DODGE
AN RBC COMPANY

Mounted Bearings

ROLLER, HYDRODYNAMIC, AND PLAIN

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WARNING

The information provided for Product Interchange in this catalog is for use only as a general reference by persons qualified to recognize unreasonable selection options. Products suggested as substitutes may have dimensional, rating, pricing and other differences from products to be replaced. This selection method must be used in conjunction with the applicable product catalog which contains important precautions and other pertinent information.

In illustrations throughout this catalog, safety guards have been removed for photographic purposes.

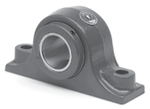
Warning: Because of the possible danger to person(s) or property from accidents which may result from the improper use of products, it is important that correct procedures be followed: Products must be used in accordance with the engineering information specified in the catalog. Proper installation, maintenance and operation procedures must be observed. The instructions in the instruction manuals must be followed. Inspections should be made as necessary to assure safe operation under prevailing conditions. Proper guards and other suitable safety devices or procedures as may be described or as may be specified in safety codes should be provided, and are neither provided by Dodge Industrial nor are the responsibility of Dodge Industrial. This unit and its associated equipment must be installed, adjusted and maintained by qualified personnel who are familiar with the construction and operation of all equipment in the system and the potential hazards involved. When risk to persons or property may be involved, a holding device must be an integral part of the driven equipment beyond the speed reducer output shaft.

Table of Contents

RGB-1	**Reference guide**
B20-1	Type E family (tapered)
B21-1	Specialty tapered
B22-1	Safety Mount® family (spherical)
B23-1	S-2000 (spherical)
B24-1	Unified SAF (spherical)
B25-1	Specialty spherical
B26-1	Sleevoil® (hydrodynamic)
B27-1	Solidlube® (plain)
B28-1	Sleeve (plain)
B29-1	Accessories
PN-1	Part number index

Reference guide

Bearings



Type E tapered roller bearings
Page B20-1

- Pre-assembled, pre-lubricated, and factory-adjusted to be shaft-ready out of the box
- XTS triple-lip seal
- E-Tect seal option for extra protection
- Comparable mounting dimensions with ball bearings
- Allows for easy and cost-effective upgrade from ball bearings
- Sensor-ready for condition monitoring
- Harsh Duty™ series option available for premium protection against contamination with 100 percent grease fill, the ArmorTect sealing system, and a 1-year performance guarantee with OPTIFY™ Intelli-Lube®

TAF tapered roller bearings
Page B20-1

- Pre-assembled, pre-lubricated, and factory-adjusted to be shaft-ready out of the box
- XTS triple-lip seal
- E-Tect seal option available up to five-inch bore sizes for extra protection
- Cost-saving alternative to SAF-style spherical bearings
- Shaft-ready—mounts six times faster than SAF-style bearings
- Interchangeable with SAF-style pillow blocks
- Capable of +/- five degrees static misalignment
- Self-aligning
- Sensor-ready for condition monitoring
- Harsh Duty series option available for premium protection against contamination with 100 percent grease fill, the ArmorTect sealing system, and a 1-year performance guarantee with OPTIFY Intelli-Lube

Type EXL tapered roller bearings
Page B20-1

- Pre-assembled, pre-lubricated, and factory-adjusted to be shaft-ready out of the box
- XTS triple-lip seal
- Completely sealed inner unit
- High-strength, ductile-iron housing
- Available in expansion and non-expansion
- Capable of +/- four degrees static misalignment
- Self-aligning
- Sensor-ready for condition monitoring

Double Interlock® tapered roller bearings
Page B20-1

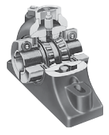
- Pre-assembled, pre-lubricated, and factory-adjusted to be shaft-ready out of the box
- XTS triple-lip seal
- E-Tect seal option for extra protection
- Special clearances and greases available
- Sealed inner unit
- Capable of +/- five degrees static misalignment
- Self-aligning
- Sensor-ready for condition monitoring

Reference guide

Bearings (continued)

Type K tapered roller bearings
Page B20-1

- Pre-assembled, pre-lubricated, and factory-adjusted to be shaft-ready out of the box
- XTS triple-lip seal
- E-Tect seal option for extra protection
- Reduced length-through-bore
- Single-collar design saves space and installation time
- Allows bearing to be closer to the load for optimization of design
- Capable of +/- five degrees static misalignment
- Self-aligning
- Sensor-ready for condition monitoring



Type C tapered roller bearings
Page B21-1

- Two single-row tapered bearings press-fitted on sleeve
- Improved concentricity over other collar-mounted types of bearings
- Steel labyrinth seals
- Rugged two-piece outer housing
- Positive concentric clamp sleeve mounting
- Heavy-duty gray iron

Special Duty tapered roller bearings
Page B21-1

- Matched double-row tapered roller bearing
- Tapered adapter sleeve mounting
- Effective piston ring seals
- Rugged two-piece housing
- Heavy-duty gray iron

Safety Mount IP spherical roller bearings
Page B22-1

- Patented push-pull adapter mounting system for the easiest installation and removal compared to SAF-style bearings
- Solid, cast-iron housing
- Available in 2- and 4-bolt pillow blocks, flanges, and take-ups
- Installation and removal in less than 15 minutes
- Fully concentric shaft attachment
- Mitigates fretting corrosion
- Capable of +/- one degree static or dynamic misalignment
- Pre-assembled and pre-lubricated to be shaft-ready out of the box
- Standard Trident™ triple-lip seal for maximum protection in wet or dirty environments
- Labyrinth non-contact seal option available for high-speed and high-temperature applications
- E-dimensioned and steel housings available
- Field-convertible between expansion and non-expansion
- Sensor-ready for condition monitoring

Reference guide

Bearings (continued)

Safety Mount ISAF spherical roller bearings
Page B22-1

- Patented push-pull adapter mounting system for the easiest installation and removal compared to SAF-style bearings
- Dimensionally interchangeable with SAF-style bearings
- Split, cast-iron housing
- Installation and removal in less than 15 minutes
- Fully concentric shaft attachment
- Mitigates fretting corrosion
- Capable of +/- one degree static or dynamic misalignment
- Pre-assembled and pre-lubricated to be shaft-ready out of the box
- Standard Trident triple-lip seal for maximum protection in wet or dirty environments
- Labyrinth non-contact seal option available for high-speed and high-temperature applications
- Field-convertible from expansion and non-expansion
- Sensor-ready for condition monitoring

Safety Mount ISN spherical roller bearings
Page B22-1

- Patented push-pull adapter mounting system for the easiest installation and removal compared to SN-style bearings
- Dimensionally interchangeable with SN-style bearings
- Solid, cast-iron housing
- Available in 2- and 4-bolt plummer blocks
- Installation and removal in less than 15 minutes
- Fully concentric shaft attachment
- Mitigates fretting corrosion
- Capable of +/- one degree static or dynamic misalignment
- Pre-assembled and pre-lubricated to be shaft-ready out of the box
- Standard Trident triple-lip seal for maximum protection in wet or dirty environments
- Labyrinth non-contact seal option available for high-speed and high-temperature applications
- Field-convertible between expansion and non-expansion
- Sensor-ready for condition monitoring

Reference guide
Bearings (continued)

S-2000 spherical roller bearings
Page B23-1

- High-capacity, double-row spherical rollers
- Capable of +/- one degree static or dynamic misalignment
- Pre-assembled, pre-adjusted, and pre-lubricated to be shaft-ready out of the box
- Features Springlok collar that acts as a flinger
- Standard Trident triple-lip seal for maximum protection in wet or dirty environments
- Labyrinth non-contact seal option available for high-speed and high-temperature applications
- 65-degree set screw attachment provides maximum holding power compared to 90- or 120-degree angles
- Steel and E-dimensioned housings available
- Sensor-ready for condition monitoring

USAF spherical roller bearings
Page B24-1

- 22200, 22300, 23000, 23100, and 23200 series
- Industry-standard dimensions interchangeable with SAF housings
- Five sealing options to match most operating conditions
- Cast-in dimples locate drill holes for lube fitting, vents, sensors, and mounting modifications
- Standard housings have two oversized drains adaptable for circulating oil systems
- Pry slots allow easy separation of the pillow block
- Sensor-ready for condition monitoring

Split-Sphere spherical roller bearings
Page B24-1

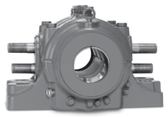
- Fully-split spherical roller bearing drop-in replacement for USAF 500 series non-split bearing
- Easy to replace without removing other shaft-mounted components
- Only split-race bearing made to standard SAF pillow block dimensions
- Has same outer diameter (OD) dimensions as a standard spherical bearing
- Uses 22200 series split roller bearings
- Sensor-ready for condition monitoring

Unisphere® II spherical roller bearings
Page B25-1

- Dimensionally interchangeable with ball bearings in length-through-bore, base-to-center height, and footprint
- Approximately five times the load rating of ball bearings
- Features same rolling elements and installation-ready components as S-2000
- Maintains sealing effectiveness with proven "R" seal
- Tapered seal landing maintains seal contact during maximum misalignment
- Springlok collar mount with 65-degree set screw angle for optimum clamping force
- Sensor-ready for condition monitoring

Reference guide

Bearings (continued)



Sleevoil R-series hydrodynamic bearings
Page B26-1

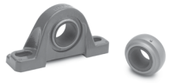
- No metal-to-metal contact during operation for extended life
- Handles high speeds
- Dampens vibration, providing quiet operation
- Fully split for ease of maintenance
- Self-aligning
- Thrust capability
- External cooling (air, water, or oil) available for hot applications

Sleevoil RTL-series hydrodynamic bearings
Page B26-1

- Upgraded spherical design does not require plunger screw re-tightening (2014)
- Fully-split construction
- Engineered for water or oil cooling in high-temperature applications
- Rugged, gray-iron housing
- Babbitted liner
- Self-alignment capability
- Trapezoidal oil ring lubrication with self-contained oil supply
- No metal-to-metal contact during operation
- Superior thrust capacity in fan applications

Sleevoil oil level and filtration system (OLF2)
Page B26-1

- Maintains proper oil level while bearing is running
- Increases bearing performance and life
- Allows even oil distribution and cooler operating temperatures
- Ensures filtered clean oil



Solidlube sleeve bearings
Page B27-1

- Functions in harsh environments where ball bearings will not
- Self-lubricating, statically self-aligning
- Covers a wide range of temperature extremes
- 700 series: -40 °F to 700 °F
- 800 series: -40 °F to 800 °F
- 1000 series: -200 °F to -40 °F and 250 °F to 1000 °F
- Housing types: 2-bolt pillow blocks, 4-bolt and 2-bolt flange units, and take-up units
- Ideal where bearings are subject to dry cycles or where lube systems would be too costly
- Recommended for slow speeds and limited shaft movement applications
- Bore sizes 3/4 inches to 5 inches

Reference Guide
Type E Family (Tapered)
Specialty Tapered
Safety Mount Family (Spherical)
S-2000 (Spherical)
Unified SAF (Spherical)
Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

Reference guide

Bearings (continued)

Bronzoil sleeve bearings
Page B28-1

- Self-oiling bushing feeds oil to shaft
- Split-pressed steel housing
- Statically self-aligning
- Bushing shoulder provides self-lubricating bearing thrust surface
- Slotted bolt holes

Bronze-Bushed sleeve bearings
Page B28-1

- Good for slower speeds and shock loads
- Capable of MPTA load ratings
- Cast-iron housings in 2- and 4-bolt pillow blocks
- Features fully split housing option
- Bronze bushing is split and easily replaced

Babbitted sleeve bearings
Page B28-1

- Engineered for reliability in slower speed applications
- Capable of MPTA load ratings
- Solid and split housing styles available
- Cast-iron housings in 2- and 4-bolt pillow blocks

Take-up frames
Page B29-1

- Seven take-up frame types available from stock
- Standard take-up frames travel from 1-1/2 inches to 60 inches
- Take-up frames allow for the mounting of Dodge roller and sleeve bearings
- Take-up frame capacity is pre-engineered to exceed bearing capacity
- Made to provide/maintain tension and shaft centers on a variety of belts and chain-type conveyors

IIoT technologies
Page B29-1

- Wireless sensors for remote condition monitoring
- Automatic lubricator for simple, hands-free maintenance
- Easy installation and setup
- Free, easy-to-use platform for remote condition monitoring of connected assets

For instruction manuals and additional information, refer to **dodge.ptplace.com.**

Type E family (tapered)

B20-1	**Type E family (tapered)**
B20-2	**Features and benefits**
B20-8	**Specification**
B20-8	**How to order**
B20-9	**Nomenclature**
B20-10	**Selection**
B20-22	**Dimensions**
B20-22	Type E
B20-34	Type EXL
B20-42	TAF
B20-50	Double Interlock
B20-58	Type K
B20-68	**Metric**
B20-68	Selection
B20-74	Type E
B20-76	Double Interlock
B20-78	**Accessories**

Features and benefits

Type E family

Overview

Introduced in 1943, the original Type E bearing immediately made an impact—giving customers an economical solution capable of handling heavy loads in harsh applications. Since its launch over 80 years ago, our Type E has grown to a family of solutions that have set the industry benchmark for mounted tapered roller bearings in quality, reliability, and longer driven equipment life.

Family features

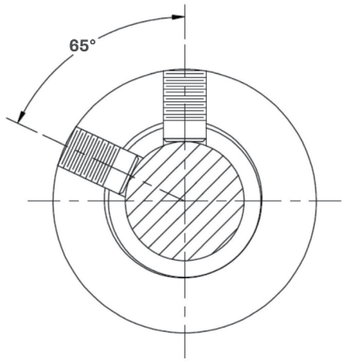
- Factory-assembled to be shaft-ready out of the box
- Case hardened rollers and races
- Factory-filled with Dodge engineering-approved NLGI grade 2 lithium-complex grease
- 65-degree set screw angle maximizes holding power compared to 90- and 120-degree angles
- Mechanically retained XTS triple-lip seal
- Oversized Springlok collars act as flingers for added protection
- Pre-drilled and tapped to be sensor-ready

XTS sealing system

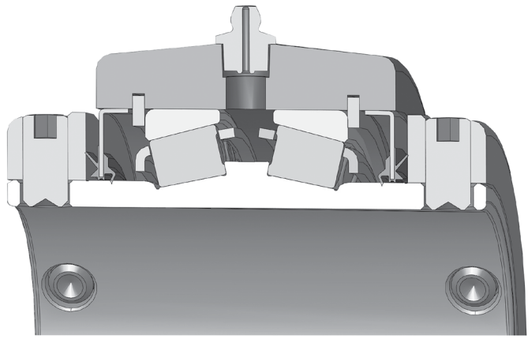
Engineering studies have found that 80 percent of all mounted bearing failures are due to contamination or lubrication issues. Dodge sealing systems are designed to prevent contamination, retain lubricant, and prevent seal blowout for increased bearing life. Type E family bearings come standard with the XTS triple-lip sealing system for optimized performance.

- Mechanically retained to optimize grease retention while preventing seal blowout
- Collar-riding seal lip provides the first level of defense against contaminants
- Trash guard protects inner seals
- Primary contact seal protects internal components and helps retain grease
- Optional E-Tect seal kit available for extra protection

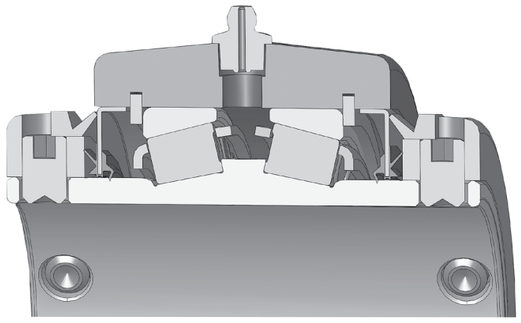
Note: Instruction manuals can be found at dodge.ptplace.com.



Set screw angle maximizes holding power



XTS sealing



XTS sealing with E-Tect option

Type E family

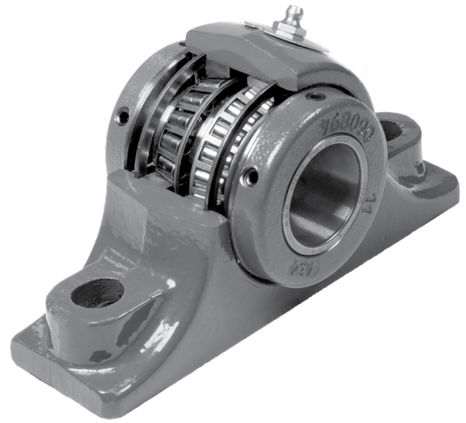
Type E

Launched over 80 years ago, the Dodge Type E bearing was the first of its kind on the market—providing customers with an innovative mounted tapered roller bearing solution—and continues to set the standard for reliable performance in high thrust-load applications. With comparable mounting dimensions, Type E is the easy upgrade from ball bearings with the ability to handle heavy loads in harsh applications.

- Widest variety of housing styles within the Type E family
- Solid, cast-iron housing for maximum durability in harsh environments
- Stocked in all common configurations
- Specialized, heat-treated cones provide the right balance of hardness and material strength to maximize performance and reliability
- Steel end covers available up to 3 inches (75 mm)

Product offering

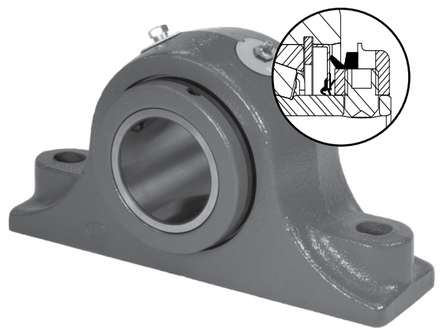
- Pillow block, 1-3/16—7 in (35—180 mm)
- Piloted flange, 1-3/16—5 in (35—125 mm)
- Flange, 1-3/16—4-1/2 in (35—115 mm)
- Top-angle take-up frame, 1-3/4—4 in (45—100 mm)
- Center-pull frame with wide-slot take-up frame, 1-3/8—3 in (35—75 mm)



Harsh Duty series

The Harsh Duty series takes reliability to the next level by offering Type E with upgraded features out of the box for maximum protection in the harshest environments. Ideal for applications with heavy particulates, such as aggregate, mining, grain, and cement, the Type E Harsh Duty is the premier solution to keep your equipment moving no matter what your operations throw at it.

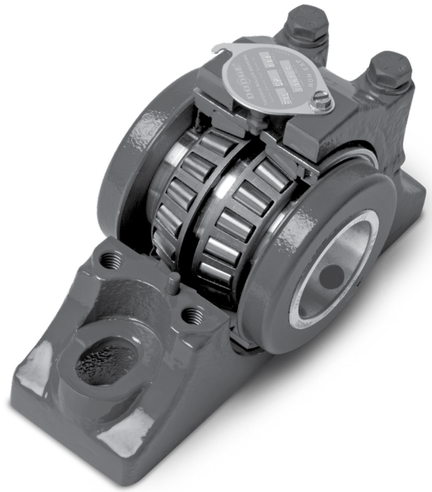
- Premium ArmorTect sealing system with four points of contact provides maximum protection against contamination
- 100 percent filled with lithium-complex grease at the factory, adding an extra layer of protection in slow-speed applications commonly found in harsh environments
- Unprecedented 1-year performance guarantee from failure due to solid particle contamination when installed and maintained with OPTIFY Intelli-Lube



Type E family
Type EXL

As the premier extension of the original Type E mounted bearing invented by Dodge over 80 years ago, Type EXL provides optimized performance with enhanced features designed to mitigate unforeseen downtime and reduce maintenance costs.

- Dimensionally interchangeable with all standard Type E products
- Split-cap design with a completely sealed inner unit allows for easy cartridge replacement and can handle +/- four degrees static misalignment
- S1 inner unit fits both expansion and non-expansion housing styles
- High-strength, ductile-iron housing maximizes tensile strength
- Nameplate protects grease zerk for easier maintenance in dirty environments



Product offering

4-bolt pillow blocks
2-1/4—5 in

2-bolt pillow blocks
1-3/16—3-1/2 in

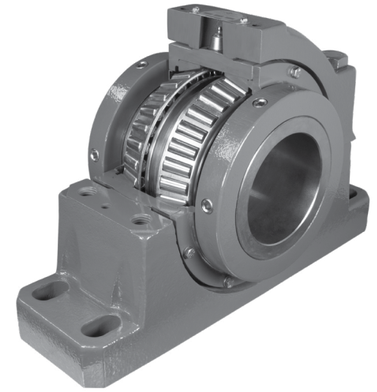
4-bolt flanges
1-3/16—4 in

Type E family
TAF

The cost-saving alternative to SAF spherical bearings

TAF is engineered to be the simpler, faster solution for your toughest applications, being dimensionally interchangeable with SAF pillow block mounted bearings to provide extra strength and the ability to withstand high-thrust load applications.

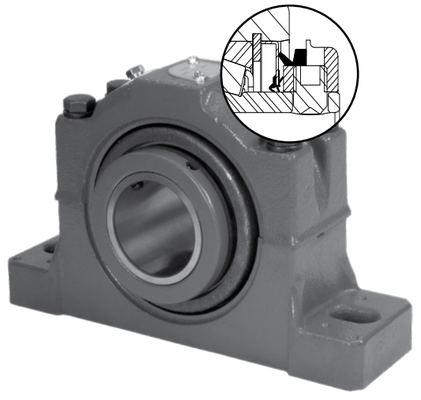
- Cast-iron, split-housed design allows cartridge replacement in the field and provides maximum durability
- Drop-in replacement for SAF pillow block bearings for a six times faster installation with no specialized tools
- Nameplate protects grease zerk for easier maintenance in wet and dirty environments
- Factory-sealed, unitized S1 inner unit uses 75 percent less grease than SAF-style bearings and eliminates opportunity for contamination upon installation
- Capable of +/- five degrees static misalignment
- Available in expansion and non-expansion housing styles
- Self-aligning



Harsh Duty series

The Harsh Duty series provides maximum protection in the toughest, dirtiest environments with upgraded features out of the box. Designed for ultimate protection in highly-contaminated applications, such as aggregate, mining, grain, and cement, the TAF Harsh Duty is the premier solution to outlast and outperform the competition.

- Premium ArmorTect sealing system with four points of contact provides maximum protection against contamination
- 100 percent filled with lithium-complex grease at the factory, adding an extra layer of protection in slow-speed applications commonly found in harsh environments
- Unprecedented 1-year performance guarantee from failure due to solid particle contamination when installed and maintained with OPTIFY Intelli-Lube



Type E family
TAF

TAF versus standard SAF bearing comparison

Dodge TAF

Assembly

- Single-piece inner unit
- Sealed bearing
- Factory assembled and adjusted
- Shaft-ready out of the box
- Pre-lubricated

Sealing

- Standard XTS triple-lip seal with optional E-Tect seal for additional protection from contamination
- Inner unit carries seal
- Up to 5° static misalignment
- Seal and bearing ride together in inner unit
- Seals maintain contact even with misalignment

Standard SAF

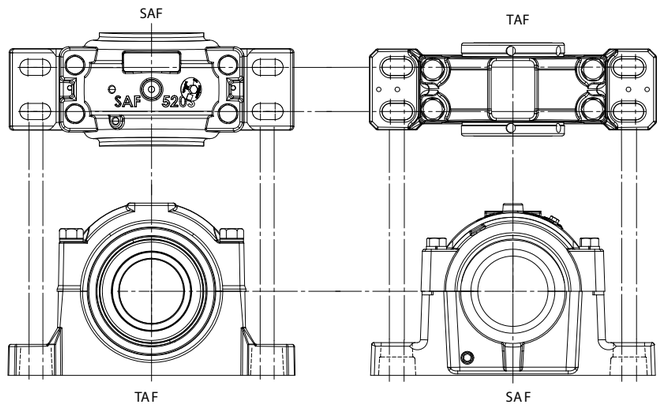
Assembly

- Multiple pieces/packages
- Open bearing
- Feeler gauge and radial clearance reduction required
- Grease required

Sealing

- Seals ride independently of bearing
- Less than 1° static misalignment
- Sealing effectiveness decreases as misalignment increases
- Seals distort when misalignment occurs

TAF is interchangeable with SAF mounting dimensions



Type E family
Double Interlock and Type K

Key to the Dodge legacy of mounted bearing solutions, Double Interlock and Type K feature a cast-iron, split-housed design for easy cartridge replacement in the field. The completely sealed S1 inner unit eliminates opportunity for contamination upon installation and allows for +/- five degrees static misalignment—providing the application versatility and enhanced performance you can rely on.

Double Interlock product offering

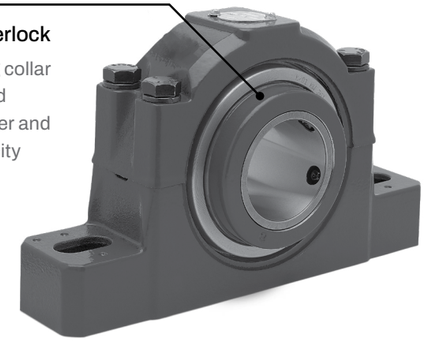
- 2-bolt pillow block, 1-3/16—3-1/2 in
- 4-bolt pillow block, 2-1/4—7 in
- 4-bolt square flange, 1-3/16—4 in
- 4-bolt round flange, 4-7/16—5 in
- S1 inner unit, 1-3/16—7 in
- B1 inner unit, 1-3/16—5 in
- D inner unit, 1-3/16—5 in

Type K product offering

- 2-bolt pillow block, 1-3/16—3-1/2 in
- 4-bolt pillow block, 2-15/16—3-15/16 in
- 4-bolt square flange, 1-3/16—3-15/16 in
- Wide-slot take-up, 1-3/8—3 in
- Top-angle take-up, 1-3/4—3-15/16 in
- S1 inner unit, 1-3/16—3-15/16 in
- B1 inner unit, 1-3/16—3-15/16 in

Double Interlock

Dual locking collar for increased holding power and thrust capacity



Type K

Single locking collar and reduced length-through-bore for application versatility in limited-space applications

Specification

Type E family

Type E, Type EXL, TAF, Double Interlock, Type K

Type E family mounted bearings are high-capacity tapered roller bearings capable of handling any combination of radial and thrust load within the capacity of the bearing.

The bearings are mounted to the shaft by means of set screw collars with a 65-degree set screw angle for optimum clamping force. Type E, Type EXL, TAF, and Double Interlock feature a locking collar at each end of their extended inner races. Type K features a single locking collar for reduced length-through-bore. Factory-assembled, adjusted, and pre-lubricated, the bearings are shaft-ready out of the box for a streamlined installation.

The standard housing material is a high-performance cast iron. The outer housing for the Type K and Double Interlock flange bearings through 4-inch bore size and all Type EXL housings utilize ductile-iron housings.

Type E bearings and Type K take-up units feature solid housings. Type EXL, TAF, Double Interlock, and Type K pillow block and flange units feature split-housed designs and factory-sealed, unitized inner units for easy maintenance and replacement.

How to order

There are two ways to specify Dodge bearings—by six-digit part number or by description. Most of the products offered have part numbers with listings shown throughout this catalog. Use of part numbers ensures accurate order processing.

When part numbers are not shown, the product may be specified by description. This method is used when ordering units that include modifications or options. To order by description, use the nomenclature key shown for each product, adding any special instructions to the end of the description for options not covered by the nomenclature.

Special bearing requirements

Depending on the bearing, a wide variety of lubricants, seals, locking devices, finishes, and adjustments are available for a wide range of applications from general purpose to extreme ambient temperatures, high speeds, or high loads.

Special lubricant options usually involve set-up charges, minimum quantities, and price premiums. To order, specify the type of lubricant required at the end of the product name or after the standard part number.

Example:

F4B-XX-207 except with Mobil HTS #2 grease

or

P/N-XXXXXX except with Mobil HTS #2 grease

Other special requirements not listed

For applications requiring modifications not listed, contact Application Engineering for bearings at +1 864 284 5700.

Nomenclature

Type E family

Type E, Type EXL, TAF, Double Interlock, Type K

P2B - 515 - TAF - 207 - R - E

Housing style option

P2B = Pillow block 2-bolt, cast iron

P4B = Pillow block 4-bolt, cast iron

F4B = Flange bearing 4-bolt, cast iron

FC = Piloted flange bearing (Flanged cartridge)

B1U = B1 unit, cast iron

DU = D unit, cast iron

S1U = S1 unit, cast iron

WSTU = Wide-slot take-up bearing cast iron

TP = Top-angle take-up bearing cast iron

H2S = Pillow block housing only 2-bolt, cast iron

H4S = Pillow block housing 4-bolt, cast iron

Bearing type options

E = Type E

ED = Type E Harsh Duty

EXL= Type EXL

K= Type K

DI = Double Interlock

TAF = TAF

TAFD = TAF Harsh Duty

5XX = Housing series (TAF only)

Size

Inches and 16th
2 = 2 inches
07 = 7/16 inches
or
207 = 2-7/16 inches

Metric
060M = 60 millimeters

Seal

R = XTS triple-lip seal

L= Labyrinth metallic seal

Other options

MOD = Special modification

E = Expansion bearing

Note: If E does not appear after seal type then bearing is non-expansion type

Selection

Type E family

Type E, Type EXL, TAF, Double Interlock, Type K

Type E family double-row tapered roller bearings have the capacity to carry heavy radial loads and combined radial and thrust loads. The maximum recommended load which can be applied is limited by various components in the system such as bearing, housing, shaft, shaft attachment, speed, and life requirements as listed in this catalog. Dodge tapered roller bearings have been applied successfully even when these limits have been exceeded under controlled operating conditions. Contact Application Engineering at +1 864 284 5700 for applications which exceed the recommendations in this catalog.

L_{10} life – The fatigue life which may be expected from at least 90 percent of a given group of bearings operating under identical conditions.

$$L_{10} = \left(\frac{C_{90}}{P}\right)^{10/3} \times \frac{1{,}500{,}000}{rpm}$$

Where:

C_{90} = Dynamic capacity (Table 2)

P = Equivalent radial load

General

Heavy service – For heavy shock loads, frequent shock loads, or severe vibrations, add up to 50 percent (according to severity of conditions) to the equivalent radial load. Consult Application Engineering for additional selection assistance.

Thrust load values shown in the table below are recommended as a guide for general applications that will give adequate L_{10} life for pillow blocks. The maximum thrust load should not exceed values shown on Table 4. Where substantial radial load is also present, it is advisable to calculate actual L_{10} life to assure that it meets the requirements. The effectiveness of the shaft attachment to carry thrust load depends on proper tightening of the set screws, shaft tolerance and shaft deflections. Therefore, it is advisable to use auxiliary thrust carrying devices such as shaft shoulder, snap ring or a thrust collar to locate the bearing under thrust loads heavier than shown below, or where extreme reliability is desired.

Speed range (rpm)		20—200	201—2,000	Over 2,000
Recommended thrust load	E, DI, TAF, EXL	$C_{90}/4$	$C_{90}/8$	$C_{90}/12$
	K	$C_{90}/5$	$C_{90}/8$	$C_{90}/12$

The shaft tolerances recommended below are adequate for normal radial and radial/thrust load applications. The radial load is limited by the attachment to the shaft (see Table 2). Where the applied radial load (F_R) exceeds this limit (maximum allowable slip fit radial load), a snug-to-light press fit of the shaft is required. Since the allowable load, especially at a low speed, is very large, the shaft should be checked to assure adequate shaft strength.

The magnitude and direction of both the thrust and radial load must be taken into account when selecting a housing. When pillow blocks are utilized, heavy loads should be directed through the base. Where uplift loads are involved, see Tables 7-9 for maximum values. Where a load pulls the housing away from the mounting base, both the hold-down bolts and housing must be of adequate strength. Auxiliary load carrying devices such as shear bars are advisable for side or end loading of pillow blocks and radial load for flange units.

Shaft tolerances

Shaft size (in)	Tolerance (in)
Up to 1-1/2	+0.0000 to -0.0005
1-5/8 to 4	+0.000 to -0.001
4-7/16 to 6	+0.000 to -0.0015
6-7/16 to 8	+0.000 to -0.002

Type E family

Type E, Type EXL, TAF, Double Interlock, Type K

Selecting bearings supporting radial loads only

1. Define L_{10} life (h) desired
2. Establish bearing radial load, F_R (F_R = P for pure radial load conditions)
3. Establish speed (rpm)

Using the easy selection Table 3, find under the rpm column, the equivalent radial load that equals or is higher than the application radial load for the desired life. The shaft size on the far left will be the minimum shaft size that you can use for your application. If the desired life is different than the values shown on the chart, use alternate Method A shown below.

Example:

L_{10} life = 30,000 h
Radial load = 4,200 lb
Speed = 1,200 rpm

At the intersection of the 1,200 rpm column and the 30,000 hours L_{10} life row, the equivalent radial load of 4,240 pounds exceeds the 4,200 pounds radial load for shaft size 2-3/16 inches. A bearing with a bore of 2-3/16 inches may be used for this application.

Alternate method A – Selecting a bearing for an L_{10} life value not shown in the easy selection chart.

The L_{10} life equation can be rearranged so that the bearing dynamic capacity C_{90} is identified in terms of L_{10}, speed, and P.

$$C_{90} = \left(\frac{L_{10} \times rpm}{1{,}500{,}000}\right)^{0.3} \times P$$

($P = F_R$ for pure radial load conditions)

Since the L_{10}, speed, and P are known, solve for C_{90}. Select from the dynamic capacity column on Table 2. The C_{90} value needs to be equal to or greater than the C_{90} value just calculated. The bore size on the far left represents the bore size selection. Check that the application speed does not exceed the maximum speed on Table 2. Also check that the radial load does not exceed the maximum allowable slip fit radial load shown on Table 2. If it does, a line to line to light press fit of shaft is required.

When selecting an L_{10} life of less than 30,000 hours, particular attention must be paid to shaft deflection and proper lubricant selection.

Selecting bearings supporting combination radial and thrust loads

When a bearing supports both a radial load and a thrust load, the loading on the two rows is shared unequally depending on the ratio of thrust to radial load. The use of the X (radial factor) and Y (thrust factor) from Table 2 converts the applied thrust load and radial loads to an equivalent radial load having the same effect on the life of the bearing as a radial load of this magnitude.

The equivalent radial load:

$$P = XF_R + YF_A$$

Where:

P = Equivalent radial load
F_R = Radial load (see Table 2 for allowable slip fit maximum)
F_A = Thrust (axial) load
e = Thrust load to radial load factor (Table 2)
X = Radial load factor (Table 2)
Y = Thrust load factor (Table 2)

To find X and Y, calculate F_A/F_R and compare to e for the selected bore size. Determine X and Y from Table 2, depending on whether F_A/F_R is equal to or less than e, or F_A/F_R is greater than e. Substitute all known values into the equivalent radial load equation. P (equivalent radial load) can be used in the life formula to determine L_{10}, or it can be compared to the equivalent radial load ratings for the speed and hours life desired in the easy selection Table 3.

Type E family

Type E, Type EXL, TAF, Double Interlock, Type K

Selecting bearings supporting only thrust loads

Tapered roller bearings perform extremely well under pure thrust load applications. Use $P = YF_A$ for the equivalent radial load. The value of Y is obtained from Table 2 for $F_A/F_R > e$. Substitute Y and F_A into the equivalent load equation. P (equivalent radial load) can be used in the life formula to determine L_{10} or it can be compared to the equivalent radial load ratings for the speed and hours life desired in the easy selection Table 3.

Lubrication

Type E family tapered roller bearings are lubricated at the factory with Mobil XHP222 grease. This grease will adequately handle low and medium speeds with low and medium loads at normal temperatures as defined on Table 6. For very low and high speeds, for heavy loads, and for low and high temperatures, special greases must be used. Please refer to the bearing lubrication calculator at ptwizard.com or contact Application Engineering at +1 864 284 5700. Dodge engineers will recommend bearings and lubricants for the above unusual conditions. Dodge also has the expertise to custom design and build special bearings for your needs. The only maintenance requirement for Dodge tapered roller bearings is periodic relubrication at regular intervals as outlined in the appropriate instruction manuals.

Relubrication schedule

Hours run per day	Suggested lubrication period in weeks based on speed (rpm)							
	1 to 250	251 to 500	501 to 750	751 to 1,000	1,001 to 1,500	1,501 to 2,000	2,001 to 2,500	2,501 to 3,000
8	12	12	10	7	5	4	3	2
16	12	7	5	4	2	2	2	1
24	10	5	3	2	1	1	1	1

High speed operation

In the higher speed ranges, too much grease will cause overheating. The amount of grease that the bearing will take for particular high speed application can only be determined by experience—contact Application Engineering at +1 864 284 5700. If excess grease in the bearing caused overheating, it will be necessary to remove grease fitting (also drain plug when furnished) to permit excess grease to escape. When establishing a relubrication schedule, note that a small amount of grease at frequent intervals is preferable to a large amount at infrequent intervals.

Operation in presence of dust, water, or corrosive vapors

Under these conditions the bearing should contain as much grease as speed will permit, since a full bearing with consequent slight leakage is the best protection against entrance of foreign material. In the higher speed ranges too much grease will cause overheating—see "High speed operation". In the lower speed ranges, it is advisable to add extra grease to a new bearing before putting into operation. Bearings should be greased as often as necessary (daily if required) to maintain a slight leakage at the seals.

Installation and maintenance

In nearly all applications, good design practice requires two bearings supporting the shaft. In cases where three or more bearings are installed, unless precautions are taken to line the bearings up both vertically and horizontally, it is possible to induce heavy loads. In the case of two bearings, alignment is not as critical, especially with Type EXL, TAF, Double Interlock, and Type K—designed to allow as much as two to seven degrees of static misalignment depending on bore size. To ensure good alignment, mounting surfaces must be checked for flatness and must lie in the same plane. When tightening base bolts and cap bolts, each bolt should be alternately tightened in incremental torque values until full torque is achieved to prevent the angular shifting of the pillow block that occurs when one bolt is tightened to its full torque. Shimming may be required to minimize misalignment.

Table 1: Set screw torque

Shaft size (in)	Set screw size	Tightening torque (lb-in)
1-3/16—1-11/16	5/16-18	165
1-3/4—2-1/2	3/8-16	290
2-11/16—3-1/2	1/2-13	620
3-15/16—5	5/8-11	1,325
5-7/16—6	3/4-10	2,150
6-7/16—7	7/8-9	5,130

Shaft size (mm)	Set screw size	Tightening torque (Nm)
35—40	M8	17.8
45—65	M10	35
70—75	M12	57
80—90	M12	57
100—125	M16	126

Type E family
Type E, Type EXL, TAF, Double Interlock, Type K

Table 2: Type E family radial and thrust factors

Shaft size (in)	e	$F_A/F_R \le e$		$F_A/F_R > e$		Dynamic capacity C_{90}*	Static capacity C_0	Maximum speed (rpm)	Maximum speed (rpm)	Maximum speed (rpm)	Maximum allowable Slip fit radial load, F_R ** (lb)	
		X	Y	X	Y	(lb)	(lb)	XTS seal	E-Tect***	Harsh Duty (100% fill)	E, DI, EXL, and TAF	K
1-3/16 1-1/4	0.49	0.87	1.77	0.70	2.14	3,890	15,760	4,490	3,100	1,550	3,100	2,100
1-3/8 1-7/16	0.46	0.87	1.89	0.70	2.28	6,220	26,000	3,820	2,675	1,338	5,000	3,300
1-1/2 1-5/8 1-11/16	0.44	0.87	1.96	0.70	2.37	8,000	33,000	3,320	2,325	1,163	6,400	4,300
1-3/4 1-7/8 1-15/16 2	0.33	0.87	2.64	0.70	3.18	10,500	43,000	3,050	2,135	1,068	8,400	5,600
2-3/16	0.36	0.87	2.38	0.70	2.87	11,000	48,200	2,730	1,900	950	8,900	5,900
2-1/4 2-7/16 2-1/2	0.40	0.87	2.17	0.70	2.63	11,800	54,000	2,420	1,700	850	9,500	6,300
2-11/16 2-3/4 2-15/16 3	0.46	0.87	1.87	0.70	2.26	12,500	61,200	2,060	1,440	720	10,000	6,700
3-3/16 3-1/4 3-7/16 3-1/2	0.50	0.87	1.71	0.70	2.07	20,000	108,600	1,640	1,145	573	16,000	10,500
3-15/16 4	0.49	0.87	1.77	0.70	2.14	27,000	154,000	1,530	1,070	535	22,000	14,600
4-7/16 4-1/2	0.53	0.87	1.63	0.70	1.97	33,600	188,400	1,360	950	475	27,000	—
4-15/16 5	0.47	0.87	1.83	0.70	2.21	46,400	266,000	1,200	840	420	35,000	—
5-7/16 5-15/16 6	0.49	0.87	1.76	0.70	2.12	44,000	354,000	915	640	320	42,400	—
6-7/16 6-1/2 6-15/16 7	0.54	0.87	1.61	0.70	1.95	72,000	574,000	790	550	275	72,000	—

Comparing spherical to tapered roller bearings: The dynamic capacity C (spherical) and C_{90} (taper) are not to the same base.

To compare basic dynamic capacities, multiply C x 0.259 and compare to C_{90}.

* C_{90} - Dynamic capacity based on a rated life of 90 million revolutions or 3000 hours at 500 rpm.

** If load exceeds maximum allowable slip fit radial load, (F_R), line-to-line, to light press fit of shaft required. Application up to maximum slip fit radial load may be applied if recommended shaft tolerances are used.

*** E-Tect seal not compatible with Type EXL.

Reference Guide
Type E Family (Tapered)
Specialty Tapered
Safety Mount Family (Spherical)
S-2000 (Spherical)
Unified SAF (Spherical)
Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

Type E family

Vibration frequencies
Anti-friction mounted bearings

More and more manufacturing facilities are getting involved with plant-wide preventive maintenance programs. By monitoring vibration levels of motors, pumps, fans and compressors, maintenance supervisors can predict imminent failures.

Knowing that a piece of equipment is showing signs of potential failure permits scheduling of maintenance at an appropriate time and avoids the consequences of catastrophic failures. Shown in Tables are vibration frequencies generated by bearing components defects. All frequencies are based on unity inner ring or cone rotation.

How to use the tables

If a 2-7/16-inch pillow block bearing is rotating at a speed of 1,000 rpm, the vibration due to a failed component will show up at the frequencies listed in the corresponding size line in the table.

Frequency

Cup nick or spall = 1,000 x 9.251 = 9,251 rpm
Cone nick or spall = 1,000 x 11.749 = 11,749 rpm
*Roller nick or spall = 1,000 x 4.011 x 2 = 8,022 rpm
Cage (train) frequency (inner ring rotation) = 1,000 x 0.441 = 441 rpm

Since all the values in the tables are based on unity inner ring or cone rotation, the vibration due to flaws will show up at the frequencies obtained by multiplying the speed (rpm) times the factors found on the appropriate table. The resulting product will have units of rpm.

Type E, TAF, Double Interlock, and Type K tapered roller bearing parameters for vibration analysis (1-RPS)

Bore size (in)	Number of rollers per row	Mean diameter of rollers (in)	Pitch diameter (in)	Contact angle (°)	Cup frequency (Hz)	Cone frequency (Hz)	Roller spin frequency* (Hz)	Cage frequency (Hz)
1-3/16—1-1/4	19	0.23	1.774	17.533	8.326	10.675	3.798	0.438
1-3/8—1-7/16	20	0.29	2.084	16.500	8.666	11.334	3.529	0.433
1-1/2—1-11/16	18	0.35	2.411	16.000	7.744	10.256	3.377	0.430
1-3/4—2	17	0.41	2.709	12.033	7.241	9.758	3.231	0.426
2-3/16	19	0.41	3.014	13.283	8.242	10.758	3.611	0.434
2-1/4—2-1/2	21	0.41	3.337	14.500	9.251	11.749	4.012	0.441
2-11/16—3	24	0.41	3.900	16.733	10.792	13.208	4.708	0.450
3-3/16—3-1/2	26	0.46	4.780	18.167	11.811	14.189	5.152	0.454
3-15/16—4	26	0.51	5.120	17.567	11.766	14.235	4.974	0.453
4-7/16—4-1/2	25	0.59	5.727	18.983	11.282	13.718	4.807	0.451
4-15/16—5	25	0.68	6.568	17.000	11.262	13.738	4.782	0.455
5-7/16—6	32	0.67	8.444	17.750	14.791	17.209	6.266	0.462
6-7/16—7	27	0.93	9.791	19.167	12.289	14.711	5.222	0.455

Cup frequency = N x rpm x (1 - (Bd x cos a/Pd)) / 120
Cone frequency = N x rpm x (1 + (Bd x cos a / Pd)) / 120
Roller spin frequency = Pd x rpm x (1 - (Bd x cos a / Pd)^2) / (120 x Bd)
Cage frequency = rpm x (1 - (Bd x cos a / Pd)) / 120

Pd = Pitch diameter
N = Number of rollers
Bd = Roller diameter
a = Cup angle (contact angle)

* Roller spin frequencies are listed at one times roller spin frequency. For a thorough analysis, it is important to check frequency level at two times rotational speed of rollers, as this is the frequency that a single roller defect will contact the raceways of the bearing. In other words, a roller defect will strike both inner and outer ring in one revolution of the roller.

Type E family

Type E, Type EXL, TAF, Double Interlock, Type K

Table 3: Easy selection for Type E family

Shaft size (in)	L_{10} life (h)	Equivalent radial load rating (lb) at various speeds (rpm)																		
		50	100	150	250	500	790	915	1,200	1,360	1,530	1,640	1,750	2,060	2,420	2,730	3,050	3,320	3,600	3,820	4,490
1-3/16 1-1/4	10,000	5,409	4,393	3,890	3,337	2,711	2,363	2,261	2,085	2,008	1,938	1,898	1,862	1,773	1,689	1,629	1,576	1,536	1,499	1,473	1,403
	30,000	3,890	3,160	2,798	2,400	1,950	1,700	1,626	1,499	1,444	1,394	1,365	1,339	1,275	1,215	1,172	1,133	1,105	1,078	1,059	1,009
	40,000	3,568	2,898	2,566	2,202	1,788	1,559	1,492	1,375	1,325	1,279	1,252	1,228	1,169	1,114	1,075	1,040	1,013	989	972	926
	60,000	3,160	2,566	2,273	1,950	1,584	1,381	1,321	1,218	1,173	1,132	1,109	1,087	1,036	987	952	921	897	876	860	820
	100,000	2,711	2,202	1,950	1,673	1,359	1,184	1,133	1,045	1,006	971	951	933	888	847	816	790	770	751	738	703
1-3/8 1-7/16	10,000	8,648	7,025	6,220	5,336	4,334	3,779	3,616	3,333	3,210	3,099	3,035	2,977	2,834	2,701	2,605	2,520	2,456	2,397	2,355	—
	30,000	6,220	5,052	4,474	3,838	3,117	2,718	2,600	2,397	2,309	2,229	2,183	2,141	2,039	1,942	1,873	1,812	1,767	1,724	1,694	—
	40,000	5,706	4,634	4,104	3,521	2,860	2,493	2,385	2,199	2,118	2,045	2,002	1,964	1,870	1,782	1,719	1,662	1,621	1,582	1,554	—
	60,000	5,052	4,104	3,634	3,117	2,532	2,207	2,112	1,947	1,875	1,810	1,773	1,739	1,656	1,578	1,522	1,472	1,435	1,400	1,376	—
	100,000	4,334	3,521	3,117	2,674	2,172	1,894	1,812	1,671	1,609	1,553	1,521	1,492	1,421	1,354	1,305	1,263	1,231	1,202	1,180	—
1-1/2 1-5/8 1-11/16	10,000	11,123	9,035	8,000	6,863	5,575	4,860	4,650	4,287	4,129	3,986	3,904	3,828	3,646	3,474	3,350	3,241	3,159	—	—	—
	30,000	8,000	6,498	5,754	4,936	4,009	3,495	3,345	3,083	2,970	2,867	2,808	2,753	2,622	2,498	2,410	2,331	2,272	—	—	—
	40,000	7,339	5,961	5,278	4,528	3,678	3,206	3,068	2,828	2,724	2,630	2,575	2,526	2,405	2,292	2,210	2,138	2,084	—	—	—
	60,000	6,498	5,278	4,674	4,009	3,257	2,839	2,717	2,504	2,412	2,328	2,280	2,236	2,130	2,029	1,957	1,893	1,846	—	—	—
	100,000	5,575	4,528	4,009	3,440	2,794	2,436	2,331	2,149	2,069	1,998	1,956	1,919	1,827	1,741	1,679	1,624	1,583	—	—	—
1-3/4 1-7/8 1-15/16 2	10,000	14,599	11,858	10,500	9,008	7,317	6,379	6,104	5,627	5,419	5,231	5,123	5,025	4,785	4,559	4,397	4,253	—	—	—	—
	30,000	10,500	8,529	7,552	6,479	5,262	4,588	4,390	4,047	3,898	3,762	3,685	3,614	3,441	3,279	3,163	3,059	—	—	—	—
	40,000	9,632	7,823	6,927	5,943	4,827	4,208	4,027	3,712	3,576	3,451	3,380	3,315	3,157	3,008	2,901	2,806	—	—	—	—
	60,000	8,529	6,927	6,134	5,262	4,274	3,726	3,566	3,287	3,166	3,056	2,993	2,935	2,795	2,663	2,569	2,485	—	—	—	—
	100,000	7,317	5,943	5,262	4,515	3,667	3,197	3,059	2,820	2,716	2,622	2,568	2,518	2,398	2,285	2,204	2,132	—	—	—	—
2-3/16	10,000	15,294	12,423	11,000	9,437	7,665	6,682	6,394	5,895	5,678	5,480	5,367	5,264	5,013	4,776	4,607	—	—	—	—	—
	30,000	11,000	8,935	7,911	6,787	5,513	4,806	4,599	4,240	4,083	3,942	3,860	3,786	3,605	3,435	3,313	—	—	—	—	—
	40,000	10,090	8,196	7,257	6,226	5,057	4,409	4,219	3,889	3,746	3,616	3,541	3,473	3,307	3,151	3,039	—	—	—	—	—
	60,000	8,935	7,257	6,426	5,513	4,478	3,904	3,735	3,444	3,317	3,202	3,136	3,075	2,928	2,790	2,691	—	—	—	—	—
	100,000	7,665	6,226	5,513	4,730	3,842	3,349	3,205	2,954	2,845	2,747	2,690	2,638	2,512	2,394	2,309	—	—	—	—	—
2-1/4 2-7/16 2-1/2	10,000	16,407	13,326	11,800	10,123	8,223	7,168	6,859	6,323	6,090	5,879	5,758	5,647	5,377	5,123	—	—	—	—	—	—
	30,000	11,800	9,585	8,487	7,281	5,914	5,156	4,933	4,548	4,380	4,228	4,141	4,061	3,867	3,685	—	—	—	—	—	—
	40,000	10,824	8,792	7,785	6,679	5,425	4,729	4,525	4,172	4,018	3,879	3,799	3,725	3,548	3,380	—	—	—	—	—	—
	60,000	9,585	7,785	6,893	5,914	4,804	4,188	4,007	3,694	3,558	3,434	3,364	3,299	3,141	2,993	—	—	—	—	—	—
	100,000	8,223	6,679	5,914	5,074	4,121	3,593	3,438	3,169	3,052	2,946	2,886	2,830	2,695	2,568	—	—	—	—	—	—
2-11/16 2-3/4 2-15/16 3	10,000	17,380	14,117	12,500	10,724	8,711	7,594	7,266	6,699	6,452	6,228	6,099	5,982	5,696	—	—	—	—	—	—	—
	30,000	12,500	10,153	8,990	7,713	6,265	5,462	5,226	4,818	4,640	4,479	4,387	4,302	4,097	—	—	—	—	—	—	—
	40,000	11,466	9,314	8,247	7,075	5,747	5,010	4,794	4,419	4,257	4,109	4,024	3,946	3,758	—	—	—	—	—	—	—
	60,000	10,153	8,247	7,302	6,265	5,089	4,436	4,245	3,913	3,769	3,638	3,563	3,494	3,328	—	—	—	—	—	—	—
	100,000	8,711	7,075	6,265	5,375	4,366	3,806	3,642	3,357	3,234	3,121	3,057	2,998	2,855	—	—	—	—	—	—	—
3-3/16 3-1/4 3-7/16 3-1/2	10,000	27,808	22,587	20,000	17,158	13,937	12,150	11,626	10,718	10,323	9,964	9,759	—	—	—	—	—	—	—	—	—
	30,000	20,000	16,245	14,384	12,341	10,024	8,738	8,362	7,708	7,424	7,167	7,019	—	—	—	—	—	—	—	—	—
	40,000	18,346	14,902	13,195	11,320	9,195	8,016	7,670	7,071	6,810	6,574	6,439	—	—	—	—	—	—	—	—	—
	60,000	16,245	13,195	11,684	10,024	8,142	7,098	6,792	6,261	6,030	5,821	5,701	—	—	—	—	—	—	—	—	—
	100,000	13,937	11,320	10,024	8,600	6,985	6,089	5,827	5,372	5,174	4,994	4,891	—	—	—	—	—	—	—	—	—
3-15/16 4	10,000	37,541	30,492	27,000	23,164	18,815	16,402	15,695	14,469	13,936	13,452	—	—	—	—	—	—	—	—	—	—
	30,000	27,000	21,931	19,419	16,660	13,532	11,797	11,288	10,406	10,023	9,675	—	—	—	—	—	—	—	—	—	—
	40,000	24,767	20,117	17,813	15,282	12,413	10,821	10,355	9,546	9,194	8,875	—	—	—	—	—	—	—	—	—	—
	60,000	21,931	17,813	15,773	13,532	10,991	9,582	9,169	8,453	8,141	7,858	—	—	—	—	—	—	—	—	—	—
	100,000	18,815	15,282	13,532	11,609	9,430	8,221	7,866	7,252	6,984	6,742	—	—	—	—	—	—	—	—	—	—

For maximum speed (rpm), see Table 2.
In the shaded area, E, DI, EXL, and TAF mounted units require a line-to-line to light press fit of shaft.
In the boxed area, Type K mounted units require a line-to-line to light press fit of shaft.

Type E family

Type E, Type EXL, TAF, Double Interlock, Type K

Table 3: Easy selection for Type E family

Shaft size (in)	L_{10} life (h)	Equivalent radial load rating (lb) at various speeds (rpm)																			
		50	100	150	250	500	790	915	1,200	1,360	1,530	1,640	1,750	2,060	2,420	2,730	3,050	3,320	3,600	3,820	4,490
4-7/16 4-1/2	10,000	46,717	37,946	33,600	28,826	23,414	20,412	19,532	18,006	17,342	—	—	—	—	—	—	—	—	—	—	—
	30,000	33,600	27,292	24,166	20,732	16,840	14,681	14,048	12,950	12,473	—	—	—	—	—	—	—	—	—	—	—
	40,000	30,822	25,035	22,168	19,018	15,447	13,467	12,886	11,879	11,442	—	—	—	—	—	—	—	—	—	—	—
	60,000	27,292	22,168	19,629	16,840	13,678	11,924	11,410	10,519	10,131	—	—	—	—	—	—	—	—	—	—	—
	100,000	23,414	19,018	16,840	14,447	11,735	10,230	9,789	9,024	8,692	—	—	—	—	—	—	—	—	—	—	—
4-15/16 5	10,000	64,514	52,402	46,400	39,807	32,334	28,188	26,972	24,865	—	—	—	—	—	—	—	—	—	—	—	—
	30,000	46,400	37,689	33,372	28,630	23,255	20,273	19,399	17,884	—	—	—	—	—	—	—	—	—	—	—	—
	40,000	42,563	34,572	30,613	26,263	21,332	18,597	17,795	16,405	—	—	—	—	—	—	—	—	—	—	—	—
	60,000	37,689	30,613	27,106	23,255	18,889	16,467	15,757	14,526	—	—	—	—	—	—	—	—	—	—	—	—
	100,000	32,334	26,263	23,255	19,951	16,205	14,127	13,518	12,462	—	—	—	—	—	—	—	—	—	—	—	—
5-7/16 5-15/16 6	10,000	61,177	49,691	44,000	37,748	30,661	26,730	25,577	—	—	—	—	—	—	—	—	—	—	—	—	—
	30,000	44,000	35,739	31,646	27,149	22,052	19,225	18,396	—	—	—	—	—	—	—	—	—	—	—	—	—
	40,000	40,362	32,784	29,029	24,905	20,229	17,635	16,875	—	—	—	—	—	—	—	—	—	—	—	—	—
	60,000	35,739	29,029	25,704	22,052	17,912	15,615	14,942	—	—	—	—	—	—	—	—	—	—	—	—	—
	100,000	30,661	24,905	22,052	18,919	15,367	13,397	12,819	—	—	—	—	—	—	—	—	—	—	—	—	—
6-7/16 6-1/2 6-15/16 7	10,000	100,108	81,313	72,000	61,770	50,173	43,739	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	30,000	72,000	58,482	51,784	44,426	36,085	31,458	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	40,000	66,047	53,647	47,502	40,753	33,102	28,857	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	60,000	58,482	47,502	42,062	36,085	29,311	25,552	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	100,000	50,173	40,753	36,085	30,958	25,146	21,922	—	—	—	—	—	—	—	—	—	—	—	—	—	—

For maximum speed (rpm), see Table 2.
In the shaded area, E, DI, EXL, and TAF mounted units require a line-to-line to light press fit of shaft.
In the boxed area, Type K mounted units require a line-to-line to light press fit of shaft.

