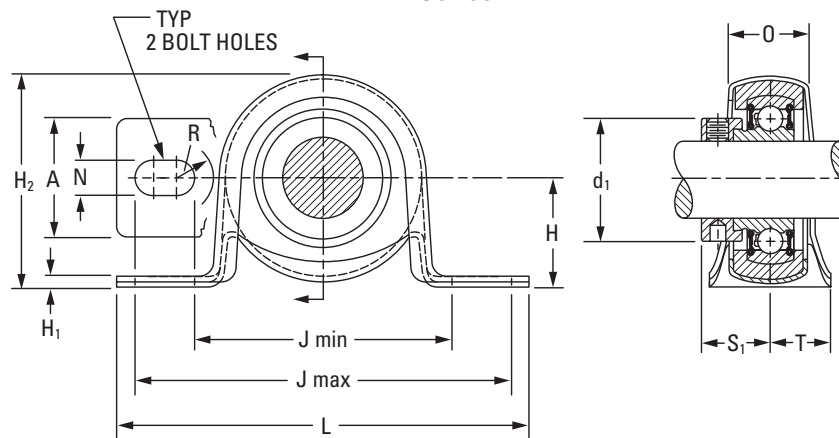
| Unit | Shaft Dia. | H         | H <sub>2</sub> | J<br>max. | J<br>min. | L         | A         | H <sub>1</sub> | N         | R         | d <sub>1</sub> | O         | S <sub>1</sub> | T         | Bearing No. | Collar No. | Stamping Radial Load Rating <sup>(1)</sup> | Unit Wt.   |
|------|------------|-----------|----------------|-----------|-----------|-----------|-----------|----------------|-----------|-----------|----------------|-----------|----------------|-----------|-------------|------------|--------------------------------------------|------------|
|      | in.<br>mm  | mm<br>in. | mm<br>in.      | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in. | mm<br>in.      | mm<br>in. |             |            | N<br>lbs.                                  | kg<br>lbs. |
| PB   | 1/2        | 22.2      | 44.4           | 81.0      | 55.6      | 92.1      | 25.4      | 2.54           | 8.7       | 8.7       | 28.6           | 18.24     | 22.07          | 12.7      | RA008RRB    | S1008K     |                                            |            |
| PB   | 5/8        | 7/8       | 1 3/4          | 3 3/16    | 2 3/16    | 3 5/8     | 1         | 0.100          | 1 1/32    | 1 1/32    | 1 1/8          | 0.718     | 0.869          | 1/2       | RA010RRB    | S1010K     | 1340                                       | 0.200      |
| PB   | 17         |           |                |           |           |           |           |                |           |           |                |           |                |           | RAE17RRB    | SE17K      | 300                                        | 0.44       |
| PB   | 3/4        | 25.4      | 52.4           | 88.9      | 63.5      | 104.8     | 25.4      | 2.54           | 10.3      | 10.3      | 33.3           | 21.82     | 23.44          | 15.9      | RA012RRB    | S1012K     | 1560                                       | 0.259      |
| PB   | 20         | 1         | 2 1/16         | 3 1/2     | 2 1/2     | 4 1/8     | 1         | 0.100          | 1 3/32    | 1 3/32    | 1 5/16         | 0.859     | 0.923          | 5/8       | RAE20RRB    | SE20K      | 350                                        | 0.57       |
| PB   | 7/8        |           |                |           |           |           |           |                |           |           |                |           |                |           | RA014RRB    | S1014K     |                                            |            |
| PB   | 1 5/16     | 28.6      | 56.4           | 100.0     | 71.4      | 114.0     | 28.6      | 5.28           | 10.3      | 10.3      | 38.1           | 25.40     | 23.44          | 14.3      | RA015RRB    | S1015K     | 1760                                       | 0.295      |
| PB   | 1          | 1 1/8     | 2 7/32         | 3 15/16   | 2 13/16   | 4 1/2     | 1 1/8     | 0.208          | 1 3/32    | 1 3/32    | 1 1/2          | 1.000     | 0.923          | 9/16      | RA100RRB    | S1100K     | 400                                        | 0.65       |
| PB   | 25         |           |                |           |           |           |           |                |           |           |                |           |                |           | RAE25RRB    | SE25K      |                                            |            |
| PB   | 1 1/8      |           |                |           |           |           |           |                |           |           |                |           |                |           | RA102RRB    | S1102K     |                                            |            |
| PB   | 1 3/16     | 33.3      | 66.7           | 104.8     | 76.2      | 123.8     | 31.8      | 3.68           | 10.3      | 10.3      | 44.5           | 25.40     | 26.72          | 19.0      | RA103RRB    | S1103K     | 2650                                       | 0.476      |
| PB   | 1 1/4 S    | 1 5/16    | 2 5/8          | 4 1/8     | 3         | 4 7/8     | 1 1/4     | 0.145          | 1 3/32    | 1 3/32    | 1 3/4          | 1.000     | 1.052          | 3/4       | RA103RRB2   | S1103K3    | 600                                        | 1.05       |
| PB   | 30         |           |                |           |           |           |           |                |           |           |                |           |                |           | RAE30RRB    | SE30K      |                                            |            |

<sup>(1)</sup>Housing thrust rating is 1/3 of housing radial load rating. Maximum suggested speed is 2400 RPM.

NOTE: Shaft diameter with an S = smaller housing.

NOTE: Load ratings are upright mounted capacities with load direction toward base.

NOTE: These units should not be mounted vertically or upside down.



**RPB Series**

| Unit | Shaft Dia. |           |                |           |           |           |           |                |           |           |                |           |                | Bearing No. <sup>(1)</sup> | Collar No. | Stamping Radial Load Rating <sup>(2)</sup> | Unit Wt.  |
|------|------------|-----------|----------------|-----------|-----------|-----------|-----------|----------------|-----------|-----------|----------------|-----------|----------------|----------------------------|------------|--------------------------------------------|-----------|
|      |            | H         | H <sub>2</sub> | J max.    | J min.    | L         | A         | H <sub>1</sub> | N         | R         | d <sub>1</sub> | O         | S <sub>1</sub> | T                          |            |                                            |           |
|      | in.<br>mm  | mm<br>in. | mm<br>in.      | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in. | mm<br>in.      | mm<br>in.                  |            |                                            | N<br>lbs. |
| RPB  | 1/2        |           |                |           |           |           |           |                |           |           |                |           |                |                            | RA008RRB   | S1008K                                     |           |
| RPB  | 5/8        | 25.40     | 52.4           | 88.9      | 63.5      | 104.8     | 25.4      | 2.54           | 10.3      | 10.3      | 28.6           | 21.59     | 22.07          | 15.9                       | RA010RRB   | S1010K                                     | 880       |
| RPB  | 17         | 1         | 2 1/16         | 3 1/2     | 2 1/2     | 4 1/8     | 1         | 0.100          | 13/32     | 13/32     | 1 1/8          | 0.85      | 0.869          | 5/8                        | RAE17RRB   | SE17K                                      | 200       |
| RPB  | 3/4        | 28.58     | 56.4           | 100.0     | 71.4      | 114.0     | 28.6      | 5.28           | 10.3      | 10.3      | 33.3           | 25.40     | 23.44          | 14.3                       | RA012RRB   | S1012K                                     | 1120      |
| RPB  | 20         | 1 1/8     | 2 7/32         | 3 5/16    | 2 13/16   | 4 1/2     | 1 1/8     | 0.208          | 13/32     | 13/32     | 1 5/16         | 1.00      | 0.923          | 9/16                       | RAE20RRB   | SE20K                                      | 250       |
| RPB  | 7/8        |           |                |           |           |           |           |                |           |           |                |           |                |                            | RA014RRB   | S1014K                                     |           |
| RPB  | 15/16      | 33.34     | 66.7           | 104.8     | 76.2      | 123.8     | 31.8      | 3.68           | 10.3      | 10.3      | 38.1           | 25.40     | 23.44          | 19.0                       | RA015RRB   | S1015K                                     | 1340      |
| RPB  | 1          | 1 5/16    | 2 5/8          | 4 1/8     | 3         | 4 7/8     | 1 1/4     | 0.145          | 13/32     | 13/32     | 1 1/2          | 1.00      | 0.923          | 3/4                        | RA100RRB   | S1100K                                     | 300       |
| RPB  | 25         |           |                |           |           |           |           |                |           |           |                |           |                |                            | RAE25RRB   | SE25K                                      |           |
| LRPB | 1 3/16     | 33.34     | 66.7           | 104.8     | 76.2      | 123.8     | 31.8      | 3.68           | 10.3      | 10.3      | 44.4           | 25.40     | 28.30          | 19.0                       | RAL103NPPB | LS103K                                     | 1340      |
|      |            | 1 5/16    | 2 5/8          | 4 1/8     | 3         | 4 7/8     | 1 1/4     | 0.145          | 13/32     | 13/32     | 1 3/4          | 1.00      | 1.114          | 3/4                        |            |                                            | 300       |

<sup>(1)</sup>Bearing suffix number FS450.

<sup>(2)</sup>Housing thrust rating is 1/3 of housing radial load rating. Maximum suggested speed is 2400 RPM.

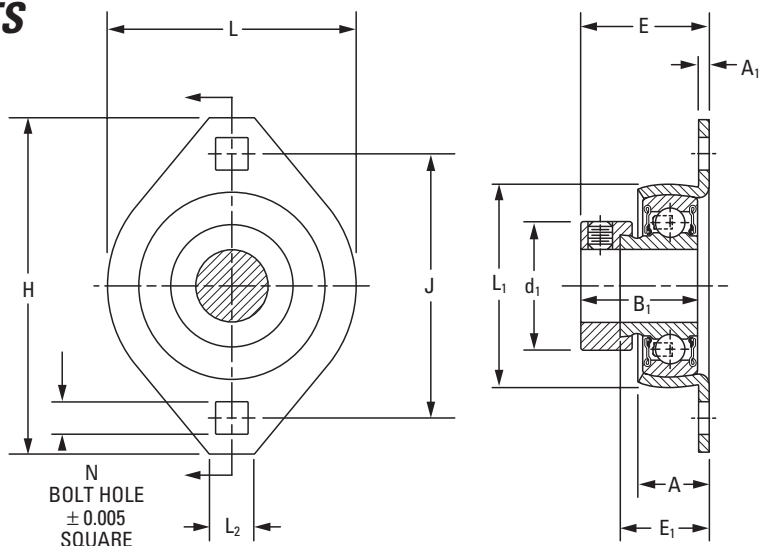
### PRESSED-STEEL FLANGED UNITS

#### VFMST SERIES

- The zinc-plated, pressed-metal flange unit is assembled with an RA-RRR prelubricated extended inner-ring-type bearing.
- The unit is ideal for light-duty applications.
- The unit features flush-mounting.
- The unit has additional contamination protection.
- The VFMST series is self-aligning.

#### Suggested shaft tolerances:

nominal to -0.013 mm, -0.0005 in.



#### BEARING DATA

| Unit  | Bearing No. | Dimensions and Load Ratings |
|-------|-------------|-----------------------------|
| VFMST | RA-RRR      | Page A-48                   |

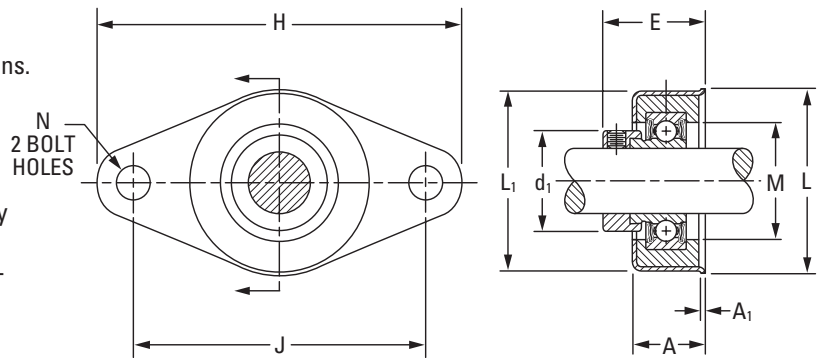
| Unit  | Shaft Dia. |           |           |           |           |           |           |                |                |                |                |                |                | Bearing No. | Collar No. | Stamping |                                   |
|-------|------------|-----------|-----------|-----------|-----------|-----------|-----------|----------------|----------------|----------------|----------------|----------------|----------------|-------------|------------|----------|-----------------------------------|
|       |            | H         | J         | L         | E         | A         | N         | L <sub>1</sub> | E <sub>1</sub> | L <sub>2</sub> | B <sub>1</sub> | d <sub>1</sub> | A <sub>1</sub> |             |            | Size     | Radial Load Rating <sup>(1)</sup> |
|       | in.<br>mm  | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in.      | mm<br>in.      | mm<br>in.      | mm<br>in.      |             |            |          | N<br>lbs.                         |
| VFMST | 3/4        | 90.5      | 71.4      | 66.7      | 33.3      | 16.7      | 8.7       | 50.8           | 23.0           | 12.7           | 31.0           | 33.3           | 2.64           | RA012RRB    | S1012K     | 47FMST   | 2240<br>500                       |
| VFMST | 20         | 3 9/16    | 2 13/16   | 2 5/8     | 1 5/16    | 2 1/32    | 1 1/32    | 2              | 29/32          | 1/2            | 1 7/32         | 1 5/16         | 0.104          | RAE20RRB    | SE20K      |          |                                   |
| VFMST | 7/8        | 95.2      | 76.2      | 71.0      | 33.3      | 18.3      | 8.7       | 55.6           | 23.8           | 12.7           | 31.0           | 38.1           | 2.64           | RA014RRB    | S1014K     | 52FMST   | 2650<br>600                       |
| VFMST | 1 5/16     |           |           |           |           |           |           |                |                |                |                |                |                | RA015RRB    | S1015K     |          |                                   |
| VFMST | 1          |           |           |           |           |           |           |                |                |                |                |                |                | RA100RRB    | S1100K     |          |                                   |
| VFMST | 25         |           |           |           |           |           |           |                |                |                |                |                |                | RAE25RRB    | SE25K      |          |                                   |
| VFMST | 1 1/8      | 112.7     | 90.5      | 84.1      | 38.9      | 23.0      | 10.3      | 66.7           | 27.8           | 15.9           | 35.7           | 44.4           | 3.40           | RA102RRB    | S1102K     | 62FMST   | 3550<br>800                       |
| VFMST | 1 3/16     |           |           |           |           |           |           |                |                |                |                |                |                | RA103RRB    | S1103K     |          |                                   |
| VFMST | 1 1/4 S    |           |           |           |           |           |           |                |                |                |                |                |                | RA103RRB2   | S1103K3    |          |                                   |
| VFMST | 30         |           |           |           |           |           |           |                |                |                |                |                |                | RAE30RRB    | SE30K      |          |                                   |

<sup>(1)</sup>Housing thrust rating is 1/3 of housing radial load rating.

NOTE: Shaft diameter with an S = smaller housing.

### LFST SERIES

- This unit is zinc-plated, pressed-steel and flush-mounted.
- This unit simplifies bearing flange-unit installations.
- The conductive rubber interliner reduces noise and vibration. This allows for alignment while the pressed-steel flange assures rigid bearing support.
- The bolt-hole spacing permits interchangeability with competitive mountings.
- The unit offers compact, economical, corrosion-resistant housing and balanced design.
- The unit features Timken RAL light-series ball bearings. The RAL provides precision in an extended inner-ring bearing with superior shroud seal protection and self-locking collar.
- The bearings are prelubricated.



#### Suggested shaft tolerances:

nominal to -0.013 mm, -0.0005 in.

#### To order, specify UNIT and SHAFT DIAMETER.

Example: LFST 1 in.

#### BEARING DATA

| Unit | Bearing No. | Dimensions and Load Ratings |
|------|-------------|-----------------------------|
| LFST | RAL-NPP     | Page A-55                   |

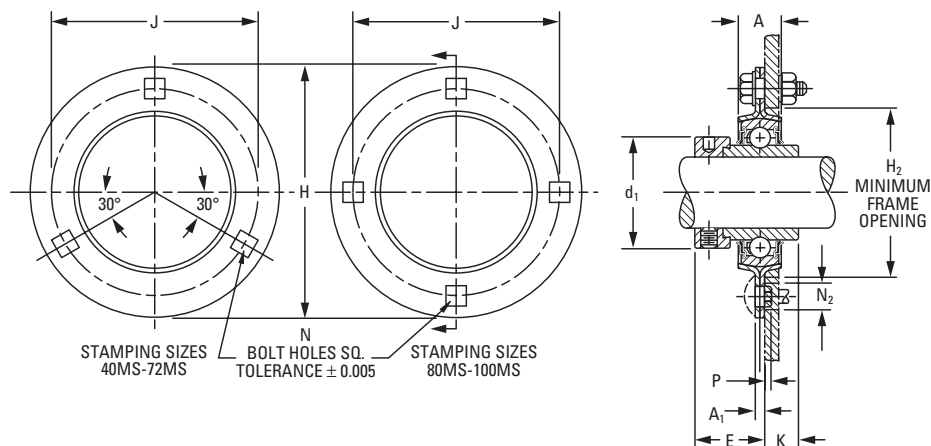
| Unit | Shaft Dia. | H      | J      | L      | L <sub>1</sub> | E      | N      | A      | A <sub>1</sub> | d <sub>1</sub> | M      | Bearing No. | Collar No. | Housing Radial Load Rating <sup>(1)</sup> |
|------|------------|--------|--------|--------|----------------|--------|--------|--------|----------------|----------------|--------|-------------|------------|-------------------------------------------|
|      | in.        | mm in. | mm in. | mm in. | mm in.         | mm in. | mm in. | mm in. | mm in.         | mm in.         | mm in. |             |            | N lbs.                                    |
| LFST | 1/2        | 114.3  | 92.1   | 57.2   | 55.6           | 31     | 9.5    | 23     | 1.52           | 25.4           | 29.4   | RAL008NPP   | LS008K     | 880                                       |
| LFST | 5/8        | 4 1/2  | 3 5/8  | 2 1/4  | 2 3/16         | 1 7/32 | 3/8    | 2 9/32 | 0.06           | 1              | 1 5/32 | RAL010NPP   | LS010K     | 200                                       |
| LFST | 3/4        | 114.3  | 92.1   | 57.2   | 55.6           | 31     | 9.5    | 23     | 1.52           | 29.8           | 34.9   | RAL012NPP   | LS012K     | 1120                                      |
|      |            | 4 1/2  | 3 5/8  | 2 1/4  | 2 3/16         | 1 7/32 | 3/8    | 2 9/32 | 0.06           | 1 11/64        | 1 3/8  |             |            | 250                                       |
| LFST | 15/16      | 114.3  | 92.1   | 57.2   | 55.6           | 31     | 9.5    | 23     | 1.52           | 36.1           | 39.7   | RAL015NPP   | LS015K     | 1340                                      |
| LFST | 1          | 4 1/2  | 3 5/8  | 2 1/4  | 2 3/16         | 1 7/32 | 3/8    | 2 9/32 | 0.06           | 1 27/64        | 1 9/16 | RAL100NPP   | LS100K     | 300                                       |

<sup>(1)</sup>Housing thrust rating is 1/3 of housing radial load rating. Maximum suggested speed is 2400 RPM.

### PRESSED-STEEL FLANGETTE UNITS

#### RR FLANGETTE UNIT

- The unit consists of two interchangeable, pressed-steel, zinc-plated flanges housing a standard bearing with a self-locking collar.
- The spherical inside surfaces of each pair of flanges mate with the spherical outside surface of the bearing's outer ring. This provides initial self-alignment.
- The flangette is equipped with the KRRB (R-seal) wide-inner-ring ball bearing.
- All units are non-relubricatable.



#### Suggested shaft tolerances:

1/2 in. – 1 15/16 in., nominal to -0.013 mm, -0.0005 in.;  
2 in. – 2 15/16 in., nominal to -0.025 mm, -0.0010 in.

#### BEARING DATA

| Unit | Bearing No. | Dimensions and Load Ratings |
|------|-------------|-----------------------------|
| RR   | KRRB        | Page A-32                   |

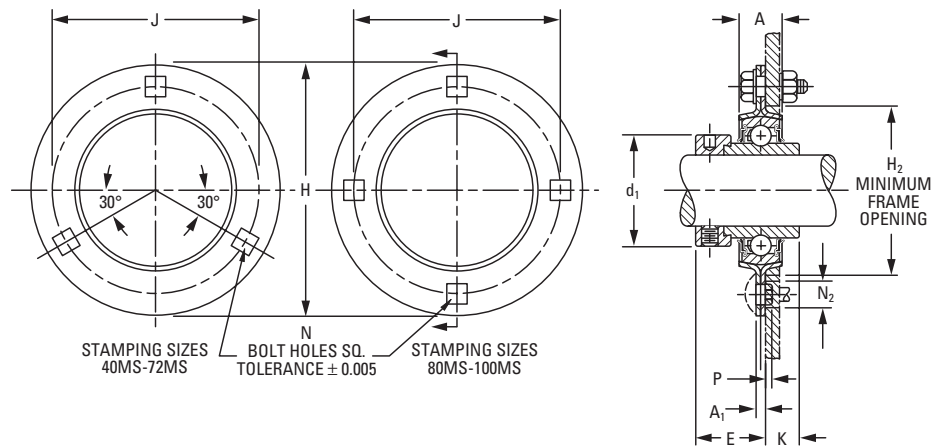
| Unit | Shaft Dia. |           |           |           |           |                |                |           |           |                |           | Bolt Size | Short Shank    | Long Shank | Flange Hole Diam. to Clear Sq. Shank | Bearing No. | Collar No. | Stamping <sup>(1)</sup>           |               | Unit Wt. |
|------|------------|-----------|-----------|-----------|-----------|----------------|----------------|-----------|-----------|----------------|-----------|-----------|----------------|------------|--------------------------------------|-------------|------------|-----------------------------------|---------------|----------|
|      |            | H         | A         | J         | N         | H <sub>2</sub> | A <sub>1</sub> | E         | K         | d <sub>1</sub> | P         |           | N <sub>2</sub> | Size       |                                      |             |            | Radial Load Rating <sup>(2)</sup> |               |          |
|      | in.<br>mm  | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in.  |                                      |             |            | N<br>lbs.                         | kg<br>lbs.    |          |
| RR   | 1/2        | 81.0      | 14.2      | 63.5      | 7.1       | 49.2           | 3.80           | 25.4      | 11.9      | 28.6           | 6.4       | 0.15      | 2.54           | 10.3       | 1008KRRB                             | S1008K      | 40MS       | 2650<br>600                       | 0.295<br>0.65 |          |
| RR   | 5/8        | 3 3/16    | 9/16      | 2 1/2     | 9/32      | 1 15/16        | 0.150          | 1         | 15/32     | 1 1/8          | 1/4       | 0.006     | 0.100          | 13/32      | 1010KRRB                             | S1010K      |            |                                   |               |          |
| RR   | 17         |           |           |           |           |                |                |           |           |                |           |           |                |            | E17KRRB                              | SE17K       |            |                                   |               |          |
| RR   | 3/4        | 90.5      | 15.8      | 71.4      | 8.7       | 55.6           | 4.22           | 28.6      | 15.1      | 33.3           | 7.9       | 0.53      | 2.92           | 12.7       | 1012KRRB                             | S1012K      | 47MS       | 3100<br>700                       | 0.404<br>0.89 |          |
| RR   | 20         | 3 9/16    | 5/8       | 2 13/16   | 11/32     | 2 3/16         | 0.166          | 1 1/8     | 19/32     | 1 5/16         | 5/16      | 0.021     | 0.115          | 1/2        | E20KRRB                              | SE20K       |            |                                   |               |          |
| RR   |            |           |           |           |           |                |                |           |           |                |           |           |                |            |                                      |             |            |                                   |               |          |
| RR   | 7/8        |           |           |           |           |                |                |           |           |                |           |           |                |            | 1014KRRB                             | S1014K      | 52MS       | 3550<br>800                       | 0.490<br>1.08 |          |
| RR   | 15/16      | 95.2      | 17.4      | 76.2      | 8.7       | 60.3           | 4.22           | 28.6      | 15.1      | 38.1           | 7.9       | 0.53      | 2.92           | 12.7       | 1015KRRB                             | S1015K      |            |                                   |               |          |
| RR   | 1          | 3 3/4     | 11/16     | 3         | 11/32     | 2 3/8          | 0.166          | 1 1/8     | 19/32     | 1 1/2          | 5/16      | 0.021     | 0.115          | 1/2        | 1100KRRB                             | S1100K      |            |                                   |               |          |
| RR   | 25         |           |           |           |           |                |                |           |           |                |           |           |                |            | E25KRRB                              | SE25K       |            |                                   |               |          |
| RR   | 1 1/8      |           |           |           |           |                |                |           |           |                |           |           |                |            | 1102KRRB                             | S1102K      | 62MS       | 4900<br>1100                      | 0.753<br>1.66 |          |
| RR   | 1 3/16     | 112.7     | 17.4      | 90.5      | 10.3      | 71.4           | 5.28           | 32.5      | 15.9      | 44.5           | 9.5       | 0.28      | 2.64           | 15.1       | 1103KRRB                             | S1103K      |            |                                   |               |          |
| RR   | 1 1/4 S    | 4 7/16    | 11/16     | 3 9/16    | 13/32     | 2 13/16        | 0.208          | 1 9/32    | 5/8       | 1 3/4          | 3/8       | 0.011     | 0.104          | 19/32      | 1103KRRB3                            | S1103K3     |            |                                   |               |          |
| RR   | 30         |           |           |           |           |                |                |           |           |                |           |           |                |            | E30KRRB                              | SE30K       |            |                                   |               |          |
| RR   | 1 1/4      |           |           |           |           |                |                |           |           |                |           |           |                |            | 1104KRRB                             | S1104K      | 72MS       | 6220<br>1400                      | 0.962<br>2.12 |          |
| RR   | 1 5/16     | 122.2     | 19.0      | 100.0     | 10.3      | 81.0           | 5.28           | 34.9      | 15.9      | 54.0           | 9.5       | 0.28      | 2.64           | 15.1       | 1105KRRB                             | S1105K      |            |                                   |               |          |
| RR   | 1 3/8      | 4 13/16   | 3/4       | 3 15/16   | 13/32     | 3 3/16         | 0.208          | 1 3/8     | 5/8       | 2 1/8          | 3/8       | 0.011     | 0.104          | 19/32      | 1106KRRB                             | S1106K      |            |                                   |               |          |
| RR   | 1 7/16     |           |           |           |           |                |                |           |           |                |           |           |                |            | 1107KRRB                             | S1107K      |            |                                   |               |          |
| RR   | 35         |           |           |           |           |                |                |           |           |                |           |           |                |            | E35KRRB                              | SE35K       |            |                                   |               |          |

<sup>(1)</sup>Stampings must be ordered in pairs to assemble bearing.

<sup>(2)</sup>Thrust ratings for stamping are 50 percent of radial ratings.

NOTE: Shaft diameter with an S = smaller housing.

Continued on next page.



Continued from previous page.

| Unit | Shaft Dia. |           |           |           |           |                |                |           |           |                | Bolt Size | Short Shank | Long Shank | Flange Hole Diam. to Clear Sq. Shank | Bearing No. | Collar No. | Stamping <sup>(1)</sup> |                                   | Unit Wt.      |
|------|------------|-----------|-----------|-----------|-----------|----------------|----------------|-----------|-----------|----------------|-----------|-------------|------------|--------------------------------------|-------------|------------|-------------------------|-----------------------------------|---------------|
|      |            |           |           |           |           |                |                |           |           |                |           |             |            |                                      |             |            | Size                    | Radial Load Rating <sup>(2)</sup> |               |
|      |            | H         | A         | J         | N         | H <sub>2</sub> | A <sub>1</sub> | E         | K         | d <sub>1</sub> |           | P           |            |                                      |             |            |                         |                                   |               |
|      | in.<br>mm  | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in. | mm<br>in.   | mm<br>in.  | mm<br>in.                            |             |            |                         | N<br>lbs.                         | kg<br>lbs.    |
| RR   | 1 1/2      |           |           |           |           |                |                |           |           |                |           |             |            |                                      | 1108KRRB    | S1108KT    | 80MS                    | 7500<br>1700                      | 1.143<br>2.52 |
| RR   | 1 9/16     | 147.6     | 20.6      | 119.1     | 13.5      | 90.5           | 6.80           | 38.1      | 18.3      | 60.3           | 12.7      | 0.33        | 2.72       | 19.4                                 | 1109KRRB    | S1109KT    |                         |                                   |               |
| RR   | 40         | 5 13/16   | 13/16     | 4 11/16   | 17/32     | 3 9/16         | 0.268          | 1 1/2     | 23/32     | 2 3/8          | 1/2       | 0.013       | 0.107      | 49/64                                | E40KRRB     | SE40K      |                         |                                   |               |
| RR   | 1 5/8      |           |           |           |           |                |                |           |           |                |           |             |            |                                      | 1110KRRB    | S1110K     | 85MS                    | 7500<br>1700                      | 1.651<br>3.64 |
| RR   | 1 11/16    | 149.2     | 22.2      | 120.6     | 13.5      | 96.8           | 6.80           | 38.1      | 18.3      | 63.5           | 12.7      | 0.33        | 2.72       | 19.4                                 | 1111KRRB    | S1111K     |                         |                                   |               |
| RR   | 45         | 5 7/8     | 7/8       | 4 3/4     | 17/32     | 13/16          | 0.268          | 1 1/2     | 23/32     | 2 1/2          | 1/2       | 0.013       | 0.107      | 49/64                                | E45KRRB     | SE45K      |                         |                                   |               |
| RR   | 1 7/8      |           |           |           |           |                |                |           |           |                |           |             |            |                                      | 1114KRRB    | S1114K     | 90MS                    | 8500<br>1900                      | 1.878<br>4.14 |
| RR   | 1 15/16    | 155.6     | 22.2      | 127.0     | 13.5      | 101.6          | 7.56           | 42.1      | 20.6      | 69.8           | 12.7      | 0           | 1.96       | 19.4                                 | 1115KRRB    | S1115K     |                         |                                   |               |
| RR   | 50         | 6 1/8     | 7/8       | 5         | 17/32     | 4              | 0.298          | 1 21/32   | 13/16     | 2 3/4          | 1/2       | 0           | 0.077      | 49/64                                | E50KRRB     | SE50K      |                         |                                   |               |
| RR   | 2          |           |           |           |           |                |                |           |           |                |           |             |            |                                      | 1200KRRB    | S1200K     | 100MS                   | 10200<br>2300                     | 2.268<br>5.00 |
| RR   | 2 1/8      | 166.7     | 23.8      | 138.1     | 13.5      | 112.7          | 7.56           | 47.6      | 23.8      | 76.2           | 12.7      | 0           | 1.96       | 19.4                                 | 1202KRRB    | S1202K     |                         |                                   |               |
| RR   | 2 3/16     | 6 9/16    | 15/16     | 5 7/16    | 17/32     | 4 7/16         | 0.298          | 1 7/8     | 15/16     | 3              | 1/2       | 0           | 0.077      | 49/64                                | 1203KRRB    | S1203K     |                         |                                   |               |
| RR   | 55         |           |           |           |           |                |                |           |           |                |           |             |            |                                      | E55KRRB     | SE55K      |                         |                                   |               |

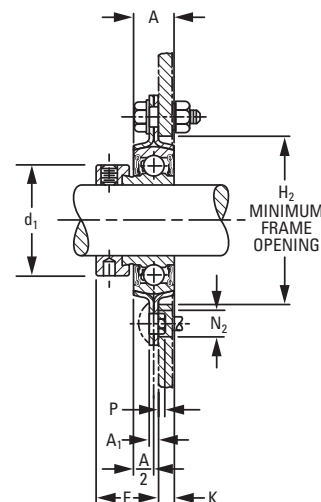
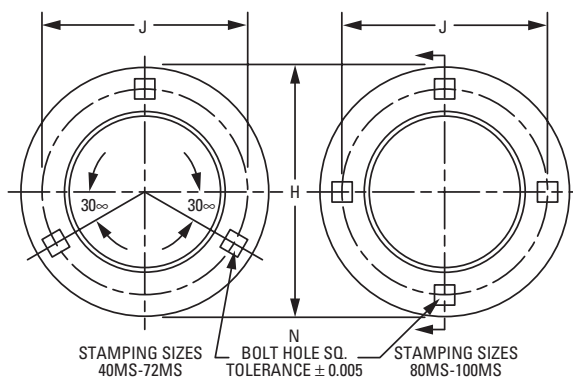
<sup>(1)</sup>Thrust ratings for stamping are 50 percent of radial ratings.

<sup>(2)</sup>Stampings must be ordered in pairs to assemble bearing.

NOTE: Shaft diameter with an S = smaller housing.

### RA FLANGETTE UNIT

- The RA flangette unit is similar to Timken RR flangette unit.
- The unit consists of two interchangeable, pressed-steel, zinc-plated flanges that house a standard ball bearing.
- The unit incorporates an extended inner-ring bearing with a self-locking collar and spherical seat in the cartridge, providing initial self-alignment.
- The unit is equipped with an RA-RRB extended inner ring ball bearing.
- The units are non-relubricatable.



#### Suggested shaft tolerances:

1/2 in. – 1 15/16 in., nominal to -0.013 mm, -0.0005 in.;  
2 in. – 2 3/16 in., nominal to -0.025 mm, -0.0010 in.

#### To order, specify UNIT and SHAFT DIAMETER.

Example: RA 1 in. flangette.