Type E family

Type E, Type EXL, TAF, Double Interlock, Type K

Table 4: Permissible thrust load (lb)*

Shaft size (in)	*E		*K/DI, TAF, EXL	
	2-bolt	4-bolt	2-bolt	4-bolt
1-3/16	2,000	—	1,400	—
1-1/4	2,000	—	1,400	—
1-3/8	2,590	—	2,590	—
1-7/16	2,590	—	2,590	—
1-1/2	2,590	—	2,590	—
1-5/8	2,590	—	2,590	—
1-11/16	2,590	—	2,590	—
1-3/4	3,454	—	3,454	—
1-7/8	3,454	—	3,454	—
1-15/16	3,454	—	3,454	—
2	3,454	—	3,454	—
2-3/16	3,454	—	3,454	—
2-1/4	3,454	3,454	3,454	3,454
2-7/16	3,454	3,454	3,454	3,454
2-1/2	3,454	3,454	3,454	3,454
2-11/16	5,181	5,181	5,181	5,181
2-3/4	5,181	5,181	5,181	5,181
2-15/16	5,181	5,181	5,181	5,181
3	5,181	5,181	5,181	5,181
3-3/16	5,181	5,181	4,300	5,181
3-1/4	5,181	5,181	4,300	5,181
3-7/16	5,181	5,181	4,300	5,181
3-1/2	5,181	5,181	4,300	5,181
3-15/16	—	6,908	—	6,908
4	—	6,908	—	6,908
4-7/16	—	6,908	—	6,908
4-1/2	—	6,908	—	6,908
4-15/16	—	6,908	—	6,908
5	—	6,908	—	6,908
5-7/16	—	8,635	—	8,635
5-15/16	—	8,635	—	8,635
6	—	8,635	—	8,635
6-7/16	—	12,282	—	12,282
6-1/2	—	12,282	—	12,282
6-15/16	—	12,282	—	12,282
7	—	12,282	—	12,282

The limits above apply to set screw shaft mounting or pillow block over turning force. Under heavy thrust loads it is always wise to use shear bars.
At all times, the L_{10} life of the bearing should be checked for proper selection and life requirements.
For thrust loads larger than listed or heavy thrust loading on other style housing, contact Application Engineering for recommendations.

* Does not include piloted flange.
Piloted flange up to and including 3-1/2 inches and all sizes of Type K only have one set screw locking collar and therefore the above listed permissible thrust load values must be decreased by 1/2.

Type E family

Type E, Type EXL, TAF, Double Interlock, Type K

Table 5: Type K, DI, TAF, EXL maximum axial expansion (in)

Bore size (in)	Type K Double Interlock		TAF TAF Harsh Duty	Type EXL
	Pillow block	Flange		
1-3/16—1-1/4	0.252	—	—	0.280
1-3/8—1-7/16	0.188	0.187	0.188	0.280
1-1/2—1-11/16	0.188	0.187	0.188	0.280
1-3/4—2	0.562	0.187	0.562	0.280
2-3/16	0.562	0.187	0.562	0.280
2-1/4—2-1/2	0.562	0.312	0.562	0.280
2-11/16—3	0.562	0.312	0.562	0.280
3-3/16—3-1/2	0.562	0.312	0.562	0.280
3-15/16—4	0.674	0.312	0.674	0.280
4-7/16—4-1/2	0.674	0.812	0.674	0.280
4-15/16—5	0.674	0.812	0.674	0.280
5-7/16—6	0.500	—	0.875	—
6-7/16—7	0.500	—	0.875	—

Table 6: Definition of operating conditions for tapered roller bearings

Low speed	Up to 20% of max. speed (rpm) (Table 2)
Medium speed	Over 20% to 80% of max. speed (rpm)
High speed	Over 80% of max. speed (rpm)
Light load	Up to 30% of C_{90} (Table 2)
Normal load	Over 30% to 70% of C_{90}
Heavy load	Over 70% of C_{90}
Low temperature	-100 °F to 20 °F
Medium temperature	Over 20 °F to 200 °F
High temperature	Over 200 °F to 300 °F
Very high temperature	Over 300 °F to 400 °F

Reference Guide
Type E Family (Tapered)
Specialty Tapered
Safety Mount Family (Spherical)
S-2000 (Spherical)
Unified SAF (Spherical)
Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

Type E family

Type E

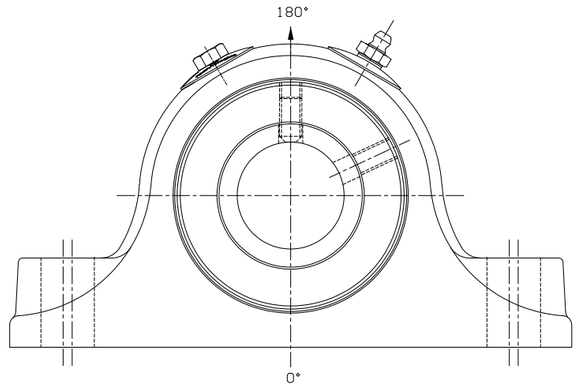


Table 7: Housing ratings - Type E (solid housing)

Shaft size (in)	Maximum recommended housing cap load (lb), gray iron, 180°
1-3/16—1-1/4	1,600
1-3/8—1-7/16	3,150
1-1/2—1-11/16	3,000
1-3/4—2	5,150
2-3/16	3,500
2-1/4—2-1/2	6,550
2-11/16—3	7,000
3-3/16—3-1/2	15,700
3-15/16—4	16,250
4-7/16—4-1/2	21,000
4-15/16—5	22,860
5-7/16—6	43,600
6-7/16—7	46,000

* When utilizing heavy cap loads on pillow block housings, the installation must adhere to the following procedures:
1. The pillow block base bolts must be of Grade 8 strength with hardened washers and properly tightened to the mounting structure.
2. The use of stop bars (shear strips) against pillow block where side loads are encountered.
3. In all cases where loads are heavy, the L_{10} life of the bearing should be checked for proper selection and life requirements.

Type E family

Type EXL, TAF, Double Interlock, Type K

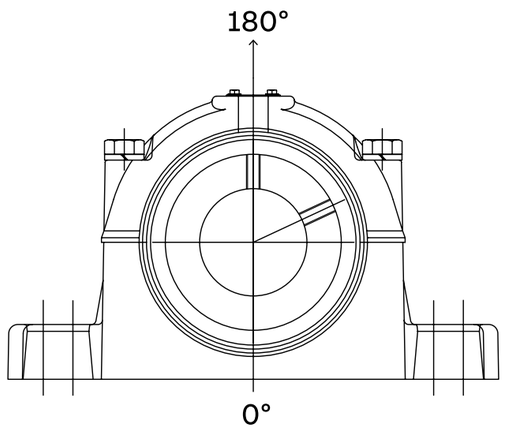


Table 8: Housing ratings for Type EXL, Double Interlock, Type K (split housing)

Shaft size (in)	Maximum recommended housing cap load (lb) 180°
1-3/16—1-1/4	4,300
1-3/8—1-7/16	5,060
1-1/2—1-11/16	5,940
1-3/4—2	8,660
2-3/16	10,100
2-1/4—2-1/2	10,100
2-11/16—3	11,220
3-3/16—3-1/2	16,170
3-15/16—4	19,580
4-7/16—4-1/2	20,130
4-15/16—5	24,530
5-7/16—6	35,200
6-7/16—7	56,000

Table 9: Housing ratings for TAF and TAF Harsh Duty (split housing)

Shaft size (in)	Maximum recommended housing cap load (lb) 180°
1-7/16	4,600
1-11/16	5,400
1-15/16	7,875
2-3/16	9,200
2-7/16—2-1/2	9,220
2-15/16—3	10,200
3-7/16—3-1/2	14,700
3-15/16—4	17,800
4-7/16—4-1/2	18,300
4-15/16—5	22,300
5-7/16—6	30,000
6-7/16—6-1/2	30,000
6-15/16—7	48,000

* When utilizing heavy cap loads on pillow block housings, the installation must adhere to the following procedures:
1. The pillow block base bolts must be of Grade 8 strength with hardened washers and properly tightened to the mounting structure.
2. The use of stop bars (shear strips) against pillow block where side loads are encountered.
3. In all cases where loads are heavy, the L_{10} life of the bearing should be checked for proper selection and life requirements.

Type E family

Type E, Type EXL, TAF, Double Interlock, Type K

Mounted bearings
Application data sheet

Instructions: Complete all applicable information and email to engineering@dodgeindustrial.com

Company _____ Dist ☐ User ☐ OEM ☐ Date _____

Address _____

Name _____ Phone _____ Fax _____

Type of equipment (sketch drive on separate sheet) _____

Service conditions:

Shaft speed: Normal _____ Maximum _____

Loads: Radial _____ Thrust _____ Shock (frequency) _____

Shaft size: _____ Shaft tolerance (specify if not commercial) _____

Duty cycle: Hours/day _____ Days/week _____ Weeks/year _____

Environment:

Ambient temperature: Max _____ °F / °C Min _____ °F / °C

External heat: Source of heat _____

Temperature _____ °F

Air: Clean _____ Contaminated _____ Contamination type _____

Gas: Clean _____ Contaminated _____ Contamination type _____

Liquid: Type _____ Contaminated _____ Contamination type _____

Other (including washdowns): _____

Experience (if applicable):

Type of bearing currently used: _____

Life realized _____ Type of failure _____

Other pertinent data:

_____

_____

_____

L_{10} hours required: _____

Dimensional restrictions: Centerline height _____

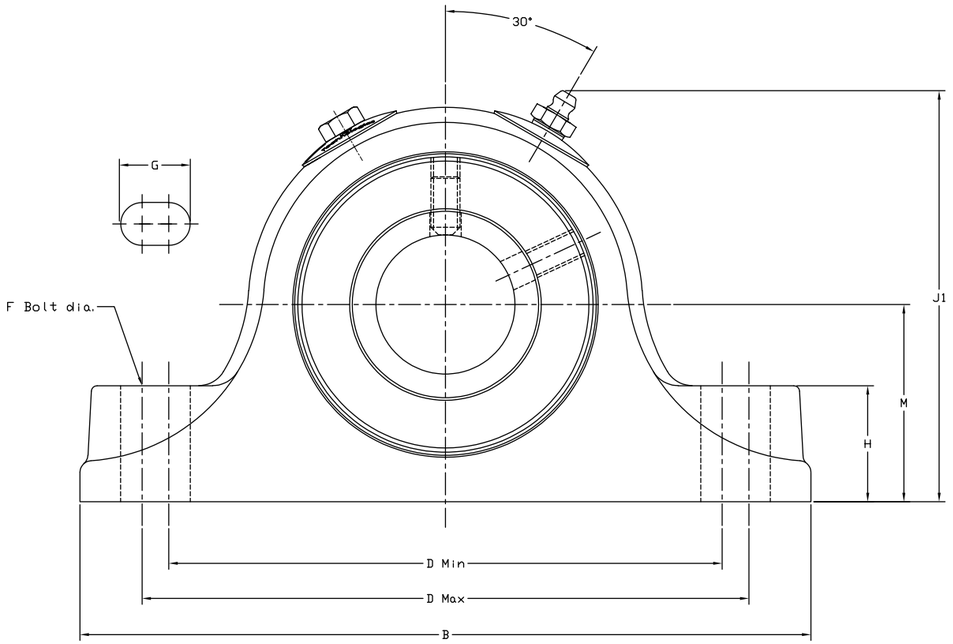
Bolt pattern _____

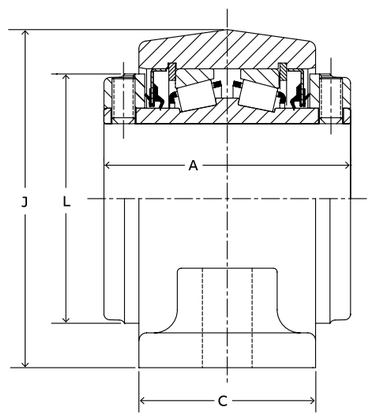
Other _____

Dimensions

Type E pillow block – inch

2-bolt





1-3/16" thru 3" Construction

Type E pillow block – inch

2-bolt

Standard			Harsh Duty		Harsh Duty (synthetic grease)		All
Shaft size	Part number	Description	Part number	Description	Part number	Description	Approx. weight (lb)
1-3/16	023000	P2B-E-103R	780437	P2B-ED-103R	780455	P2B-ED-103R MOD	4
1-1/4	023001	P2B-E-104R	780438	P2B-ED-104R	780456	P2B-ED-104R MOD	4
1-3/8	023002	P2B-E-106R	—	—	—	—	7
1-7/16	023003	P2B-E-107R	145914	P2B-ED-107R	—	—	7
1-1/2	023004	P2B-E-108R	780439	P2B-ED-108R	780457	P2B-ED-108R MOD	10
1-5/8	023005	P2B-E-110R	780440	P2B-ED-110R	780458	P2B-ED-110R MOD	10
1-11/16	023006	P2B-E-111R	780441	P2B-ED-111R	780459	P2B-ED-111R MOD	10
1-3/4	023007	P2B-E-112R	780442	P2B-ED-112R	780460	P2B-ED-112R MOD	12
1-7/8	023008	P2B-E-114R	—	—	—	—	12
1-15/16	023009	P2B-E-115R	013923	P2B-ED-115R	013967	P2B-ED-115R MOD	12
2	023010	P2B-E-200R	780443	P2B-ED-200R	780461	P2B-ED-200R MOD	12
2-3/16	023011	P2B-E-203R	780079	P2B-ED-203R	—	—	15
2-1/4	023012	P2B-E-204R	780444	P2B-ED-204R	780462	P2B-ED-204R MOD	21
2-7/16	023013	P2B-E-207R	013924	P2B-ED-207R	013968	P2B-ED-207R MOD	20
2-1/2	023014	P2B-E-208R	780445	P2B-ED-208R	780463	P2B-ED-208R MOD	20
2-11/16	023015	P2B-E-211R	780446	P2B-ED-211R	780464	P2B-ED-211R MOD	29
2-3/4	023016	P2B-E-212R	780447	P2B-ED-212R	780465	P2B-ED-212R MOD	28
2-15/16	023017	P2B-E-215R	013925	P2B-ED-215R	013969	P2B-ED-215R MOD	27
3	023018	P2B-E-300R	780080	P2B-ED-300R	—	—	27
3-3/16	023019	P2B-E-303R	780448	P2B-ED-303R	780466	P2B-ED-303R MOD	48
3-1/4	023020	P2B-E-304R	—	—	—	—	47
3-7/16	023021	P2B-E-307R	013926	P2B-ED-307R	013970	P2B-ED-307R MOD	46
3-1/2	023022	P2B-E-308R	780081	P2B-ED-308R	—	—	45

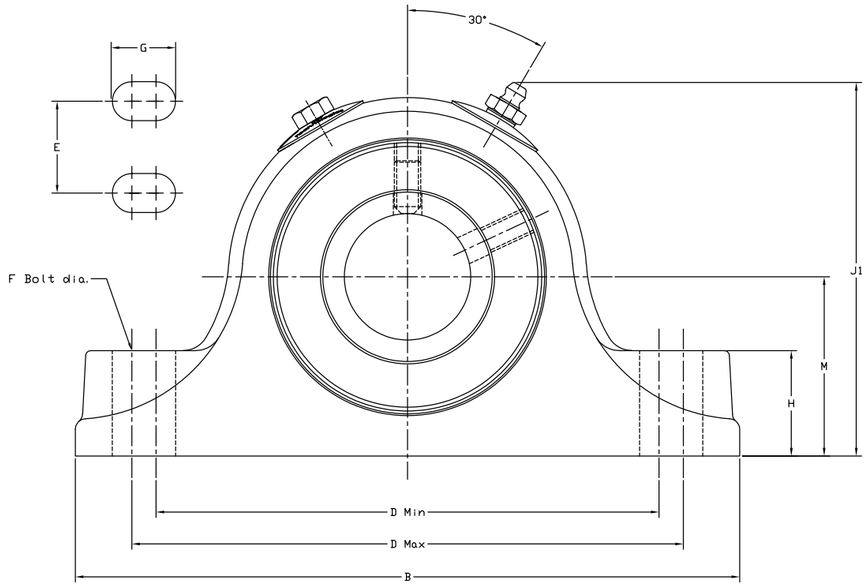
Contact Dodge for availability of any not listed.

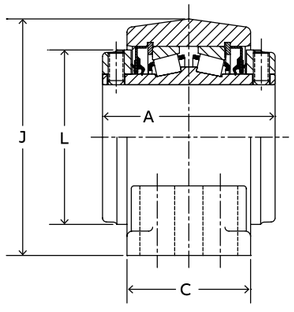
Shaft size	A	B	C	D		F bolt dia	G	H	J	J1	L	M
				Min	Max							
1-3/16 1-1/4	2.75	6.00	1.88	4.75	4.81	1/2	0.59	0.88	3.00	3.28	2.25	1.50
1-3/8 1-7/16	3.00	7.38	2.13	5.63	5.88	1/2	0.75	1.13	3.75	4.00	2.75	1.88
1-1/2 1-5/8 1-11/16	3.38	7.88	2.38	6.13	6.38	1/2	0.75	1.25	4.25	4.47	3.19	2.13
1-3/4 1-7/8 1-15/16 2	3.50	8.88	2.50	6.88	7.13	5/8	0.88	1.31	4.50	4.69	3.44	2.25
2-3/16	3.75	9.63	2.63	7.63	7.88	5/8	0.88	1.50	5.00	5.17	3.75	2.50
2-1/4 2-7/16 2-1/2	4.00	10.50	2.88	8.38	8.63	5/8	0.88	1.63	5.50	5.63	4.06	2.75
2-11/16 2-3/4 2-15/16 3	4.50	12.00	3.00	9.31	9.69	3/4	1.00	1.88	6.25	6.34	4.72	3.13
3-3/16 3-1/4 3-7/16 3-1/2	5.00	14.00	3.50	10.81	11.19	7/8	1.19	2.25	7.50	7.50	5.50	3.75

Note: All sizes use a 1/8-27 NPT hydraulic grease fitting.

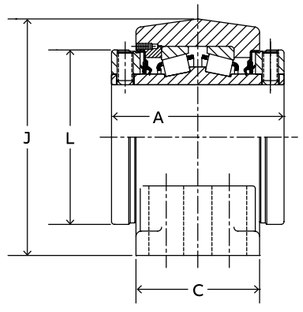
Type E pillow block – inch

4-bolt

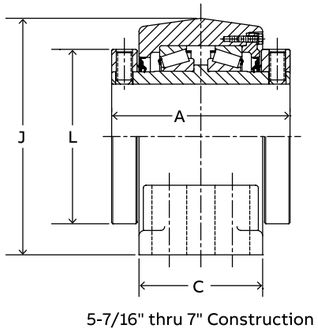




2-1/4" thru 3-1/2" Construction



3-15/16" thru 5" Construction



5-7/16" thru 7" Construction

Type E pillow block – inch

4-bolt

Standard			Harsh Duty		Harsh Duty (synthetic grease)		
Shaft size	**Part number**	**Description**	**Part number**	**Description**	**Part number**	**Description**	**Approx. weight (lb)**
2-1/4	023023	P4B-E-204R	780450	P4B-ED-204R	780468	P4B-ED-204R MOD	20
2-7/16	023024	P4B-E-207R	013927	P4B-ED-207R	013971	P4B-ED-207R MOD	20
2-1/2	023025	P4B-E-208R	780451	P4B-ED-208R	780469	P4B-ED-208R MOD	19
2-11/16	023026	P4B-E-211R	—	—	—	—	30
2-3/4	023027	P4B-E-212R	—	—	—	—	28
2-15/16	023028	P4B-E-215R	013928	P4B-ED-215R	013972	P4B-ED-215R MOD	28
3	023029	P4B-E-300R	780452	P4B-ED-300R	780470	P4B-ED-300R MOD	28
3-3/16	023030	P4B-E-303R	—	—	—	—	47
3-1/4	023031	P4B-E-304R	—	—	—	—	47
3-7/16	023032	P4B-E-307R	013929	P4B-ED-307R	013973	P4B-ED-307R MOD	46
3-1/2	023033	P4B-E-308R	780453	P4B-ED-308R	780471	P4B-ED-308R MOD	45
3-15/16	023690	P4B-E-315R	013930	P4B-ED-315R	013974	P4B-ED-315R MOD	69
4	023691	P4B-E-400R	780454	P4B-ED-400R	780472	P4B-ED-400R MOD	69
4-7/16	023692	P4B-E-407R	013931	P4B-ED-407R	013975	P4B-ED-407R MOD	85
4-1/2	023693	P4B-E-408R	—	—	—	—	85
4-15/16	023694	P4B-E-415R	013932	P4B-ED-415R	013976	P4B-ED-415R MOD	134
5	023695	P4B-E-500R	—	—	—	—	133
5-7/16	023040	P4B-E-507R	013933	P4B-ED-507R	013977	P4B-ED-507R MOD	230
5-15/16	023041	P4B-E-515R	013934	P4B-ED-515R	013978	P4B-ED-515R MOD	250
6	023042	P4B-E-600R	013895	P4B-ED-600R	019447	P4B-ED-600R-MOD	245
6-7/16	023043	P4B-E-607R	780540	P4B-ED-607R	—	—	356
6-1/2	023044	P4B-E-608R	780082	P4B-ED-608R	—	—	350
6-15/16	023045	P4B-E-615R	—	—	—	—	340
7	023046	P4B-E-700R	013896	P4B-ED-700R	019448	P4B-ED-700R-MOD	335

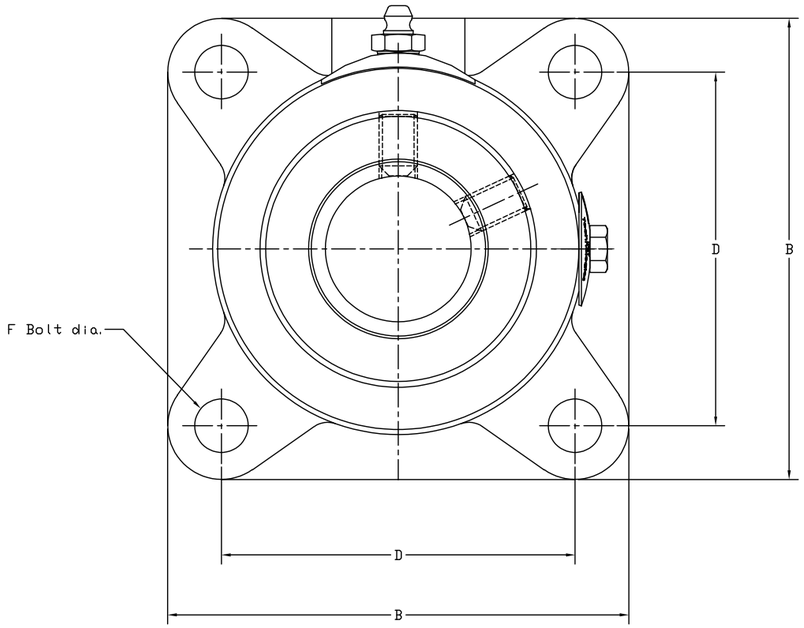
Contact Dodge for availability of any not listed.

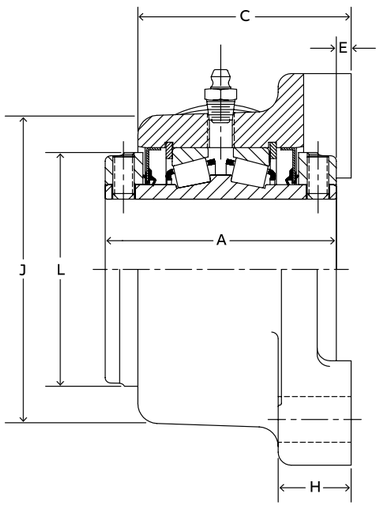
Shaft size	**A**	**B**	**C**	**D**		**E**	**F bolt dia.**	**G**	**H**	**J1**	**J**	**L**	**M**
				Min.	**Max.**								
2-1/4 2-7/16 2-1/2	4.00	10.50	3.50	8.31	8.69	1.88	5/8	0.88	1.63	5.50	5.63	4.06	2.75
2-11/16 2-3/4 2-15/16 3	4.50	12.00	4.00	9.19	9.81	2.13	5/8	1.00	1.88	6.25	6.34	4.72	3.13
3-3/16 3-1/4 3-7/16 3-1/2	5.00	13.50	4.50	10.75	11.25	2.38	3/4	1.19	2.25	7.50	7.50	5.50	3.75
3-15/16 4	6.25	15.25	4.50	12.25	12.75	2.25	3/4	1.13	2.44	8.50	8.44	6.00	4.25
4-7/16 4-1/2	6.75	16.63	4.63	13.25	13.75	2.50	3/4	1.13	2.75	9.38	9.28	6.45	4.75
4-15/16 5	7.25	18.50	5.13	15.25	15.75	2.88	7/8	1.25	3.00	10.88	10.69	7.45	5.50
5-7/16 5-15/16 6	9.00	22.00	6.25	17.38	19.13	3.75	1	2.00	3.25	13.19	—	9.38	6.69
6-7/16 6-1/2 6-15/16 7	10.50	26.00	7.13	21.25	23.25	4.63	1	2.00	3.69	14.94	—	11.38	7.50

Note: All sizes use a 1/8-27 NPT hydraulic grease fitting.

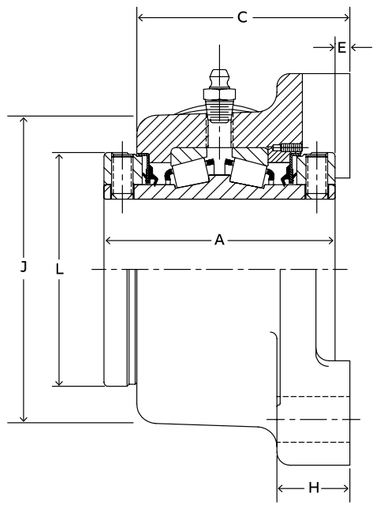
Type E flange – inch

4-bolt





1-3/16" thru 3" Construction



3-3/16" thru 4-1/2" Construction

Type E flange – inch

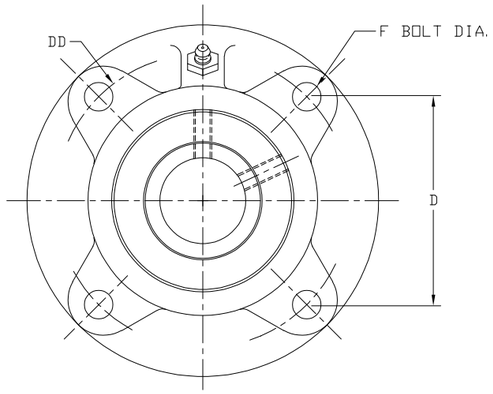
4-bolt

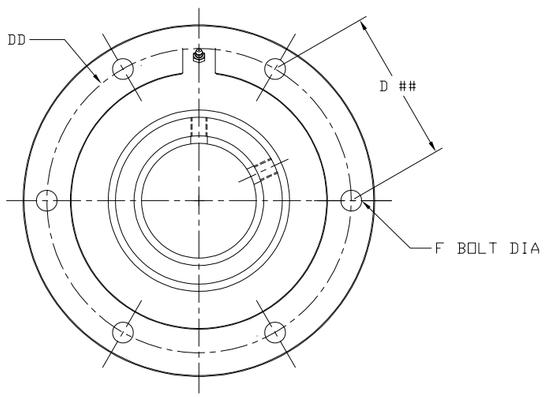
Gray iron			Harsh Duty		
Shaft size	**Part number**	**Description**	**Part number**	**Description**	**Approx. weight (lb)**
1-3/16	023093	F4B-E-103R	780365	F4B-ED-103R	4
1-1/4	023094	F4B-E-104R	780366	F4B-ED-104R	4
1-3/8	023095	F4B-E-106R	—	—	7
1-7/16	023096	F4B-E-107R	780367	F4B-ED-107R	7
1-1/2	023097	F4B-E-108R	780368	F4B-ED-108R	11
1-5/8	023098	F4B-E-110R	—	—	11
1-11/16	023099	F4B-E-111R	780369	F4B-ED-111R	11
1-3/4	023100	F4B-E-112R	780370	F4B-ED-112R	12
1-7/8	023101	F4B-E-114R	780371	F4B-ED-114R	12
1-15/16	023102	F4B-E-115R	780083	F4B-ED-115R	12
2	023103	F4B-E-200R	780084	F4B-ED-200R	12
2-3/16	023104	F4B-E-203R	780372	F4B-ED-203R	15
2-1/4	023105	F4B-E-204R	780373	F4B-ED-204R	21
2-7/16	023106	F4B-E-207R	145953	F4B-ED-207R	20
2-1/2	023107	F4B-E-208R	780374	F4B-ED-208R	19
2-11/16	023108	F4B-E-211R	780375	F4B-ED-211R	28
2-3/4	023109	F4B-E-212R	780376	F4B-ED-212R	28
2-15/16	023110	F4B-E-215R	780085	F4B-ED-215R	27
3	023111	F4B-E-300R	145870	F4B-ED-300R	26
3-3/16	023112	F4B-E-303R	—	—	52
3-1/4	023113	F4B-E-304R	—	—	51
3-7/16	023114	F4B-E-307R	780001	F4B-ED-307R	50
3-1/2	023115	F4B-E-308R	780377	F4B-ED-308R	50
3-15/16	023116	F4B-E-315R	780101	F4B-ED-315R	75
4	023117	F4B-E-400R	780378	F4B-ED-400R	75
4-7/16	023118	F4B-E-407R	780379	F4B-ED-407R	90
4-1/2	023119	F4B-E-408R	—	—	90

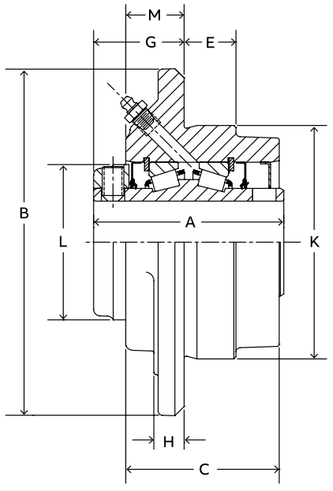
Shaft size	**A**	**B**	**C**	**D**	**E**	**F bolt dia.**	**H**	**J**	**L**
1-3/16 1-1/4	2.75	3.75	2.34	2.88	0.06	3/8	1.00	2.94	2.25
1-3/8 1-7/16	3.00	4.63	2.59	3.50	0.06	1/2	1.06	3.50	2.75
1-1/2 1-5/8 1-11/16	3.38	5.38	2.97	4.13	0.13	1/2	1.19	4.19	3.19
1-3/4 1-7/8 1-15/16 2	3.50	5.63	3.09	4.38	0.13	1/2	1.19	4.44	3.44
2-3/16	3.75	6.25	3.28	4.88	0.13	5/8	1.38	4.88	3.75
2-1/4 2-7/16 2-1/2	4.00	6.88	3.56	5.38	0.19	5/8	1.50	5.31	4.06
2-11/16 2-3/4 2-15/16 3	4.50	7.75	3.94	6.00	0.19	3/4	1.63	6.00	4.72
3-3/16 3-1/4 3-7/16 3-1/2	5.00	9.25	4.50	7.00	0.25	3/4	1.88	7.25	5.50
3-15/16 4	6.25	10.25	5.63	7.75	0.25	7/8	2.13	8.25	6.00
4-7/16 4-1/2	6.75	10.88	5.94	8.75	0.34	7/8	2.44	8.75	6.45

Note: All sizes use a 1/8-27 NPT hydraulic grease fitting.

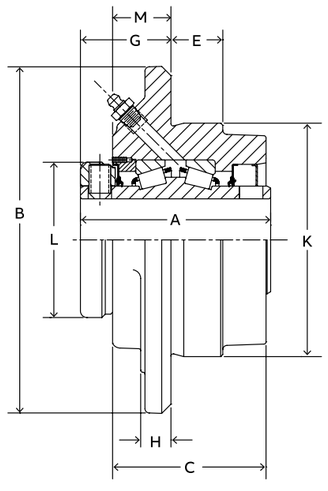
Type E piloted flange – inch



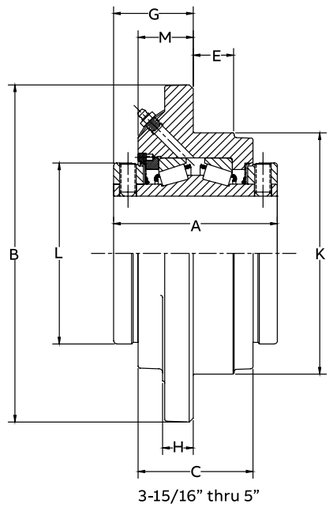




1-3/16” thru 3” Construction



3-3/16” thru 3-1/2” Construction



3-15/16” thru 5” Construction

Type E piloted flange – inch

Gray iron			Harsh Duty		Harsh Duty (synthetic grease)		
Shaft size	**Part number**	**Description**	**Part number**	**Description**	**Part number**	**Description**	**Approx. weight (lb)**
1-3/16	023120	FC-E-103R	—	—	—	—	5
1-1/4	023121	FC-E-104R	780395	FC-ED-104R	780415	FC-ED-104R MOD	5
1-3/8	023122	FC-E-106R	780396	FC-ED-106R	780416	FC-ED-106R MOD	7
1-7/16	023123	FC-E-107R	780397	FC-ED-107R	780417	FC-ED-107R MOD	6
1-1/2	023124	FC-E-108R	780398	FC-ED-108R	780418	FC-ED-108R MOD	10
1-5/8	023125	FC-E-110R	—	—	—	—	9
1-11/16	023126	FC-E-111R	780399	FC-ED-111R	780419	FC-ED-111R MOD	9
1-3/4	023127	FC-E-112R	—	—	—	—	11
1-7/8	023128	FC-E-114R	—	—	—	—	10
1-15/16	023129	FC-E-115R	780400	FC-ED-115R	780420	FC-ED-115R MOD	10
2	023130	FC-E-200R	780401	FC-ED-200R	780421	FC-ED-200R MOD	10
2-3/16	023131	FC-E-203R	780402	FC-ED-203R	780422	FC-ED-203R MOD	14
2-1/4	023132	FC-E-204R	780403	FC-ED-204R	780423	FC-ED-204R MOD	18
2-7/16	023133	FC-E-207R	780404	FC-ED-207R	780424	FC-ED-207R MOD	18
2-1/2	023134	FC-E-208R	780405	FC-ED-208R	780425	FC-ED-208R MOD	17
2-11/16	023135	FC-E-211R	780406	FC-ED-211R	780426	FC-ED-211R MOD	27
2-3/4	023136	FC-E-212R	—	—	—	—	27
2-15/16	023137	FC-E-215R	780407	FC-ED-215R	780427	FC-ED-215R MOD	25
3	023138	FC-E-300R	780408	FC-ED-300R	780428	FC-ED-300R MOD	25
3-3/16	023139	FC-E-303R	—	—	—	—	44
3-1/4	023140	FC-E-304R	—	—	—	—	44
3-7/16	023141	FC-E-307R	780409	FC-ED-307R	780429	FC-ED-307R MOD	43
3-1/2	023142	FC-E-308R	780410	FC-ED-308R	780430	FC-ED-308R MOD	42
3-15/16	023143	FC-E-315R	780411	FC-ED-315R	780431	FC-ED-315R MOD	59
4	023144	FC-E-400R	—	—	—	—	58
4-7/16 ##	023145	FC-E-407R	—	—	—	—	110
4-1/2 ##	023146	FC-E-408R	—	—	—	—	110
4-15/16 ##	023147	FC-E-415R	780412	FC-ED-415R	780432	FC-ED-415R MOD	130
5 ##	023148	FC-E-500R	—	—	—	—	130

Shaft size	A	B	C	D	ØDD	E	F bolt dia	G	H	K**	L	M
1-3/16 1-1/4	2.75	5.00	2.22	2.92	4.13	0.75	3/8	1.31	0.44	3.38	2.25	0.84
1-3/8 1-7/16	3.00	5.25	2.47	3.09	4.38	0.88	3/8	1.50	0.50	3.63	2.75	1.03
1-1/2 1-5/8 1-11/16	3.38	6.13	2.39	3.62	5.13	1.06	7/16	1.56	0.50	4.25	3.19	1.03
1-3/4 1-7/8 1-15/16 2	3.50	6.38	2.91	3.80	5.38	1.19	7/16	1.56	0.56	4.50	3.44	1.03
2-3/16	3.75	7.13	3.09	4.24	6.00	1.19	1/2	1.69	0.56	5.00	3.75	1.09
2-1/4 2-7/16 2-1/2	4.00	7.63	3.31	4.60	6.50	1.31	1/2	1.81	0.63	5.50	4.06	1.19
2-11/16 2-3/4 2-15/16 3	4.50	8.75	3.69	5.30	7.50	1.50	5/8	2.00	0.75	6.38	4.72	1.25
3-3/16 3-1/4 3-7/16 3-1/2	5.00	10.25	4.19	6.10	8.63	1.25	3/4	2.44	0.94	7.38	5.50	1.69
3-15/16 4	6.25	10.88	4.50	6.63	9.38	1.50	3/4	2.69	1.00	8.13	6.00	1.81
4-7/16 4-1/2	6.75	13.50	4.63	5.88##	11.75	1.50	3/4##	3.00	1.00	10.25	6.45	1.94
4-15/16 5	7.25	14.75	5.06	6.38##	12.75	1.75	7/8##	2.97	1.25	11.00	7.45	1.88

* 1-3/16 to 3-1/2 – One collar
3-15/16 to 5 – Two collars

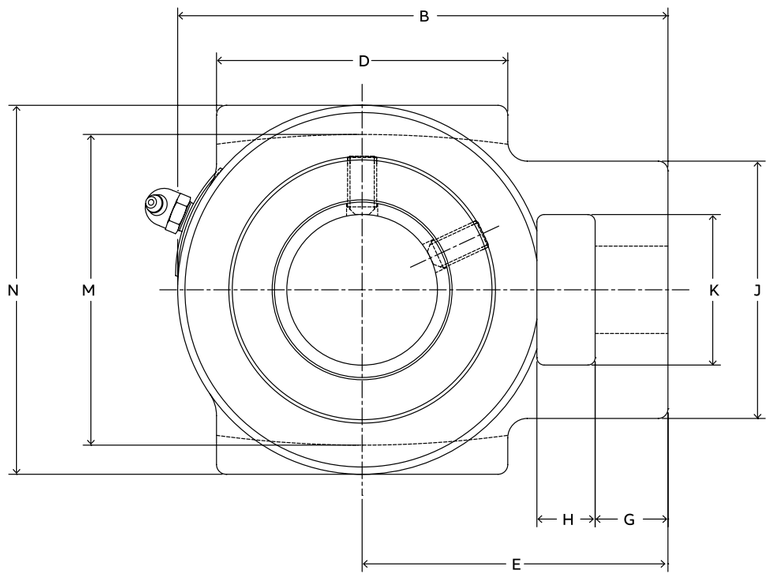
(6) Bolts equally spaced.

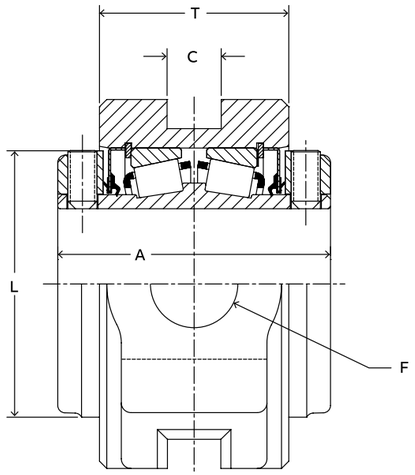
** +0.000 to -0.002

Note: All sizes use a 1/8-27 NPT hydraulic grease fitting.

Type E take-up – inch

Wide-slot (WS)





1-3/8” thru 3” Construction

Reference Guide
Type E Family (Tapered)
Specialty Tapered
Safety Mount Family (Spherical)
S-2000 (Spherical)
Unified SAF (Spherical)
Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

Type E take-up – inch

Wide-slot (WS)

Standard			Harsh Duty		Harsh Duty (synthetic grease)		All	
Shaft size	**Part number**	**Description**	**Part number**	**Description**	**Part number**	**Description**	**Approx. weight (lb)**	**Frame**
1-3/8	023076	WSTU-E-106R	—	—	—	—	8	CP308
1-7/16	023077	WSTU-E-107R	—	—	—	—	8	
1-1/2	023078	WSTU-E-108R	—	—	—	—	10	CP400
1-5/8	023079	WSTU-E-110R	—	—	—	—	10	
1-11/16	023080	WSTU-E-111R	—	—	—	—	10	
1-3/4	023081	WSTU-E-112R	—	—	—	—	12	CP400
1-7/8	023082	WSTU-E-114R	—	—	—	—	12	
1-15/16	023083	WSTU-E-115R	013940	WSTU-ED-115R	013984	WSTU-ED-115R MOD	12	
2	023084	WSTU-E-200R	—	—	—	—	12	
2-3/16	023085	WSTU-E-203R	—	—	—	—	16	CP408
2-1/4	023086	WSTU-E-204R	780491	WSTU-ED-204R	780497	WSTU-ED-204R MOD	21	CP502
2-7/16	023087	WSTU-E-207R	013941	WSTU-ED-207R	013985	WSTU-ED-207R MOD	21	
2-1/2	023088	WSTU-E-208R	—	—	—	—	21	
2-11/16	023089	WSTU-E-211R	—	—	—	—	30	CP515
2-3/4	023090	WSTU-E-212R	—	—	—	—	30	
2-15/16	023091	WSTU-E-215R	013942	WSTU-ED-215R	013986	WSTU-ED-215R MOD	30	
3	023092	WSTU-E-300R	—	—	—	—	30	

Contact Dodge for availability of any not listed.

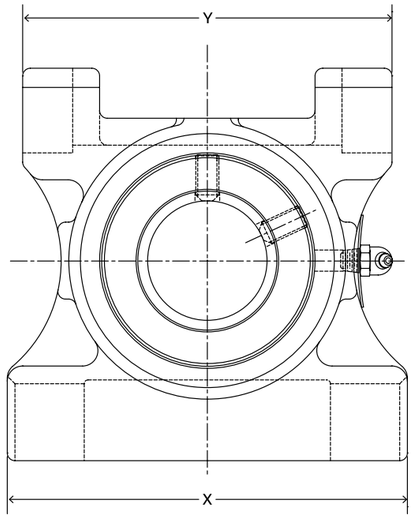
Shaft size	**A**	**B**	**C***	**D**	**E**	**F screw dia.**	**G**	**H**	**J**	**K**	**L**	**M**	**N**	**T**
1-3/8	3.00	5.09	0.53	2.75	3.22	3/4	0.69	0.63	2.44	1.44	2.75	3.50	4.13	2.06
1-7/16														
1-1/2	3.38	6.00	0.69	3.25	3.81	1	0.94	0.75	3.31	1.94	3.79	4.00	4.75	2.31
1-5/8														
1-11/16														
1-3/4	3.50	6.31	0.69	3.75	3.94	1	0.94	0.75	3.31	1.94	3.44	4.00	4.75	2.44
1-7/8														
1-15/16														
2														
2-3/16	3.75	7.13	0.81	3.75	4.63	1-1/8	1.00	1.25	3.88	2.25	3.75	4.50	5.25	2.56
2-1/4	4.00	7.81	1.06	4.50	5.06	1-1/4	1.06	1.25	4.25	2.50	4.06	5.13	6.00	2.75
2-7/16														
2-1/2														
2-11/16	4.50	9.13	1.81	4.75	5.88	1-1/2	1.13	1.50	4.88	2.75	4.72	5.94	6.75	3.00
2-3/4														
2-15/16														
3														

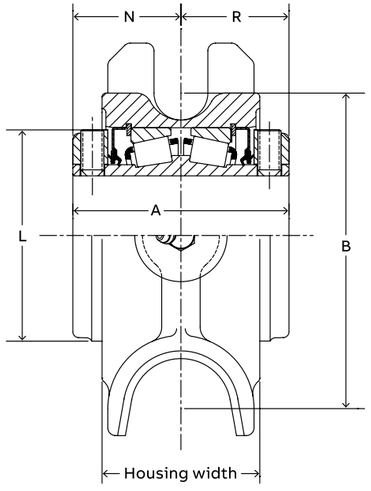
Note: All sizes use a 1/8-27 NPT hydraulic grease fitting.

* Slot is "as cast" dimension.

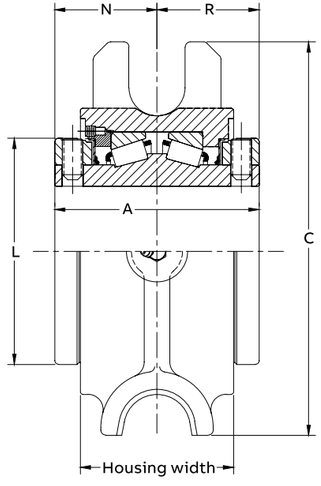
Type E take-up – inch

Top-angle (TP)





1-3/4” thru 3” Construction



3-3/16” thru 4” Construction

Type E take-up – inch
Top-angle (TP)

Standard			Harsh Duty		Harsh Duty (synthetic grease)		All	
Shaft size	Part number	Description	Part number	Description	Part number	Description	Approx. weight (lb)	Frame size ref.
1-3/4	023149	TP-E-112R	—	—	—	—	14	TP10
1-7/8	023150	TP-E-114R	—	—	—	—	14	TP10
1-15/16	023151	TP-E-115R	013935	TP-ED-115R	013979	TP-ED-115R MOD	14	TP10
2	023152	TP-E-200R	—	—	—	—	14	TP10
2-3/16	023153	TP-E-203R	780490	TP-ED-203R	780496	TP-ED-203R MOD	16	TP20
2-1/4	023154	TP-E-204R	—	—	—	—	21	TP30
2-7/16	023155	TP-E-207R	013936	TP-ED-207R	013980	TP-ED-207R MOD	21	TP30
2-1/2	023156	TP-E-208R	—	—	—	—	21	TP30
2-11/16	023157	TP-E-211R	—	—	—	—	29	TP40
2-3/4	023158	TP-E-212R	—	—	—	—	29	TP40
2-15/16	023159	TP-E-215R	013937	TP-ED-215R	013981	TP-ED-215R MOD	29	TP40
3	023160	TP-E-300R	—	—	—	—	29	TP40
3-3/16	023161	TP-E-303R	—	—	—	—	43	TP50
3-1/4	023162	TP-E-304R	—	—	—	—	43	TP50
3-7/16	023163	TP-E-307R	013938	TP-ED-307R	013982	TP-ED-307R MOD	42	TP50
3-1/2	023164	TP-E-308R	—	—	—	—	42	TP50
3-15/16	023165	TP-E-315R	013939	TP-ED-315R	013983	TP-ED-315R MOD	62	TP60
4	023166	TP-E-400R	—	—	—	—	62	TP60

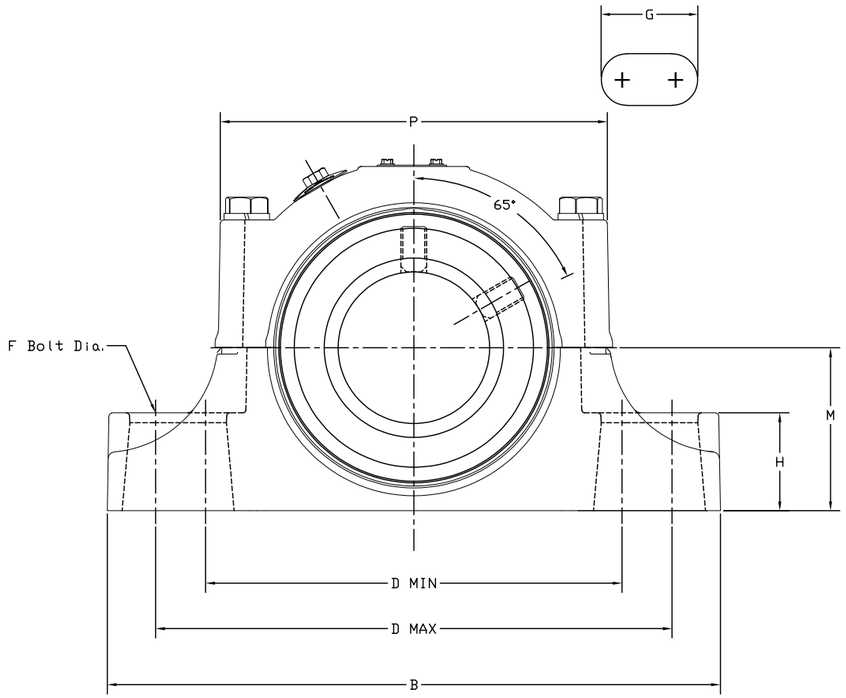
Contact Dodge for availability of any not listed.

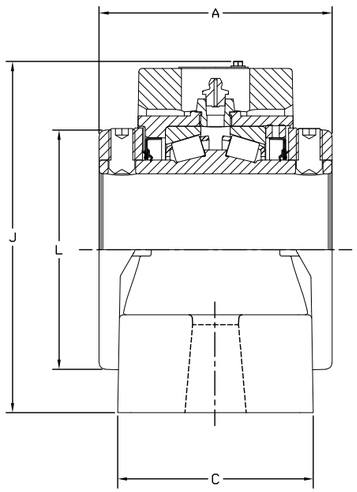
Shaft size	A	B	C	L	N	Housing width	X	Y
1-3/4	3.50	5.19	6.38	3.44	1.75	2.56	6.50	6.00
1-7/8								
1-15/16								
2								
2 -3/16	3.75	5.81	6.88	3.75	1.88	2.56	6.75	7.00
2 -1/4	4.00	6.25	7.44	4.06	2.00	3.00	7.50	7.00
2 -7/16								
2 -1/2								
2-11/16	4.50	7.19	8.31	4.72	2.25	3.00	8.50	8.00
2 -3/4								
2-15/16								
3								
3-3/16	5.00	8.31	9.63	5.50	2.50	3.75	9.50	9.00
3-1/4								
3-7/16								
3-1/2								
3-15/16	6.25	9.06	11.00	6.00	3.13	4.75	11.00	10.50
4								

Note: All sizes use a 1/8-27 NPT hydraulic grease fitting.

Type EXL pillow block – inch

2-bolt





Type EXL pillow block – inch

2-bolt

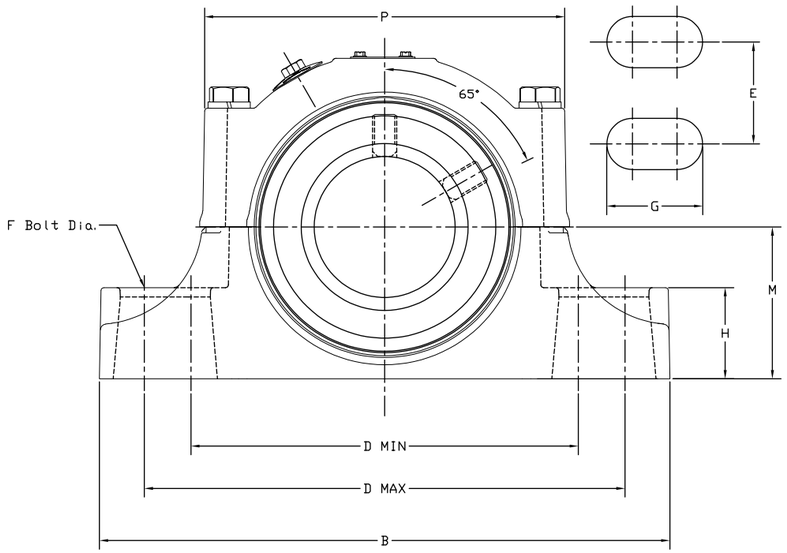
Shaft size	Non-expansion part number	Description	Expansion part number	Description
1-3/16	077221	P2B-EXL-103R	077244	P2B-EXL-103RE
1-1/4	077222	P2B-EXL-104R	077245	P2B-EXL-104RE
1-3/8	077223	P2B-EXL-106R	077246	P2B-EXL-106RE
1-7/16	077224	P2B-EXL-107R	077247	P2B-EXL-107RE
1-1/2	077225	P2B-EXL-108R	077248	P2B-EXL-108RE
1-5/8	077226	P2B-EXL-110R	077249	P2B-EXL-110RE
1-11/16	077227	P2B-EXL-111R	077250	P2B-EXL-111RE
1-3/4	077228	P2B-EXL-112R	077251	P2B-EXL-112RE
1-7/8	077229	P2B-EXL-114R	077252	P2B-EXL-114RE
1-15/16	077230	P2B-EXL-115R	077253	P2B-EXL-115RE
2	077231	P2B-EXL-200R	077254	P2B-EXL-200RE
2-3/16	077232	P2B-EXL-203R	077255	P2B-EXL-203RE
2-1/4	077233	P2B-EXL-204R	077256	P2B-EXL-204RE
2-7/16	077234	P2B-EXL-207R	077257	P2B-EXL-207RE
2-1/2	077235	P2B-EXL-208R	077258	P2B-EXL-208RE
2-11/16	077236	P2B-EXL-211R	077259	P2B-EXL-211RE
2-3/4	077237	P2B-EXL-212R	077260	P2B-EXL-212RE
2-15/16	077238	P2B-EXL-215R	077261	P2B-EXL-215RE
3	077239	P2B-EXL-300R	077262	P2B-EXL-300RE
3-3/16	077240	P2B-EXL-303R	077263	P2B-EXL-303RE
3-1/4	077241	P2B-EXL-304R	077264	P2B-EXL-304RE
3-7/16	077242	P2B-EXL-307R	077265	P2B-EXL-307RE
3-1/2	077243	P2B-EXL-308R	077266	P2B-EXL-308RE

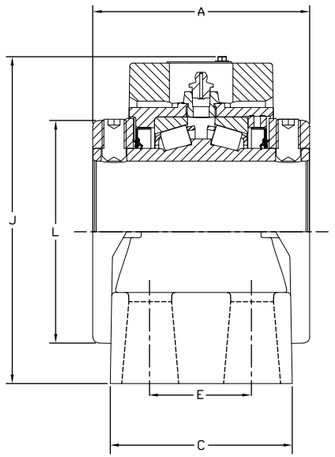
Shaft size	Approx. weight (lb)	A	B	C	D		F bolt dia.	G	H	J	L	M	P	EXP*
					Min.	Max.								
1-3/16	10	2.75	6.25	1.88	4.56	4.94	1/2	0.75	0.88	3.51	2.25	1.50	4.06	0.56
1-1/4	10													
1-3/8	12	3.00	7.25	2.19	5.31	5.94	1/2	0.94	1.13	4.17	2.75	1.88	4.63	0.56
1-7/16	12													
1-1/2	12													
1-5/8	15	3.38	7.75	2.37	5.56	6.44	1/2	1.07	1.25	4.69	3.19	2.13	5.13	0.56
1-11/16	15													
1-3/4	15	3.50	8.88	2.54	6.31	7.19	5/8	1.19	1.31	4.99	3.44	2.25	5.56	0.56
1-7/8	19													
1-15/16	19													
2	19													
2-3/16	24	3.75	9.62	2.65	6.69	7.94	5/8	1.38	1.50	5.42	3.75	2.50	6.00	0.56
2-1/4	24	4.00	10.38	2.88	6.94	8.69	5/8	1.63	1.63	6.08	4.06	2.75	6.41	0.56
2-7/16	29													
2-1/2	29													
2-11/16	42	4.50	11.75	3.32	8.06	10.00	3/4	1.85	1.88	6.77	4.72	3.13	7.50	0.56
2-3/4	42													
2-15/16	43													
3	43													
3-3/16	73	5.00	13.75	4.00	10.12	11.75	7/8	1.82	2.25	7.97	5.50	3.75	9.31	0.56
3-1/4	73													
3-7/16	73													
3-1/2	73													

* EXP = Total expansion divided equally on both sides of bearing (expansion bearing only).