#### BEARING DATA

| Unit | Bearing No. | Dimensions and Load Ratings |
|------|-------------|-----------------------------|
| RA   | RA-RRB      | Page A-48                   |

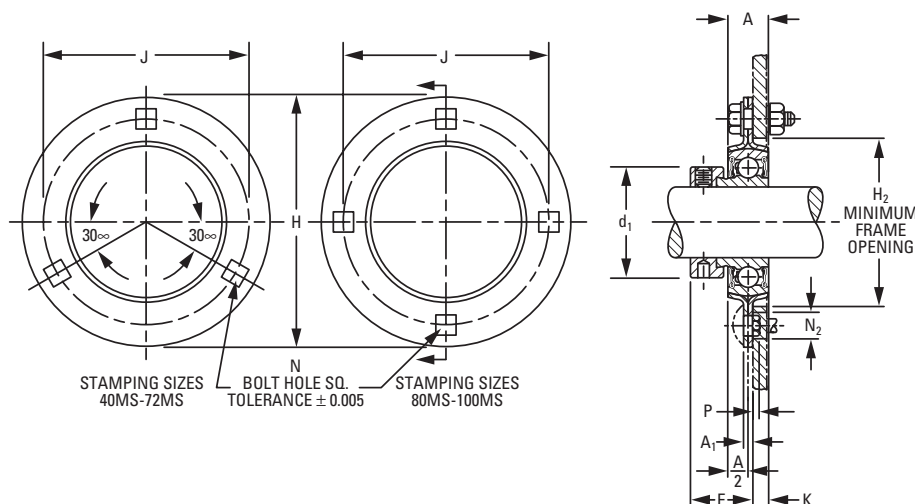
| Unit | Shaft Dia. |           |           |           |           |                |                |           |           |                | Bolt Size | Short Shank | Long Shank     | Flange Hole Diam. to Clear Sq. Shank | Bearing No. | Collar No. | Stamping <sup>(1)</sup> |                                   | Unit Wt.   |
|------|------------|-----------|-----------|-----------|-----------|----------------|----------------|-----------|-----------|----------------|-----------|-------------|----------------|--------------------------------------|-------------|------------|-------------------------|-----------------------------------|------------|
|      |            | H         | A         | J         | N         | H <sub>2</sub> | A <sub>1</sub> | E         | K         | d <sub>1</sub> |           | P           | N <sub>2</sub> |                                      |             |            | Size                    | Radial Load Rating <sup>(2)</sup> |            |
|      | in.<br>mm  | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in. | mm<br>in.   | mm<br>in.      | mm<br>in.                            |             |            |                         | N<br>lbs.                         | kg<br>lbs. |
| RA   | 1/2        |           |           |           |           |                |                |           |           |                |           |             |                |                                      | RA008RRB    | S1008K     | 40MS                    | 2650<br>600                       | 0.277      |
| RA   | 9/16       | 81.0      | 14.2      | 63.5      | 7.1       | 49.2           | 3.81           | 23.8      | 5.6       | 28.6           | 6.4       | 0.15        | 2.54           | 10.3                                 | RA009RRB    | S1009K     |                         |                                   | 0.61       |
|      | 5/8        | 3 3/16    | 9/16      | 2 1/2     | 9/32      | 1 15/16        | 0.150          | 1 5/16    | 7/32      | 1 1/8          | 1/4       | 0.006       | 0.100          | 13/32                                | RA010RRB    | S1010K     |                         |                                   |            |
| RA   | 17         |           |           |           |           |                |                |           |           |                |           |             |                |                                      | RAE17RRB    | SE17K      |                         |                                   |            |
| RA   | 3/4        | 90.5      | 15.8      | 71.4      | 8.7       | 55.6           | 4.22           | 25.0      | 6.4       | 33.3           | 7.9       | 0.53        | 2.92           | 12.7                                 | RA012RRB    | S1012K     | 47MS                    | 3100<br>700                       | 0.363      |
| RA   | 20         | 3 3/16    | 5/8       | 2 13/16   | 11/32     | 2 3/16         | 0.166          | 63/64     | 1/4       | 1 5/16         | 5/16      | 0.021       | 0.115          | 1/2                                  | RAE20RRB    | SE20K      |                         |                                   | 0.80       |
| RA   | 13/16      |           |           |           |           |                |                |           |           |                |           |             |                |                                      | RA013RRB    | S1013K     | 52MS                    | 3550<br>800                       | 0.408      |
|      | 7/8        |           |           |           |           |                |                |           |           |                |           |             |                |                                      | RA014RRB    | S1014K     |                         |                                   |            |
| RA   | 15/16      | 95.2      | 17.4      | 76.2      | 8.7       | 60.3           | 4.22           | 25.0      | 7.1       | 38.1           | 7.9       | 0.53        | 2.92           | 12.7                                 | RA015RRB    | S1015K     |                         |                                   |            |
| RA   | 1          | 3 3/4     | 1 1/16    | 3         | 11/32     | 2 3/8          | 0.166          | 63/64     | 9/32      | 1 1/2          | 5/16      | 0.021       | 0.115          | 1/2                                  | RA100RRB    | S1100K     |                         |                                   |            |
| RA   | 25         |           |           |           |           |                |                |           |           |                |           |             |                |                                      | RAE25RRB    | SE25K      |                         |                                   |            |
| RA   | 1 1/16     |           |           |           |           |                |                |           |           |                |           |             |                |                                      | RA101RRB    | S11013K    | 62MS                    | 4900<br>1100                      | 0.667      |
|      | 1 1/8      | 112.7     | 17.4      | 90.5      | 10.3      | 71.4           | 5.28           | 29.0      | 6.7       | 44.5           | 9.5       | 0.28        | 2.64           | 15.1                                 | RA102RRB    | S1102K     |                         |                                   |            |
| RA   | 13/16      | 4 7/16    | 1 1/16    | 3 9/16    | 13/32     | 2 13/16        | 0.208          | 1 9/64    | 17/64     | 1 3/4          | 3/8       | 0.011       | 0.104          | 19/32                                | RA103RRB    | S1103K     |                         |                                   |            |
| RA   | 1 1/4 S    |           |           |           |           |                |                |           |           |                |           |             |                |                                      | RA103RRB3   | S1103K3    |                         |                                   |            |
| RA   | 30         |           |           |           |           |                |                |           |           |                |           |             |                |                                      | RAE30RRB    | SE30K      |                         |                                   |            |
| RA   | 1 1/4      |           |           |           |           |                |                |           |           |                |           |             |                |                                      | RA104RRB    | S1104K     | 72MS                    | 6220<br>1400                      | 0.889      |
| RA   | 1 5/16     | 122.2     | 19.0      | 100.0     | 10.3      | 81.0           | 5.28           | 31.8      | 7.5       | 54             | 9.5       | 0.28        | 2.64           | 15.1                                 | RA105RRB    | S1105K     |                         |                                   |            |
| RA   | 1 3/8      | 4 13/16   | 3/4       | 3 15/16   | 13/32     | 3 3/16         | 0.208          | 1 1/4     | 19/64     | 2 1/8          | 3/8       | 0.011       | 0.104          | 19/32                                | RA106RRB    | S1106K     |                         |                                   |            |
| RA   | 1 7/16     |           |           |           |           |                |                |           |           |                |           |             |                |                                      | RA107RRB    | S1107K     |                         |                                   |            |
| RA   | 35         |           |           |           |           |                |                |           |           |                |           |             |                |                                      | RAE35RRB    | SE35K      |                         |                                   |            |

<sup>(1)</sup>Stampings must be ordered in pairs to assemble bearing.

<sup>(2)</sup>Thrust ratings for stamping are 50 percent of radial ratings.

NOTE: Shaft diameter with an S = smaller housing.

Continued on next page.



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| Unit | Shaft Dia. |           |           |           |           |                |                |           |           |                | Bolt Size | Short Shank | Long Shank | Flange Hole Diam. to Clear Sq. Shank | Bearing No. | Collar No. | Stamping <sup>(1)</sup> |                                   | Unit Wt.   |
|------|------------|-----------|-----------|-----------|-----------|----------------|----------------|-----------|-----------|----------------|-----------|-------------|------------|--------------------------------------|-------------|------------|-------------------------|-----------------------------------|------------|
|      |            |           |           |           |           |                |                |           |           |                |           |             |            |                                      |             |            | Size                    | Radial Load Rating <sup>(2)</sup> |            |
|      |            | H         | A         | J         | N         | H <sub>2</sub> | A <sub>1</sub> | E         | K         | d <sub>1</sub> |           | P           |            |                                      |             |            |                         |                                   |            |
|      | in.<br>mm  | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in. | mm<br>in.   | mm<br>in.  | mm<br>in.                            |             |            |                         | N<br>lbs.                         | kg<br>lbs. |
| RA   | 1 1/2      |           |           |           |           |                |                |           |           |                |           |             |            |                                      | RA108RRB    | S1108KT    | 80MS                    | 7500<br>1700                      | 1.447      |
| RA   | 1 9/16     | 147.6     | 20.6      | 119.1     | 13.5      | 90.5           | 6.80           | 36.1      | 7.5       | 60.3           | 12.7      | 0.33        | 2.72       | 19.4                                 | RA109RRB    | S1109KT    |                         |                                   | 3.19       |
| RA   | 40         | 5 13/16   | 13/16     | 4 11/16   | 17/32     | 3 9/16         | 0.268          | 1 27/64   | 19/64     | 2 3/8          | 1/2       | 0.013       | 0.107      | 49/64                                | RAE40RRB    | SE40K      |                         |                                   |            |
| RA   | 1 5/8      |           |           |           |           |                |                |           |           |                |           |             |            |                                      | RA110RRB    | S1110K     | 85MS                    | 7500<br>1700                      | 1.479      |
| RA   | 1 11/16    | 149.2     | 22.2      | 120.6     | 13.5      | 96.8           | 6.80           | 36.1      | 7.5       | 63.5           | 12.7      | 0.33        | 2.72       | 19.4                                 | RA111RRB    | S1111K     |                         |                                   | 3.26       |
| RA   | 1 3/4      | 5 7/8     | 7/8       | 4 3/4     | 17/32     | 3 13/16        | 0.268          | 1 27/64   | 19/64     | 2 1/2          | 1/2       | 0.013       | 0.107      | 49/64                                | RA112RRB    | S1112K     |                         |                                   |            |
|      | 45         |           |           |           |           |                |                |           |           |                |           |             |            |                                      | RAE45RRB    | SE45K      |                         |                                   |            |
| RA   | 1 13/16    |           |           |           |           |                |                |           |           |                |           |             |            |                                      | RA113RRB    | S1113K     | 90MS                    | 8500<br>1900                      | 1.669      |
| RA   | 1 7/8      | 155.6     | 22.2      | 127.0     | 13.5      | 101.6          | 7.56           | 36.5      | 7.1       | 69.8           | 12.7      | 0           | 1.96       | 19.4                                 | RA114RRB    | S1114K     |                         |                                   | 3.68       |
| RA   | 1 15/16    | 6 1/8     | 7/8       | 5         | 17/32     | 4              | 0.300          | 1 7/16    | 9/32      | 2 3/4          | 1/2       | 0           | 0.077      | 49/64                                | RA115RRB    | S1115K     |                         |                                   |            |
|      | 50         |           |           |           |           |                |                |           |           |                |           |             |            |                                      | RAE50RRB    | SE50K      |                         |                                   |            |
| RA   | 2          |           |           |           |           |                |                |           |           |                |           |             |            |                                      | RA200RRB    | S1200K     | 100MS                   | 10200<br>2300                     | 2.000      |
|      | 2 1/16     | 166.7     | 23.8      | 138.1     | 13.5      | 112.7          | 7.56           | 40.5      | 8.3       | 76.2           | 12.7      | 0           | 1.96       | 19.4                                 | RA201RRB    | S1201K     |                         |                                   | 4.41       |
| RA   | 2 1/8      | 6 9/16    | 15/16     | 5 7/16    | 17/32     | 4 7/16         | 0.300          | 1 19/32   | 29/64     | 3              | 1/2       | 0           | 0.077      | 49/64                                | RA202RRB    | S1202K     |                         |                                   |            |
| RA   | 2 3/16     |           |           |           |           |                |                |           |           |                |           |             |            |                                      | RA203RRB    | S1203K     |                         |                                   |            |
| RA   | 55         |           |           |           |           |                |                |           |           |                |           |             |            |                                      | RAE55RRB    | SE55K      |                         |                                   |            |

<sup>(1)</sup>Stampings must be ordered in pairs to assemble bearing.

<sup>(2)</sup>Thrust ratings for stamping are 50 percent of radial ratings.

NOTE: Shaft diameter with an S = smaller housing.

### RAT, RRT TWO-BOLT FLANGETTE UNITS

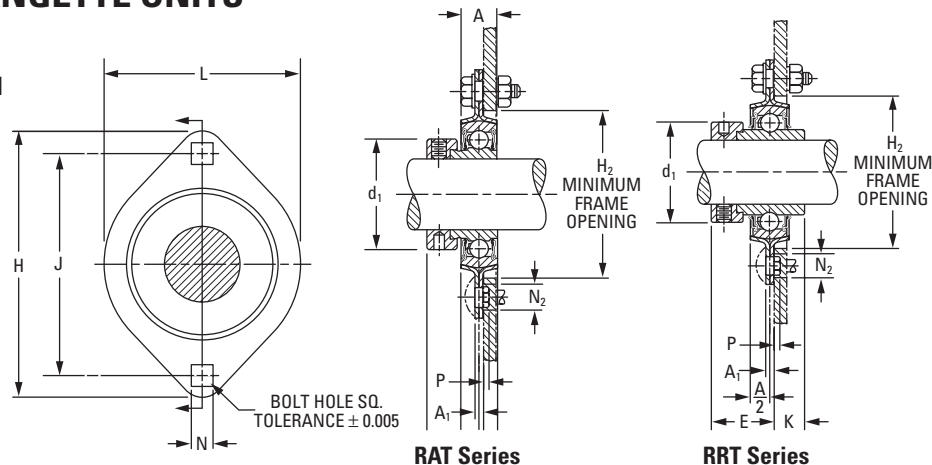
- These units are designed for installations where the standard three-bolt flangettes cannot be used due to space limitations.
- Like standard three-bolt flangettes, they are available with RA-RRB extended inner ring ball bearings and the KRRB wide-inner-ring ball bearings (RRT) with self-locking collars.
- All units are non-relubricatable.

#### Suggested shaft tolerances:

1/2 in. – 1 7/16 in.,  
nominal to -0.013 mm, -0.0005 in.;

#### To order, specify UNIT and SHAFT DIAMETER.

Example: RAT 1 in. flangette or RRT 1 in. flangette.



#### BEARING DATA

| Unit | Bearing No. | Dimensions and Load Ratings |
|------|-------------|-----------------------------|
| RAT  | RA-RRB      | Page A-48                   |
| RRT  | -KRRB       | Page A-32                   |

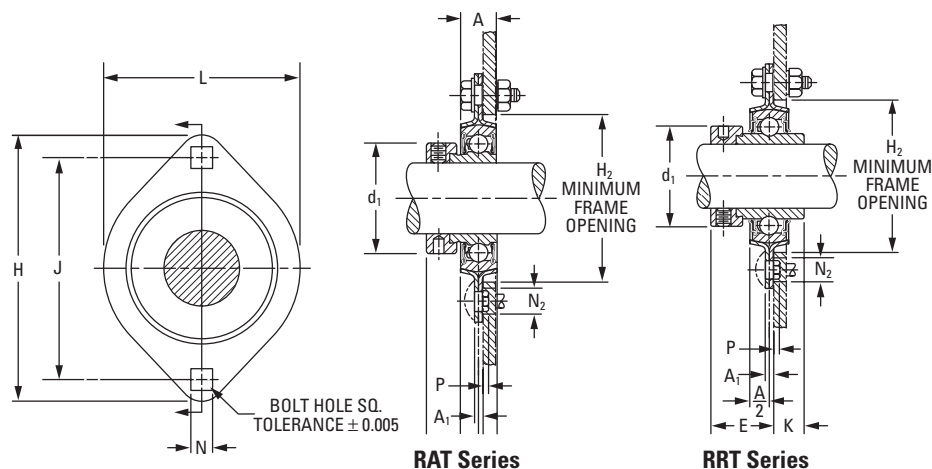
| Unit | Shaft Dia. |           |           |           |           |           |                |                |           |           |                | Bolt Size | Short Shank | Long Shank | Flange Hole Diam. to Clear Sq. Shank | Bearing No. | Collar No. | Stamping <sup>(1)</sup> |              | Unit Wt.      |
|------|------------|-----------|-----------|-----------|-----------|-----------|----------------|----------------|-----------|-----------|----------------|-----------|-------------|------------|--------------------------------------|-------------|------------|-------------------------|--------------|---------------|
|      |            | L         | H         | A         | J         | N         | H <sub>2</sub> | A <sub>1</sub> | E         | K         | d <sub>1</sub> |           | P           |            |                                      |             |            | N <sub>2</sub>          | Size         |               |
|      | in.<br>mm  | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in. | mm<br>in.   | mm<br>in.  | mm<br>in.                            |             |            |                         | N<br>lbs.    | kg<br>lbs.    |
| RAT  | 1/2        | 58.7      | 81.0      | 14.2      | 63.5      | 7.1       | 49.2           | 3.81           | 23.8      | 5.6       | 28.6           | 6.4       | 0.15        | 2.54       | 10.3                                 | RA008RRB    | S1008K     | 40MST                   | 2650<br>600  | 0.213<br>0.47 |
| RAT  | 5/8        | 25.16     | 33.16     | 9.16      | 21.2      | 9.32      | 115.16         | 0.150          | 15.16     | 7.32      | 11.8           | 1.4       | 0.006       | 0.100      | 13.32                                | RA010RRB    | S1010K     |                         |              |               |
| RAT  | 17         |           |           |           |           |           |                |                |           |           |                |           |             |            |                                      | RAE17RRB    | SE17K      |                         |              |               |
| RAT  | 3/4        | 66.7      | 90.5      | 15.8      | 71.4      | 8.7       | 55.6           | 4.22           | 25.0      | 6.4       | 33.3           | 7.9       | 0.53        | 2.92       | 12.7                                 | RA012RRB    | S1012K     | 47MST                   | 3100<br>700  | 0.299<br>0.66 |
| RAT  | 20         | 2.5/8     | 3.9/16    | 5/8       | 2.13/16   | 1.1/32    | 2.3/8          | 0.166          | 6.3/64    | 1/4       | 1.5/16         | 5/16      | 0.021       | 0.115      | 1/2                                  | RAE20RRB    | SE20K      |                         |              |               |
| RAT  | 7/8        |           |           |           |           |           |                |                |           |           |                |           |             |            |                                      | RA014RRB    | S1014K     | 52MST                   | 3550<br>800  | 0.331<br>0.73 |
| RAT  | 15/16      | 71.0      | 95.2      | 17.4      | 76.2      | 8.7       | 60.3           | 4.22           | 25.0      | 7.1       | 38.1           | 7.9       | 0.53        | 2.92       | 12.7                                 | RA015RRB    | S1015K     |                         |              |               |
| RAT  | 1          | 25.1/64   | 3.3/4     | 1.1/16    | 3         | 1.1/32    | 2.3/8          | 0.166          | 6.3/64    | 9/32      | 1.1/2          | 5/16      | 0.021       | 0.115      | 1/2                                  | RA100RRB    | S1100K     |                         |              |               |
| RAT  | 25         |           |           |           |           |           |                |                |           |           |                |           |             |            |                                      | RAE25RRB    | SE25K      |                         |              |               |
| RAT  | 1 1/16     |           |           |           |           |           |                |                |           |           |                |           |             |            |                                      | RA101RRB    | S1103K     | 62MST                   | 4900<br>1100 | 0.531<br>1.17 |
| RAT  | 1 1/8      |           |           |           |           |           |                |                |           |           |                |           |             |            |                                      | RA102RRB    | S1102K     |                         |              |               |
| RAT  | 1 3/16     | 84.1      | 112.7     | 17.4      | 90.5      | 10.3      | 71.4           | 5.28           | 29.0      | 6.7       | 44.5           | 9.5       | 0.28        | 2.64       | 15.1                                 | RA103RRB    | S1103K     |                         |              |               |
| RAT  | 1 1/4 S    |           |           |           |           |           |                |                |           |           |                |           |             |            |                                      | RA103RRB2   | S1103K3    |                         |              |               |
| RAT  | 30         |           |           |           |           |           |                |                |           |           |                |           |             |            |                                      | RAE30RRB    | SE30K      |                         |              |               |
| RAT  | 1 1/4      |           |           |           |           |           |                |                |           |           |                |           |             |            |                                      | RA104RRB    | S1104K     | 72MST                   | 6220<br>1400 | 0.476<br>1.05 |
| RAT  | 1 5/16     |           |           |           |           |           |                |                |           |           |                |           |             |            |                                      | RA105RRB    | S1105K     |                         |              |               |
| RAT  | 1 3/8      | 93.7      | 125.4     | 22.2      | 100.0     | 10.3      | 81.0           | 5.28           | 32.1      | 6.7       | 54.0           | 9.5       | 0.28        | 2.64       | 15.1                                 | RA106RRB    | S1106K     |                         |              |               |
| RAT  | 1 7/16     | 3.11/16   | 4.15/16   | 7/8       | 3.15/16   | 13/32     | 3.3/16         | 0.208          | 1.17/64   | 17/64     | 2.1/8          | 3/8       | 0.011       | 0.104      | 19/32                                | RA107RRB    | S1107K     |                         |              |               |
| RAT  | 35         |           |           |           |           |           |                |                |           |           |                |           |             |            |                                      | RAE35RRB    | SE35K      |                         |              |               |

<sup>(1)</sup>Stampings must be ordered in pairs to assemble bearing.

<sup>(2)</sup>Thrust ratings for stamping are 50 percent of radial ratings.

NOTE: Shaft diameter with an S = smaller housing.

Continued on next page.



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| Unit | Shaft Dia. |                 |                  |                |                  |                |                 |                |                 |               |                | Bolt Size   | Short Shank   | Long Shank    | Flange Hole Diam. to Clear Sq. Shank | Bearing No.          | Collar No.       | Stamping <sup>(1)</sup> |              | Unit Wt.      |
|------|------------|-----------------|------------------|----------------|------------------|----------------|-----------------|----------------|-----------------|---------------|----------------|-------------|---------------|---------------|--------------------------------------|----------------------|------------------|-------------------------|--------------|---------------|
|      |            | L               | H                | A              | J                | N              | H <sub>2</sub>  | A <sub>1</sub> | E               | K             | d <sub>1</sub> |             | P             |               |                                      |                      |                  | N <sub>2</sub>          | Size         |               |
|      | in.<br>mm  | mm<br>in.       | mm<br>in.        | mm<br>in.      | mm<br>in.        | mm<br>in.      | mm<br>in.       | mm<br>in.      | mm<br>in.       | mm<br>in.     | mm<br>in.      | mm<br>in.   | mm<br>in.     | mm<br>in.     | mm<br>in.                            |                      |                  |                         | N<br>lbs.    | kg<br>lbs.    |
| RRT  | 1/2        |                 |                  |                |                  |                |                 |                |                 |               |                |             |               |               |                                      | 1008KRBB             | S1008K           | 40MST                   | 2650<br>600  | 0.213<br>0.47 |
| RRT  | 5/8        | 58.7<br>2 5/16  | 81.0<br>3 3/16   | 14.2<br>9/16   | 63.5<br>2 1/2    | 7.1<br>9/32    | 49.2<br>1 15/16 | 3.81<br>0.150  | 23.8<br>1 5/16  | 5.6<br>7/32   | 28.6<br>1 1/8  | 6.4<br>1/4  | 0.15<br>0.006 | 2.54<br>0.100 | 10.3<br>1 3/32                       | 1010KRBB             | S1010K           |                         |              |               |
| RRT  | 17         |                 |                  |                |                  |                |                 |                |                 |               |                |             |               |               |                                      | E17KRBB              | SE17K            |                         |              |               |
| RRT  | 3/4        | 66.7<br>2 5/8   | 90.5<br>3 9/16   | 15.8<br>5/8    | 71.4<br>2 13/16  | 8.7<br>1 1/32  | 55.6<br>2 3/16  | 4.22<br>0.166  | 25.0<br>6 3/64  | 6.4<br>1/4    | 33.3<br>1 5/16 | 7.9<br>5/16 | 0.53<br>0.021 | 2.92<br>0.115 | 12.7<br>1/2                          | 1012KRBB<br>E20KRBB  | S1012K<br>SE20K  | 47MST                   | 3100<br>700  | 0.299<br>0.66 |
| RRT  | 20         |                 |                  |                |                  |                |                 |                |                 |               |                |             |               |               |                                      |                      |                  |                         |              |               |
| RRT  | 7/8        |                 |                  |                |                  |                |                 |                |                 |               |                |             |               |               |                                      | 1014KRBB             | S1014K           |                         |              |               |
| RRT  | 15/16      | 71.0<br>2 51/64 | 95.2<br>3 3/4    | 17.4<br>1 1/16 | 76.2<br>3        | 8.7<br>1 1/32  | 60.3<br>2 3/8   | 4.22<br>0.166  | 25.0<br>6 3/64  | 7.1<br>9/32   | 38.1<br>1 1/2  | 7.9<br>5/16 | 0.53<br>0.021 | 2.92<br>0.115 | 12.7<br>1/2                          | 1015KRBB<br>1100KRBB | S1015K<br>S1100K | 52MST                   | 3550<br>800  | 0.331<br>0.73 |
| RRT  | 1          |                 |                  |                |                  |                |                 |                |                 |               |                |             |               |               |                                      | E25KRBB              | SE25K            |                         |              |               |
| RRT  | 25         |                 |                  |                |                  |                |                 |                |                 |               |                |             |               |               |                                      |                      |                  |                         |              |               |
| RRT  | 1 1/16     |                 |                  |                |                  |                |                 |                |                 |               |                |             |               |               |                                      | 1101KRBB             | S1103K           | 62MST                   | 4900<br>1100 | 0.531<br>1.17 |
| RRT  | 1 1/8      |                 |                  |                |                  |                |                 |                |                 |               |                |             |               |               |                                      | 1102KRBB             | S1102K           |                         |              |               |
| RRT  | 1 3/16     | 84.1<br>3 5/16  | 112.7<br>4 7/16  | 17.4<br>1 1/16 | 90.5<br>3 9/16   | 10.3<br>1 3/32 | 71.4<br>2 13/16 | 5.28<br>0.208  | 29.0<br>1 9/64  | 6.7<br>1 7/64 | 44.5<br>1 3/4  | 9.5<br>3/8  | 0.28<br>0.011 | 2.64<br>0.104 | 15.1<br>1 9/32                       | 1103KRBB             | S1103K           |                         |              |               |
| RRT  | 1 1/4 S    |                 |                  |                |                  |                |                 |                |                 |               |                |             |               |               |                                      | 1103KRBB3            | S1103K3          |                         |              |               |
| RRT  | 30         |                 |                  |                |                  |                |                 |                |                 |               |                |             |               |               |                                      | E30KRBB              | SE30K            |                         |              |               |
| RRT  | 1 1/4      |                 |                  |                |                  |                |                 |                |                 |               |                |             |               |               |                                      | 1104KRBB             | S1104K           | 72MST                   | 6220<br>1400 | 0.476<br>1.05 |
| RRT  | 1 5/16     | 93.7<br>3 11/16 | 125.4<br>4 15/16 | 22.2<br>7/8    | 100.0<br>3 15/16 | 10.3<br>1 3/32 | 81.0<br>3 3/16  | 5.28<br>0.208  | 32.1<br>1 17/64 | 6.7<br>1 7/64 | 54.0<br>2 1/8  | 9.5<br>3/8  | 0.28<br>0.011 | 2.64<br>0.104 | 15.1<br>1 9/32                       | 1105KRBB<br>1106KRBB | S1105K<br>S1106K |                         |              |               |
| RRT  | 1 3/8      |                 |                  |                |                  |                |                 |                |                 |               |                |             |               |               |                                      | 1107KRBB             | S1107K           |                         |              |               |
| RRT  | 1 7/16     |                 |                  |                |                  |                |                 |                |                 |               |                |             |               |               |                                      |                      |                  |                         |              |               |
| RRT  | 35         |                 |                  |                |                  |                |                 |                |                 |               |                |             |               |               |                                      | E35KRBB              | SE35K            |                         |              |               |

<sup>(1)</sup>Stampings must be ordered in pairs to assemble bearing.

<sup>(2)</sup>Thrust ratings for stamping are 50 percent of radial ratings.

NOTE: Shaft diameter with an S = smaller housing.

### RATR, RRTR TRIANGLE FLANGETTE UNITS

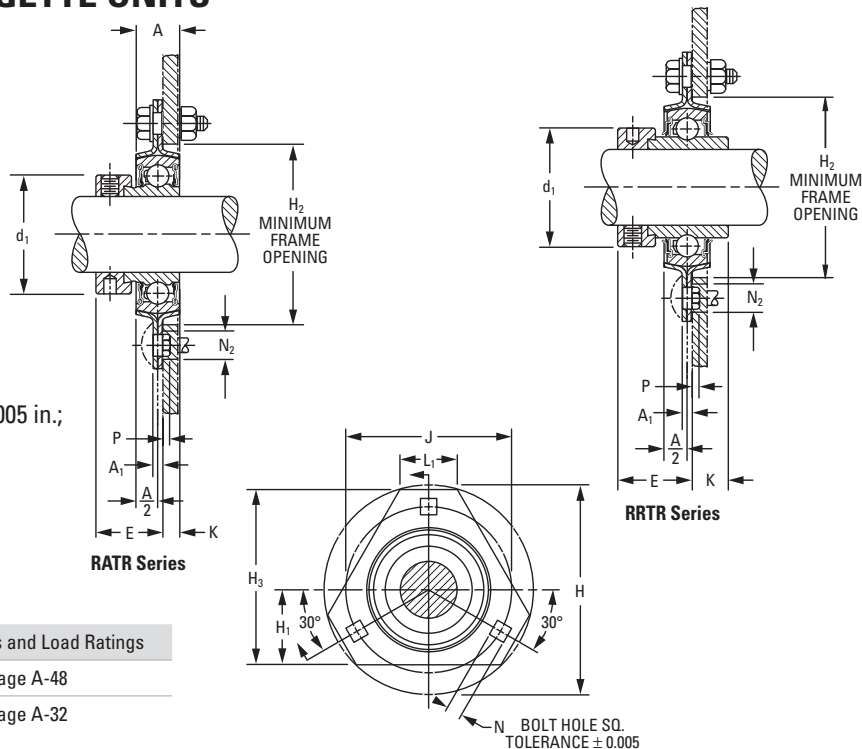
- These units are similar to standard 47MS, 52MS, 62MS and 72MS, except the stamping is triangular instead of round.
- These units are used where space is limited or where it is necessary to cut off one or more sides of the standard flangette stamping.
- The RA-RRB and KRRB may be used with this stamping, as with other types of flangettes.
- All units are non-relubricatable.

#### Suggested shaft tolerances:

1/2 in. – 1 7/16 in., nominal to -0.013 mm, -0.0005 in.;

#### To order, specify UNIT and SHAFT DIAMETER.

Example: RATR 1 in. flangette or  
RRTR 1 in. flangette.



#### BEARING DATA

| Unit | Bearing No. | Dimensions and Load Ratings |
|------|-------------|-----------------------------|
| RATR | RA-RRB      | Page A-48                   |
| RRTR | -KRRB       | Page A-32                   |

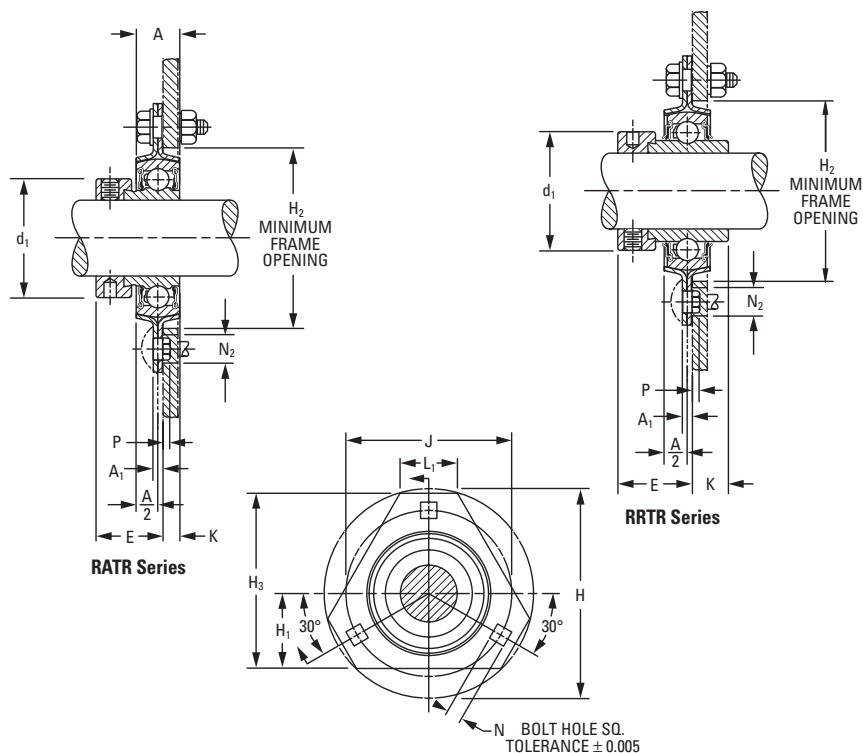
| Unit | Shaft Dia. |                |           |           |           |           |                |                |           |           |                |                |                |           | Bolt Size | Short Shank | Long Shank     | Flange Hole Diam. to Clear Sq. Shank | Bearing No. | Collar No. | Stamping <sup>(1)</sup> |                                   | Unit Wt.      |
|------|------------|----------------|-----------|-----------|-----------|-----------|----------------|----------------|-----------|-----------|----------------|----------------|----------------|-----------|-----------|-------------|----------------|--------------------------------------|-------------|------------|-------------------------|-----------------------------------|---------------|
|      |            |                |           |           |           |           |                |                |           |           |                |                |                |           |           |             |                |                                      |             |            | Size                    | Radial Load Rating <sup>(2)</sup> |               |
|      |            | H <sub>3</sub> | H         | A         | J         | N         | H <sub>2</sub> | A <sub>1</sub> | E         | K         | d <sub>1</sub> | H <sub>1</sub> | L <sub>1</sub> |           |           | P           | N <sub>2</sub> |                                      |             |            |                         |                                   |               |
|      | in.<br>mm  | mm<br>in.      | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in.      | mm<br>in. | mm<br>in. | mm<br>in.   |                |                                      |             | N<br>lbs.  | kg<br>lbs.              |                                   |               |
| RATR | 3/4        | 76.2           | 90.5      | 15.8      | 71.4      | 8.7       | 55.6           | 4.22           | 25.0      | 6.4       | 33.3           | 33.3           | 27.0           | 7.9       | 0.15      | 2.54        | 12.7           | RA012RRB                             | S1012K      | 47MSTR     | 3100<br>700             | 0.313<br>0.69                     |               |
| RATR | 20         | 3              | 3 9/16    | 5/8       | 2 13/16   | 1 1/32    | 2 3/16         | 0.166          | 63/64     | 1/4       | 1 5/16         | 1 5/16         | 1 1/16         | 5/16      | 0.006     | 0.100       | 1/2            | RAE20RRB                             | SE20K       |            |                         |                                   |               |
| RATR | 7/8        |                |           |           |           |           |                |                |           |           |                |                |                |           |           |             |                |                                      | RA014RRB    | S1014K     | 52MSTR                  | 3550<br>800                       | 0.354<br>0.78 |
| RATR | 15/16      | 79.4           | 95.2      | 17.4      | 76.2      | 8.7       | 60.3           | 4.22           | 25.0      | 7.1       | 38.1           | 34.9           | 27.8           | 7.9       | 0.53      | 2.92        | 12.7           | RA015RRB                             | S1015K      |            |                         |                                   |               |
| RATR | 1          | 3 1/8          | 3 3/4     | 1 1/16    | 3         | 1 1/32    | 2 3/8          | 0.166          | 63/64     | 9/32      | 1 1/2          | 1 3/8          | 1 3/32         | 5/16      | 0.021     | 0.115       | 1/2            | RA100RRB                             | S1100K      |            |                         |                                   |               |
| RATR | 25         |                |           |           |           |           |                |                |           |           |                |                |                |           |           |             |                |                                      | RAE25RRB    | SE25K      |                         |                                   |               |
| RATR | 1 1/16     |                |           |           |           |           |                |                |           |           |                |                |                |           |           |             |                |                                      | RA101RRB    | S1103K     | 62MSTR                  | 4900<br>1100                      | 0.526<br>1.16 |
| RATR | 1 1/8      |                |           |           |           |           |                |                |           |           |                |                |                |           |           |             |                |                                      | RA102RRB    | S1102K     |                         |                                   |               |
| RATR | 1 3/16     | 93.7           | 112.7     | 17.4      | 90.5      | 10.3      | 71.4           | 5.28           | 29.0      | 6.7       | 44.5           | 38.1           | 25.4           | 9.5       | 0.28      | 2.64        | 15.1           | RA103RRB                             | S1103K      |            |                         |                                   |               |
| RATR | 1 1/4 S    | 3 11/16        | 4 7/16    | 1 1/16    | 3 9/16    | 1 3/32    | 2 13/16        | 0.208          | 1 9/64    | 1 7/64    | 1 3/4          | 1 1/2          | 1              | 3/8       | 0.011     | 0.104       | 1 9/32         | RA103RRB2                            | S1103K3     |            |                         |                                   |               |
| RATR | 30         |                |           |           |           |           |                |                |           |           |                |                |                |           |           |             |                |                                      | RAE30RRB    | SE30K      |                         |                                   |               |
| RATR | 1 1/4      |                |           |           |           |           |                |                |           |           |                |                |                |           |           |             |                |                                      | RA104RRB    | S1104K     | 72MSTR                  | 6300<br>1400                      | 0.703<br>1.55 |
| RATR | 1 5/16     |                |           |           |           |           |                |                |           |           |                |                |                |           |           |             |                |                                      | RA105RRB    | S1105K     |                         |                                   |               |
| RATR | 1 3/8      | 105.6          | 127.0     | 19.0      | 100.0     | 10.3      | 81.0           | 5.28           | 32.1      | 6.7       | 54.0           | 44.4           | 32.1           | 9.5       | 0.028     | 2.64        | 15.1           | RA106RRB                             | S1106K      |            |                         |                                   |               |
| RATR | 1 7/16     | 4 5/32         | 5         | 3/4       | 3 15/16   | 1 3/32    | 3 3/16         | 0.208          | 1 17/64   | 1 7/64    | 2 1/8          | 1 3/4          | 1 17/64        | 3/8       | 0.011     | 0.104       | 1 9/32         | RA107RRB                             | S1107K      |            |                         |                                   |               |
| RATR | 35         |                |           |           |           |           |                |                |           |           |                |                |                |           |           |             |                |                                      | RAE35RRB    | SE35K      |                         |                                   |               |

<sup>(1)</sup>Stampings must be ordered in pairs to assemble bearing.