Type EXL pillow block – inch

4-bolt





Type EXL pillow block – inch

4-bolt

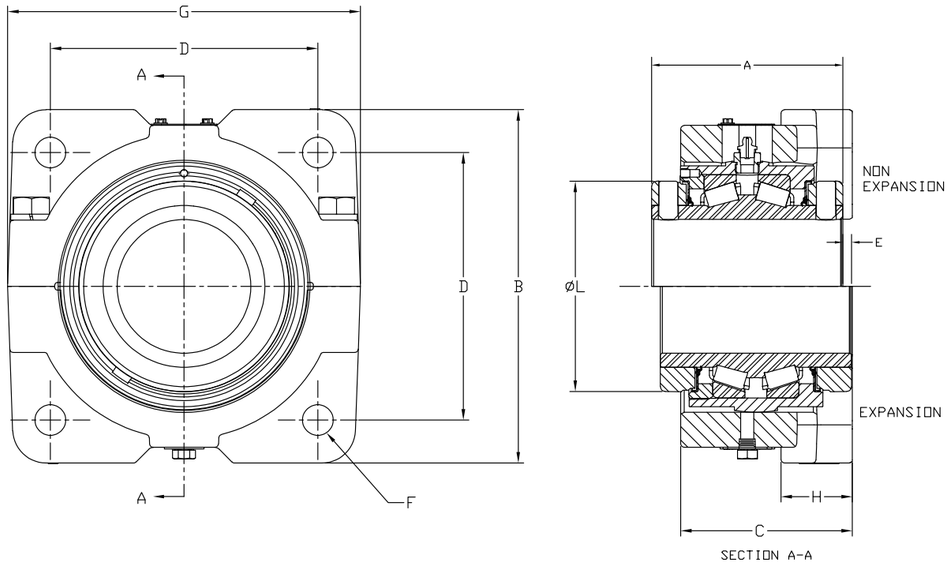
Shaft size	Non-expansion part number	Description	Expansion part number	Description
2-1/4	077267	P4B-EXL-204R	077284	P4B-EXL-204RE
2-7/16	077268	P4B-EXL-207R	077285	P4B-EXL-207RE
2-1/2	077269	P4B-EXL-208R	077286	P4B-EXL-208RE
2-11/16	077270	P4B-EXL-211R	077287	P4B-EXL-211RE
2-3/4	077271	P4B-EXL-212R	077288	P4B-EXL-212RE
2-15/16	077272	P4B-EXL-215R	077289	P4B-EXL-215RE
3	077273	P4B-EXL-300R	077290	P4B-EXL-300RE
3-3/16	077274	P4B-EXL-303R	077291	P4B-EXL-303RE
3-1/4	077275	P4B-EXL-304R	077292	P4B-EXL-304RE
3-7/16	077276	P4B-EXL-307R	077293	P4B-EXL-307RE
3-1/2	077277	P4B-EXL-308R	077294	P4B-EXL-308RE
3-15/16	077278	P4B-EXL-315R	077295	P4B-EXL-315RE
4	077279	P4B-EXL-400R	077296	P4B-EXL-400RE
4-7/16	077280	P4B-EXL-407R	077297	P4B-EXL-407RE
4-1/2	077281	P4B-EXL-408R	077298	P4B-EXL-408RE
4-15/16	077282	P4B-EXL-415R	077299	P4B-EXL-415RE
5	077283	P4B-EXL-500R	077300	P4B-EXL-500RE

Shaft size	Approx. weight (lb)	A	B	C	D		E	F bolt dia.	G	H	J	L	M	P	EXP*
					Min.	Max.									
2-1/4	29	4.00	10.38	3.50	7.75	8.25	1.88	5/8	1.25	1.63	6.08	4.06	2.75	6.41	0.56
2-7/16	29														
2-1/2	29														
2-11/16	42	4.50	11.75	3.75	8.75	10.00	2.12	5/8	1.38	1.88	6.77	4.72	3.13	7.50	0.56
2-3/4	42														
2-15/16	42														
3	42														
3-3/16	73	5.00	13.75	4.50	10.56	11.75	2.38	3/4	1.48	2.25	7.97	5.50	3.75	9.31	0.56
3-1/4	73														
3-7/16	73														
3-1/2	73														
3-15/16	109	6.25	15.25	4.74	11.00	13.00	2.25	3/4	1.88	2.44	8.81	6.00	4.25	10.08	0.56
4	109														
4-7/16	154	6.75	16.50	5.08	12.00	13.88	2.50	3/4	1.82	2.75	9.79	6.45	4.75	11.08	0.56
4-1/2	154														
4-15/16	192	7.25	18.50	5.66	13.50	15.88	2.88	7/8	2.23	3.00	11.36	7.25	5.50	12.71	0.56
5	192														

* EXP = Total expansion divided equally on both sides of bearing (expansion bearing only).

Type EXL flange – inch

4-bolt



Shaft size	Non-expansion part number	Description	Expansion part number	Description
1-3/16	077301	F4B-EXL-103R	077326	F4B-EXL-103RE
1-1/4	077302	F4B-EXL-104R	077327	F4B-EXL-104RE
1-3/8	077303	F4B-EXL-106R	077328	F4B-EXL-106RE
1-7/16	077304	F4B-EXL-107R	077329	F4B-EXL-107RE
1-1/2	077305	F4B-EXL-108R	077330	F4B-EXL-108RE
1-5/8	077306	F4B-EXL-110R	077331	F4B-EXL-110RE
1-11/16	077307	F4B-EXL-111R	077332	F4B-EXL-111RE
1-3/4	077308	F4B-EXL-112R	077333	F4B-EXL-112RE
1-7/8	077309	F4B-EXL-114R	077334	F4B-EXL-114RE
1-15/16	077310	F4B-EXL-115R	077335	F4B-EXL-115RE
2	077311	F4B-EXL-200R	077336	F4B-EXL-200RE
2-3/16	077312	F4B-EXL-203R	077337	F4B-EXL-203RE
2-1/4	077313	F4B-EXL-204R	077338	F4B-EXL-204RE
2-7/16	077314	F4B-EXL-207R	077339	F4B-EXL-207RE
2-1/2	077315	F4B-EXL-208R	077340	F4B-EXL-208RE
2-11/16	077316	F4B-EXL-211R	077341	F4B-EXL-211RE
2-3/4	077317	F4B-EXL-212R	077342	F4B-EXL-212RE
2-15/16	077318	F4B-EXL-215R	077343	F4B-EXL-215RE
3	077319	F4B-EXL-300R	077344	F4B-EXL-300RE
3-3/16	077320	F4B-EXL-303R	077345	F4B-EXL-303RE
3-1/4	077321	F4B-EXL-304R	077346	F4B-EXL-304RE
3-7/16	077322	F4B-EXL-307R	077347	F4B-EXL-307RE
3-1/2	077323	F4B-EXL-308R	077348	F4B-EXL-308RE
3-15/16	077324	F4B-EXL-315R	077349	F4B-EXL-315RE
4	077325	F4B-EXL-400R	077350	F4B-EXL-400RE

Reference Guide
Type E Family (Tapered)
Specialty Tapered
Safety Mount Family (Spherical)
S-2000 (Spherical)
Unified SAF (Spherical)
Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

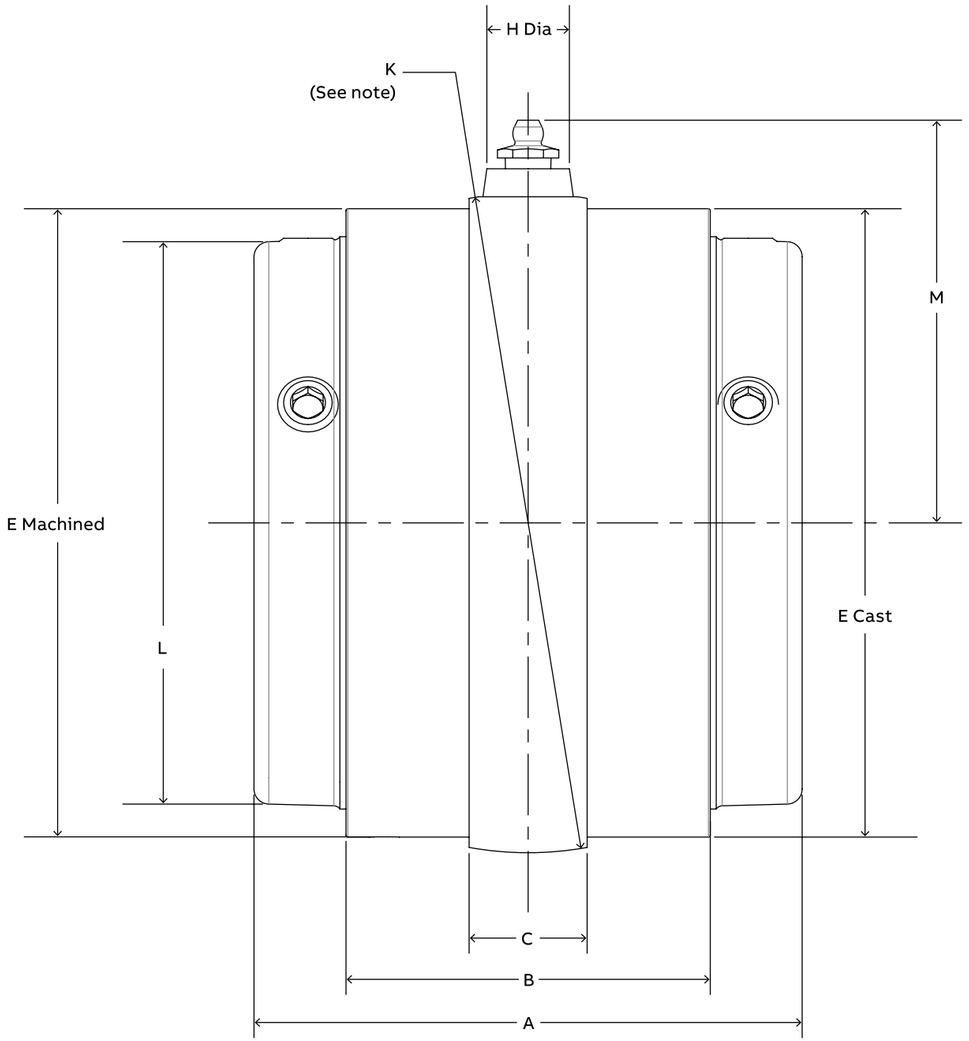
Type EXL flange – inch

4-bolt

Bearing series	Shaft size	Approx. weight (lb)	A	B	C	D	E	F bolt dia.	G	H	L	EXP*
103	1-3/16	6	2.75	4.00	2.31	2.88	0.06	3/8	3.98	1.00	2.25	0.20
104	1-1/4											
106	1-3/8	8	3.00	4.63	2.56	3.50	0.06	1/2	4.61	1.00	2.75	0.21
107	1-7/16											
108	1-1/2	13	3.38	5.38	2.93	4.13	0.12	1/2	5.36	1.19	3.19	0.20
110	1-5/8											
111	1-11/16											
112	1-3/4	15	3.50	5.63	3.06	4.38	0.13	1/2	5.60	1.19	3.44	0.20
114	1-7/8											
115	1-15/16											
200	2											
203	2-3/16	19	3.75	6.25	3.25	4.88	0.13	5/8	6.23	1.38	3.75	0.26
204	2-1/4	24	4.00	6.88	3.56	5.38	0.19	5/8	6.86	1.50	4.06	0.20
207	2-7/16											
208	2-1/2											
211	2-11/16	35	4.50	7.75	3.93	6.00	0.19	3/4	7.73	1.62	4.72	0.20
212	2-3/4											
215	2-15/16											
300	3											
303	3-3/16	61	5.00	9.25	4.50	7.00	0.25	3/4	9.22	1.87	5.50	0.35
304	3-1/4											
307	3-7/16											
308	3-1/2											
315	3-15/16	90	6.25	10.25	5.62	7.75	0.25	7/8	10.19	2.12	6.00	0.37
400	4											

* Total expansion (expansion bearings only).

Type EXL S1 unit – inch



Type EXL S1 unit – inch

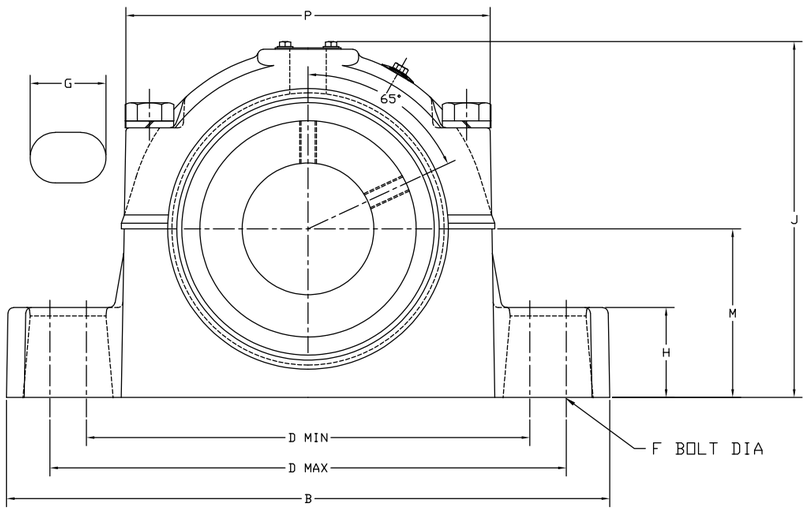
Shaft size	Part number	Description	Approx. weight (lb)	A	B	C	E	H	K*	L	M
1-3/16	077192	S1U-EXL-103R	3	2.75	1.88	0.56	2.51	5/16	2.6370	2.25	1.66
1-1/4	077193	S1U-EXL-104R	3								
1-3/8	077194	S1U-EXL-106R	4	3.00	2.06	0.62	3.03	5/16	3.2000	2.75	1.94
1-7/16	077195	S1U-EXL-107R	4								
1-1/2	077196	S1U-EXL-108R	4	3.38	2.31	0.75	3.49	14/25	3.6920	3.19	2.19
1-5/8	077197	S1U-EXL-110R	6								
1-11/16	077198	S1U-EXL-111R	6								
1-3/4	077199	S1U-EXL-112R	6	3.50	2.44	0.82	3.75	14/25	3.9650	3.44	2.38
1-7/8	077200	S1U-EXL-114R	6								
1-15/16	077201	S1U-EXL-115R	7								
2	077202	S1U-EXL-200R	7								
2-3/16	077203	S1U-EXL-203R	9	3.75	2.56	0.84	4.22	14/25	4.4380	3.75	2.61
2-1/4	077204	S1U-EXL-204R	11	4.00	2.75	0.85	4.56	11/16	4.7810	4.06	3.04
2-7/16	077205	S1U-EXL-207R	11								
2-1/2	077206	S1U-EXL-208R	11								
2-11/16	077207	S1U-EXL-211R	16	4.50	3.00	0.98	5.17	11/16	5.4325	4.72	3.37
2-3/4	077208	S1U-EXL-212R	16								
2-15/16	077209	S1U-EXL-215R	16								
3	077210	S1U-EXL-300R	16								
3-3/16	077211	S1U-EXL-303R	30	5.00	3.50	1.12	6.30	11/16	6.5940	5.50	3.95
3-1/4	077212	S1U-EXL-304R	30								
3-7/16	077213	S1U-EXL-307R	30								
3-1/2	077214	S1U-EXL-308R	30								
3-15/16	077215	S1U-EXL-315R	42	6.25	4.50	1.56	6.84	11/16	7.2640	6.00	4.28
4	077216	S1U-EXL-400R	42								
4-7/16	077217	S1U-EXL-407R	56	6.75	4.63	1.63	7.56	11/16	8.0000	6.45	4.65
4-1/2	077218	S1U-EXL-408R	56								
4-15/16	077219	S1U-EXL-415R	81	7.25	5.13	1.87	8.79	11/16	9.2900	7.25	5.30
5	077220	S1U-EXL-500R	81								

* +/- 0.0005

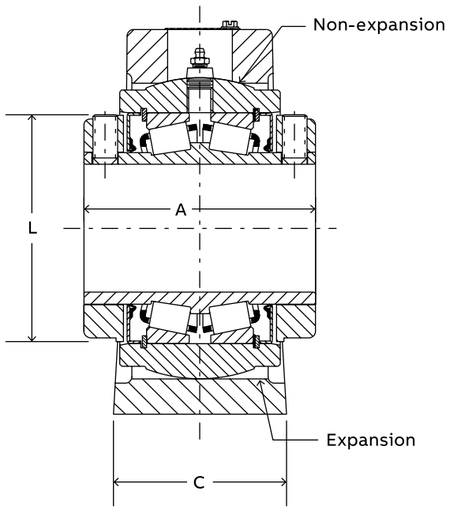
Reference Guide
Type E Family (Tapered)
Specialty Tapered
Safety Mount Family (Spherical)
S-2000 (Spherical)
Unified SAF (Spherical)
Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

TAF pillow block – inch

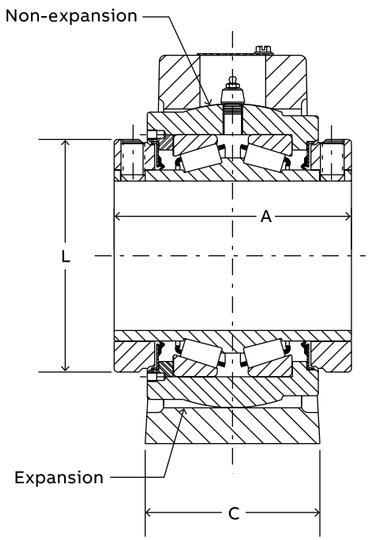
2-bolt



Note: All sizes use a 1/8 - 27 NPT hydraulic grease fitting



1-7/16" thru 3" Construction



3-7/16" thru 3-1/2" Construction

TAF pillow block – inch

2-bolt

Standard – Non-expansion

Shaft size	Pillow block assy.	Description	Pillow block approx. weight (lb)	Bearing inner unit
1-7/16	037580	P2B509-TAF-107R	12	037632
1-11/16	037581	P2B510-TAF-111R	15	037633
1-15/16	037582	P2B511-TAF-115R	17	037634
2-3/16	037583	P2B513-TAF-203R	25	037635
2-7/16	037584	P2B515-TAF-207R	30	037636
2-1/2	037585	P2B515-TAF-208R	30	037637
2-11/16	037586	P2B516-TAF-211R	38	037638
2-3/4	037587	P2B516-TAF-212R	38	037639
2-15/16	037588	P2B517-TAF-215R	45	037640
3	037589	P2B517-TAF-300R	44	037641
3-7/16	037590	P2B520-TAF-307R	71	037642
3-1/2	037591	P2B520-TAF-308R	70	037643

Non-expansion furnished unless otherwise specified.

Standard – Expansion

Shaft size	Pillow block assy.	Description	Pillow block approx. weight (lb)	Bearing inner unit
1-7/16	037592	P2B509-TAF-107RE	12	037632
1-11/16	037593	P2B510-TAF-111RE	15	037633
1-15/16	037594	P2B511-TAF-115RE	17	037634
2-3/16	037595	P2B513-TAF-203RE	25	037635
2-7/16	037596	P2B515-TAF-207RE	30	037636
2-1/2	037597	P2B515-TAF-208RE	30	037637
2-11/16	037598	P2B516-TAF-211RE	38	037638
2-3/4	037599	P2B516-TAF-212RE	38	037639
2-15/16	037600	P2B517-TAF-215RE	45	037640
3	037601	P2B517-TAF-300RE	44	037641
3-7/16	037602	P2B520-TAF-307RE	71	037642
3-1/2	037603	P2B520-TAF-308RE	70	037643

Harsh Duty – Non-expansion

Shaft size	Part number	Description	Approx. weight (lb)
1-7/16	780542	P2B509-TAFD-107R	12
1-15/16	013943	P2B511-TAFD-115R	17
2-3/16	780479	P2B513-TAFD-203R	25
2-7/16	013944	P2B515-TAFD-207R	30
2-11/16	780480	P2B516-TAFD-211R	38
2-15/16	013945	P2B517-TAFD-215R	45
3	780697	P2B517-TAFD-300R	44
3-7/16	013949	P2B520-TAFD-307R	71

Harsh Duty – Expansion

Shaft size	Part number	Description	Approx. weight (lb)
1-15/16	013947	P2B511-TAFD-115RE	17
2-3/16	780478	P2B513-TAFD-203RE	25
2-7/16	013948	P2B515-TAFD-207RE	30
2-11/16	780481	P2B516-TAFD-211RE	38
2-15/16	013949	P2B517-TAFD-215RE	45
3	780482	P2B517-TAFD-300RE	44
3-7/16	013950	P2B520-TAFD-307RE	71

Harsh Duty – Non-expansion, synthetic grease

Shaft size	Part number	Description	Approx. weight (lb)
1-15/16	013987	P2B511-TAFD-115R MOD	17
2-3/16	780499	P2B513-TAFD-203R MOD	25
2-7/16	013988	P2B515-TAFD-207R MOD	30
2-11/16	780500	P2B516-TAFD-211R MOD	38
2-15/16	013989	P2B517-TAFD-215R MOD	45
3	780698	P2B517-TAFD-300R MOD	44
3-7/16	013990	P2B520-TAFD-307R MOD	71

Harsh Duty – Expansion, synthetic grease

Shaft size	Part number	Description	Approx. weight (lb)
1-15/16	013991	P2B511-TAFD-115RE MOD	17
2-3/16	780498	P2B513-TAFD-203RE MOD	25
2-7/16	013992	P2B515-TAFD-207RE MOD	30
2-11/16	780501	P2B516-TAFD-211RE MOD	38
2-15/16	013993	P2B517-TAFD-215RE MOD	45
3	780502	P2B517-TAFD-300RE MOD	44
3-7/16	013994	P2B520-TAFD-307RE MOD	71

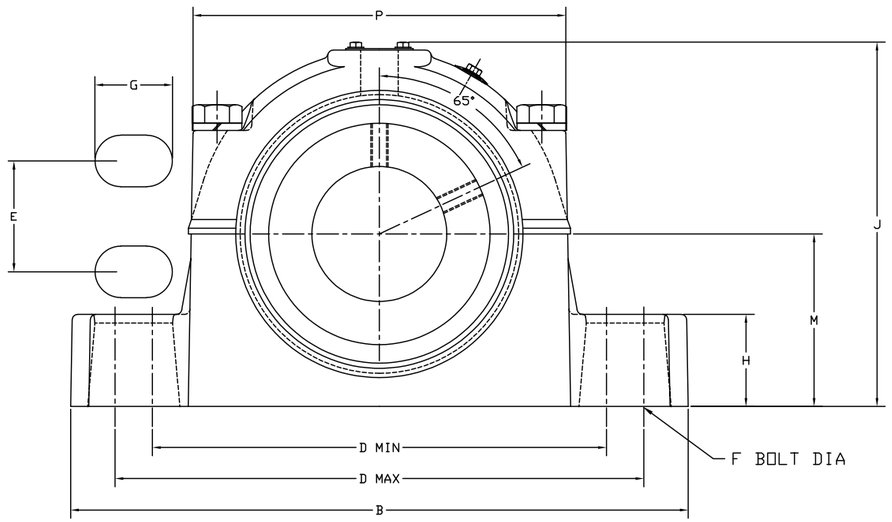
Shaft size	SAF series	A	B	C	D		F bolt dia.	G	H	J	L	M	P	EXP*
					Min.	Max.								
1-7/16	509	3.00	8.25	2.19	6.25	7.00	1/2	0.94	0.88	5.11	2.75	2.25	5.52	3/32
1-11/16	510	3.38	8.25	2.38	6.50	7.00	1/2	0.88	1.03	5.63	3.19	2.50	5.81	3/32
1-15/16	511	3.50	9.63	2.75	7.38	8.25	5/8	1.20	1.03	6.14	3.44	2.75	6.36	9/32
2-3/16	513	3.75	11.00	3.25	8.66	9.50	5/8	1.44	1.03	6.52	3.75	3.00	6.95	9/32
2-7/16 2-1/2	515	4.00	11.13	3.13	8.63	9.63	5/8	1.27	1.25	7.03	4.06	3.25	7.38	9/32
2-11/16 2-3/4	516	4.50	12.59	3.50	9.88	11.00	3/4	1.44	1.00	7.67	4.72	3.50	8.31	9/32
2-15/16 3	517	4.50	12.59	3.50	9.88	11.00	3/4	1.44	1.25	7.92	4.72	3.75	8.31	9/32
3-7/16 3-1/2	520	5.00	15.38	4.34	11.81	13.13	7/8	1.66	1.66	9.42	5.50	4.50	10.09	9/32

* EXP – Total expansion divided equally on both sides of bearing (expansion bearings only).

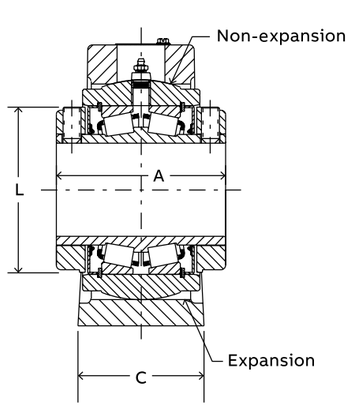
Note: All sizes use a 1/8-27 NPT hydraulic grease fitting.

TAF pillow block – inch

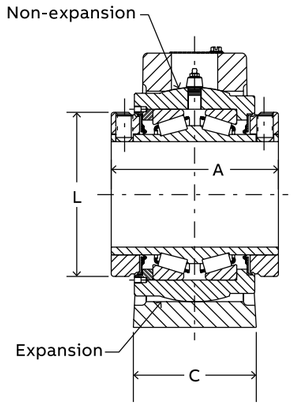
4-bolt



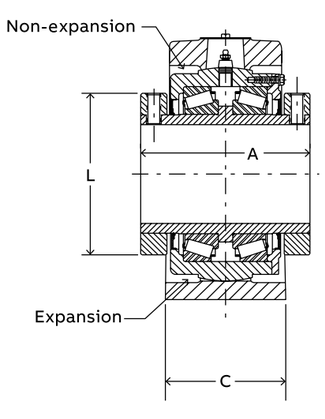
Note: All sizes use a 1/8 - 27 NPT hydraulic grease fitting



2-7/16" thru 3" Construction



3-7/16" thru 5" Construction



5-7/16" thru 7" Construction

TAF pillow block – inch

4-bolt

Non-expansion

Shaft size	Pillow block assy.	Description	Pillow block approx. weight (lb)	Bearing inner unit
2-7/16	037604	P4B515-TAF-207R	30	037636
2-1/2	037605	P4B515-TAF-208R	30	037637
2-11/16	037606	P4B516-TAF-211R	38	037638
2-3/4	037607	P4B516-TAF-212R	38	037639
2-15/16	037608	P4B517-TAF-215R	45	037640
3	037609	P4B517-TAF-300R	44	037641
3-7/16	037610	P4B520-TAF-307R	71	037642
3-1/2	037611	P4B520-TAF-308R	70	037643
3-15/16	037612	P4B522-TAF-315R	110	037644
4	037613	P4B522-TAF-400R	110	037645
4-7/16	037614	P4B526-TAF-407R	140	037646
4-1/2	037615	P4B526-TAF-408R	140	037647
4-15/16	037616	P4B528-TAF-415R	180	037648
5	037617	P4B528-TAF-500R	180	037649
5-7/16	023584	P4B532-TAF-507R	300	023610
5-15/16	023585	P4B534-TAF-515R	300	023611
6	023586	P4B534-TAF-600R	300	023612
6-7/16	023587	P4B536-TAF-607R	510	023613
6-1/2	023588	P4B536-TAF-608R	510	023614
6-15/16	023589	P4B538-TAF-615R	487	023615
7	023590	P4B538-TAF-700R	470	023616

Non-expansion furnished unless otherwise specified.

Expansion

Shaft size	Pillow block assy.	Description	Pillow block approx. weight (lb)	Bearing inner unit
2-7/16	037618	P4B515-TAF-207RE	30	037636
2-1/2	037619	P4B515-TAF-208RE	30	037637
2-11/16	037620	P4B516-TAF-211RE	38	037638
2-3/4	037621	P4B516-TAF-212RE	38	037639
2-15/16	037622	P4B517-TAF-215RE	45	037640
3	037623	P4B517-TAF-300RE	44	037641
3-7/16	037624	P4B520-TAF-307RE	71	037642
3-1/2	037625	P4B520-TAF-308RE	70	037643
3-15/16	037626	P4B522-TAF-315RE	110	037644
4	037627	P4B522-TAF-400RE	110	037645
4-7/16	037628	P4B526-TAF-407RE	140	037646
4-1/2	037629	P4B526-TAF-408RE	140	037647
4-15/16	037630	P4B528-TAF-415RE	180	037648
5	037631	P4B528-TAF-500RE	180	037649
5-7/16	023603	P4B532-TAF-507RE	300	023610
5-15/16	023604	P4B534-TAF-515RE	300	023611
6	023605	P4B534-TAF-600RE	300	023612
6-7/16	023606	P4B536-TAF-607RE	510	023613
6-1/2	023607	P4B536-TAF-608RE	510	023614
6-15/16	023608	P4B538-TAF-615RE	487	023615
7	023609	P4B538-TAF-700RE	470	023616

Harsh Duty – Non-expansion

Shaft size	Part number	Description	Approx. weight (lb)
2-7/16	013951	P4B515-TAFD-207R	30
2-15/16	013952	P4B517-TAFD-215R	45
3	780483	P4B517-TAFD-300R	44
3-7/16	013953	P4B520-TAFD-307R	71
3-1/2	780485	P4B520-TAFD-308R	70
3-15/16	013954	P4B522-TAFD-315R	110
4-7/16	013955	P4B526-TAFD-407R	140
4-15/16	013956	P4B528-TAFD-415R	180
5	780486	P4B528-TAFD-500R	180
5-7/16	013957	P4B532-TAFD-507R	300
5-15/16	013958	P4B534-TAFD-515R	300
6	013888	P4B534-TAFD-600R	300
6-7/16	780492	P4B536-TAFD-607R	510
6-1/2	013891	P4B536-TAFD-608R	510
6-15/16	780494	P4B538-TAFD-615R	487
7	013893	P4B538-TAFD-700R	470

Harsh Duty – Expansion

Shaft size	Part number	Description	Approx. weight (lb)
2-7/16	013959	P4B515-TAFD-207RE	30
2-15/16	013960	P4B517-TAFD-215RE	45
3	780699	P4B517-TAFD-300RE	44
3-7/16	013961	P4B520-TAFD-307RE	71
3-1/2	780484	P4B520-TAFD-308RE	70
3-15/16	013962	P4B522-TAFD-315RE	110
4-7/16	013963	P4B526-TAFD-407RE	140
4-15/16	013964	P4B528-TAFD-415RE	180
5	780487	P4B528-TAFD-500RE	180
5-7/16	013965	P4B532-TAFD-507RE	300
5-15/16	013966	P4B534-TAFD-515RE	300
6	013889	P4B534-TAFD-600RE	300
6-7/16	780493	P4B536-TAFD-607RE	510
6-1/2	013892	P4B536-TAFD-608RE	510
6-15/16	780495	P4B538-TAFD-615RE	476
7	013894	P4B538-TAFD-700RE	468

Harsh Duty – Non-expansion, synthetic grease

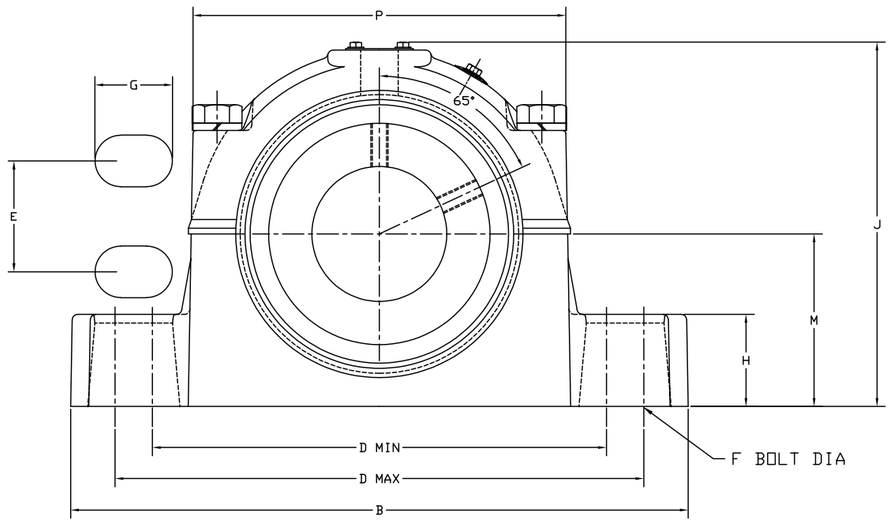
Shaft size	Part number	Description	Approx. weight (lb)
2-7/16	013854	P4B515-TAFD-207R MOD	30
2-15/16	013855	P4B517-TAFD-215R MOD	45
3	780503	P4B517-TAFD-300R MOD	44
3-7/16	013856	P4B520-TAFD-307R MOD	71
3-1/2	780505	P4B520-TAFD-308R MOD	70
3-15/16	013857	P4B522-TAFD-315R MOD	110
4-7/16	013858	P4B526-TAFD-407R MOD	140
4-15/16	013859	P4B528-TAFD-415R MOD	180
5	780506	P4B528-TAFD-500R MOD	180
5-7/16	013860	P4B532-TAFD-507R MOD	300
5-15/16	013861	P4B534-TAFD-515R MOD	300
6	019440	P4B534-TAFD-600R-MOD	300
6-7/16	780508	P4B536-TAFD-607R-MOD	510
6-1/2	019443	P4B536-TAFD-608R-MOD	510
6-15/16	780510	P4B538-TAFD-615R-MOD	487
7	019445	P4B538-TAFD-700R-MOD	470

Harsh Duty – Expansion, synthetic grease

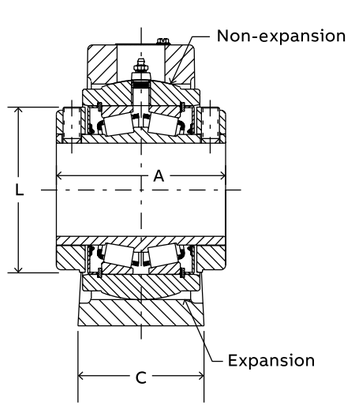
Shaft size	Part number	Description	Approx. weight (lb)
2-7/16	013862	P4B515-TAFD-207RE MOD	30
2-15/16	013863	P4B517-TAFD-215RE MOD	45
3	780700	P4B517-TAFD-300RE-MOD	44
3-7/16	013864	P4B520-TAFD-307RE MOD	71
3-1/2	780504	P4B520-TAFD-308RE MOD	70
3-15/16	013865	P4B522-TAFD-315RE MOD	110
4-7/16	013866	P4B526-TAFD-407RE MOD	140
4-15/16	013867	P4B528-TAFD-415RE MOD	180
5	780507	P4B528-TAFD-500RE MOD	180
5-7/16	013868	P4B532-TAFD-507RE MOD	300
5-15/16	013869	P4B534-TAFD-515RE MOD	300
6	019441	P4B534-TAFD-600RE-MOD	300
6-7/16	780509	P4B536-TAFD-607RE-MOD	510
6-1/2	019444	P4B536-TAFD-608RE-MOD	510
6-15/16	780511	P4B538-TAFD-615RE-MOD	487
7	019446	P4B538-TAFD-700RE-MOD	468

TAF pillow block – inch

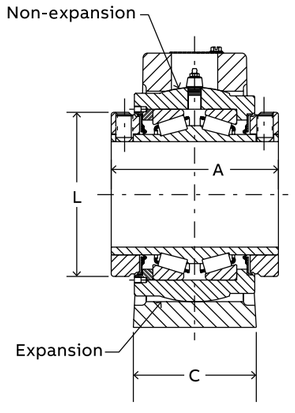
4-bolt



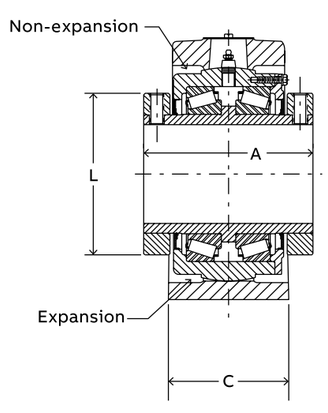
Note: All sizes use a 1/8 - 27 NPT hydraulic grease fitting



2-7/16" thru 3" Construction



3-7/16" thru 5" Construction



5-7/16" thru 7" Construction

TAF pillow block – inch

4-bolt

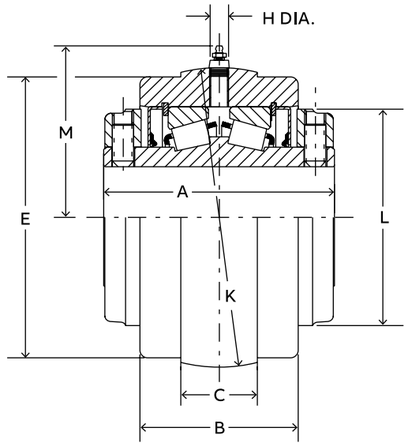
Shaft size	SAF series	A	B	C	D		E	F bolt dia.	G	H	J	L	M	P	EXP*
					Min.	Max.									
2-7/16 2-1/2	515	4.00	11.13	3.13	8.63	9.63	1.88	1/2	1.13	1.25	7.03	4.06	3.25	7.38	9/32
2-11/16 2-3/4	516	4.50	12.59	3.50	9.88	11.00	2.13	5/8	1.33	1.00	7.67	4.72	3.50	8.31	9/32
2-15/16 3	517	4.50	12.59	3.50	9.88	11.00	2.13	5/8	1.33	1.25	7.92	4.72	3.75	8.31	9/32
3-7/16 3-1/2	520	5.00	15.38	4.34	11.63	13.13	2.38	3/4	1.63	1.66	9.42	5.50	4.50	10.09	9/32
3-15/16 4	522	6.25	16.50	4.75	12.59	14.50	2.75	3/4	1.83	1.78	10.36	6.00	4.94	10.70	11/32
4-7/16 4-1/2	526	6.75	18.38	5.13	14.50	16.00	3.25	7/8	1.75	2.06	11.83	6.45	6.00	12.45	11/32
4-15/16 5	528	7.25	19.70	5.88	15.63	17.38	3.38	1	2.00	2.06	12.58	7.45	6.00	13.36	11/32
5-7/16	532	9.00	21.66	6.25	17.63	19.25	3.75	1	1.92	2.34	14.00	9.38	6.69	15.13	13/32
5-15/16 6	534	9.00	24.75	6.75	19.00	21.63	4.25	1	2.44	2.88	14.38	9.38	7.06	15.13	13/32
6-7/16 6-1/2	536	10.50	26.75	7.13	21.00	23.63	4.63	1	2.44	3.00	16.19	11.38	7.50	18.31	13/32
6-15/16 7	538	10.50	28.00	7.50	21.63	24.38	4.50	1-1/4	2.75	3.13	16.56	11.38	7.88	18.31	13/32

* EXP – Total expansion divided equally on both sides of bearing (expansion bearings only).

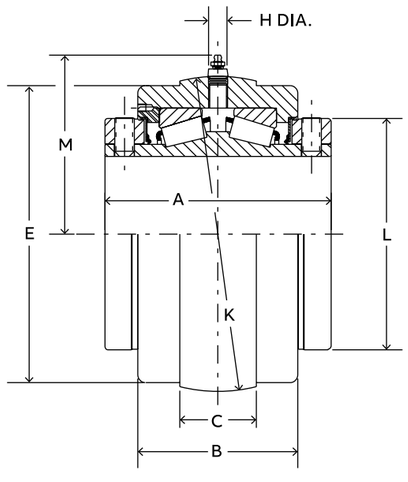
Note: All sizes use a 1/8-27 NPT hydraulic grease fitting.

TAF inner unit – inch

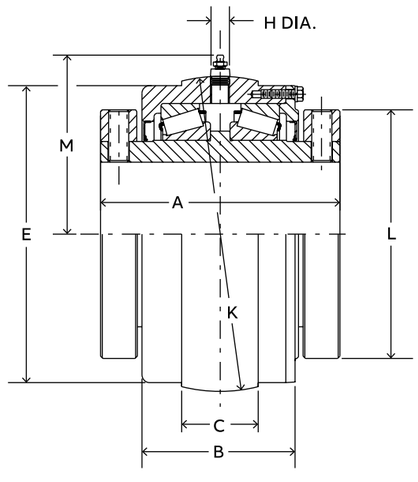
S1 unit cartridge



S1 Unit
1-7/16" thru 3" Construction



S1 Unit
3-3/16" thru 5" Construction



S1 Unit
5-7/16" thru 7" Construction

Notes: All sizes use a 1/8 - 27 NPT hydraulic grease fitting
TAF S1Unit Is used in all Expansion and Non-Expansion TAF housings

TAF inner unit – inch
S1 unit cartridge

Gray iron

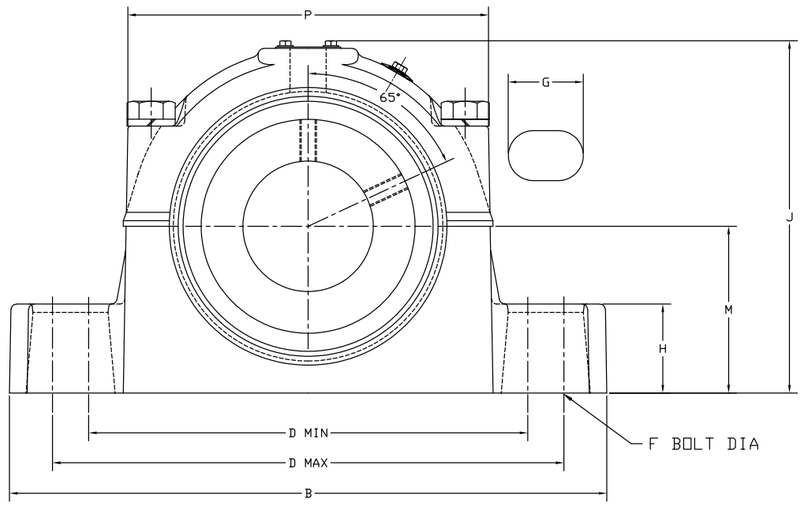
Shaft size	Part number	Description	Approx. weight (lb)
1-7/16	037632	S1U509-TAF-107	5
1-11/16	037633	S1U510-TAF-111	7
1-15/16	037634	S1U511-TAF-115	8
2-3/16	037635	S1U513-TAF-203	9
2-7/16	037636	S1U515-TAF-207	11
2- 1/2	037637	S1U515-TAF-208	11
2-11/16	037638	S1U516-TAF-211	18
2-3/4	037639	S1U516-TAF-212	17
2-15/16	037640	S1U517-TAF-215	17
3	037641	S1U517-TAF-300	17
3-7/16	037642	S1U520-TAF-307	31
3-1/2	037643	S1U520-TAF-308	31
3-15/16	037644	S1U522-TAF-315	43
4	037645	S1U522-TAF-400	43
4-7/16	037646	S1U526-TAF-407	57
4-1/2	037647	S1U526-TAF-408	68
4-15/16	037648	S1U528-TAF-415	82
5	037649	S1U528-TAF-500	82
5-7/16	023610	S1U532-TAF-507	155
5-15/16	023611	S1U534-TAF-515	143
6	023612	S1U534-TAF-600	138
6-7/16	023613	S1U536-TAF-607	187
6-1/2	023614	S1U536-TAF-608	182
6-15/16	023615	S1U538-TAF-615	180
7	023616	S1U538-TAF-700	178

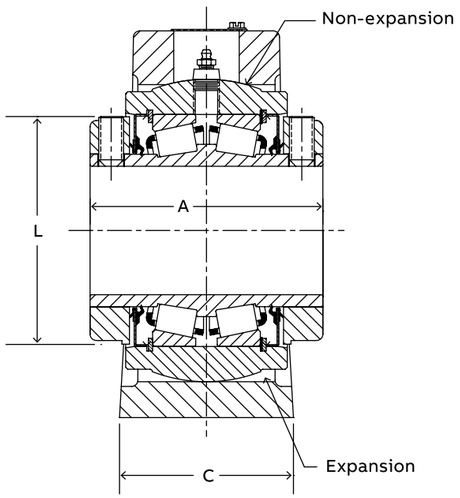
Shaft size	A	B	C	E Mach side	E Cast side	H	K	L	M
1-7/16	3.00	2.06	1.16	3.25	3.31	0.75	3.595 •	2.75	2.50
1-11/16	3.38	2.31	1.19	3.75	3.81	0.75	4.095 •	3.19	2.88
1-15/16	3.50	2.44	1.50	4.13	4.18	0.75	4.502 •	3.44	2.75
2-3/16	3.75	2.56	1.56	4.50	4.56	0.75	4.940 •	3.75	2.95
2-7/16 2- 1/2	4.00	2.75	1.44	4.81	4.87	0.75	5.156 •	4.06	3.38
2-11/16 2-3/4	4.50	3.00	1.88	5.56	5.63	0.75	6.001 •	4.72	3.88
2-15/16 3	4.50	3.00	1.88	5.56	5.63	0.75	6.001 •	4.72	3.88
3-7/16 3-1/2	5.00	3.50	2.19	6.81	6.88	0.75	7.313 ✳	5.50	4.50
3-15/16 4	6.25	4.50	2.59	7.44	7.40	0.94	7.937 ✳	6.00	5.13
4-7/16 4-1/2	6.75	4.63	2.56	8.31	8.32	0.94	8.812 ✳	6.45	5.50
4-15/16 5	7.25	5.13	3.13	9.56	9.54	0.94	10.124 ✳	7.45	6.19
5-7/16 5-15/16 6	9.00	5.88	2.56	11.19	11.19	0.94	11.563 ^	9.38	6.91
6-7/16 6-1/2 6-15/16 7	10.50	7.13	3.00	13.25	13.25	0.94	13.748 ^	11.38	8.00

• +0.000 to -0.001 inches ^ +0.000 to -0.003 inches ✳ +/- 0.0005 inches

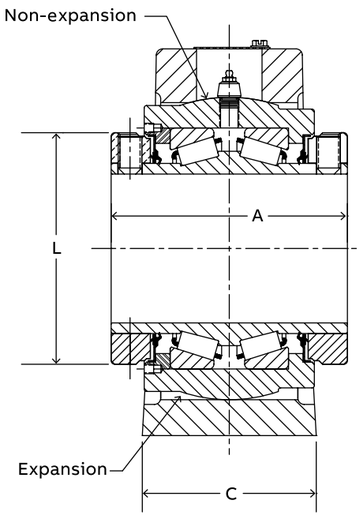
Double Interlock pillow block – inch

2-bolt





1-3/16” thru 3” Construction



3-3/16” thru 3-1/2” Construction

Double Interlock pillow block – inch

2-bolt

Gray iron – Non-expansion

Shaft size	Pillow block assy.	Description	Pillow block Approx. weight (lb)	Bearing inner units
1-1/4	023329	P2B-DI-104R	9	023508
1-3/8	023330	P2B-DI-106R	13	023509
1-7/16	023331	P2B-DI-107R	13	023510
1-1/2	023332	P2B-DI-108R	17	023511
1-5/8	023333	P2B-DI-110R	17	023512
1-11/16	023334	P2B-DI-111R	17	023513
1-3/4	023335	P2B-DI-112R	21	023514
1-15/16	023337	P2B-DI-115R	21	023516
2	023338	P2B-DI-200R	21	023517
2-3/16	023339	P2B-DI-203R	26	023518
2-1/4	023340	P2B-DI-204R	33	023519
2-7/16	023341	P2B-DI-207R	32	023520
2-1/2	023342	P2B-DI-208R	32	023521
2-11/16	023343	P2B-DI-211R	46	023522
2-3/4	023344	P2B-DI-212R	46	023523
2-15/16	023345	P2B-DI-215R	44	023524
3	023346	P2B-DI-300R	43	023525
3-3/16	023347	P2B-DI-303R	77	023526
3-7/16	023349	P2B-DI-307R	75	023528
3-1/2	023350	P2B-DI-308R	75	023529

Non-expansion furnished unless otherwise specified.

Gray iron – Expansion

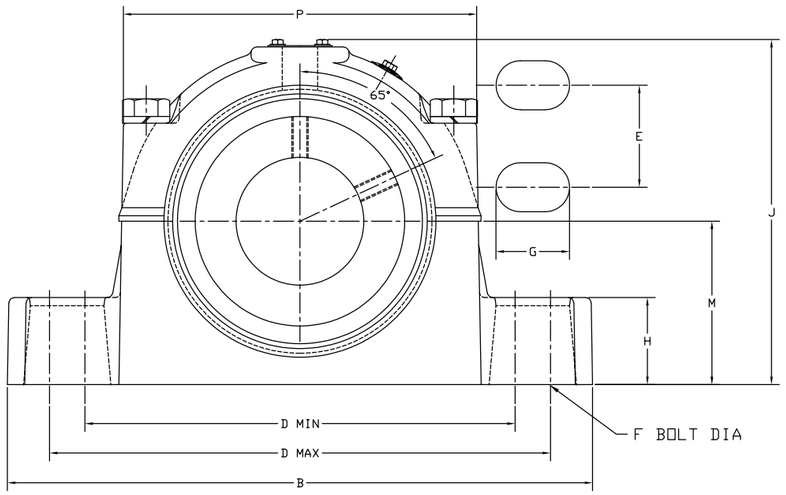
Shaft size	Pillow block assy.	Description	Pillow block Approx. weight (lb)	Bearing inner units
1-1/4	023376	P2B-DI-104RE	10	023508
1-3/8	023377	P2B-DI-106RE	13	023509
1-7/16	023378	P2B-DI-107RE	13	023510
1-1/2	023379	P2B-DI-108RE	17	023511
1-5/8	023380	P2B-DI-110RE	16	023512
1-11/16	023381	P2B-DI-111RE	16	023513
1-3/4	023382	P2B-DI-112RE	21	023514
1-15/16	023384	P2B-DI-115RE	21	023516
2	023385	P2B-DI-200RE	21	023517
2-3/16	023386	P2B-DI-203RE	25	023518
2-1/4	023387	P2B-DI-204RE	30	023519
2-7/16	023388	P2B-DI-207RE	32	023520
2-1/2	023389	P2B-DI-208RE	32	023521
2-11/16	023390	P2B-DI-211RE	45	023522
2-3/4	023391	P2B-DI-212RE	44	023523
2-15/16	023392	P2B-DI-215RE	43	023524
3	023393	P2B-DI-300RE	43	023525
3-3/16	023394	P2B-DI-303RE	75	023526
3-7/16	023396	P2B-DI-307RE	74	023528
3-1/2	023397	P2B-DI-308RE	73	023529

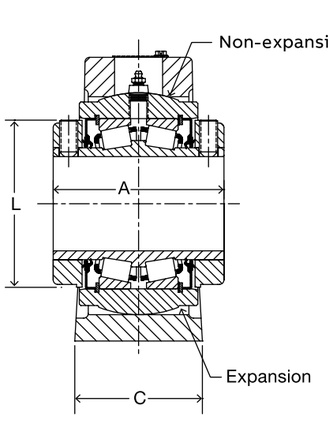
Shaft size	A	B	C	D Min.	D Max.	F bolt dia.	G	H	J	L	M	P	EXP*
1-1/4	2.75	7.50	1.88	6.00	6.38	3/8	0.67	1.00	4.53	2.25	2.13	5.00	3/32
1-3/8 1-7/16	3.00	8.00	2.19	6.25	6.63	1/2	0.75	1.25	5.23	2.75	2.38	5.52	3/32
1-1/2 1-5/8 1-11/16	3.38	9.00	2.38	6.88	7.63	1/2	1.00	1.38	5.75	3.19	2.63	5.81	3/32
1-3/4 1-15/16 2	3.50	10.00	2.53	7.38	8.44	5/8	1.30	1.50	6.27	3.44	2.88	6.36	9/32
2-3/16	3.75	11.00	2.66	8.06	9.25	5/8	1.33	1.50	6.52	3.75	3.00	6.97	9/32
2-1/4 2-7/16 2-1/2	4.00	12.00	2.81	9.27	10.25	5/8	1.27	1.75	7.03	4.06	3.25	7.38	9/32
2-11/16 2-3/4 2-15/16 3	4.50	13.44	2.94	9.88	11.50	3/4	1.69	2.00	7.92	4.72	3.75	8.31	9/32
3-3/16 3-7/16 3-1/2	5.00	16.00	3.44	12.81	13.81	7/8	1.50	2.25	9.42	5.50	4.50	10.09	9/32

* EXP – Total expansion divided equally on both sides of bearing (expansion bearings only).
Note: All sizes use a 1/8-27 NPT hydraulic grease fitting.

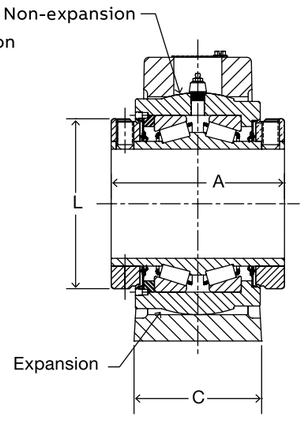
Double Interlock pillow block – inch

4-bolt

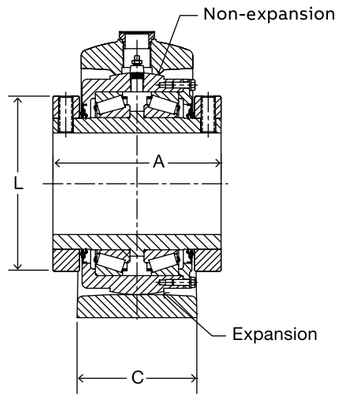




2-1/4" thru 3" Construction



3-3/16" thru 5" Construction



5-7/16" thru 7" Construction

Double Interlock pillow block – inch

4-bolt

Gray iron – Non-expansion

Shaft size	Pillow block assy.	Description	Pillow block Approx. weight (lb)	Bearing inner unit
2-7/16	023352	P4B-DI-207R	33	023520
2-1/2	023353	P4B-DI-208R	32	023521
2-11/16	023354	P4B-DI-211R	47	023522
2-15/16	023356	P4B-DI-215R	46	023524
3	023357	P4B-DI-300R	45	023525
3-7/16	023360	P4B-DI-307R	79	023528
3-1/2	023361	P4B-DI-308R	78	023529
3-15/16	023362	P4B-DI-315R	118	023530
4	023363	P4B-DI-400R	118	023531
4-7/16	023364	P4B-DI-407R	154	023532
4-1/2	023365	P4B-DI-408R	150	023533
4-15/16	023366	P4B-DI-415R	200	023534
5	023367	P4B-DI-500R	200	023535
5-7/16	023368	P4B-DI-507R	329	023536
5-15/16	023369	P4B-DI-515R	314	023537

Non-expansion furnished unless otherwise specified.

Gray iron – Expansion

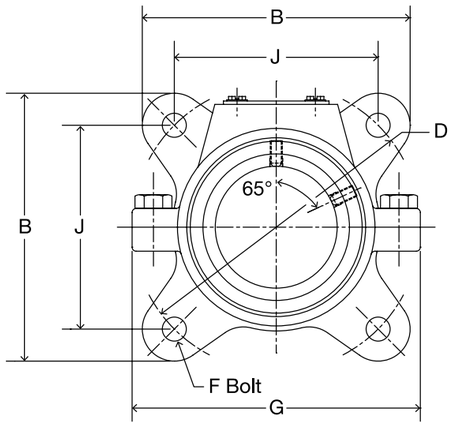
Shaft size	Pillow block assy.	Description	Pillow block Approx. weight (lb)	Bearing inner unit
2-7/16	023399	P4B-DI-207RE	32	023520
2-1/2	023400	P4B-DI-208RE	32	023521
2-11/16	023401	P4B-DI-211RE	46	023522
2-15/16	023403	P4B-DI-215RE	45	023524
3	023404	P4B-DI-300RE	45	023525
3-7/16	023407	P4B-DI-307RE	72	023528
3-1/2	023408	P4B-DI-308RE	77	023529
3-15/16	023409	P4B-DI-315RE	116	023530
4	023410	P4B-DI-400RE	118	023531
4-7/16	023411	P4B-DI-407RE	152	023532
4-1/2	023412	P4B-DI-408RE	150	023533
4-15/16	023413	P4B-DI-415RE	198	023534
5	023414	P4B-DI-500RE	197	023535
5-7/16	023415	P4B-DI-507RE	311	023536
5-15/16	023416	P4B-DI-515RE	302	023537

Shaft size	A	B	C	D Min.	D Max.	E	F bolt dia.	G	H	J	L	M	P	EXP*
2-7/16 2-1/2	4.00	12.00	3.38	9.27	10.25	1.75	1/2	1.06	1.75	7.03	4.06	3.25	7.38	9/32
2-11/16 2-15/16 3	4.50	13.44	3.50	9.88	11.50	1.88	5/8	1.56	2.00	7.92	4.72	3.75	8.31	9/32
3-7/16 3-1/2	5.00	16.00	4.00	12.81	13.81	2.00	3/4	1.45	2.25	9.42	5.50	4.50	10.09	9/32
3-15/16 4	6.25	17.44	4.75	13.13	14.75	2.00	3/4	1.70	2.75	10.42	6.00	5.00	10.70	11/32
4-7/16 4-1/2	6.75	19.00	5.13	14.38	16.25	2.25	3/4	1.81	3.00	11.59	6.45	5.75	12.45	11/32
4-15/16 5	7.25	20.50	5.88	15.50	18.06	2.50	7/8	2.28	3.25	12.83	7.45	6.25	13.36	11/32
5-7/16 5-15/16	9.00	23.69	6.25	19.00	20.63	3.00	1	1.94	3.50	14.59	9.38	7.13	15.13	1/2

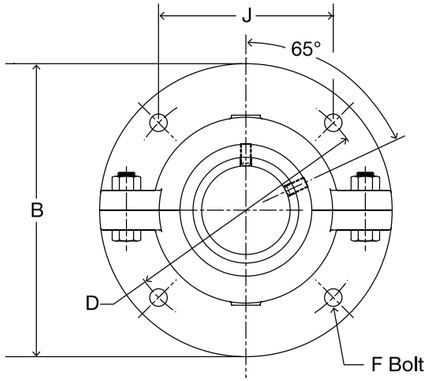
* EXP – Total expansion divided equally on both sides of bearing (expansion bearings only).
Note: All sizes use a 1/8-27 NPT hydraulic grease fitting.

Double Interlock flange – inch

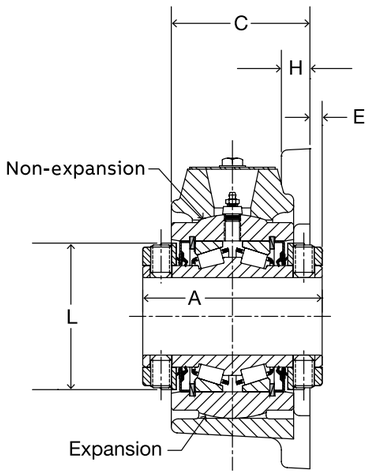
4-bolt



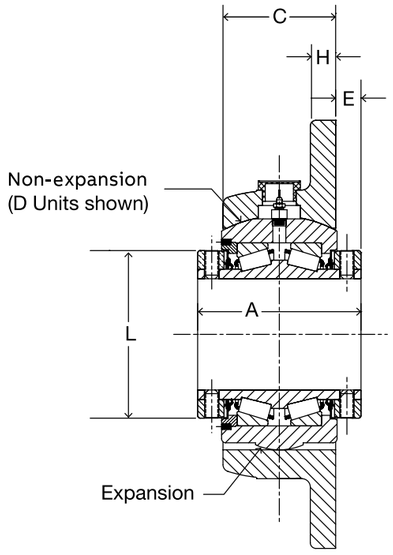
1-3/16” thru 4” External Construction



4-7/16” thru 5” External Construction



1-3/16” thru 3” Internal Construction



3-3/16” thru 5” Internal Construction

Double Interlock flange – inch

4-bolt

Ductile iron – Non-expansion

Shaft size	Part number	Description	Approx. weight (lb)
1-3/16	023422	F4B-DI-103R	7
1-1/4	023423	F4B-DI-104R	7
1-3/8	023424	F4B-DI-106R	10
1-7/16	023425	F4B-DI-107R	9
1-1/2	023426	F4B-DI-108R	14
1-5/8	023427	F4B-DI-110R	14
1-11/16	023428	F4B-DI-111R	13
1-3/4	023429	F4B-DI-112R	16
1-7/8	023430	F4B-DI-114R	16
1-15/16	023431	F4B-DI-115R	16
2	023432	F4B-DI-200R	15
2-3/16	023433	F4B-DI-203R	19
2-1/4	023434	F4B-DI-204R	23
2-7/16	023435	F4B-DI-207R	22
2-1/2	023436	F4B-DI-208R	22
2-11/16	023437	F4B-DI-211R	34
2-3/4	023438	F4B-DI-212R	33
2-15/16	023439	F4B-DI-215R	31
3	023440	F4B-DI-300R	31
3-3/16	023441	F4B-DI-303R	54
3-1/4	023442	F4B-DI-304R	53
3-7/16	023443	F4B-DI-307R	52
3-1/2	023444	F4B-DI-308R	52
3-15/16	023445	F4B-DI-315R	82
4	023446	F4B-DI-400R	81
4-7/16 ◊	023447	F4B-DI-407R	158
4-1/2 ◊	023448	F4B-DI-408R	158
4-15/16 ◊	023449	F4B-DI-415R	257
5 ◊	023450	F4B-DI-500R	329

Non-expansion furnished unless otherwise specified.
◊ 4-7/16— 5 inch housings are made of cast iron and round.

Ductile iron – Expansion

Shaft size	Part number	Description	Approx. weight (lb)
1-3/16	023451	F4B-DI-103RE	7
1-1/4	023452	F4B-DI-104RE	7
1-3/8	023453	F4B-DI-106RE	10
1-7/16	023454	F4B-DI-107RE	9
1-1/2	023455	F4B-DI-108RE	14
1-5/8	023456	F4B-DI-110RE	14
1-11/16	023457	F4B-DI-111RE	13
1-3/4	023458	F4B-DI-112RE	16
1-7/8	023459	F4B-DI-114RE	16
1-15/16	023460	F4B-DI-115RE	16
2	023461	F4B-DI-200RE	15
2-3/16	023462	F4B-DI-203RE	19
2-1/4	023463	F4B-DI-204RE	23
2-7/16	023464	F4B-DI-207RE	22
2-1/2	023465	F4B-DI-208RE	22
2-11/16	023466	F4B-DI-211RE	34
2-3/4	023467	F4B-DI-212RE	33
2-15/16	023468	F4B-DI-215RE	31
3	023469	F4B-DI-300RE	31
3-3/16	023470	F4B-DI-303RE	54
3-1/4	023471	F4B-DI-304RE	53
3-7/16	023472	F4B-DI-307RE	52
3-1/2	023473	F4B-DI-308RE	52
3-15/16	023474	F4B-DI-315RE	82
4	023475	F4B-DI-400RE	81
4-7/16 ◊	023476	F4B-DI-407RE	158
4-1/2 ◊	023477	F4B-DI-408RE	158
4-15/16 ◊	023478	F4B-DI-415RE	271
5	023479	F4B-DI-500RE	329

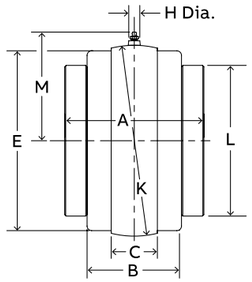
◊ 4-7/16—5 inch housings are made of cast iron and round.

Shaft size	A	B #	C #	D	E	F bolt dia.	G #	H #	J	L	EXP*
1-3/16 1-1/4	2.75	5.13	2.13	5.66	0.19	3/8	5.25	0.44	4.00	2.25	5/16
1-3/8 1-7/16	3.00	5.75	2.13	6.25	0.31	1/2	5.75	0.50	4.42	2.75	3/16
1-1/2 1-5/8 1-11/16	3.38	6.13	2.44	6.75	0.38	1/2	6.75	0.50	4.78	3.19	3/16
1-3/4 1-7/8 1-15/16 2	3.50	6.88	2.56	7.50	0.38	5/8	7.25	0.56	5.31	3.44	3/16
2-3/16	3.75	7.19	2.72	8.00	0.44	5/8	7.81	0.56	5.66	3.75	3/16
2-1/4 2-7/16 2-1/2	4.00	7.66	2.94	8.50	0.44	5/8	8.56	0.63	6.00	4.06	5/16
2-11/16 2-3/4 2-15/16 3	4.50	8.88	3.34	9.75	0.50	3/4	9.50	0.69	6.89	4.72	5/16
3-3/16 3-1/4 3-7/16 3-1/2	5.00	10.25	3.72	11.50	0.50	7/8	11.38	0.75	8.13	5.50	5/16
3-15/16 4	6.25	11.44	4.63	13.00	0.75	1	12.88	0.81	9.19	6.00	5/16
4-7/16 4-1/2	6.75	17.75	4.63	15.00	1.06	1	—	1.00	10.61	6.45	13/16
4-15/16 5	7.25	19.00	5.00	16.00	1.13	1-1/8	—	1.13	11.31	7.45	13/16

These are as cast surfaces. Dimensions may fluctuate due to draft angles and pattern shifts .
* EXP = Total expansion divided equally on both sides of bearing (expansion bearing only).
Note: All sizes use a 1/8-27 NPT hydraulic grease fitting.

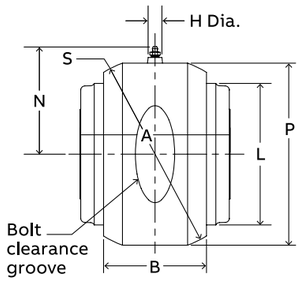
Reference Guide
Type E Family (Tapered)
Specialty Tapered
Safety Mount Family (Spherical)
S-2000 (Spherical)
Unified SAF (Spherical)
Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

Double Interlock inner unit – inch

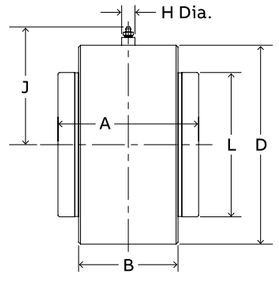


S1 unit
Pillow block
S1 units are used in expansion and non-expansion pillow block housings.

Flange
S1 unit is used in expansion flange housings and non-expansion flange housings for 1-3/16—4 inches.



D unit
Flange
D units are used in non-expansion flange housings 4-7/16—5 inches bore size.



B1 unit
B1 units can only be used in a customer manufactured housing and are often mounted in machines where bored holes can be provided. B1 units can be used either as non-expansion or expansion bearings by providing a suitable means of locating the unit axially. B1 units will handle slight misalignment requirements. Shaft must be supported by another unit or bearing. For mounting in rotating wheels the Type C B1 units is preferred or consult Dodge Application Engineering.

Shaft size	A	B	C	♦D	E		H	J	K	L	M	N	P	S
					Mach side	Cast side								
1-3/16 1-1/4	2.75	1.88	1.03	3.000	2.81	2.28	**	2.42	3.125 •	2.25	2.03	—	—	—
1-3/8 1-7/16 1-1/2	3.00	2.06	1.16	3.438	3.25	3.31	11/16	2.54	3.625 •	2.75	2.64	2.88	3.63	3.844 •
1-5/8 1-11/16 1-3/4	3.38	2.31	1.19	3.938	3.75	3.81	11/16	2.79	4.125 •	3.19	2.89	3.13	4.09	4.344 •
1-7/8 1-15/16 2	3.50	2.44	1.50	4.250	4.13	4.19	11/16	2.95	4.562 •	3.44	3.10	3.25	4.44	4.656 •
2-3/16 2-1/4	3.75	2.56	1.56	4.625	4.50	4.63	11/16	3.13	5.000 •	3.75	3.32	3.44	4.72	5.000 •
2-7/16 2-1/2	4.00	2.75	1.44	5.000	4.81	4.88	11/16	3.32	5.186 •	4.06	3.41	3.58	5.16	5.437 •
2-11/16 2-3/4 2-15/16 3	4.50	3.00	1.88	5.875	5.56	5.63	11/16	3.76	6.061 •	4.72	3.85	4.00	5.81	6.094 •
3-3/16 3-1/4 3-7/16 3-1/2	5.00	3.50	2.00	7.125	6.81	6.88	11/16	4.38	7.373#	5.50	4.51	4.69	7.22	7.500 ^
3-15/16 4	6.25	4.50	2.38	7.875	7.44	7.50	*	5.48	7.997#	6.00	5.16	5.13	8.13	8.375 ^
4-7/16 4-1/2	6.75	4.63	2.38	8.750	8.31	8.38	*	5.91	8.872#	6.45	5.60	5.50	8.88	9.125 ^
4-15/16 5	7.25	5.13	2.88	10.125	9.56	9.63	*	6.6	10.184#	7.45	6.26	6.19	10.25	10.500 ^
5-7/16 5-15/16 6	9.00	6.06	2.88	—	11.19	11.19	15/16	—	11.874 ♦	9.38	7.10	—	—	—
6-7/16 6-1/2 6-15/16 7	10.50	7.13	3.00	—	13.25	13.25	15/16	—	14.248 ♦	11.38	8.29	—	—	—

* 11/16-inch diameter on D units; 15/16-inches on S1 units; and 3/4-inch hex on B1 units
** 11/16-inch diameter on B1 units; 7/16-inch diameter on S1 units.
• +0.000 to -0.001
+/-0.0005
^ +0.000 to -0.002
♦ +0.000 to -0.003

Double Interlock inner unit – inch

S1 units – Gray iron

Shaft size	Part number	Description	Approx. weight (lb)
1-3/16	023507	S1U-DI-103R	3
1-1/4	023508	S1U-DI-104R	4
1-3/8	023509	S1U-DI-106R	5
1-7/16	023510	S1U-DI-107R	5
1-1/2	023511	S1U-DI-108R	7
1-5/8	023512	S1U-DI-110R	7
1-11/16	023513	S1U-DI-111R	7
1-3/4	023514	S1U-DI-112R	8
1-7/8	023515	S1U-DI-114R	8
1-15/16	023516	S1U-DI-115R	8
2	023517	S1U-DI-200R	8
2-3/16	023518	S1U-DI-203R	10
2-1/4	023519	S1U-DI-204R	12
2-7/16	023520	S1U-DI-207R	11
2-1/2	023521	S1U-DI-208R	11
2-11/16	023522	S1U-DI-211R	18
2-3/4	023523	S1U-DI-212R	17
2-15/16	023524	S1U-DI-215R	17
3	023525	S1U-DI-300R	17

S1 units – Gray iron

Shaft size	Part number	Description	Approx. weight (lb)
3-3/16	023526	S1U-DI-303R	34
3-1/4	023527	S1U-DI-304R	31
3-7/16	023528	S1U-DI-307R	31
3-1/2	023529	S1U-DI-308R	31
3-15/16	023530	S1U-DI-315R	43
4	023531	S1U-DI-400R	43
4-7/16	023532	S1U-DI-407R	57
4-1/2	023533	S1U-DI-408R	64
4-15/16	023534	S1U-DI-415R	82
5	023535	S1U-DI-500R	82
5-7/16	023536	S1U-DI-507R	159
5-15/16	023537	S1U-DI-515R	135
6	023538	S1U-DI-600R	128
6-7/16	023539	S1U-DI-607R	187
6-1/2	023540	S1U-DI-608R	182
6-15/16	023541	S1U-DI-615R	180
7	023542	S1U-DI-700R	178

D units – Gray iron

Shaft size	Part number	Description	Approx. weight (lb)
1-3/16	—	DU-DI-103R	—
1-1/4	—	DU-DI-104R	—
1-3/8	023480	DU-DI-106R	5
1-7/16	023481	DU-DI-107R	5
1-1/2	023482	DU-DI-108R	8
1-5/8	023483	DU-DI-110R	7
1-11/16	023484	DU-DI-111R	7
1-3/4	023485	DU-DI-112R	8
1-7/8	023486	DU-DI-114R	8
1-15/16	023487	DU-DI-115R	8
2	023488	DU-DI-200R	8
2-3/16	023489	DU-DI-203R	9
2-1/4	023490	DU-DI-204R	12
2-7/16	023491	DU-DI-207R	12
2-1/2	023492	DU-DI-208R	12
2-11/16	023493	DU-DI-211R	18
2-3/4	023494	DU-DI-212R	17
2-15/16	023495	DU-DI-215R	16
3	023496	DU-DI-300R	16
3-3/16	023497	DU-DI-303R	32
3-1/4	023498	DU-DI-304R	31
3-7/16	023499	DU-DI-307R	30
3-1/2	023500	DU-DI-308R	29
3-15/16	023501	DU-DI-315R	46
4	023502	DU-DI-400R	43
4-7/16	023503	DU-DI-407R	57
4 1/2	023504	DU-DI-408R	64
4-15/16	023505	DU-DI-415R	85
5	023506	DU-DI-500R	85

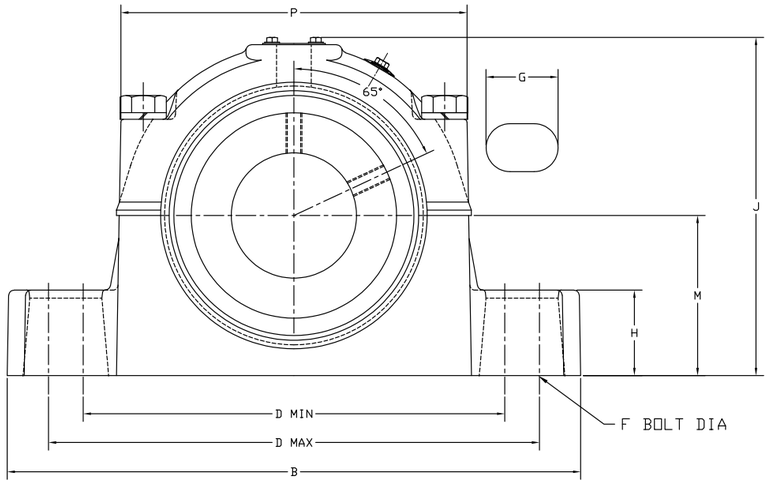
B1 units – Gray iron

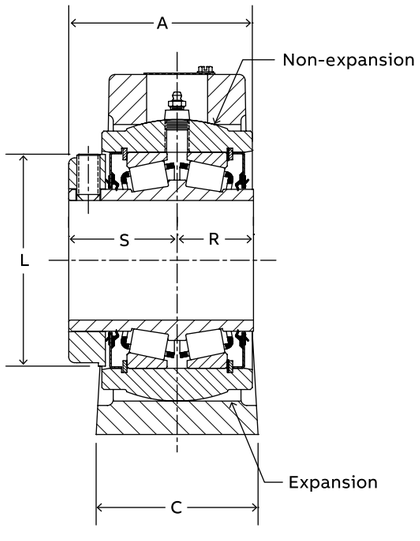
Shaft size	Part number	Description	Approx. weight (lb)
1-3/16	023543	B1U-DI-103R	3
1-3/8	023545	B1U-DI-106R	5
1-7/16	023546	B1U-DI-107R	5
1-1/2	023547	B1U-DI-108R	6
1-5/8	023548	B1U-DI-110R	6
1-3/4	023550	B1U-DI-112R	8
1-15/16	023552	B1U-DI-115R	8
2	023553	B1U-DI-200R	7
2-3/16	023554	B1U-DI-203R	9
2-7/16	023556	B1U-DI-207R	12
2-1/2	023557	B1U-DI-208R	11
2-11/16	023558	B1U-DI-211R	17
2-3/4	023559	B1U-DI-212R	17
2-15/16	023560	B1U-DI-215R	17
3	023561	B1U-DI-300R	17
3-7/16	023564	B1U-DI-307R	30
3-1/2	023565	B1U-DI-308R	30
3-15/16	023566	B1U-DI-315R	45
4	023567	B1U-DI-400R	44
4-7/16	023568	B1U-DI-407R	58
4 1/2	023569	B1U-DI-408R	64
4-15/16	023570	B1U-DI-415R	87
5	023571	B1U-DI-500R	86

Note: All sizes use a 1/8-27 NPT hydraulic grease fitting.

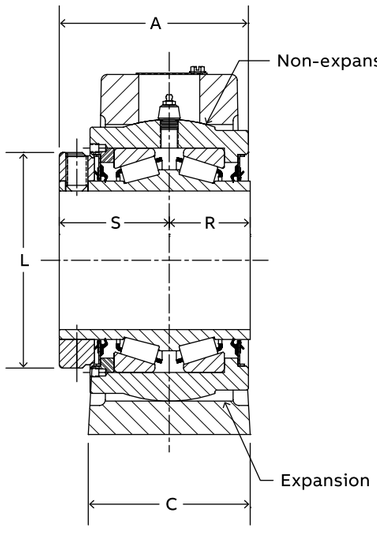
Type K pillow block – inch

2- and 4-bolt





1-3/16” thru 3” Construction



3-3/16” thru 3-15/16” Construction

1-13/16” thru 3-1/2“ (2 Bolt base)
3-15/16” (4 Bolt base)

Type K pillow block – inch
2- and 4-bolt

Gray iron – Non-expansion

Shaft size	Part number	Description	Approx. weight (lb)
1-3/16	023167	P2B-K-103R	9
1-1/4	023168	P2B-K-104R	9
1-7/16	023170	P2B-K-107R	11
1-1/2	023171	P2B-K-108R	15
1-5/8	023172	P2B-K-110R	14
1-11/16	023173	P2B-K-111R	14
1-3/4	023174	P2B-K-112R	20
1-15/16	023175	P2B-K-115R	19
2	023176	P2B-K-200R	19
2-3/16	023177	P2B-K-203R	24
2-1/4	023178	P2B-K-204R	28
2-7/16	023179	P2B-K-207R	28
2-1/2	023180	P2B-K-208R	28
2-11/16	023181	P2B-K-211R	40
2-3/4	023182	P2B-K-212R	40
2-15/16	023183	P2B-K-215R	39
3	023184	P2B-K-300R	39
3-7/16	023186	P2B-K-307R	67
3-1/2	023187	P2B-K-308R	66
3-15/16 ▲	023188	P4B-K-315R	106

Gray iron – Expansion

Shaft size	Part number	Description	Approx. weight (lb)
1-3/16	023189	P2B-K-103RE	9
1-1/4	023190	P2B-K-104RE	9
1-7/16	023192	P2B-K-107RE	11
1-1/2	023193	P2B-K-108RE	15
1-5/8	023194	P2B-K-110RE	14
1-11/16	023195	P2B-K-111RE	14
1-3/4	023196	P2B-K-112RE	20
1-15/16	023197	P2B-K-115RE	19
2	023198	P2B-K-200RE	19
2-3/16	023199	P2B-K-203RE	24
2-1/4	023200	P2B-K-204RE	28
2-7/16	023201	P2B-K-207RE	28
2-1/2	023202	P2B-K-208RE	28
2-11/16	023203	P2B-K-211RE	40
2-3/4	023204	P2B-K-212RE	40
2-15/16	023205	P2B-K-215RE	39
3	023206	P2B-K-300RE	39
3-7/16	023208	P2B-K-307RE	67
3-1/2	023209	P2B-K-308RE	66
3-15/16 ▲	023210	P4B-K-315RE	106

Non-expansion provided unless otherwise specified.

Shaft size	A	B	C	D Min.	D Max.	F bolt dia.	G	H	J	L	M	P	R	S	EXP*
1-3/16 1-1/4	2.28	7.50	1.88	6.00	6.38	3/8	0.69	1.00	4.53	2.25	2.13	5.00	1.00	1.38	3/32
1-3/8 1-7/16	2.55	8.00	2.19	6.25	6.63	1/2	0.75	1.25	5.23	2.75	2.38	5.52	1.03	1.50	3/32
1-1/2 1-5/8 1-11/16	2.83	9.00	2.38	6.88	7.63	1/2	1.00	1.38	5.75	3.19	2.63	5.81	1.56	1.69	3/32
1-3/4 1-15/16 2	2.95	10.00	2.53	7.38	8.44	5/8	1.30	1.50	6.27	3.44	2.88	6.36	1.20	1.75	9/32
2-3/16	3.16	11.00	2.66	8.06	9.25	5/8	1.33	1.50	6.52	3.75	3.00	6.95	1.25	1.88	9/32
2-1/4 2-7/16 2-1/2	3.34	12.00	2.81	9.25	10.25	5/8	1.27	1.75	7.03	4.06	3.25	7.38	1.31	2.00	9/32
2-11/16 2-3/4 2-15/16 3	3.78	13.44	2.94	9.88	11.50	3/4	1.69	2.00	7.92	4.72	3.75	8.31	1.44	2.25	9/32
3-3/16 3-7/16 3-1/2	4.27	16.00	3.44	12.81	13.81	7/8	1.50	2.25	9.42	5.50	4.50	10.09	1.69	2.50	9/32
3-15/16▲	5.41	17.44	4.75	13.13	14.75	3/4	1.70	2.75	10.42	6.00	5.00	10.70	2.13	3.13	11/32

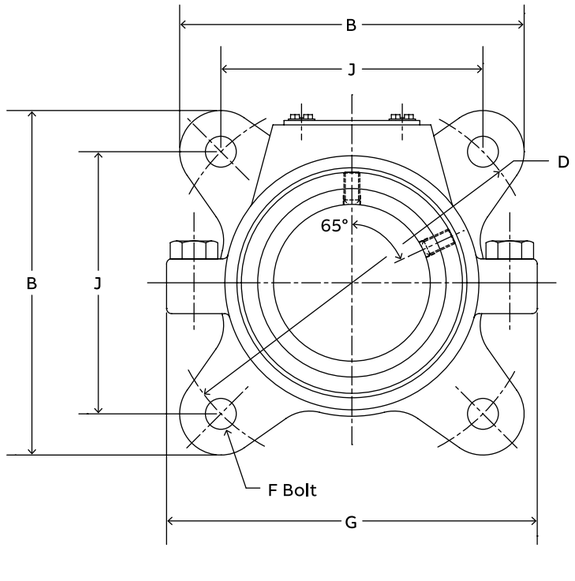
* EXP = Total expansion divided equally on both sides of bearing (expansion bearings only).

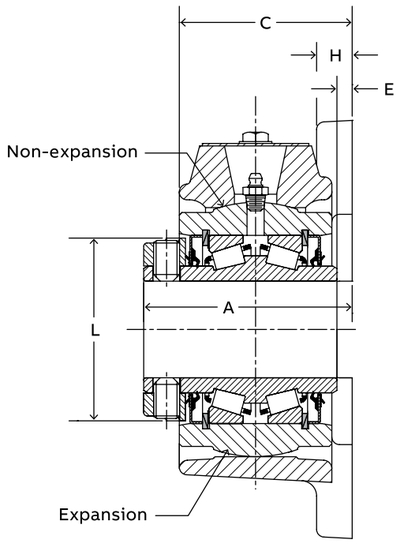
▲ 4-bolt (see P4B-DI-315R on page B20-54 through B20-55 for bolt spacing).

Note: All sizes use a 1/8-27 NPT hydraulic grease fitting.

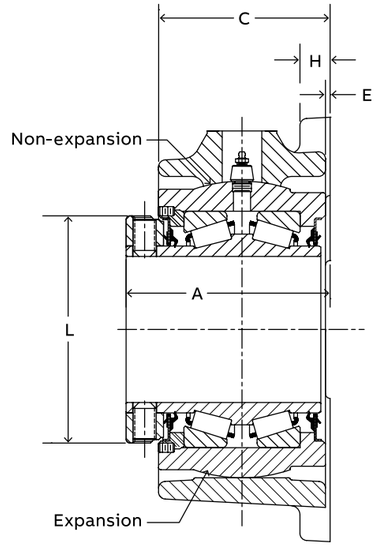
Type K flange – inch

4-bolt





1-3/16" thru 3" Construction



3-3/16" thru 3-15/16" Construction

Type K flange – inch

4-bolt

Ductile iron – Non-expansion

Shaft size	Part number	Description	Approx. weight (lb)
1-3/16	023211	F4B-K-103R	6
1-1/4	023212	F4B-K-104R	6
1-3/8	023213	F4B-K-106R	7
1-7/16	023214	F4B-K-107R	8
1-1/2	023215	F4B-K-108R	12
1-5/8	023216	F4B-K-110R	12
1-11/16	023217	F4B-K-111R	12
1-3/4	023218	F4B-K-112R	13
1-15/16	023219	F4B-K-115R	15
2	023220	F4B-K-200R	14
2-3/16	023221	F4B-K-203R	17
2-1/4	023222	F4B-K-204R	17
2-7/16	023223	F4B-K-207R	20
2-1/2	023224	F4B-K-208R	20
2-11/16	023225	F4B-K-211R	24
2-3/4	023226	F4B-K-212R	24
2-15/16	023227	F4B-K-215R	29
3	023228	F4B-K-300R	29
3-3/16	023229	F4B-K-303R	45
3-7/16	023230	F4B-K-307R	47
3-1/2	023231	F4B-K-308R	45
3-15/16	023232	F4B-K-315R	73

Non-expansion provided unless otherwise specified.

Ductile iron – Expansion

Shaft size	Part number	Description	Approx. weight (lb)
1-3/16	023233	F4B-K-103RE	6
1-1/4	023234	F4B-K-104RE	6
1-3/8	023235	F4B-K-106RE	7
1-7/16	023236	F4B-K-107RE	8
1-1/2	023237	F4B-K-108RE	12
1-5/8	023238	F4B-K-110RE	12
1-11/16	023239	F4B-K-111RE	12
1-3/4	023240	F4B-K-112RE	13
1-15/16	023241	F4B-K-115RE	15
2	023242	F4B-K-200RE	14
2-3/16	023243	F4B-K-203RE	17
2-1/4	023244	F4B-K-204RE	17
2-7/16	023245	F4B-K-207RE	20
2-1/2	023246	F4B-K-208RE	20
2-11/16	023247	F4B-K-211RE	24
2-3/4	023248	F4B-K-212RE	24
2-15/16	023249	F4B-K-215RE	29
3	023250	F4B-K-300RE	29
3-3/16	023251	F4B-K-303RE	45
3-7/16	023252	F4B-K-307RE	47
3-1/2	023253	F4B-K-308RE	45
3-15/16	023254	F4B-K-315RE	73

Shaft size	A	B #	C #	D	E	F bolt dia.	G #	H #	J	L	EXP *
1-3/16 1-1/4	2.56	5.19	2.13	5.66	0.19	3/8	5.25	0.44	4.00	2.25	9/32
1-3/8 1-7/16	2.69	5.75	2.13	6.25	0.16	1/2	5.75	0.50	4.41	2.75	3/16
1-1/2 1-5/8 1-11/16	3.00	6.13	2.44	6.75	0.16	1/2	6.75	0.50	4.78	3.19	3/16
1-3/4 1-15/16 2	3.13	6.88	2.56	7.50	0.16	5/8	7.25	0.56	5.31	3.44	3/16
2-3/16	3.31	7.19	2.72	8.00	0.16	5/8	7.81	0.56	5.66	3.75	3/16
2-1/4 2-7/16 2-1/2	3.56	7.63	2.92	8.50	0.25	5/8	8.56	0.63	6.00	4.06	5/16
2-11/16 2-3/4 2-15/16 3	4.00	8.88	3.34	9.75	0.25	3/4	9.50	0.69	6.91	4.72	5/16
3-3/16 3-7/16 3-1/2	4.50	10.25	3.72	11.50	0.25	7/8	11.38	0.75	8.13	5.50	5/16
3-15/16	5.50	11.44	4.63	13.00	0.13	1	12.88	0.81	9.19	6.00	5/16

These are as cast surfaces. Dimensions may fluctuate due to draft angles and pattern shifts.

* EXP = Total expansion divided equally on both sides of bearing (expansion bearing only).

Note: All sizes use a 1/8-27 NPT hydraulic grease fitting.

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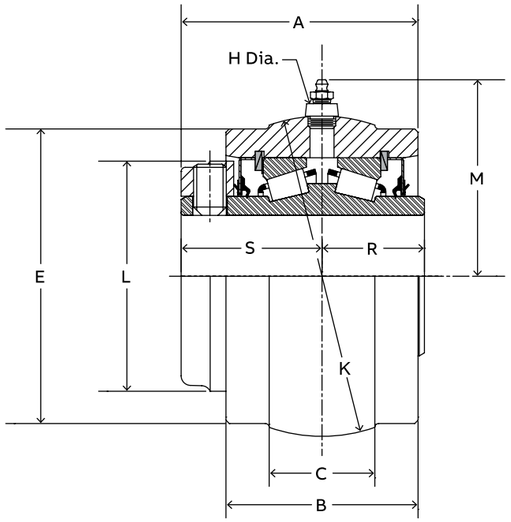
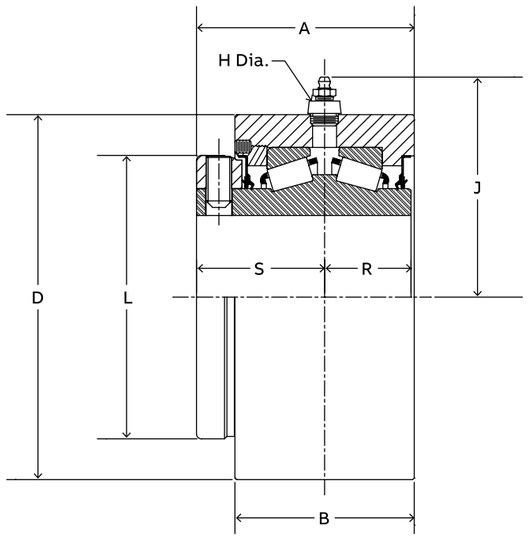
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

Type K inner unit – inch



S1 Unit
1-3/16" thru 3" Construction



B1 Unit
3-3/16" thru 3-15/16" Construction

Type K inner unit – inch

S1 unit

Shaft size	Part number	Description	Approx. weight (lb)
1-3/16	023271	S1U-K-103R	3
1-1/4	023272	S1U-K-104R	3
1-3/8	023273	S1U-K-106R	4
1-7/16	023274	S1U-K-107R	4
1-1/2	023275	S1U-K-108R	5
1-5/8	023276	S1U-K-110R	5
1-11/16	023277	S1U-K-111R	5
1-3/4	023278	S1U-K-112R	7
1-15/16	023279	S1U-K-115R	7
2	023280	S1U-K-200R	7
2-3/16	023281	S1U-K-203R	9
2-1/4	023282	S1U-K-204R	11
2-7/16	023283	S1U-K-207R	11
2-1/2	023284	S1U-K-208R	11
2-11/16	023285	S1U-K-211R	15
2-3/4	023286	S1U-K-212R	15
2-15/16	023287	S1U-K-215R	15
3	023288	S1U-K-300R	15
3-3/16	023289	S1U-K-303R	28
3-7/16	023290	S1U-K-307R	28
3-1/2	023291	S1U-K-308R	28
3-15/16	023292	S1U-K-315R	40

B1 unit

Shaft size	Part number	Description	Approx. weight (lb)
1-3/16	—	—	—
1-1/4	—	—	—
1-3/8	023293	B1U-K-106R	4
1-7/16	023294	B1U-K-107R	4
1-1/2	023295	B1U-K-108R	5
1-5/8	023296	B1U-K-110R	5
1-11/16	023297	B1U-K-111R	5
1-3/4	023298	B1U-K-112R	7
1-15/16	023299	B1U-K-115R	7
2	023300	B1U-K-200R	7
2-3/16	023301	B1U-K-203R	9
2-1/4	023302	B1U-K-204R	11
2-7/16	023303	B1U-K-207R	11
2-1/2	023304	B1U-K-208R	11
2-11/16	023305	B1U-K-211R	15
2-3/4	023306	B1U-K-212R	15
2-15/16	023307	B1U-K-215R	15
3	023308	B1U-K-300R	15
3-3/16	023309	B1U-K-303R	28
3-7/16	023310	B1U-K-307R	28
3-1/2	023311	B1U-K-308R	28
3-15/16	023312	B1U-K-315R	40

Shaft size	A	B	C	D*	E*** Machine side	E*** Cast side	H	J	K**	L	M	R	S
1-3/16	2.31	1.88	1.03	—	2.81	3.13	0.44	—	3.125	2.25	2.03	1.00	1.38
1-1/4													
1-3/8	2.53	2.06	1.16	3.438	3.25	3.31	0.69	2.63	3.625	2.75	2.63	1.03	1.50
1-7/16													
1-1/2	2.84	2.31	1.19	3.948	3.75	3.81	0.69	2.88	4.125	3.19	2.81	1.16	1.69
1-5/8													
1-11/16													
1-3/4	2.97	2.44	1.50	4.250	4.13	4.19	0.69	3.00	4.562	3.44	3.06	1.20	1.75
1-15/16													
2													
2-3/16	3.16	2.56	1.56	4.625	4.50	4.56	0.69	3.25	5.000	3.75	3.25	1.25	1.88
2-1/4	3.38	2.75	1.44	5.000	4.81	4.88	0.69	3.44	5.186	4.06	3.38	1.31	2.00
2-7/16													
2-1/2													
2-11/16	3.75	3.00	1.88	5.875	5.56	5.63	0.69	3.88	6.061	4.72	3.81	1.44	2.25
2-3/4													
2-15/16													
3													
3-3/16	4.25	3.50	2.00	7.125	6.81	6.88	0.69	4.50	7.373	5.50	4.50	1.69	2.50
3-7/16													
3-1/2													
3-15/16	5.38	4.50	2.38	7.875	7.44	7.50	0.94	5.50	7.997	6.00	5.16	2.13	3.13

* +0.000, -0.002 inches

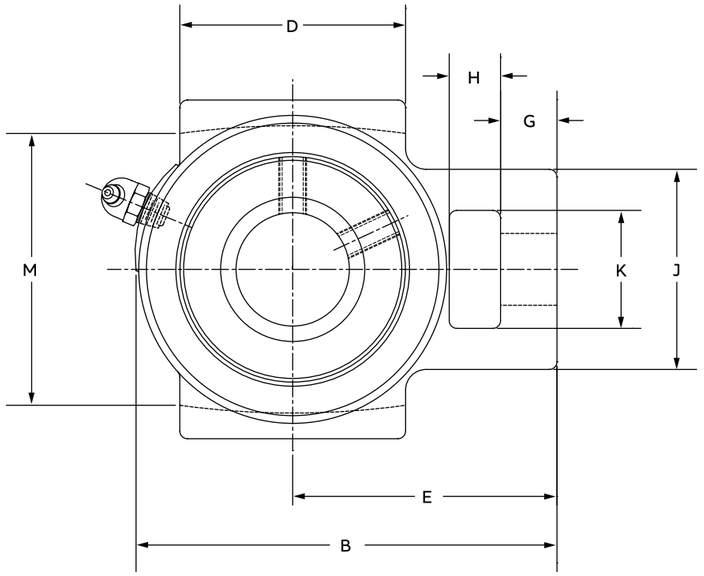
** +0.000, -0.001 inches, sizes 1-3/16 through 3 inches; +/-0.0005 inches, sizes 3-3/16 through 3-15/16 inches

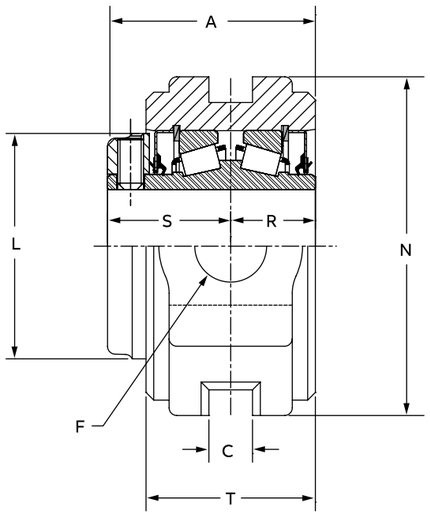
*** Machined side of unit is on collar side only.

Note: All sizes use a 1/8-27 NPT hydraulic grease fitting

Type K take-up – inch

Wide-slot (WS)





1-3/8” thru 3” Construction

Type K take-up – inch
Wide-slot (WS)

Gray iron

Shaft size	Part number	Description	Approx. weight (lb)	CP frame size
1-7/16	023256	WSTU-K-107R	8	CP308
1-1/2	023257	WSTU-K-108R	9	CP 400
1-5/8	023258	WSTU-K-110R	9	
1-3/4	023260	WSTU-K-112R	11	
1-15/16	023261	WSTU-K-115R	11	CP400
2	023262	WSTU-K-200R	11	
2-3/16	023263	WSTU-K-203R	15	CP408
2-1/4	023264	WSTU-K-204R	20	
2-7/16	023265	WSTU-K-207R	20	CP502
2-1/2	023266	WSTU-K-208R	20	
2-11/16	023267	WSTU-K-211R	28	
2-15/16	023269	WSTU-K-215R	28	CP515
3	023270	WSTU-K-300R	28	

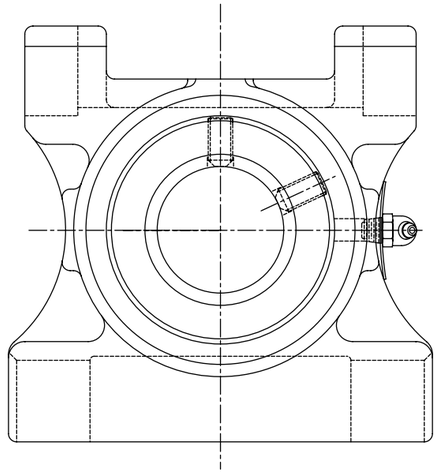
Shaft size	A	B	C *	D	E	F Screw dia.	G	H	J	K	L	M	N	R	S	T
1-7/16	2.53	5.09	0.53	2.75	3.22	3/4	0.69	0.63	2.44	1.44	2.75	3.50	4.13	1.03	1.50	2.06
1-1/2	2.84	6	0.69	3.25	3.81	1	0.94	0.75	3.31	1.94	3.19	4.00	4.75	1.16	1.69	2.31
1-5/8																
1-3/4																
1-15/16	2.97	6.31	0.69	3.75	3.94	1	0.94	0.75	3.31	1.94	3.44	4.00	4.75	1.20	1.75	2.44
2																
2-3/16	3.16	7.13	0.81	3.75	4.63	1-1/8	1.00	1.25	3.88	2.25	3.75	4.50	5.25	1.25	1.88	2.56
2-1/4																
2-7/16	3.38	7.81	1.06	4.50	5.06	1-1/2	1.06	1.25	4.25	2.50	4.06	5.13	6.00	1.31	2.00	2.75
2-1/2																
2-11/16																
2-15/16	3.75	9.13	1.81	4.75	5.88	1-1/2	1.38	1.50	4.88	2.75	4.72	5.94	6.75	1.44	2.25	3.00
3																

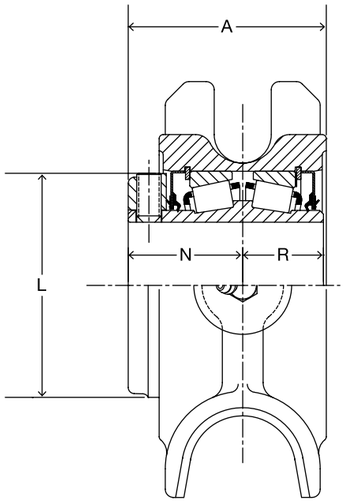
Note: All sizes use a 1/8-27 NPT hydraulic grease fitting.

* Slot is "as cast" dimension.

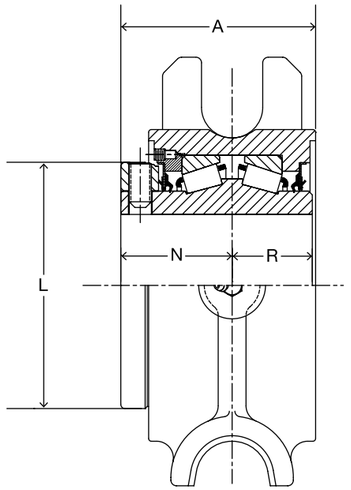
Type K take-up – inch

Top-angle (TP)





1-3/16” thru 3” Internal Construction



3-3/16” thru 3-15/16” Internal Construction

Type K take-up – inch

Top-angle (TP)

Gray iron

Shaft size	Part number	Description	Approx. weight (lb)
1-15/16	023314	TP-K-115R	13
2	023315	TP-K-200R	13
2-3/16	023316	TP-K-203R	16
2-1/4	023317	TP-K-204R	20
2-7/16	023318	TP-K-207R	20
2-1/2	023319	TP-K-208R	20
2-11/16	023320	TP-K-211R	27
2-3/4	023321	TP-K-212R	27
2-15/16	023322	TP-K-215R	27
3	023323	TP-K-300R	27
3-3/16	023324	TP-K-303R	40
3-7/16	023325	TP-K-307R	40
3-15/16	023327	TP-K-315R	59

Shaft size	Frame size ref.	A	L	N	R
1-15/16 2	TP10	3.03	3.44	1.75	1.22
2-3/16	TP20	3.19	3.75	1.88	1.25
2-1/4 2-7/16 2-1/2	TP30	3.50	4.06	2.00	1.31
2-11/16 2-3/4 2-15/16 3	TP40	3.75	4.72	2.25	1.44
3-3/16 3-7/16	TP50	4.28	5.50	2.41	1.78
3-15/16	TP60	5.50	6.00	3.13	2.13

Note: All sizes use a 1/8-27 NPT hydraulic grease fitting.

Selection

Type E family

Type E metric

Type E double-row tapered roller bearings have the capacity to carry heavy radial loads, thrust loads, and combined radial and thrust loads. The maximum recommended load which can be applied is limited by various components in the system such as bearing, housing, shaft, shaft attachment, speed and life requirements as listed in this catalog. Type E bearings have been applied successfully even when these limits have been exceeded under controlled operating conditions. Contact Application Engineering at +1 864 284 5700 for applications which exceed the recommendations of this catalog.

L_{10} life – The fatigue life which may be expected from at least 90 percent of a given group of bearings operating under identical conditions.

$$L_{10}\text{ life, hours} = \left(\frac{C_{90}}{P}\right)^{10/3} \times \frac{1{,}500{,}000}{rpm}$$

Where:

C_{90} = Dynamic capacity (Table 10)

P = Equivalent radial load

General

Heavy service – For heavy shock loads, frequent shock loads, or severe vibrations, increase the equivalent radial load up to 50 percent (according to severity of conditions) to obtain a modified equivalent radial load. Consult Application Engineering at +1 864 284 5700 for additional selection assistance.

Thrust load values shown in the table below are recommended as a guide for general applications that will give adequate L_{10} life. With substantial radial loads also present, it is advisable to calculate actual L_{10} life to assure the bearing meets requirements.

Speed range (rpm)	20—200	201—2,000	Over 2,000
Recommended thrust load	$C_{90}/4$	$C_{90}/8$	$C_{90}/12$

The shaft tolerances recommended below are adequate for the conditions outlined in this catalog. Since the allowable load, especially at a low speed, is very large, the shaft should be checked to assure adequate shaft strength.

The magnitude and direction of both the thrust and radial load must be taken into account when selecting a shaft size. Heavy loads should be directed through the base. Where uplift loads are involved see Table 13 for maximum values. Where a load pulls the housing away from the mounting base, both the hold-down bolts and housing must be of adequate strength. Auxiliary load carrying devices such as shear bars are advisable for side or end loading of plummer blocks.

Shaft tolerances

Shaft size (mm)	Tolerance (mm)
Up to 35	+0.000 to -0.013
40 to 100	+0.000 to -0.025
100 to 150	+0.000 to -0.038
160 to 180	+0.000 to -0.051

1. Define the desired L_{10} life, in hours
2. Establish bearing radial load, F_R (kN)
3. Establish speed (rpm)

F_R = P for pure radial load conditions.

P = Equivalent radial load

Using the easy selection Table 11, under the rpm column find the equivalent load that equals or is higher than the application radial load for the desired life. The shaft size on the far left will be the minimum shaft size that you can use for your application. If the desired life is different than the values shown on the chart, use alternate Method A shown below.

Example:

L_{10} life = 30,000 h

Radial load = 19 kN

Speed = 1,000 rpm

At the intersection of the 1000 rpm column and at the 30,000 hours L_{10} life row, the equivalent radial load of 20 kN exceeds the 19 kN application radial load for shaft size 55 mm. Therefore, a 55 mm Type E bearing can be used to meet the application bearing conditions of the above example:

Alternate method A – Selecting a bearing for an L_{10} life value not shown in the Easy Selection chart.

The L_{10} life equation can be rearranged so that the bearing dynamic capacity C_{90} is identified in terms of L_{10}, speed and P.

$$C_{90} = \left(\frac{L_{10} \times rpm}{1{,}500{,}000}\right)^{0.3} \times P$$

($P = F_R$ for pure radial load conditions)

Since the L_{10}, speed, and P are known, solve for C_{90}. Select from the dynamic capacity column on Table 10 the C_{90} value equal to or greater than the C_{90} value just calculated. The bore size on the far left represents the minimum shaft size selection. Check that the application speed does not exceed the maximum speed on Table 10. When selecting a L_{10} life of less than 30,000 hours particular attention must be paid to shaft deflection and proper lubricant selection.

Type E family

Type E metric

Selecting bearings supporting both radial and thrust loads

When a bearing supports both a radial load and a thrust load, the loading on the two rows is shared unequally depending on the ratio of thrust to radial load. The use of the X (radial factor) and Y (thrust factor) from Table 10 convert the applied thrust load and radial loads to an equivalent radial load having the same effect on the life of the bearing as a radial load of this magnitude.

The equivalent radial load:

$$P = XF_R + YF_A$$

Where:

P = Equivalent radial load

F_R = Radial load

F_A = Thrust (axial) load

e = Thrust load to radial load factor (Table 10)

X = Radial load factor (Table 10)

Y = Thrust load factor (Table 10)

Calculate F_A/F_R and compare to e for the selected bore size.

Determine X and Y from Table 10 depending on whether F_A/F_R is equal to or less than e, or F_A/F_R greater than e. Substitute all known values into the equivalent radial load equation. P (equivalent radial load) can be used in the life formula to determine L_{10} life in hours or compared to the equivalent radial load ratings for the speed and hours life desired in the easy selection table.

Selecting bearings supporting only thrust loads

Type E tapered roller bearings are well suited to carry pure thrust loads. Follow the same selection procedure used above "Selecting bearings supporting both radial and thrust loads" except the equation $P = XF_R + YF_A$ reduces to $P = YF_A$. (XF_R is equal to zero).

Table 10: Radial and thrust factors for Type E metric

Shaft size (mm)	e	$F_A/F_R \le e$		$F_A/F_R > e$		Dynamic capacity C_{90}* (kN)	Maximum speed (rpm)	Maximum slip fit radial load, F_R(kN)**
		X	Y	X	Y			
35	0.46	0.87	1.89	0.70	2.28	27.7	3,820	22.2
40	0.44	0.87	1.96	0.70	2.37	35.6	3,320	28.5
45, 50	0.33	0.87	2.64	0.70	3.18	46.7	3,050	37.4
55	0.35	0.87	2.38	0.70	2.87	48.9	2,730	39.6
60, 65	0.40	0.87	2.17	0.70	2.63	52.5	2,420	42.2
70, 75	0.45	0.87	1.87	0.70	2.26	55.6	2,060	44.5
80, 85, 90	0.50	0.87	1.71	0.70	2.07	89	1,640	71.2
100	0.49	0.87	1.77	0.70	2.14	120.1	1,530	98.0
110, 115	0.53	0.87	1.63	0.70	1.97	149.5	1,360	120.0
125	0.47	0.87	1.83	0.70	2.21	206.4	1,200	164.6
135, 140, 150	0.49	0.87	1.76	0.70	2.12	195.7	915	188.6
160, 170, 180	0.54	0.87	1.61	0.70	1.95	320.3	790	320.2

Comparing spherical to tapered roller bearing

The dynamic capacity C (spherical) and C_{90} (tapered) are not to the same base. To compare basic dynamic capacities, multiply C x 0.259 and compare to C_{90}.

To select and then compare, use the complete selection procedure for each type bearing and then compare.

* C_{90} – Dynamic capacity based on a rated life of 90 million revolutions.

** If load exceeds maximum allowable slip fit radial load (F_R), line-to-line, to light press fit of shaft required. Application loads up to maximum slip fit radial load may be applied if recommended shaft tolerances are used.

Type E family

Type E metric

Table 11: Easy selection for Type E metric

Shaft size (mm)	L_{10} life (h)	Equivalent radial load rating (kN) at various speeds (rpm)														
		50	100	150	250	500	750	1000	1250	1500	1750	2000	2500	2700	3000	3500
35	10,000	38	31	28	24	19	17	16	15	14	13	13	12	12	11	11
	30,000	28	22	20	17	14	12	11	11	10	10	9	9	8	8	8
	40,000	25	21	18	16	13	11	10	10	9	9	8	8	8	7	7
	60,000	22	18	16	14	11	10	9	9	8	8	7	7	7	7	6
	100,000	19	16	14	12	10	9	8	7	7	7	6	6	6	6	5
40	10,000	49	40	36	31	25	22	20	19	18	17	16	15	15	14	14
	30,000	36	29	26	22	18	16	14	14	13	12	12	11	11	10	10
	40,000	33	27	23	20	16	14	13	12	12	11	11	10	10	10	9
	60,000	29	23	21	18	14	13	12	11	10	10	10	9	9	8	8
	100,000	25	20	18	15	12	11	10	9	9	9	8	8	7	7	7
45 50	10,000	65	53	47	40	33	29	26	25	23	22	21	20	20	19	—
	30,000	47	38	34	29	23	21	19	18	17	16	15	14	14	14	—
	40,000	43	35	31	26	21	19	17	16	15	15	14	13	13	13	—
	60,000	38	31	27	23	19	17	15	14	14	13	13	12	11	11	—
	100,000	33	26	23	20	16	14	13	12	12	11	11	10	10	10	—
55	10,000	65	53	47	40	33	29	26	25	23	22	21	20	20	19	—
	30,000	47	38	34	29	23	21	19	18	17	16	15	14	14	14	—
	40,000	43	35	31	26	21	19	17	16	15	15	14	13	13	13	—
	60,000	38	31	27	23	19	17	15	14	14	13	13	12	11	11	—
	100,000	33	26	23	20	16	14	13	12	12	11	11	10	10	10	—
60 65	10,000	73	59	52	45	37	32	30	28	26	25	24	23	—	—	—
	30,000	52	43	38	32	26	23	21	20	19	18	17	16	—	—	—
	40,000	48	39	35	30	24	21	20	18	17	17	16	15	—	—	—
	60,000	43	35	31	26	21	19	17	16	15	15	14	13	—	—	—
	100,000	37	30	26	23	18	16	15	14	13	13	12	11	—	—	—
70 75	10,000	77	63	56	48	39	34	31	29	28	27	26	—	—	—	—
	30,000	56	45	40	34	28	25	23	21	20	19	18	—	—	—	—
	40,000	51	41	37	31	26	23	21	19	18	18	17	—	—	—	—
	60,000	45	37	32	28	23	20	18	17	16	16	15	—	—	—	—
	100,000	39	31	28	24	19	17	16	15	14	13	13	—	—	—	—
80 85 90	10,000	124	100	89	76	62	55	50	47	45	43	—	—	—	—	—
	30,000	89	72	64	55	45	39	36	34	32	31	—	—	—	—	—
	40,000	82	66	59	50	41	36	33	31	29	28	—	—	—	—	—
	60,000	72	59	52	45	36	32	29	28	26	25	—	—	—	—	—
	100,000	62	50	45	38	31	28	25	24	22	21	—	—	—	—	—
100	10,000	167	136	120	103	84	74	68	64	60	—	—	—	—	—	—
	30,000	120	98	86	74	60	53	49	46	43	—	—	—	—	—	—
	40,000	110	89	79	68	55	49	45	42	40	—	—	—	—	—	—
	60,000	98	79	70	60	49	43	40	37	35	—	—	—	—	—	—
	100,000	84	68	60	52	42	37	34	32	30	—	—	—	—	—	—

For maximum speed (rpm), see Table 10.

In the shaded area E, DI and TAF mounted units require a line-to-line to light press fit to shaft.

Type E family

Type E metric

Table 11: Easy selection for Type E metric

Shaft size (mm)	L_{10} life (h)	Equivalent radial load rating (kN) at various speeds (rpm)														
		50	100	150	250	500	750	1000	1250	1500	1750	2000	2500	2700	3000	3500
110 115	10,000	208	169	149	128	104	92	85	79	—	—	—	—	—	—	—
	30,000	149	121	107	92	75	66	61	57	—	—	—	—	—	—	—
	40,000	137	111	99	85	69	61	56	52	—	—	—	—	—	—	—
	60,000	121	99	87	75	61	54	49	46	—	—	—	—	—	—	—
	100,000	104	85	75	64	52	46	42	40	—	—	—	—	—	—	—
125	10,000	287	233	206	177	144	127	117	109	—	—	—	—	—	—	—
	30,000	206	168	148	127	103	92	84	79	—	—	—	—	—	—	—
	40,000	189	154	136	117	95	84	77	72	—	—	—	—	—	—	—
	60,000	168	136	121	103	84	74	68	64	—	—	—	—	—	—	—
	100,000	144	117	103	89	72	64	59	55	—	—	—	—	—	—	—
135 140 150	10,000	272	221	196	168	136	121	111	—	—	—	—	—	—	—	—
	30,000	196	159	141	121	98	87	80	—	—	—	—	—	—	—	—
	40,000	180	146	129	111	90	80	73	—	—	—	—	—	—	—	—
	60,000	159	129	114	98	80	71	65	—	—	—	—	—	—	—	—
	100,000	136	111	98	84	68	61	56	—	—	—	—	—	—	—	—
160 170 180	10,000	445	362	320	275	223	198	—	—	—	—	—	—	—	—	—
	30,000	320	260	230	198	161	142	—	—	—	—	—	—	—	—	—
	40,000	294	239	211	181	147	130	—	—	—	—	—	—	—	—	—
	60,000	260	211	187	161	130	115	—	—	—	—	—	—	—	—	—
	100,000	223	181	161	138	112	99	—	—	—	—	—	—	—	—	—

For maximum speed (rpm), see Table 10.

In the shaded area E, DI and TAF mounted units require a line-to-line to light press fit to shaft.

Type E family
Type E metric

Lubrication

Type E metric tapered roller bearings are lubricated at the factory with Mobilgrease XHP222, a superior industrial grease using a lithium complex thickener and a highly refined base oil. This grease will adequately handle low and medium speeds with low and medium loads at normal temperatures as defined on Table 14. For very low and high speeds, for heavy loads, and for low and high temperatures, special greases must be used. Contact Application Engineering at +1 864 284 5700. Dodge engineers will recommend bearings and lubricants for the unusual conditions. Dodge also has the expertise to custom design and build special bearings for your needs. Refer to the mounted bearing grease calculator at ptwizard.com for application-specific recommendations.

High speed operation

In the higher speed ranges too much grease will cause overheating. The amount of grease that the bearing will take for particular high speed application can only be determined by experience. If excess grease in the bearing caused overheating, it will be necessary to remove grease fitting (also drain plug when furnished) to permit excess grease to escape. When establishing a relubrication schedule, note that a small amount of grease at frequent intervals is preferable to a large amount at infrequent intervals.

Operation in presence of dust, water or corrosive vapors

Under these conditions the bearing should contain as much grease as speed will permit, since a full bearing with consequent slight leakage is the best protection against entrance of foreign material. In the higher speed ranges too much grease will cause overheating—see "High speed operation". In the lower speed ranges, it is advisable to add extra grease to a new bearing before putting into operation. Bearings should be greased as often as necessary (daily if required) to maintain a slight leakage at the seals.

Installation and maintenance

In nearly all applications, good design practice requires two bearings supporting the shaft. In cases where three or more bearings are installed, unless precautions are taken to line the bearings up, both vertically and horizontally, it is possible to induce heavy loads. To ensure good alignment, mounting surfaces must be checked for flatness and must lie in the same plane. When tightening base bolts and cap bolts, each bolt should be alternately tightened in incremental torque values until full torque is achieved to prevent the angular shifting of the pillow block that occurs when one bolt is tightened to its full torque. Shimming may be required to minimize misalignment.