<sup>(2)</sup>Thrust ratings for stamping are 50 percent of radial ratings.

NOTE: Shaft diameter with an S = smaller housing.

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| Unit | Shaft Dia. |                |           |           |           |           |                |                |           |           |                |                |                | Bolt Size | Short Shank | Long Shank | Flange Hole Diam. to Clear Sq. Shank | Bearing No. | Collar No. | Stamping <sup>(1)</sup> |                | Unit Wt.      |
|------|------------|----------------|-----------|-----------|-----------|-----------|----------------|----------------|-----------|-----------|----------------|----------------|----------------|-----------|-------------|------------|--------------------------------------|-------------|------------|-------------------------|----------------|---------------|
|      |            | H <sub>3</sub> | H         | A         | J         | N         | H <sub>2</sub> | A <sub>1</sub> | E         | K         | d <sub>1</sub> | H <sub>1</sub> | L <sub>1</sub> |           |             |            |                                      |             |            | P                       | N <sub>2</sub> |               |
|      | in.<br>mm  | mm<br>in.      | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in.      | mm<br>in. | mm<br>in.   | mm<br>in.  | mm<br>in.                            |             |            |                         | N<br>lbs.      | kg<br>lbs.    |
| RRTR | 3/4        | 76.2           | 90.5      | 15.8      | 71.4      | 8.7       | 55.6           | 4.22           | 28.6      | 15.1      | 33.3           | 33.3           | 2.07           | 7.9       | 0.15        | 2.54       | 12.7                                 | 1012KRRB    | S1012K     | 47MSTR                  | 3100<br>700    | 0.313<br>0.69 |
| RRTR | 20         | 3              | 3 3/16    | 5/8       | 2 13/16   | 1 1/32    | 2 3/16         | 0.166          | 1 1/8     | 1 9/32    | 1 5/16         | 1 5/16         | 1 1/16         | 5/16      | 0.006       | 0.100      | 1/2                                  | E20KRRB     | SE20K      |                         |                |               |
| RRTR | 7/8        |                |           |           |           |           |                |                |           |           |                |                |                |           |             |            |                                      | 1014KRRB    | S1014K     | 52MSTR                  | 3550<br>800    | 0.354<br>0.78 |
| RRTR | 15/16      | 79.4           | 95.2      | 17.4      | 76.2      | 8.7       | 60.3           | 4.22           | 28.6      | 15.1      | 38.1           | 34.9           | 27.8           | 7.9       | 0.53        | 2.92       | 12.7                                 | 1015KRRB    | S1015K     |                         |                |               |
| RRTR | 1          | 3 1/8          | 3 3/4     | 1 1/16    | 3         | 1 1/32    | 2 3/8          | 0.166          | 1 1/8     | 1 9/32    | 1 1/2          | 1 3/8          | 1 3/32         | 5/16      | 0.021       | 0.115      | 1/2                                  | 1100KRRB    | S1100K     |                         |                |               |
| RRTR | 25         |                |           |           |           |           |                |                |           |           |                |                |                |           |             |            |                                      | E25KRRB     | SE25K      |                         |                |               |
| RRTR | 1 1/16     |                |           |           |           |           |                |                |           |           |                |                |                |           |             |            |                                      | 1101KRRB    | S1103K     | 62MSTR                  | 4900<br>1100   | 0.526<br>1.16 |
| RRTR | 1 1/8      |                |           |           |           |           |                |                |           |           |                |                |                |           |             |            |                                      | 1102KRRB    | S1102K     |                         |                |               |
| RRTR | 1 3/16     | 93.7           | 112.7     | 17.4      | 90.5      | 10.3      | 71.4           | 5.28           | 32.5      | 15.9      | 44.5           | 38.1           | 25.4           | 9.5       | 0.28        | 2.64       | 15.1                                 | 1103KRRB    | S1103K     |                         |                |               |
| RRTR | 1 1/4 S    | 3 11/16        | 4 7/16    | 1 1/16    | 3 9/16    | 1 3/32    | 2 13/16        | 0.208          | 1 9/32    | 5/8       | 1 3/4          | 1 1/2          | 1              | 3/8       | 0.011       | 0.104      | 1 9/32                               | 1103KRRB3   | S1103K3    |                         |                |               |
| RRTR | 30         |                |           |           |           |           |                |                |           |           |                |                |                |           |             |            |                                      | E30KRRB     | SE30K      |                         |                |               |
| RRTR | 1 1/4      |                |           |           |           |           |                |                |           |           |                |                |                |           |             |            |                                      | 1104KRRB    | S1104K     | 72MSTR                  | 6300<br>1400   | 0.703<br>1.55 |
| RRTR | 1 5/16     |                |           |           |           |           |                |                |           |           |                |                |                |           |             |            |                                      | 1105KRRB    | S1105K     |                         |                |               |
| RRTR | 1 3/8      | 105.6          | 127.0     | 19.0      | 100.0     | 10.3      | 81.0           | 5.28           | 34.9      | 16.3      | 54.0           | 44.4           | 32.1           | 9.5       | .028        | 2.64       | 15.1                                 | 1106KRRB    | S1106K     |                         |                |               |
| RRTR | 1 7/16     | 4 5/32         | 5         | 3/4       | 3 15/16   | 1 3/32    | 3 3/16         | 0.208          | 1 3/8     | 4 1/64    | 2 1/8          | 1 3/4          | 1 17/64        | 3/8       | 0.011       | 0.104      | 1 9/32                               | 1107KRRB    | S1107K     |                         |                |               |
| RRTR | 35         |                |           |           |           |           |                |                |           |           |                |                |                |           |             |            |                                      | E35KRRB     | SE35K      |                         |                |               |

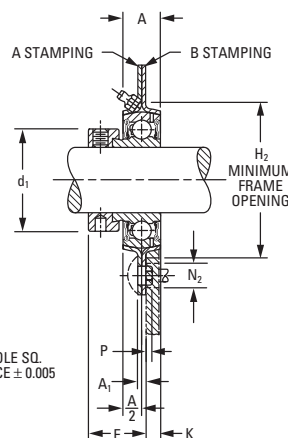
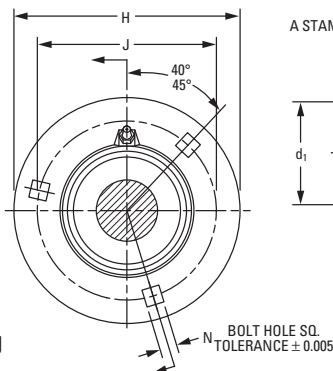
<sup>(1)</sup>Stampings must be ordered in pairs to assemble bearing.

<sup>(2)</sup>Thrust ratings for stamping are 50 percent of radial ratings.

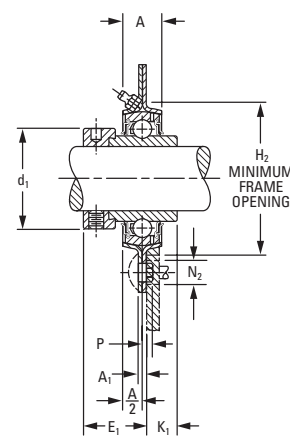
NOTE: Shaft diameter with an S = smaller housing.

### GRA, GRR RELUBRICATABLE FLANGETTE UNITS

- These units are supplements to the standard non-relubricatable type.
- These units are zinc-plated and designed for relubrication in applications where excessive moisture and severe contamination are present.
- The relubricatable flangettes are dimensionally interchangeable with the non-relubricated types. Load ratings also are the same.
- The relubricatable units incorporate G-KRRB bearings and GRA-RRB inner-ring bearings with positive-contact, land-riding seals and self-locking collars.
- The two stampings are needed to make a complete relubricatable flangette. Stamping A contains the boss for the grease fitting and a grease groove to allow grease to enter holes in the outer ring of the bearing. Stamping B contains a similar groove for the same purpose. With the grease groove in both stampings, the bearing can be reversed in the housing and still be relubricated.



GRA Series



GRR Series

#### Suggested shaft tolerances:

1/2 in. – 1 15/16 in., nominal to -0.013 mm, -0.0005 in.;

2 in. – 2 3/16 in., nominal to -0.025 mm, -0.0010 in.

#### To order, specify UNIT and SHAFT DIAMETER.

Example: GRA 1 in. flangette.

#### BEARING DATA

| Unit | Bearing No. | Dimensions and Load Ratings |
|------|-------------|-----------------------------|
| GRA  | GRA-RRB     | Page A-50                   |
| GRR  | G-KRRB      | Page A-34                   |

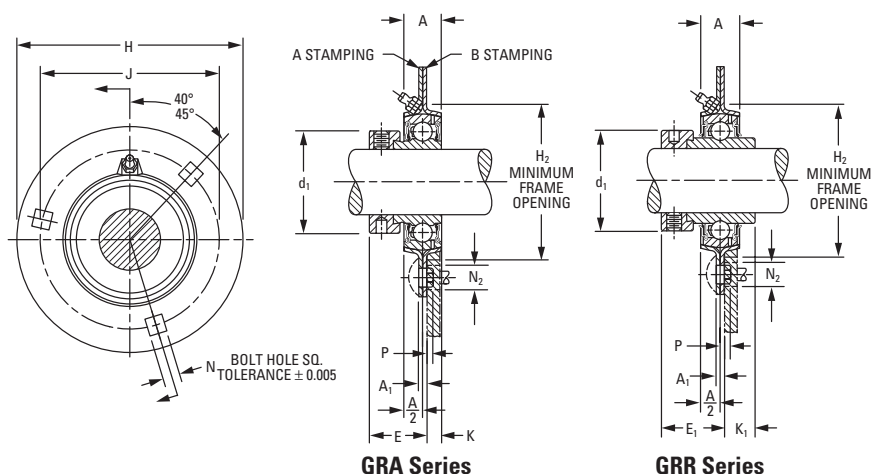
| Unit                  | Shaft Dia. |                  |                |                  |               |                 |                |                 |                 |              |                |                 | Short Shank   | Long Shank    | Flange Hole Diam. to Clear Sq. Shank | Bearing No. |            | Collar No. | Stamping Radial Load Rating <sup>(1)</sup> |
|-----------------------|------------|------------------|----------------|------------------|---------------|-----------------|----------------|-----------------|-----------------|--------------|----------------|-----------------|---------------|---------------|--------------------------------------|-------------|------------|------------|--------------------------------------------|
|                       |            | H                | A              | J                | N             | H <sub>2</sub>  | A <sub>1</sub> | E               | E <sub>1</sub>  | K            | K <sub>1</sub> | d <sub>1</sub>  |               |               |                                      |             |            |            |                                            |
|                       | in.<br>mm  | mm<br>in.        | mm<br>in.      | mm<br>in.        | mm<br>in.     | mm<br>in.       | mm<br>in.      | mm<br>in.       | mm<br>in.       | mm<br>in.    | mm<br>in.      | mm<br>in.       | mm<br>in.     | mm<br>in.     | mm<br>in.                            | (GRA)       | (GRR)      |            | N<br>lbs.                                  |
| G52MSA<br>&<br>G52MSB | 13/16      |                  |                |                  |               |                 |                |                 |                 |              |                |                 |               |               |                                      | GRA013RRB   | G1013KRRB  | S1013K     | 7700<br>1730                               |
|                       | 7/8        |                  |                |                  |               |                 |                |                 |                 |              |                |                 |               |               |                                      | GRA014RRB   | G1014KRRB  | S1014K     |                                            |
|                       | 15/16      |                  |                |                  |               |                 |                |                 |                 |              |                |                 |               |               |                                      | GRA015RRB   | G1015KRRB  | S1015K     |                                            |
|                       | 1          |                  |                |                  |               |                 |                |                 |                 |              |                |                 |               |               |                                      | GRA100RRB   | G1100KRRB  | S1100K     |                                            |
|                       | 25         | 95.2<br>3 3/4    | 17.40<br>11/16 | 76.2<br>3        | 8.7<br>11/32  | 60.3<br>2 3/8   | 4.22<br>0.166  | 25.4<br>1       | 29.0<br>1 9/64  | 6.7<br>17/64 | 13.5<br>17/32  | 38.1<br>1 1/2   | 0.53<br>0.021 | 2.92<br>0.115 | 12.7<br>1/2                          |             |            | SE25K      |                                            |
| G62MSA<br>&<br>G62MSB | 1 1/16     |                  |                |                  |               |                 |                |                 |                 |              |                |                 |               |               |                                      | GRA101RRB   | G1101KRRB  | S1103K     | 11100<br>2500                              |
|                       | 1 1/8      |                  |                |                  |               |                 |                |                 |                 |              |                |                 |               |               |                                      | GRA102RRB   | G1102KRRB  | S1102K     |                                            |
|                       | 1 3/16     |                  |                |                  |               |                 |                |                 |                 |              |                |                 |               |               |                                      | GRA103RRB   | G1103KRRB  | S1103K     |                                            |
|                       | 1 1/4 S    |                  |                |                  |               |                 |                |                 |                 |              |                |                 |               |               |                                      | GRA103RRB2  | G1103KRRB3 | S1103K3    |                                            |
|                       | 30         | 112.7<br>4 13/16 | 19.05<br>3/4   | 90.5<br>3 9/16   | 10.3<br>13/32 | 71.4<br>2 13/16 | 5.28<br>0.208  | 29.4<br>1 5/32  | 32.9<br>1 19/64 | 6.7<br>17/64 | 15.5<br>39/64  | 44.1<br>1 47/64 | 0.28<br>0.011 | 2.64<br>0.104 | 15.1<br>19/32                        |             |            | SE30K      |                                            |
| G72MSA<br>&<br>G72MSB | 1 1/4      |                  |                |                  |               |                 |                |                 |                 |              |                |                 |               |               |                                      | GRA104RRB   | G1104KRRB  | S1104K     | 15100<br>3400                              |
|                       | 1 5/16     |                  |                |                  |               |                 |                |                 |                 |              |                |                 |               |               |                                      | GRA105RRB   | G1105KRRB  | S1105K     |                                            |
|                       | 1 3/8      |                  |                |                  |               |                 |                |                 |                 |              |                |                 |               |               |                                      | GRA106RRB   | G1106KRRB  | S1106K     |                                            |
|                       | 1 7/16     |                  |                |                  |               |                 |                |                 |                 |              |                |                 |               |               |                                      | GRA107RRB   | G1107KRRB  | S1107K     |                                            |
|                       | 35         | 122.2<br>4 13/16 | 22.20<br>7/8   | 100.0<br>3 15/16 | 10.3<br>13/32 | 81.0<br>3 3/16  | 6.80<br>0.268  | 32.9<br>1 19/64 | 35.7<br>1 13/32 | 7.9<br>5/16  | 15.5<br>39/64  | 54.0<br>2 1/8   | 0.28<br>0.011 | 2.64<br>0.104 | 15.1<br>19/32                        |             |            | SE35K      |                                            |

<sup>(1)</sup>Thrust ratings for stampings are 50 percent of radial ratings.

<sup>(2)</sup>Four bolt holes.

NOTE: Shaft diameter with an S = smaller housing.

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| Unit                                                | Shaft Dia. |           |           |           |           |                |                |           |                |           |                |                | Short Shank | Long Shank     | Flange Hole Diam. to Clear Sq. Shank | Bearing No. | Collar No. | Stamping Radial Load Rating <sup>(1)</sup> |
|-----------------------------------------------------|------------|-----------|-----------|-----------|-----------|----------------|----------------|-----------|----------------|-----------|----------------|----------------|-------------|----------------|--------------------------------------|-------------|------------|--------------------------------------------|
|                                                     |            | H         | A         | J         | N         | H <sub>2</sub> | A <sub>1</sub> | E         | E <sub>1</sub> | K         | K <sub>1</sub> | d <sub>1</sub> | P           | N <sub>2</sub> | N <sub>2</sub>                       |             |            |                                            |
|                                                     | in.<br>mm  | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in. | mm<br>in.      | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in.   | mm<br>in.      | mm<br>in.                            | (GRA)       | (GRR)      | N<br>lbs.                                  |
| G80MSA <sup>(2)</sup><br>&<br>G80MSB <sup>(2)</sup> | 1 1/2      | 147.6     | 31.80     | 119.1     | 13.5      | 90.4           | 7.56           | 36.5      | 38.9           | 12.3      | 17.9           | 60.3           | 0.33        | 2.72           | 19.4                                 | GRA108RRB   | G1108KRRB  | S1108KT                                    |
|                                                     | 1 9/16     | 5 13/16   | 1 1/4     | 4 11/16   | 17/32     | 3 9/16         | 0.298          | 1 7/16    | 1 17/32        | 31/64     | 45/64          | 2 3/8          | 0.013       | 0.107          | 49/64                                | GRA109RRB   | G1109KRRB  | S1109KT                                    |
|                                                     | 40         |           |           |           |           |                |                |           |                |           |                |                |             |                |                                      | GE40KRRB    | SE40K      | 19600<br>4400                              |
| G85MSA <sup>(2)</sup><br>&<br>G85MSB <sup>(2)</sup> | 1 5/8      | 149.2     | 31.8      | 120.6     | 13.5      | 96.8           | 7.56           | 36.5      | 38.9           | 11.9      | 17.9           | 63.5           | 0.33        | 2.72           | 19.4                                 | GRA110RRB   | G1110KRRB  | S1110K                                     |
|                                                     | 1 11/16    | 5 7/8     | 1 1/4     | 4 3/4     | 17/32     | 3 13/16        | 0.298          | 1 7/16    | 1 17/32        | 15/32     | 45/64          | 2 1/2          | 0.013       | 0.107          | 49/64                                | GRA111RRB   | G1111KRRB  | S1111K                                     |
|                                                     | 45         |           |           |           |           |                |                |           |                |           |                |                |             |                |                                      | GRA112RRB   | G1112KRRB  | S1112K                                     |
| G90MSA <sup>(2)</sup><br>&<br>G90MSB <sup>(2)</sup> | 1 13/16    | 155.6     | 25.4      | 127.0     | 13.5      | 101.6          | 8.34           | 36.9      | 42.5           | 8.3       | 20.6           | 69.8           | —           | 1.96           | 19.4                                 | GRA113RRB   | G1113KRRB  | S1113K                                     |
|                                                     | 1 7/8      | 6 1/8     | 1         | 5         | 17/32     | 4              | 0.328          | 1 29/64   | 1 43/64        | 21/64     | 13/16          | 2 3/4          |             | 0.077          | 49/64                                | GRA114RRB   | G1114KRRB  | S1114K                                     |
|                                                     | 50         |           |           |           |           |                |                |           |                |           |                |                |             |                |                                      | GRA115RRB   | G1115KRRB  | S1115K                                     |
| G100MSA<br>&<br>G100MSB                             | 2          | 166.7     | 31.8      | 138.1     | 13.5      | 112.7          | 8.34           | 40.5      | 47.6           | 11.9      | 23.8           | 76.2           | —           | 1.96           | 19.4                                 | GRAE45RRB   | GE45KRRB   | SE45K                                      |
|                                                     | 2 1/16     | 6 9/16    | 1 1/4     | 5 7/16    | 17/32     | 4 7/16         | 0.328          | 1 19/32   | 1 7/8          | 15/32     | 15/16          | 3              |             | 0.077          | 49/64                                | GRAE50RRB   | GE50KRRB   | SE50K                                      |
|                                                     | 55         |           |           |           |           |                |                |           |                |           |                |                |             |                |                                      | GRAE55RRB   | GE55KRRB   | SE55K                                      |

<sup>(1)</sup>Thrust ratings for stampings are 50 percent of radial ratings.

<sup>(2)</sup>Four bolt holes.

NOTE: Shaft diameter with an S = smaller housing.

### RUBBER CARTRIDGES

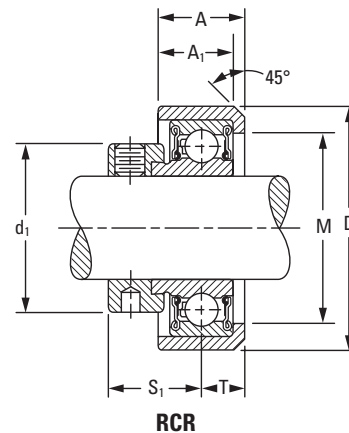
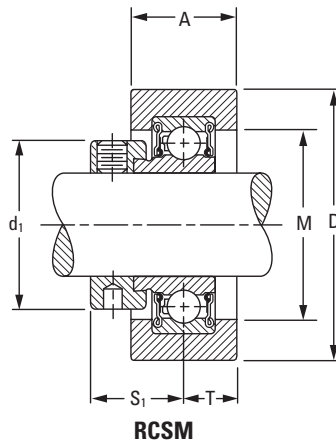
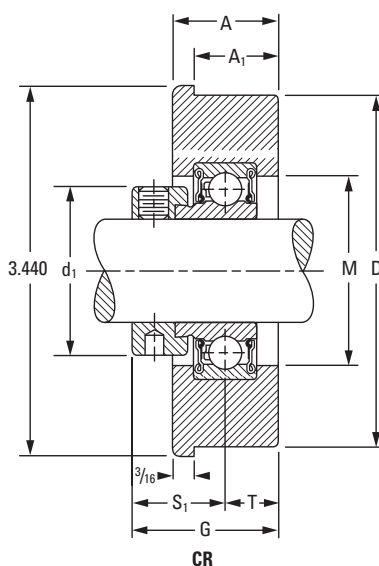
#### RCSM, RCR, CR SERIES

- RCSM and RCR are quiet, synthetic, conductive-rubber cylindrical cartridges designed for domestic heating, air-conditioning, ventilating equipment and other applications that require noise-free operation.
- All units are available with the RA-RRB extended inner-ring bearings with positive-contact, land-riding seals and a self-locking collar.

- An initial supply of grease is provided in the one-piece, non-relubricatable cartridges.
- The Timken-patented CR unit was designed to accommodate the wide tolerances of hot or cold rolled #10-gage (0.134 in.), 3 1/2 in. O.D., electric-resistance welded mechanical tubing, similar to what is found in post office conveyor systems.

To order, specify **UNIT** and **SHAFT DIAMETER**.

Example: RCSM 3/4 in. or RCR 3/4 in. or CR 3/4 in.



#### BEARING DATA

| Unit          | Bearing No. | Dimensions and Load Ratings |
|---------------|-------------|-----------------------------|
| RCSM, RCR, CR | RA-RR       | Page A-48                   |

| Unit                                                                                                  | Shaft Dia. | D         | A         | A <sub>1</sub> | G         | M         | d <sub>1</sub> | S <sub>1</sub> | T         | Bearing No. <sup>(1)</sup> | Collar No. | Housing Radial Load Rating <sup>(2)</sup> | Unit Wt.   |
|-------------------------------------------------------------------------------------------------------|------------|-----------|-----------|----------------|-----------|-----------|----------------|----------------|-----------|----------------------------|------------|-------------------------------------------|------------|
|                                                                                                       | in.<br>mm  | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in. |                            |            | N<br>lbs.                                 | kg<br>lbs. |
| RCSM SERIES – Suggested Housing Diameter = Nominal D ± 0.013 mm ± 0.005 in.                           |            |           |           |                |           |           |                |                |           |                            |            |                                           |            |
| RCSM                                                                                                  | 1/2        | 64.30     | 25.4      | —              | —         | 34.9      | 28.6           | 22.2           | 12.7      | RA008RR                    | S1008K     | 880                                       | 0.395      |
| RCSM                                                                                                  | 5/8        | 2 17/32   | 1         | —              | —         | 1 3/8     | 1 1/8          | 7/8            | 1/2       | RA010RR                    | S1010K     | 200                                       | 0.87       |
| RCSM                                                                                                  | 17         |           |           |                |           |           |                |                |           | RAE17RR                    | SE17K      |                                           |            |
| RCSM                                                                                                  | 3/4        | 64.30     | 25.4      | —              | —         | 39.7      | 33.3           | 23.4           | 12.7      | RA012RR                    | S1012K     | 1120                                      | 0.472      |
| RCSM                                                                                                  | 20         | 2 17/32   | 1         | —              | —         | 1 9/16    | 1 9/16         | 59/64          | 1/2       | —                          | SE20K      | 250                                       | 1.04       |
| RCSM                                                                                                  | 15/16      | 64.30     | 25.4      | —              | —         | 45.2      | 38.1           | 23.4           | 12.7      | RA015RR                    | S1015K     |                                           |            |
| RCSM                                                                                                  | 1          | 2 17/32   | 1         | —              | —         | 1 25/32   | 1 1/2          | 59/64          | 1/2       | RA100RR                    | S1100K     | 1340                                      | 0.527      |
| RCSM                                                                                                  | 25         |           |           |                |           |           |                |                |           | RAE25RR                    | SE25K      | 300                                       | 1.16       |
| LRCM                                                                                                  | 1 3/16     | 64.30     | 25.4      | —              | —         | 47.6      | 42.1           | 19.8           | 12.7      | RAL103NPP                  | LS103K     | 1340                                      | 0.627      |
|                                                                                                       |            | 2 17/32   | 1         | —              | —         | 1 7/8     | 1 21/32        | 25/32          | 1/2       |                            |            | 300                                       | 1.38       |
| RCSM SERIES – Suggested Housing Diameter = Nominal D -0.13 mm to -0.038 mm, -0.005 in. to -0.0015 in. |            |           |           |                |           |           |                |                |           |                            |            |                                           |            |
| LRCR                                                                                                  | 3/4        | 46.00     | 18.3      | 15.9           | —         | 34.9      | 30.2           | 18.7           | 9.9       | RAL012NPP                  | LS012K     | 880                                       | 0.272      |
|                                                                                                       |            | 1 13/16   | 23/32     | 5/8            | —         | 1 3/8     | 1 3/16         | 47/64          | 25/64     |                            |            | 200                                       | 0.60       |
| RCR                                                                                                   | 1          | 57.20     | 19.8      | 17.5           | —         | 44.4      | 38.1           | 23.4           | 9.9       | RA100RR                    | S1100K     | 1340                                      | 0.409      |
| RCR                                                                                                   | 25         | 2 1/4     | 25/32     | 11/16          | —         | 1 3/4     | 1 1/2          | 59/64          | 25/64     | RAE25RR                    | SE25K      | 300                                       | 0.90       |
| RCSM SERIES – Suggested Housing Diameter 82.73 mm to 81.76 mm, 3.257 in. to 3.219 in.                 |            |           |           |                |           |           |                |                |           |                            |            |                                           |            |
| CR                                                                                                    | 3/4        | 83.57     | 25.4      | 22.2           | 36.1      | 39.7      | 33.3           | 23.4           | 12.7      | RA012RR                    | S1012K     | 670                                       | 0.318      |
| CR                                                                                                    | 20         | 3.29      | 1         | 7/8            | 1 27/64   | 1 9/16    | 1 9/16         | 59/64          | 1/2       | RAE20RR                    | SE20K      | 150                                       | 0.70       |
| CR                                                                                                    | 1          | 83.57     | 25.4      | 22.2           | 36.1      | 45.2      | 38.1           | 23.4           | 12.7      | RA100RR                    | S1100K     | 880                                       | 0.340      |
| CR                                                                                                    | 25         | 3.29      | 1         | 7/8            | 1 27/64   | 1 25/32   | 1 1/2          | 59/64          | 1/2       | RAE25RR                    | SE25K      | 200                                       | 0.75       |
| LCR                                                                                                   | 1          | 83.57     | 25.4      | 20.6           | 33.3      | 39.7      | 36.1           | 19.8           | 14.3      | RAL100NPP                  | S1100K     | 880                                       | 0.309      |
| LCR                                                                                                   | 25         | 3.29      | 1         | 13/16          | 1 9/16    | 1 9/16    | 1 27/64        | 25/32          | 9/16      | RALE25NPP                  | SE25K      | 200                                       | 0.68       |

<sup>(1)</sup>Suffix for RA bearing is FS450 (RCSM and RCR series).

<sup>(2)</sup>Steady loads only. Thrust load is 1/3 radial load rating. Maximum suggested speed is 2400 RPM.

### RABR HVAC SPECIAL SERIES

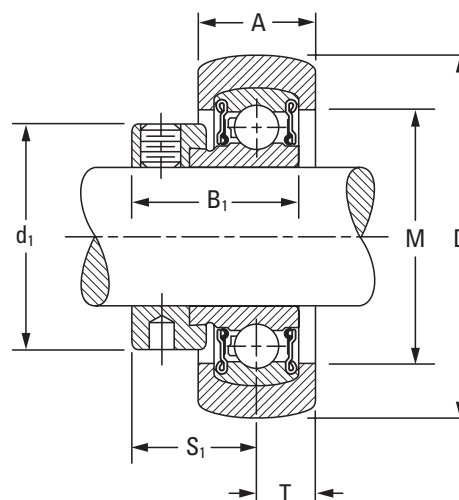
- This unit features a conductive rubber interliner to dissipate static charges.
- The quiet RA-RRB extended inner-ring bearings are prelubricated and have positive-contact, land-riding seals with self-locking collars.
- RABR units can be mounted in tri-arm brackets or pressed-steel stampings.
- Maximum suggested speed is 2400 RPM.

#### Suggested housing diameter =

Nominal (D) -0.130 mm – 0.380 mm; -0.005 in. – 0.015 in.

#### To order, specify UNIT and SHAFT DIAMETER.

Example: RABR 1 in.



#### BEARING DATA

| Unit | Bearing No. | Dimensions and Load Ratings |
|------|-------------|-----------------------------|
| RABR | RA-RRB      | Page A-48                   |

| Unit | Shaft Dia. | D              | B <sub>1</sub>  | A             | M               | d <sub>1</sub> | S <sub>1</sub> | T             | Bearing No. <sup>(1)</sup> | Collar No. | Housing Radial Load Rating <sup>(2)</sup> |
|------|------------|----------------|-----------------|---------------|-----------------|----------------|----------------|---------------|----------------------------|------------|-------------------------------------------|
|      | in.<br>mm  | mm<br>in.      | mm<br>in.       | mm<br>in.     | mm<br>in.       | mm<br>in.      | mm<br>in.      | mm<br>in.     |                            |            | N<br>lbs.                                 |
| RABR | 1/2        |                |                 |               |                 |                |                |               | RA008RRB                   | S1008K     |                                           |
| RABR | 5/8        | 47.37<br>1.865 | 28.6<br>1 1/8   | 17.5<br>11/16 | 34.9<br>1 3/8   | 28.6<br>1 1/8  | 22.2<br>7/8    | 8.7<br>11/32  | RA010RRB                   | S1010K     | 880<br>200                                |
| RABR | 17         |                |                 |               |                 |                |                |               | RAE17RRB                   | SE17K      |                                           |
| RABR | 3/4        | 52.37<br>2.062 | 31.0<br>1 7/32  | 17.5<br>11/16 | 41.3<br>1 5/8   | 33.3<br>1 5/16 | 23.4<br>59/64  | 8.7<br>11/32  | RA012RRB                   | S1012K     | 1120<br>250                               |
| RABR | 20         |                |                 |               |                 |                |                |               | RAE20RRB                   | SE20K      |                                           |
| RABR | 15/16      |                |                 |               |                 |                |                |               | RA015RRB                   | S1015K     |                                           |
| RABR | 1          | 62.38<br>2.456 | 31.0<br>1 7/32  | 20.6<br>13/16 | 46.8<br>1 27/32 | 38.1<br>1 1/2  | 23.4<br>59/64  | 10.3<br>13/32 | RA100RRB                   | S1100K     | 1340<br>300                               |
| RABR | 25         |                |                 |               |                 |                |                |               | RAE25RRB                   | SE25K      |                                           |
| RABR | 1 3/16     | 62.38<br>2.456 | 35.7<br>1 13/32 | 20.6<br>13/16 | 46.8<br>1 27/32 | 44.4<br>1 3/4  | 28.6<br>1 1/8  | 10.3<br>13/32 | RAL103PP                   | LS103K     | 1340<br>300                               |
| RABR | 30         |                |                 |               |                 |                |                |               | RAE30PP3                   | SE30K      |                                           |

<sup>(1)</sup>For replacement of bearings, specify suffix FS450.

<sup>(2)</sup>Thrust load is 1/3 radial load rating.

NOTE: Maximum suggested speed is 2400 RPM.

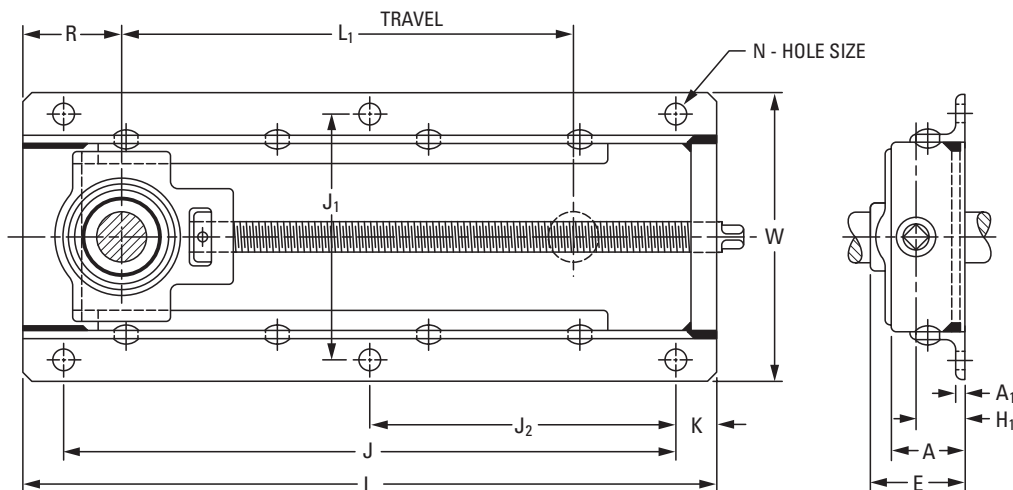
### TAKE-UP UNITS

#### NLTU SERIES SIDE-MOUNTED, PRESSED-STEEL

- The take-up frame incorporates RTU take-up units as shown on the following pages.
- The frame is designed for side mounting and made of welded steel.