Table 12: Relubrication schedule

Hours run per day	Suggested lubrication period in weeks based on speed (rpm)							
	1 to 250	251 to 500	501 to 750	751 to 1,000	1,001 to 1,500	1,501 to 2,000	2,001 to 2,500	2,501 to 3,000
8	12	12	10	7	5	4	3	2
16	12	7	5	4	2	2	2	1
24	10	5	3	2	1	1	1	1

Type E family
Type E metric

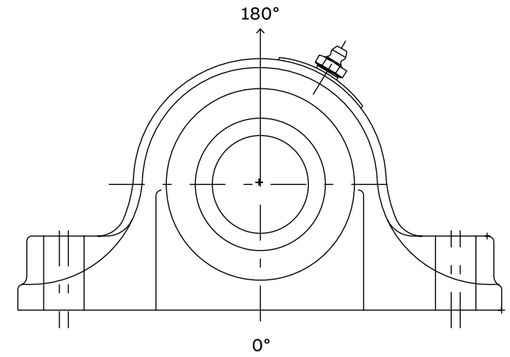


Table 13: Type housing ratings, gray iron

Bore size (mm)	Maximum housing cap load (kN)
	P180
35	14
40	13
45, 50	23
55	16
60, 65	29
70, 75	31
80, 85, 90	70
100	72
110, 115	93
125	116
135, 140, 150	194
160, 170, 180	204

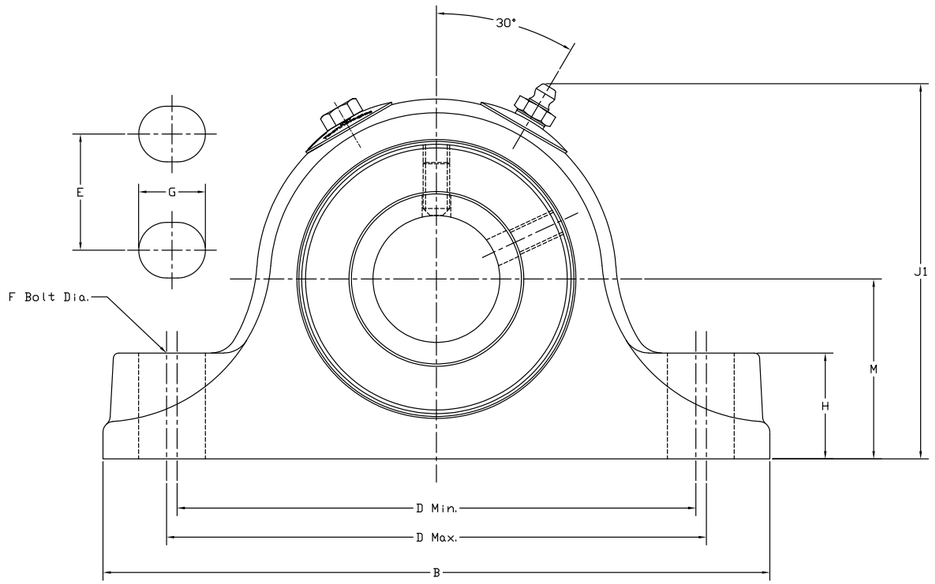
Table 14: Definition of operating conditions for tapered roller bearings

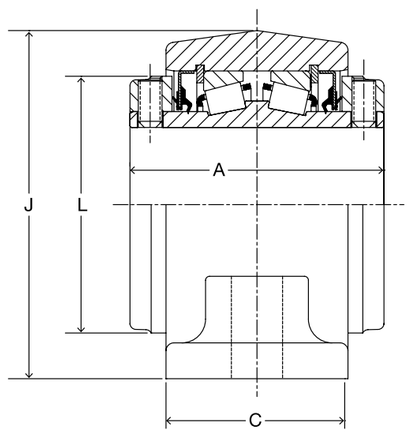
Low speed	Up to 20% of max. rpm (Table 10)
Medium speed	Over 20% to 80% of max. rpm
High speed	Over 80% of max. rpm
Light load	Up to 30% of C_{90} (Table 10)
Normal load	Over 30% to 70% of C_{90}
Heavy load	Over 70% of C_{90}
Low temperature	-75 °C to - 10 °C
Medium temperature	Above - 10 °C to 100 °C
High temperature	Above 100 °C to 150 °C
Very high temperature	Above 150 °C to 205 °C

Dimensions

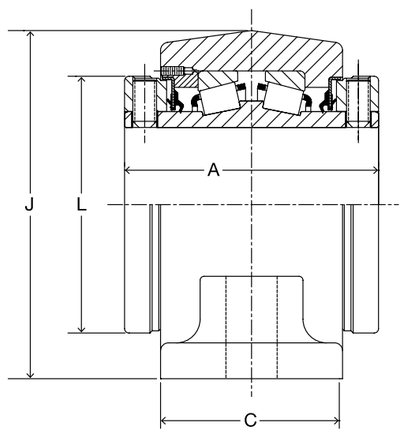
Type E pillow block – metric

2- and 4-bolt





35 mm thru 90 mm construction



100 mm thru 125 mm construction

Type E pillow block – metric

2- and 4-bolt

2-bolt

Shaft size (mm)	Part number	Description	Approx. weight (lb)
35	023620	P2B-E-035MR	7
40	023621	P2B-E-040MR	10
45	023622	P2B-E-045MR	12
50	023623	P2B-E-050MR	12
55	023624	P2B-E-055MR	15
60	023625	P2B-E-060MR	20
65	023626	P2B-E-065MR	20
70	023627	P2B-E-070MR	29
75	023628	P2B-E-075MR	27
80	023629	P2B-E-080MR	49
85	023630	P2B-E-085MR	47
90	023631	P2B-E-090MR	45

4-bolt

Shaft size (mm)	Part number	Description	Approx. weight (lb)
100	023632	P4B-E-100MR	69
110	023633	P4B-E-110MR	85
115	023634	P4B-E-115MR	91
125	023635	P4B-E-125MR	136
135	023636	P4B-E-135MR	245
140	023637	P4B-E-140MR	240
150	023638	P4B-E-150MR	235
160	023639	P4B-E-160MR	355
170	023640	P4B-E-170MR	345
180	023641	P4B-E-180MR	345
4-bolt Harsh Duty			
100	780449	P4B-ED-100MR	69

Contact Dodge for availability of any not listed.

2-bolt

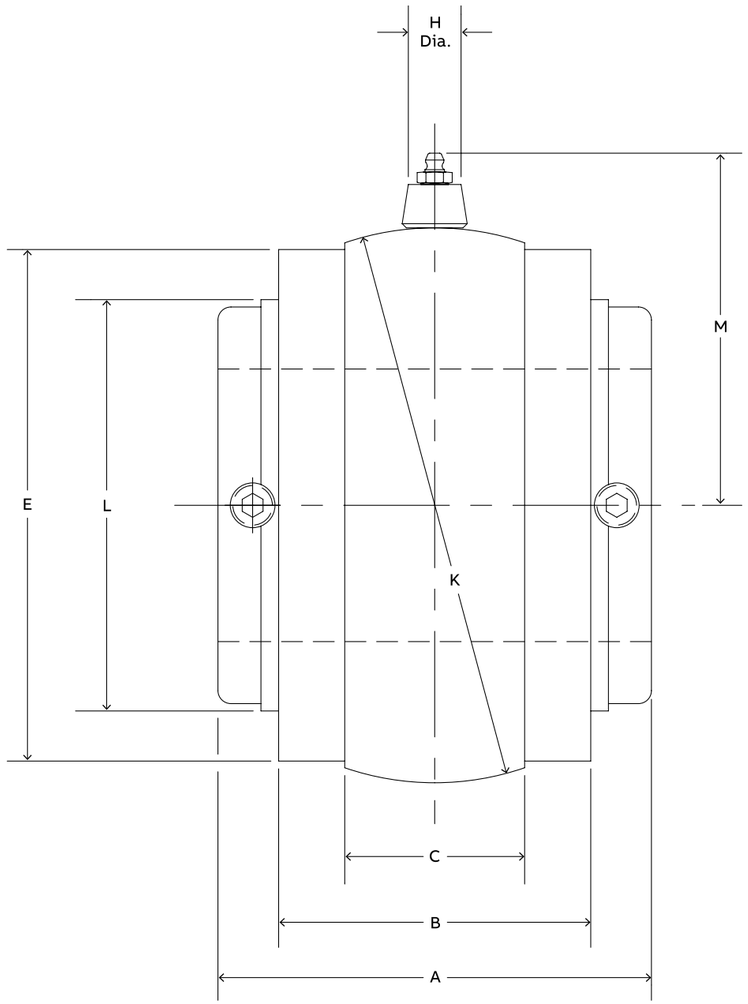
Shaft size (mm)	A	B	C	D		F bolt	G	H	J1	L	M
				Min.	Max.						
35	76.2	187.0	54.0	142.8	149.2	M12	19	29	101.6	70	47.6
40	85.7	200.0	60.0	155.5	161.9	M12	19	32	113.5	81	54.0
45 50	88.9	225.0	64.0	174.6	181.0	M16	22	33	119	87	57.2
55	95.3	244.0	67.0	193.7	200.0	M16	22	38	131.4	95	63.5
60 65	101.6	267.0	73.0	212.7	219.0	M16	22	41	142.8	103	69.9
70 75	114.3	305.0	76.0	236.5	246.0	M20	27	48	161.1	120	79.4
80 85 90	127.0	356.0	89.0	274.6	284.2	M20	30	57	190.5	139.7	95.3

4-bolt

Shaft size (mm)	A	B	C	D		E	F bolt	G	H	J1	L	M
				Min.	Max.							
100	158.8	387	114	311.2	323.9	57.2	M20	28	62	216	152.4	108.0
110 115	171.5	422	117	336.6	349.3	63.5	M20	28	70	238	164	120.7
125	184.2	470	130	387.4	400.0	73.0	M24	32	76	276	189	139.7
135 140 150	228.6	559	159	441.3	485.8	95.3	M24	51	83	335	238	169.9
160 170 180	266.7	660	181	539.8	590.6	117.5	M24	51	94	379	289	190.5

Double Interlock – metric

S1 inner unit



Double Interlock – metric

S1 inner unit

Gray iron

Shaft size (mm)	Part number	Description	Approx. weight (lb)
35	023700	S1U-DI-035M	5
40	023701	S1U-DI-040M	6
45	023702	S1U-DI-045M	8
50	023703	S1U-DI-050M	8
55	023704	S1U-DI-055M	10
60	023705	S1U-DI-060M	11
65	023706	S1U-DI-065M	10
70	023707	S1U-DI-070M	17
75	023708	S1U-DI-075M	17
80	023709	S1U-DI-080M	33
85	023710	S1U-DI-085M	32
90	023711	S1U-DI-090M	31
100	023712	S1U-DI-100M	42
110	023713	S1U-DI-110M	55
115	023714	S1U-DI-115M	71
125	023715	S1U-DI-125M	85

Shaft size (mm)	A	B	C	E		H dia.	K	L	M
				Mach. size	Cast. size				
35	3.00	2.063	1.156	3.250	3-5/16	0.688	3.625 ▲	2.750	2.640
40	3.375	2.313	1.188	3.750	3-13/16	0.688	4.125 ▲	3.188	2.890
45 50	3.500	2.875	1.500	4.125	4-3/16	0.688	4.562 ▲	3.438	3.100
55	3.750	2.563	1.563	4.500	4-5/8	0.688	5.000 ▲	3.750	3.320
60 65	4.000	2.750	1.438	4.812	4-7/8	0.688	5.186 ▲	4.063	3.410
70 75	4.500	3.000	1.875	5.563	5-5/8	0.688	6.061 ▲	4.719	3.850
80 85 90	5.000	3.500	2.00	6.813	6-7/8	0.688	7.373#	5.531	4.510
100	6.250	4.500	2.375	7.438	7-1/2	0.313	7.997#	6.125	5.160
110 115	6.750	4.625	2.375	8.313	8-3/8	0.313	8.872#	6.438	5.600
125	7.250	5.125	2.875	9.563	9-5/8	0.313	10.184#	7.438	6.260

All dimensions are shown in inches unless noted otherwise.

▲ +0.000 to -0.001 inches

+/-0.0005 inches

Accessories

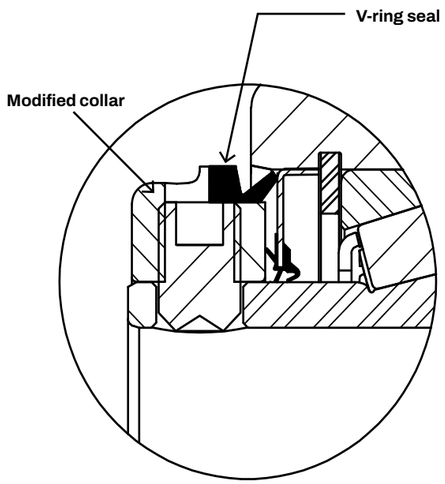
E-Tect seal kit – inch

Type E, TAF, Double Interlock, and Type K

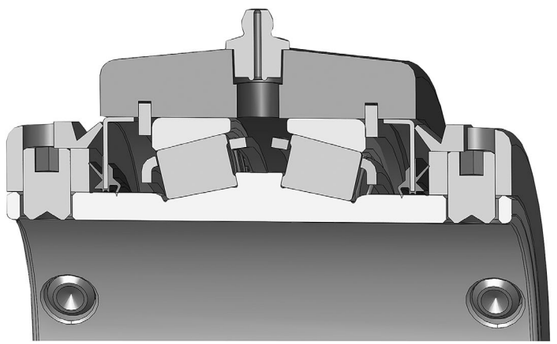
Shaft size	Kit part number
1-3/16 to 1-1/4	037650 *
1-3/8 to 1-7/16	037651 *
1-1/2 to 1-11/16	037652 *
1-3/4 to 2	037653 *
2-3/16	037654 *
2-1/4 to 2-1/2	037655 *
2-11/16 to 3	037656 *
3-3/16 to 3-1/2	037657 *
3-15/16 to 4	037658 *
4-7/16 to 4-1/2	037659 *
4-15/16 to 5	037660 *
5-7/16 to 6	037673 **
6-7/16 to 7	037674 **

* Kit includes one collar, set screws and seal

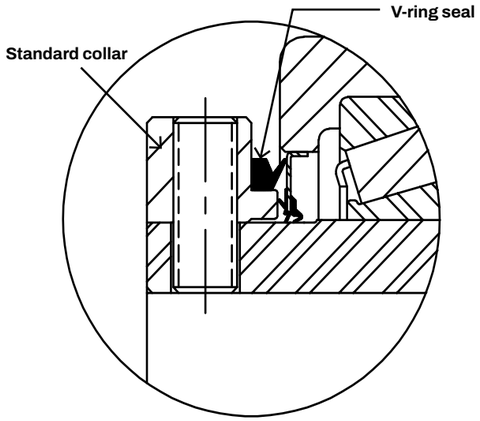
** Kit for 5-7/16-inch and larger consists of a modified V-ring seal.



E-Tect seal
1-3/16 through 5 inches



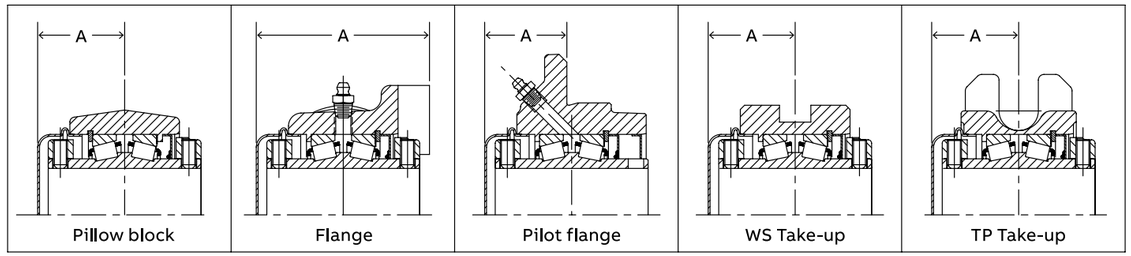
XTS sealing with E-Tect option



E-Tect seal
5-7/16 through 7 inches

End cover kit – inch

Type E



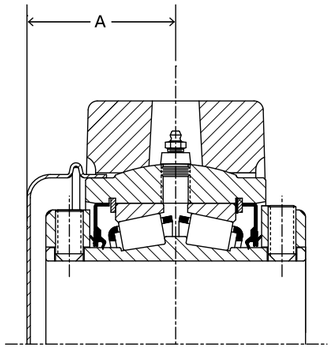
Shaft size Δ	Kit* part number	"A" Dimension				
		Pillow block	Flange	Pilot flange	WS take-up	TP take-up
1-3/16 to 1-1/4	023795	1.56	2.97	1.47	—	—
1-3/8 to 1-7/16	023796	1.34	3.22	1.66	1.66	—
1-1/2 to 1-11/16	023797	1.89	3.67	1.73	1.76	—
1-3/4 to 2	023798	1.95	3.80	1.73	1.92	1.98
2-3/16	023799	2.09	4.06	1.88	2.06	2.06
2-1/4 to 2-1/2	023800	2.25	4.38	2.00	2.19	2.31
2-11/16 to 3	023801	2.44	4.88	2.19	2.44	2.44

Δ Consult Dodge for sizes not listed.

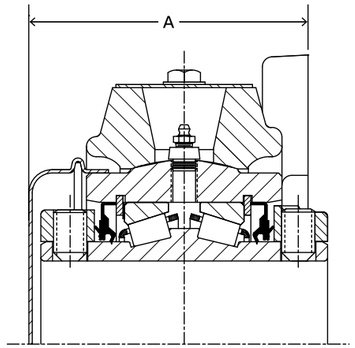
* Kit includes end cover and special collar.

End cover kit – inch

TAF, Double Interlock, and Type K



Pillow block - TAF, Double Interlock, and Type K (Double Interlock shown)



Flange - Double Interlock and Type K (Double Interlock shown)

Shaft size	Part number	"A" Dimension	
		Pillow block	Flange bearing
1-3/8 to 1-7/16	037681	1.66	2.84
1-1/2 to 1-11/16	037682	1.86	3.17
1-3/4 to 2	037683	1.92	3.30
2-3/16	037684	2.06	3.50
2-1/4 to 2-1/2	037685	2.19	3.75
2-11/16 to 3	037686	2.44	4.19
3-3/16 to 3-1/2	037687	2.69	4.94
3-15/16 to 4	037688	3.31	5.81
4-7/16 to 4-1/2	037689	3.56	5.88
4-15/16 to 5	037690	3.81	6.31
5-7/16 to 6*	141152	5.28	—
6-7/16 to 7*	141153	6.52	—

End cover mounts on machined OD side of S1 unit.

* Cover bolts are supplied to attach cover to bearing face.

Notes

Specialty tapered

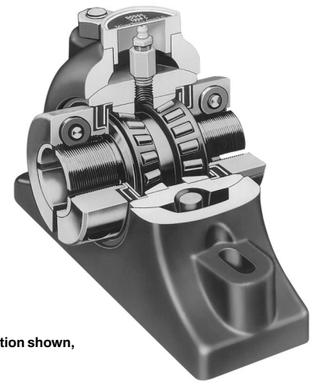
B21-1	**Specialty tapered**
B21-2	**Features and benefits**
B21-4	**Specification**
B21-6	**How to order**
B21-7	**Nomenclature**
B21-8	**Selection**
B21-18	**Dimensions**
B21-18	Type C
B21-18	Pillow block
B21-22	Flange
B21-24	Inner unit
B21-26	Take-up
B21-28	Hanger
B21-30	Special Duty
B21-30	Pillow block
B21-36	Flange
B21-38	Inner unit
B21-42	Hinged Cap pillow block
B21-44	Hinged Cap inner unit

Features and benefits

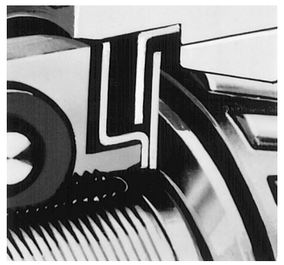
Specialty tapered

Type C

- Positive concentric clamp-sleeve mounting
- Steel labyrinth seals
- Two quality single-row tapered roller assemblies
- Rugged two-piece housing
- Elongated bolt holes



2-1/2 to 5 inches NE construction shown, expansion also available



Clamp sleeve mounting

- Two quality single-row tapered bearings press-fitted on sleeve
- Outer races shouldered against rib in housing
- Offers improved concentricity over other collar-mounted types of bearings
- Best bearing unit for wheel or sprocket applications
- Two-piece split collars used on 2-1/2-inch and larger sizes
- Single-piece split collars used on smaller sizes
- Performs flinger-like function to keep contaminants away from seal

Steel labyrinth seals

- Combine with collars offering excellent resistance to keep contaminants out of the bearing
- Sealed bearing both on and off the shaft before, during, and after installation
- Ideal for applications where dirt and dust are severe

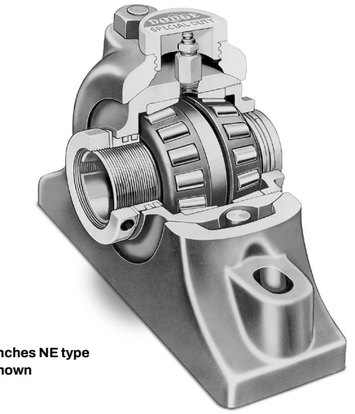
Rugged two-piece outer housing

- Split housing of heavy-duty gray-iron construction houses completely assembled inner unit
- Elongated bolt holes provide lateral adjustment for ease of installing pillow blocks

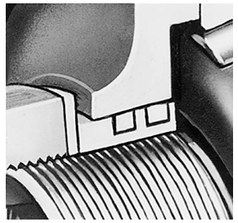
Specialty tapered

Special Duty

- Quality duplex tapered roller bearing
- Tapered adapter sleeve mounting
- Dual piston ring seals
- Rugged two-piece housing
- Elongated bolt holes



1-3/8 to 3-1/2 inches NE type construction shown



Dual piston ring seals

- Contained within self-aligning inner unit; unaffected by misalignment
- Sealed bearing both on and off the shaft before, during, and after installation
- Extremely close clearances exclude contaminants from entering bearings

Tapered adapter sleeve mounting

- A split-tapered adapter sleeve extending through the entire length of the pillow block is used to securely fasten the bearing to the shaft tighter than shorter adapter sleeves
- A single adapter nut is used on sizes 3-1/2-inch and smaller with two adapter nuts being used on the larger sizes. The adapter nut at the large end of the taper can be used to remove the bearing from the shaft

Duplex tapered roller bearing

- Uses case-hardened inner race, outer races, and rollers with adapter-sleeve mounting for unsurpassed load-handling capability and longer useful bearing life
- Handles any combination of radial and thrust load from 100 percent radial load to 100 percent thrust load

Rugged two-piece outer housing

- Split housing of heavy-duty gray-iron construction houses completely assembled inner unit
- Elongated bolt holes provide lateral adjustment for ease of installing pillow blocks

Specification

Specialty tapered

Type C

The standard housing material for Type C mounted bearings is high-performance cast iron having a minimum tensile strength of 30,000 psi. The outer housings for the pillow blocks and flange bearings are of split construction for ease of replacement of the completely assembled, adjusted and lubricated inner units. The housings for the take-ups, hanger bearings, D, S1 and B1 units are of solid one-piece construction. Pillow blocks and flange bearings are available in both expansion and non-expansion styles. Take-up and hanger bearings are available as non-expansion only.

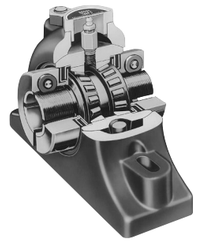
The Type C mounted bearing has indirect mounted tapered roller bearings press-fitted on a common sleeve with the outer race shouldered against a rib in the housing. The tapered roller bearings used in the Type C mounted bearings have case carburized inner races (cones), outer races (cups), and rollers.

The Type C bearing is mounted to the shaft by clamping the sleeve to the shaft at the slotted threaded end of the sleeve with flinger collars. These collars are one-piece construction for sizes through 2-1/2-inch, while larger sizes use two-piece collars. The bearing rating for the Type C is determined by the sleeve, resulting in a L_{10} life at maximum speed of at least 100,000 hours.

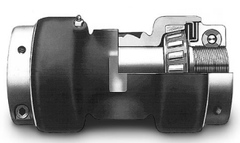
Steel labyrinth seals are used to offer extra resistance to keep contaminants out of the bearing before, during, and after installation.

Type C available in:

- 2-bolt pillow blocks, 1-3/16 to 3-7/16 inches
- 4-bolt pillow blocks, 2-3/8 to 4-15/16 inches
- 4-bolt flanges, 1-7/16 to 3-7/16 inches
- All in either expansion or non-expansion

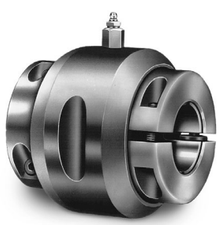


Hanger bearings, 1-15/16 to 3-7/16 inches



Take-up bearings, 1-7/16 to 2-15/16 inches

D, S1 or B1 units, 1-7/16 to 4-15/16 inches



Specialty tapered

Special Duty

The standard housing material for Special Duty mounted bearings is a high-performance cast iron. The outer housings for the pillow blocks and flange bearings are of split construction for ease of replacement of the completely assembled, adjusted and lubricated inner units. The housings for the D, S1, and B1 units are of solid one-piece construction. Pillow blocks and flange bearings are available in both expansion and non-expansion types.

Special Duty mounted bearings have duplex tapered roller bearings mounted to the shaft with a tapered adapter sleeve extending through the complete length of the pillow block. The tapered roller bearings used in the Special Duty mounted bearings all have case-carburized inner races (cone), outer races (cup), and rollers. A single adapter nut is used on sizes through 3-1/2 inches with two adapter nuts being used on the larger sizes. The nut at the large end of the taper can be used to remove the bearing from the shaft.

Special Duty mounted bearings have two piston ring seals running in grooves in the seal ring carriers at each end of the units to seal the bearings both on and off the shaft. Sizes through 3-1/2 inches use a grooved seal ring carrier at one end and grooved adapter at the opposite end for carrying the piston ring seals. Larger sizes have grooved adapter nuts to carry the piston ring seals.

Hinged Cap Special Duty

The standard housing material for Special Duty Hinged Cap bearings is a high-performance cast iron. The housing is equipped with a brass hand wheel for ease of removal of the S1 unit from the pillow block housing. Hinged Cap pillow blocks are available in both expansion and non-expansion types.

Hinged Cap pillow blocks and units are mounted to the shaft with a tapered adapter sleeve extending completely through the unit. The tapered adapter sleeve is equipped with micro mount removal screws for ease of demounting the bearing from the shaft.

The Hinged Cap pillow blocks are arranged for relubrication from the end of the pillow block rather than from the top of the pillow block.

Special Duty available in:

Pillow blocks, 2-bolt 1-3/8 to 3-1/2 inches Pillow blocks, 4-bolt 2-3/8 to 6 inches

Flange bearings 4-bolt, 1-7/16 to 6 inches

All in either expansion or non-expansion D, S1 and B1 Unit, 1-3/8 to 6 inches

Hinged Cap pillow blocks available in:

- 2-bolt base, 1-3/8 to 3 inches
- Expansion or non-expansion

Hinged Cap S1 units 1-3/8 to 3 inches

How to order

Specialty tapered

Type C and Special Duty

There are two ways to specify Dodge bearings—by six-digit part number or by description. Most of the products offered have part numbers with listings shown throughout this catalog. Use of part numbers ensures accurate order processing.

When part numbers are not shown, the product may be specified by description. This method is used when ordering units that include modifications or options. To order by description, use the nomenclature key shown for each product, adding any special instructions to the end of the description for options not covered by the nomenclature.

Special bearing requirements

Depending on the bearing, a wide variety of lubricants, seals, locking devices, finishes, and adjustments are available for a wide range of applications from general purpose to extreme ambient temperatures, high speeds, or high loads.

Special lubricant options usually involve set-up charges, minimum quantities, and price premiums. To order, specify the type of lubricant required at the end of the product name or after the standard part number.

Example:

F4B-XX-207 except with Mobil HTS #2 grease

or

P/N-XXXXXX except with Mobil HTS #2 grease

Other special requirements not listed

For applications requiring modifications not listed, contact Application Engineering for bearings at +1 864 284 5700.

Nomenclature

Specialty tapered

Type C and Special Duty

P2B - C - 207 - E

Housing style

P2B = Pillow block 2-bolt, cast iron

P4B = Pillow block 4-bolt, cast iron

F4B = Flange bearing 4-bolt, cast iron

B1U = B1 unit, cast iron

DU = D unit, cast iron

S1U = S1 unit, cast iron

CRT = Cartridge unit ductile-iron end plates

NSTU = Narrow slot take-up bearing, cast iron

HNG = Hanger bearing, cast iron

Bearing type

C = Type C

SD = Special duty

HC = Hinged Cap

Size

Inches and 16th

2 = 2 inches

07 = 7/16 inches

or

207 = 2-7/16 inches

Other data

E = Expansion type bearing

If E does not appear after seal type, then bearing is non-expansion type.

MOD = Special modification

Reference Guide
Type E Family (Tapered)
Specialty Tapered
Safety Mount Family (Spherical)
S-2000 (Spherical)
Unified SAF (Spherical)
Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

Selection

Specialty tapered

Type C

The capacity of the Type C bearing is designed to handle loads normally imposed on the shaft. However, due to the assembly method and method of fastening the bearing to the shaft, there are necessary clearances between the sleeve and the shaft except at the two ends. Consequently, under heavy loads a flexing and stressing of the sleeve will take place as the shaft rotates. For this reason, the radial load ratings shown in Table 1 are based on the sleeve capacity under maximum clearance conditions rather than on the capacity of the roller bearings themselves.

Sleeve capacity being independent of speed, the table gives maximum recommended bearing loads at all allowable speeds and is based on the use of shafting tolerances.

Type C bearings are primarily utilized on radial load applications. They have ample thrust capacity for use as the locating bearing normally encountered with this type service. If heavy thrust loads are involved, Application Engineering should be contacted for a review of the application. The maximum thrust load should not exceed Type C pillow block limits shown in Table 3.

Since these ratings are considerably less than the base bearing ratings, the resulting life expectancy is, for all practical purposes, contingent only on proper lubrication.

Table 1: Type C radial load ratings

Shaft size (in)	Radial load rating (lb) *	Maximum speed (rpm)	Shaft size (in)	Radial load rating (lb) *	Maximum speed (rpm)
1-3/16—1-7/16	725	3,000	2-1/2—2-15/16	3,000	1,750
1-1/2—1-3/4	1,000	3,000	3 - 3—7/16	4,000	1,500
1-15/16	1,350	2,500	3-1/2—4	5,500	1,250
2—2-1/4	1,700	2,500	4-7/16—4-1/2	6,500	1,000
2-3/8—2-7/16	2,100	2,000	4-15/16—5	7,500	750

* More than 100,000 L_{10} hours life at maximum speed (rpm) listed.

Table 2: Type C expansion capability (in)

Shaft size	Type C		
	2-bolt pillow block	4-bolt pillow block	Flange
1-3/16 —1-7/16	3/16	—	3/16
1-1/2—1-3/4	5/8	—	1/4
1-15/16	5/8	—	1/4
2—2-1/4	5/8	—	1/4
2-3/8—2-7/16	5/8	5/8	1/4
2-1/2—2-15/16	3/4	5/8	5/8
3 —3-7/16	3/4	3/4	1/4
3-1/2 —4	—	3/4	1/4
4-7/16—4-1/2	—	3/4	5/8
4-15/16—5	—	3/4	5/8

Table 3: Type C pillow block permissible thrust load ♦

Shaft size (in)	Thrust load (lb) ♦		Shaft size (in)	Thrust load (lb) ♦	
	2-bolt	4-bolt		2-bolt	4-bolt
1-3/16—1-7/16	3,000	—	2-1/2—2-15/16	6,900	9,300
1-1/2—1-3/4	3,150	—	3—3-7/16	5,700	12,000
1-15/16	5,000	—	3-1/2—4	—	12,000
2—2-3/16	5,000	—	4-7/16—4-1/2	—	12,000
2-3/8—2-7/16	7,300	10,000	4-15/16—5	—	16,500

♦ The limits in above apply to pillow blocks.
For thrust loads larger than listed or heavy thrust loading on other style housings, contact Application Engineering for recommendation.

Specialty tapered

Special Duty

Special Duty double-row mounted tapered roller bearings have the highest capacity of all Dodge tapered roller bearings. They carry heavy radial loads and combined radial and thrust loads. The maximum recommended load which can be applied is limited by various components in the system such as bearing, housing, shaft, shaft attachment, speed and life requirements as listed in this catalog. Special Duty bearings have been applied successfully even when these limits have been exceeded under controlled operating conditions. Contact Application Engineering at +1 864 284 5700 for applications which exceed the recommendations of this catalog.

L_{10} life – The fatigue life which may be expected from at least 90 percent of a given group of bearings operating under identical conditions.

$$L_{10} = \left(\frac{C_{90}}{P}\right)^{10/3} \times \left(\frac{1{,}500{,}000}{rpm}\right)$$

Where:

C_{90} = Dynamic capacity (Table 4)

P = Equivalent radial load

General

Heavy service – For heavy shock loads, frequent shock loads, or severe vibrations, add up to 50 percent (according to severity of conditions) to the equivalent radial load. Consult Dodge Application Engineering for additional selection assistance.

Thrust load values shown in the table below are recommended as a guide for general applications that will give adequate L_{10} life for pillow blocks. The maximum thrust load should not exceed values shown on Table 6. Where substantial radial load is also present, it is advisable to calculate actual L_{10} life to assure that it meets the requirements. The effectiveness of the shaft attachment to carry thrust load depends on proper tightening, shaft tolerance (see shaft tolerances table) and shaft deflections. Therefore, it is advisable to use auxiliary thrust-carrying devices such as shaft shoulder, snap ring or a thrust collar to locate the bearing under thrust loads heavier than shown below, or where extreme reliability is desired.

Speed range (rpm)	20—200	201—2,000	Over 2,000
Recommended thrust load	$C_{90}/4$	$C_{90}/8$	$C_{90}/12$

The shaft tolerances recommended below are adequate for normal radial and radial/thrust load applications. Since the allowable load, especially at a low speed, is very large, the shaft should be checked to assure adequate shaft strength.

The magnitude and direction of both the thrust and radial load must be taken into account when selecting a housing. When pillow blocks are utilized, heavy loads should be directed through the base. Where uplift loads are involved, see Table 9 for maximum values. Where a load pulls the housing away from the mounting base, both the hold-down bolts and housing must be of adequate strength. Auxiliary load-carrying devices such as shear bars are advisable for side or end loading of pillow blocks and radial load for flange units.

Shaft tolerances

Shaft size (in)	Tolerance (in)
Up to 1-1/2	+0.000 to -0.002
1-9/16 to 2-1/2	+0.000 to -0.003
2-1/2 to 4	+0.000 to -0.004
4-3/16 to 6	+0.000 to -0.005

Selecting bearings supporting radial loads only

1. Define L_{10} life (h) desired
2. Establish bearing radial load, F_R (F_R = P for pure radial load conditions)
3. Establish speed (rpm)

Using the easy selection Table 5, find under the rpm column, the equivalent radial load that equals or is higher than the application radial load for the desired life. The shaft size on the far left will be the minimum shaft size that you can use for your application. If the desired life is different than the values shown on the chart, use alternate Method A shown below.

Example:

L_{10} life = 30,000 h

Radial load = 3,800 lb

Speed = 1,000 rpm

At the intersection of the 1,000 rpm column and the 30,000 hours L_{10} life row, the equivalent radial load of 3,977 pounds exceeds the 3,800 pounds radial load for shaft sizes 1-3/8 to 1-1/2 inches. A bearing with bore ranging from 1-3/8 to 1-1/2 inches may be used for this application.

Alternate method A – Selecting a bearing for an L_{10} life value not shown in the easy selection chart.

Specialty tapered
Special Duty

The L_{10} life equation can be rearranged so that the bearing dynamic capacity C is identified in terms of L_{10}, speed and P.

$$C_{90} = \left(\frac{L_{30} \times rpm}{1{,}500{,}000} \right)^{0.3} X \quad P$$

(P = F_R for pure radial load conditions)

Since the L_{10}, speed, and P are known, solve for C_{90}. Select from the dynamic capacity column on Table 4, the C_{90} value equal to or greater than the C_{90} value just calculated. The bore size on the far left represents the bore size selection. Check that the application speed does not exceed the maximum speed in Table 4. When selecting an L_{10} life of less than 30,000 hours, particular attention must be paid to shaft deflection and proper lubricant selection.

Selecting bearings supporting combination radial and thrust loads

When a bearing supports both a radial load and a thrust load, the loading on the two rows is shared unequally depending on the ratio of thrust to radial load. The use of the X (radial factor) and Y (thrust factor) from Table 4 converts the applied thrust load and radial loads to an equivalent radial load having the same effect on the life of the bearing as a radial load of this magnitude.

The equivalent radial load:

$$P = XF_R + YF_A$$

Where:

P = Equivalent radial load
F_R = Radial load
F_A = Thrust (axial) load
e = Thrust load to radial load factor (Table 4)
X = Radial load factor (Table 4)
Y = Thrust load factor (Table 4)

To find X and Y, calculate F_A/F_R and compare to e for the selected bore size. Determine X and Y from Table 4, depending on whether F_A/F_R is equal to or less than e, or F_A/F_R is greater than e. Substitute all known values into the equivalent radial load equation. P (equivalent radial load) can be used in the life formula to determine L_{10}, or it can be compared to the equivalent radial load ratings for the speed and hours life desired in the easy selection Table 5.

Selecting bearings supporting only thrust loads

Tapered roller bearings perform extremely well under pure thrust load applications. Use $P = YF_A$ for the equivalent radial load. The value of Y is obtained from Table 4 for $F_A/F_R > e$. Substitute Y and F_A into the equivalent load equation. P (equivalent radial load) can be used in the life formula to determine L_{10} or it can be compared to the equivalent radial load ratings for the speed and hours life desired in the easy selection Table 5.

Lubrication

Special Duty tapered roller bearings are lubricated at the factory with Mobilgrease XHP222. This grease will adequately handle low and medium speeds with low and medium loads at normal temperatures as defined on Table 8 for very low and high speeds, for heavy loads and for low and high temperatures, special greases must be used. Contact Dodge Application Engineering at +1 864 284 5700. Dodge engineers will recommend bearings and lubricants for the above unusual conditions. Dodge also has the expertise to custom design and build special bearings for your needs. The only maintenance requirement for Dodge tapered roller bearings is periodic relubrication at regular intervals as outlined in the appropriate instruction manuals.

Installation and maintenance

In nearly all applications, good design practice requires two bearings supporting the shaft. In cases where three or more bearings are installed, unless precautions are taken to align the bearings both vertically and horizontally, it is possible to induce heavy loads. In the case of two bearings, alignment is not as critical, especially with Special Duty tapered roller bearings. Special Duty bearings are designed to allow as much as 2 to 5 degrees of static misalignment for bore sizes up to 6 inches and 1 to 1.5 degrees for bore sizes greater than 8 inches. To ensure good alignment, mounting surfaces must be checked for flatness and must lie in the same plane. When tightening base bolts and cap bolts, each bolt should be alternately tightened in incremental torque values until full torque is achieved to prevent the angular shifting of the pillow block that occurs when one bolt is tightened to its full torque. Shimming may be required to minimize misalignment.

Specialty tapered
Special Duty

Table 4: Special Duty roller bearings radial/thrust factors

Bore size (in)	e	$F_A/F_R \le e$		$F_A/F_R > e$		Dynamic capacity C_{90}		Max. speed
		X	Y	X	Y	(lb)	(N)	(rpm)
1-3/8 to 1-1/2	0.31	1	0	0.40	1.97	9,770	43,460	3,250
1-9/16 to 1-3/4	0.43	1	0	0.40	1.39	11,600	51,600	2,900
1-7/8 to 2	0.46	1	0	0.40	1.31	11,800	52,490	2,700
2-1/8 to 2-1/4	0.49	1	0	0.40	1.23	11,623	51,700	2,300
2-3/8 to 2-1/2	0.51	1	0	0.40	1.18	11,954	53,170	2,180
2-5/8 to 3	0.27	1	0	0.40	2.23	29,754	132,350	1,830
3-3/16 to 3-1/2	0.43	1	0	0.40	1.39	33,756	150,150	1,510
3-11/16 to 4	0.43	1	0	0.40	1.41	36,700	163,250	1,330
4-7/16 to 4-1/2	0.49	1	0	0.40	1.23	36,700	163,250	1,120
4-15/16 to 5	0.46	1	0	0.40	1.31	62,000	275,873	1,040
5-7/16 to 6	0.48	0.87	1.80	0.70	2.18	62,000	275,873	860

Comparing spherical to taper roller bearing.
The dynamic capacity C (spherical) and C_{90} (taper) are not to the same base.
To compare basic dynamic capacities, multiply C x 0.259 and compare to C_{90}.

Specialty tapered

Vibration frequencies
Anti-friction mounted bearings

More and more manufacturing facilities are getting involved with plant-wide preventive maintenance programs. By monitoring vibration levels of motors, pumps, fans and compressors, maintenance supervisors can predict imminent failures.

Knowing that a piece of equipment is showing signs of potential failure permits scheduling of maintenance at an appropriate time and avoids the consequences of catastrophic failures. Shown in Tables are vibration frequencies generated by bearing components defects. All frequencies are based on unity inner ring or cone rotation.

How to use the tables

If a 2-7/16-inch pillow block bearing is rotating at a speed of 1,000 rpm, the vibration due to a failed component will show up at the frequencies listed in the corresponding size line in the table.

Frequency

Cup nick or spall = 1,000 x 9.251 = 9,251 rpm
Cone nick or spall = 1,000 x 11.749 = 11,749 rpm
*Roller nick or spall = 1,000 x 4.011 x 2 = 8,022 rpm
Cage (train) frequency (inner ring rotation) = 1,000 x 0.441 = 441 rpm

Since all the values in the tables are based on unity inner ring or cone rotation, the vibration due to flaws will show up at the frequencies obtained by multiplying the speed (rpm) times the factors found on the appropriate table. The resulting product will have units of rpm.

Type C tapered roller bearing parameters for vibration analysis (1-RPS)

Bore size (in)	Number of rollers per row	Mean diameter of rollers (in)	Pitch diameter (in)	Contact angle (°)	Cup frequency (Hz)	Cone frequency (Hz)	Roller spin frequency* (Hz)	Cage frequency (Hz)
1-3/16—1-7/16	19	0.31	2.251	14.92	8.236	10.764	3.566	0.433
1-1/2—1-3/4	21	0.32	2.604	11.50	9.236	11.764	4.010	0.440
1-15/16	22	0.33	2.848	15.00	9.769	12.231	4.261	0.444
2—2-1/4	21	0.40	3.335	16.83	9.295	11.705	4.114	0.443
2-3/16—2-7/16	25	0.35	3.533	18.00	11.322	13.678	5.002	0.453
2-1/2—2-11/16	23	0.43	3.827	16.50	10.261	12.739	4.399	0.446
2-7/16—2-15/16	26	0.42	4.220	16.50	11.759	14.241	4.978	0.452
3—3-3/16	22	0.55	4.612	16.50	9.742	12.258	4.138	0.443
3-1/4—3-7/16	24	0.51	4.761	16.42	10.767	13.233	4.618	0.449
3-1/2—4	25	0.59	5.727	18.98	11.282	13.718	4.807	0.4513
4-7/16—4-1/2	33	0.46	3.109	11.50	14.108	18.892	3.308	0.428
4-15/16—5	26	0.68	6.983	18.00	11.796	14.204	5.091	0.4537

Cup frequency = N x rpm x (1 - (Bd x cos a/Pd)) / 120
Cone frequency = N x rpm x (1 + (Bd x cos a / Pd)) / 120
Roller spin frequency = Pd x rpm x (1 - (Bd x cos a / Pd)^2) / (120 x Bd)
Cage frequency = rpm x (1 - (Bd x cos a / Pd)) / 120

Pd = Pitch diameter
N = Number of rollers
Bd = Roller diameter
a = Cup angle (contact angle)

* Roller spin frequencies are listed at one times roller spin frequency. For a thorough analysis, it is important to check frequency level at two times rotational speed of rollers, as this is the frequency that a single roller defect will contact the raceways of the bearing. In other words, a roller defect will strike both inner and outer ring in one revolution of the roller.

Specialty tapered

Vibration frequencies
Anti-friction mounted bearings

Special Duty tapered roller bearing parameters for vibration analysis (1-RPS)

Bore size (in)	Number of rollers per row	Mean diameter of rollers (in)	Pitch diameter (in)	Contact angle (°)	Cup frequency (Hz)	Cone frequency (Hz)	* Roller spin frequency (Hz)	Cage frequency (Hz)
1-3/8—1-1/2	21	0.32	2.603	11.50	9.2384	11.7616	4.0188	0.4399
1-9/16—1-3/4	26	0.32	3.061	16.00	11.6930	14.3070	4.7323	0.4497
1-7/8—2	27	0.32	3.267	17.00	12.2349	14.7651	5.0578	0.4531
2-1/8—2-1/4	25	0.35	3.533	18.00	11.3174	13.6826	4.9813	0.4527
2-3/8—2-1/2	29	0.35	3.828	18.77	13.2454	15.7546	5.4304	0.4567
2-5/8—3	26	0.48	4.572	10.17	11.6498	14.3502	4.6873	0.4481
3-3/16—3-1/2	27	0.56	5.541	16.00	12.1840	14.8160	4.8838	0.4513
3-11/16—4	23	0.68	6.103	15.88	10.2627	12.7373	4.4180	0.4462
4-7/16—4-1/2	26	0.68	6.983	18.00	11.7910	14.2090	5.0689	0.4535
4-15/16—5	30	0.75	7.896	17.00	13.6369	16.3631	5.2181	0.4546
5-7/16—6	24	0.93	9.123	17.33	10.8322	13.1678	4.8584	0.4513
6-1/2—7	29	0.93	10.190	19.23	13.2505	15.7495	5.4378	0.4569
7-15/16—8	27	1.12	11.471	12.42	12.2127	14.7873	5.0744	0.4523
8-1/2—10	41	0.87	13.979	16.40	19.2761	21.7239	8.0053	0.4701
11—12	37	1.20	16.061	12.50	17.1505	19.8495	6.6565	0.4635

Cup frequency = N x rpm x (1 - (Bd x cos a/Pd)) / 2
Cone frequency = N x rpm x (1 + (Bd x cos a / Pd)) / 2
Roller spin frequency = Pd x rpm x (1 - (Bd x cos a / Pd)^2) / (2 x Bd)
Cage frequency = rpm x (1 - (Bd x cos a / Pd)) / 2

Pd = Pitch diameter
N = Number of rollers
Bd = Roller diameter
a = Cup angle (contact angle)

* Roller spin frequencies are listed at one times roller spin frequency. For a thorough analysis, it is important to check frequency level at two times rotational speed of rollers, as this is the frequency that a single roller defect will contact the raceways of the bearing. In other words, a roller defect will strike both inner and outer ring in one revolution of the roller.

Specialty tapered

Special Duty

Table 5: Easy selection for Special Duty tapered roller bearings

Bore size (in)	L_{10} life (h)	Equivalent radial load rating (lb) at various speeds (rpm)												
		50	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000	3,500
1-3/8 1-7/16 1-1/2	5,000	16,724	13,584	10,319	8,382	7,422	6,808	6,367	6,028	5,756	5,530	5,172	4,897	4,675
	10,000	13,584	11,034	8,382	6,808	6,028	5,530	5,172	4,897	4,675	4,492	4,201	3,977	3,798
	30,000	9,770	7,936	6,028	4,897	4,336	3,977	3,720	3,522	3,363	3,231	3,021	2,861	2,731
	50,000	8,382	6,808	5,172	4,201	3,720	3,412	3,191	3,021	2,885	2,772	2,592	2,454	2,343
	100,000	6,808	5,530	4,201	3,412	3,021	2,772	2,592	2,454	2,343	2,251	2,105	1,993	1,903
1-9/16 1-5/8 1-11/16 1-3/4	5,000	19,857	16,129	12,252	9,952	8,812	8,083	7,560	7,158	6,834	6,566	6,141	5,814	—
	10,000	16,129	13,100	9,952	8,083	7,158	6,566	6,141	5,814	5,551	5,333	4,988	4,722	—
	30,000	11,600	9,422	7,158	5,814	5,148	4,722	4,416	4,181	3,992	3,836	3,587	3,396	—
	50,000	9,952	8,083	6,141	4,988	4,416	4,051	3,789	3,587	3,425	3,291	3,078	2,914	—
	100,000	8,083	6,566	4,988	4,051	3,587	3,291	3,078	2,914	2,782	2,673	2,500	2,367	—
1-7/8 1-15/16 2	5,000	20,199	16,407	12,463	10,123	8,964	8,223	7,690	7,281	6,952	6,679	6,246	—	—
	10,000	16,407	13,326	10,123	8,223	7,281	6,679	6,246	5,914	5,647	5,425	5,074	—	—
	30,000	11,800	9,585	7,281	5,914	5,237	4,804	4,493	4,253	4,061	3,902	3,649	—	—
	50,000	10,123	8,223	6,246	5,074	4,493	4,121	3,854	3,649	3,484	3,347	3,131	—	—
	100,000	8,223	6,679	5,074	4,121	3,649	3,347	3,131	2,964	2,830	2,719	2,543	—	—
2-1/8 2-3/16 2-1/4	5,000	19,896	16,160	12,276	9,972	8,830	8,099	7,575	7,172	6,848	6,579	—	—	—
	10,000	16,160	13,126	9,972	8,099	7,172	6,579	6,153	5,825	5,562	5,344	—	—	—
	30,000	11,623	9,441	7,172	5,825	5,158	4,732	4,425	4,190	4,000	3,843	—	—	—
	50,000	9,972	8,099	6,153	4,998	4,425	4,059	3,796	3,594	3,432	3,297	—	—	—
	100,000	8,099	6,579	4,998	4,059	3,594	3,297	3,084	2,920	2,788	2,678	—	—	—
2-3/8 2-7/16 2-1/2	5,000	20,462	16,621	12,626	10,256	9,081	8,330	7,791	7,376	7,043	6,766	—	—	—
	10,000	16,621	13,500	10,256	8,330	7,376	6,766	6,328	5,991	5,720	5,496	—	—	—
	30,000	11,954	9,710	7,376	5,991	5,305	4,866	4,551	4,309	4,114	3,953	—	—	—
	50,000	10,256	8,330	6,328	5,140	4,551	4,175	3,905	3,697	3,530	3,391	—	—	—
	100,000	8,330	6,766	5,140	4,175	3,697	3,391	3,172	3,003	2,867	2,754	—	—	—
2-5/8 2-11/16 2-3/4 2-15/16 3	5,000	50,932	41,370	31,427	25,526	22,603	20,734	19,391	18,359	17,530	—	—	—	—
	10,000	41,370	33,603	25,526	20,734	18,359	16,841	15,751	14,912	14,238	—	—	—	—
	30,000	29,754	24,168	18,359	14,912	13,204	12,113	11,328	10,725	10,241	—	—	—	—
	50,000	25,526	20,734	15,751	12,794	11,328	10,392	9,719	9,201	8,786	—	—	—	—
	100,000	20,734	16,841	12,794	10,392	9,201	8,441	7,894	7,474	7,136	—	—	—	—
3-3/16 3-3/8 3-7/16 3-1/2	5,000	57,783	46,934	35,654	28,960	25,643	23,523	22,000	20,829	—	—	—	—	—
	10,000	46,934	38,122	28,960	23,523	20,829	19,106	17,869	16,918	—	—	—	—	—
	30,000	33,756	27,418	20,829	16,918	14,980	13,742	12,852	12,168	—	—	—	—	—
	50,000	28,960	23,523	17,869	14,514	12,852	11,789	11,026	10,439	—	—	—	—	—
	100,000	23,523	19,106	14,514	11,789	10,439	9,576	8,956	8,479	—	—	—	—	—
3-11/16 3-3/4 3-7/8 3-15/16 4	5,000	62,822	51,027	38,763	31,486	27,879	25,574	23,918	—	—	—	—	—	—
	10,000	51,027	41,447	31,486	25,574	22,645	20,773	19,428	—	—	—	—	—	—
	30,000	36,700	29,810	22,645	18,394	16,287	14,940	13,973	—	—	—	—	—	—
	50,000	31,486	25,574	19,428	15,780	13,973	12,817	11,988	—	—	—	—	—	—
	100,000	25,574	20,773	15,780	12,817	11,349	10,411	9,737	—	—	—	—	—	—
4-7/16 4-1/2	5,000	62,822	51,027	38,763	31,486	27,879	25,574	—	—	—	—	—	—	—
	10,000	51,027	41,447	31,486	25,574	22,645	20,773	—	—	—	—	—	—	—
	30,000	36,700	29,810	22,645	18,394	16,287	14,940	—	—	—	—	—	—	—
	50,000	31,486	25,574	19,428	15,780	13,973	12,817	—	—	—	—	—	—	—
	100,000	25,574	20,773	15,780	12,817	11,349	10,411	—	—	—	—	—	—	—

Specialty tapered

Special Duty

Table 5: Easy selection for Special Duty tapered roller bearings

Bore size (in)	L_{10} life (h)	Equivalent radial load rating (lb) at various speeds (rpm)												
		50	100	250	500	750	1,000	1,250	1,500	1,750	2,000	2,500	3,000	3,500
4-15/16 5	5,000	106,130	86,204	65,486	53,191	47,099	43,204	—	—	—	—	—	—	—
	10,000	86,204	70,020	53,191	43,204	38,256	35,093	—	—	—	—	—	—	—
	30,000	62,000	50,360	38,256	31,074	27,515	25,240	—	—	—	—	—	—	—
	50,000	53,191	43,204	32,821	26,659	23,605	21,653	—	—	—	—	—	—	—
	100,000	43,204	35,093	26,659	21,653	19,173	17,588	—	—	—	—	—	—	—
5-7/16 5-15/16 6	5,000	106,130	86,204	65,486	53,191	47,099	—	—	—	—	—	—	—	—
	10,000	86,204	70,020	53,191	43,204	38,256	—	—	—	—	—	—	—	—
	30,000	62,000	50,360	38,256	31,074	27,515	—	—	—	—	—	—	—	—
	50,000	53,191	43,204	32,821	26,659	23,605	—	—	—	—	—	—	—	—
	100,000	43,204	35,093	26,659	21,653	19,173	—	—	—	—	—	—	—	—

Reference Guide
Type E Family (Tapered)
Specialty Tapered
Safety Mount Family (Spherical)
S-2000 (Spherical)
Unified SAF (Spherical)
Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

Specialty tapered
Special Duty

Table 6: Special Duty pillow blocks housing permissible thrust load (lb)*

Shaft size (in)	2-bolt	4-bolt
1-3/8		
1-7/16	1,521	—
1-1/2		
1-9/16		
1-5/8	1,772	—
1-11/16		
1-3/4		
1-7/8		
1-15/16	1,964	—
2		
2-1/8		
2-3/16	2,325	—
2-1/4		
2-3/8		
2-7/16	3,122	3,122
2-1/2		
2-5/8		
2-11/16		
2-3/4		
2-13/16	4,375	4,375
2-7/8		
2-15/16		
3		
3-3/16		
3-1/4		
3-3/8	6,118	6,118
3-7/16		
3-1/2		
3-11/16		
3-3/4	—	8,250
3-7/8		
3-15/16		
4		
4-7/16	—	10,538
4-1/2		
4-15/16		12,190
5	—	
5-7/16		17,957
5-15/16		
6		

* The limits above apply to pillow blocks. For thrust loads larger than listed or heavy thrust loading on other style housing, contact Dodge Engineering for recommendation.