To order a complete assembly, specify **NLTU FRAME** and **RTU TAKE-UP UNIT**.

Example: NLTU5 frame and RTU 1 11/16 in. If frame only is required, order by frame number. Example: NLTU3.



| NLTU<br>Frame No. | Shaft<br>Dia.                                                       | L <sub>1</sub> | R         | J         | L         | A <sub>1</sub> | H <sub>1</sub> | E         | J <sub>1</sub> | W         | A         | J <sub>2</sub> | K         | N         | Bolts<br>6 req'd. | Unit<br>Wt. |
|-------------------|---------------------------------------------------------------------|----------------|-----------|-----------|-----------|----------------|----------------|-----------|----------------|-----------|-----------|----------------|-----------|-----------|-------------------|-------------|
|                   | in.                                                                 | mm<br>in.      | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in. | mm<br>in.      | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in. | mm<br>in. | in.               | kg<br>lbs.  |
| 1                 | 5/16, 3/4,<br>13/16, 7/8, 15/16, 1                                  | 231.8          | 62.70     | 327.0     | 377.8     | 4.8            | 27.0           | 54.0      | 141.3          | 166.7     | 44.4      | 163.5          | 25.4      | 12.7      | 7/16              | 3.691       |
|                   |                                                                     | 9 1/8          | 2 15/32   | 12 7/8    | 14 7/8    | 3/16           | 1 1/16         | 2 1/8     | 5 9/16         | 6 9/16    | 1 3/4     | 6 7/16         | 1         | 1/2       |                   | 8.13        |
| 3                 | 1 1/16, 1 1/8, 1 3/16, 1 1/4,<br>1 5/16, 1 3/8, 1 7/16              | 290.5          | 64.23     | 392.1     | 432.2     | 4.8            | 31.8           | 61.9      | 154.0          | 179.4     | 50.8      | 196.1          | 25.4      | 12.7      | 7/16              | 5.003       |
|                   |                                                                     | 11 7/16        | 2 17/32   | 15 7/16   | 17 7/16   | 3/16           | 1 1/4          | 2 7/16    | 6 1/16         | 7 1/16    | 2         | 7 23/32        | 1         | 1/2       |                   | 11.02       |
|                   |                                                                     | 290.5          | 61.90     | 392.1     | 432.2     | 4.8            | 31.8           | 64.3      | 154            | 179.4     | 50.8      | 196.1          | 25.4      | 12.7      | 7/16              |             |
| 5                 | 1 1/2, 1 9/16,<br>1 5/8, 1 11/16, 1 3/4,<br>1 13/16, 1 7/8, 1 15/16 | 298.4          | 92.90     | 444.5     | 501.6     | 4.8            | 36.5           | 71.4      | 185.7          | 223.8     | 57.2      | 222.5          | 28.6      | 14.3      | 1/2               | 8.217       |
|                   |                                                                     | 11 3/4         | 3 21/32   | 17 1/2    | 19 3/4    | 3/16           | 1 7/16         | 2 13/16   | 7 5/16         | 8 13/16   | 2 1/4     | 8 3/4          | 1 1/8     | 9/16      |                   | 18.10       |
| 7                 | 2, 2 1/16, 2 1/8, 2 3/16,<br>2 1/4, 2 5/16, 2 3/8, 2 7/16           | 362.0          | 92.90     | 546.1     | 603.2     | 4.8            | 38.1           | 81.8      | 219.1          | 265.1     | 63.5      | 273.0          | 28.6      | 15.9      | 9/16              | 12.312      |
|                   |                                                                     | 14 1/4         | 3 21/32   | 21 1/2    | 23 3/4    | 3/16           | 1 1/2          | 3 7/32    | 8 5/8          | 10 7/16   | 2 1/2     | 10 3/4         | 1 1/8     | 5/8       |                   | 27.12       |
|                   |                                                                     | 362.0          | 92.90     | 546.1     | 603.2     | 4.8            | 38.1           | 84.9      | 219.1          | 265.1     | 63.5      | 273.0          | 28.6      | 15.9      | 9/16              |             |
|                   |                                                                     | 14 1/4         | 3 21/32   | 21 1/2    | 23 3/4    | 3/16           | 1 1/2          | 3 11/32   | 8 5/8          | 10 7/16   | 2 1/2     | 10 3/4         | 1 1/8     | 5/8       |                   |             |

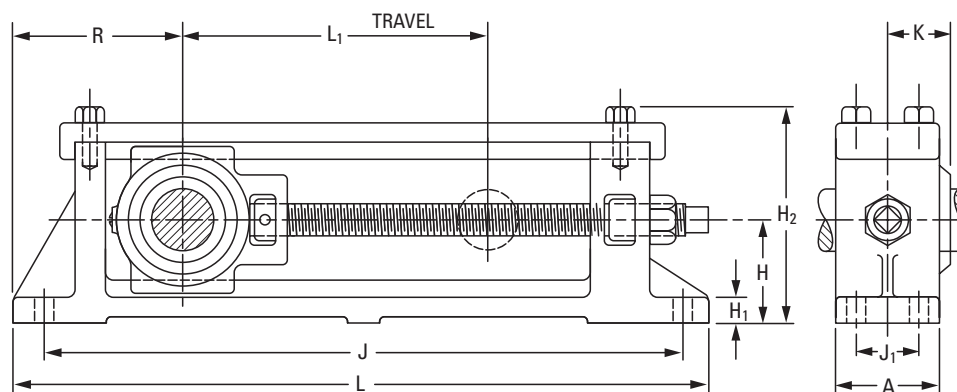
## TU SERIES

### TOP-MOUNTED, CAST-IRON

- The take-up frame incorporates RTU take-up units as shown on the following pages.
- The frame is designed for top mounting and is made of cast-iron.

**To order a complete assembly, specify TU FRAME and RTU or TU TAKE-UP UNIT.**

Example: TU5 frame and RTU 1 <sup>11</sup>/<sub>16</sub> in.

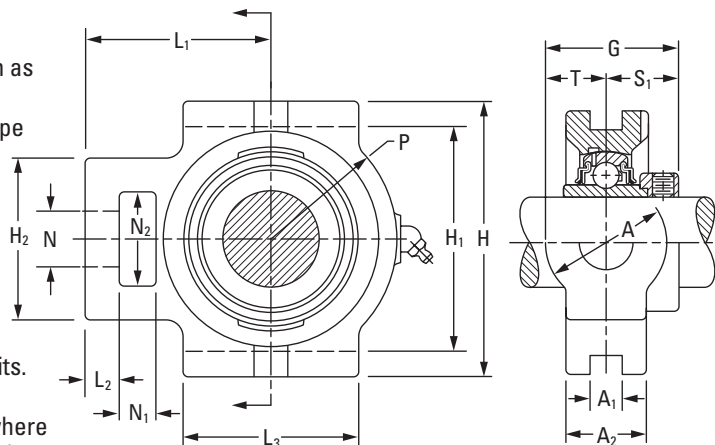


| TU<br>Frame No. | Shaft<br>Dia.                                                                                                                                                                                                                                                              | L <sub>1</sub> | R              | J               | L               | H <sub>1</sub> | H                                       | H <sub>2</sub>                           | J <sub>1</sub> | A              | K              | Bolts<br>4 req'd.            | Unit<br>Wt.      |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------|-----------------|-----------------|----------------|-----------------------------------------|------------------------------------------|----------------|----------------|----------------|------------------------------|------------------|
|                 | in.                                                                                                                                                                                                                                                                        | mm<br>in.      | mm<br>in.      | mm<br>in.       | mm<br>in.       | mm<br>in.      | mm<br>in.                               | mm<br>in.                                | mm<br>in.      | mm<br>in.      | mm<br>in.      | in.                          | kg<br>lbs.       |
| 1               | <sup>3</sup> / <sub>4</sub> , <sup>13</sup> / <sub>16</sub> ,<br><sup>7</sup> / <sub>8</sub> , <sup>15</sup> / <sub>16</sub> , 1                                                                                                                                           | 203.2<br>8     | 114.3<br>4 1/2 | 419.2<br>16 1/2 | 469.9<br>18 1/2 | 14.3<br>9/16   | 63.5<br>2 1/2                           | 131.0<br>5 5/32                          | 34.9<br>1 3/8  | 54.0<br>2 1/8  | —              | <sup>3</sup> / <sub>8</sub>  | 7.491<br>16.50   |
| 3               | 1 <sup>1</sup> / <sub>16</sub> , 1 <sup>1</sup> / <sub>8</sub> , 1 <sup>3</sup> / <sub>16</sub> ,<br>1 <sup>1</sup> / <sub>4</sub> , 1 <sup>5</sup> / <sub>16</sub> , 1 <sup>3</sup> / <sub>8</sub> , 1 <sup>7</sup> / <sub>16</sub>                                       | 254.0<br>10    | 127.0<br>5     | 492.1<br>19 3/8 | 542.9<br>21 3/8 | 15.9<br>5/8    | 71.4<br>2 <sup>13</sup> / <sub>16</sub> | 149.2<br>5 7/8                           | 38.1<br>1 1/2  | 65.1<br>2 9/16 | —              | <sup>7</sup> / <sub>16</sub> | 11.464<br>25.25  |
| 5               | 1 <sup>1</sup> / <sub>2</sub> , 1 <sup>9</sup> / <sub>16</sub> , 1 <sup>5</sup> / <sub>8</sub> ,<br>1 <sup>11</sup> / <sub>16</sub> , 1 <sup>3</sup> / <sub>4</sub> , 1 <sup>13</sup> / <sub>16</sub> ,<br>1 <sup>7</sup> / <sub>8</sub> , 1 <sup>15</sup> / <sub>16</sub> | 254.0<br>10    | 139.7<br>5 1/2 | 530.2<br>20 7/8 | 581.0<br>22 7/8 | 19.0<br>3/4    | 82.6<br>3 1/4                           | 171.4<br>6 3/4                           | 50.8<br>2      | 88.9<br>3 1/2  | —              | 1/2                          | 20.203<br>44.50  |
| 7               | 2, 2 <sup>1</sup> / <sub>16</sub> , 2 <sup>1</sup> / <sub>8</sub> , 2 <sup>3</sup> / <sub>16</sub> , 2 <sup>1</sup> / <sub>4</sub> ,<br>2 <sup>5</sup> / <sub>16</sub> , 2 <sup>3</sup> / <sub>8</sub> , 2 <sup>7</sup> / <sub>16</sub>                                    | 304.8<br>12    | 168.3<br>6 5/8 | 644.5<br>25 3/8 | 708.0<br>27 7/8 | 22.2<br>7/8    | 101.6<br>4                              | 211.9<br>8 <sup>11</sup> / <sub>32</sub> | 63.5<br>2 1/2  | 101.6<br>4     | —              | <sup>5</sup> / <sub>8</sub>  | 36.320<br>80.00  |
| 9               | 2 <sup>11</sup> / <sub>16</sub> , 2 <sup>15</sup> / <sub>16</sub> <sup>(1)</sup>                                                                                                                                                                                           | 304.8<br>12    | 193.7<br>7 5/8 | 695.3<br>27 3/8 | 771.5<br>30 3/8 | 25.4<br>1      | 117.5<br>4 5/8                          | 243.7<br>9 <sup>19</sup> / <sub>32</sub> | 82.6<br>3 1/4  | 120.6<br>4 3/4 | 65.1<br>2 9/16 | <sup>5</sup> / <sub>8</sub>  | 52.778<br>116.25 |

<sup>(1)</sup>Dimension K is 69.1 mm (2 <sup>23</sup>/<sub>32</sub> in.) for 2 <sup>15</sup>/<sub>16</sub> in. shaft diameters.

### RTU INDUSTRIAL SERIES

- These ball bearing take-up units are used where shaft adjustment and belt-tightening devices are required, such as in conveyor applications.
- Both types of take-up units incorporate self-aligning, B-type wide-inner-ring ball bearings with self-locking collars.
- These units use a G-KRRB, R-seal type wide inner ring ball bearing.
- These units provide compact, efficient supports for adjustable shafts and conveyor take-up pulleys.
- The units are factory-prelubricated. A grease fitting is provided for relubrication if required.
- See the preceding page for take-up frames to fit these units.
- Contact your Timken engineer to discuss highly corrosive applications (e.g., food processing, chemical exposure) where Timken thin-dense chrome-coated bearings can be utilized.



#### Suggested shaft tolerances:

3/4 in. – 1 15/16 in., nominal to -0.013 mm, -0.0005 in.;  
2 in. – 2 7/16 in., nominal to -0.025 mm, -0.0010 in.

#### To order, specify UNIT and SHAFT DIAMETER.

Example: RTU 3/4 in. or RTU 2 11/16 in.

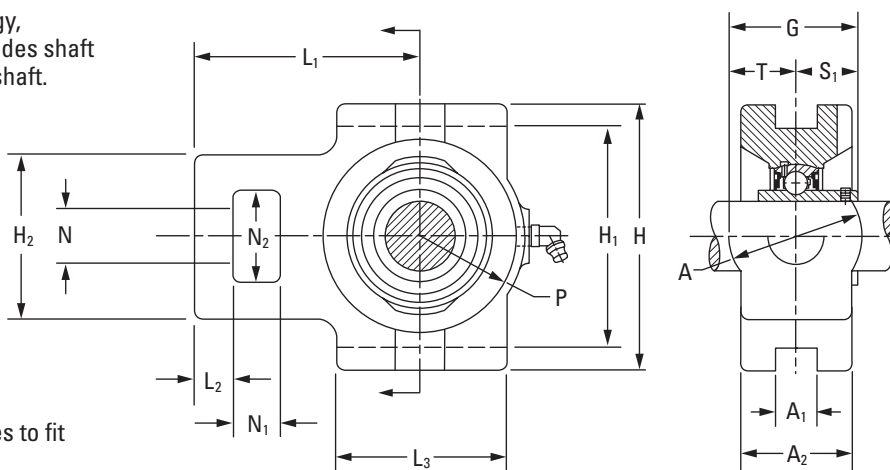
#### BEARING DATA

| Unit | Bearing No. | Dimensions and Load Ratings |
|------|-------------|-----------------------------|
| RTU  | G-KRRB      | Page A-34                   |

| Unit | Shaft Dia. | G         | T         | S <sub>1</sub> | A <sub>2</sub> | A <sub>1</sub> | A         | L <sub>1</sub> | H <sub>2</sub> | N         | N <sub>2</sub> | L <sub>2</sub> | N <sub>1</sub> | P         | L <sub>3</sub> | H <sub>1</sub> | H         | Bearing No. | Collar No. | Housing No. | Unit Wt.   |
|------|------------|-----------|-----------|----------------|----------------|----------------|-----------|----------------|----------------|-----------|----------------|----------------|----------------|-----------|----------------|----------------|-----------|-------------|------------|-------------|------------|
|      | in.<br>mm  | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in.      | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in.      | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in. |             |            |             | kg<br>lbs. |
| RTU  | 3/4        | 47.6      | 20.6      | 27.0           | 34.1           | 13.5           | 41.3      | 67.5           | 57.2           | 19.0      | 31.8           | 12.7           | 15.9           | 49.2      | 57.2           | 76.2           | 92.1      | G1012KRRB   | S1012K     | T-18832     | 1.444      |
| RTU  | 20         | 1 7/8     | 13/16     | 1 1/16         | 1 11/32        | 17/32          | 15/8      | 2 21/32        | 2 1/4          | 3/4       | 1 1/4          | 1/2            | 5/8            | 1 15/16   | 2 1/4          | 3              | 3 5/8     | GE20KRRB    | SE20K      |             | 3.18       |
| RTU  | 7/8        |           |           |                |                |                |           |                |                |           |                |                |                |           |                |                |           | G1014KRRB   | S1014K     |             |            |
| RTU  | 15/16      | 42.9      | 22.2      | 27.0           | 37.3           | 13.5           | 44.4      | 67.5           | 57.2           | 19.0      | 31.8           | 12.7           | 15.9           | 34.9      | 57.2           | 76.2           | 92.1      | G1015KRRB   | S1015K     | T-18696     | 1.498      |
| RTU  | 1          | 1 15/16   | 7/8       | 1 1/16         | 1 15/32        | 17/32          | 13/4      | 2 21/32        | 2 1/4          | 3/4       | 1 1/4          | 1/2            | 5/8            | 1 3/8     | 2 1/4          | 3              | 3 5/8     | G1100KRRB   | S1100K     |             | 3.30       |
| RTU  | 25         |           |           |                |                |                |           |                |                |           |                |                |                |           |                |                |           | GE25KRRB    | SE25K      |             |            |
| RTU  | 1 1/16     |           |           |                |                |                |           |                |                |           |                |                |                |           |                |                |           | G1101KRRB   | S1101K     |             |            |
| RTU  | 1 1/8      | 55.6      | 25.4      | 30.2           | 38.1           | 13.5           | 50.8      | 72.2           | 61.9           | 22.2      | 36.5           | 12.7           | 15.9           | 41.3      | 63.5           | 88.9           | 104.8     | G1102KRRB   | S1102K     | T-18694     | 1.920      |
| RTU  | 1 3/16     | 2 3/16    | 1         | 1 3/16         | 1 1/2          | 17/32          | 2         | 2 27/32        | 2 7/16         | 7/8       | 1 7/16         | 1/2            | 5/8            | 1 5/8     | 2 1/2          | 3 1/2          | 4 1/8     | G1103KRRB   | S1103K     |             | 4.23       |
| RTU  | 30         |           |           |                |                |                |           |                |                |           |                |                |                |           |                |                |           | GE30KRRB    | SE30K      |             |            |
| RTU  | 1 1/4      |           |           |                |                |                |           |                |                |           |                |                |                |           |                |                |           | G1104KRRB   | S1104K     |             |            |
| RTU  | 1 5/16     | 54.8      | 22.2      | 32.5           | 36.5           | 13.5           | 44.5      | 74.6           | 63.5           | 22.2      | 36.5           | 12.7           | 15.9           | 49.2      | 69.8           | 88.9           | 104.8     | G1105KRRB   | S1105K     | T-18692     | 2.025      |
| RTU  | 1 3/8      | 2 5/32    | 7/8       | 1 9/32         | 1 7/16         | 17/32          | 13/4      | 2 15/16        | 2 1/2          | 7/8       | 1 7/16         | 1/2            | 5/8            | 1 15/16   | 2 3/4          | 3 1/2          | 4 1/8     | G1106KRRB   | S1106K     |             | 4.46       |
| RTU  | 1 7/16     |           |           |                |                |                |           |                |                |           |                |                |                |           |                |                |           | G1107KRRB   | S1107K     |             |            |
| RTU  | 35         |           |           |                |                |                |           |                |                |           |                |                |                |           |                |                |           | GE35KRRB    | SE35K      |             |            |
| RTU  | 1 1/2      | 67.5      | 32.5      | 34.9           | 44.4           | 17.5           | 65.1      | 88.1           | 82.6           | 28.6      | 49.2           | 15.9           | 19.0           | 53.3      | 82.6           | 100.8          | 120.6     | G1108KRRB   | S1108KT    |             |            |
| RTU  | 1 9/16     | 2 21/32   | 1 9/32    | 1 3/8          | 1 3/4          | 1 1/16         | 2 9/16    | 3 15/32        | 3 1/4          | 1 1/8     | 1 15/16        | 5/8            | 3/4            | 2 3/32    | 3 1/4          | 3 31/32        | 4 3/4     | G1109KRRB   | S1109K     | T-18834     | 3.314      |
| RTU  | 40         |           |           |                |                |                |           |                |                |           |                |                |                |           |                |                |           | GE40KRRB    | SE40K      |             | 7.30       |
| RTU  | 1 5/8      |           |           |                |                |                |           |                |                |           |                |                |                |           |                |                |           | G1110KRRB   | S1110K     |             |            |
| RTU  | 1 11/16    | 67.5      | 32.5      | 34.9           | 44.4           | 17.5           | 65.1      | 88.1           | 82.6           | 28.6      | 49.2           | 15.9           | 19.0           | 53.3      | 82.6           | 100.8          | 120.6     | G1111KRRB   | S1111K     | T-18762     | 3.164      |
| RTU  | 1 3/4      | 2 21/32   | 1 9/32    | 1 3/8          | 1 3/4          | 1 1/16         | 2 9/16    | 3 15/32        | 3 1/4          | 1 1/8     | 1 15/16        | 5/8            | 3/4            | 2 3/32    | 3 1/4          | 3 31/32        | 4 3/4     | G1112KRRB   | S1112K     |             | 6.97       |
| RTU  | 45         |           |           |                |                |                |           |                |                |           |                |                |                |           |                |                |           | GE45KRRB    | SE45K      |             |            |
| RTU  | 1 7/8      | 70.6      | 32.5      | 38.1           | 49.2           | 17.5           | 65.1      | 91.3           | 82.6           | 28.6      | 49.2           | 15.9           | 19.0           | 59.5      | 85.7           | 100.8          | 120.6     | G1114KRRB   | S1114K     | T-18690     | 3.587      |
| RTU  | 1 15/16    | 2 25/32   | 1 9/32    | 1 1/2          | 1 15/16        | 1 1/16         | 2 9/16    | 3 19/32        | 3 1/4          | 1 1/8     | 1 15/16        | 5/8            | 3/4            | 2 11/32   | 3 3/8          | 3 31/32        | 4 3/4     | G1115KRRB   | S1115K     |             | 7.90       |
| RTU  | 50         |           |           |                |                |                |           |                |                |           |                |                |                |           |                |                |           | GE50KRRB    | SE50K      |             |            |
| RTU  | 2          |           |           |                |                |                |           |                |                |           |                |                |                |           |                |                |           | G1200KRRB   | S1201K     |             |            |
| RTU  | 2 1/8      | 77.0      | 34.9      | 43.7           | 55.6           | 27.0           | 69.8      | 119.9          | 101.6          | 34.9      | 63.5           | 19.0           | 31.8           | 69.1      | 101.6          | 129.4          | 149.2     | G1202KRRB   | S1202K     | T-18828     | 6.333      |
| RTU  | 2 3/16     | 3 1/32    | 1 3/8     | 1 23/32        | 2 3/16         | 1 1/16         | 2 3/4     | 4 23/32        | 4              | 1 3/8     | 2 1/2          | 3/4            | 1 1/4          | 2 23/32   | 4              | 5 3/32         | 5 7/8     | G1203KRRB   | S1203K     |             | 13.95      |
| RTU  | 55         |           |           |                |                |                |           |                |                |           |                |                |                |           |                |                |           | GE55KRRB    | SE55K      |             |            |
| RTU  | 2 1/4      |           |           |                |                |                |           |                |                |           |                |                |                |           |                |                |           | G1204KRRB   | S1204K     |             |            |
| RTU  | 2 3/8      | 81.8      | 34.9      | 46.8           | 52.4           | 27.0           | 69.8      | 119.9          | 101.6          | 34.9      | 63.5           | 19.0           | 31.8           | 69.1      | 101.6          | 129.4          | 149.2     | G1206KRRB   | S1206K     | T-18830     | 5.993      |
| RTU  | 2 7/16     | 3 7/32    | 1 3/8     | 1 27/32        | 2 1/16         | 1 1/16         | 2 3/4     | 4 23/32        | 4              | 1 3/8     | 2 1/2          | 3/4            | 1 1/4          | 2 23/32   | 4              | 5 3/32         | 5 7/8     | G1207KRRB   | S1207K     |             | 13.20      |
| RTU  | 60         |           |           |                |                |                |           |                |                |           |                |                |                |           |                |                |           | GE60KRRB    | SE60K      |             |            |

### YTU INDUSTRIAL SERIES

- Incorporates Shaft Guarding Technology, which reduces replacement time, provides shaft protection and prolongs the life of the shaft.
- Used where shaft adjustment and belt-tightening devices are required, such as conveyor applications.
- Incorporates self-aligning, B-type extra wide-inner-ring ball bearings with set screw lock.
- Provides compact, efficient supports for adjustable shafts and conveyor take-up pulleys.
- Factory-prelubricated. A grease fitting is provided for relubrication if required.
- See preceding pages for take-up frames to fit these units.
- Safety end caps are available for selected sizes.
- Contact your Timken engineer to discuss highly corrosive applications (e.g., food processing, chemical exposure) where Timken thin-dense chrome-coated bearings can be utilized.



#### Suggested shaft tolerances:

1/2 in. – 1 15/16 in., nominal to -0.013 mm, -0.0005 in.;  
2 in. – 2 7/16 in., nominal to -0.025 mm, -0.0010 in.

#### To order, specify UNIT and SHAFT DIAMETER.

Example: YTU 3/4 in.

#### BEARING DATA

| Unit | Bearing No. | Dimensions and Load Ratings |
|------|-------------|-----------------------------|
| YTU  | GY-KRRB     | Page A-44                   |

| Unit    | Shaft Dia. | G         | T         | S <sub>1</sub> | A <sub>2</sub> | A <sub>1</sub> | A         | L <sub>1</sub> | H <sub>2</sub> | N         | N <sub>2</sub> | L <sub>2</sub> | N <sub>1</sub> | P         | L <sub>3</sub> | H <sub>1</sub> | H         | Bearing No.    | Housing No. |
|---------|------------|-----------|-----------|----------------|----------------|----------------|-----------|----------------|----------------|-----------|----------------|----------------|----------------|-----------|----------------|----------------|-----------|----------------|-------------|
|         | in.<br>mm  | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in.      | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in.      | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in. |                |             |
| YTU SGT | 3/4        | 39.7      | 20.6      | 19.00          | 34.1           | 13.5           | 41.3      | 67.5           | 57.2           | 19.0      | 31.8           | 12.7           | 15.9           | 33.3      | 57.2           | 76.2           | 92.1      | GY1012KRRB SGT | T-18832     |
| YTU SGT | 20         | 1 9/16    | 19/16     | 0.748          | 1 11/32        | 17/32          | 1 5/8     | 2 21/32        | 2 1/4          | 3/4       | 1 1/4          | 1/2            | 5/8            | 1 9/16    | 2 1/4          | 3              | 3 3/8     | GYE20KRRB SGT  |             |
| YTU SGT | 7/8        | 42.9      | 22.2      | 20.60          | 37.3           | 13.5           | 44.4      | 67.5           | 57.2           | 19.0      | 31.8           | 12.7           | 15.9           | 34.9      | 57.2           | 76.2           | 92.1      | GY1014KRRB SGT | T-18696     |
| YTU SGT | 15/16      | 1 11/16   | 7/8       | 0.81           | 1 15/32        | 17/32          | 1 3/4     | 2 21/32        | 2 1/4          | 3/4       | 1 1/4          | 1/2            | 5/8            | 1 3/8     | 2 1/4          | 3              | 3 3/8     | GY1015KRRB SGT |             |
| YTU SGT | 1          | 1 11/16   | 7/8       | 0.81           | 1 15/32        | 17/32          | 1 3/4     | 2 21/32        | 2 1/4          | 3/4       | 1 1/4          | 1/2            | 5/8            | 1 3/8     | 2 1/4          | 3              | 3 3/8     | GY1100KRRB SGT |             |
| YTU SGT | 25         | 1 11/16   | 7/8       | 0.81           | 1 15/32        | 17/32          | 1 3/4     | 2 21/32        | 2 1/4          | 3/4       | 1 1/4          | 1/2            | 5/8            | 1 3/8     | 2 1/4          | 3              | 3 3/8     | GYE25KRRB SGT  |             |
| YTU SGT | 1 1/8      | 48.8      | 25.4      | 23.24          | 38.1           | 13.5           | 50.8      | 72.2           | 61.9           | 22.2      | 36.5           | 12.7           | 15.9           | 41.3      | 63.5           | 88.9           | 104.8     | GY1102KRRB SGT | T-18694     |
| YTU SGT | 1 3/16     | 1 59/64   | 1         | 0.915          | 1 1/2          | 17/32          | 2         | 2 27/32        | 2 7/16         | 7/8       | 1 7/16         | 1/2            | 5/8            | 1 5/8     | 2 1/2          | 3 1/2          | 4 1/8     | GY1103KRRB SGT |             |
| YTU SGT | 30         | 1 59/64   | 1         | 0.915          | 1 1/2          | 17/32          | 2         | 2 27/32        | 2 7/16         | 7/8       | 1 7/16         | 1/2            | 5/8            | 1 5/8     | 2 1/2          | 3 1/2          | 4 1/8     | GYE30KRRB SGT  |             |
| YTU SGT | 1 1/4      | 50.4      | 22.2      | 27.90          | 36.5           | 13.5           | 44.5      | 74.6           | 63.5           | 22.2      | 36.5           | 12.7           | 15.9           | 49.2      | 69.8           | 88.9           | 104.8     | GY1104KRRB SGT | T-18692     |
| YTU SGT | 1 3/8      | 1 63/64   | 7/8       | 1.1            | 1 7/16         | 17/32          | 1 3/4     | 2 15/16        | 2 1/2          | 7/8       | 1 7/16         | 1/2            | 5/8            | 1 15/16   | 2 3/4          | 3 1/2          | 4 1/8     | GY1106KRRB SGT |             |
| YTU SGT | 1 7/16     | 1 63/64   | 7/8       | 1.1            | 1 7/16         | 17/32          | 1 3/4     | 2 15/16        | 2 1/2          | 7/8       | 1 7/16         | 1/2            | 5/8            | 1 15/16   | 2 3/4          | 3 1/2          | 4 1/8     | GY1107KRRB SGT |             |
| YTU SGT | 35         | 1 63/64   | 7/8       | 1.1            | 1 7/16         | 17/32          | 1 3/4     | 2 15/16        | 2 1/2          | 7/8       | 1 7/16         | 1/2            | 5/8            | 1 15/16   | 2 3/4          | 3 1/2          | 4 1/8     | GYE35KRRB SGT  |             |
| YTU SGT | 1 1/2      | 62.7      | 32.5      | 30.20          | 44.4           | 17.5           | 65.1      | 88.1           | 82.6           | 28.6      | 49.2           | 15.9           | 19.0           | 53.3      | 82.6           | 100.8          | 120.6     | GY1108KRRB SGT | T-18834     |
| YTU SGT | 40         | 2 15/32   | 1 9/32    | 1.188          | 1 3/4          | 1 1/16         | 2 9/16    | 3 15/32        | 3 1/4          | 1 1/8     | 1 15/16        | 5/8            | 3/4            | 2 3/32    | 3 1/4          | 3 31/32        | 4 3/4     | GYE40KRRB SGT  |             |
| YTU SGT | 1 5/8      | 64.0      | 32.5      | 31.30          | 44.4           | 17.5           | 65.1      | 88.1           | 82.6           | 28.6      | 49.2           | 15.9           | 19.0           | 53.3      | 82.6           | 100.8          | 120.6     | GY1110KRRB SGT | T-18762     |
| YTU SGT | 1 11/16    | 2 33/64   | 1 9/32    | 1.233          | 1 3/4          | 1 1/16         | 2 9/16    | 3 15/32        | 3 1/4          | 1 1/8     | 1 15/16        | 5/8            | 3/4            | 2 3/32    | 3 1/4          | 3 31/32        | 4 3/4     | GY1111KRRB SGT |             |
| YTU SGT | 1 3/4      | 2 33/64   | 1 9/32    | 1.233          | 1 3/4          | 1 1/16         | 2 9/16    | 3 15/32        | 3 1/4          | 1 1/8     | 1 15/16        | 5/8            | 3/4            | 2 3/32    | 3 1/4          | 3 31/32        | 4 3/4     | GY1112KRRB SGT |             |
| YTU SGT | 45         | 2 33/64   | 1 9/32    | 1.233          | 1 3/4          | 1 1/16         | 2 9/16    | 3 15/32        | 3 1/4          | 1 1/8     | 1 15/16        | 5/8            | 3/4            | 2 3/32    | 3 1/4          | 3 31/32        | 4 3/4     | GYE45KRRB SGT  |             |
| YTU SGT | 1 15/16    | 65.0      | 32.5      | 32.50          | 49.2           | 17.5           | 65.1      | 91.3           | 82.6           | 28.6      | 49.2           | 15.9           | 19.0           | 59.5      | 85.7           | 100.8          | 120.6     | GY1115KRRB SGT | T-18690     |
| YTU SGT | 50         | 2 9/16    | 1 9/32    | 1.281          | 1 15/16        | 1 1/16         | 2 9/16    | 3 19/32        | 3 1/4          | 1 1/8     | 1 15/16        | 5/8            | 3/4            | 2 11/32   | 3 3/8          | 3 31/32        | 4 3/4     | GYE50KRRB SGT  |             |
| YTU SGT | 2          | 68.3      | 34.9      | 33.30          | 55.6           | 27.0           | 69.8      | 119.9          | 101.6          | 34.9      | 63.5           | 19.0           | 31.8           | 69.1      | 101.6          | 129.4          | 149.2     | GY1200KRRB SGT | T-18828     |
| YTU SGT | 2 3/16     | 2 11/16   | 1 3/8     | 1.312          | 2 3/16         | 1 1/16         | 2 3/4     | 4 23/32        | 4              | 1 3/8     | 2 1/2          | 3/4            | 1 1/4          | 2 23/32   | 4              | 5 3/32         | 5 7/8     | GY1203KRRB SGT |             |
| YTU SGT | 55         | 2 11/16   | 1 3/8     | 1.312          | 2 3/16         | 1 1/16         | 2 3/4     | 4 23/32        | 4              | 1 3/8     | 2 1/2          | 3/4            | 1 1/4          | 2 23/32   | 4              | 5 3/32         | 5 7/8     | GYE55KRRB SGT  |             |
| YTU SGT | 2 1/4      | 74.6      | 34.9      | 39.70          | 52.4           | 27.0           | 69.8      | 119.9          | 101.6          | 34.9      | 63.5           | 19.0           | 31.8           | 69.1      | 101.6          | 129.4          | 149.2     | GY1204KRRB SGT | T-18830     |
| YTU SGT | 2 7/16     | 2 15/16   | 1 3/8     | 1.562          | 2 1/16         | 1 1/16         | 2 3/4     | 4 23/32        | 4              | 1 3/8     | 2 1/2          | 3/4            | 1 1/4          | 2 23/32   | 4              | 5 3/32         | 5 7/8     | GY1207KRRB SGT |             |
| YTU SGT | 60         | 2 15/16   | 1 3/8     | 1.562          | 2 1/16         | 1 1/16         | 2 3/4     | 4 23/32        | 4              | 1 3/8     | 2 1/2          | 3/4            | 1 1/4          | 2 23/32   | 4              | 5 3/32         | 5 7/8     | GYE60KRRB SGT  |             |

### VTU STANDARD SERIES

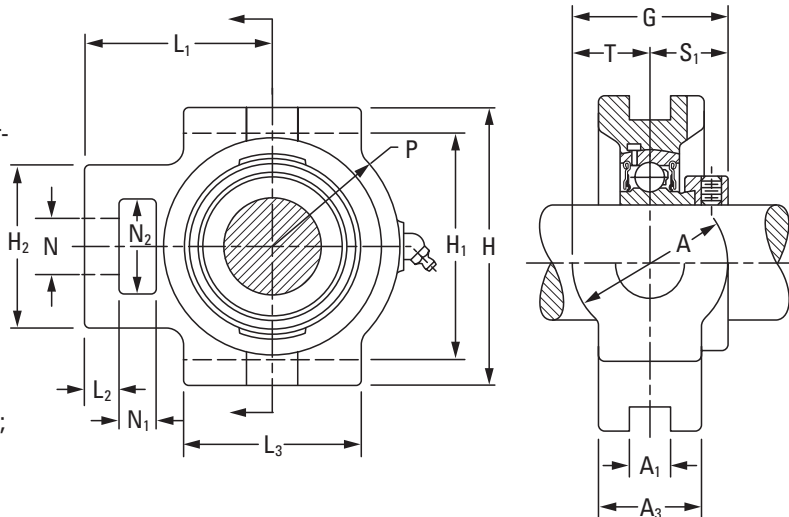
- These units are used where shaft adjustment and belt-tightening devices are required (e.g., conveyor belt applications).
- This unit provides self-aligning, B-type wide-inner-ring ball bearings with self-locking collars.
- Provides compact, efficient supports for adjustable shafts and conveyor take-up pulleys.
- The units are factory-prelubricated. A grease fitting is provided for relubrication if required.
- See the preceding pages for take-up frames to fit these units.