Table 7: Special Duty maximum total axial expansion (in)

Shaft size	2-bolt pillow block	4-bolt pillow block	Flange
1-3/8—1-1/2	3/16	—	3/16
1-9/16—1-3/4	5/8	—	1/4
1-7/8—2	5/8	—	1/4
2-1/8—2-1/4	5/8	—	1/4
2-3/8—2-1/2	5/8	5/8	1/4
2-5/8—3	3/4	5/8	5/8
3-3/16—3-1/2	3/4	3/4	3/4
3-11/16—4	—	3/4	1/4
4-7/16—4-1/2	—	3/4	5/8
4-15/16—5	—	3/4	5/8
5-7/16—6	—	3/4	5/8

Specialty tapered
Special Duty

Table 8: Definition of operating conditions for tapered roller bearings

Low speed	Up to 20% of maximum speed (rpm) (Table 4)
Medium speed	Over 20% to 80% of maximum speed (rpm)
High speed	Over 80% of maximum speed (rpm)
Light load	Up to 30% of C_{90} (Table 4)
Normal load	Over 30% to 70% of C_{90}
Heavy load	Over 70% of C_{90}
Low temperature	-100 °F to 20 °F
Medium temperature	Over 20 °F to 200 °F
High temperature	Over 200 °F to 300 °F
Very high temperature	Over 300 °F to 400 °F

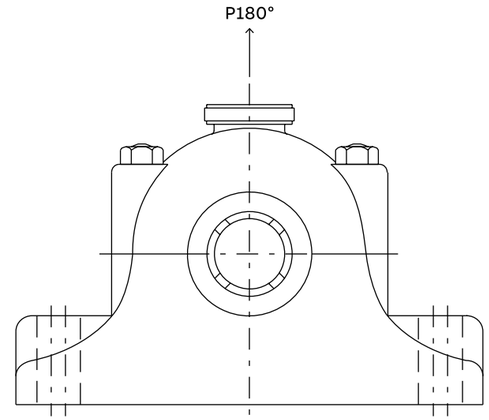


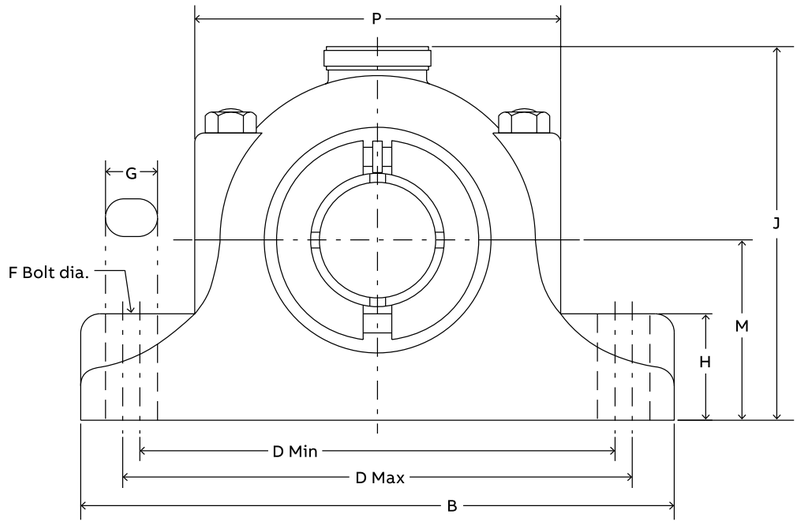
Table 9: Special Duty pillow block housing ratings

Shaft size (in)	Housing strength (lb) Gray iron 180°
1-3/8—1-1/2	3,470
1-9/16—1-3/4	4,430
1-7/8—2	5,250
2-1/8—2-1/4	7,300
2-3/8—2-1/2	7,200
2-5/8—3	10,600
3-3/16—3-1/2	13,000
3-11/6—4	21,600
4-7/16—4-1/2	25,800
4-15/16—5	22,900
5-7/16—6	41,500

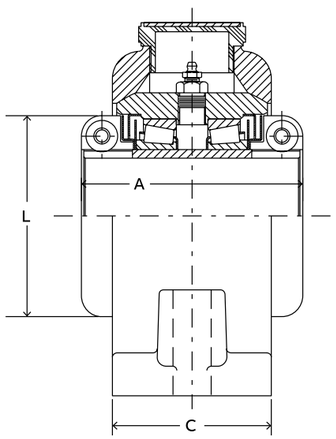
Dimensions

Type C pillow block – inch

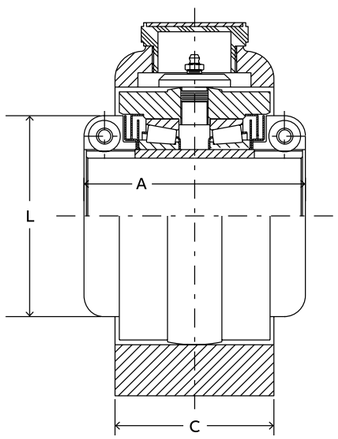
2-bolt



Note: All sizes use a 1/8 - 27 NPT hydraulic grease fitting



Non-Expansion construction



Expansion construction

Type C pillow block – inch

2-bolt

Gray iron – Non-expansion*

Shaft size	Part number	Description	Approx. weight (lb)
1-3/16	065289	P2B-C-103	21
1-1/4	065311	P2B-C-104	20
1-7/16	065290	P2B-C-107	20
1-1/2	065312	P2B-C-108	28
1-11/16	065291	P2B-C-111	28
1-3/4	065238	P2B-C-112	26
1-15/16	065292	P2B-C-115	29
2	065313	P2B-C-200	47
2-3/16	065293	P2B-C-203	47
2-1/4	065314	P2B-C-204	47
2-7/16	065294	P2B-C-207	57
2-1/2	065315	P2B-C-208	83
2-11/16	065295	P2B-C-211	83
2-7/8	065244	P2B-C-214	83
2-15/16	065296	P2B-C-215	83
3	065316	P2B-C-300	132
3-3/16	065317	P2B-C-303	132
3-7/16	065297	P2B-C-307	128

Gray iron – Expansion

Shaft size	Part number	Description	Approx. weight (lb)
1-3/16	087262	P2B-C-103E	22
1-1/4	087263	P2B-C-104E	22
1-7/16	087180	P2B-C-107E	20
1-1/2	087264	P2B-C-108E	28
1-11/16	087181	P2B-C-111E	28
1-3/4	087172	P2B-C-112E	28
1-15/16	087182	P2B-C-115E	29
2	087265	P2B-C-200E	49
2-3/16	087183	P2B-C-203E	49
2-1/4	087266	P2B-C-204E	49
2-7/16	087184	P2B-C-207E	57
2-1/2	087267	P2B-C-208E	90
2-11/16	087185	P2B-C-211E	90
2-7/8	087178	P2B-C-214E	90
2-15/16	087186	P2B-C-215E	90
3	087268	P2B-C-300E	135
3-3/16	087269	P2B-C-303E	135
3-7/16	087187	P2B-C-307E	131

* Furnished unless otherwise specified.

Shaft size	A	B*	C*	D Min.	D Max.	F bolt dia.	G*	H*	J	L Δ	M	P*	EXP**
1-3/16													
1-1/4	4.50	9.00	3.00	6.88	7.63	1/2	1.00	2.13	6.25	3.09	2.88	5.88	3/16
1-7/16													
1-1/2													
1-11/16	4.88	9.50	3.38	7.38	8.13	1/2	0.81	2.38	6.81	3.50	3.13	6.50	5/8
1-3/4													
1-15/16	5.25	11.00	3.50	8.50	9.00	5/8	1.25	2.50	7.13	3.88	3.25	7.38	5/8
2													
2-3/16	5.75	12.00	4.00	9.25	10.25	5/8	1.18	2.88	8.00	4.38	3.75	8.00	5/8
2-1/4													
2-7/16	6.00	13.25	4.25	10.13	11.38	3/4	1.50	3.00	8.56	4.66	4.00	8.88	5/8
2-1/2													
2-11/16	6.50	14.25	4.75	11.13	12.38	3/4	1.50	3.75	9.88	5.44	4.75	9.88	3/4
2-7/8													
2-15/16													
3													
3-3/16	7.00	16.75	5.50	13.75	14.25	7/8	1.50	4.00	11.38	5.94	5.50	11.63	3/4
3-7/16													

Note: All sizes use a 1/8-27 NPT hydraulic grease fitting.

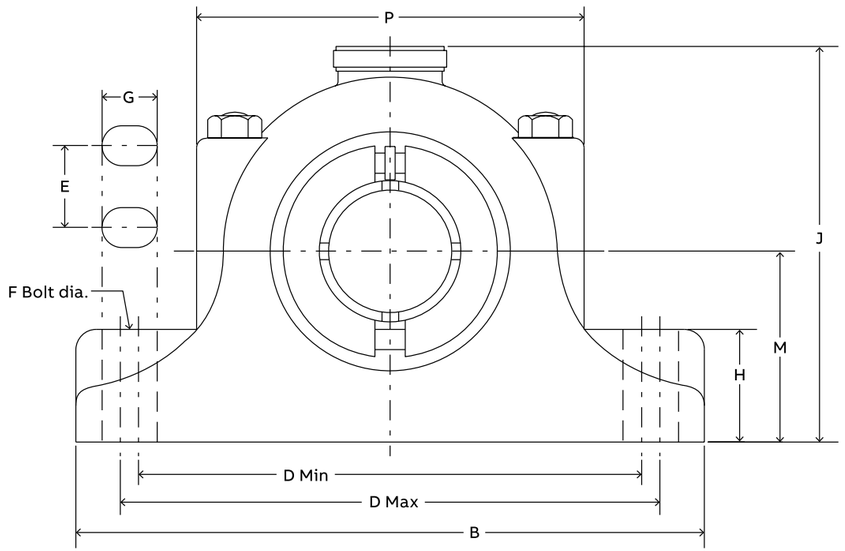
* These are as cast surfaces. Dimensions may fluctuate due to draft angles and pattern shifts.

Δ A one-piece collar furnished up through 2-7/16 sizes. Larger sizes use a two-piece collar.

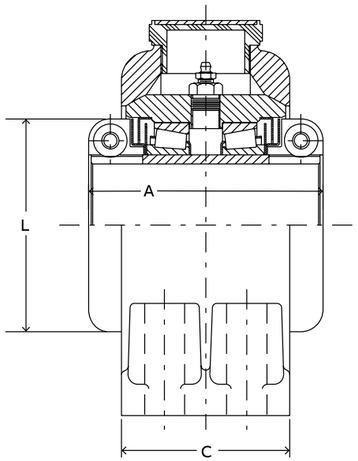
** EXP – Total expansion for expansion bearing only.

Type C pillow block – inch

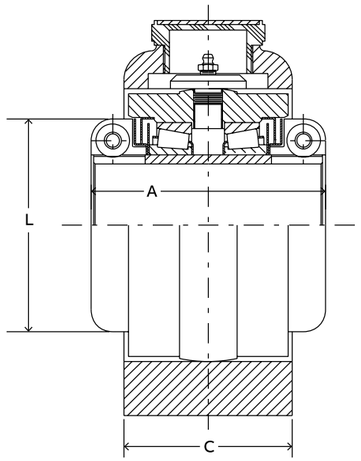
4-bolt



Note: All sizes use a 1/8 - 27 NPT hydraulic grease fitting



Non-Expansion construction



Expansion construction

Type C pillow block – inch

4-bolt

Gray iron – Non-expansion*

Shaft size	Part number	Description	Approx. weight (lb)
2-7/16	065310	P4B-C-207	59
2-15/16	065302	P4B-C-215	85
3-7/16	065303	P4B-C-307	130
3-15/16	065298	P4B-C-315	230
4-7/16	065299	P4B-C-407	280
4-15/16	065300	P4B-C-415	370

* Furnished unless otherwise specified.

Gray iron – Expansion

Shaft size	Part number	Description	Approx. weight (lb)
2-7/16	087191	P4B-C-207E	59
2-15/16	087192	P4B-C-215E	85
3-7/16	087193	P4B-C-307E	135
3-15/16	087188	P4B-C-315E	230
4-7/16	087189	P4B-C-407E	290
4-15/16	087190	P4B-C-415E	380

Shaft size	A	B*	C*	D		E	F bolt dia.	G*	H*	J	L Δ	M	P*	EXP**
				Min.	Max.									
2-7/16	6.00	13.25	4.25	10.00	11.50	2.50	5/8	1.50	3.00	8.50	4.66	4.00	8.88	5/8
2-15/16	6.50	14.25	4.75	11.00	12.50	2.75	5/8	1.50	3.75	9.88	5.44	4.75	9.88	5/8
3-7/16	7.00	16.75	5.50	12.88	14.63	3.25	3/4	1.50	4.00	11.38	5.94	5.50	11.63	3/4
3-15/16	9.50	19.00	7.00	15.00	16.00	3.25	7/8	1.50	4.00	13.38	7.38	6.38	13.88	3/4
4-7/16	10.00	20.00	7.50	15.63	17.38	3.50	7/8	1.88	4.00	14.50	8.38	7.25	15.25	3/4
4-15/16	11.25	23.00	8.25	17.75	19.75	3.75	1	2.13	4.25	15.63	9.38	7.50	16.75	3/4

Note: All sizes use a 1/8-27 NPT hydraulic grease fitting.

* These are as cast surfaces. Dimensions may fluctuate due to draft angles and pattern shifts.

Δ A one-piece collar furnished up through 2-7/16 sizes. Larger sizes use a two-piece collar.

** EXP – Total expansion for expansion bearing only.

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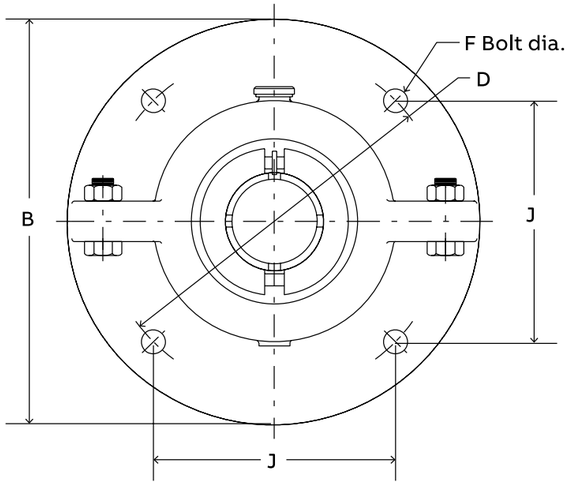
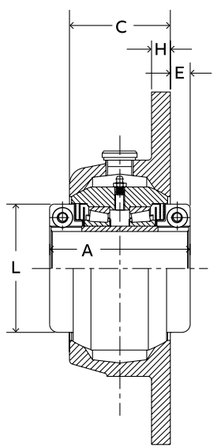
Solidlube (Plain)
Sleeve (Plain)
Accessories

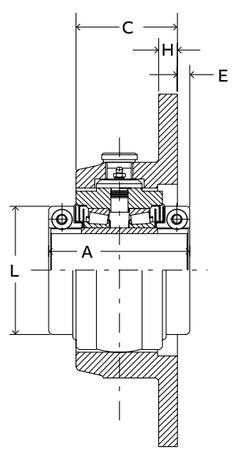
Type C flange – inch

4-bolt





Non-Expansion construction



Expansion construction

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Solidlube (Plain)
Sleeve (Plain)
Accessories

Type C flange – inch

4-bolt

Gray iron – Non-expansion*

Shaft size	Part number	Description	Approx. weight (lb)
1-7/16	104040	F4B-C-107	21
1-11/16	104041	F4B-C-111	31
1-3/4	104106	F4B-C-112	31
1-15/16	104042	F4B-C-115	37
2-3/16	104043	F4B-C-203	49
2-7/16	104044	F4B-C-207	63
2-15/16	104045	F4B-C-215	98
3	104119	F4B-C-300	140
3-7/16	104046	F4B-C-307	140

* Furnished unless otherwise specified.

Gray iron – Expansion

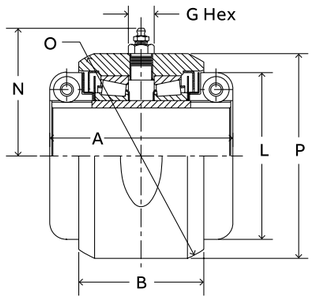
Shaft size	Part number	Description	Approx. weight (lb)
1-7/16	104050	F4B-C-107E	21
1-11/16	104051	F4B-C-111E	31
1-3/4	104078	F4B-C-112E	31
1-15/16	104052	F4B-C-115E	38
2-3/16	104053	F4B-C-203E	49
2-7/16	104054	F4B-C-207E	63
2-15/16	104055	F4B-C-215E	98
3	104090	F4B-C-300E	140
3-7/16	104056	F4B-C-307E	140

Shaft size	A	B	C	D	E	F bolt dia.	H	J	L Δ	EXP*
1-7/16	4.50	8.25	3.00	7.00	0.75	1/2	0.63	4.95	3.09	3/16
1-11/16 1-3/4	4.88	9.00	3.38	7.63	0.75	1/2	0.69	5.39	3.50	1/4
1-15/16	5.25	10.00	3.50	8.38	0.88	5/8	0.75	5.92	3.88	1/4
2-3/16	5.75	10.75	4.00	9.13	0.88	5/8	0.81	6.45	4.38	1/4
2-7/16	6.00	12.00	4.25	10.25	0.88	3/4	0.88	7.25	4.66	1/4
2-15/16	6.50	13.00	4.63	11.25	0.94	3/4	1.00	7.96	5.44	5/8
3 3-7/16	7	14.50	5.375	12.5	0.81	7/8	1.13	8.839	5.94	1/4

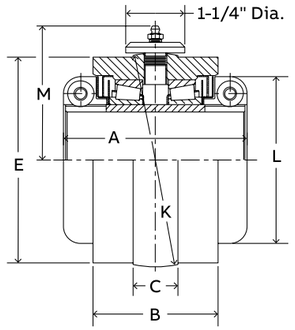
Δ A one-piece collar furnished up through 2-7/16 sizes. Larger sizes use a two-piece collar.

* EXP - Total expansion for expansion bearing only.

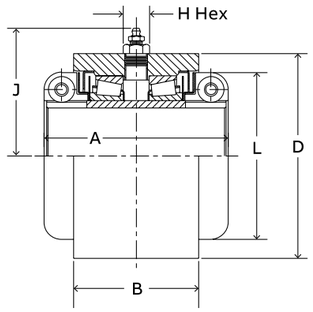
Type C inner unit – inch



D Unit
Used in Non-Expansion Housings



S1 Unit
Used in Expansion Housings



B1 Unit
Used in Customer Manufactured Housings

Shaft size	D units		S1 units		B1 units		Approx. weight (lb)
	Part number	Description	Part number	Description	Part number	Description	
1-7/16	065282	DU-C-107	087199	S1U-C-107	069060	B1U-C-107	7
1-1/2	065258	DU-C-108	087205	S1U-C-108	—	—	11
1-11/16	065283	DU-C-111	087200	S1U-C-111	069061	B1U-C-111	11
1-3/4	065260	DU-C-112	087207	S1U-C-112	—	—	11
1-15/16	065284	DU-C-115	087194	S1U-C-115	069062	B1U-C-115	12
2	065262	DU-C-200	087209	S1U-C-200	069034	B1U-C-200	18
2-3/16	065285	DU-C-203	087195	S1U-C-203	069063	B1U-C-203	17
2-1/4	065265	DU-C-204	087215	S1U-C-204	—	—	17
2-7/16	065286	DU-C-207	087196	S1U-C-207	069064	B1U-C-207	20
2-1/2	—	—	—	—	069039	B1U-C-208	35
2-11/16	065268	DU-C-211	087218	S1U-C-211	—	—	34
2-7/8	065270	DU-C-214	087220	S1U-C-214	—	—	34
2-15/16	065287	DU-C-215	087197	S1U-C-215	069065	B1U-C-215	34
3	065271	DU-C-300	087221	S1U-C-300	—	—	55
3-3/16	—	—	087222	S1U-C-303	069045	B1U-C-303	53
3-1/4	—	—	—	—	069046	B1U-C-304	53
3-7/16	065288	DU-C-307	087198	S1U-C-307	069066	B1U-C-307	51
3-1/2	065274	DU-C-308	087224	S1U-C-308	—	—	115
3-11/16	—	—	087225	S1U-C-311	—	—	115
3-15/16	065304	DU-C-315	087210	S1U-C-315	069067	B1U-C-315	115
4	—	—	—	—	069069	B1U-C-400	115
4-7/16	065305	DU-C-407	087211	S1U-C-407	—	—	138
4-15/16	065306	DU-C-415	087212	S1U-C-415	—	—	190

Consult Dodge for sizes not listed.

Type C inner unit – inch

Shaft Size	A	B	C	D**	E	G Hex	H Hex	J	K	L	M	N	O**	P
1-7/16	4.50	2.69	0.75	3.875	3.81	7/16	5/8	3.13	4.062	3.09	2.69	2.50	4.438	3.94
1-1/2 1-11/16 1-3/4	4.88	3.13	0.75	4.250	4.13	7/16	5/8	3.31	4.438	3.50	2.88	2.75	5.000	4.50
1-15/16	5.25	3.25	0.88	4.750	4.50	7/16	5/8	3.56	4.812	3.88	3.06	2.88	5.312	4.75
2 2-3/16 2-1/4	5.75	3.75	0.88	5.250	5.00	7/16	5/8	3.81	5.375	4.38	5.31	3.19	6.000	5.38
2-7/16	6.00	4.00	1.00	5.750	5.31	5/8	5/8	4.06	5.687	4.66	3.80	4.09	6.375	5.69
2-1/2 2-11/16 2-7/8 2-15/16	6.50	4.44	1.00	6.500	6.19	5/8	3/4	4.63	6.562	5.44	4.50	4.50	7.312	6.50
3 3-3/16 3-1/4 3-7/16	7.00	5.00	1.25	7.750	7.50	5/8	3/4	5.25	8.000	5.94	4.88	5.56	8.625	7.91
3-1/2 3-11/16 3-15/16 4	9.50	6.25	1.50	9.250	8.81	5/8	3/4	6.00	9.500	7.38	5.63	6.38	10.250	9.75
4-7/16	10.00	6.63	1.75	10.500	9.84	3/4	3/4	6.63	10.625	8.38	6.19	6.89	11.125	10.38
4-15/16	11.25	7.38	2.00	11.750	10.84	3/4	3/4	7.25	11.500	9.38	6.63	7.44	12.500	11.88

Note: All sizes use a 1/8-27 NPT hydraulic grease fitting.

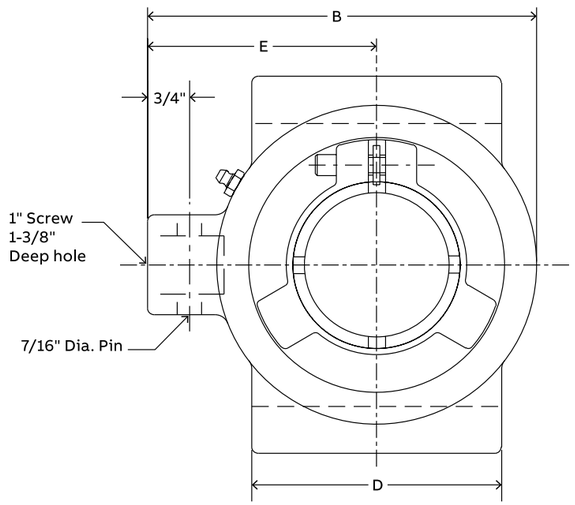
Δ A one-piece collar furnished up through 2-7/16 sizes. Larger sizes use a two-piece collar.

** + 0.000 - 0.002

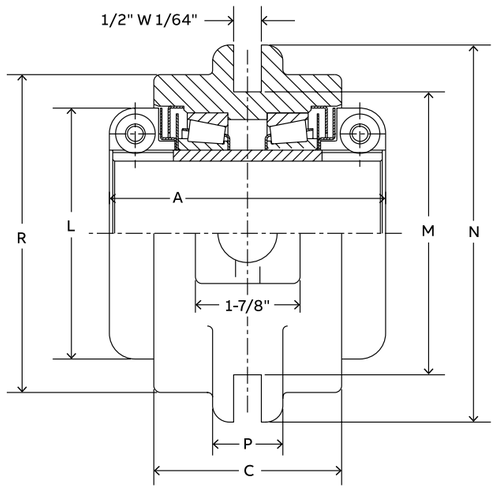
Reference Guide
Type E Family (Tapered)
Specialty Tapered
Safety Mount Family (Spherical)
S-2000 (Spherical)
Unified SAF (Spherical)
Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

Type C take-up – inch

Narrow-slot (NS)



Note: All sizes use a 1/8 - 27 NPT hydraulic grease fitting



Type C take-up – inch
Narrow-slot (NS)

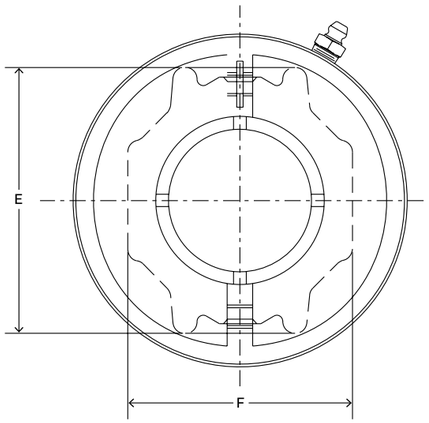
Gray iron

Shaft size	Part number	Description	Approx. weight (lb)
1-7/16	036116	NSTU-C-107	12
1-1/2	036054	NSTU-C-108	15
1-15/16	036118	NSTU-C-115	18
2-3/16	036119	NSTU-C-203	26
2-7/16	036120	NSTU-C-207	27
2-15/16	036121	NSTU-C-215	37

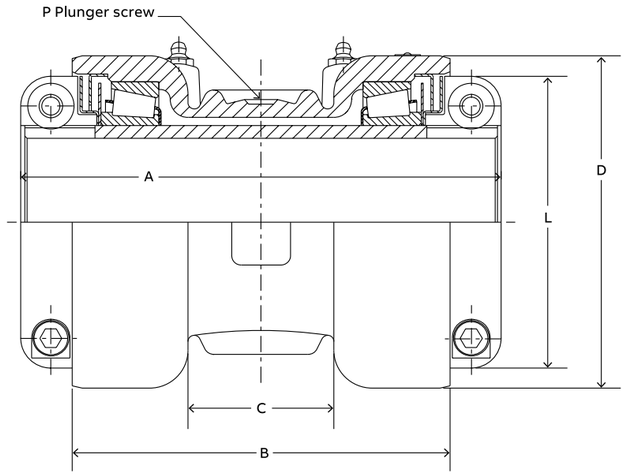
Shaft size	A	B	C	D	E	L	M	N	P	R
1-7/16	4.50	5.63	2.69	2.50	3.63	3.08	5.13	6.25	1.25	4.00
1-1/2	4.88	5.88	3.13	3.00	3.63	3.50	5.13	6.25	1.25	4.25
1-15/16	5.25	6.00	3.25	3.50	3.63	3.88	5.13	6.25	1.25	4.75
2-3/16	5.75	7.00	3.75	4.50	4.63	4.38	5.13	6.25	1.25	5.75
2-7/16	6.00	7.00	4.00	4.50	4.63	4.66	5.13	6.25	1.25	5.75
2-15/16	6.50	7.75	4.44	5.00	4.50	5.44	6.13	7.25	1.25	6.50

Note: All sizes use a 1/8-27 NPT hydraulic grease fitting.

Type C hanger bearing – inch



Note: All sizes use a 1/8 - 27 NPT hydraulic grease fitting



Type C hanger bearing – inch

Gray iron

Shaft size	Part number	Description	Approx. weight (lb)
1-15/16	061082	HNG-C-115	16
2-3/16	061083	HNG-C-203	21
2-7/16	061084	HNG-C-207	30
2-11/16	061085	HNG-C-211	41
2-15/16	061086	HNG-C-215	40
3-7/16	061087	HNG-C-307	51

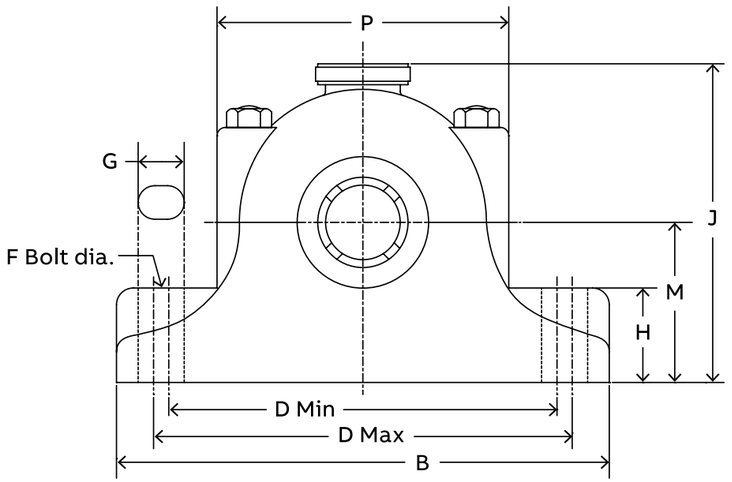
Shaft size	A	B	C	D	E	F	L	P
1-15/16	8.25	6.25	2.75	4.63	3.38	2.94	3.88	5/8, 1-1/2
2-3/16	8.88	6.88	3.00	5.13	3.75	3.31	4.38	5/8, 1-1/2
2-7/16	9.63	7.63	3.00	5.38	4.13	3.50	4.66	5/8, 1-1/2
2-11/16	10.38	8.25	3.25	6.25	4.63	4.00	5.44	3/4, 2
2-15/16								
3-7/16	11.25	9.25	4.00	6.75	5.13	4.50	5.94	3/4, 2-1/2

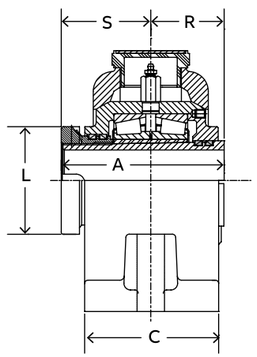
Note: All sizes use a 1/8-27 NPT hydraulic grease fitting.

Reference Guide
Type E Family (Tapered)
Specialty Tapered
Safety Mount Family (Spherical)
S-2000 (Spherical)
Unified SAF (Spherical)
Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

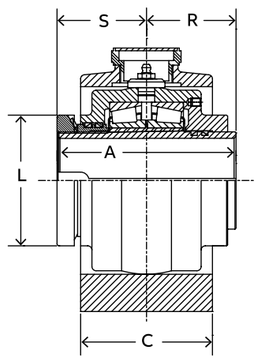
Special Duty pillow block – inch

2-bolt





Non-Expansion construction



Expansion construction

Special Duty pillow block – inch

2-bolt

Gray iron – Non-expansion*

Shaft size	Part number	Description	Approx. weight (lb)
1-3/8	066213	P2B-SD-106	20
1-7/16	066214	P2B-SD-107	20
1-1/2	066300	P2B-SD-108	20
1-9/16	066212	P2B-SD-109	27
1-5/8	066228	P2B-SD-110	27
1-11/16	066216	P2B-SD-111	27
1-3/4	066301	P2B-SD-112	27
1-7/8	066217	P2B-SD-114	33
1-15/16	066218	P2B-SD-115	32
2	066302	P2B-SD-200	32
2-1/8	066215	P2B-SD-202	48
2-3/16	066220	P2B-SD-203	47
2-1/4	066303	P2B-SD-204	47
2-7/16	066222	P2B-SD-207	56
2-1/2	066246	P2B-SD-208	56
2-5/8	066223	P2B-SD-210	84
2-11/16	066304	P2B-SD-211	84
2-3/4	066226	P2B-SD-212	84
2-15/16	066230	P2B-SD-215	82
3	066305	P2B-SD-300	82
3-3/16	066232	P2B-SD-303	120
3-3/8	066237	P2B-SD-306	119
3-7/16	066234	P2B-SD-307	118
3-1/2	066236	P2B-SD-308	118

Gray iron – Expansion

Shaft size	Part number	Description	Approx. weight (lb)
1-3/8	066249	P2B-SD-106E	22
1-7/16	066250	P2B-SD-107E	22
1-1/2	066306	P2B-SD-108E	22
1-9/16	066248	P2B-SD-109E	28
1-5/8	066243	P2B-SD-110E	28
1-11/16	066252	P2B-SD-111E	28
1-3/4	066307	P2B-SD-112E	28
1-7/8	066253	P2B-SD-114E	33
1-15/16	066254	P2B-SD-115E	32
2	066308	P2B-SD-200E	32
2-1/8	066257	P2B-SD-202E	50
2-3/16	066256	P2B-SD-203E	49
2-1/4	066309	P2B-SD-204E	49
2-7/16	066258	P2B-SD-207E	60
2-1/2	066247	P2B-SD-208E	60
2-5/8	066262	P2B-SD-210E	80
2-11/16	066310	P2B-SD-211E	80
2-3/4	066263	P2B-SD-212E	80
2-15/16	066266	P2B-SD-215E	78
3	066311	P2B-SD-300E	78
3-3/16	066269	P2B-SD-303E	120
3-3/8	066271	P2B-SD-306E	119
3-7/16	066270	P2B-SD-307E	118
3-1/2	066273	P2B-SD-308E	118

* Furnished unless otherwise specified.

Shaft size	A	B	C	D		F bolt dia.	G	H	J	L	M	P	R	S	Exp*
				Min.	Max.										
1-3/8															
1-7/16	4.00	9.00	3.00	6.88	7.63	1/2	1.00	2.13	6.25	2.44	2.88	5.88	1.81	2.19	3/16
1-1/2															
1-9/16															
1-5/8	4.13	9.50	3.44	7.56	7.94	1/2	1.00	2.38	6.81	2.81	3.13	5.94	1.88	2.25	5/8
1-11/16															
1-3/4															
1-7/8															
1-15/16	4.25	11.00	3.50	8.25	9.25	5/8	1.25	2.50	7.13	3.06	3.25	7.25	1.94	2.31	5/8
2															
2-1/8															
2-3/16	4.56	12.00	4.00	9.13	10.38	5/8	1.25	2.88	8.00	3.44	3.75	7.25	2.06	2.50	5/8
2-1/4															
2-7/16	5.06	13.25	4.25	10.00	11.50	3/4	1.50	3.00	8.56	3.81	4.00	7.81	2.31	2.75	5/8
2-1/2															
2-5/8															
2-11/16															
2-3/4	5.75	14.25	4.75	11.00	12.50	3/4	1.50	3.75	9.88	4.44	4.75	8.69	2.63	3.13	3/4
2-15/16															
3															
3-3/16															
3-3/8	6.38	16.75	5.50	13.25	14.25	7/8	1.50	4.00	11.38	5.06	5.50	11.25	2.94	3.44	3/4
3-7/16															
3-1/2															

* Total expansion for expansion bearing only.

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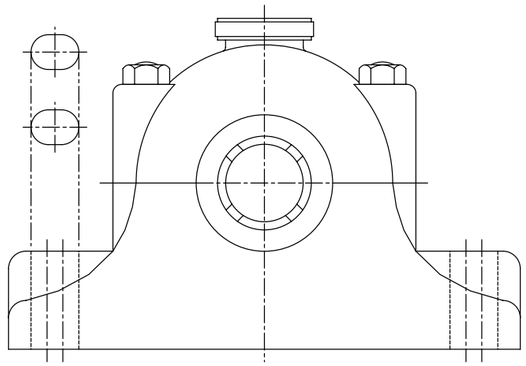
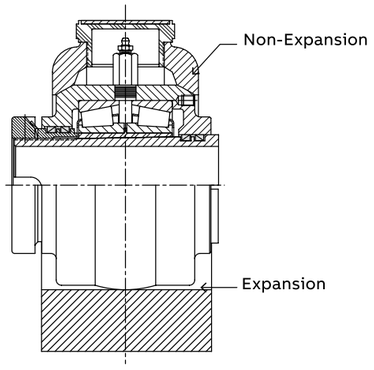
Solidlube (Plain)
Sleeve (Plain)
Accessories

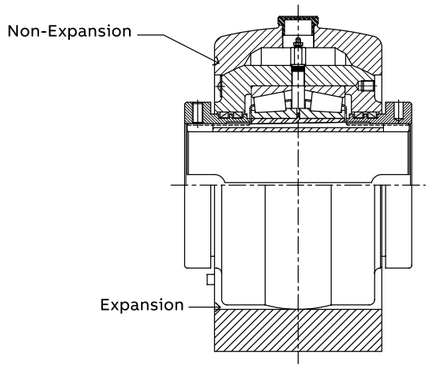
Special Duty pillow block – inch

4-bolt





2-3/8" thru 3-1/2"
Construction



3-11/16" thru 6"
Construction

Special Duty pillow block – inch

4-bolt

Gray iron – Non-expansion *

Shaft size	Part number	Description	Approx. weight (lb)
2-3/8	066360	P4B-SD-206	60
2-7/16	066224	P4B-SD-207	60
2-1/2	066244	P4B-SD-208	60
2-11/16	066225	P4B-SD-211	82
2-3/4	066363	P4B-SD-212	82
2-7/8	066365	P4B-SD-214	81
2-15/16	066231	P4B-SD-215	80
3	066366	P4B-SD-300	80
3-3/16	066367	P4B-SD-303	124
3-3/8	066370	P4B-SD-306	122
3-7/16	066235	P4B-SD-307	120
3-1/2	066371	P4B-SD-308	120
3-11/16	066372	P4B-SD-311	215
3-3/4	066373	P4B-SD-312	215
3-7/8	066374	P4B-SD-314	215
3-15/16	066238	P4B-SD-315	215
4	066375	P4B-SD-400	215
4-7/16	066240	P4B-SD-407	296
4-1/2	066377	P4B-SD-408	296
4-15/16	066242	P4B-SD-415	380
5	066378	P4B-SD-500	380
5-7/16	066379	P4B-SD-507	585
5-15/16	066381	P4B-SD-515	585
6	066382	P4B-SD-600	585

Gray iron – Expansion

Shaft size	Part number	Description	Approx. weight (lb)
2-3/8	066400	P4B-SD-206E	60
2-7/16	066260	P4B-SD-207E	60
2-1/2	066245	P4B-SD-208E	60
2-11/16	066261	P4B-SD-211E	82
2-3/4	066403	P4B-SD-212E	82
2-7/8	066405	P4B-SD-214E	81
2-15/16	066268	P4B-SD-215E	80
3	066406	P4B-SD-300E	80
3-3/16	066407	P4B-SD-303E	124
3-3/8	066410	P4B-SD-306E	122
3-7/16	066272	P4B-SD-307E	120
3-1/2	066411	P4B-SD-308E	120
3-11/16	066412	P4B-SD-311E	230
3-3/4	066413	P4B-SD-312E	230
3-7/8	066414	P4B-SD-314E	230
3-15/16	066274	P4B-SD-315E	230
4	066415	P4B-SD-400E	230
4-7/16	066276	P4B-SD-407E	296
4-1/2	066417	P4B-SD-408E	296
4-15/16	066278	P4B-SD-415E	380
5	066418	P4B-SD-500E	380
5-7/16	066419	P4B-SD-507E	585
5-15/16	066421	P4B-SD-515E	585
6	066422	P4B-SD-600E	585

* Furnished unless otherwise specified.

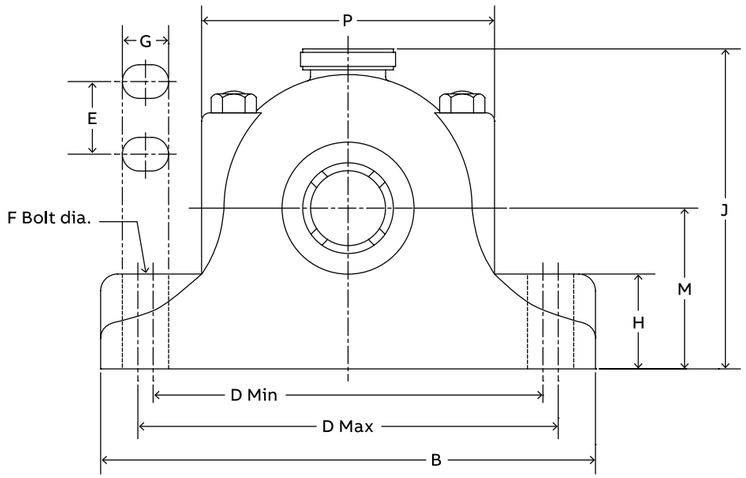
Note: When ordering sizes larger than 5 inches, specify speed (rpm).

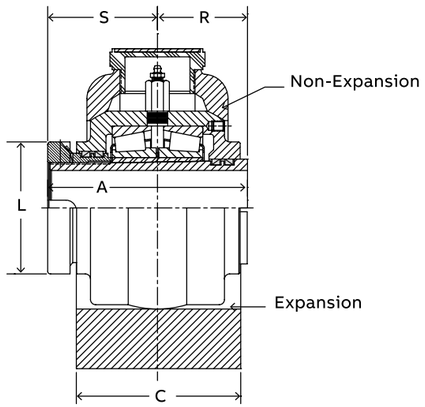
All sizes use a 1/8-27 NPT hydraulic grease fitting.

Reference Guide
Type E Family (Tapered)
Specialty Tapered
Safety Mount Family (Spherical)
S-2000 (Spherical)
Unified SAF (Spherical)
Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

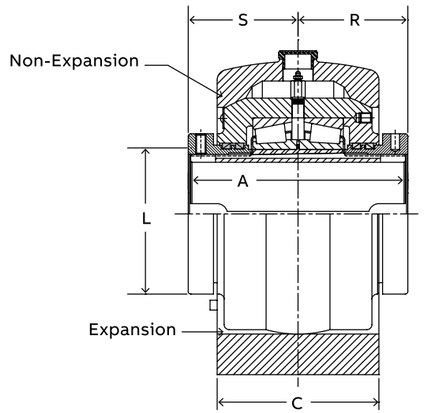
Special Duty pillow block – inch

4-bolt





2-3/8" thru 3-1/2" Construction



3-11/16" thru 6" Construction

Special Duty pillow block – inch

4-bolt

Shaft size	A	B*	C*	D		E	F bolt dia.	G*	H*	J	L	M	P*	R	S	EXP**
				Min.	Max.											
2-3/8 2-7/16 2-1/2	5.06	13.25	4.25	9.88	11.63	2.50	5/8	1.50	3.00	8.56	3.81	4.00	7.81	2.31	2.75	5/8
2-11/16 2-3/4 2-7/8 2-15/16 3	5.75	14.25	4.75	10.88	12.63	2.75	5/8	1.50	3.75	9.88	4.44	4.75	8.69	2.63	3.13	5/8
3-3/16 3-3/8 3-7/16 3-1/2	6.38	16.75	5.50	13.00	14.50	3.25	3/4	1.50	4.00	11.38	5.06	5.50	10.25	2.94	3.44	3/4
3-11/16 3-3/4 3-7/8 3-15/16 4	8.50	19.00	7.00	15.00	16.00	3.25	7/8	1.50	4.00	13.38	6.25	6.38	13.75	4.25	4.25	3/4
4-7/16 4-1/2	9.50	20.00	7.50	15.50	17.50	3.50	7/8	1.88	4.00	14.50	7.25	7.25	12.63	4.75	4.75	3/4
4-15/16 5	10.50	23.00	8.25	17.75	19.75	3.75	1	2.13	4.25	15.68	8.00	7.50	16.50	5.25	5.25	3/4
5-7/16 5-15/16 6	12.00	26.75	9.25	21.38	23.63	5.00	1-1/8	2.25	5.00	19.00	9.50	9.00	17.38	6.00	6.00	3/4

* These are as cast surfaces. Dimensions may fluctuate due to draft angles and pattern shifts.

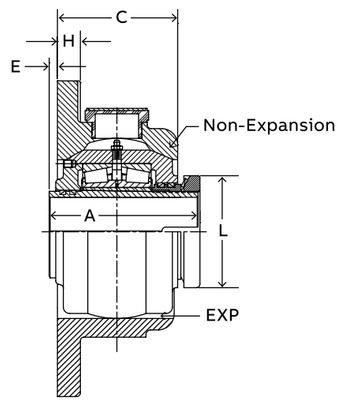
** Total expansion for expansion bearing only.

Note: All sizes use a 1/8-27 NPT hydraulic grease fitting.

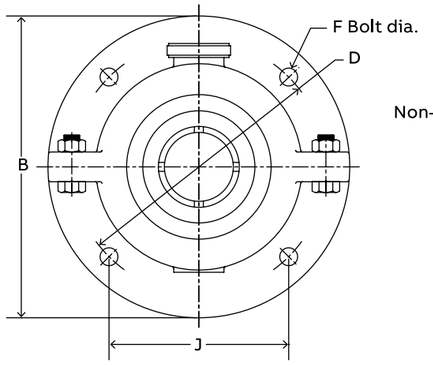
Reference Guide
Type E Family (Tapered)
Specialty Tapered
Safety Mount Family (Spherical)
S-2000 (Spherical)
Unified SAF (Spherical)
Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

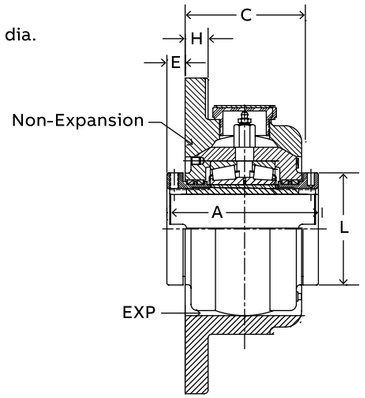
Special Duty flange – inch

4-bolt



1-3/8" thru 3-1/2" Construction





3-11/16" thru 6" Construction

Gray iron – Non-expansion *

Shaft size	Part number	Description	Approx. weight (lb)
1-7/16	104020	F4B-SD-107	21
1-1/2	104161	F4B-SD-108	21
1-11/16	104021	F4B-SD-111	30
1-3/4	104162	F4B-SD-112	30
1-15/16	104022	F4B-SD-115	37
2	104164	F4B-SD-200	37
2-3/16	104023	F4B-SD-203	46
2-3/8	104169	F4B-SD-206	62
2-7/16	104024	F4B-SD-207	62
2-1/2	104170	F4B-SD-208	62
2-11/16	104172	F4B-SD-211	85
2-3/4	104173	F4B-SD-212	83
2-15/16	104025	F4B-SD-215	81
3	104176	F4B-SD-300	81
3-3/16	104177	F4B-SD-303	141
3-7/16	104026	F4B-SD-307	139
3-1/2	104181	F4B-SD-308	138
3-15/16	104027	F4B-SD-315	230
4	104010	F4B-SD-400	229
4-7/16	104028	F4B-SD-407	325
4-15/16	104029	F4B-SD-415	430
5	104013	F4B-SD-500	428
5-15/16	104016	F4B-SD-515	560
6	104018	F4B-SD-600	560

Gray iron – Expansion

Shaft size	Part number	Description	Approx. weight (lb)
1-7/16	104030	F4B-SD-107E	22
1-1/2	104196	F4B-SD-108E	22
1-11/16	104031	F4B-SD-115E	30
1-3/4	104197	F4B-SD-112E	30
1-15/16	104032	F4B-SD-115E	37
2	104199	F4B-SD-200E	37
2-3/16	104033	F4B-SD-203E	49
2-3/8	104204	F4B-SD-206E	64
2-7/16	104034	F4B-SD-207E	64
2-1/2	104205	F4B-SD-208E	64
2-11/16	104207	F4B-SD-211E	88
2-3/4	104208	F4B-SD-212E	86
2-15/16	104035	F4B-SD-215E	85
3	104211	F4B-SD-300E	84
3-3/16	104212	F4B-SD-303E	145
3-7/16	104036	F4B-SD-307E	144
3-1/2	104216	F4B-SD-308E	143
3-15/16	104037	F4B-SD-315E	234
4	104003	F4B-SD-400E	234
4-7/16	104038	F4B-SD-407E	325
4-15/16	104039	F4B-SD-415E	430
5	104006	F4B-SD-500E	428
5-15/16	104017	F4B-SD-515E	560
6	104019	F4B-SD-600E	560

* Furnished unless otherwise specified.

Note: When ordering sizes larger than 5 inches, specify speed (rpm).

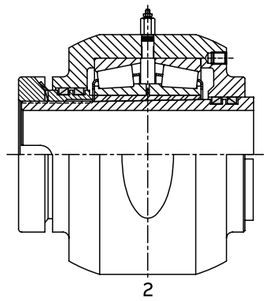
Special Duty flange – inch

4-bolt

Shaft size	A	B	C	D	E	F bolt dia.	H	J	L	EXP*
1-3/8 1-7/16 1-1/2	4.00	8.25	3.00	7.00	0.31	1/2	0.63	4.95	2.44	3/16
1-11/16 1-3/4	4.13	9.00	3.38	7.63	0.19	1/2	0.69	5.39	2.81	1/4
1-15/16 2	4.25	10.00	3.50	8.38	0.19	5/8	0.75	5.92	3.06	1/4
2-3/16	4.50	10.75	4.00	9.13	0.06	5/8	0.81	6.45	3.44	1/4
2-3/8 2-7/16 2-1/2	5.06	12.00	4.25	10.25	0.19	3/4	0.88	7.25	3.81	1/4
2-11/16 2-3/4 2-15/16 3	5.75	13.00	4.63	11.25	0.31	3/4	1.00	7.96	4.44	5/8
3-3/16 3-7/16 3-1/2	6.38	14.50	5.38	12.50	0.25	7/8	1.13	8.84	5.06	1/4
3-15/16 4	8.50	18.00	6.75	15.75	0.88	1	1.25	11.14	6.25	1/4
4-7/16	9.50	19.50	7.25	17.00	1.13	1-1/8	1.38	12.02	7.25	5/8
4-15/16 5	10.50	21.50	8.25	19.00	1.00	1-1/8	1.75	13.44	8.00	5/8
5-15/16 6	12.00	25.50	9.00	22.50	1.50	1-1/4	1.75	15.91	9.50	5/8

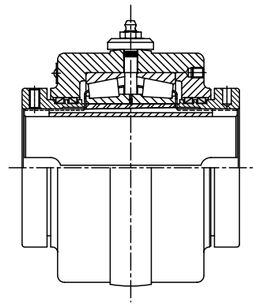
* Total expansion for expansion bearing only.

Special Duty inner unit – inch



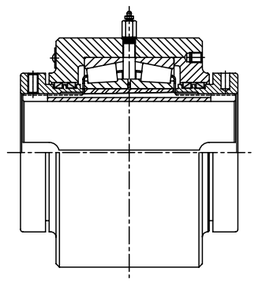
D Unit
1-3/8" thru 3-1/2" Construction

Non-Expansion
3-11/16" thru 6" not shown
Consult Dodge for detail



S1 Unit
3-11/16" thru 6" Construction

Expansion
1-3/8" thru 3-1/2" and 6" not shown
Consult Dodge for detail



B1 Unit
3-11/16" thru 6" Construction

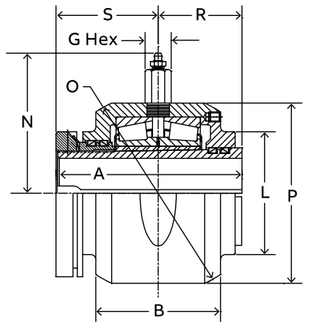
Customer supplied housing only
1-3/8" thru 3-1/2" not shown
Consult Dodge for detail

Special Duty inner unit – inch

Shaft size	D units – Non-expansion		S1 units – Expansion		B1 units – Customer supplied housing		Approx. weight (lb)
	Part number	Description	Part number	Description	Part number	Description	
1-3/8	066445	DU-SD-106	066500	S1U-SD-106	066560	B1U-SD-106	7
1-7/16	066280	DU-SD-107	066290	S1U-SD-107	066315	B1U-SD-107	7
1-1/2	066446	DU-SD-108	066501	S1U-SD-108	066561	B1U-SD-108	7
1-9/16	066444	DU-SD-109	066499	S1U-SD-109	066559	B1U-SD-109	10
1-5/8	066324	DU-SD-110	066312	S1U-SD-110	066314	B1U-SD-110	10
1-11/16	066281	DU-SD-111	066291	S1U-SD-111	066316	B1U-SD-111	10
1-3/4	066447	DU-SD-112	066502	S1U-SD-112	066562	B1U-SD-112	10
1-7/8	066448	DU-SD-114	066503	S1U-SD-114	066563	B1U-SD-114	12
1-15/16	066282	DU-SD-115	066292	S1U-SD-115	066317	B1U-SD-115	12
2	066464	DU-SD-200	066504	S1U-SD-200	066564	B1U-SD-200	12
2-1/8	066450	DU-SD-202	066506	S1U-SD-202	066566	B1U-SD-202	16
2-3/16	066283	DU-SD-203	066293	S1U-SD-203	066318	B1U-SD-203	16
2-1/4	066451	DU-SD-204	066507	S1U-SD-204	066567	B1U-SD-204	16
2-3/8	066453	DU-SD-206	066509	S1U-SD-206	066569	B1U-SD-206	20
2-7/16	066284	DU-SD-207	066294	S1U-SD-207	066319	B1U-SD-207	20
2-1/2	066285	DU-SD-208	066510	S1U-SD-208	066570	B1U-SD-208	20
2-5/8	066455	DU-SD-210	066511	S1U-SD-210	066571	B1U-SD-210	29
2-11/16	066279	DU-SD-211	066326	S1U-SD-211	066572	B1U-SD-211	29
2-3/4	066456	DU-SD-212	066512	S1U-SD-212	066573	B1U-SD-212	29
2-13/16	066457	DU-SD-213	066513	S1U-SD-213	066574	B1U-SD-213	29
2-7/8	066458	DU-SD-214	066514	S1U-SD-214	066575	B1U-SD-214	29
2-15/16	066286	DU-SD-215	066295	S1U-SD-215	066320	B1U-SD-215	29
3	066459	DU-SD-300	066515	S1U-SD-300	066576	B1U-SD-300	29
3-3/16	066460	DU-SD-303	066516	S1U-SD-303	066577	B1U-SD-303	47
3-1/4	066461	DU-SD-304	066517	S1U-SD-304	066578	B1U-SD-304	47
3-3/8	066463	DU-SD-306	066519	S1U-SD-306	066580	B1U-SD-306	47
3-7/16	066287	DU-SD-307	066296	S1U-SD-307	066321	B1U-SD-307	47
3-1/2	066465	DU-SD-308	066520	S1U-SD-308	066581	B1U-SD-308	47
3-11/16	066466	DU-SD-311	066521	S1U-SD-311	066582	B1U-SD-311	94
3-3/4	066467	DU-SD-312	066522	S1U-SD-312	066583	B1U-SD-312	94
3-7/8	066468	DU-SD-314	066523	S1U-SD-314	066584	B1U-SD-314	94
3-15/16	066288	DU-SD-315	066297	S1U-SD-315	066322	B1U-SD-315	94
4	066469	DU-SD-400	066524	S1U-SD-400	066585	B1U-SD-400	94
4-7/16	066289	DU-SD-407	066298	S1U-SD-407	066587	B1U-SD-407	116
4-1/2	066471	DU-SD-408	066526	S1U-SD-408	066588	B1U-SD-408	116
4-15/16	066325	DU-SD-415	066299	S1U-SD-415	066589	B1U-SD-415	175
5	066472	DU-SD-500	066527	S1U-SD-500	066590	B1U-SD-500	175
5-7/16	066473	DU-SD-507	066528	S1U-SD-507	066591	B1U-SD-507	300
5-15/16	066475	DU-SD-515	066530	S1U-SD-515	066593	B1U-SD-515	300
6	066476	DU-SD-600	066531	S1U-SD-600	066594	B1U-SD-600	300

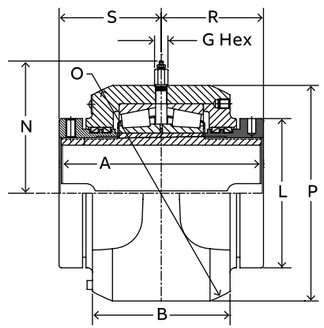
Note: When ordering sizes larger than 5 inches, specify speed (rpm).