#### Suggested shaft tolerances:

3/4 in. – 1 15/16 in., nominal to -0.013 mm, -0.0005 in.;  
2 in. – 2 3/16 in., nominal to -0.025 mm, -0.0010 in.

#### To order, specify UNIT and SHAFT DIAMETER.

Example: VTU 3/4 in. or VTU 2 11/16 in.



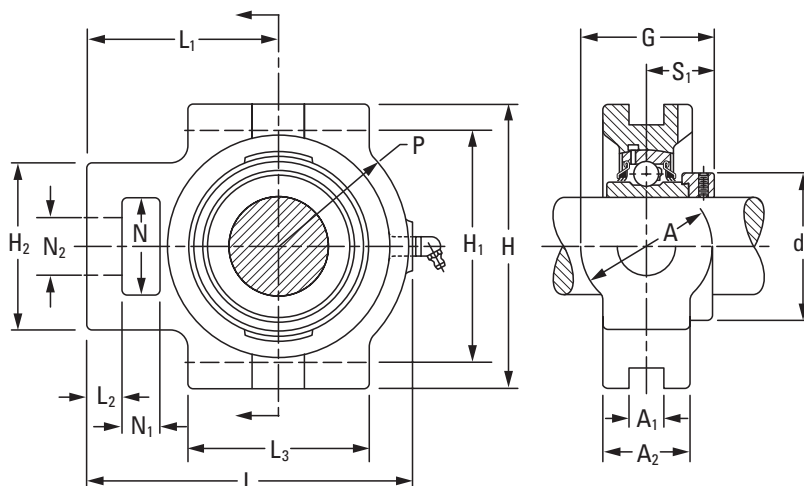
#### BEARING DATA

| Unit | Bearing No. | Dimensions and Load Ratings |
|------|-------------|-----------------------------|
| VTU  | GRA-RRB     | Page A-50                   |

| Unit | Shaft Dia. | G         | T         | S <sub>1</sub> | A <sub>3</sub> | A <sub>1</sub> | A         | L <sub>1</sub> | H <sub>2</sub> | N         | N <sub>2</sub> | L <sub>2</sub> | N <sub>1</sub> | P         | L <sub>3</sub> | H <sub>1</sub> | H         | Bearing No. | Collar No. | Housing No. | Unit Wt.      |                |
|------|------------|-----------|-----------|----------------|----------------|----------------|-----------|----------------|----------------|-----------|----------------|----------------|----------------|-----------|----------------|----------------|-----------|-------------|------------|-------------|---------------|----------------|
|      | in.<br>mm  | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in.      | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in.      | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in. |             |            |             | kg<br>lbs.    |                |
| VTU  | 3/4        | 44.1      | 20.6      | 23.4           | 34.1           | 13.5           | 41.3      | 67.5           | 57.2           | 19.0      | 31.8           | 12.7           | 15.9           | 33.3      | 57.2           | 2              | 76.2      | 92.1        | GRA012RRB  | S1012K      | T-18832       | 1.372          |
| VTU  | 20         | 1 47/64   | 13/16     | 59/64          | 1 11/32        | 17/32          | 1 5/8     | 2 21/32        | 2 1/4          | 3/4       | 1 1/4          | 1/2            | 5/8            | 1 5/16    | 1/4            | 3              | 3 5/8     | GRAE20RRB   | SE20K      | 3.02        |               |                |
| VTU  | 7/8        |           |           |                |                |                |           |                |                |           |                |                |                |           |                |                |           |             | GRA014RRB  | S1014K      | T-18696       | 1.458<br>3.21  |
| VTU  | 1 5/16     | 45.2      | 22.2      | 23.0           | 37.3           | 13.5           | 44.4      | 67.5           | 57.2           | 19.0      | 31.8           | 12.7           | 15.9           | 34.9      | 1              | 57.2           | 76.2      | 92.1        | GRA015RRB  | S1015K      |               |                |
| VTU  | 1          | 1 25/32   | 7/8       | 29/32          | 1 15/32        | 17/32          | 1 3/4     | 2 21/32        | 2 1/4          | 3/4       | 1 1/4          | 1/2            | 5/8            | 3/8       | 2 1/4          | 3              | 3 5/8     | GRA100RRB   | S1100K     |             |               |                |
| VTU  | 25         |           |           |                |                |                |           |                |                |           |                |                |                |           |                |                |           | GRAE25RRB   | SE25K      |             |               |                |
| VTU  | 1 1/8      |           |           |                |                |                |           |                |                |           |                |                |                |           |                |                |           |             | GRA102RRB  | S1102K      | T-18694       | 1.862<br>4.10  |
| VTU  | 1 3/16     | 52.0      | 25.4      | 27.0           | 38.1           | 13.5           | 50.8      | 72.2           | 61.9           | 22.2      | 36.5           | 12.7           | 15.9           | 41.3      | 63.5           | 88.9           | 104.8     | GRA103RRB   | S1103K3    |             |               |                |
| VTU  | 30         | 2 1/16    | 1         | 1 1/16         | 1 1/2          | 17/32          | 2         | 2 27/32        | 2 7/16         | 7/8       | 1 7/16         | 1/2            | 5/8            | 1 5/8     | 2 1/2          | 3 1/2          | 4 1/8     | GRAE30RRB   | SE30K      |             |               |                |
| VTU  | 1 1/4      |           |           |                |                |                |           |                |                |           |                |                |                |           |                |                |           |             | GRA104RRB  | S1104K      | T-18692       | 1.953<br>4.30  |
| VTU  | 1 3/8      | 51.6      | 22.2      | 29.4           | 36.5           | 13.5           | 44.5      | 74.6           | 63.5           | 22.2      | 36.5           | 12.7           | 15.9           | 49.2      | 69.8           | 2              | 88.9      | 104.8       | GRA106RRB  | S1106K      |               |                |
| VTU  | 1 7/16     | 2 1/32    | 7/8       | 1 5/32         | 1 7/16         | 17/32          | 1 3/4     | 2 15/16        | 2 1/2          | 7/8       | 1 7/16         | 1/2            | 5/8            | 1 15/16   | 3/4            | 3 1/2          | 4 1/8     | GRA107RRB   | S1107K     |             |               |                |
| VTU  | 35         |           |           |                |                |                |           |                |                |           |                |                |                |           |                |                |           | GRAE35RRB   | SE35K      |             |               |                |
| VTU  | 1 1/2      | 65.0      | 32.5      | 32.5           | 44.4           | 17.5           | 65.1      | 88.1           | 82.6           | 28.6      | 49.2           | 15.9           | 19.0           | 53.3      | 82.6           | 100.8          | 120.6     | GRA108RRB   | S1108KT    | T-18834     | 3.192<br>7.03 |                |
| VTU  | 40         | 2 9/16    | 1 9/32    | 1 9/32         | 1 3/4          | 1 11/16        | 2 9/16    | 3 15/32        | 3 1/4          | 1 1/8     | 1 15/16        | 5/8            | 3/4            | 2 3/32    | 3 1/4          | 3 31/32        | 4 3/4     | GRAE40RRB   | SE40K      |             |               |                |
| VTU  | 1 5/8      |           |           |                |                |                |           |                |                |           |                |                |                |           |                |                |           |             | GRA110RRB  | S1110K      | T-18762       | 3.009<br>6.63  |
| VTU  | 1 11/16    | 65.0      | 32.5      | 32.5           | 44.4           | 17.5           | 65.1      | 88.1           | 82.6           | 28.6      | 49.2           | 15.9           | 19.0           | 53.3      | 82.6           | 100.8          | 120.6     | GRA111RRB   | S1111K     |             |               |                |
| VTU  | 1 3/4      | 2 9/16    | 1 9/32    | 1 9/32         | 1 3/4          | 1 11/16        | 2 9/16    | 3 15/32        | 3 1/4          | 1 1/8     | 1 15/16        | 5/8            | 3/4            | 2 3/32    | 3 1/4          | 3 31/32        | 4 3/4     | GRA112RRB   | S1112K     |             |               |                |
| VTU  | 45         |           |           |                |                |                |           |                |                |           |                |                |                |           |                |                |           | GRAE45RRB   | SE45K      |             |               |                |
| VTU  | 1 7/8      |           |           |                |                |                |           |                |                |           |                |                |                |           |                |                |           |             | GRA114RRB  | S1114K      | T-18690       | 3.342<br>7.36  |
| VTU  | 1 15/16    | 65.0      | 32.5      | 32.5           | 49.2           | 17.5           | 65.1      | 91.3           | 82.6           | 28.6      | 49.2           | 15.9           | 19.0           | 59.5      | 85.7           | 100.8          | 120.6     | GRA115RRB   | S1115K     |             |               |                |
| VTU  | 50         | 2 9/16    | 1 9/32    | 1 9/32         | 1 15/16        | 1 11/16        | 2 9/16    | 3 19/32        | 3 1/4          | 1 1/8     | 1 15/16        | 5/8            | 3/4            | 2 11/32   | 3 3/8          | 3 31/32        | 4 3/4     | GRAE50RRB   | SE50K      |             |               |                |
| VTU  | 2          |           |           |                |                |                |           |                |                |           |                |                |                |           |                |                |           |             | GRA200RRB  | S1200K      | T-18828       | 5.784<br>12.73 |
| VTU  | 2 3/16     | 71.4      | 34.9      | 36.5           | 55.6           | 27.0           | 69.8      | 119.9          | 101.6          | 34.9      | 63.5           | 2              | 19.0           | 31.8      | 69.1           | 101.6          | 129.4     | 149.2       | GRA203RRB  | S1203K      |               |                |
| VTU  | 55         | 2 13/16   | 1 3/8     | 1 7/16         | 2 3/16         | 1 1/16         | 2 3/4     | 4 23/32        | 4              | 1 3/8     | 1 1/2          | 3/4            | 1 1/4          | 2 23/32   | 4              | 5 3/32         | 5 7/8     | GRAE55RRB   | SE55K      |             |               |                |

### TTU INDUSTRIAL SERIES

- These units are used where shaft adjustment and belt-tightening devices are required (e.g., in conveyor belt applications).
- The unit incorporates self-aligning, B-type, extra wide-inner-ring ball bearings with self-locking collars.
- The unit uses a G-KPPB (tri-ply) type wide inner ring ball bearing.
- The unit provides compact, efficient supports for adjustable shafts and conveyor take-up pulleys.
- The units are factory-prelubricated. A grease fitting is provided for relubrication if required.
- Contact your Timken engineer to discuss highly corrosive applications (e.g., food processing, chemical exposure) where Timken thin-dense chrome-coated bearings can be utilized.



#### Suggested shaft tolerances:

2 in. – 2 3/16 in., nominal to -0.025 mm, -0.0010 in.

#### To order, specify UNIT and SHAFT DIAMETER.

Example: TTU 3/4 in.

#### BEARING DATA

| Unit | Bearing No. | Dimensions and Load Ratings |
|------|-------------|-----------------------------|
| TTU  | G-KPPB      | Page A-39                   |

| Unit | Shaft Dia. | G         | L         | S <sub>1</sub> | d <sub>1</sub> | A <sub>2</sub> | A <sub>1</sub> | A         | L <sub>1</sub> | H <sub>2</sub> | N         | N <sub>2</sub> | L <sub>2</sub> | N <sub>1</sub> | P         | L <sub>3</sub> | H <sub>1</sub> | H         | Bearing No. | Housing No. |
|------|------------|-----------|-----------|----------------|----------------|----------------|----------------|-----------|----------------|----------------|-----------|----------------|----------------|----------------|-----------|----------------|----------------|-----------|-------------|-------------|
|      | in.<br>mm  | mm<br>in. | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in.      | mm<br>in.      | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in.      | mm<br>in. | mm<br>in.      | mm<br>in.      | mm<br>in. |             |             |
| TTU  | 1 1/4      |           |           |                |                |                |                |           |                |                |           |                |                |                |           |                |                |           | G1104KPPB2  | T18692      |
|      | 1 5/16     | 54.38     | 125.41    | 32.31          | 53.98          | 36.51          | 13.49          | 44.45     | 74.61          | 63.50          | 36.51     | 22.23          | 12.70          | 15.88          | 49.21     | 69.85          | 88.90          | 104.78    | G1105KPPB2  |             |
|      | 1 3/8      | 2.141     | 4 15/16   | 1.272          | 2.125          | 1 7/16         | 17/32          | 1 3/4     | 2 15/16        | 2 1/2          | 1 7/16    | 0.875          | 1/2            | 5/8            | 1 15/16   | 2 3/4          | 3 1/2          | 4 1/8     | G1106KPPB2  |             |
|      | 1 7/16     |           |           |                |                |                |                |           |                |                |           |                |                |                |           |                |                |           | G1107KPPB2  |             |
| TTU  | 1 15/16    | 70.64     | 152.80    | 38.07          | 69.34          | 49.21          | 17.46          | 65.09     | 91.28          | 82.55          | 49.21     | 28.58          | 15.88          | 19.05          | 59.53     | 85.73          | 100.81         | 120.65    | G1115KPPB3  | T18690      |
|      |            | 2.781     | 6 1/4     | 1.499          | 2.73           | 1 15/16        | 11/16          | 2 9/16    | 3 19/32        | 3 1/4          | 1 15/16   | 1.125          | 5/8            | 3/4            | 2 11/32   | 3 3/8          | 3 31/32        | 4 3/4     |             |             |
| TTU  | 2          |           |           |                |                |                |                |           |                |                |           |                |                |                |           |                |                |           | G1200KPPB4  | T-18828     |
|      | 2 1/16     | 79        | 190.5     | 43.6           | 75.7           | 55.6           | 27             | 69.8      | 119.9          | 101.6          | 63.5      | 34.7           | 19             | 31.8           | 69.1      | 101.6          | 129.4          | 149.2     | G1201KPPB4  |             |
|      | 2 1/8      | 3.109     | 7 1/2     | 1.716          | 2.980          | 2 3/16         | 1 1/16         | 2 3/4     | 4 23/32        | 4              | 2 1/2     | 1.365          | 3/4            | 1 1/4          | 2 23/32   | 4              | 5 3/32         | 5 7/8     | G1202KPPB4  |             |
|      | 2 3/16     |           |           |                |                |                |                |           |                |                |           |                |                |                |           |                |                |           | G1203KPPB4  |             |
|      | 55         |           |           |                |                |                |                |           |                |                |           |                |                |                |           |                |                |           | GE55KPPB4   |             |

TIMKEN® SURVIVOR® PS SERIES

Timken® Survivor® PS series housed units have polymer housings and a 300-series stainless-steel insert to provide the highest possible corrosion resistance in the industry (fig. A-24). The engineered polymer housing unit is FDA/USDA compliant. It is specifically designed for light loads and low speeds with stainless-steel set screws.

The durable corrosion-proof polymer housing features stainless-steel crush bushings in mounting holes with stainless-steel grease fittings with a nylon cap (table A-23). It resists a broad range of acids and alkalis, as well as steam and continuous temperature up to 121° C (250° F) and brief exposure up to 160° C (320° F).

Additionally, the polymer strength exceeds the static capacity of the bearing, and the housing retains proper bearing fit and resists shock loads. The flush base has no voids where bacteria could collect. Optional end covers further protect the insert bearing from direct contact with wash-down solutions and cover rotating components.

Survivor PS series units are available as:

- High-base and low-base pillow blocks.
- Two-bolt and four-bolt flanged cartridges for popular shaft sizes.



Fig. A-24. PS series.

TABLE A-23.

| PS SERIES            |                        |
|----------------------|------------------------|
| Component            | Material               |
| Balls                | Stainless steel        |
| Ball retainer        | Nylon                  |
| Set screws           | Stainless steel        |
| Crush bushing        | Stainless steel        |
| Grease               | FDA approved           |
| <b>Housing</b>       | <b>Polymer</b>         |
| Grease fitting       | Stainless steel        |
| Grease-fitting cover | Nylon                  |
| <b>Rings</b>         | <b>Stainless steel</b> |
| Seals                | Synthetic rubber       |

ORDERING INFORMATION

To order complete Survivor polymer assemblies, simply replace the (current cast-iron housed-unit designations) prefix with K and add the PS suffix.

Example: **KCJT 1 PS** or **KAK 3/4 PS**

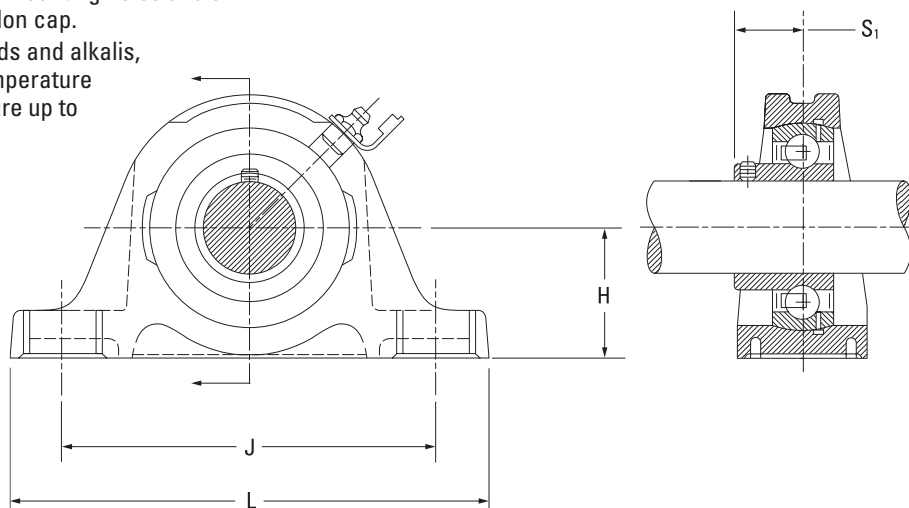
PS Survivor inserts can be ordered using the part numbers shown in the following tables.

Example: **KCJT1PS100RRB** or **KAK3/4PS012RRB**

# PS

## KAK/S SERIES

- The 300-series stainless-steel insert provides the highest resistance to corrosion in the industry.
- This unit is used for the ready-to-eat portion of the process. Loads are lighter and corrosion protection is the primary concern.
- Specifically designed for light loads and low speeds, and has stainless-steel set screws.
- The durable, corrosion-proof polymer housing has stainless-steel crush bushings in the mounting holes and a stainless-steel grease fitting with nylon cap.
- Polymer resists a broad range of acids and alkalis, as well as steam and continuous temperature up to 121° C (250° F) and brief exposure up to 160° C (320° F).
- The polymer strength exceeds static capacity of bearing; housing retains proper bearing fit and resists shock loads.
- The flush base contains no voids where bacteria can collect.
- The optional end covers further protect insert bearing from direct contact with washdown solutions and cover rotating components.

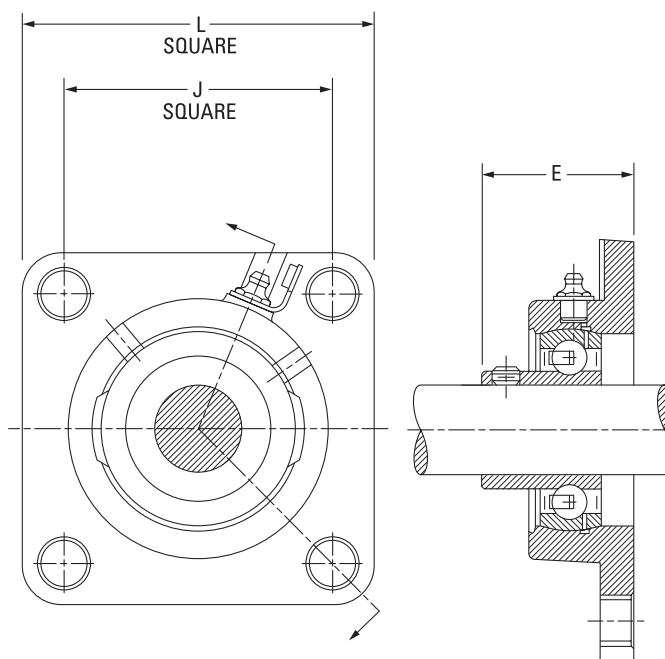


| Unit <sup>(1)</sup> | Shaft Dia.              | Type | KAK<br>H         | KAS<br>H         | J                | L                | S <sub>1</sub>  | Static Load<br>Rating | Limiting<br>Speed | Bearing<br>No.                       |
|---------------------|-------------------------|------|------------------|------------------|------------------|------------------|-----------------|-----------------------|-------------------|--------------------------------------|
|                     | in.<br>mm               |      | mm<br>in.        | mm<br>in.        | mm<br>in.        | mm<br>in.        | mm<br>in.       | N<br>lbs.             | RPM               |                                      |
| KAK/S               | 3/4<br>20               | PS   | 31.75<br>1 1/4   | 33.34<br>1 15/16 | 96.04<br>3 25/32 | 127.00<br>5      | 18.26<br>23/32  | 900<br>200            | 500               | GKY012RRB<br>GKYE20RRB               |
| KAK/S               | 1<br>25                 | PS   | 33.34<br>1 5/16  | 36.51<br>1 7/16  | 104.78<br>4 1/8  | 139.70<br>5 1/2  | 20.64<br>13/16  | 1100<br>240           | 425               | GKY100RRB<br>GKYE25RRB               |
| KAK/S               | 1 3/16<br>1 1/4 S<br>30 | PS   | 39.69<br>1 9/16  | 42.86<br>1 11/16 | 117.48<br>4 5/8  | 157.16<br>6 3/16 | 22.23<br>7/8    | 1600<br>350           | 375               | GKY103RRB<br>GKY103RRB2<br>GKYE30RRB |
| KAK/S               | 1 1/4<br>1 7/16<br>35   | PS   | 46.04<br>1 13/16 | 47.63<br>1 7/8   | 130.18<br>5 1/8  | 166.69<br>6 9/16 | 27.38<br>1 5/64 | 2100<br>475           | 300               | GKY104RRB<br>GKY107RRB<br>GKYE35RRB  |

<sup>(1)</sup>Option of low-base KAK or high-base KAS.

### KCJ SERIES

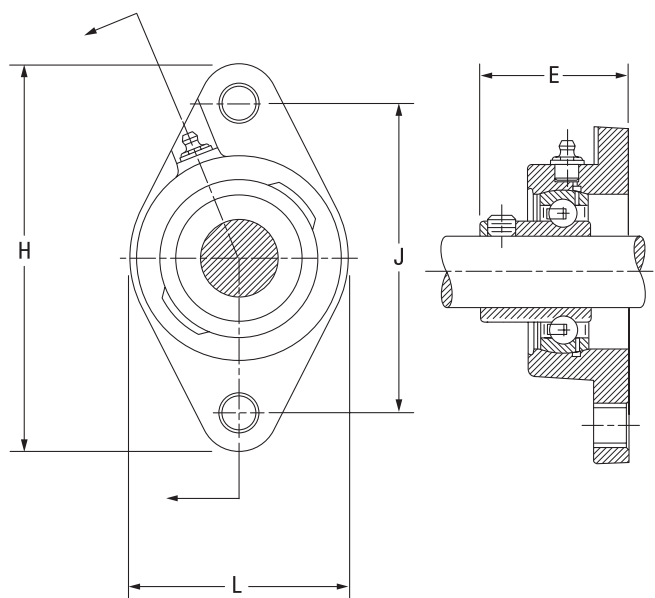
- The 300-series stainless-steel insert provides the highest resistance to corrosion in the industry.
- This unit is used for the ready-to-eat portion of the process. Loads are lighter and corrosion protection is the primary concern.
- Specifically designed for light loads and low speeds, and has stainless-steel set screws.
- The durable, corrosion-proof polymer housing has stainless-steel crush bushings in the mounting holes and a stainless-steel grease fitting with nylon cap.
- Polymer resists a broad range of acids and alkalis, as well as steam and continuous temperature up to 121° C (250° F) and brief exposure up to 160° C (320° F).
- The polymer strength exceeds static capacity of bearing; housing retains proper bearing fit and resists shock loads.
- The flush base contains no voids where bacteria can collect.
- The optional end covers further protect insert bearing from direct contact with washdown solutions and cover rotating components.



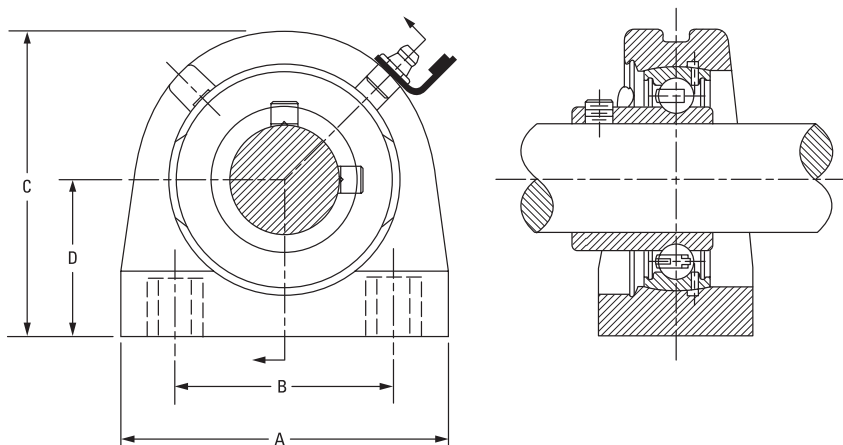
| Unit | Shaft Dia.              | Type |                  |                |                  | Static Load Rating | Limiting Speed | Bearing No.                          |
|------|-------------------------|------|------------------|----------------|------------------|--------------------|----------------|--------------------------------------|
|      | in.<br>mm               |      | L<br>mm<br>in.   | J<br>mm<br>in. | E<br>mm<br>in.   | N<br>lbs.          | RPM            |                                      |
| KCJ  | 3/4<br>20               | PS   | 85.33<br>3 23/64 | 63.50<br>2 1/2 | 37.31<br>1 15/32 | 900<br>200         | 500            | GKY012RRB<br>GKYE20RRB               |
| KCJ  | 1<br>25                 | PS   | 94.85<br>3 47/64 | 69.85<br>2 3/4 | 39.69<br>1 9/16  | 1100<br>240        | 425            | GKY100RRB<br>GKYE25RRB               |
| KCJ  | 1 3/16<br>1 1/4 S<br>30 | PS   | 107.95<br>4 1/4  | 82.55<br>3 1/4 | 41.28<br>1 5/8   | 1600<br>350        | 375            | GKY103RRB<br>GKY103RRB2<br>GKYE30RRB |
| KCJ  | 1 1/4<br>1 7/16<br>35   | PS   | 117.48<br>4 5/8  | 92.08<br>3 5/8 | 46.04<br>1 13/16 | 2100<br>475        | 300            | GKY104RRB<br>GKY107RRB<br>GKYE35RRB  |

### KCJT AND KTB SERIES

- The 300-series stainless-steel insert provides the highest resistance to corrosion in the industry.
- This unit is used for the ready-to-eat portion of the process. Loads are lighter and corrosion protection is the primary concern.
- Specifically designed for light loads and low speeds, and has stainless-steel set screws.
- The durable, corrosion-proof polymer housing has stainless-steel crush bushings in the mounting holes and a stainless-steel grease fitting with nylon cap.
- Polymer resists a broad range of acids and alkalis, as well as steam and continuous temperature up to 121° C (250° F) and brief exposure up to 160° C (320° F).
- The polymer strength exceeds static capacity of bearing; housing retains proper bearing fit and resists shock loads.
- The flush base contains no voids where bacteria can collect.
- The optional end covers further protect insert bearing from direct contact with washdown solutions and cover rotating components.



| Unit | Shaft Dia.              | Type | H                 | J                 | L                | E                | Static Load Rating | Limiting Speed | Bearing No.                          |
|------|-------------------------|------|-------------------|-------------------|------------------|------------------|--------------------|----------------|--------------------------------------|
|      | in.<br>mm               |      | mm<br>in.         | mm<br>in.         | mm<br>in.        | mm<br>in.        | N<br>lbs.          | RPM            |                                      |
| KCJT | 3/4<br>20               | PS   | 111.92<br>4 13/32 | 89.69<br>3 17/32  | 60.33<br>2 3/8   | 37.31<br>1 15/32 | 900<br>200         | 500            | GKY012RRB<br>GKYE20RRB               |
| KCJT | 1<br>25                 | PS   | 124.22<br>4 57/64 | 98.82<br>3 57/64  | 65.48<br>2 37/64 | 39.69<br>1 9/16  | 1100<br>240        | 425            | GKY100RRB<br>GKYE25RRB               |
| KCJT | 1 3/16<br>1 1/4 S<br>30 | PS   | 140.89<br>5 35/64 | 116.68<br>4 19/32 | 76.20<br>3       | 41.28<br>1 5/8   | 1600<br>350        | 375            | GKY103RRB<br>GKY103RRB2<br>GKYE30RRB |
| KCJT | 1 1/4<br>1 7/16<br>35   | PS   | 155.58<br>6 1/8   | 130.18<br>5 1/8   | 92.08<br>3 5/8   | 49.21<br>1 15/16 | 2100<br>475        | 300            | GKY104RRB<br>GKY107RRB<br>GKYE35RRB  |



| Unit | Shaft Dia. | Type | A          | B          | C                | D               | Static Load Rating | Limiting Speed | Bearing No. |
|------|------------|------|------------|------------|------------------|-----------------|--------------------|----------------|-------------|
|      | in.<br>mm  |      | mm<br>in.  | mm<br>in.  | mm<br>in.        | mm<br>in.       | N<br>lbs.          | RPM            |             |
| KTB  | 1          | PS   | 76.20<br>3 | 50.80<br>2 | 71.44<br>2 13/16 | 36.51<br>1 7/16 | 1100<br>240        | 425            | GKY100RRB   |

TIMKEN® SURVIVOR® PT SERIES

Timken® Survivor® PT series housed units are designed to meet stringent food-handling requirements while standing up to highly corrosive environments (fig. A-25). All materials used in Survivor assemblies, including grease, are approved for USDA- and FDA-compliant industries (table A-24).

The Survivor series also provides extraordinary corrosion resistance for materials handling operations, dairy and refrigeration applications, as well as heating, ventilation and air conditioning (HVAC), chemical, maritime and other highly corrosive environments.

Patented Survivor PT polymer housed units withstand a wide range of chemicals. These units are dimensionally stable under load and able to operate in continuous temperatures up to 120° C (250° F) and brief exposures up to 177° C (350° F).

Our bearing inserts are coated in proprietary Timken thin-dense chrome that will not crack or peel. Inserts are available with a self-locking collar or a set screw locking device. Also available is Timken Shaft Guarding Technology (page A-31), which uses a stainless-steel, hardened band to transfer gripping pressure on the shaft. Unlike traditional set screws, which can dig into the shaft, there are no nicks, raised metal or permanent shaft damage.

The stainless band won’t corrode on the shaft. Housed units with Shaft Guarding Technology also reduce change-out time.

Survivor PT series units are available as:

- High-base and low-base pillow blocks.
- Two-bolt and four-bolt flanged cartridges for popular shaft sizes of ½ in. through 2 15⁄16 in. (and selected metric diameters).
- Take-up unit in the Survivor PT series in limited shaft sizes (RTU-NT). The bearing inserts are available with self-locking collars.

Timken also produces a take-up unit in the Survivor NT series in limited shaft sizes (RTU-NT). The bearing inserts are available with self-locking collars.

Survivor PT assemblies are dimensionally interchangeable with the current line of Timken cast-iron housed units.

The polymer housing and TDC coating resist premature failure under corrosive conditions. These properties extend the life of the housed unit and bearing. Longer periods between replacements save costs and reduce downtime.



Fig. A-25. Popular styles.

TABLE A-24.

| PT SERIES            |                  |
|----------------------|------------------|
| Component            | Material         |
| Balls                | Stainless steel  |
| Ball retainer        | Nylon            |
| Collar               | Stainless steel  |
| Crush bushing        | Stainless steel  |
| Grease               | FDA approved     |
| Housing              | Polymer          |
| Grease fitting       | Stainless steel  |
| Grease fitting cover | Nylon            |
| Rings                | TDC plated       |
| Seals                | Synthetic rubber |
| Seal caps            | Stainless steel  |
| Set screw            | Stainless steel  |

ORDERING INFORMATION

To order complete Survivor polymer assemblies, simply add the PT suffix to the current cast-iron housed-unit designations.

Example: YCJT 1 PT SGT or RAK ¾ PT SGT

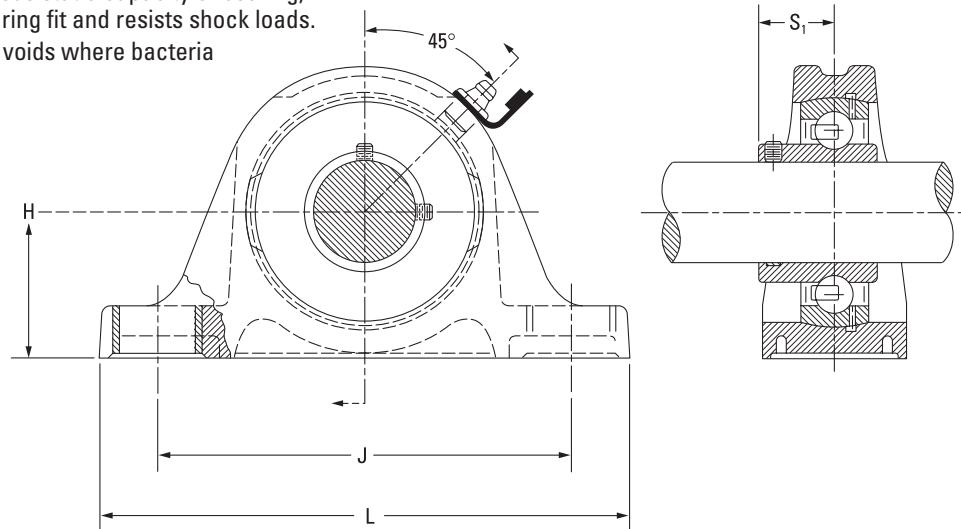
Survivor inserts can be ordered using Timken’s standard part number for wide-inner-ring ball bearings with a TDCF suffix.

Example: GY1100KRRB TDCF SGT or G1100KRRB + COL TDCF SGT

# PT

## YAK/S SERIES

- This unit is used for the main portion of the process where loads are lighter and corrosion protection is important.
- Durable corrosion-proof polymer housing with stainless-steel crush bushings in mounting holes and a stainless-steel grease fitting with a nylon cap.
- Polymer resists a broad range of acids and alkalis, as well as steam and continuous temperature up to 121° C (250° F), and brief exposure up to 160° C (320° F).
- The polymer strength exceeds static capacity of bearing; housing retains proper bearing fit and resists shock loads.
- The flush base contains no voids where bacteria can collect.
- Corrosion-resistant insert bearing with stainless-steel balls and a nylon retainer. The PT series also features industrial-duty contact seals with stainless-steel shroud caps.
- This unit has stainless-steel set screws with Shaft Guarding Technology.
- This unit is factory lubricated with FDA/USDA-approved grease (class H1 lubricant) for incidental food contact.

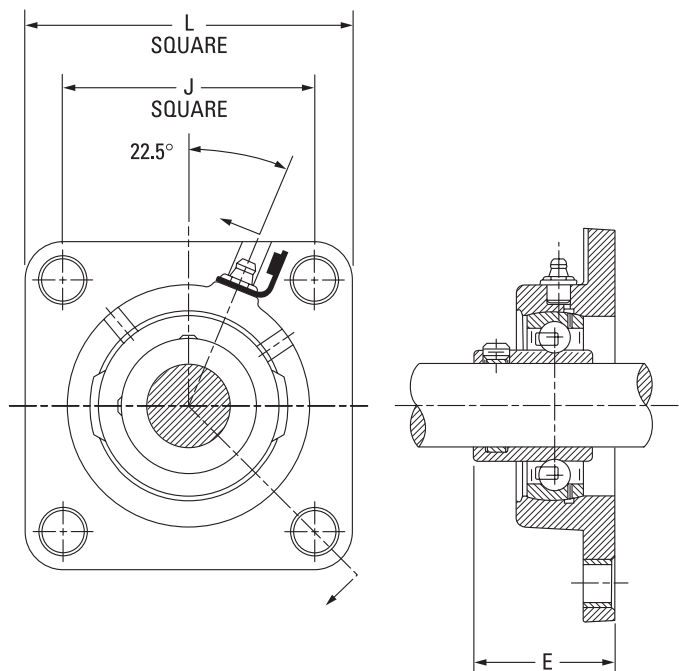


| Unit <sup>(1)</sup> | Shaft Dia.            | Type         | YAK H            | YAS H            | J                | L                | S <sub>1</sub>  | Static Load Rating | Dynamic Load Rating | Speed Rating         | Bearing No.                           |                                  |
|---------------------|-----------------------|--------------|------------------|------------------|------------------|------------------|-----------------|--------------------|---------------------|----------------------|---------------------------------------|----------------------------------|
|                     | in.<br>mm             |              | mm<br>in.        | mm<br>in.        | mm<br>in.        | mm<br>in.        | mm<br>in.       | N<br>lbs.          | N<br>lbs.           | RPM                  |                                       |                                  |
| YAK/S               | 3/4<br>20             | PT SGT       | 31.75<br>1 1/4   | 33.34<br>1 5/16  | 96.04<br>3 25/32 | 127.00<br>5      | 19.05<br>3/4    | 6500<br>1460       | 14500<br>3250       | 9200<br>8800         | GY1012KRRB                            | TDCF SGT                         |
| YAK/S               | 1<br>25               | PT SGT       | 33.34<br>1 5/16  | 36.51<br>1 7/16  | 104.78<br>4 1/8  | 139.70<br>5 1/2  | 20.64<br>13/16  | 7700<br>1730       | 15800<br>3550       | 6900<br>7000         | GY1100KRRB                            | TDCF SGT                         |
| YAK/S               | 1 1/4S<br>30          | PT<br>PT SGT | 39.69<br>1 9/16  | 42.86<br>1 11/16 | 117.48<br>4 5/8  | 157.16<br>6 3/16 | 23.4<br>59/64   | 11100<br>2500      | 21800<br>4900       | 5500<br>5800         | GY1103KRRB3                           | TDCF                             |
| YAK/S               | 1 3/8<br>1 7/16<br>35 | PT SGT       | 46.04<br>1 13/16 | 47.63<br>1 7/8   | 130.18<br>5 1/8  | 166.69<br>6 9/16 | 28.18<br>1 7/64 | 15100<br>3400      | 28500<br>6400       | 5000<br>4800<br>5000 | GY1106KRRB<br>GY1107KRRB<br>GYE35KRRB | TDCF SGT<br>TDCF SGT<br>TDCF SGT |
| YAK/S               | 1 1/2<br>40           | PT SGT       | 49.21<br>1 15/16 | 49.21<br>1 15/16 | 136.53<br>5 3/8  | 179.39<br>7 1/16 | 30.16<br>1 3/16 | 19600<br>4400      | 36300<br>8150       | 4600<br>4400         | GY1108KRRB<br>GYE40KRRB               | TDCF SGT<br>TDCF SGT             |

<sup>(1)</sup>Option of low-base RAK or high-base RAS.

### YCJ SERIES

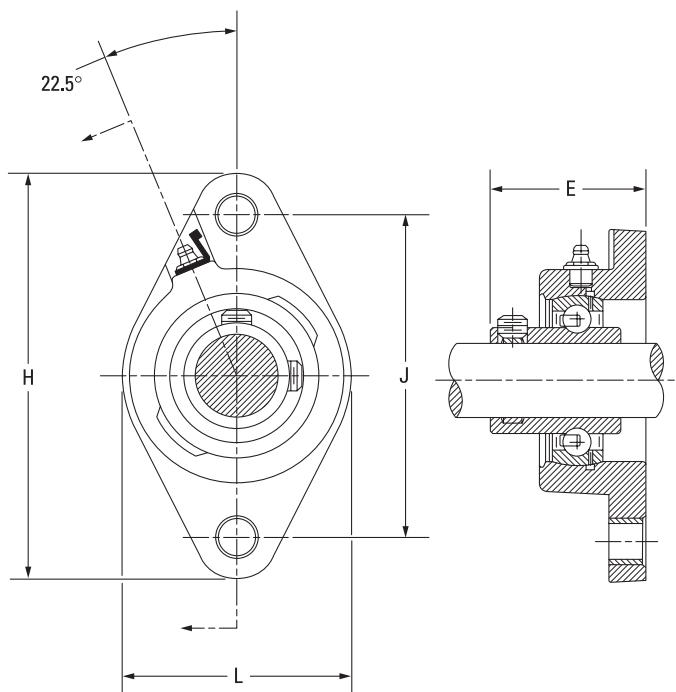
- This unit is used for the main portion of the process where loads are lighter and corrosion protection is important.
- Durable corrosion-proof polymer housing with stainless-steel crush bushings in mounting holes and a stainless-steel grease fitting with a nylon cap.
- Polymer resists a broad range of acids and alkalis, as well as steam and continuous temperature up to 121° C (250° F), and brief exposure up to 160° C (320° F).
- The polymer strength exceeds static capacity of bearing; housing retains proper bearing fit and resists shock loads.
- The flush base contains no voids where bacteria can collect.
- Corrosion-resistant insert bearing with stainless-steel balls and a nylon retainer. The PT series also features industrial-duty contact seals with stainless-steel shroud caps.
- This unit has stainless-steel set screws with Shaft Guarding Technology.
- This unit is factory lubricated with FDA/USDA-approved grease (class H1 lubricant) for incidental food contact.



| Unit | Shaft Dia.                     | Type   |                |                |                | Static Load Rating | Dynamic Load Rating | Speed Rating | Bearing No. |          |
|------|--------------------------------|--------|----------------|----------------|----------------|--------------------|---------------------|--------------|-------------|----------|
|      | in.<br>mm                      |        | L<br>mm<br>in. | J<br>mm<br>in. | E<br>mm<br>in. | N<br>lbs.          | N<br>lbs.           | RPM          |             |          |
| YCJ  | 3/4<br>20                      | PT SGT | 85.73          | 63.50          | 38.10          | 6500               | 14500               | 9200         | GY1012KRRB  | TDCF SGT |
|      |                                |        | 3 3/8          | 2 1/2          | 1 1/2          | 1460               | 3250                | 8800         | GYE20KRRB   | TDCF SGT |
| YCJ  | 1<br>25                        | PT SGT | 95.25          | 69.85          | 39.69          | 7700               | 15800               | 6900         | GY1100KRRB  | TDCF SGT |
|      |                                |        | 3 3/4          | 2 49/64        | 1 9/16         | 1730               | 3550                | 7000         | GYE25KRRB   | TDCF SGT |
| YCJ  | 1 3/16<br>1 1/4S<br>30         | PT SGT | 107.95         | 82.55          | 42.07          | 11100              | 21800               | 5800         | GY1103KRRB  | TDCF SGT |
|      |                                | PT     |                |                |                |                    |                     | 5500         | GY1103KRRB3 | TDCF     |
|      |                                | PT SGT |                |                |                |                    |                     | 5800         | GYE30KRRB   | TDCF SGT |
| YCJ  | 1 1/4<br>1 3/8<br>1 7/16<br>35 | PT SGT | 117.48         | 92.08          | 48.42          | 15100              | 28500               | 5500         | GY1104KRRB  | TDCF SGT |
|      |                                |        |                |                |                |                    |                     | 5000         | GY1106KRRB  | TDCF SGT |
|      |                                |        |                |                |                |                    |                     | 4800         | GY1107KRRB  | TDCF SGT |
|      |                                |        |                |                |                |                    |                     | 5000         | GYE35KRRB   | TDCF SGT |
| YCJ  | 1 1/2<br>40                    | PT SGT | 130.18         | 101.60         | 53.98          | 19600              | 36300               | 4600         | GY1108KRRB  | TDCF SGT |
|      |                                |        | 5 1/8          | 4              | 2 1/8          | 4400               | 8150                | 4400         | GYE40KRRB   | TDCF SGT |

## YCJT SERIES

- This unit is used for the main portion of the process where loads are lighter and corrosion protection is important.
- Durable corrosion-proof polymer housing with stainless-steel crush bushings in mounting holes and a stainless-steel grease fitting with a nylon cap.
- Polymer resists a broad range of acids and alkalis, as well as steam and continuous temperature up to 121° C (250° F), and brief exposure up to 160° C (320° F).
- The polymer strength exceeds static capacity of bearing; housing retains proper bearing fit and resists shock loads.
- The flush base contains no voids where bacteria can collect.
- Corrosion-resistant insert bearing with stainless-steel balls and a nylon retainer. The PT series also features industrial-duty contact seals with stainless-steel shroud caps.
- This unit has stainless-steel set screws with Shaft Guarding Technology.
- This unit is factory lubricated with FDA/USDA-approved grease (class H1 lubricant) for incidental food contact.

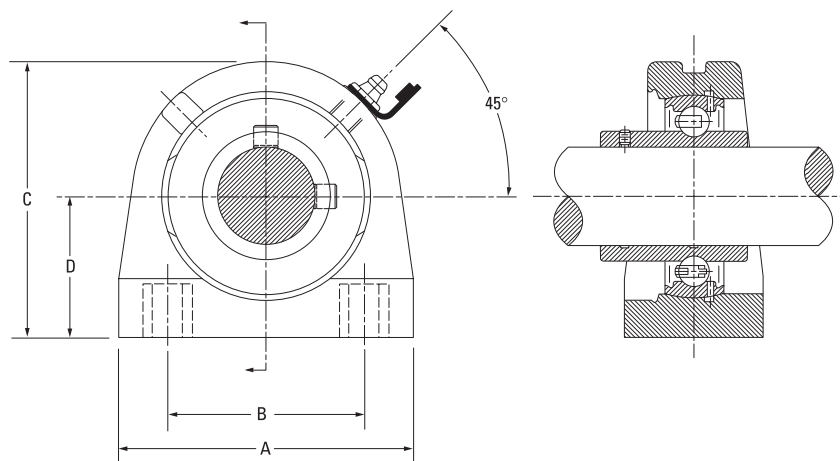


| Unit | Shaft Dia. | Type   |               |               |               |              | Static Load Rating | Dynamic Load Rating | Speed Rating | Bearing No. |          |
|------|------------|--------|---------------|---------------|---------------|--------------|--------------------|---------------------|--------------|-------------|----------|
|      |            |        | H             | J             | L             | E            |                    |                     |              |             |          |
|      | in.<br>mm  |        | mm<br>in.     | mm<br>in.     | mm<br>in.     | mm<br>in.    | N<br>lbs.          | N<br>lbs.           | RPM          |             |          |
| YCJT | 3/4        | PT SGT | <b>111.92</b> | <b>89.69</b>  | <b>60.33</b>  | <b>38.10</b> | <b>6500</b>        | <b>14500</b>        | 9200         | GY1012KRRB  | TDCF SGT |
|      | <b>20</b>  |        | 4 13/32       | 3 17/32       | 2 3/8         | 1 1/2        | 1460               | 3250                | 8800         | GYE20KRRB   | TDCF SGT |
| YCJT | 1          | PT SGT | <b>123.83</b> | <b>99.22</b>  | <b>69.85</b>  | <b>39.69</b> | <b>7700</b>        | <b>15800</b>        | 6900         | GY1100KRRB  | TDCF SGT |
|      | <b>25</b>  |        | 4 7/8         | 3 29/32       | 2 3/4         | 1 9/16       | 1730               | 3550                | 7000         | GYE25KRRB   | TDCF SGT |
| YCJT | 1 3/16     | PT SGT | <b>141.29</b> | <b>116.68</b> | <b>79.38</b>  | <b>42.07</b> | <b>11100</b>       | <b>21800</b>        | 5800         | GY1103KRRB  | TDCF SGT |
|      | 1 1/4S     | PT     |               |               |               |              |                    |                     | 5500         | GY1103KRRB3 | TDCF     |
|      | <b>30</b>  | PT SGT |               |               |               |              |                    |                     | 5800         | GYE30KRRB   | TDCF SGT |
| YCJT | 1 1/4      | PT SGT | <b>155.58</b> | <b>130.18</b> | <b>92.08</b>  | <b>48.42</b> | <b>15100</b>       | <b>28500</b>        | 5500         | GY1104KRRB  | TDCF SGT |
|      | 1 3/8      |        |               |               |               |              |                    |                     | 5000         | GY1106KRRB  | TDCF SGT |
|      | 1 7/16     |        |               |               |               |              |                    |                     | 4800         | GY1107KRRB  | TDCF SGT |
|      | <b>35</b>  |        |               |               |               |              |                    |                     | 5000         | GYE35KRRB   | TDCF SGT |
| YCJT | 1 1/2      | PT SGT | <b>171.45</b> | <b>143.67</b> | <b>104.78</b> | <b>53.98</b> | <b>19600</b>       | <b>36300</b>        | 4600         | GY1108KRRB  | TDCF SGT |
|      | <b>40</b>  |        |               |               |               |              |                    |                     | 4400         | GYE40KRRB   | TDCF SGT |

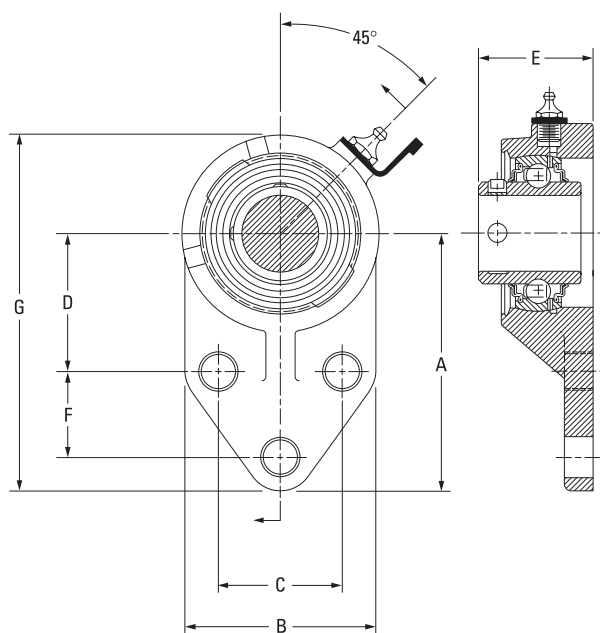
### YTB AND YFB SERIES

- This unit is used for the main portion of the process where loads are lighter and corrosion protection is important.
- Durable corrosion-proof polymer housing with stainless-steel crush bushings in mounting holes and a stainless-steel grease fitting with a nylon cap.
- Polymer resists a broad range of acids and alkalis, as well as steam and continuous temperature up to 121° C (250° F), and brief exposure up to 160° C (320° F).
- The polymer strength exceeds static capacity of bearing; housing retains proper bearing fit and resists shock loads.
- The flush base contains no voids where bacteria can collect.
- Corrosion-resistant insert bearing with stainless-steel balls and a nylon retainer. The PT series also features industrial-duty contact seals with stainless-steel shroud caps.

- This unit has stainless-steel set screws with Shaft Guarding Technology.
- This unit is factory lubricated with FDA/USDA-approved grease (class H1 lubricant) for incidental food contact.



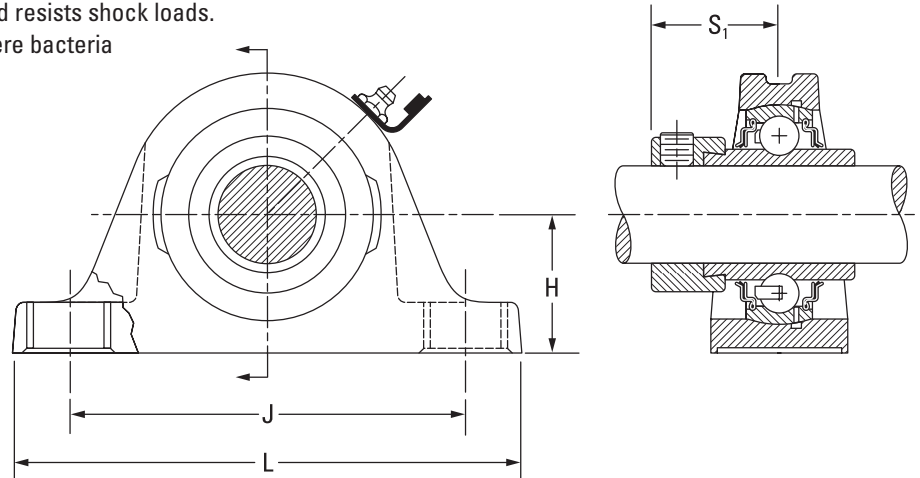
| Unit | Shaft Dia. | Type   | A         | B         | C         | D         | Static Load Rating | Dynamic Load Rating | Speed Rating | Bearing No.         |
|------|------------|--------|-----------|-----------|-----------|-----------|--------------------|---------------------|--------------|---------------------|
|      | in.<br>mm  |        | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | N<br>lbs.          | N<br>lbs.           | RPM          |                     |
| YTB  | 1          | PT SGT | 76.20     | 50.80     | 71.44     | 36.51     | 7700               | 15800               | 6900         | GY1100KRRB TDCF SGT |
|      | 25         |        | 3         | 2         | 2 13/16   | 1 7/16    | 1730               | 3550                | 7000         | GYE25KRRB TDCF SGT  |



| Unit | Shaft Dia. | Type   | A         | B         | C         | D         | E         | F         | G         | Static Load Rating | Dynamic Load Rating | Speed Rating | Bearing No.         |
|------|------------|--------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--------------------|---------------------|--------------|---------------------|
|      | in.<br>mm  |        | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | N<br>lbs.          | N<br>lbs.           | RPM          |                     |
| YFB  | 1          | PT SGT | 85.73     | 63.50     | 41.28     | 46.04     | 38.10     | 28.58     | 118.66    | 6900               | 15300               | 6900         | GY1100KRRB TDCF SGT |
|      | 25         |        | 3 3/8     | 2 1/2     | 1 5/8     | 1 13/16   | 1 1/2     | 1 1/8     | 4 43/64   | 1560               | 3450                | 7000         | GYE25KRRB TDCF SGT  |

### RAK/S SERIES

- This unit is used for the main portion of the process where loads are lighter and corrosion protection is important.
- Durable corrosion-proof polymer housing with stainless-steel crush bushings in mounting holes and a stainless-steel grease fitting with a nylon cap.
- Polymer resists a broad range of acids and alkalis, as well as steam and continuous temperature up to 121° C (250° F), and brief exposure up to 160° C (320° F).
- The polymer strength exceeds static capacity of bearing; housing retains proper bearing fit and resists shock loads.
- The flush base contains no voids where bacteria can collect.
- Corrosion-resistant insert bearing with stainless-steel balls and a nylon retainer. The PT series also features industrial-duty contact seals with stainless-steel shroud caps.
- This unit has a stainless-steel lock collar.
- This unit is factory lubricated with FDA/USDA-approved grease (class H1 lubricant) for incidental food contact.

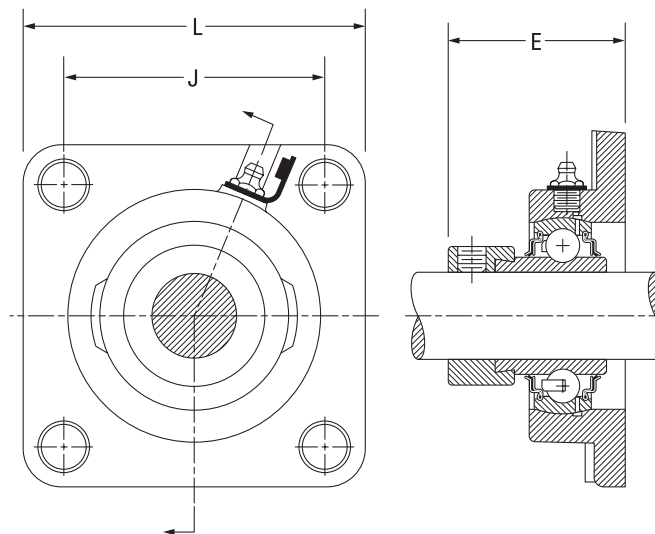


| Unit <sup>(1)</sup> | Shaft Dia.               | Type | RAK H            | RAS H            | J                | L                | S <sub>1</sub>  | Static Load Rating | Dynamic Load Rating | Speed Rating         | Bearing No.                                 | Collar No.                          |
|---------------------|--------------------------|------|------------------|------------------|------------------|------------------|-----------------|--------------------|---------------------|----------------------|---------------------------------------------|-------------------------------------|
|                     | in.<br>mm                |      | mm<br>in.        | mm<br>in.        | mm<br>in.        | mm<br>in.        | mm<br>in.       | N<br>lbs.          | N<br>lbs.           | RPM                  |                                             |                                     |
| RAK/S               | 3/4                      | PT   | 31.75<br>1 1/4   | 33.34<br>1 5/16  | 96.04<br>3 25/32 | 127.00<br>5      | 26.59<br>1 3/64 | 6500<br>1460       | 14500<br>3250       | 9200                 | G1012KRRB<br>TDCF                           | S1012K SS                           |
| RAK/S               | 1<br>25                  | PT   | 33.34<br>1 5/16  | 36.51<br>1 7/16  | 104.78<br>4 1/8  | 139.70<br>5 1/2  | 26.99<br>1 1/16 | 7700<br>1730       | 15800<br>3550       | 6900<br>7000         | G1100KRRB<br>GE25KRRB<br>TDCF               | S1100K SS<br>SE25K SS               |
| RAK/S               | 1 3/16<br>1 1/4<br>30    | PT   | 39.69<br>1 9/16  | 42.86<br>1 11/16 | 117.48<br>4 5/8  | 157.16<br>6 3/16 | 30.16<br>1 3/16 | 11100<br>2500      | 21800<br>4900       | 5800<br>5500<br>5800 | G1103KRRB<br>G1103KRRB3<br>GE30KRRB<br>TDCF | S1103K SS<br>S1103K3 SS<br>SE30K SS |
| RAK/S               | 1 1/4<br>1 3/8<br>1 7/16 | PT   | 46.04<br>1 13/16 | 47.63<br>1 7/8   | 130.18<br>5 1/8  | 166.69<br>6 9/16 | 32.54<br>1 9/32 | 15100<br>3400      | 28500<br>6400       | 5500<br>5000<br>4800 | G1104KRRB<br>G1106KRRB<br>G1107KRRB<br>TDCF | S1104K SS<br>S1106K SS<br>S1107K SS |
| RAK/S               | 1 1/2<br>40              | PT   | 49.21<br>1 15/16 | 49.21<br>1 15/16 | 136.53<br>5 3/8  | 179.39<br>7 1/16 | 34.93<br>1 3/8  | 19600<br>4400      | 36300<br>8150       | 4600<br>4400         | G1108KRRB<br>GE40KRRB<br>TDCF               | S1108KT SS<br>SE40K SS              |

<sup>(1)</sup>Option of low-base RAK or high-base RAS.

### RCJ SERIES

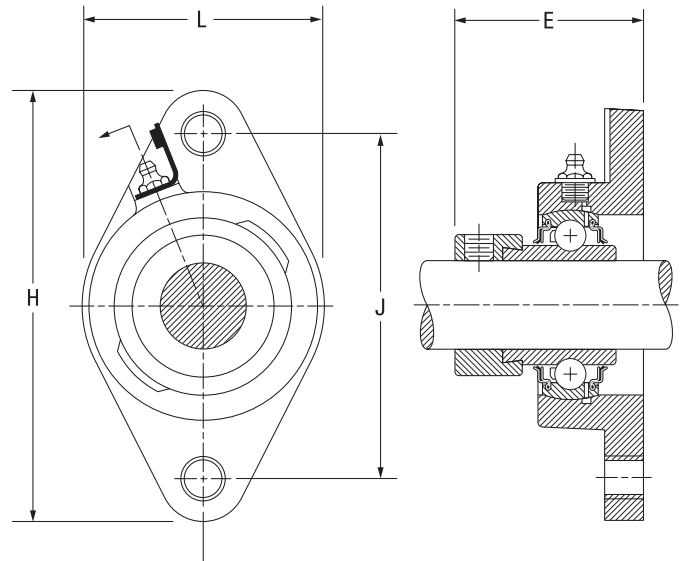
- This unit is used for the main portion of the process where loads are lighter and corrosion protection is important.
- Durable corrosion-proof polymer housing with stainless-steel crush bushings in mounting holes and a stainless-steel grease fitting with a nylon cap.
- Polymer resists a broad range of acids and alkalis, as well as steam and continuous temperature up to 121° C (250° F), and brief exposure up to 160° C (320° F).
- The polymer strength exceeds static capacity of bearing; housing retains proper bearing fit and resists shock loads.
- The flush base contains no voids where bacteria can collect.
- Corrosion-resistant insert bearing with stainless-steel balls and a nylon retainer. The PT series also features industrial-duty contact seals with stainless-steel shroud caps.
- This unit has a stainless-steel lock collar.
- This unit is factory lubricated with FDA/USDA-approved grease (class H1 lubricant) for incidental food contact.



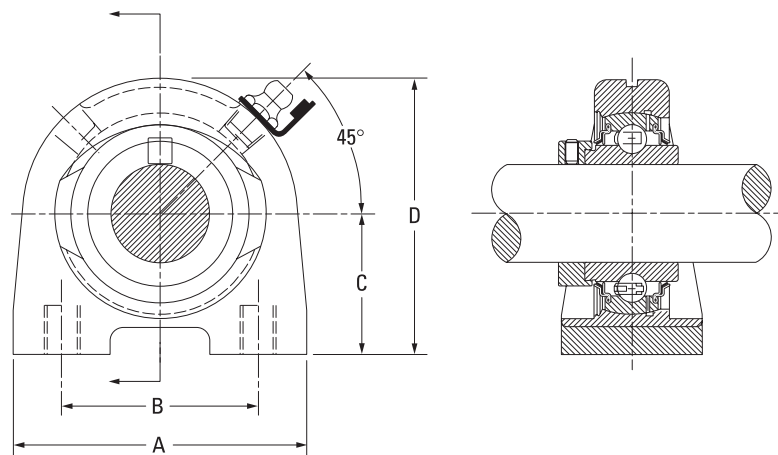
| Unit | Shaft Dia.               | Type |                 |                |                  | Static Load Rating | Dynamic Load Rating | Speed Rating         | Bearing No.                         |                      | Collar No.                          |
|------|--------------------------|------|-----------------|----------------|------------------|--------------------|---------------------|----------------------|-------------------------------------|----------------------|-------------------------------------|
|      | in.<br>mm                |      | L<br>mm<br>in.  | J<br>mm<br>in. | E<br>mm<br>in.   | N<br>lbs.          | N<br>lbs.           | RPM                  |                                     |                      |                                     |
| RCJ  | 3/4                      | PT   | 85.73<br>3 3/8  | 63.50<br>2 1/2 | 43.26<br>1 45/64 | 6500<br>1460       | 14500<br>3250       | 9200                 | G1012KRRB                           | TDCF                 | S1012K SS                           |
| RCJ  | 1<br>25                  | PT   | 95.25<br>3 3/4  | 69.85<br>2 3/4 | 46.04<br>1 13/16 | 7700<br>1730       | 15800<br>3550       | 6900<br>7000         | G1100KRRB<br>GE25KRRB               | TDCF<br>TDCF         | S1100K SS<br>SE25K SS               |
| RCJ  | 1 3/16<br>1 1/4S<br>30   | PT   | 107.95<br>4 1/4 | 82.55<br>3 1/4 | 49.21<br>1 15/16 | 11100<br>2500      | 21800<br>4900       | 5800<br>5500<br>5800 | G1103KRRB<br>G1103KRRB3<br>GE30KRRB | TDCF<br>TDCF<br>TDCF | S1103K SS<br>S1103K3 SS<br>SE30K SS |
| RCJ  | 1 1/4<br>1 3/8<br>1 7/16 | PT   | 117.48<br>4 5/8 | 92.08<br>3 5/8 | 52.78<br>2 5/64  | 15100<br>3400      | 28500<br>6400       | 5500<br>5000<br>4800 | G1104KRRB<br>G1106KRRB<br>G1107KRRB | TDCF<br>TDCF<br>TDCF | S1104K SS<br>S1106K SS<br>S1107K SS |
| RCJ  | 1 1/2<br>40              | PT   | 130.18<br>5 1/8 | 101.60<br>4    | 58.74<br>2 5/16  | 19600<br>4400      | 36300<br>8150       | 4600<br>4400         | G1108KRRB<br>GE40KRRB               | TDCF<br>TDCF         | S1108KT SS<br>SE40K SS              |

### RCJT AND RTB SERIES

- This unit is used for the main portion of the process where loads are lighter and corrosion protection is important.
- Durable corrosion-proof polymer housing with stainless steel crush bushings in mounting holes and a stainless-steel grease fitting with a nylon cap.
- Polymer resists a broad range of acids and alkalis, as well as steam and continuous temperature up to 121° C (250° F), and brief exposure up to 160° C (320° F).
- The polymer strength exceeds static capacity of bearing; housing retains proper bearing fit and resists shock loads.
- The flush base contains no voids where bacteria can collect.
- Corrosion-resistant insert bearing with stainless-steel balls and a nylon retainer. The PT series also features industrial-duty contact seals with stainless-steel shroud caps.
- This unit has a stainless-steel lock collar.
- This unit is factory lubricated with FDA/USDA-approved grease (class H1 lubricant) for incidental food contact.



| Unit | Shaft Dia.               | Type | H                 | J                 | L               | E                | Static Load Rating | Dynamic Load Rating | Speed Rating         | Bearing No.                                        | Collar No.                          |
|------|--------------------------|------|-------------------|-------------------|-----------------|------------------|--------------------|---------------------|----------------------|----------------------------------------------------|-------------------------------------|
|      | in.<br>mm                |      | mm<br>in.         | mm<br>in.         | mm<br>in.       | mm<br>in.        | N<br>lbs.          | N<br>lbs.           | RPM                  |                                                    |                                     |
| RCJT | 3/4                      | PT   | 111.92<br>4 13/32 | 89.69<br>3 17/32  | 60.5<br>2 3/8   | 45.24<br>1 25/32 | 6500<br>1460       | 14500<br>3250       | 9200                 | G1012KRRB TDCF                                     | S1012K SS                           |
| RCJT | 1<br>25                  | PT   | 123.83<br>4 7/8   | 99.22<br>3 29/32  | 69.85<br>2 3/4  | 46.04<br>1 13/16 | 7700<br>1730       | 15800<br>3550       | 6900<br>7000         | G1100KRRB TDCF<br>GE25KRRB TDCF                    | S1100K SS<br>SE25K SS               |
| RCJT | 1 3/16<br>1 1/4S<br>30   | PT   | 141.29<br>5 9/16  | 116.68<br>4 19/32 | 79.38<br>3 1/8  | 49.21<br>1 15/16 | 11100<br>2500      | 21800<br>4900       | 5800<br>5500<br>5800 | G1103KRRB TDCF<br>G1103KRRB3 TDCF<br>GE30KRRB TDCF | S1103K SS<br>S1103K3 SS<br>SE30K SS |
| RCJT | 1 1/4<br>1 3/8<br>1 7/16 | PT   | 155.58<br>6 1/8   | 130.18<br>5 1/8   | 92.08<br>3 5/8  | 52.78<br>2 5/64  | 15100<br>3400      | 28500<br>6400       | 5000<br>4800<br>5500 | G1104KRRB TDCF<br>G1106KRRB TDCF<br>G1107KRRB TDCF | S1104K SS<br>S1106K SS<br>S1107K SS |
| RCJT | 1 1/2<br>40              | PT   | 171.45<br>6 3/4   | 143.67<br>5 21/32 | 104.78<br>4 1/8 | 58.74<br>2 5/16  | 19600<br>4400      | 36300<br>8150       | 4600<br>4400         | G1108KRRB TDCF<br>GE40KRRB TDCF                    | S1108KT SS<br>SE40K SS              |



| Unit | Shaft Dia. | Type | A          | B          | C               | D                | Static Load Rating | Dynamic Load Rating | Limiting Speed | Bearing No.    | Collar No. |
|------|------------|------|------------|------------|-----------------|------------------|--------------------|---------------------|----------------|----------------|------------|
|      | in.        |      | mm<br>in.  | mm<br>in.  | mm<br>in.       | mm<br>in.        | N<br>lbs.          | N<br>lbs.           | RPM            |                |            |
| RTB  | 1          | PT   | 76.20<br>3 | 50.80<br>2 | 36.51<br>1 7/16 | 71.44<br>2 13/16 | 7700<br>1730       | 15300<br>3450       | 6900           | G1100KRRB TDCF | S1100K SS  |

### TIMKEN® SURVIVOR® NT SERIES

Timken® Survivor® NT series housed units offer superior corrosion resistance and durability for food and beverage industries, materials-handling operations, dairy and refrigeration applications, as well as HVAC, chemical, maritime and other highly corrosive environments (fig. A-26). All materials used in the Survivor assemblies, including the grease, are approved for USDA- and FDA-compliant industries (table A-25). The solid base is designed so food particles easily wash out.

Bearing inserts are coated in proprietary Timken thin-dense chrome that will not crack or peel. Combined with stainless-steel locking collars, these offer superior corrosion protection. The robust block option features an electroless nickel-plated housing.

Survivor NT series units are available as:

- High-base and low-base pillow blocks.
- Two-bolt and four-bolt flanged cartridges for popular shaft sizes of ½ in. through 2 15/16 in. (and select metric diameters).

- Take-up unit in the Survivor NT series in limited shaft sizes (RTU-NT). The bearing inserts are available with self-locking collars.

The Survivor NT series is dimensionally interchangeable with the current line of Timken cast-iron housed units.

Our bearing inserts are coated in proprietary Timken thin-dense chrome that will not crack or peel. Inserts are available with a self-locking collar or a set screw locking device. Also available is Timken Shaft Guarding Technology (page A-31), which uses a stainless-steel hardened band to transfer gripping pressure on the shaft. Unlike traditional set screws, which can dig into the shaft, there are no nicks, raised metal or permanent shaft damage. The stainless band won't corrode on the shaft. Housed units with Shaft Guarding Technology also reduce change-out time.



Fig. A-26. Popular styles.