Special Duty inner unit – inch

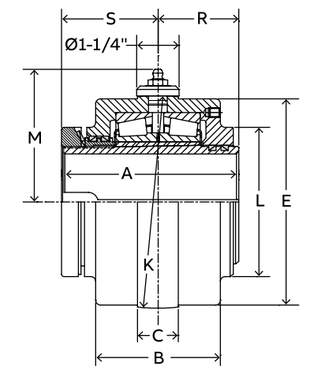


1-3/8" - 3-1/2"

D-Unit

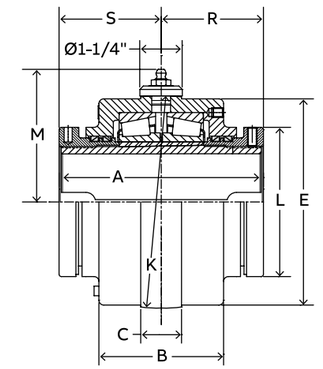


3-11/16" - 6"

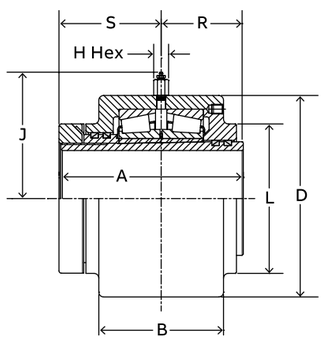


1-3/8" - 3-1/2"

S1-Unit

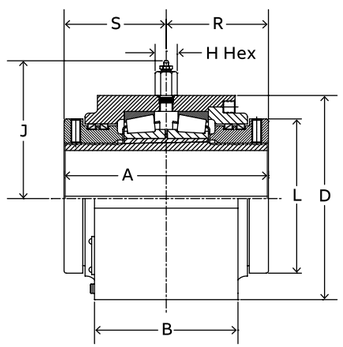


3-11/16" - 6"



1-3/8" - 3-1/2"

B1-Unit



3-11/16" - 6"

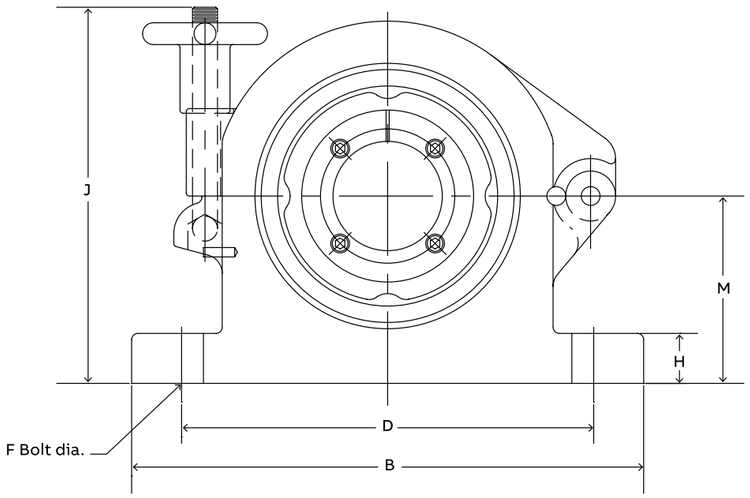
Special Duty inner unit – inch

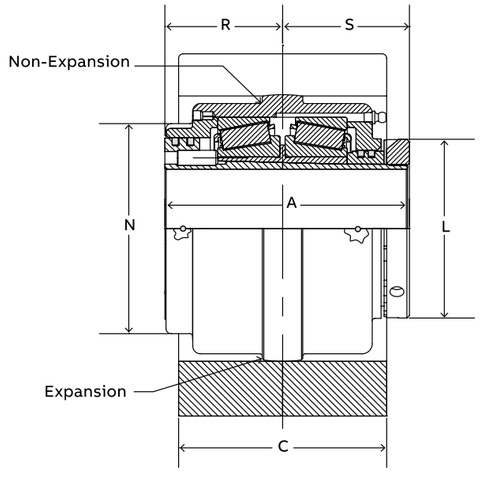
Shaft size	A	B	C	D	E	F	G Hex	H Hex	J	K	L	M	N	O	P	R	S
1-3/8 1-7/16 1-1/2	4.00	2.69	0.75	3.875 ★	3.75	—	7/16	5/8	3.06	4.062 ★	2.44	2.69	2.50	4.438 ★	3.94	1.81	2.19
1-9/16 1-5/8 1-11/16 1-3/4	4.13	3.13	0.75	4.250 ★	4.13	—	7/16	5/8	4.25	4.438 ★	2.81	2.88	2.75	5.000 ★	4.50	1.88	2.25
1-7/8 1-15/16 2	4.25	3.25	0.88	4.750 ★	4.50	—	5/8	5/8	4.75	4.812 ★	3.06	3.06	2.88	5.313 ★	4.75	1.94	2.31
2-1/8 2-3/16 2-1/4	4.56	3.50	0.88	5.250 ★	5.06	—	5/8	5/8	5.25	5.375 ★	3.44	3.31	3.19	6.000 ★	5.38	2.06	2.50
2-3/8 2-7/16 2-1/2	5.06	4.00	1.00	5.750 ★	5.31	—	3/4	5/8	5.75	5.687 ★	3.81	3.50	4.09	6.375 ★	5.69	2.31	2.75
2-5/8 2-11/16 2-3/4 2-13/16 2-7/8 2-15/16 3	5.75	4.44	1.00	6.500 ★	6.19	—	3/4	3/4	6.50	6.562 ★	4.44	4.19	4.50	7.313 ★	6.50	2.63	3.13
3-3/16 3-1/4 3-3/8 3-7/16 3-1/2	6.38	5.00	1.25	7.750 ★	7-5/8	—	3/4	3/4	5.38	8.000 ●	5.06	4.88	5.56	8.625 ♦	8.00	2.94	3.44
3-11/16 3-3/4 3-7/8 3-15/16 4	8.50	6.25	1.50	9.250 ★	9.00	—	3/4	3/4	6.13	9.500 ●	6.25	5.63	6.38	10.250 ♦	9.75	4.25	4.25
4-7/16 4-1/2	9.50	6.63	1.75	10.500 ★	10-1/16	—	3/4	3/4	6.75	10.625 ●	7.25	6.19	6.69	11.125 ♦	10.06	4.75	4.75
4-15/16 5	10.50	7.38	2.00	11.750 ★	10-7/8	—	3/4	3/4	7.38	11.500 ●	8.00	6.63	7.44	12.500 ♦	11.88	5.25	5.25
5-7/16 5-15/16 6	12.00	8.50	2.25	13.500 ★	13.00	—	3/4	3/4	8.25	14.000 ●	9.50	7.88	8.56	14.750 ❖	14.13	6.00	6.00

★ 0.000 to +0.002 inches
♦ 0.000 to +0.003 inches
● 0.000 to -0.004 inches
❖ 0.000 to +0.004 inches

Special Duty Hinged Cap pillow block – inch

2-bolt





Special Duty Hinged Cap pillow block – inch
2-bolt

Pillow block assembly – Non-expansion *

Shaft size	Part number	Description	Approx. weight (lb)
1-3/8	067054	P2B-HC-106	20
1-7/16	067050	P2B-HC-107	20
1-1/2	067056	P2B-HC-108	20
1-11/16	067048	P2B-HC-111	27
1-3/4	067042	P2B-HC-112	27
1-15/16	067052	P2B-HC-115	36
2	067060	P2B-HC-200	36
2-3/16	067046	P2B-HC-203	47
2-7/16	067044	P2B-HC-207	60
2-15/16	067072	P2B-HC-215	60
3	067070	P2B-HC-300	60

* Furnished unless otherwise specified.

Pillow block assembly – Expansion

Shaft size	Part number	Description	Approx. weight (lb)
1-3/8	067055	P2B-HC-106E	20
1-7/16	067051	P2B-HC-107E	20
1-1/2	067057	P2B-HC-108E	20
1-11/16	067049	P2B-HC-111E	27
1-3/4	067043	P2B-HC-112E	27
1-15/16	067053	P2B-HC-115E	36
2	067061	P2B-HC-200E	36
2-3/16	067047	P2B-HC-203E	47
2-7/16	067045	P2B-HC-207E	60
2-15/16	067073	P2B-HC-215E	60
3	067071	P2B-HC-300E	60

Pillow block housing only – Non-expansion *

Shaft size range symbol #	Part number	Description	Approx. weight (lb)
106 to 108	067007 *	HS2-HC-406	13
111 to 112	067100 *	HS2-HC-444	16
115 to 200	067031 *	HS2-HC-481	23
203	067120 *	HS2-HC-538	26
207	067135 *	HS2-HC-569	40
215 to 300	067078 *	HS2-HC-656	52

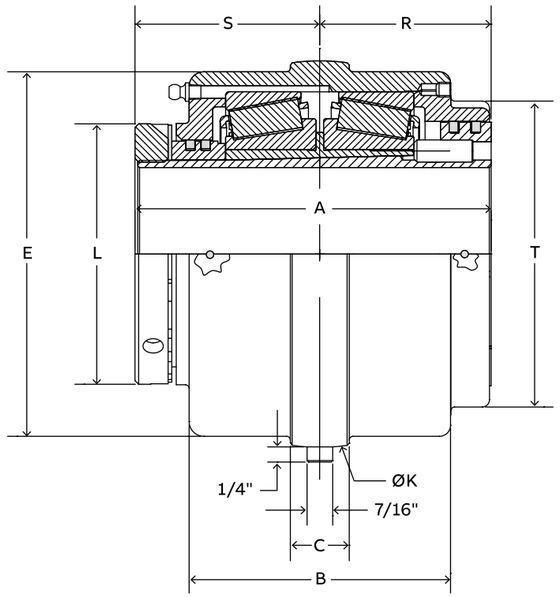
* Furnished unless otherwise specified.

Pillow block housing only – Expansion

Shaft size range symbol #	Part number	Description	Approx. weight (lb)
106 to 108	067016	HS2-HC-406E	13
111 to 112	067103	HS2-HC-444E	16
115 to 200	067034	HS2-HC-481E	23
203	067123	HS2-HC-538E	26
207	067138	HS2-HC-569E	40
215 to 300	067075	HS2-HC-656E	52

Shaft size	A	B	C	D	F bolt dia.	H	J	L	M	N	R	S
1-3/8 1-7/16 1-1/2	4.13	7.25	3.00	5.88	1/2	0.75	6.88	2.44	2.88	3.25	1.94	2.19
1-11/16 1-3/4	4.25	8.25	3.25	6.88	1/2	0.75	6.88	2.81	3.13	3.53	2.00	2.25
1-15/16 2	4.44	9.25	3.50	7.69	5/8	0.88	7.63	3.06	3.25	3.81	2.13	2.31
2-3/16	4.75	10.25	4.00	8.25	3/4	1.00	7.63	3.44	3.75	4.22	2.25	2.50
2-7/16	5.53	10.25	4.25	8.25	3/4	1.00	9.63	3.81	4.50	4.63	2.56	2.75
2-15/16 3	6.06	11.13	4.75	9.13	3/4	1.25	10.13	4.44	5.00	5.25	2.94	3.13

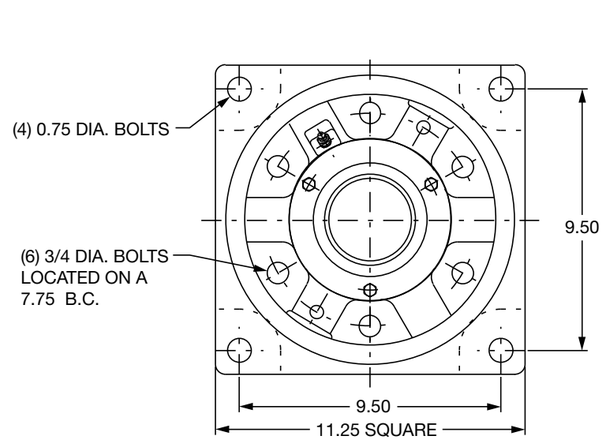
Special Duty Hinged Cap S1 inner unit – inch

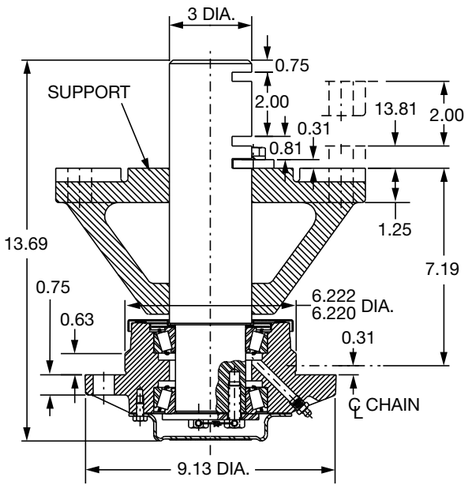


Hinged Cap S1 unit

Shaft size	Part number	Description	Approx. weight (lb)	A	B	C	E	K	L	R	S	T
1-3/8	067149	S1U406-HC-106	8	4.13	2.69	0.75	3.75	4.06	2.44	1.94	2.19	3.25
1-7/16	067151	S1U406-HC-107	8									
1-1/2	067152	S1U406-HC-108	8									
1-11/16	067153	S1U444-HC-111	10	4.25	3.13	0.75	4.13	4.44	2.81	2.00	2.25	3.53
1-3/4	067154	S1U444-HC-112	10									
1-15/16	067155	S1U481-HC-115	11	4.44	3.25	0.88	4.50	4.81	3.06	2.13	2.31	3.81
2	067156	S1U481-HC-200	11									
2-3/16	067157	S1U538-HC-203	16	4.75	3.50	0.88	5.06	5.38	3.44	2.25	2.50	4.22
2-7/16	067159	S1U569-HC-207	19	5.31	4.00	1.00	5.31	5.69	3.81	2.56	2.75	4.63
2-15/16	067164	S1U656-HC-215	30	6.06	4.44	1.00	6.19	6.56	4.44	2.94	3.13	5.25
3	067165	S1U656-HC-300	30									

Special Duty traction wheel hub assembly – inch





Traction wheel hub assemblies are constructed to operate with wheels (sprockets) ranging from two to six feet in diameter. Commonly used in overhead chain conveyors, the units bolt directly to the supporting structure and can be adjusted vertically to three different operating positions.

The hub utilizes combination seals to protect the tapered roller bearings from dust and dirt and retain lubricant.

Traction wheel hub assembly

Size	Part number	Part name	Approx. weight (lb)	Recommended for conveyors with chain nos.	Operating characteristics		
					rpm	Max. resultant load (lb) ▲	L_{10} life (h)
70	062040	TRW-70	100	348	10	3600	★
70LS*	422604	TRW-70LS	80	458	10	8000	

▲ Based on 180 - chain wrap

★ More than 100,000 hours life

* (LS) Less support - support for mounting to structure not included with this part

Notes

Safety Mount family (spherical)

B22-1 **Safety Mount family (spherical)**
B22-2 **Features and benefits**
B22-7 **Specification**
B22-8 **How to order**
B22-8 **Nomenclature**
B22-10 **Selection**
B22-24 **Dimensions**
B22-24 IP
B22-24 Pillow block
B22-40 Round flange
B22-42 Flange bracket
B22-44 Square flange
B22-52 Piloted flange
B22-62 Narrow piloted flange
B22-64 Wide-slot take-up
B22-68 Top-angle heavy-duty universal take-up
B22-70 Insert
B22-72 ISAF
B22-72 Pillow block
B22-76 ISN
B22-76 Plummer block
B22-78 Insert
B22-80 **Accessories**

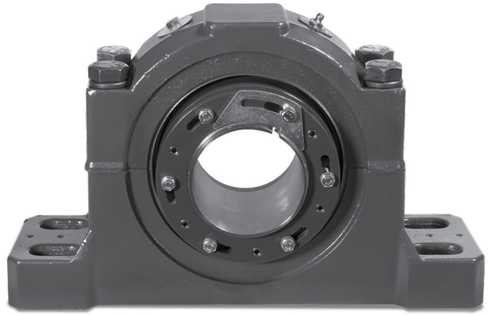
Features and benefits

Safety Mount family

Overview

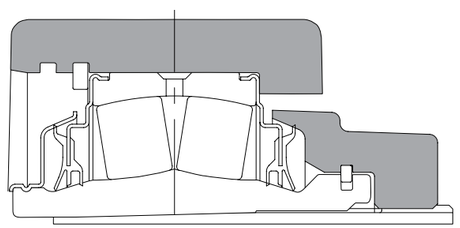
Features overview

- Tapered adapter sleeve uniformly grips the shaft for minimized shaft damage
- Integrated push-pull adapter mounting system enables easy, consistent installation and removal
- Unitized, replaceable insert allows a total of two degrees static or dynamic misalignment
- Inch- and metric-dimensioned bore sizes allows seamless integration with existing equipment design
- Innovative lock plate technology enables 360-degree mounting options and eliminates hammering for a safer, more efficient installation
- Factory-assembled, adjusted, and pre-lubricated to be shaft-ready out of the box
- Built-in expansion and non-expansion capability for installation flexibility and streamlined inventory management
- Heavy-duty housing material ensures superior durability in demanding environments
- Mechanically retained triple-lip sealing system prevents seal blowout and allows efficient purging for maximum protection against contamination
- Sensor-ready for remote condition monitoring
- OPTIFY Intelli-Lube compatible for effortless replacement of manual lubrication
- Manufactured in the USA for superior quality and unrivaled lead times



Expansion vs. non-expansion

- Field-convertible from non-expansion to expansion
- Built-in snap or stabilization ring allows conversion on-site
- Setting determined by position of ring in housing bore
- Part numbers available for ordering either configuration



Safety Mount family

Overview

Tapered adapter sleeve

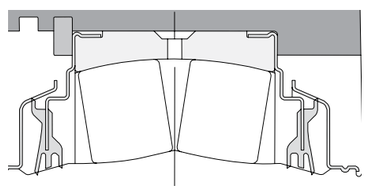
Safety Mount bearings feature a tapered adapter sleeve, engineered to conform precisely and uniformly to the shaft for reduced fretting corrosion, superior shaft protection, and simplified installation. The unique design minimizes installation force requirements and eliminates the need for excessive blows of a hammer, significantly reducing the risk of shaft movement and damage while enabling a faster, safer, and more efficient mounting process. The family is compatible with commercial shafting—providing significantly reduced lead times and cost savings compared to solutions with one-piece inner rings requiring turned, ground, and polished shafting with tight tolerances. The Safety Mount family allows easy integration into existing equipment design for a solution across a wide range of applications.

Superior sealing systems for extended life

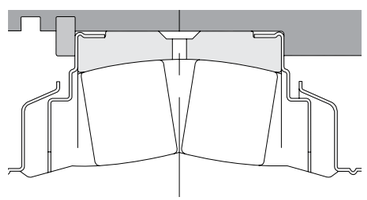
An ineffective seal allows contaminants to enter a bearing, destroying the rolling elements and leading to premature failure. Since the launch of our first spherical roller bearing over 100 years ago, Dodge engineering has prioritized effective seal design. All Safety Mount family bearings feature an advanced, mechanically retained triple-lip sealing system designed to prevent seal blowout and allow for effective purging—eliminating failure modes common to shaft-mounted seals in standard SAF-style bearings and maximizing protection against contamination.

A corrosion-resistant flinger acts as the first line of defense from contaminants. The Trident triple-lip seal provides critical protection in dirty environments, low-to-medium speeds, and typical ambient temperatures. Mechanically retained and made of nitrile material, the triple-lip rubbing seal has a low coefficient of friction with a tapered seal landing that maintains full contact even when misaligned—providing superior protection against contamination. For high speeds and harsh ambient conditions, the Labyrinth seal provides a non-contact solution using clearance steel seal carriers.

Trident seal



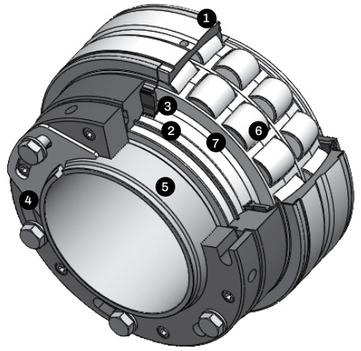
Labyrinth seal



Safety Mount family
IP, ISAF, ISN

Patented bearing inserts
1-1/8 to 10-1/2-inch (30 mm to 170 mm) bore

Safety Mount bearings up to 10-1/2-inch bore size utilize a patented insert featuring a thin-walled tapered adapter that forms to the shaft without causing damage and uniformly grips the shaft for maximum holding power. Its innovative design allows the proper clearance to be set by turning the lock nut a predefined distance past the zero-reference point, ensuring a consistent and streamlined installation without the blows of a hammer.



01 Corrosion-resistant flinger blocks and repels contaminants

02 Tapered seal landing maintains full seal contact when misaligned

03 Patented nitrile multiple-lip seal resists heat and chemical breakdown

04 Simple mounting and dismounting achieved through patented adapter system

05 Thin-walled tapered adapter sleeve improves concentricity, reduces inherent vibrations, and virtually eliminates fretting corrosion

06 Steel cage rides on the outer ring, minimizing friction and providing precision roller guidance for optimized lubrication

07 Extended inner ring maximizes area of contact for superior axial holding power

Patented lock plate design
1-1/8 to 10-1/2-inch bore

Safety Mount bearings up to 10-1/2-inch bore size feature a patented lock plate design that eliminates precise alignment requirements for securement with fewer tools, maximizing reliability. The innovative lock plate technology enables 360-degree mounting options—removing traditional alignment constraints for superior installation efficiency compared to the competition. The tightening of bolts with a common wrench replaces dangerous blows of a hammer for reduced risk and the reusable design optimizes efficiency by eliminating the destructive removal process required by competitive-style SAF lock washers.

End covers for increased on-site safety
1-1/8 to 10-1/2-inch bore

- Corrosion-resistant end covers protect workers from rotating shafts
- Easily installed on-site
- Open and closed options

Safety Mount family
IP, ISAF, ISN

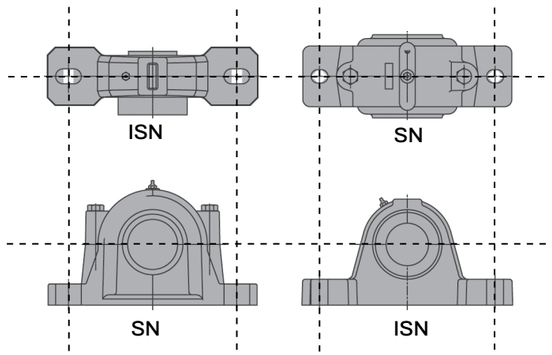
Patented push-pull adapter mounting system
1-1/8 to 10-1/2-inch bore

- Clockwise rotation of the lock nut pushes the tapered adapter sleeve between the shaft and bearing inner race, allowing quick metal-to-metal contact during initial installation
- Lock nut is further rotated for a pre-determined number of turns, properly reducing bearing clearance and creating industry-standard shaft-to-bearing clamp load to prevent relative movement on shaft during operation. The Safety Mount design uses mounting bolts on the face of the patented split lock nut to create the precise amount of radial clearance reduction—no feeler gauges are used.
- Lock plate keeps lock nut tight for dependable shaft attachment
- Integral lock nut inner race design allows efficient removal of the sleeve from the bearing assembly via counterclockwise rotation of the lock nut. The Safety Mount design relies on dismounting screws located on the face of the lock nut, which safely pushes the bearing off the adapter sleeve.

ISN plummer blocks for easy interchangeability with SN units
30 to 170 mm

The Safety Mount ISN mounted spherical roller bearing provides all the advantages of the Safety Mount family with the dimensions of SN units for easy interchangeability in existing equipment design.

Dimensionally interchangeable with housings of the SN family



Stronger feet for higher load capacity

Safety Mount family

Configuration options

Available in unitized and split-housed designs, as well as steel, E-dimensioned, SAF-dimensioned, and metric-dimensioned units, Safety Mount bearings offer a solution for every application.

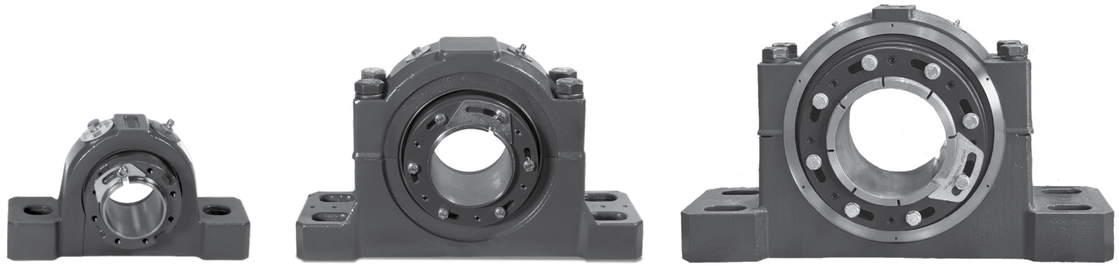
	IP	IP-HD	IP-E	IP-HD-E	ISAF	ISN
Dimensional standard	**US standard (in)**	**US standard (in)**	**E-dimensioned (in)**	**E-dimensioned (in)**	**SAF-dimensioned (in)**	**Metric (mm)**
Housing material	**Cast iron**	**Steel**	**Cast iron**	**Steel**	**Cast iron**	**Cast iron**
Housing style	**Solid**	**Solid**	**Solid**	**Solid**	**Split**	**Solid**
2-bolt pillow block	1-1/8—4	1-1/8—4	1-3/8—3-1/2	1-3/8—3-1/2	1-7/16—3-7/16	30—140
4-bolt pillow block	2-3/8—5	2-3/8—5	2-1/4—7	2-1/4—5	2-7/16— 10-1/2	150—170
3- and 4-bolt round flange	1-1/8—3	—	—	—	—	—
4-bolt square flange	1-1/8—4	1-1/8—4	1-3/8—4-1/2	1-3/8—4-1/2	—	—
Piloted flange	1-1/8—5	1-1/8—5	1-3/8—5	—	—	—
Narrow piloted flange	—	1-7/16—4-1/2	—	—	—	—
Wide-slot take-up	1-1/8—5	—	1-1/8—5-15/16	—	—	—
Inserts	1-1/8—5	1-1/8—5	1-1/8—7	1-3/8—5	1-7/16—10-1/2	30—170

Specification

Safety Mount family

Safety Mount family mounted spherical roller bearings, are general-purpose, high-capacity, double-row spherical roller bearings. All Safety Mount family bearings are mounted in single-piece, precision-machined housings. Bearings are mounted to shafts by means of a patented adapter system that improves concentricity and reduces inherent vibration. Housings are available in a variety of standard configurations, including pillow blocks, flanges, piloted flanges and take-up bearings.

Safety Mount HD housings are made of high-performance steel is the standard material used in Safety Mount HD housings. Steel housings are designed for performance in extremely harsh environments through the use of special finishes and stainless hardware.



How to order

Safety Mount family

There are two ways to specify Dodge bearings—by six-digit part number or by description. Most of the products offered have part numbers with listings shown throughout this catalog. Use of part numbers ensures accurate order processing.

When part numbers are not shown, the product may be specified by description. This method is used when ordering units that include modifications or options. To order by description, use the nomenclature key shown for each product, adding any special instructions to the end of the description for options not covered by the nomenclature.

Special bearing requirements

Depending on the bearing, a wide variety of lubricants, seals, locking devices, finishes, and adjustments are available for a wide range of applications from general purpose to extreme ambient temperatures, high speeds, or high loads.

Special lubricant options usually involve set-up charges, minimum quantities, and price premiums. To order, specify the type of lubricant required at the end of the product name or after the standard part number.

Example:

F4B-XX-207 except with Mobil HTS #2 grease

or

P/N-XXXXXX except with Mobil HTS #2 grease

Other special requirements not listed

For applications requiring modifications not listed, contact Application Engineering for bearings at +1 864 284 5700.

Nomenclature

IP

S - E - P2B - IP - 207 - R - E

S

Prefix denotes steel housing (HD) series

E

Prefix denotes E-dimensioned housing

Housing style

P2B = Pillow block 2-bolt

P4B = Pillow block 4-bolt

F3R = Flange bearing 3-bolt, cast iron, round

F4R = Flange bearing 4-bolt, cast iron, round

F4S = Flange bearing 4-bolt, cast iron, square

FC = Piloted flanged (Flanged cartridge)

FCN = Narrow piloted flange

WSTU = Wide-slot take-up bearing for use in center pull frame

TPHU = Top-angle heavy-duty universal take-up for use in top-angle frame

Bearing type

IP = Safety Mount IP

Size

Inches and 16th
2 = 2 inches
07 = 7/16 inches
or
207 = 2-7/16 inches

Seal

R = Trident triple-lip rubbing seal

L = Labyrinth metallic seal

Other data

E = Expansion

Note: If E does not appear after seal type then bearing is non-expansion type

MOD = Special modification

Safety Mount family

ISAF

P2B - 515 - ISAF - 207 - R - E

Housing style

P2B = Pillow block 2-bolt

P4B = Pillow block 4-bolt

Housing size

5xx For interchangeable SAF-style housings

Bearing type

ISAF = Safety Mount ISAF

Size

Inches and 16th
2 = 2 inches
07 = 7/16 inches
or
207 = 2-7/16 inches

Seal

R = Trident triple-lip rubbing seal

L = Labyrinth seal

Other data

E = Expansion

If E does not appear, bearing is a non-expansion type

MOD = Special modification

ISN

P2B - 507 - ISN - 030M - FR

Housing style

P2B = Pillow block 2-bolt

P4B = Pillow block 4-bolt

Housing size

5xx For adapter mounted 22200K series bearings Interchangeable with SN style bearings

0xx For adapter mounted 23000K series bearings Interchangeable with large bore plummer blocks

31xx For adapter mounted 23100K series bearings Interchangeable with large bore plummer blocks

Bearing type

ISN = Safety Mount ISN

Size

M = Size in millimeters

030M = 30 mm

otherwise inches and 16ths

Other data

F = Non-Expansion

L = Expansion

R = Trident rubbing seal

S = Labyrinth seal

MOD = Special modification

Selection

Safety Mount family

IP, ISAF, ISN

Safety Mount family spherical roller bearings have the capacity to carry heavy radial loads and combined radial and thrust loads. The maximum recommended load which can be applied is limited by various components in the system such as bearing, housing, shaft, shaft attachment, speed and life requirements as listed in this catalog. Dodge spherical roller bearings have been applied successfully even when these limits have been exceeded under controlled operating conditions. Contact Application Engineering at +1 864 284 5700 for applications which exceed the recommendations of this catalog.

L_{10} life – The fatigue life which may be expected from at least 90 percent of a given group of bearings operating under identical conditions.

$$L_{10}\text{ life, hours} = \left(\frac{C}{P}\right)^{10/3} \times \left(\frac{16{,}667}{\text{rpm}}\right)$$

Where:

C = Dynamic capacity (Table 1 of this section)

P = Equivalent radial load

General

Heavy service – For heavy shock loads, frequent shock loads, or severe vibrations, add up to 50 percent (according to severity of conditions) to the equivalent radial load to obtain a modified equivalent radial load. Consult Application Engineering for additional selection assistance.

Thrust load values shown in the table below are recommended as a guide for general applications that will give adequate L_{10} life. Spherical bearings require a radial load at least equal to the thrust load for proper operation. If the thrust load exceeds this limit, consult Application Engineering. Where substantial radial load is also present, it is advisable to calculate actual L_{10} life to assure that it meets the requirements. The effectiveness of the shaft attachment to carry thrust load depends on proper tightening of the bearing to the shaft. Therefore, it is advisable to use auxiliary thrust carrying devices such as shaft shoulder, snap ring or a thrust collar to locate the bearing under thrust loads heavier than shown below, or where extreme reliability is desired.

Speed range (rpm)	20—200	201—2,000	Over 2,000
Recommended thrust load	C/20	C/40	C/60

The shaft tolerances recommended below are adequate for normal radial and radial/thrust load applications. Since the allowable load, especially at a low speed, is very large, the shaft should be checked to assure adequate shaft strength.

The magnitude and direction of both the thrust and radial load must be taken into account when selecting a housing. When pillow blocks are utilized, heavy loads should be directed through the base. Where cap loads are involved, see Table 3, 4, and 5 for maximum values. Where a load pulls the housing away from the mounting base, both the hold-down bolts and housing must be of adequate strength. Auxiliary load carrying devices such as shear bars are advisable for side or end loading of pillow blocks and radial loads for flange units.

Shaft tolerances

Shaft size (in)	Tolerance (in)
Up to 1-1/2	+0.000 to -0.002
1-9/16 to 2-1/2	+0.000 to -0.003
2-5/8 to 4	+0.000 to -0.004
4-3/16 to 6	+0.000 to -0.005
6-7/16 to 7-15/16	+0.000 to -0.006
8 to 9	+0.000 to -0.007
Over 9	+0.000 to -0.008

Bearing supporting radial loads only

1. Define L_{10} life (h) desired
2. Establish bearing radial load, F_R
   (F_R = P for pure radial load conditions)
3. Establish speed (rpm)

Using the easy selection Table 2 for Safety Mount, find, under the rpm column, the equivalent radial load that equals or is slightly higher than the application radial load for the desired life. The shaft size on the far left will be the minimum shaft size that you can use for your application.

If the desired life is different than the values shown on the chart, use alternate method A shown below.

Example:

L_{10} life = 30,000 h

Radial load = 4,000 lb

Speed = 1,000 rpm

At the intersection of the 1,000 rpm column and the 30,000 hours L_{10} life row, the equivalent radial load of 4,749 pounds exceeds the 4,000 pounds radial load for shaft size 2-3/8 to 2-1/2 inches. A bearing with bore ranging from 2-3/8 to 2-1/2 inches, or larger, may be used for this application.

Safety Mount family
IP, ISAF, ISN

Alternate method A – Selecting a bearing for an L_{10} life value not shown in the Easy Selection chart.

The L_{10} life equation can be rearranged so that the bearing dynamic capacity C is identified in terms of L_{10}, speed and P.

$$C = \left(\frac{L_{10} \times \text{rpm}}{16{,}667}\right)^{0.3} \times P$$

(P = F_R for pure radial load conditions)

Since the L_{10}, speed and P are known, solve for C. Select from the dynamic capacity column on Table 1 the C value equal to or greater than the C value just calculated. The bore size on the far left represents the proper bore size selection. Check that the application speed does not exceed the maximum speed from Table 1. When selecting an L_{10} life of less than 30,000 hours, particular attention must be paid to shaft deflection and proper lubricant selection.

Selecting bearings supporting combination radial and thrust loads

When a bearing supports both a radial load and a thrust load, the loading on the two rows is shared unequally depending on the ratio of thrust to radial load. The use of the X (radial factor) and Y (thrust factor) from Table 1 converts the applied thrust load and radial load to an equivalent radial load having the same effect on the life of the bearing as a radial load of this magnitude.

The equivalent radial load:

$$P = XF_R + YF_A$$

Where:

P = Equivalent radial load

F_R = Radial load (see Table 1 for allowable slip fit maximum load)

F_A = Thrust (axial) load

e = Thrust load to radial load factor (Table 1)

X = Radial load factor (Table 1)

Y = Thrust load factor (Table 1)

To find X and Y, calculate F_A/F_R and compare to e for the selected bore size. Determine X and Y from Table 1 depending on whether F_A/F_R is equal to or less than e, or F_A/F_R is greater than e. Substitute all known values into the equivalent radial load equation. P (equivalent radial load) can be used in the life formula to determine L_{10}, or it can be compared to the equivalent radial load ratings for the speed and hours life desired in the easy selection.

Selecting bearings supporting only thrust loads

Spherical roller bearings generally are not recommended for pure thrust load applications. However, they will perform satisfactorily under very light pure thrust loads. Consult Application Engineering at +1 864 284 5700.

Selecting lubrication

Safety Mount spherical roller bearings are lubricated at the factory with Mobil Grease XHP 222 lithium complex grease. This grease will adequately handle low and medium speeds with low and medium loads at normal temperatures on Table 9. For very low and high speeds, heavy loads, and low and high temperatures, special greases may be used. Contact Application Engineering at +1 864 284 5700 for bearing and lubricant recommendations for the above unusual conditions. Dodge also has the expertise to custom design and build special bearings for your needs. The only maintenance requirement for Dodge spherical roller bearings is periodic relubrication at regular intervals as outlined in the appropriate instruction manuals.

Misalignment consideration

In nearly all applications, good design practice requires two bearings supporting the shaft. In cases where three or more bearings are installed, unless precautions are taken to line the bearings up both vertically and horizontally, it is possible to induce heavy loads. In the case of two bearings, alignment is not as critical, especially with Dodge Unitized spherical roller bearings. Safety Mount bearings are designed to allow a maximum of +/- one degree of static and dynamic misalignment. To ensure good alignment, mounting surfaces must be checked for flatness and must lie in the same plane. When tightening base bolts, each bolt should be alternately tightened in incremental torque values until full torque is achieved to prevent the angular shifting of the pillow block that occurs when one bolt is tightened to its full torque. Shimming may be required to minimize misalignment.

Reference Guide
Type E Family (Tapered)
Specialty Tapered
Safety Mount Family (Spherical)
S-2000 (Spherical)
Unified SAF (Spherical)
Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

Safety Mount family

IP and ISAF

Table 1: Safety Mount spherical roller bearing

Shaft size (in)	Bearing series	e	F_A/F_R<e		F_A/F_R>e		Adapter maximum thrust load (lb)	Dynamic capacity (C) (lb)	Static capacity (C_0) (lb)	Maximum speed*		Maximum ISAF expansion capability (in)
			X	Y	X	Y				Labyrinth (rpm)	Trident (rpm)	
1-1/8	22208	0.28	1.0	2.4	0.67	3.6	620	22,700	21,000	6,000	3,975	7/32
1-3/16												
1-1/4												
1-3/8												
1-7/16												
1-1/2												
1-1/2 **	22209	0.26	1.0	2.6	0.67	3.9	700	23,400	22,000	5,600	3,725	7/32
1-5/8												
1-11/16												
1-3/4												
1-3/4 **	22210	0.24	1.0	2.8	0.67	4.2	775	24,500	24,000	5,300	3,520	17/64
1-7/8												
1-15/16												
2												
2-3/16	22211	0.23	1.0	2.9	0.67	4.3	930	29,000	29,000	4,500	3,000	7/32
2-1/4												
2-1/4 **	22213	0.24	1.0	2.8	0.67	4.2	1,360	45,000	47,500	3,800	2,400	5/16
2-3/8												
2-7/16												
2-1/2												
2-11/16	22215	0.22	1.0	3.1	0.67	4.6	1,570	48,600	53,000	3,400	2,250	15/64
2-3/4												
2-15/16												
3												
3-3/16	22218	0.23	1.0	2.9	0.67	4.3	2,430	77,600	81,500	2,600	1,825	3/8
3-1/4												
3-7/16												
3-1/2												
3-11/16	22220	0.24	1.0	2.8	0.67	4.2	3,100	96,000	104,000	2,200	1,530	3/8
3-15/16												
4												
4-7/16	22222	0.25	1.0	2.7	0.67	4.0	3,930	123,000	132,000	2,000	1,325	3/8
4-1/2												
4-15/16	22226	0.26	1.0	2.6	0.67	3.9	5,610	171,000	196,000	1,800	1,175	3/8
5												
5-7/16	22228	0.25	1.0	2.7	0.67	4.0	6,419	195,000	236,000	1,700	1,100	3/8
5-1/2												
5-15/16	22232	0.26	1.0	2.6	0.67	3.9	8,630	258,000	315,000	1,500	975	3/8
6												
6-7/16	22236	0.25	1.0	2.7	0.67	4.0	10,437	305,000	375,000	1,300	845	3/8
6-1/2												
6-15/16												
7												
7-3/16	22240	0.29	1.0	2.3	0.67	3.5	13,215	300,000	450,000	1,000	650	3/8
7-1/2	22244	0.29	1.0	2.3	0.67	3.5	16,020	365,000	550,000	925	600	3/8
7-15/16												
8												
8-1/2	23048	0.25	1.0	2.7	0.67	4.1	14,887	260,000	476,000	925	600	5/8
9												
9-1/2	23052	0.26	1.0	2.6	0.67	3.9	18,232	340,000	584,000	900	585	17/32
10	23056	0.25	1.0	2.7	0.67	4.1	20,000	345,000	640,000	850	550	1-5/8
10-1/2												

* Maximum grease speed is dependent on load and ambient conditions, consult Application Engineering.

** Safety Mount – E-dimensioned housing.

Safety Mount family

IP and ISAF

Table 2: Equivalent radial load rating at various speeds (rpm)

Size (in)	L_{10} life (h)	Equivalent radial load rating (lb) at various speeds (rpm)									
		50	100	150	250	500	750	1,000	1,300	1,500	1,700
1-1/8 to 1-1/2	10,000	8,183	6,646	5,885	5,049	4,101	3,631	3,331	3,079	2,950	2,841
	30,000	5,885	4,780	4,233	3,631	2,950	2,612	2,396	2,214	2,121	2,043
	40,000	5,399	4,385	3,883	3,331	2,706	2,396	2,198	2,031	1,946	1,874
	60,000	4,780	3,883	3,438	2,950	2,396	2,121	1,946	1,799	1,723	1,660
	100,000	4,101	3,331	2,950	2,530	2,055	1,820	1,669	1,543	1,478	1,424
*1-1/2 1-5/8 1-11/16 1-3/4	10,000	8,435	6,851	6,067	5,205	4,227	3,743	3,434	3,174	3,041	2,928
	30,000	6,067	4,928	4,363	3,743	3,041	2,692	2,470	2,283	2,187	2,106
	40,000	5,565	4,520	4,002	3,434	2,789	2,470	2,265	2,094	2,006	1,932
	60,000	4,928	4,002	3,544	3,041	2,470	2,187	2,006	1,854	1,776	1,711
	100,000	4,227	3,434	3,041	2,609	2,119	1,876	1,721	1,591	1,524	1,468
*1-3/4 1-7/8 1-15/16 2	10,000	8,831	7,173	6,352	5,449	4,426	3,919	3,595	3,323	3,183	3,066
	30,000	6,352	5,159	4,568	3,919	3,183	2,819	2,586	2,390	2,290	2,205
	40,000	5,827	4,733	4,191	3,595	2,920	2,586	2,372	2,192	2,100	2,023
	60,000	5,159	4,191	3,711	3,183	2,586	2,290	2,100	1,941	1,860	1,791
	100,000	4,426	3,595	3,183	2,731	2,218	1,964	1,802	1,665	1,595	1,537
2-3/16 to 2-1/4	10,000	10,454	8,491	7,518	6,450	5,239	4,639	4,256	3,933	3,768	3,629
	30,000	7,518	6,107	5,407	4,639	3,768	3,337	3,061	2,829	2,710	2,610
	40,000	6,897	5,602	4,960	4,256	3,457	3,061	2,808	2,595	2,486	2,394
	60,000	6,107	4,960	4,392	3,768	3,061	2,710	2,486	2,298	2,201	2,120
	100,000	5,239	4,256	3,768	3,233	2,626	2,325	2,133	1,971	1,889	1,819
*2-1/4 2-3/8 2-7/16 2-1/2	10,000	16,221	13,176	11,667	10,009	8,130	7,199	6,603	6,104	5,847	5,632
	30,000	11,667	9,476	8,391	7,199	5,847	5,177	4,749	4,390	4,205	4,050
	40,000	10,702	8,693	7,697	6,603	5,364	4,749	4,357	4,027	3,858	3,715
	60,000	9,476	7,697	6,815	5,847	4,749	4,205	3,858	3,566	3,416	3,290
	100,000	8,130	6,603	5,847	5,016	4,075	3,608	3,310	3,059	2,931	2,823
2-11/16 to 3	10,000	17,519	14,230	12,600	10,810	8,780	7,775	7,132	6,592	6,315	6,082
	30,000	12,600	10,234	9,062	7,775	6,315	5,592	5,129	4,741	4,542	4,374
	40,000	11,558	9,388	8,313	7,132	5,793	5,129	4,705	4,349	4,166	4,013
	60,000	10,234	8,313	7,361	6,315	5,129	4,542	4,166	3,851	3,689	3,553
	100,000	8,780	7,132	6,315	5,418	4,401	3,897	3,574	3,304	3,165	3,048
3-3/16 to 3-1/2	10,000	27,972	22,721	20,118	17,260	14,019	12,414	11,387	10,525	10,083	9,711
	30,000	20,118	16,341	14,470	12,414	10,083	8,928	8,190	7,570	7,252	6,985
	40,000	18,455	14,990	13,273	11,387	9,249	8,190	7,513	6,944	6,652	6,407
	60,000	16,341	13,273	11,753	10,083	8,190	7,252	6,652	6,149	5,890	5,673
	100,000	14,019	11,387	10,083	8,650	7,026	6,222	5,707	5,275	5,053	4,867
3-11/16 to 4	10,000	34,605	28,108	24,889	21,352	17,344	15,357	14,087	13,021	12,474	12,014
	30,000	24,889	20,216	17,900	15,357	12,474	11,045	10,132	9,365	8,971	8,641
	40,000	22,831	18,544	16,420	14,087	11,442	10,132	9,294	8,591	8,230	7,926
	60,000	20,216	16,420	14,540	12,474	10,132	8,971	8,230	7,607	7,287	7,019
	100,000	17,344	14,087	12,474	10,702	8,692	7,697	7,060	6,526	6,252	6,021

Only the labyrinth seal (L seal) may be used to the right of the heavy line.

Applications in the light shaded cells may require a high temperature lubrication, consult Application Engineering at +1 864 297 4800.

* Safety Mount – E-dimensioned housing.

Safety Mount family

IP and ISAF

Table 2

Size (in)	L_{10} life (h)	Equivalent radial load rating (lb) at various speeds (rpm)											
		1,800	2,000	2,200	2,600	2,750	3,000	3,400	3,800	4,500	5,300	5,600	6,000
1-1/8 to 1-1/2	10,000	2,793	2,706	2,629	2,501	2,459	2,396	2,307	2,232	2,121	2,020	1,987	1,946
	30,000	2,008	1,946	1,891	1,799	1,769	1,723	1,660	1,605	1,526	1,453	1,429	1,400
	40,000	1,842	1,785	1,735	1,650	1,622	1,581	1,522	1,472	1,400	1,333	1,311	1,284
	60,000	1,631	1,581	1,536	1,461	1,437	1,400	1,348	1,304	1,239	1,180	1,161	1,137
	100,000	1,400	1,356	1,318	1,253	1,232	1,201	1,156	1,119	1,063	1,012	996	975
*1-1/2 1-5/8 1-11/16 1-3/4	10,000	2,879	2,789	2,710	2,578	2,535	2,470	2,379	2,301	2,187	2,082	2,048	—
	30,000	2,070	2,006	1,949	1,854	1,823	1,776	1,711	1,655	1,573	1,497	1,473	—
	40,000	1,899	1,840	1,788	1,701	1,672	1,629	1,569	1,518	1,443	1,374	1,351	—
	60,000	1,682	1,629	1,583	1,506	1,481	1,443	1,390	1,344	1,278	1,216	1,196	—
	100,000	1,443	1,398	1,358	1,292	1,270	1,238	1,192	1,153	1,096	1,043	1,026	—
*1-3/4 1-7/8 1-15/16 2	10,000	3,014	2,920	2,838	2,699	2,654	2,586	2,490	2,409	2,290	2,180	—	—
	30,000	2,168	2,100	2,041	1,941	1,909	1,860	1,791	1,732	1,647	1,568	—	—
	40,000	1,988	1,927	1,872	1,781	1,751	1,706	1,643	1,589	1,511	1,438	—	—
	60,000	1,761	1,706	1,658	1,577	1,551	1,511	1,455	1,407	1,338	1,273	—	—
	100,000	1,511	1,464	1,422	1,353	1,330	1,296	1,248	1,207	1,148	1,093	—	—
2-3/16 to 2-1/4	10,000	3,568	3,457	3,359	3,195	3,142	3,061	2,948	2,851	2,710	—	—	—
	30,000	2,566	2,486	2,416	2,298	2,260	2,201	2,120	2,051	1,949	—	—	—
	40,000	2,354	2,280	2,216	2,108	2,073	2,019	1,945	1,881	1,788	—	—	—
	60,000	2,084	2,019	1,962	1,866	1,835	1,788	1,722	1,666	1,583	—	—	—
	100,000	1,788	1,732	1,684	1,601	1,575	1,534	1,477	1,429	1,358	—	—	—
*2-1/4 2-3/8 2-7/16 2-1/2	10,000	5,536	5,364	5,212	4,958	4,875	4,749	4,574	4,424	—	—	—	—
	30,000	3,982	3,858	3,749	3,566	3,506	3,416	3,290	3,182	—	—	—	—
	40,000	3,652	3,539	3,439	3,271	3,216	3,133	3,018	2,919	—	—	—	—
	60,000	3,234	3,133	3,045	2,896	2,848	2,775	2,672	2,585	—	—	—	—
	100,000	2,775	2,688	2,612	2,485	2,443	2,380	2,293	2,217	—	—	—	—
2-11/16 to 3	10,000	5,979	5,793	5,629	5,354	5,265	5,129	4,940	—	—	—	—	—
	30,000	4,300	4,166	4,049	3,851	3,787	3,689	3,553	—	—	—	—	—
	40,000	3,945	3,822	3,714	3,533	3,474	3,384	3,259	—	—	—	—	—
	60,000	3,493	3,384	3,289	3,128	3,076	2,996	2,886	—	—	—	—	—
	100,000	2,996	2,903	2,821	2,683	2,639	2,571	2,476	—	—	—	—	—
3-3/16 to 3-1/2	10,000	9,546	9,249	8,989	8,549	—	—	—	—	—	—	—	—
	30,000	6,866	6,652	6,465	6,149	—	—	—	—	—	—	—	—
	40,000	6,298	6,102	5,930	5,640	—	—	—	—	—	—	—	—
	60,000	5,577	5,403	5,251	4,994	—	—	—	—	—	—	—	—
	100,000	4,785	4,636	4,505	4,285	—	—	—	—	—	—	—	—
3-11/16 to 4	10,000	11,810	11,442	11,120	—	—	—	—	—	—	—	—	—
	30,000	8,494	8,230	7,998	—	—	—	—	—	—	—	—	—
	40,000	7,792	7,549	7,336	—	—	—	—	—	—	—	—	—
	60,000	6,899	6,685	6,496	—	—	—	—	—	—	—	—	—
	100,000	5,919	5,735	5,573	—	—	—	—	—	—	—	—	—

Only the labyrinth seal (L seal) may be used to the right of the heavy line.

Applications in the light shaded cells may require a high temperature lubrication, consult Application Engineering at +1 864 297 4800.

* Safety Mount – E-dimensioned housing.

Safety Mount family

IP and ISAF

Table 2

Size (in)	L_{10} life (h)	Equivalent radial load rating (lb) at various speeds (rpm)									
		50	100	150	250	500	750	1,000	1,300	1,500	1,700
4-7/16 to 4-1/2	10,000	44,338	36,013	31,889	27,358	22,221	19,676	18,049	16,683	15,982	15,393
	30,000	31,889	25,902	22,935	19,676	15,982	14,152	12,982	11,999	11,495	11,071
	40,000	29,252	23,760	21,039	18,049	14,661	12,982	11,908	11,007	10,544	10,156
	60,000	25,902	21,039	18,629	15,982	12,982	11,495	10,544	9,746	9,337	8,993
	100,000	22,221	18,049	15,982	13,711	11,137	9,862	9,046	8,361	8,010	7,715
4-15/16 to 5	10,000	61,640	50,067	44,333	38,034	30,893	27,355	25,093	23,194	22,219	21,400
	30,000	44,333	36,009	31,885	27,355	22,219	19,674	18,047	16,681	15,980	15,392
	40,000	40,667	33,032	29,249	25,093	20,382	18,047	16,555	15,302	14,659	14,119
	60,000	36,009	29,249	25,899	22,219	18,047	15,980	14,659	13,550	12,980	12,502
	100,000	30,893	25,093	22,219	19,062	15,483	13,710	12,576	11,624	11,136	10,726
5-7/16 to 5-1/2	10,000	70,291	57,094	50,555	43,372	35,229	31,194	28,615	26,449	25,338	24,404
	30,000	50,555	41,063	36,360	31,194	25,338	22,436	20,580	19,023	18,223	17,552
	40,000	46,375	37,668	33,354	28,615	23,243	20,580	18,879	17,450	16,717	16,100
	60,000	41,063	33,354	29,534	25,338	20,580	18,223	16,717	15,451	14,802	14,256
	100,000	35,229	28,615	25,338	21,738	17,656	15,634	14,341	13,256	12,699	12,231
5-15/16 to 6	10,000	93,001	75,540	66,888	57,385	46,611	41,272	37,860	34,994	33,524	—
	30,000	66,888	54,330	48,108	41,272	33,524	29,684	27,230	25,169	24,111	—
	40,000	61,358	49,838	44,130	37,860	30,752	27,230	24,978	23,087	22,117	—
	60,000	54,330	44,130	39,075	33,524	27,230	24,111	22,117	20,443	19,584	—
	100,000	46,611	37,860	33,524	28,760	23,361	20,685	18,975	17,539	16,802	—
6-7/16 to 7	10,000	109,943	89,301	79,073	67,838	55,102	48,791	44,757	41,369	—	—
	30,000	79,073	64,227	56,871	48,791	39,631	35,092	32,190	29,753	—	—
	40,000	72,535	58,917	52,169	44,757	36,354	32,190	29,528	27,293	—	—
	60,000	64,227	52,169	46,194	39,631	32,190	28,503	26,146	24,167	—	—
	100,000	55,102	44,757	39,631	34,000	27,616	24,453	22,431	20,734	—	—
7-3/16	10,000	108,140	87,837	77,777	66,726	54,199	47,991	44,023	—	—	—
	30,000	77,777	63,175	55,939	47,991	38,981	34,516	31,662	—	—	—
	40,000	71,346	57,951	51,314	44,023	35,758	31,662	29,044	—	—	—
	60,000	63,175	51,314	45,437	38,981	31,662	28,036	25,718	—	—	—
	100,000	54,199	44,023	38,981	33,442	27,164	24,052	22,064	—	—	—
7-1/2 to 8	10,000	131,571	106,869	94,629	81,184	65,942	58,389	53,561	—	—	—
	30,000	94,629	76,862	68,059	58,389	47,427	41,995	38,522	—	—	—
	40,000	86,804	70,507	62,432	53,561	43,505	38,522	35,337	—	—	—
	60,000	76,862	62,432	55,281	47,427	38,522	34,110	31,290	—	—	—
	100,000	65,942	53,561	47,427	40,688	33,049	29,264	26,844	—	—	—
8-1/2 to 9	10,000	93,722	76,126	67,407	57,829	46,972	41,592	38,153	—	—	—
	30,000	67,407	54,751	48,480	41,592	33,783	29,914	27,441	—	—	—
	40,000	61,833	50,224	44,472	38,153	30,990	27,441	25,172	—	—	—
	60,000	54,751	44,472	39,378	33,783	27,441	24,298	22,289	—	—	—
	100,000	46,972	38,153	33,783	28,983	23,542	20,845	19,122	—	—	—
9-1/2	10,000	122,559	99,549	88,147	75,623	61,425	54,390	49,893	—	—	—
	30,000	88,147	71,598	63,398	54,390	44,178	39,118	35,884	—	—	—
	40,000	80,859	65,678	58,155	49,893	40,525	35,884	32,917	—	—	—
	60,000	71,598	58,155	51,495	44,178	35,884	31,774	29,147	—	—	—
	100,000	61,425	49,893	44,178	37,901	30,785	27,259	25,006	—	—	—
10 to 10-1/2	10,000	124,361	101,013	89,444	76,735	62,328	55,190	50,626	—	—	—
	30,000	89,444	72,651	64,330	55,190	44,828	39,694	36,412	—	—	—
	40,000	82,048	66,644	59,011	50,626	41,121	36,412	33,401	—	—	—
	60,000	72,651	59,011	52,252	44,828	36,412	32,241	29,575	—	—	—
	100,000	62,328	50,626	44,828	38,459	31,238	27,660	25,373	—	—	—

Only the labyrinth seal (L seal) may be used to the right of the heavy line.

Applications in the light shaded cells may require a high temperature lubrication, consult Application Engineering at +1 864 297 4800.

* Safety Mount – E-dimensioned housing

Safety Mount family

IP and ISAF

Table 2

Size (in)	L_{10} life (h)	Equivalent radial load rating (lb) at various speeds (rpm)											
		1,800	2,000	2,200	2,600	2,750	3,000	3,400	3,800	4,500	5,300	5,600	6,000
4-7/16 to 4-1/2	10,000	15,131	14,661	—	—	—	—	—	—	—	—	—	—
	30,000	10,883	10,544	—	—	—	—	—	—	—	—	—	—
	40,000	9,983	9,672	—	—	—	—	—	—	—	—	—	—
	60,000	8,840	8,565	—	—	—	—	—	—	—	—	—	—
	100,000	7,584	7,348	—	—	—	—	—	—	—	—	—	—
4-15/16 to 5	10,000	21,036	—	—	—	—	—	—	—	—	—	—	—
	30,000	15,130	—	—	—	—	—	—	—	—	—	—	—
	40,000	13,879	—	—	—	—	—	—	—	—	—	—	—
	60,000	12,289	—	—	—	—	—	—	—	—	—	—	—
	100,000	10,543	—	—	—	—	—	—	—	—	—	—	—
5-7/16 to 5-1/2	10,000	—	—	—	—	—	—	—	—	—	—	—	—
	30,000	—	—	—	—	—	—	—	—	—	—	—	—
	40,000	—	—	—	—	—	—	—	—	—	—	—	—
	60,000	—	—	—	—	—	—	—	—	—	—	—	—
	100,000	—	—	—	—	—	—	—	—	—	—	—	—
5-15/16 to 6	10,000	—	—	—	—	—	—	—	—	—	—	—	—
	30,000	—	—	—	—	—	—	—	—	—	—	—	—
	40,000	—	—	—	—	—	—	—	—	—	—	—	—
	60,000	—	—	—	—	—	—	—	—	—	—	—	—
	100,000	—	—	—	—	—	—	—	—	—	—	—	—
6-7/16 to 7	10,000	—	—	—	—	—	—	—	—	—	—	—	—
	30,000	—	—	—	—	—	—	—	—	—	—	—	—
	40,000	—	—	—	—	—	—	—	—	—	—	—	—
	60,000	—	—	—	—	—	—	—	—	—	—	—	—
	100,000	—	—	—	—	—	—	—	—	—	—	—	—

Only the labyrinth seal (L seal) may be used to the right of the heavy line.

Applications in non-shaded cells may require a high temperature lubrication, consult Application Engineering at +1 864 297 4800.

* Safety Mount – E-dimensioned housing.

Safety Mount family

Vibration frequencies
Anti-friction mounted bearings

More and more manufacturing facilities are getting involved with plant-wide preventive maintenance programs. By monitoring vibration levels of motors, pumps, fans and compressors, maintenance supervisors can predict imminent failures.

Knowing that a piece of equipment is showing signs of potential failure permits scheduling of maintenance at an appropriate time and avoids the consequences of catastrophic failures. Shown in Tables are vibration frequencies generated by bearing components defects. All frequencies are based on unity inner ring or cone rotation.

How to use the tables

If a 2-7/16-inch pillow block bearing is rotating at a speed of 1,000 rpm, the vibration due to a failed component will show up at the frequencies listed in the corresponding size line in the table.

Frequency

Cup nick or spall = 1,000 x 9.251 = 9,251 rpm
Cone nick or spall = 1,000 x 11.749 = 11,749 rpm
*Roller nick or spall = 1,000 x 4.011 x 2 = 8,022 rpm
Cage (train) frequency (inner ring rotation) = 1,000 x 0.441 = 441 rpm

Since all the values in the tables are based on unity inner ring or cone rotation, the vibration due to flaws will show up at the frequencies obtained by multiplying the speed (rpm) times the factors found on the appropriate table. The resulting product will have units of rpm.