TABLE A-25.

| NT SERIES                |                       |
|--------------------------|-----------------------|
| Component                | Material              |
| Balls                    | Stainless steel       |
| Ball retainer            | Nylon                 |
| Collar                   | Stainless steel       |
| Rings                    | TDC plated            |
| Grease                   | FDA approved          |
| <b>Housing finish</b>    | <b>Nickel plating</b> |
| Grease fitting           | Stainless steel       |
| Grease-fitting cover     | Nylon                 |
| Seals                    | Synthetic rubber      |
| Seal caps                | Stainless steel       |
| Set screw <sup>(1)</sup> | Stainless steel       |

<sup>(1)</sup>Standard Survivor® NT units are only available in the R-series self-locking collar types. Set screw lock series (Y) units are available for minimum quantity orders.

### ORDERING INFORMATION

To order complete Survivor nickel-plated assemblies, simply add the NT suffix to the cast-iron housed-unit designations.

Example: RCJT 1 NT or RAK ¾ NT

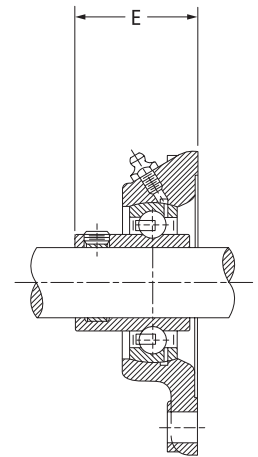
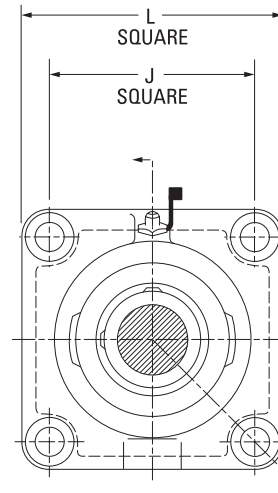
Survivor inserts can be ordered using Timken's standard part number for wide-inner-ring ball bearings with a TDCF suffix.

Example: G1100KRRB + COL TDCF

### NT

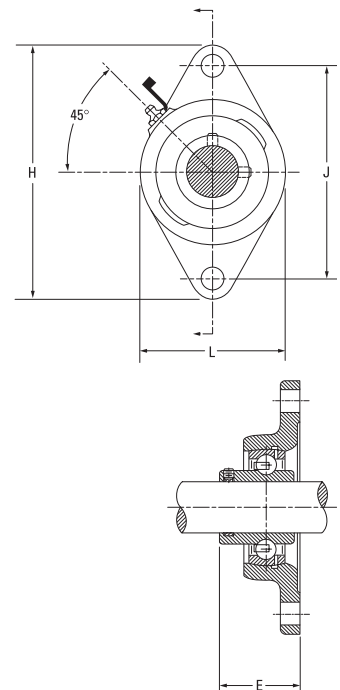
### YCJ AND YCJT SERIES

- This unit has the largest variety of configurations and shaft sizes and is used for the heaviest loads at the beginning of processing.
- Corrosion-resistant housing that is electroless nickel-plated and has a stainless-steel grease fitting. The protective cap withstands corrosion and prevents contamination.
- The corrosion-resistant insert bearing has stainless-steel balls with a nylon retainer. It also has industrial-duty contact seals with stainless-steel shroud caps.
- This unit has stainless-steel set screws with Shaft Guarding Technology.
- The unit is factory lubricated with FDA/USDA-approved grease (class H1 lubricant) for incidental food contact.



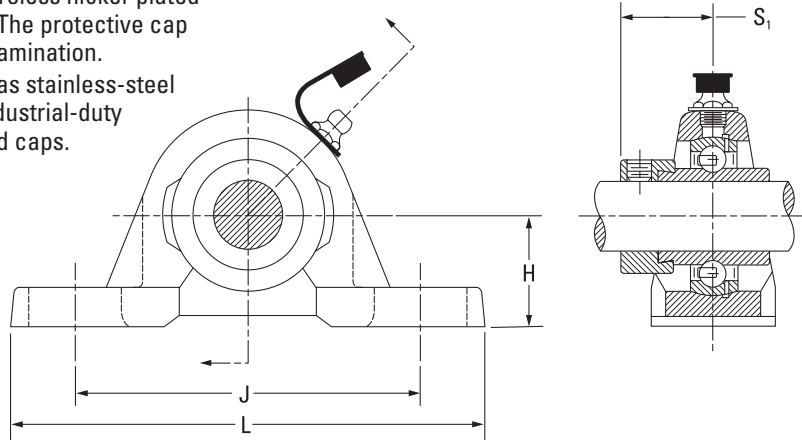
| Unit | Shaft Dia.                     | Type   |                 |                  |                  | Static Load Rating | Dynamic Load Rating | Speed Rating                 | Bearing No.                                         |                                              |
|------|--------------------------------|--------|-----------------|------------------|------------------|--------------------|---------------------|------------------------------|-----------------------------------------------------|----------------------------------------------|
|      | in.<br>mm                      |        | L<br>mm<br>in.  | J<br>mm<br>in.   | E<br>mm<br>in.   | N<br>lbs.          | N<br>lbs.           | RPM                          |                                                     |                                              |
| YCJ  | 1<br>25                        | NT SGT | 95.25<br>3 3/4  | 70.25<br>2 49/64 | 40.08<br>1 37/64 | 7700<br>1730       | 15800<br>3550       | 6900<br>7000                 | GY1100KRRB<br>GYE25KRRB                             | TDCF SGT<br>TDCF SGT                         |
| YCJ  | 1 1/4S<br>30                   | NT SGT | 107.95<br>4 1/4 | 82.55<br>3 1/4   | 42.46<br>1 43/64 | 11100<br>2500      | 21800<br>4900       | 5500<br>5800                 | GY1103KRRB3<br>GYE30KRRB                            | TDCF<br>TDCF SGT                             |
| YCJ  | 1 1/4<br>1 3/8<br>1 7/16<br>35 | NT SGT | 117.48<br>4 5/8 | 92.08<br>3 5/8   | 49.21<br>1 15/16 | 15100<br>3400      | 28500<br>6400       | 5500<br>5000<br>4800<br>4800 | GY1104KRRB<br>GY1106KRRB<br>GY1107KRRB<br>GYE35KRRB | TDCF SGT<br>TDCF SGT<br>TDCF SGT<br>TDCF SGT |
| YCJ  | 1 15/16                        | NT SGT | 142.88<br>5 5/8 | 111.13<br>4 3/8  | 60.72<br>2 25/64 | 22700<br>5100      | 39100<br>8800       | 3600                         | GY1115KRRB                                          | TDCF SGT                                     |
| YCJ  | 2                              | NT SGT | 161.93<br>6 3/8 | 130.18<br>5 1/8  | 64.69<br>2 35/64 | 28500<br>6400      | 48000<br>10800      | 3400                         | GY1200KRRB                                          | TDCF SGT                                     |
| YCJ  | 2 7/16                         | NT SGT | 174.63<br>6 7/8 | 142.88<br>5 5/8  | 74.22<br>2 59/64 | 35600<br>8000      | 58700<br>13200      | 2800                         | GY1207KRRB                                          | TDCF SGT                                     |

| Unit | Shaft Dia.                     | Type                   |                   |                   |                  |                  | Static Load Rating | Dynamic Load Rating | Speed Rating                 | Bearing No.                                     |                                              |
|------|--------------------------------|------------------------|-------------------|-------------------|------------------|------------------|--------------------|---------------------|------------------------------|-------------------------------------------------|----------------------------------------------|
|      | in.<br>mm                      |                        | H<br>mm<br>in.    | J<br>mm<br>in.    | L<br>mm<br>in.   | E<br>mm<br>in.   | N<br>lbs.          | N<br>lbs.           | RPM                          |                                                 |                                              |
| YCJT | 3/4                            | NT SGT                 | 111.92<br>4 13/32 | 89.69<br>3 17/32  | 60.33<br>2 3/8   | 38.50<br>1 33/64 | 6500<br>1460       | 14500<br>3250       | 9200                         | G1012KRRB                                       | TDCF SGT                                     |
| YCJT | 1<br>25                        | NT SGT                 | 123.83<br>4 7/8   | 99.22<br>3 29/32  | 69.85<br>2 3/4   | 40.08<br>1 37/64 | 7700<br>1730       | 15800<br>3550       | 6900<br>7000                 | G1100KRRB<br>GE25KRRB                           | TDCF SGT<br>TDCF SGT                         |
| YCJT | 1 3/16<br>1 1/4S<br>30         | NT SGT<br>NT<br>NT SGT | 141.29<br>5 9/16  | 116.68<br>4 19/32 | 79.38<br>3 1/8   | 43.66<br>1 23/32 | 11100<br>2500      | 21800<br>4900       | 5800<br>5500<br>5800         | G1103KRRB<br>G1103KRRB3<br>GE30KRRB             | TDCF SGT<br>TDCF<br>TDCF SGT                 |
| YCJT | 1 1/4<br>1 3/8<br>1 7/16<br>35 | NT SGT                 | 155.58<br>6 1/8   | 130.18<br>5 1/8   | 92.08<br>3 5/8   | 49.21<br>1 15/16 | 15100<br>3400      | 28500<br>6400       | 5500<br>5000<br>4800<br>4800 | G1104KRRB<br>G1106KRRB<br>G1107KRRB<br>GE35KRRB | TDCF SGT<br>TDCF SGT<br>TDCF SGT<br>TDCF SGT |
| YCJT | 1 1/2<br>40                    | NT SGT                 | 171.45<br>6 3/4   | 143.67<br>5 21/32 | 104.78<br>4 1/8  | 54.37<br>2 9/64  | 19600<br>4400      | 36300<br>8150       | 4600<br>4400                 | G1108KRRB<br>GE40KRRB                           | TDCF SGT<br>TDCF SGT                         |
| YCJT | 1 11/16<br>1 3/4               | NT SGT                 | 179.39<br>7 1/16  | 148.03<br>5 53/64 | 111.13<br>4 3/8  | 55.56<br>2 3/16  | 20000<br>4500      | 36300<br>8150       | 4100<br>3900                 | G1111KRRB<br>G1112KRRB                          | TDCF SGT<br>TDCF SGT                         |
| YCJT | 1 15/16                        | NT SGT                 | 188.91<br>7 7/16  | 157.16<br>6 3/16  | 115.89<br>4 9/16 | 60.72<br>2 25/64 | 22700<br>5100      | 39100<br>8800       | 3600                         | G1115KRRB                                       | TDCF SGT                                     |
| YCJT | 2 3/16                         | NT SGT                 | 215.90<br>8 1/2   | 184.15<br>7 1/4   | 127.00<br>5      | 64.69<br>2 35/64 | 28500<br>6400      | 48000<br>10800      | 3100                         | G1203KRRB                                       | TDCF SGT                                     |



### RAK/S SERIES

- This unit has the largest variety of configurations and shaft sizes and is used for the heaviest loads at the beginning of processing.
- Corrosion-resistant housing that is electroless nickel-plated and has a stainless-steel grease fitting. The protective cap withstands corrosion and prevents contamination.
- The corrosion-resistant insert bearing has stainless-steel balls with a nylon retainer. It also has industrial-duty contact seals with stainless-steel shroud caps.
- This unit has a stainless-steel lock collar.
- The unit is factory lubricated with FDA/USDA-approved grease (class H1 lubricant) for incidental food contact.

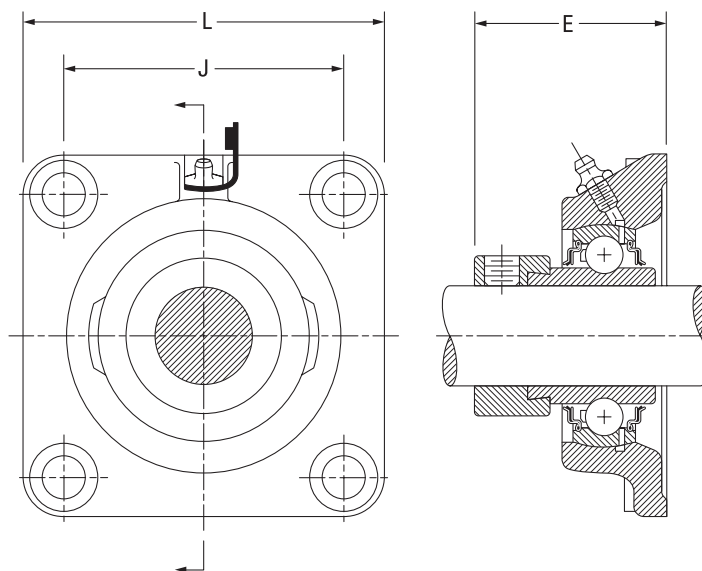


| Unit <sup>(1)</sup> | Shaft Dia.               | Type | RAK H            | RAS H            | J                 | L                 | S <sub>1</sub>   | Static Load Rating | Dynamic Load Rating | Speed Rating         | Bearing No.                                        | Collar No.                          |
|---------------------|--------------------------|------|------------------|------------------|-------------------|-------------------|------------------|--------------------|---------------------|----------------------|----------------------------------------------------|-------------------------------------|
|                     | in.<br>mm                |      | mm<br>in.        | mm<br>in.        | mm<br>in.         | mm<br>in.         | mm<br>in.        | N<br>lbs.          | N<br>lbs.           | RPM                  |                                                    |                                     |
| RAK/S               | 1/2<br>5/8               | NT   | 26.99<br>1 1/8   | 30.16<br>1 3/16  | 92.08<br>3 5/8    | 123.83<br>4 7/8   | 23.42<br>59/64   | 4700<br>1060       | 10700<br>2400       | 13800<br>11000       | G1008KRRB TDCF<br>G1010KRRB TDCF                   | S1008K SS<br>S1010K SS              |
| RAK/S               | 3/4                      | NT   | 31.75<br>1 1/4   | 33.34<br>1 5/16  | 96.04<br>3 25/32  | 127.00<br>5       | 26.59<br>1 3/64  | 6500<br>1460       | 14500<br>3250       | 9200                 | G1012KRRB TDCF                                     | S1012K SS                           |
| RAK/S               | 1<br>25                  | NT   | 33.34<br>1 5/16  | 36.51<br>1 7/16  | 104.78<br>4 1/8   | 139.70<br>5 1/2   | 26.99<br>1 1/6   | 7700<br>1730       | 15800<br>3550       | 6900<br>7000         | G1100KRRB TDCF<br>GE25KRRB TDCF                    | S1100K SS<br>SE25K SS               |
| RAK/S               | 1 3/16<br>1 1/4<br>30    | NT   | 39.69<br>1 9/16  | 42.86<br>1 11/16 | 117.48<br>4 5/8   | 157.16<br>6 3/16  | 30.16<br>1 3/16  | 11100<br>2500      | 21800<br>4900       | 5800<br>5500<br>5800 | G1103KRRB TDCF<br>G1103KRRB3 TDCF<br>GE30KRRB TDCF | S1103K SS<br>S1103K3 SS<br>SE30K SS |
| RAK/S               | 1 1/4<br>1 3/8<br>1 7/16 | NT   | 46.04<br>1 13/16 | 47.63<br>1 7/8   | 130.18<br>5 1/8   | 166.69<br>6 9/16  | 32.54<br>1 9/32  | 15100<br>3400      | 28500<br>6400       | 5500<br>5000<br>4800 | G1104KRRB TDCF<br>G1106KRRB TDCF<br>G1107KRRB TDCF | S1104K SS<br>S1106K SS<br>S1107K SS |
| RAK/S               | 1 1/2<br>40              | NT   | 49.21<br>1 15/16 | 49.21<br>1 15/16 | 136.53<br>5 3/8   | 179.39<br>7 1/16  | 34.93<br>1 3/8   | 19600<br>4400      | 36300<br>8150       | 4600<br>4400         | G1108KRRB TDCF<br>GE40KRRB TDCF                    | S1108KT SS<br>SE40K SS              |
| RAK/S               | 1 11/16<br>1 3/4         | NT   | 52.39<br>2 1/16  | 53.98<br>2 1/8   | 149.23<br>5 7/8   | 191.29<br>7 11/32 | 34.93<br>1 3/8   | 20000<br>4500      | 36300<br>8150       | 4100<br>3900         | G1111KRRB TDCF<br>G1112KRRB TDCF                   | S1111K SS<br>S1112K SS              |
| RAK/S               | 1 15/16                  | NT   | 55.56<br>2 3/16  | 57.15<br>2 1/4   | 157.96<br>6 1/32  | 200.03<br>7 7/8   | 38.10<br>1 1/2   | 22700<br>5100      | 39100<br>8800       | 3600                 | G1115KRRB TDCF                                     | S1115K SS                           |
| RAK/S               | 2<br>2 3/16              | NT   | 61.91<br>2 7/16  | 63.50<br>2 1/2   | 176.21<br>6 15/16 | 222.25<br>8 3/4   | 43.66<br>1 23/32 | 28500<br>6400      | 48000<br>10800      | 3400<br>3100         | G1200KRRB TDCF<br>G1203KRRB TDCF                   | S1200K SS<br>S1203K SS              |
| RAK/S               | 2 7/16                   | NT   | 68.26<br>2 11/16 | 69.85<br>2 3/4   | 188.12<br>7 13/32 | 239.71<br>9 1/16  | 46.83<br>1 27/32 | 35600<br>8000      | 58700<br>13200      | 2800                 | G1207KRRB TDCF                                     | S1207K SS                           |
| RAK/S               | 2 11/16                  | NT   | 76.20<br>3       | —                | 203.20<br>8       | 266.70<br>10 1/2  | 51.59<br>2 1/32  | 42900<br>9650      | 69400<br>15600      | 2600                 | G1211KRRB TDCF                                     | S1211K SS                           |
| RAK/S               | 2 15/16                  | NT   | 84.14<br>3 5/16  | 82.55<br>3 1/4   | 241.30<br>9 1/2   | 304.80<br>12      | 54.77<br>2 5/32  | 43600<br>9800      | 69400<br>15600      | 2300                 | G1215KRRB TDCF                                     | S1215K SS                           |

<sup>(1)</sup>Option of low-base RAK or high-base RAS.

## RCJ SERIES

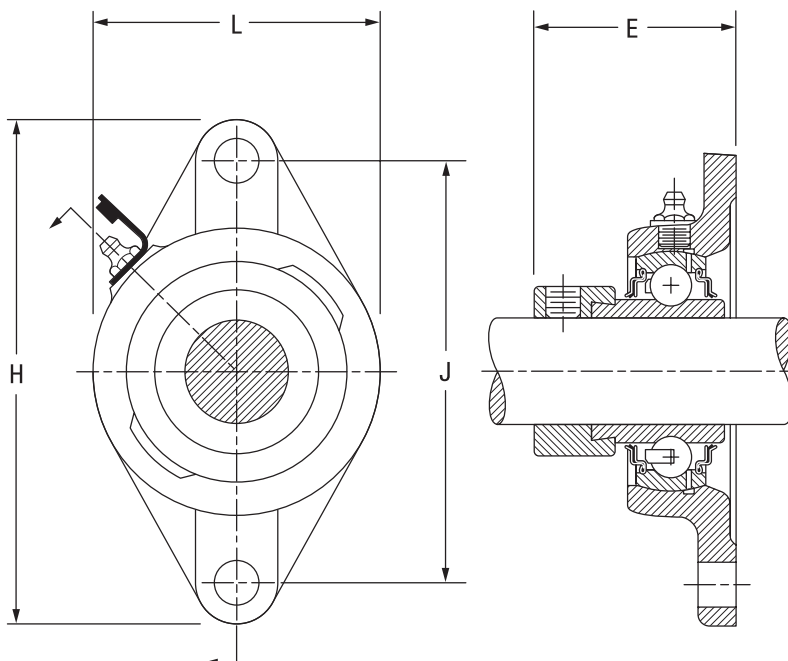
- This unit has the largest variety of configurations and shaft sizes and is used for the heaviest loads at the beginning of processing.
- Corrosion-resistant housing that is electroless nickel-plated and has a stainless-steel grease fitting. The protective cap withstands corrosion and prevents contamination.
- The corrosion-resistant insert bearing has stainless-steel balls with a nylon retainer. It also has industrial-duty contact seals with stainless-steel shroud caps.
- This unit has a stainless-steel lock collar.
- The unit is factory lubricated with FDA/USDA-approved grease (class H1 lubricant) for incidental food contact.



| Unit | Shaft Dia.               | Type |                |                |                | Static Load Rating | Dynamic Load Rating | Speed Rating | Bearing No. |      | Collar No. |
|------|--------------------------|------|----------------|----------------|----------------|--------------------|---------------------|--------------|-------------|------|------------|
|      | in.<br>mm                |      | L<br>mm<br>in. | J<br>mm<br>in. | E<br>mm<br>in. | N<br>lbs.          | N<br>lbs.           | RPM          |             |      |            |
| RCJ  | 1/2<br>5/8               | NT   | 76.20          | 53.98          | 40.10          | 4700               | 10700               | 13800        | G1008KRRB   | TDCF | S1008K SS  |
|      |                          |      | 3              | 2 1/8          | 1 19/32        | 1060               | 2400                | 11000        | G1010KRRB   | TDCF | S1010K SS  |
| RCJ  | 3/4                      | NT   | 85.73          | 63.50          | 46.43          | 6500               | 14500               | 9200         | G1012KRRB   | TDCF | S1012K SS  |
|      |                          |      | 3 3/8          | 2 1/2          | 1 53/64        | 1460               | 3250                |              |             |      |            |
| RCJ  | 1<br>25                  | NT   | 95.25          | 69.85          | 46.80          | 7700               | 15800               | 6900         | G1100KRRB   | TDCF | S1100K SS  |
|      |                          |      | 3 3/4          | 2 3/4          | 1 27/32        | 1730               | 3550                | 7000         | GE25KRRB    | TDCF | SE25K SS   |
| RCJ  | 1 3/16<br>1 1/4S<br>30   | NT   | 107.95         | 82.55          | 50.80          | 11100              | 21800               | 5800         | G1103KRRB   | TDCF | S1103K SS  |
|      |                          |      | 4 1/4          | 3 1/4          | 2              | 2500               | 4900                | 5500         | G1103KRRB3  | TDCF | S1103K3 SS |
|      |                          |      |                |                |                |                    |                     | 5800         | GE30KRRB    | TDCF | SE30K SS   |
| RCJ  | 1 1/4<br>1 3/8<br>1 7/16 | NT   | 117.48         | 92.08          | 53.58          | 15100              | 28500               | 5500         | G1104KRRB   | TDCF | S1104K SS  |
|      |                          |      | 4 5/8          | 3 5/8          | 2 7/64         | 3400               | 6400                | 5000         | G1106KRRB   | TDCF | S1106K SS  |
|      |                          |      |                |                |                |                    |                     | 4800         | G1107KRRB   | TDCF | S1107K SS  |
| RCJ  | 1 1/2<br>40              | NT   | 130.18         | 101.60         | 59.13          | 19600              | 36300               | 4600         | G1108KRRB   | TDCF | S1108KT SS |
|      |                          |      | 5 1/8          | 4              | 2 21/64        | 4400               | 8150                | 4400         | GE40KRRB    | TDCF | SE40K SS   |
| RCJ  | 1 11/16<br>1 3/4         | NT   | 136.53         | 104.78         | 59.13          | 20000              | 36300               | 4100         | G1111KRRB   | TDCF | S1111K SS  |
|      |                          |      | 5 3/8          | 4 1/8          | 2 21/64        | 4500               | 8150                | 3900         | G1112KRRB   | TDCF | S1112K SS  |
| RCJ  | 1 15/16                  | NT   | 142.88         | 111.13         | 66.68          | 22700              | 39100               | 3600         | G1115KRRB   | TDCF | S1115K SS  |
|      |                          |      | 5 5/8          | 4 3/8          | 2 5/8          | 5100               | 8800                |              |             |      |            |
| RCJ  | 2<br>2 3/16              | NT   | 161.93         | 130.18         | 75.41          | 28500              | 48000               | 3400         | G1200KRRB   | TDCF | S1200K SS  |
|      |                          |      | 6 3/8          | 5 1/8          | 2 31/32        | 6400               | 10800               | 3100         | G1203KRRB   | TDCF | S1203K SS  |
| RCJ  | 2 7/16                   | NT   | 174.63         | 142.88         | 81.76          | 35600              | 58700               | 2800         | G1207KRRB   | TDCF | S1207K SS  |
|      |                          |      | 6 7/8          | 5 5/8          | 3 7/32         | 8000               | 13200               |              |             |      |            |
| RCJ  | 2 11/16                  | NT   | 187.33         | 149.23         | 90.49          | 42900              | 69400               | 2600         | G1211KRRB   | TDCF | S1211K SS  |
|      |                          |      | 7 3/8          | 5 7/8          | 3 9/16         | 9650               | 15600               |              |             |      |            |
| RCJ  | 2 15/16                  | NT   | 196.85         | 152.40         | 96.84          | 43600              | 69400               | 2300         | G1215KRRB   | TDCF | S1215K SS  |
|      |                          |      | 7 3/4          | 6              | 3 13/16        | 9800               | 15600               |              |             |      |            |

### RCJT SERIES

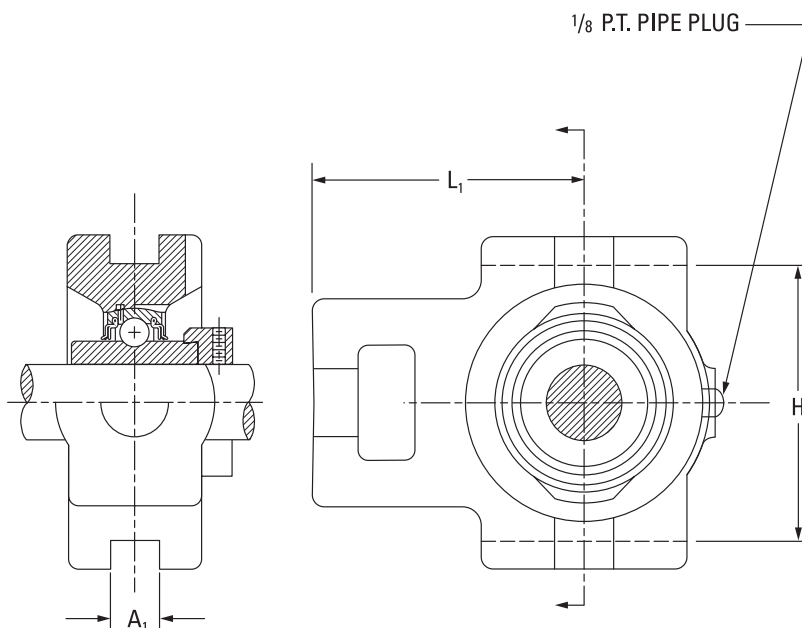
- This unit has the largest variety of configurations and shaft sizes and is used for the heaviest loads at the beginning of processing.
- Corrosion-resistant housing that is electroless nickel-plated and has a stainless-steel grease fitting. The protective cap withstands corrosion and prevents contamination.
- The corrosion-resistant insert bearing has stainless-steel balls with a nylon retainer. It also has industrial-duty contact seals with stainless-steel shroud caps.
- This unit has a stainless-steel lock collar.
- The unit is factory lubricated with FDA/USDA-approved grease (class H1 lubricant) for incidental food contact.



| Unit | Shaft Dia. | Type |           |           |           |           | Static Load Rating | Dynamic Load Rating | Speed Rating | Bearing No. |       | Collar No. |      |      |      |            |      |            |
|------|------------|------|-----------|-----------|-----------|-----------|--------------------|---------------------|--------------|-------------|-------|------------|------|------|------|------------|------|------------|
|      |            |      | H         | J         | L         | E         |                    |                     |              |             |       |            |      |      |      |            |      |            |
|      | in.<br>mm  |      | mm<br>in. | mm<br>in. | mm<br>in. | mm<br>in. | N<br>lbs.          | N<br>lbs.           | RPM          |             |       |            |      |      |      |            |      |            |
| RCJT | 1/2        | NT   | 98.43     | 76.20     | 54.0      | 40.61     | 4700               | 10700               | 13800        | G1008KRRB   | TDCF  | S1008K SS  |      |      |      |            |      |            |
|      | 5/8        |      | 3 7/8     | 3         | 2 1/8     | 1 39/64   | 1060               | 2400                | 11000        | G1010KRRB   | TDCF  | S1010K SS  |      |      |      |            |      |            |
| RCJT | 3/4        | NT   | 111.92    | 89.69     | 60.5      | 46.43     | 6500               | 14500               | 9200         | G1012KRRB   | TDCF  | S1012K SS  |      |      |      |            |      |            |
|      |            |      | 4 13/32   | 3 17/32   | 2 3/8     | 1 59/64   | 1460               | 3250                |              |             |       |            |      |      |      |            |      |            |
| RCJT | 1          | NT   | 123.83    | 99.22     | 69.85     | 46.83     | 7700               | 15800               | 6900         | G1100KRRB   | TDCF  | S1100K SS  |      |      |      |            |      |            |
|      | 25         |      | 4 7/8     | 3 29/32   | 2 3/4     | 1 27/32   | 1730               | 3550                | 7000         | GE25KRRB    | TDCF  | SE25K SS   |      |      |      |            |      |            |
| RCJT | 1 3/16     | NT   | 141.29    | 116.68    | 79.38     | 50.80     | 11100              | 21800               | 5800         | G1103KRRB   | TDCF  | S1103K SS  |      |      |      |            |      |            |
|      | 1 1/4S     |      |           |           |           |           |                    |                     | 5 9/16       | 4 19/32     | 3 1/8 | 2          | 2500 | 4900 | 5500 | G1103KRRB3 | TDCF | S1103K3 SS |
|      | 30         |      |           |           |           |           |                    |                     |              |             |       |            |      |      | 5800 | GE30KRRB   | TDCF | SE30K SS   |
| RCJT | 1 1/4      | NT   | 155.58    | 130.18    | 92.08     | 53.58     | 15100              | 28500               | 5500         | G1104KRRB   | TDCF  | S1104K SS  |      |      |      |            |      |            |
|      | 1 3/8      |      |           |           |           |           |                    |                     | 6 1/8        | 5 1/8       | 3 5/8 | 2 7/64     | 3400 | 6400 | 5000 | G1106KRRB  | TDCF | S1106K SS  |
|      | 1 7/16     |      |           |           |           |           |                    |                     |              |             |       |            |      |      | 4800 | G1107KRRB  | TDCF | S1107K SS  |
| RCJT | 1 1/2      | NT   | 171.45    | 143.67    | 104.78    | 59.13     | 19600              | 36300               | 4600         | G1108KRRB   | TDCF  | S1108KT SS |      |      |      |            |      |            |
|      | 40         |      | 6 3/4     | 5 21/32   | 4 1/8     | 2 21/64   | 4400               | 8150                | 4400         | GE40KRRB    | TDCF  | SE40K SS   |      |      |      |            |      |            |
| RCJT | 1 11/16    | NT   | 179.39    | 148.03    | 111.13    | 59.13     | 20000              | 36300               | 4100         | G1111KRRB   | TDCF  | S1111K SS  |      |      |      |            |      |            |
|      | 1 3/4      |      | 7 1/16    | 5 27/32   | 4 3/8     | 2 21/64   | 4500               | 8150                | 3900         | G1112KRRB   | TDCF  | S1112K SS  |      |      |      |            |      |            |
| RCJT | 1 15/16    | NT   | 188.91    | 157.16    | 115.89    | 66.68     | 22700              | 39100               | 3600         | G1115KRRB   | TDCF  | S1115K SS  |      |      |      |            |      |            |
|      |            |      | 7 7/16    | 6 3/16    | 4 9/16    | 2 5/8     | 5100               | 8800                |              |             |       |            |      |      |      |            |      |            |
| RCJT | 2          | NT   | 215.90    | 184.15    | 127.00    | 75.41     | 28500              | 48000               | 3400         | G1200KRRB   | TDCF  | S1200K SS  |      |      |      |            |      |            |
|      | 2 3/16     |      | 8 1/2     | 7 1/4     | 5         | 2 31/32   | 6400               | 10800               | 3100         | G1203KRRB   | TDCF  | S1203K SS  |      |      |      |            |      |            |

### RTU SERIES

- This unit has the largest variety of configurations and shaft sizes and is used for the heaviest loads at the beginning of processing.
- Corrosion-resistant housing that is electroless nickel-plated and has a stainless-steel grease fitting. The protective cap withstands corrosion and prevents contamination.
- The corrosion-resistant insert bearing has stainless-steel balls with a nylon retainer. It also has industrial-duty contact seals with stainless-steel shroud caps.
- This unit has a stainless-steel lock collar.
- The unit is factory lubricated with FDA/USDA-approved grease (class H1 lubricant) for incidental food contact.



| Unit | Shaft Dia. | Type |                |                |                | Static Load Rating | Dynamic Load Rating | Speed Rating | Bearing No. |      | Collar No. |
|------|------------|------|----------------|----------------|----------------|--------------------|---------------------|--------------|-------------|------|------------|
|      |            |      | A <sub>1</sub> | H <sub>1</sub> | L <sub>1</sub> |                    |                     |              |             |      |            |
|      | in.<br>mm  |      | mm<br>in.      | mm<br>in.      | mm<br>in.      | N<br>lbs.          | N<br>lbs.           | RPM          |             |      |            |
| RTU  | 1          | NT   | 13.49          | 76.20          | 67.47          | 7700               | 15300               | 6900         | G1100KRRB   | TDCF | S1100K SS  |
|      | 25         |      | 17/32          | 3              | 2 21/32        | 1730               | 3450                | 7000         | GE25KRRB    | TDCF | SE25K SS   |
| RTU  | 1 3/16     | NT   | 13.49          | 88.90          | 72.23          | 11100              | 21800               | 5800         | G1103KRRB   | TDCF | S1103K SS  |
|      | 30         |      | 17/32          | 3 1/2          | 2 27/32        | 2500               | 4900                | 5800         | GE30KRRB    | TDCF | SE30K SS   |
| RTU  | 1 1/4      | NT   | 13.49          | 88.90          | 74.61          | 15100              | 28500               | 5500         | G1104KRRB   | TDCF | S1104K SS  |
|      | 1 7/16     |      | 17/32          | 3 1/2          | 2 15/16        | 3400               | 6400                | 4800         | G1107KRRB   | TDCF | S1107K SS  |
| RTU  | 1 1/2      | NT   | 17.46          | 100.81         | 88.11          | 19600              | 36300               | 4600         | G1108KRRB   | TDCF | S1108KT SS |
|      | 40         |      | 11/16          | 3 31/32        | 3 15/32        | 4400               | 8150                | 4400         | GE40KRRB    | TDCF | SE40K SS   |
| RTU  | 1 11/16    | NT   | 17.46          | 100.81         | 88.11          | 20000              | 36300               | 4100         | G1111KRRB   | TDCF | S1111K SS  |
|      | 1 3/4      |      | 11/16          | 3 31/32        | 3 15/32        | 4500               | 8150                | 3900         | G1112KRRB   | TDCF | S1112K SS  |
| RTU  | 1 15/16    | NT   | 17.46          | 100.81         | 91.28          | 22700              | 39100               | 3600         | G1115KRRB   | TDCF | S1115K SS  |
|      |            |      | 11/16          | 3 31/32        | 3 19/32        | 5100               | 8800                |              |             |      |            |
| RTU  | 2          | NT   | 26.99          | 129.38         | 119.86         | 28500              | 48000               | 3400         | G1200KRRB   | TDCF | S1200K SS  |
|      | 2 3/16     |      | 1 1/16         | 5 3/32         | 4 23/32        | 6400               | 10800               | 3100         | G1203KRRB   | TDCF | S1203K SS  |
| RTU  | 2 7/16     | NT   | 26.99          | 129.38         | 119.86         | 35600              | 58700               | 2800         | G1207KRRB   | TDCF | S1207K SS  |
|      |            |      | 1 1/16         | 5 3/32         | 4 23/32        | 8000               | 13200               |              |             |      |            |

### MISCELLANEOUS HOUSED UNITS

#### IDLER PULLEY UNITS

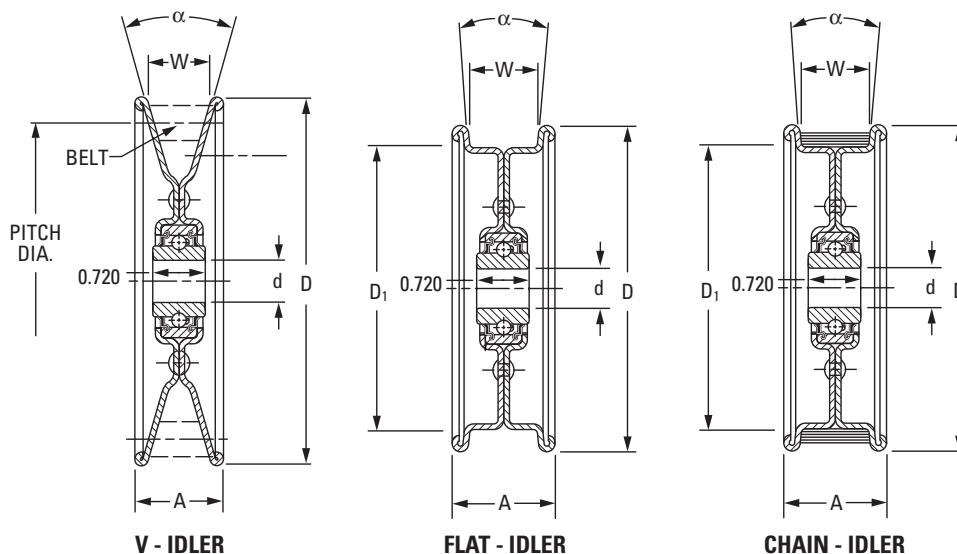
- A pressed-steel pulley and a Timken® precision ball bearing with rubber seals are combined to make a self-contained unit.
- Two pulley designs are available. One for V-belts and another for the backs of V-belts. Both are made for A, B, C and D section belts.
- A chain idler, identical in construction to the flat idler, is available, with the addition of an assembled rubber tire (part number A-10927). The rubber tire cushions the chain, preventing undue wear on the pulley surface or chain.
- Idler pulley units feature a Timken® single-row radial ball bearing with an inner ring extended on both sides. This

provides clearance for abutting parts and greater support on the shaft.

- Contact-type rubber seals help ensure positive retention for lubricant and full protection against dirt, dust and foreign matter.
- All units are non-relubricatable. Special features include smoothly rolled-over edges, eliminating belt chafing and scuffing. The weep holes on the rivet circle allow water drainage when the pulley is mounted in a horizontal position.

**To order, specify PULLEY NUMBER.**

Example: 008-10853 Idler Pulley.

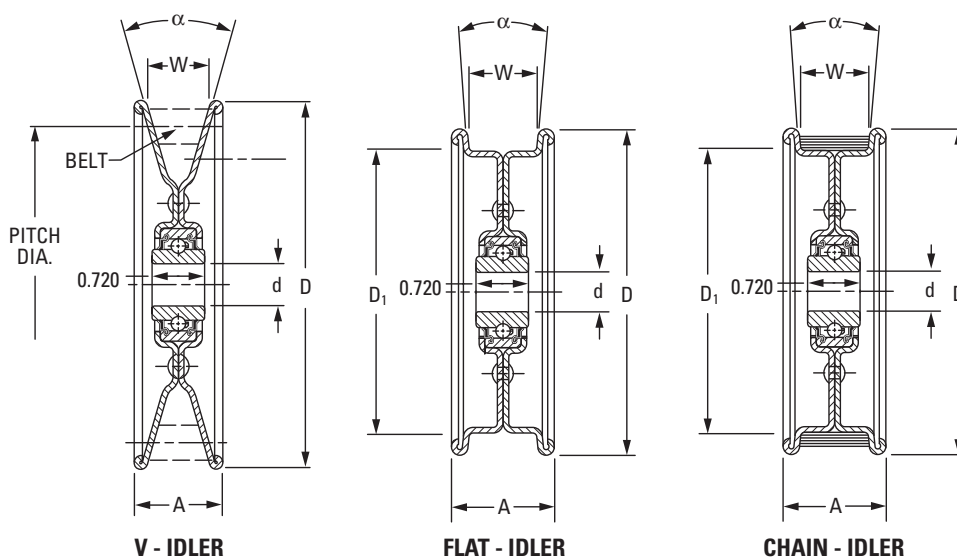


| Pulley No.                | α<br>Included Angle<br>Degrees | Bearing No. | Bore<br>d                      | D               | A           | D <sub>1</sub> | W              | Wt.           |
|---------------------------|--------------------------------|-------------|--------------------------------|-----------------|-------------|----------------|----------------|---------------|
|                           |                                |             | mm<br>in.                      | mm<br>in.       | mm<br>in.   | mm<br>in.      | mm<br>in.      | kg<br>lbs.    |
| V IDLERS                  |                                |             |                                |                 |             |                |                |               |
| 006-11520A <sup>(1)</sup> | 32                             | WS3NPP3     | 10.010/9.780<br>0.3940/0.3850  | 76.2<br>3       | 19.0<br>¾   | —              | 12.45<br>0.049 | 0.145<br>0.32 |
| 10874 <sup>(2)</sup>      | 34                             | 203NPP      | 17.000/16.993<br>0.6693/0.6690 | 101.6<br>4      | 22.2<br>7/8 | —              | 12.70<br>0.500 | 0.417<br>0.92 |
| 010-10874                 | 34                             | 203KRR2     | 16.130/16.260<br>0.6350/0.6400 | 101.6<br>4      | 22.2<br>7.8 | —              | 12.70<br>0.500 | 0.435<br>0.96 |
| 008-10482                 | 32                             | 203KRR5     | 13.080/12.950<br>0.5150/0.5100 | 128.6<br>5 1/16 | 31.8<br>1 ¼ | —              | 22.15<br>0.872 | 0.572<br>1.26 |
| 010-10482                 | 32                             | 203KRR2     | 16.130/16.260<br>0.6350/0.6400 | 128.6<br>5 1/16 | 31.8<br>1 ¼ | —              | 22.15<br>0.872 | 0.558<br>1.23 |
| 008-10853                 | 32                             | 203KRR5     | 13.080/12.950<br>0.5150/0.5100 | 185.7<br>7 5/16 | 31.8<br>1 ¼ | —              | 22.15<br>0.872 | 1.134<br>2.50 |
| 010-10853                 | 32                             | 203KRR2     | 16.13/16.260<br>0.6350/0.6400  | 185.7<br>7 5/16 | 31.8<br>1 ¼ | —              | 22.15<br>0.872 | 1.120<br>2.47 |

<sup>(1)</sup>Inner ring width 13.891 mm – 13.764 mm; (0.5469 in. – 0.5419 in.)

<sup>(2)</sup>12 mm (0.4724 in.) inner ring width 11.999 mm – 11.872 mm (0.4724 in. – 0.4674 in.).

Continued on next page.



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| Pulley No.                | $\alpha$<br>Included Angle<br>Degrees | Bearing No. | Bore                       |                |                 |                |               |               |
|---------------------------|---------------------------------------|-------------|----------------------------|----------------|-----------------|----------------|---------------|---------------|
|                           |                                       |             | d                          | D              | A               | D <sub>1</sub> | W             | Wt.           |
|                           |                                       |             | mm<br>in.                  | mm<br>in.      | mm<br>in.       | mm<br>in.      | mm<br>in.     | kg<br>lbs.    |
| FLAT IDLERS               |                                       |             |                            |                |                 |                |               |               |
| 006-11581A <sup>(1)</sup> | 10                                    | WS3NPP3     | 10.01/9.78<br>0.394/0.385  | 92.1<br>3 5/8  | 30.6<br>1 7/32  | 76.2<br>3      | 22.2<br>7/8   | 0.259<br>0.57 |
| 008-10601                 | 10                                    | 203KRR5     | 13.08/12.95<br>0.515/0.510 | 117.5<br>4 5/8 | 36.5<br>1 7/16  | 101.6<br>4     | 25.4<br>1     | 0.503<br>1.11 |
| 010-10601                 | 10                                    | 203KRR2     | 16.13/16.26<br>0.635/0.640 | 117.5<br>4 5/8 | 36.5<br>1 7/16  | 101.6<br>4     | 25.4<br>1     | 0.490<br>1.08 |
| FLAT IDLERS               |                                       |             |                            |                |                 |                |               |               |
| 008-10483                 | 10                                    | 203KRR5     | 13.08/12.95<br>0.515/0.510 | 158.8<br>6 1/4 | 36.5<br>1 7/16  | 139.7<br>5 1/2 | 25.4<br>1     | 0.803<br>1.77 |
| 010-10483                 | 10                                    | 203KRR2     | 16.13/16.26<br>0.635/0.640 | 158.8<br>6 1/4 | 36.5<br>1 7/16  | 139.7<br>5 1/2 | 25.4<br>1     | 0.789<br>1.74 |
| 008-10650                 | 50                                    | 203KRR5     | 13.08/12.95<br>0.515/0.510 | 158.8<br>6 1/4 | 36.5<br>1 7/16  | 139.7<br>5 1/2 | 25.4<br>1     | 0.785<br>1.73 |
| 010-10650                 | 50                                    | 203KRR2     | 16.13/16.26<br>0.635/0.640 | 158.8<br>6 1/4 | 41.3<br>1 7/16  | 139.7<br>5 1/2 | 25.4<br>1     | 0.771<br>1.70 |
| 008-11515                 | 10                                    | 203KRR5     | 13.08/12.95<br>0.515/0.510 | 222.2<br>8 3/4 | 35.7<br>1 13/32 | 203.2<br>8     | 25.4<br>1     | 1.238<br>2.73 |
| 010-11515                 | 10                                    | 203KRR2     | 16.13/16.26<br>0.635/0.640 | 222.2<br>8 3/4 | 35.7<br>1 13/32 | 203.2<br>8     | 25.4<br>1     | 1.225<br>2.70 |
| 008-10731                 | 10                                    | 203KRR5     | 13.08/12.95<br>0.515/0.510 | 222.2<br>8 3/4 | 48.4<br>1 29/32 | 203.2<br>8     | 38.1<br>1 1/2 | 1.488<br>3.38 |
| 010-10731                 | 10                                    | 203KRR2     | 16.13/16.26<br>0.635/0.640 | 222.2<br>8 3/4 | 48.4<br>1 29/32 | 203.2<br>8     | 38.1<br>1 1/2 | 1.474<br>3.25 |
| CHAIN IDLERS              |                                       |             |                            |                |                 |                |               |               |
| 008-10927                 | 10                                    | 203KRR5     | 13.08/12.95<br>0.515/0.510 | 117.5<br>4 5/8 | 36.5<br>1 7/16  | 111.1<br>4 3/8 | 25.4<br>1     | 0.576<br>1.27 |
| 010-10927                 | 10                                    | 203KRR2     | 16.13/16.26<br>0.635/0.640 | 117.5<br>4 5/8 | 36.5<br>1 7/16  | 111.1<br>4 3/8 | 25.4<br>1     | 0.562<br>1.24 |

<sup>(1)</sup>Inner ring width 13.891 mm – 13.764 mm; (0.5469 in. – 0.5419 in.)

<sup>(2)</sup>12 mm (0.4724 in.) inner ring width 11.999 mm – 11.872 mm (0.4724 in. – 0.4674 in.).

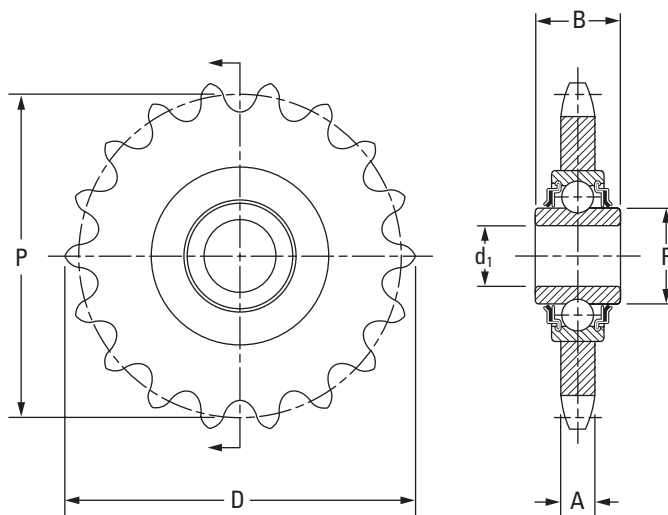
### ROLLER CHAIN IDLER SPROCKETS

- The sintered-steel sprockets are hardened and perform well at an economical cost.
- The roller chain idler sprocket replaces the hardened-plate steel sprockets on most applications.
- All units are non-relubricatable.

**To order, specify SPROCKET NUMBER.**

Example: 010-5017S Idler Sprocket.

Order all bearings with E8728 specification.



| Sprocket No. | Bearing No. | Bore<br>$d_1$                       | A.S.A.<br>Chain No. | No. of<br>Teeth | Pitch       | P              | D               | A              | F              | B             | Bearing Radial<br>Load Rating<br>@500 RPM | Wt.           |
|--------------|-------------|-------------------------------------|---------------------|-----------------|-------------|----------------|-----------------|----------------|----------------|---------------|-------------------------------------------|---------------|
|              |             | mm<br>in.                           |                     |                 | mm<br>in.   | mm<br>in.      | mm<br>in.       | mm<br>in.      | mm<br>in.      | mm<br>in.     | N<br>lbs.                                 | kg<br>lbs.    |
| 008-4018-S   | 203KRR5     | 13.08/12.95<br>0.5150/0.5000        | 40                  | 18              | 12.7<br>1/2 | 73.13<br>2.879 | 79.88<br>3.145  | 7.21<br>0.284  | 24.43<br>0.962 | 18.29<br>0.72 | 3550<br>800                               | 0.200<br>0.44 |
| 008-5017-S   | 203KRR5     | 13.08/12.95<br>0.5150/0.5000        | 50                  | 17              | 15.9<br>5/8 | 86.36<br>3.400 | 94.72<br>3.729  | 8.71<br>0.343  | 24.43<br>0.962 | 18.29<br>0.72 | 3550<br>800                               | 0.299<br>0.66 |
| 008-6015-S   | 203KRR5     | 13.08/12.95<br>0.5150/0.5000        | 60                  | 15              | 19.0<br>3/4 | 91.62<br>3.607 | 101.32<br>3.989 | 11.66<br>0.459 | 24.43<br>0.962 | 18.29<br>0.72 | 3550<br>800                               | 0.417<br>0.92 |
| 010-4018-S   | 203KRR2     | 16.26/16.13<br>0.6400/0.6350        | 40                  | 18              | 12.7<br>1/2 | 73.13<br>2.879 | 79.88<br>3.145  | 7.21<br>0.284  | 24.43<br>0.962 | 18.29<br>0.72 | 3550<br>800                               | 0.200<br>0.44 |
| 010-5017-S   | 203KRR2     | 16.26/16.13<br>0.6400/0.6350        | 50                  | 17              | 15.9<br>5/8 | 86.36<br>3.400 | 94.72<br>3.729  | 8.71<br>0.343  | 24.43<br>0.962 | 18.29<br>0.72 | 3550<br>800                               | 0.299<br>0.66 |
| 010-6015-S   | 203KRR2     | 16.26/16.13<br>0.6400/0.6350        | 60                  | 15              | 19.0<br>3/4 | 91.62<br>3.607 | 101.32<br>3.989 | 11.66<br>0.459 | 24.43<br>0.962 | 18.29<br>0.72 | 3550<br>800                               | 0.417<br>0.92 |
| 011H-5017-S  | 204KRR2     | 17.65/17.52<br>HEX<br>0.6950/0.6900 | 50                  | 17              | 15.9<br>5/8 | 86.36<br>3.400 | 94.72<br>3.729  | 8.71<br>0.343  | 28.73<br>1.131 | 18.29<br>0.72 | 3550<br>800                               | 0.299<br>0.66 |
| 011H-6015-S  | 204RR2      | 17.65/17.52<br>HEX<br>0.6950/0.6900 | 60                  | 15              | 19.0<br>3/4 | 91.62<br>3.607 | 101.32<br>3.989 | 11.66<br>0.459 | 24.43<br>0.962 | 18.29<br>0.72 | 3550<br>800                               | 0.417<br>0.92 |
| 012-8012-S   | 204RR6      | 19.18/19.05<br>0.7500/0.7505        | 80                  | 12              | 25.4<br>1   | 98.15<br>3.864 | 110.41<br>4.347 | 14.60<br>0.575 | 26.62<br>1.048 | 15.49<br>0.61 | 4800<br>1080                              | 0.676<br>1.49 |

### REPLACEMENT BEARINGS

TABLE A-26. HOUSED UNIT REPLACEMENT BEARINGS

| Housed Units                      | Replacement Bearing Assembly   | Features                                                                         | Part No.                                                                                                               |
|-----------------------------------|--------------------------------|----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| C                                 | MUB replaced by 1000KRB & Col. | Standard series (SM) wide inner ring (B-type), collar, caps and wire             | Example: 2 1 <sup>1</sup> / <sub>16</sub> in. (uses MUB 2 1 <sup>1</sup> / <sub>16</sub> in.)                          |
| DRNR                              | 1000KR & Col. (Two)            | Single R-seal (A-type), complete bearing number marked on seal                   | Example: DRNR 1 3 <sup>1</sup> / <sub>16</sub> in. (uses two 1103KR & Col.)                                            |
| FLCT                              | RA000RRB & Col.                | Non-relubricatable; B-spherical outer ring; RR-double R-seal                     | Bearing identification marked on seal.                                                                                 |
| GRFD, GRFDR, GRFTD, GRFTDR        | G1000KRRB & Col.               | G-relubricatable; B-spherical outer ring; RR-double R-seal                       | Complete bearing number marked on seal.<br>Example: GRFD 1 3 <sup>1</sup> / <sub>16</sub> in. (uses G1103KRRB & Col.)  |
| GRKD, GRSD                        | G1000KRRB & Col.               | G-relubricatable; B-spherical outer ring; RR-double R-seal                       | Complete bearing number marked on seal.<br>Example: GRKD 1 3 <sup>1</sup> / <sub>16</sub> in. (uses G1103KRRB & Col.)  |
| GVFD, GVFDR, GVFTD, GVFTDR        | GRA000RRB & Col.               | G-relubricatable; B-spherical outer ring; RR-double R-seal                       | Bearing identification marked on seal.                                                                                 |
| GVKD, GVSD                        | GRA000RRB & Col.               | G-relubricatable; B-spherical outer ring; RR-double R-seal                       | Bearing identification marked on seal.                                                                                 |
| LAK, LAS                          | G1000KLLB & Col.               | G-relubricatable; B-spherical outer ring; LL-double Mechani-seal                 | Complete bearing number marked on seal.<br>Example: LAK 1 3 <sup>1</sup> / <sub>16</sub> in. (uses G1103KLLB & Col.)   |
| LAKHL                             | 1000KLS & Col.                 | L-single Mechani-seal; S-external self-aligning                                  | Complete bearing number marked on seal.<br>Example: LAKHL 1 3 <sup>1</sup> / <sub>16</sub> in. (uses 1103KLS & Col.)   |
| LAO, LSAO                         | GN000KLLB & Col.               | G-relubricatable; B-spherical outer ring; LL-double Mechani-seal                 | Complete bearing number marked on seal.<br>Example: LAO 1 3 <sup>1</sup> / <sub>16</sub> in. (uses GN103KLLB & Col.)   |
| LCJ, LCJT                         | G1000KLLB & Col.               | G-relubricatable; B-spherical outer ring; LL-double Mechani-seal                 | Complete bearing number marked on seal.<br>Example: LCJ 1 3 <sup>1</sup> / <sub>16</sub> in. (uses G1103KLLB & Col.)   |
| LCJO                              | GN000KLLB                      | G-relubricatable; N-Heavy series; B-spherical outer ring; LL-double Mechani-seal | Complete bearing number marked on seal.<br>Example: LCJO 1 3 <sup>1</sup> / <sub>16</sub> in. (uses GN103KLLB & Col.)  |
| PB, PBS, VKD, VSD                 | RA000RRB & Col.                | Non-relubricatable; B-spherical outer ring; RR-double R-seal                     | Bearing identification marked on seal.                                                                                 |
| RA Flangette, RAT Flangette       | RA000RRB & Col.                | Non-relubricatable; B-spherical outer ring; RR-double R-seal                     | Bearing identification marked on seal.                                                                                 |
| RA Relubricatable Flangette       | GRA000RRB & Col.               | G-relubricatable; B-spherical outer ring; RR-double R-seal                       | To order, specify bearings and markings.<br>Example: 1-GRA103RRB & Col., 1-G62MSA marking, 1-G62MSB marking            |
| RAK, RAS, RAKH, RSA               | G1000KRRB & Col.               | G-relubricatable; B-spherical outer ring; RR-double R-seal                       | Complete bearing number marked on seal.<br>Example: RAK 1 3 <sup>1</sup> / <sub>16</sub> in. (uses G1103KRRB & Col.)   |
| RAKHL                             | 1000KRS & Col                  | R-Single R-seal; S-external self-aligning                                        | Complete bearing number marked on seal.<br>Example: RAKHL 1 3 <sup>1</sup> / <sub>16</sub> in. (uses 1103KRS & Col.)   |
| RAKN, RASN                        | 1000KRRB & Col.                | Non-relubricatable; B-spherical outer ring; RR-double R-seal                     | Complete bearing number marked on seal.<br>Example: RAKN 1 3 <sup>1</sup> / <sub>16</sub> in. (uses 1103KRRB & Col.)   |
| RAO, RSAO                         | GN000KRRB & Col.               | G-relubricatable; B-spherical outer ring; RR-double R-seal                       | Complete bearing number marked on seal.<br>Example: RSAO 3 3 <sup>1</sup> / <sub>16</sub> in. (uses GN303KRRB & Col.)  |
| RASC                              | GC1000KRRB & Col.              | G-relubricatable; C-concentric collar; B-spherical outer ring; RR-double R-seal  | Complete bearing number marked on seal.<br>Example: RASC 1 3 <sup>1</sup> / <sub>16</sub> in. (uses GC1103KRRB & Col.) |
| RCJ, RCJT, RC                     | G1000KRRB & Col.               | G-relubricatable; B-spherical outer ring; RR-double R-seal                       | Complete bearing number marked on seal.<br>Example: RCJ 1 3 <sup>1</sup> / <sub>16</sub> in. (uses G1103KRRB & Col.)   |
| RCJN, RR Flangette, RRT Flangette | 1000KRRB & Col.                | Non-relubricatable; B-spherical outer ring; RR-double R-seal                     | Complete bearing number marked on seal.<br>Example: RCJN 1 3 <sup>1</sup> / <sub>16</sub> in. (uses 1103KRRB & Col.)   |
| RFC, RCJC, RCJTC                  | GC1000KRRB & Col.              | G-relubricatable; C-concentric collar; B-spherical outer ring; RR-double R-seal  | Complete bearing number marked on seal.<br>Example: 1 3 <sup>1</sup> / <sub>16</sub> in. (uses GC1103KRRB & Col.)      |
| RFD, RFDR, RFTD, RFTDR            | 1000KRRB & Col.                | Non-relubricatable; B-spherical outer ring; RR-double R-seal                     | Complete bearing number marked on seal.<br>Example: RFD: 1 3 <sup>1</sup> / <sub>16</sub> in. (uses 1103KRRB & Col.)   |

Continued on next page.

# BALL BEARING HOUSED UNITS

## BALL BEARING HOUSED UNITS • REPLACEMENT BEARINGS

Continued from previous page.

| Housed Units                   | Replacement Bearing Assembly    | Features                                                                                                 | Part No.                                                                                                         |
|--------------------------------|---------------------------------|----------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| RKD, RSD                       | 1000KRRB & Col.                 | Non-relubricatable; B-spherical outer ring; RR-double R-seal                                             | Complete bearing number marked on seal.<br>Example: RKD 1 3/16 in. (uses 1103KRRB & Col.)                        |
| RPB                            | RABR (shaft size)               | Non-relubricatable; B-spherical outer ring; RR-double R-seal                                             | RA000RRB FS-450 Bearing and Col. mounted in rubber interliner. Example: RPB 1 3/16 in. (uses an RABR 1 3/16 in.) |
| RR Relubricatable Flangette    | G1000KRRB & Col.                | G-relubricatable; B-spherical outer ring; RR-double R-seal                                               | To order, specify bearing and markings.<br>Example: 1-G1100KRRB & Col., 1-G52MSA marking, 1-G52MSB marking       |
| SA                             | MUB replaced by 1000KRB & Col.  | Standard series (SM) wide-inner-ring ball bearing (B-type), collar, caps and wire                        | Example: SA 1 3/16 in. (uses MUB 1 3/16 in.)                                                                     |
| SAD                            | MUBD replaced by 1000KRB & Col. | Standard series (SM) wide-inner-ring ball bearing (B-type), dust seal, collar, caps and wire             | Example: SA 1 3/16 in. (uses MUB 1 3/16 in.)                                                                     |
| SADD                           | MUBD replaced by N000KRB & Col. | Rear dust seal, otherwise same as SAD                                                                    |                                                                                                                  |
| SAL                            | SM1000KS & Col.                 | S-external self-aligning ring                                                                            | Example: SAL 1 3/16 in. (uses SM1103KS & Col.)                                                                   |
| SAO                            | MUOB replaced by 100KRB & Col.  | Heavy series (SMN) wide-inner-ring ball bearing (B-type), collar, caps and wire                          | Example: SAO 1 3/16 in. (uses MUOB 1 3/16 in.)                                                                   |
| SAOD                           | MUOBD (shaft size)              | Heavy series (SMN) wide-inner-ring ball bearing (B-type), dust seal, collar, caps and wire               | Example: SAOD 1 3/16 in. (uses MUOBD 1 3/16 in.)                                                                 |
| SAODD                          | MUOBD (shaft size)              | Rear dust seal, otherwise same as SAOD                                                                   |                                                                                                                  |
| SAOL                           | SMN000KS & Col.                 | S-external self-aligning ring heavy series                                                               | Example: SAOL 1 3/16 in. (uses SMN103KS & Col.)                                                                  |
| SAS, SAK                       | GYA000RRB                       | G-relubricatable; B-spherical outer ring; RR-double R-seal                                               | Bearing identification marked on seal.                                                                           |
| SCJ, SCJT                      | GYA000RRB                       | G-relubricatable; B-spherical outer ring; RR-double R-seal                                               | Bearing identification marked on seal.                                                                           |
| TAK, TAS                       | G1000KPPB & Col.                | G-relubricatable; B-spherical outer ring; PP-Double tri-ply seal                                         | Complete bearing number marked on seal.<br>Example: TAK 1 3/16 in. (uses G1103KPPB3 & Col.)                      |
| TCJ, TCJT                      | G1000KPPB & Col.                | G-relubricatable; B-spherical outer ring; PP-Double tri-ply seal                                         | Complete bearing number marked on seal.<br>Example: TCJ 1 3/16 in. (uses G1103KPPB3 & Col.)                      |
| VAK, VAS                       | GRA000RRB & Col.                | G-relubricatable; B-spherical outer ring; RR-double R-seal                                               | Bearing identification marked on seal.                                                                           |
| VCJ, VCJT                      | GRA000RRB & Col.                | G-relubricatable; B-spherical outer ring; RR-double R-seal                                               | Bearing identification marked on seal.                                                                           |
| VFD, VFDR, VFTD, VFTDR         | RA000RRB & Col.                 | Non-relubricatable; B-spherical outer ring; RR-double R-seal                                             | Bearing identification marked on seal.                                                                           |
| YAS, YAK, YASM, YCJ, YCJT, YTU | GY-KRRB                         | G-relubricatable; B-spherical outer ring; RR-double R-seal, Y-series wide inner ring                     | Bearing identification marked on seal.                                                                           |
| OTHER TYPES                    |                                 |                                                                                                          |                                                                                                                  |
| LTU Take-Up                    | G1000KLLB & Col.                | G-relubricatable; B-spherical outer ring; LL-double Mechani-seal                                         | Complete bearing number marked on seal.<br>Example: LTU 1 3/16 in. (uses G1103KLLB & Col.)                       |
| RHC, RHCM Hanger               | GC1000KRRB & Col.               | G-relubricatable; C-concentric collar; B-spherical outer ring; RR-double R-seal                          | Complete bearing number marked on seal.<br>Example: RCH 1 1/2 in. (uses GC1108KRRB & Col.)                       |
| RTU Take-Up                    | G1000KRRB & Col.                | G-relubricatable; B-spherical outer ring; RR-double R-seal                                               | Complete bearing number marked on seal.<br>Example: RTU 1 3/16 in. (uses G1103KRRB & Col.)                       |
| STU Take-Up                    | GYA-RRB                         | G-relubricatable; B-spherical outer ring; RR-double R-seal                                               | Complete bearing number marked on seal.<br>Example: STU 1 3/16 in. (uses GYA103RRB)                              |
| TU Take-Up                     | MUB replaced by 1000KRB & Col.  | Standard series (SM) wide-inner-ring ball bearing (B-type), collar, caps and wire                        | Example: TU 2 11/16 in. (uses MUB 2 11/16 & Col.)                                                                |
| YTU Take-Up                    | GY-KRRB                         | G-relubricatable; B-spherical outer ring; RR-double R-seal; Y-series wide inner ring with set screw lock | Complete bearing number marked on seal.<br>Example: YTU 1 3/16 in. (uses GY1103KRRB)                             |

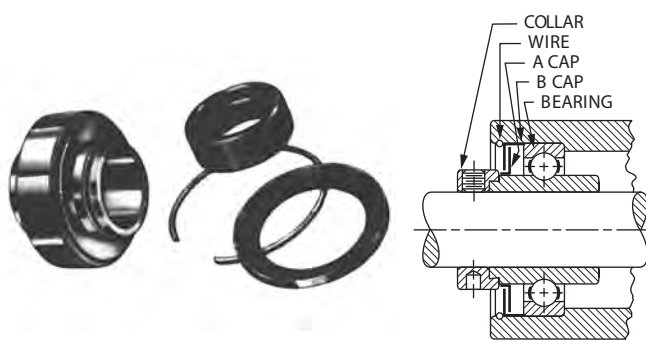
## **MACHINE UNITS**

A complete machine unit consists of either a standard (SM) or heavy (SMN) series wide-inner-ring ball bearing, an inner and outer sealing cap, a retaining wire and self-locking collar, or an integrally sealed bearing and collar. These units are available as bearing replacements for Timken power transmission units such as the SA, SAO, DSA and DSAO pillow blocks, and C and Co cylindrical cartridges or special housings.

These are available in two types, A and B, as described below.

### **A-TYPE**

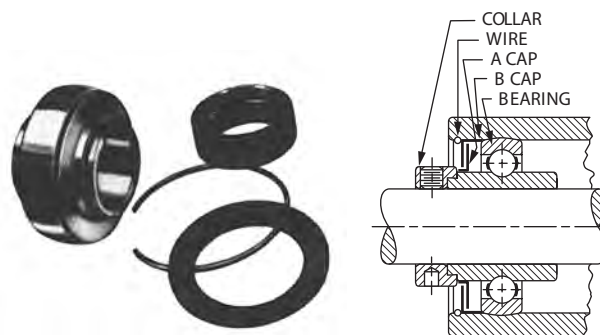
Fig. A-27 shows a machine unit with an A-type bearing carrying the designation MUA (standard series) and MUOA (heavy series). It consists of a wide inner ring, open type or one-piece R-seal bearing, collar, caps and wire. The “caps” are two steel members which comprise a non-integral frictionless labyrinth seal. The inner member is pressed on the inner ring and rotates with it. The outer member is pressed in the housing against the face of the outer ring and is held in place by the round retaining wire.



**Fig. A-27. MUA, MUOA.**

### **B-TYPE**

Fig. A-28 is the same as fig. A-27, except that the bearing is B-type and the seal on the collar side is either a labyrinth seal (as shown) or a one-piece R-seal. In the latter case no wire is supplied. The designation of the machine unit is MUB (standard series) or MUOB (heavy series). The B-type bearing is mounted in the spherical housing seat by means of two slots milled diametrically opposite each other in the housing. The bearing can be inserted at right angles and swiveled into position. No additional shoulders or snap rings are required to locate this type.



**Fig. A-28. MUB, MUOB.**

**TIMKEN® BALL BEARING HOUSED UNIT SAFETY END CAPS MAKE WORKPLACE PROTECTION A SNAP**

Easy-to-install Timken® safety end caps protect exposed rotating shafts, reducing hazards around many types of equipment.

The Timken safety product line consists of a mounting ring and snap-on cover, both molded in durable, bright-yellow polymer. The end cap snaps into the adhesive-backed ring that adheres to the outboard face of most flanged bearing housings. The secure 360-degree fit makes for a rugged unit that also provides basic protection and washdown.

Factory retrofits are a snap with everything provided in a handy kit. The cost-effective end covers are simple-to-install on Timken and most other flanged units. Current sizes range from 20 mm to 50 mm (¾ in. to 1 15/16 in.) shaft sizes for two or four-bolt flanged cast-iron, malleable iron and other selected housing styles and sizes.



Fig. A-29. Safety end caps protect against rotating stub shafts.

**KIT CONTENTS**

Timken safety end caps come in a convenient kit that contains everything required for a safe and durable mounting:

- Polymer end cap.
- Adhesive-backed polymer mounting ring.
- Scuffing pad.
- Cleaning cloth.

**INSTALLATION**

Steps in the simple mounting procedure include:

1. Use the scuffing pad on housing’s mating surface where the mounting ring will be placed.
2. Clean off the mounting area.
3. Attach the adhesive-backed mounting ring.
4. Hold the mounting ring in place with pressure for 60 seconds.
5. Allow the adhesive to set for a minimum of one hour.
6. Snap the end cap into place.

**ORDERING INFORMATION**

TABLE A-27. ORDERING INFORMATION

| Kit <sup>(1)</sup> | Shaft Sizes                           |
|--------------------|---------------------------------------|
| 204 ECY Kit        | 20 mm, ¾                              |
| 205 ECY Kit        | 25 mm, 7/8, 15/16, 1                  |
| 206 ECY Kit        | 30 mm, 1 1/16, 1 1/8, 1 3/16, 1 1/4 S |
| 207 ECY Kit        | 35 mm, 1 1/4, 1 5/16, 1 3/8, 1 7/16,  |
| 208 ECY Kit        | 40 mm, 1 1/2                          |
| 209 ECY Kit        | 45 mm, 1 5/8, 1 11/16, 1 3/4          |
| 210 ECY Kit        | 50 mm, 1 15/16, 2 S                   |

<sup>(1)</sup>Kits are designed to fit the following housed units –  
Four-bolt: YCJ, RCJ, RCJC, TCJ, LCJ, SCJ, VCJ  
Two-bolt: YCJT, RCJT, RCJTC, TCJT, LCJT, SCJT, VCJT

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# TIMKEN

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