Safety Mount spherical roller bearing parameters for vibration analysis (1-RPS)

Basic bearing series	Safety Mount bore size (in)	Number of rollers	Mean diameter of rollers (in)	Pitch diameter (in)	Contact angle (°)	Outer ring frequency (Hz)	Inner ring frequency (Hz)	* Roller spin frequency (Hz)	Cage frequency (Hz)
22208	1-1/8—1-1/2	15	0.449	2.449	10.583	6.149	8.851	2.640	0.410
22209	1-5/8—1-3/4	17	0.429	2.665	9.750	7.151	9.849	3.027	0.421
22210	1-7/8—2	18	0.433	2.858	9.083	7.653	10.347	3.226	0.425
22211	2-3/16—2-1/4	19	0.465	3.189	8.750	8.132	10.868	3.361	0.428
22213	2-3/8—2-1/2	18	0.583	3.795	9.083	7.635	10.365	3.182	0.424
22215	2-11/16—3	20	0.575	4.197	8.250	8.645	11.355	3.584	0.432
22218	3-3/16—3-1/2	18	0.780	5.079	8.833	7.635	10.365	3.183	0.424
22220	3-11/16—4	18	0.878	5.705	9.000	7.632	10.368	3.174	0.424
22222	4-7/16—4-1/2	17	1.020	6.287	9.417	7.140	9.860	3.004	0.420
22226	4-15/16—5	18	1.118	7.307	9.750	7.643	10.357	3.193	0.425
22228	5-7/16—5-1/2	18	1.217	7.933	9.583	7.639	10.361	3.186	0.424
22232	5-15/16—6	18	1.409	9.189	9.667	7.639	10.361	3.185	0.424
22236	6-7/16—7	18	1.559	10.157	9.417	7.637	10.363	3.183	0.424
22240	7-3/16	19	1.614	11.021	10.833	8.133	10.867	3.343	0.428
22244	7-1/2—8	19	1.850	12.480	10.833	8.117	10.883	3.301	0.427
22248	8-7/16—9	29	1.142	12.008	9.333	13.140	15.860	5.213	0.453
23052	9-7/16—9-1/2	27	1.378	13.228	9.667	12.114	14.886	4.749	0.449
23056	9-15/16—10-1/2	28	1.378	13.976	9.333	12.636	15.362	5.023	0.451

Outer ring frequency = N x rpm x (1 - (Bd x cos a / Pd)) / 120
Inner ring frequency = N x rpm x (1 + (Bd x cos a / Pd)) / 120
Roller spin frequency = Pd x rpm x (1 - (Bd x cos a / Pd)^2) / (120 x Bd)
Cage frequency = rpm x (1 - (Bd x cos a / Pd)) / 120

Pd = Pitch diameter
N = Number of rollers
Bd = Roller diameter
a = Contact angle

* Roller spin frequencies are listed at one times roller spin frequency. For a thorough analysis, it is important to check frequency level at two times rotational speed of rollers, as this is the frequency that a single roller defect will contact the raceways of the bearing. In other words, a roller defect will strike both inner and outer ring in one revolution of the roller.

Reference Guide
Type E Family (Tapered)
Specialty Tapered
Safety Mount Family (Spherical)
S-2000 (Spherical)
Unified SAF (Spherical)
Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

Safety Mount family

IP

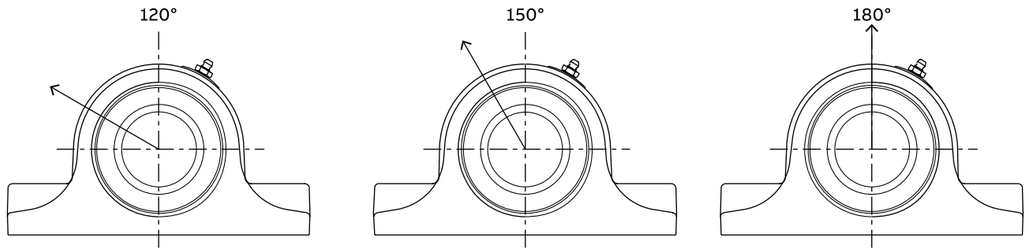


Table 3: IP 2-bolt pillow block housing ratings*

Bore size (in)	Maximum recommended housing cap load (lb)		
	120°	150°	180°
1-1/8—1-1/2	2,110	2,640	3,100
1-5/8—1-3/4	2,380	2,980	3,500
1-7/8—2	3,130	3,910	4,600
2-3/16—2-1/4	3,330	4,160	4,900
2-3/8—2-1/2	3,330	4,160	4,900
2-11/16—3	4,420	5,520	6,500
3-3/16—3-1/2	4,620	5,780	6,800
3-11/16—4	7,500	9,350	11,000

Table 4: IP 4-bolt pillow block housing ratings*

Bore size (in)	Maximum recommended housing cap load (lb)		
	120°	150°	180°
2-3/8—2-1/2	3,810	4,760	5,600
2-11/16—3	4,620	5,780	6,800
3-3/16—3-1/2	4,700	5,870	6,900
3-11/16—4	7,500	9,350	11,000
4-7/16—4-1/2	9,900	12,330	14,500
4-15/16	13,400	16,750	19,700

* When utilizing heavy cap loads on pillow block housings; the installation must adhere to the following procedures:
1. The pillow block base bolts must be of high strength (Grade 8 or Class 10.9) bolts and properly tightened to mounting structure.
2. Stop bars (shear strips) should be used against the plummer block where side loads are encountered.
3. In all cases where loads are heavy, the L_{10} life of the bearing should be checked for proper selection and life requirements.

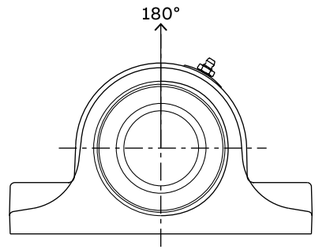


Table 5: IP-HD steel housing ratings*

Shaft sizes (in)	Series	Maximum recommended housing load (lb)	
		P2B	P4B
1-1/8 1-3/16 1-1/4 1-3/8 1-7/16 1-1/2	22208	24,400	—
1-1/2** 1-5/8 1-11/16 1-3/4	22209	26,400	—
1-3/4** 1-15/16 2	22210	30,200	—
2-3/16 2-1/4	22211	35,400	—
2-1/4** 2-3/8 2-7/16 2-1/2	22213	51,300	52,800
2-11/16 2-3/4 2-15/16 3	22215	59,700	60,000
3-3/16 3-1/4 3-7/16 3-1/2	22218	90,700	95,500
3-11/16 3-15/16 4	22220	—	115,000
4-7/16 4-1/2	22222	—	152,100
4-15/16 5	22226	—	188,200

* It is important to note that the values listed above are housing fracture loads from various applied directions.
These loads may exceed bearing, mounting bolt and/or shaft capacities.
Applications subject to heavy housing loads, particularly shock loads, must adhere to the following procedures:
1. The pillow block base bolts must be of high strength (Grade 8) bolts and properly tightened to mounting structure.
2. Stop bars (shear strips) should be used against the plummer block where side loads are encountered.
3. In all cases where loads are heavy, the L_{10} life of the bearing should be checked for proper selection and life requirements.
** Safety Mount – E-dimensioned housing.

Safety Mount family
ISAF

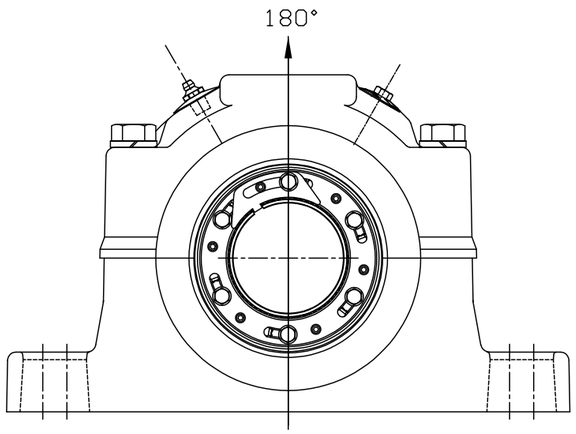


Table 6: Safety Mount ISAF housing rating*

Shaft size (in)	Maximum recommended housing Cap loads (lb)
	180°
1-1/8—1-1/2	4,600
1-5/8—1-3/4	5,400
1-7/8—2	7,875
2-3/16—2-1/4	9,200
2-3/8—2-1/2	9,220
2-11/16—3	10,200
3-3/8—3-1/2	14,700
3-11/16—4	17,800
4-7/16—4-1/2	18,300
4-15/16—5	22,300
5-7/16—5-1/2	25,100
5-15/16—6	30,200
6-7/16—7	35,300
7-3/16—10-1/2	50,000

* When utilizing heavy cap loads on pillow block housings; the installation must adhere to the following procedures:

1. The pillow block base bolts must be of high strength (Grade 8) bolts and properly tightened to mounting structure.
2. Stop bars (shear strips) should be used against the plummer block where side loads are encountered.
3. In all cases where loads are heavy, the L_{10} life of the bearing should be checked for proper selection and life requirements.

Safety Mount family
ISN

Table 7: ISN housing rating*

Bore size (mm)	Maximum recommended housing cap load (kN)		
	120°	150°	180°
507	9.4	11.7	13.8
508			
509	10.6	13.3	15.6
510			
511	13.9	17.4	20.5
512	14.8	18.5	21.8
513	14.8	18.5	21.8
515			
516	19.7	24.6	28.9
517			
518	20.6	25.7	30.2
519			
520	33.4	41.6	48.9
522			
524	44	54.8	64.5
526	59.6	74.5	87.6
528			
530	67.2	84.1	99.0
532	89.8	112.5	132.3

* When utilizing heavy cap loads on pillow block housings; the installation must adhere to the following procedures:

1. The pillow block base bolts must be of high strength (Grade 8 or Class 10.9) bolts and properly tightened to mounting structure.
2. Stop bars (shear strips) should be used against the plummer block where side loads are encountered.
3. In all cases where loads are heavy, the L_{10} life of the bearing should be checked for proper selection and life requirements.

Table 8: Definition of operating conditions for unitized spherical roller bearings

Low speed	Up to 20% of maximum speed (rpm) (Table 1 and/or Table 3)
Medium speed	Over 20% to 80% of maximum speed (rpm)
High speed	Over 80% of maximum speed (rpm)
Light load	Up to 8% of C (Table 1 and/or Table 3) – C = Dynamic capacity
Normal load	Over 8% to 18% of C
Heavy load	Over 18% of C
Low temperature	20 °F to -100 °F (-73 °C to -7 °C)
Medium temperature	Over 20 °F to 200 °F (over -7 °C to 93 °C)
High temperature	Over 200 °F to 250 °F (over 93 °C to 122 °C)

Table 9: ISN spherical roller bearings

Housing	Bearing series	Maximum allowable adapter thrust	Basic load ratings		e	$F_A/F_R \le e$		$F_A/F_R > e$		Max. rpm ★		
			Dynamic capacity (C)	Static capacity (C_0)		X_1	Y_1	X_2	Y_2	Trident seal	Labyrinth seal	Maximum expansion
		(kN)	(kN)	(kN)								
507	22208	2.7	101	94	0.28	1.0	2.4	0.67	3.6	3,975	6,000	3.18
508												
509	22209	3.1	104.1	105	0.26	1.0	2.6	0.67	3.9	3,725	5,600	3.18
510	22210	3.4	109	118	0.24	1.0	2.8	0.67	4.2	3,520	5,300	6.35
511												
512	22211	4.1	129	145	0.23	1.0	2.9	0.67	4.3	3,000	4,500	6.35
513	22213	6.0	200.2	216	0.24	1.0	2.8	0.67	4.2	2,400	3,800	6.35
515	22215	7.0	216.2	236	0.22	1.0	3.1	0.67	4.6	2,250	3,400	6.35
516												
517												
518	22218	10.8	345.2	363	0.23	1.0	2.9	0.67	4.3	1,825	2,600	6.35
519												
520	22220	13.8	427	463	0.24	1.0	2.8	0.67	4.2	1,530	2,200	7.94
522												
524	22222	17.5	547	587	0.25	1.0	2.7	0.67	4.0	1,325	2,000	9.53
526	22226	25.0	760.6	872	0.26	1.0	2.6	0.67	4.0	1,175	1,800	9.53
528												
530	22228	28.5	867.4	1050	0.25	1.0	2.7	0.67	4.0	1,100	1,700	9.53
532	22232	38.4	1147.6	1401	0.26	1.0	2.6	0.68	3.9	975	1,500	9.53
3134	22232	38.4	1147.6	1401	0.26	1.0	2.6	0.67	3.9	975	1,500	16.8
3136	22236	46.4	1356.7	1668	0.25	1.0	2.7	0.67	4.0	845	1,300	17.0
3138												

Refer to Table 10 for information on bearing calculations, including L_{10} life and loads.

★ Maximum grease speed is dependent on load and ambient conditions. Consult Application Engineering.

Safety Mount family
ISN

Table 10: ISN spherical roller bearing

Housing	L_{10} life (h)	Equivalent radial load rating (kN) at various speeds (rpm)																						
		50	100	150	250	500	750	1,000	1,300	1,500	1,700	1,800	2,000	2,200	2,600	2,750	3,000	3,400	3,800	4,500	5,300	5,600	6,000
507	10,000	36	30	26	22	18	16	15	14	13	13	12	12	12	11	11	11	10	10	9	9	9	9
	30,000	26	21	19	16	13	12	11	10	9	9	9	9	8	8	8	8	7	7	7	6	6	6
	40,000	24	20	17	15	12	11	10	9	9	8	8	8	8	7	7	7	7	7	6	6	6	6
	60,000	21	17	15	13	11	9	9	8	8	7	7	7	7	6	6	6	6	6	6	5	5	5
	100,000	18	15	13	11	9	8	7	7	7	6	6	6	6	6	5	5	5	5	5	5	4	4
508	10,000	36	30	26	22	18	16	15	14	13	13	12	12	12	11	11	11	10	10	9	9	9	9
	30,000	26	21	19	16	13	12	11	10	9	9	9	9	8	8	8	8	7	7	7	6	6	6
	40,000	24	20	17	15	12	11	10	9	9	8	8	8	8	7	7	7	7	7	6	6	6	6
	60,000	21	17	15	13	11	9	9	8	8	7	7	7	7	6	6	6	6	6	6	5	5	5
	100,000	18	15	13	11	9	8	7	7	7	6	6	6	6	6	5	5	5	5	5	5	4	4
509	10,000	38	30	27	23	19	17	15	14	14	13	13	12	12	11	11	11	11	10	10	9	9	—
	30,000	27	22	19	17	14	12	11	10	10	9	9	9	9	8	8	8	8	7	7	7	7	—
	40,000	25	20	18	15	12	11	10	9	9	9	8	8	8	8	7	7	7	7	6	6	6	—
	60,000	22	18	16	14	11	10	9	8	8	8	7	7	7	7	7	6	6	6	6	5	5	—
	100,000	19	15	14	12	9	8	8	7	7	7	6	6	6	6	6	6	5	5	5	5	5	—
510	10,000	39	32	28	24	20	17	16	15	14	14	13	13	13	12	12	12	11	11	10	10	—	—
	30,000	28	23	20	17	14	13	12	11	10	10	10	9	9	9	8	8	8	8	7	7	—	—
	40,000	26	21	19	16	13	12	11	10	9	9	9	9	8	8	8	8	7	7	7	6	—	—
	60,000	23	19	17	14	12	10	9	9	8	8	8	8	7	7	7	7	6	6	6	6	—	—
	100,000	20	16	14	12	10	9	8	7	7	7	7	7	6	6	6	6	6	5	5	5	—	—
511	10,000	46	38	33	29	23	21	19	17	17	16	16	15	15	14	14	14	13	13	12	—	—	—
	30,000	33	27	24	21	17	15	14	13	12	12	11	11	11	10	10	10	9	9	9	—	—	—
	40,000	31	25	22	19	15	14	12	12	11	11	10	10	10	9	9	9	9	8	8	—	—	—
	60,000	27	22	20	17	14	12	11	10	10	9	9	9	9	8	8	8	8	7	7	—	—	—
	100,000	23	19	17	14	12	10	9	9	8	8	8	8	7	7	7	7	7	6	6	—	—	—
512	10,000	72	59	52	45	36	32	29	27	26	25	25	24	23	22	22	21	20	20	—	—	—	—
	30,000	52	42	37	32	26	23	21	20	19	18	18	17	17	16	16	15	15	14	—	—	—	—
	40,000	48	39	34	29	24	21	19	18	17	17	16	16	15	15	14	14	13	13	—	—	—	—
	60,000	42	34	30	26	21	19	17	16	15	15	14	14	14	13	13	12	12	11	—	—	—	—
	100,000	36	29	26	22	18	16	15	14	13	13	12	12	12	11	11	11	10	10	—	—	—	—
513	10,000	78	63	56	48	39	35	32	29	28	27	27	26	25	24	23	23	22	—	—	—	—	—
	30,000	56	46	40	35	28	25	23	21	20	19	19	19	18	17	17	16	16	—	—	—	—	—
	40,000	51	42	37	32	26	23	21	19	19	18	18	17	17	16	15	15	14	—	—	—	—	—
	60,000	46	37	33	28	23	20	19	17	16	16	16	15	15	14	14	13	13	—	—	—	—	—
	100,000	39	32	28	24	20	17	16	15	14	14	13	13	13	12	12	11	11	—	—	—	—	—
515	10,000	78	63	56	48	39	35	32	29	28	27	27	26	25	24	23	23	22	—	—	—	—	—
	30,000	56	46	40	35	28	25	23	21	20	19	19	19	18	17	17	16	16	—	—	—	—	—
	40,000	51	42	37	32	26	23	21	19	19	18	18	17	17	16	15	15	14	—	—	—	—	—
	60,000	46	37	33	28	23	20	19	17	16	16	16	15	15	14	14	13	13	—	—	—	—	—
	100,000	39	32	28	24	20	17	16	15	14	14	13	13	13	12	12	11	11	—	—	—	—	—
516	10,000	78	63	56	48	39	35	32	29	28	27	27	26	25	24	23	23	22	—	—	—	—	—
	30,000	56	46	40	35	28	25	23	21	20	19	19	19	18	17	17	16	16	—	—	—	—	—
	40,000	51	42	37	32	26	23	21	19	19	18	18	17	17	16	15	15	14	—	—	—	—	—
	60,000	46	37	33	28	23	20	19	17	16	16	16	15	15	14	14	13	13	—	—	—	—	—
	100,000	39	32	28	24	20	17	16	15	14	14	13	13	13	12	12	11	11	—	—	—	—	—

Use the labyrinth (S) seal for applications to the right of the vertical line.
For applications in the dark shaded areas, the maximum load for the specific speed is shown. The load does not correspond to the L_{10} shown.
Applications in the light shaded areas may require high temperature lubrication. Please consult Application Engineering.

Safety Mount family
ISN

Table 10: ISN spherical roller bearing (continued)

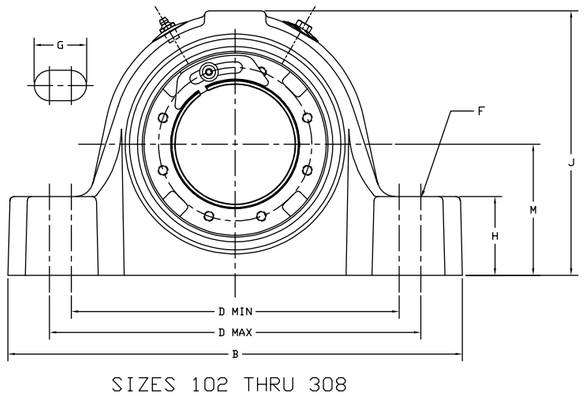
Housing	L_{10} life (h)	Equivalent radial load rating (kN) at various speeds (rpm)																						
		50	100	150	250	500	750	1,000	1,300	1,500	1,700	1,800	2,000	2,200	2,600	2,750	3,000	3,400	3,800	4,500	5,300	5,600	6,000
517	10,000	78	63	56	48	39	35	32	29	28	27	27	26	25	24	23	23	22	—	—	—	—	—
	30,000	56	46	40	35	28	25	23	21	20	19	19	19	18	17	17	16	16	—	—	—	—	—
	40,000	51	42	37	32	26	23	21	19	19	18	18	17	17	16	15	15	14	—	—	—	—	—
	60,000	46	37	33	28	23	20	19	17	16	16	16	15	15	14	14	13	13	—	—	—	—	—
	100,000	39	32	28	24	20	17	16	15	14	14	13	13	13	12	12	11	11	—	—	—	—	—
518	10,000	124	101	89	77	62	55	51	47	45	43	42	41	40	38	—	—	—	—	—	—	—	—
	30,000	89	73	64	55	45	40	36	34	32	31	31	30	29	27	—	—	—	—	—	—	—	—
	40,000	82	67	59	51	41	36	33	31	30	29	28	27	26	25	—	—	—	—	—	—	—	—
	60,000	73	59	52	45	36	32	30	27	26	25	25	24	23	22	—	—	—	—	—	—	—	—
	100,000	62	51	45	38	31	28	25	23	22	22	21	21	20	19	—	—	—	—	—	—	—	—
519	10,000	124	101	89	77	62	55	51	47	45	43	42	41	40	38	—	—	—	—	—	—	—	—
	30,000	89	73	64	55	45	40	36	34	32	31	31	30	29	27	—	—	—	—	—	—	—	—
	40,000	82	67	59	51	41	36	33	31	30	29	28	27	26	25	—	—	—	—	—	—	—	—
	60,000	73	59	52	45	36	32	30	27	26	25	25	24	23	22	—	—	—	—	—	—	—	—
	100,000	62	51	45	38	31	28	25	23	22	22	21	21	20	19	—	—	—	—	—	—	—	—
520	10,000	154	125	111	95	77	68	63	58	55	53	53	51	49	—	—	—	—	—	—	—	—	—
	30,000	111	90	80	68	55	49	45	42	40	38	38	37	36	—	—	—	—	—	—	—	—	—
	40,000	102	82	73	63	51	45	41	38	37	35	35	34	33	—	—	—	—	—	—	—	—	—
	60,000	90	73	65	55	45	40	37	34	32	31	31	30	29	—	—	—	—	—	—	—	—	—
	100,000	77	63	55	48	39	34	31	29	28	27	26	26	25	—	—	—	—	—	—	—	—	—
522	10,000	154	125	111	95	77	68	63	58	55	53	53	51	49	—	—	—	—	—	—	—	—	—
	30,000	111	90	80	68	55	49	45	42	40	38	38	37	36	—	—	—	—	—	—	—	—	—
	40,000	102	82	73	63	51	45	41	38	37	35	35	34	33	—	—	—	—	—	—	—	—	—
	60,000	90	73	65	55	45	40	37	34	32	31	31	30	29	—	—	—	—	—	—	—	—	—
	100,000	77	63	55	48	39	34	31	29	28	27	26	26	25	—	—	—	—	—	—	—	—	—
524	10,000	197	160	142	122	99	88	80	74	71	68	67	65	—	—	—	—	—	—	—	—	—	—
	30,000	142	115	102	88	71	63	58	53	51	49	48	47	—	—	—	—	—	—	—	—	—	—
	40,000	130	106	94	80	65	58	53	49	47	45	44	43	—	—	—	—	—	—	—	—	—	—
	60,000	115	94	83	71	58	51	47	43	42	40	39	38	—	—	—	—	—	—	—	—	—	—
	100,000	99	80	71	61	50	44	40	37	36	34	34	33	—	—	—	—	—	—	—	—	—	—
526	10,000	274	223	197	169	137	122	112	103	99	95	94	—	—	—	—	—	—	—	—	—	—	—
	30,000	197	160	142	122	99	88	80	74	71	68	67	—	—	—	—	—	—	—	—	—	—	—
	40,000	181	147	130	112	91	80	74	68	65	63	62	—	—	—	—	—	—	—	—	—	—	—
	60,000	160	130	115	99	80	71	65	60	58	56	55	—	—	—	—	—	—	—	—	—	—	—
	100,000	137	112	99	85	69	61	56	52	50	48	47	—	—	—	—	—	—	—	—	—	—	—
528	10,000	274	223	197	169	137	122	112	103	99	95	94	—	—	—	—	—	—	—	—	—	—	—
	30,000	197	160	142	122	99	88	80	74	71	68	67	—	—	—	—	—	—	—	—	—	—	—
	40,000	181	147	130	112	91	80	74	68	65	63	62	—	—	—	—	—	—	—	—	—	—	—
	60,000	160	130	115	99	80	71	65	60	58	56	55	—	—	—	—	—	—	—	—	—	—	—
	100,000	137	112	99	85	69	61	56	52	50	48	47	—	—	—	—	—	—	—	—	—	—	—
530	10,000	313	254	225	193	157	139	127	118	113	109	—	—	—	—	—	—	—	—	—	—	—	—
	30,000	225	183	162	139	113	100	92	85	81	78	—	—	—	—	—	—	—	—	—	—	—	—
	40,000	206	168	148	127	103	92	84	78	74	72	—	—	—	—	—	—	—	—	—	—	—	—
	60,000	183	148	131	113	92	81	74	69	66	63	—	—	—	—	—	—	—	—	—	—	—	—
	100,000	157	127	113	97	79	70	64	59	56	54	—	—	—	—	—	—	—	—	—	—	—	—
532	10,000	414	336	298	255	207	184	168	156	149	—	—	—	—	—	—	—	—	—	—	—	—	—
	30,000	298	242	214	184	149	132	121	112	107	—	—	—	—	—	—	—	—	—	—	—	—	—
	40,000	273	222	196	168	137	121	111	103	98	—	—	—	—	—	—	—	—	—	—	—	—	—
	60,000	242	196	174	149	121	107	98	91	87	—	—	—	—	—	—	—	—	—	—	—	—	—
	100,000	207	168	149	128	104	92	84	78	75	—	—	—	—	—	—	—	—	—	—	—	—	—

Use the labyrinth (S) seal for applications to the right of the vertical line.
For applications in the dark shaded areas, the maximum load for the specific speed is shown. The load does not correspond to the L_{10} shown.
Applications in the light shaded areas may require high temperature lubrication. Please consult Application Engineering.

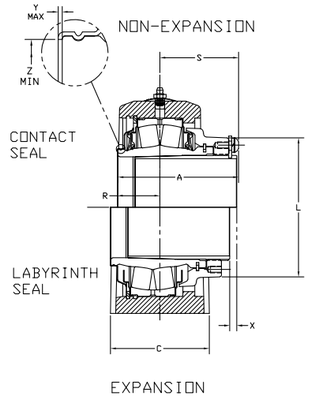
Dimensions

IP pillow block – inch

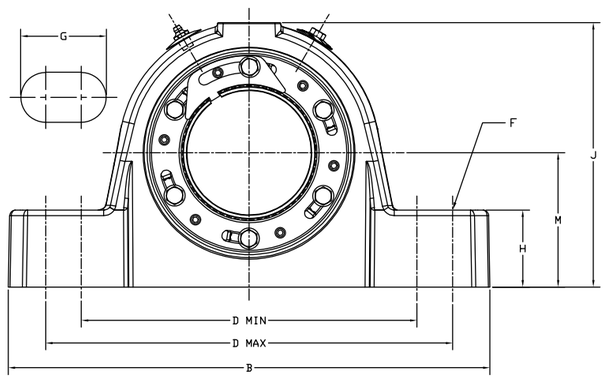
2-bolt



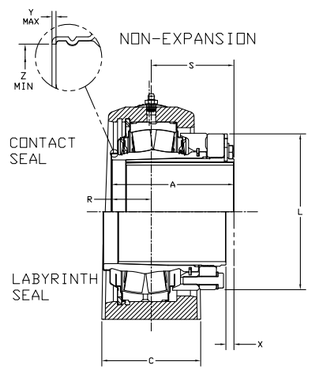
SIZES 102 THRU 308



EXPANSION



SIZES 311 THRU 400



EXPANSION

IP pillow block – inch

2-bolt

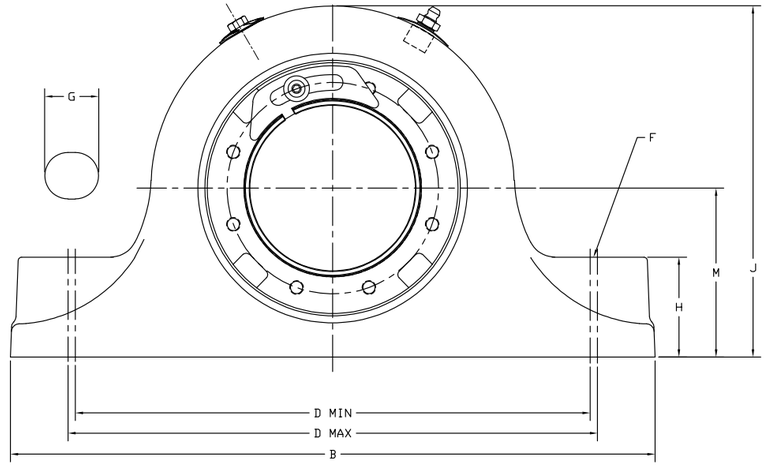
Bearing series	Shaft size	Trident seal				Labyrinth seal			
		Non-expansion		Expansion		Non-expansion		Expansion	
		Part number	Description	Part number	Description	Part number	Description	Part number	Description
22208	1-1/8	069400	P2B-IP-102R	069428	P2B-IP-102RE	069456	P2B-IP-102L	069484	P2B-IP-102LE
	1-3/16	069401	P2B-IP-103R	069429	P2B-IP-103RE	069457	P2B-IP-103L	069485	P2B-IP-103LE
	1-1/4	069402	P2B-IP-104R	069430	P2B-IP-104RE	069458	P2B-IP-104L	069486	P2B-IP-104LE
	1-3/8	069403	P2B-IP-106R	069431	P2B-IP-106RE	069459	P2B-IP-106L	069487	P2B-IP-106LE
	1-7/16	069404	P2B-IP-107R	069432	P2B-IP-107RE	069460	P2B-IP-107L	069488	P2B-IP-107LE
	1-1/2	069405	P2B-IP-108R	069433	P2B-IP-108RE	069461	P2B-IP-108L	069489	P2B-IP-108LE
22209	1- 5/8	069406	P2B-IP-110R	069434	P2B-IP-110RE	069462	P2B-IP-110L	069490	P2B-IP-110LE
	1-11/16	069407	P2B-IP-111R	069435	P2B-IP-111RE	069463	P2B-IP-111L	069491	P2B-IP-111LE
	1-3/4	069408	P2B-IP-112R	069436	P2B-IP-112RE	069464	P2B-IP-112L	069492	P2B-IP-112LE
22210	1-7/8	069409	P2B-IP-114R	069437	P2B-IP-114RE	069465	P2B-IP-114L	069493	P2B-IP-114LE
	1-15/16	069410	P2B-IP-115R	069438	P2B-IP-115RE	069466	P2B-IP-115L	069494	P2B-IP-115LE
	2	069411	P2B-IP-200R	069439	P2B-IP-200RE	069467	P2B-IP-200L	069495	P2B-IP-200LE
22211	2-3/16	069412	P2B-IP-203R	069440	P2B-IP-203RE	069468	P2B-IP-203L	069496	P2B-IP-203LE
	2 -1/4	069413	P2B-IP-204R	069441	P2B-IP-204RE	069469	P2B-IP-204L	069497	P2B-IP-204LE
22213	2-3/8	069414	P2B-IP-206R	069442	P2B-IP-206RE	069470	P2B-IP-206L	069498	P2B-IP-206LE
	2-7/16	069415	P2B-IP-207R	069443	P2B-IP-207RE	069471	P2B-IP-207L	069499	P2B-IP-207LE
	2-1/2	069416	P2B-IP-208R	069444	P2B-IP-208RE	069472	P2B-IP-208L	069500	P2B-IP-208LE
22215	2-11/16	069417	P2B-IP-211R	069445	P2B-IP-211RE	069473	P2B-IP-211L	069501	P2B-IP-211LE
	2-3/4	069418	P2B-IP-212R	069446	P2B-IP-212RE	069474	P2B-IP-212L	069502	P2B-IP-212LE
	2-15/16	069419	P2B-IP-215R	069447	P2B-IP-215RE	069475	P2B-IP-215L	069503	P2B-IP-215LE
	3	069420	P2B-IP-300R	069448	P2B-IP-300RE	069476	P2B-IP-300L	069504	P2B-IP-300LE
22218	3-3/16	069421	P2B-IP-303R	069449	P2B-IP-303RE	069477	P2B-IP-303L	069505	P2B-IP-303LE
	3-1/4	069422	P2B-IP-304R	069450	P2B-IP-304RE	069478	P2B-IP-304L	069506	P2B-IP-304LE
	3-7/16	069423	P2B-IP-307R	069451	P2B-IP-307RE	069479	P2B-IP-307L	069507	P2B-IP-307LE
	3-1/2	069424	P2B-IP-308R	069452	P2B-IP-308RE	069480	P2B-IP-308L	069508	P2B-IP-308LE
22220*	3-11/16	069425	P2B-IP-311R	069453	P2B-IP-311RE	069481	P2B-IP-311L	069509	P2B-IP-311LE
	3-15/16	069426	P2B-IP-315R	069454	P2B-IP-315RE	069482	P2B-IP-315L	069510	P2B-IP-315LE
	4	069427	P2B-IP-400R	069455	P2B-IP-400RE	069483	P2B-IP-400L	069511	P2B-IP-400LE

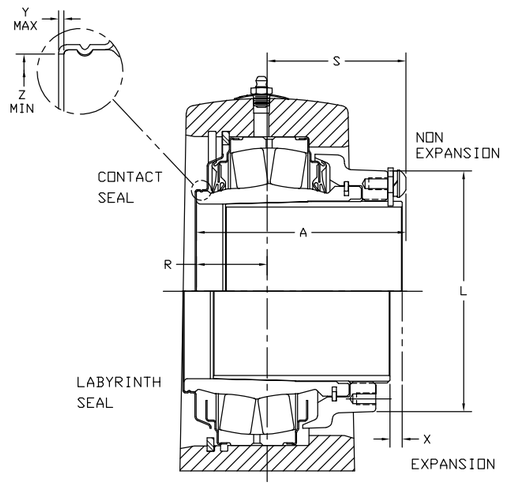
Consult Dodge for sizes not listed.

Shaft size	A	B	C	D		F	G	H	J	L	M	R	S	X total exp.	Y	Z
				Min.	Max.	bolt dia.										
1-1/8 1-3/16 1-1/4 1-3/8 1-7/16 1-1/2	2.63	6.80	1.95	4.81	5.20	1/2	0.81	1.13	3.88	2.72	1.88	0.88	1.75	3/16	0.02	1.80
1- 5/8 1-11/16 1-3/4	2.81	7.38	2.06	5.31	5.70	1/2	0.81	1.25	4.27	3.00	2.13	0.81	2.00	1/4	0.02	2.08
1-7/8 1-15/16 2	2.86	8.38	2.50	6.06	6.44	5/8	0.95	1.31	4.56	3.28	2.25	0.86	2.00	1/4	0.02	2.30
2-3/16 2 -1/4	3.03	8.88	2.63	6.56	6.94	5/8	0.95	1.50	5.00	3.50	2.50	0.91	2.13	1/4	0.03	2.60
2-3/8 2 -7/16 2-1/2	3.42	9.25	2.86	6.94	7.31	5/8	0.95	1.63	5.59	3.88	2.75	1.20	2.22	1/4	0.03	2.95
2-11/16 2-3/4 2-15/16 3	3.50	10.44	3.08	7.94	8.31	3/4	1.06	1.88	6.38	4.28	3.25	1.23	2.27	1/4	0.03	3.47
3-3/16 3-1/4 3-7/16 3-1/2	4.17	13.00	3.42	9.38	10.63	7/8	1.63	2.25	7.50	5.00	3.75	1.48	2.69	1/4	0.03	4.05
3-11/16 3-15/16 4	4.70	15.25	3.91	10.63	12.80	1	2.25	2.44	8.38	5.56	4.25	1.64	3.06	5/16	0.03	4.50

IP pillow block – inch

2-bolt, E-dimensioned





IP pillow block – inch

2-bolt, E-dimensioned

Bearing series	Shaft size	Trident seal				Labyrinth seal			
		Part number	Description	Part number	Description	Part number	Description	Part number	Description
22208	1- 3/8	071120	EP2B-IP-106R	071141	EP2B-IP-106RE	071162	EP2B-IP-106L	071183	EP2B-IP-106LE
	1-7/16	071121	EP2B-IP-107R	071142	EP2B-IP-107RE	071163	EP2B-IP-107L	071184	EP2B-IP-107LE
22209	1-1/2	071122	EP2B-IP-108R	071143	EP2B-IP-108RE	071164	EP2B-IP-108L	071185	EP2B-IP-108LE
	1-5/8	071123	EP2B-IP-110R	071144	EP2B-IP-110RE	071165	EP2B-IP-110L	071186	EP2B-IP-110LE
	1-11/16	071124	EP2B-IP-111R	071145	EP2B-IP-111RE	071166	EP2B-IP-111L	071187	EP2B-IP-111LE
22210	1-3/4	071125	EP2B-IP-112R	071146	EP2B-IP-112RE	071167	EP2B-IP-112L	071188	EP2B-IP-112LE
	1-7/8	071126	EP2B-IP-114R	071147	EP2B-IP-114RE	071168	EP2B-IP-114L	071189	EP2B-IP-114LE
	1-15/16	071127	EP2B-IP-115R	071148	EP2B-IP-115RE	071169	EP2B-IP-115L	071190	EP2B-IP-115LE
	2	071128	EP2B-IP-200R	071149	EP2B-IP-200RE	071170	EP2B-IP-200L	071191	EP2B-IP-200LE
22211	2-3/16	071129	EP2B-IP-203R	071150	EP2B-IP-203RE	071171	EP2B-IP-203L	071192	EP2B-IP-203LE
22213	2-1/4	071130	EP2B-IP-204R	071151	EP2B-IP-204RE	071172	EP2B-IP-204L	071193	EP2B-IP-204LE
	2-7/16	071131	EP2B-IP-207R	071152	EP2B-IP-207RE	071173	EP2B-IP-207L	071194	EP2B-IP-207LE
	2-1/2	071132	EP2B-IP-208R	071153	EP2B-IP-208RE	071174	EP2B-IP-208L	071195	EP2B-IP-208LE
22215	2-11/16	071133	EP2B-IP-211R	071154	EP2B-IP-211RE	071175	EP2B-IP-211L	071196	EP2B-IP-211LE
	2-3/4	071134	EP2B-IP-212R	071155	EP2B-IP-212RE	071176	EP2B-IP-212L	071197	EP2B-IP-212LE
	2-15/16	071135	EP2B-IP-215R	071156	EP2B-IP-215RE	071177	EP2B-IP-215L	071198	EP2B-IP-215LE
	3	071136	EP2B-IP-300R	071157	EP2B-IP-300RE	071178	EP2B-IP-300L	071199	EP2B-IP-300LE
22218	3-3/16	071137	EP2B-IP-303R	071158	EP2B-IP-303RE	071179	EP2B-IP-303L	071200	EP2B-IP-303LE
	3-1/4	071138	EP2B-IP-304R	071159	EP2B-IP-304RE	071180	EP2B-IP-304L	071201	EP2B-IP-304LE
	3-7/16	071139	EP2B-IP-307R	071160	EP2B-IP-307RE	071181	EP2B-IP-307L	071202	EP2B-IP-307LE
	3-1/2	071140	EP2B-IP-308R	071161	EP2B-IP-308RE	071182	EP2B-IP-308L	071203	EP2B-IP-308LE

Consult Dodge for sizes not listed.

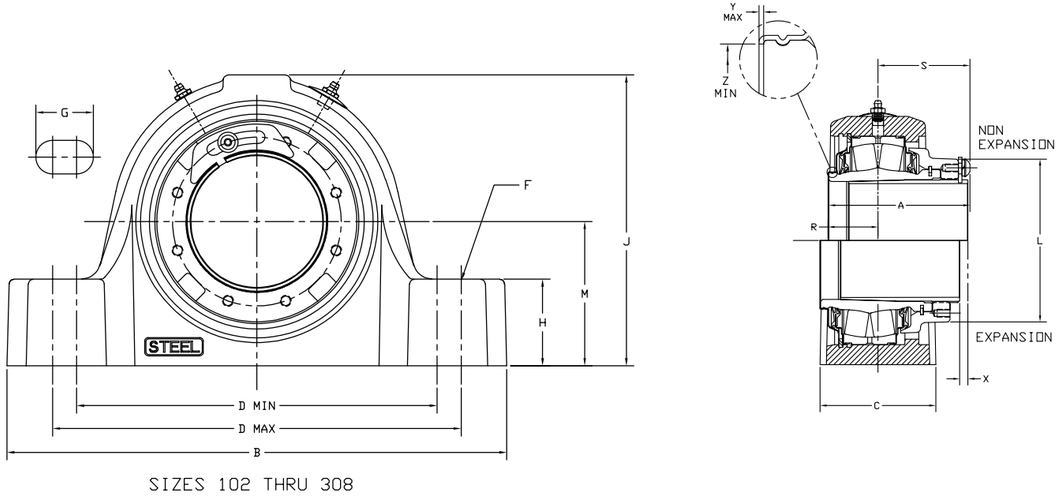
Shaft size	A	B #	C #	D		F bolt dia.	G #	H #	J #	L	M	R	S	X total exp.	Y	Z
				Min.	Max.											
1-3/8	2.63	7.37	2.12	5.63	5.88	1/2	0.75	1.13	3.85	2.72	1.875	1.04	1.59	5/32	0.02	1.80
1-7/16																
1-1/2	2.81	7.88	2.38	6.13	6.38	1/2	0.75	1.25	4.25	3.00	2.125	0.98	1.83	3/16	0.02	2.08
1-5/8																
1-11/16																
1-3/4	2.86	8.87	2.49	6.88	7.12	5/8	0.88	1.31	4.47	3.28	2.250	1.10	1.76	7/32	0.02	2.30
1-7/8																
1-15/16																
2																
2-3/16	3.03	9.62	2.56	7.63	7.88	5/8	0.88	1.50	5.00	3.50	2.500	1.06	1.97	1/4	0.025	2.60
2-1/4	3.42	10.50	2.87	8.38	8.62	5/8	0.88	1.63	5.71	3.88	2.750	1.20	2.22	1/4	0.025	2.95
2-7/16																
2-1/2																
2-11/16	3.50	12.00	2.99	9.31	9.69	3/4	1.07	1.88	6.32	4.28	3.125	1.35	2.15	1/4	0.025	3.47
2-3/4																
2-15/16																
3																
3-3/16	4.17	14.00	3.49	10.81	11.19	7/8	1.19	2.25	7.69	5.00	3.750	1.51	2.66	1/4	0.025	4.05
3-1/4																
3-7/16																
3-1/2																

"A" and "R" dimensions do not include "Y" dimension.
Reference dimension only.

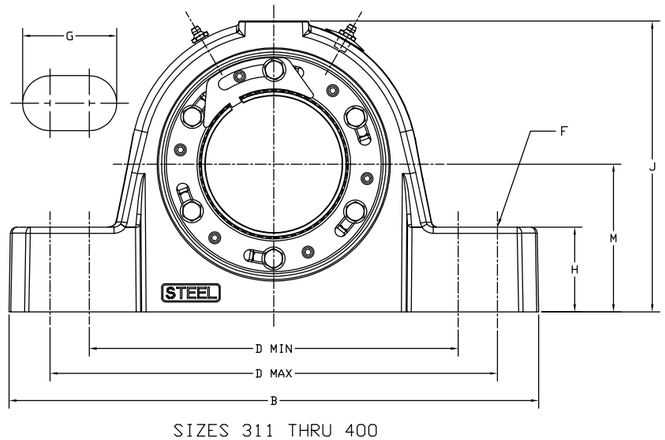
Reference Guide
Type E Family (Tapered)
Specialty Tapered
Safety Mount Family (Spherical)
S-2000 (Spherical)
Unified SAF (Spherical)
Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

IP pillow block – inch

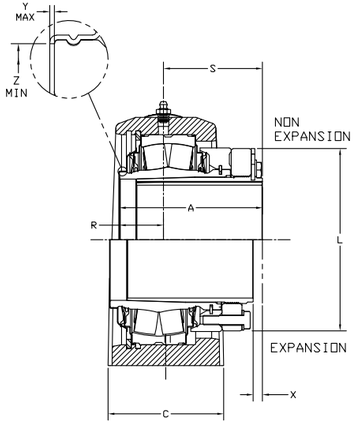
2-bolt, steel (HD)



SIZES 102 THRU 308



SIZES 311 THRU 400



Reference Guide
Type E Family (Tapered)
Specialty Tapered
Safety Mount Family (Spherical)
S-2000 (Spherical)
Unified SAF (Spherical)
Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

IP pillow block – inch

2-bolt, steel (HD)

Non-expansion

Shaft size	Part number	Description
1-1/8	071650	SP2B-IP-102R
1-3/16	071651	SP2B-IP-103R
1-1/4	071652	SP2B-IP-104R
1-3/8	071653	SP2B-IP-106R
1-7/16	071654	SP2B-IP-107R
1-1/2	071655	SP2B-IP-108R
1-5/8	071656	SP2B-IP-110R
1-11/16	071657	SP2B-IP-111R
1-3/4	071658	SP2B-IP-112R
1-7/8	071659	SP2B-IP-114R
1-15/16	071660	SP2B-IP-115R
2	071661	SP2B-IP-200R
2-3/16	071662	SP2B-IP-203R
2-1/4	071663	SP2B-IP-204R
2-3/8	071664	SP2B-IP-206R
2-7/16	071665	SP2B-IP-207R
2-1/2	071666	SP2B-IP-208R
2-11/16	071667	SP2B-IP-211R
2-3/4	071668	SP2B-IP-212R
2-15/16	071669	SP2B-IP-215R
3	071670	SP2B-IP-300R
3-3/16	071671	SP2B-IP-303R
3-1/4	071672	SP2B-IP-304R
3-7/16	071673	SP2B-IP-307R
3-1/2	071674	SP2B-IP-308R
3-11/16	071675	SP2B-IP-311R
3-15/16	071676	SP2B-IP-315R
4	071677	SP2B-IP-400R

Expansion

Shaft size	Part number	Description
1-1/8	071678	SP2B-IP-102RE
1-3/16	071679	SP2B-IP-103RE
1-1/4	071680	SP2B-IP-104RE
1-3/8	071681	SP2B-IP-106RE
1-7/16	071682	SP2B-IP-107RE
1-1/2	071683	SP2B-IP-108RE
1-5/8	071684	SP2B-IP-110RE
1-11/16	071685	SP2B-IP-111RE
1-3/4	071686	SP2B-IP-112RE
1-7/8	071687	SP2B-IP-114RE
1-15/16	071688	SP2B-IP-115RE
2	071689	SP2B-IP-200RE
2-3/16	071690	SP2B-IP-203RE
2-1/4	071691	SP2B-IP-204RE
2-3/8	071692	SP2B-IP-206RE
2-7/16	071693	SP2B-IP-207RE
2-1/2	071694	SP2B-IP-208RE
2-11/16	071695	SP2B-IP-211RE
2-3/4	071696	SP2B-IP-212RE
2-15/16	071697	SP2B-IP-215RE
3	071698	SP2B-IP-300RE
3-3/16	071699	SP2B-IP-303RE
3-1/4	071700	SP2B-IP-304RE
3-7/16	071701	SP2B-IP-307RE
3-1/2	071702	SP2B-IP-308RE
3-11/16	071703	SP2B-IP-311RE
3-15/16	071704	SP2B-IP-315RE
4	071705	SP2B-IP-400RE

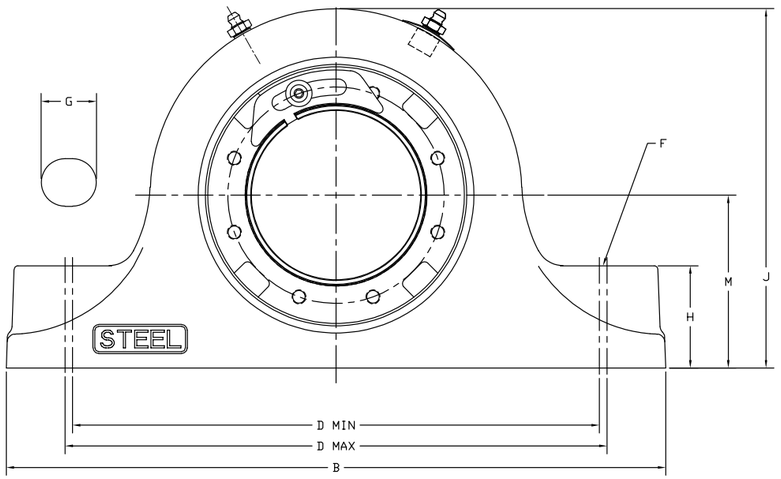
Consult Dodge for sizes not listed.

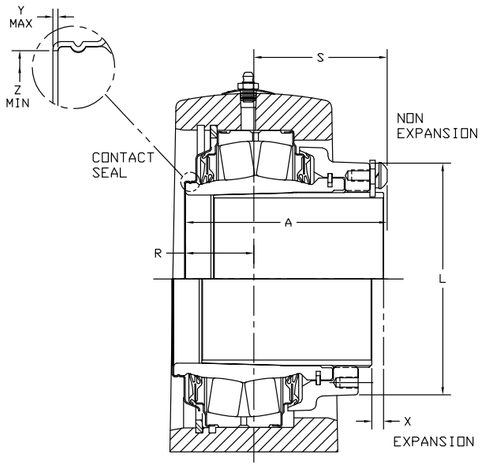
Shaft size	A	B	C	D Min.	D Max.	F bolt dia.	G	H	J	L	M	R	S	X total exp.	Y	Z
1-1/8 1-3/16 1-1/4 1-3/8 1-7/16 1-1/2	2.63	6.88	2.25	4.69	6.00	1/2	1.28	1.12	3.88	2.72	1.88	0.86	1.77	3/16	0.02	1.80
1-5/8 1-11/16 1-3/4	2.81	7.13	2.37	5.25	5.75	1/2	0.87	1.25	4.27	3.00	2.12	0.92	1.89	1/4	0.02	2.09
1-7/8 1-15/16 2	2.86	8.38	2.44	5.93	6.36	5/8	0.97	1.31	4.56	3.28	2.25	0.90	1.96	1/4	0.02	2.30
2-3/16 2-1/4	3.03	8.88	2.50	6.50	7.06	5/8	1.04	1.50	5.00	3.50	2.50	0.99	2.04	1/4	0.03	2.60
2-3/8 2-7/16 2-1/2	3.42	9.25	2.90	6.81	7.43	5/8	1.07	1.62	5.59	3.88	2.75	1.17	2.25	1/4	0.03	2.95
2-11/16 2-3/4 2-15/16 3	3.50	10.44	2.91	7.70	8.40	3/4	1.23	1.88	6.38	4.28	3.25	1.12	2.37	1/4	0.03	3.47
3-3/16 3-1/4 3-7/16 3-1/2	4.17	13.00	3.42	9.25	10.75	7/8	1.75	2.25	7.50	5.00	3.75	1.53	2.63	1/4	0.03	4.05
3-11/16 3-15/16 4	4.70	14.25	3.89	10.04	12.60	1	2.40	2.44	8.38	6.15	4.25	1.70	3.00	5/16	0.03	4.51

"A" and "R" dimensions do not include "Y" dimension.

IP pillow block – inch

2-bolt, E-dimensioned steel (HD)





IP pillow block – inch

2-bolt, E-dimensioned steel (HD)

Non-expansion*

Shaft size	Part number	Description
1-3/8	071864	SEP2B-IP-106R
1-7/16	071865	SEP2B-IP-107R
1-1/2	071866	SEP2B-IP-108R
1-5/8	071867	SEP2B-IP-110R
1-11/16	071868	SEP2B-IP-111R
1-3/4	071869	SEP2B-IP-112R
1-7/8	071870	SEP2B-IP-114R
1-15/16	071871	SEP2B-IP-115R
2	071872	SEP2B-IP-200R
2-3/16	071873	SEP2B-IP-203R
2-1/4	071874	SEP2B-IP-204R
2-7/16	071875	SEP2B-IP-207R
2-1/2	071876	SEP2B-IP-208R
2-11/16	071877	SEP2B-IP-211R
2-3/4	071878	SEP2B-IP-212R
2-15/16	071879	SEP2B-IP-215R
3	071880	SEP2B-IP-300R
3-3/16	071881	SEP2B-IP-303R
3-1/4	071882	SEP2B-IP-304R
3-7/16	071883	SEP2B-IP-307R
3-1/2	071884	SEP2B-IP-308R

Expansion

Shaft size	Part number	Description
1-3/8	071885	SEP2B-IP-106RE
1-7/16	071886	SEP2B-IP-107RE
1-1/2	071887	SEP2B-IP-108RE
1-5/8	071888	SEP2B-IP-110RE
1-11/16	071889	SEP2B-IP-111RE
1-3/4	071890	SEP2B-IP-112RE
1-7/8	071891	SEP2B-IP-114RE
1-15/16	071892	SEP2B-IP-115RE
2	071893	SEP2B-IP-200RE
2-3/16	071894	SEP2B-IP-203RE
2-1/4	071895	SEP2B-IP-204RE
2-7/16	071896	SEP2B-IP-207RE
2-1/2	071897	SEP2B-IP-208RE
2-11/16	071898	SEP2B-IP-211RE
2-3/4	071899	SEP2B-IP-212RE
2-15/16	071900	SEP2B-IP-215RE
3	071901	SEP2B-IP-300RE
3-3/16	071902	SEP2B-IP-303RE
3-1/4	071903	SEP2B-IP-304RE
3-7/16	071904	SEP2B-IP-307RE
3-1/2	071905	SEP2B-IP-308RE

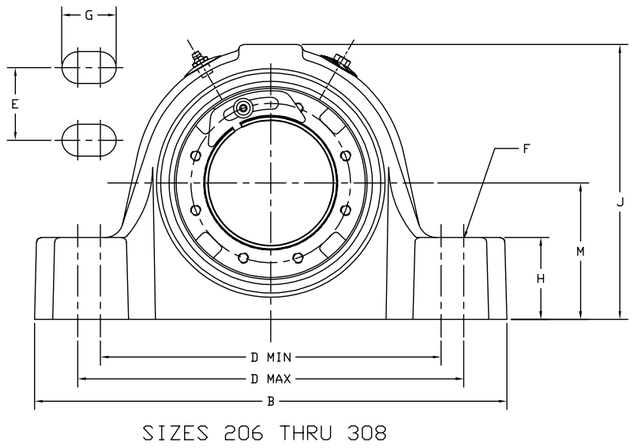
* Consult Dodge for sizes not listed.

Shaft size	A	B	C	D Min.	D Max.	F bolt dia.	G	H	J	L	M	R	S	X total exp.	Y	Z
1-3/8	2.63	6.88	2.25	4.69	5.88	1/2	1.22	1.13	3.85	2.72	1.875	1.04	1.59	5/32	0.02	1.80
1-7/16																
1-1/2	2.81	7.88	2.38	5.70	6.50	1/2	1.02	1.25	4.25	3.00	2.125	0.96	1.83	3/16	0.02	2.08
1-5/8																
1-11/16																
1-3/4	2.86	8.87	2.44	6.00	7.12	5/8	1.32	1.31	4.47	3.28	2.250	1.10	1.76	3/32	0.02	2.30
1-7/8																
1-15/16																
2																
2-3/16	3.03	9.62	2.50	6.50	7.88	5/8	1.45	1.50	5.00	3.50	2.500	1.06	1.97	1/4	0.03	2.60
2-1/4	3.42	10.25	2.90	6.88	8.62	5/8	1.63	1.63	5.71	3.88	2.75	1.20	2.22	1/4	0.03	2.95
2-7/16																
2-1/2																
2-11/16	3.50	11.63	2.91	7.88	9.62	3/4	1.75	1.88	6.32	4.28	3.125	1.35	2.15	1/4	0.03	3.47
2-3/4																
2-15/16																
3																
3-3/16	4.17	13.5	3.41	9.38	11.25	7/8	1.94	2.25	7.69	5.00	3.75	1.51	2.66	1/4	0.03	4.05
3-1/4																
3-7/16																
3-1/2																

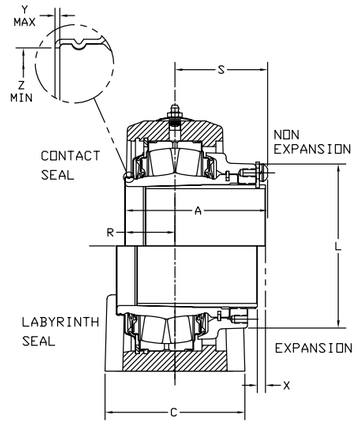
"A" and "R" dimensions do not include "Y" dimension.

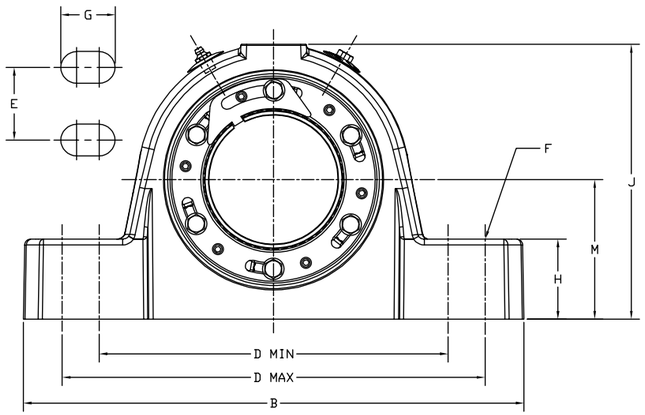
IP pillow block – inch

4-bolt

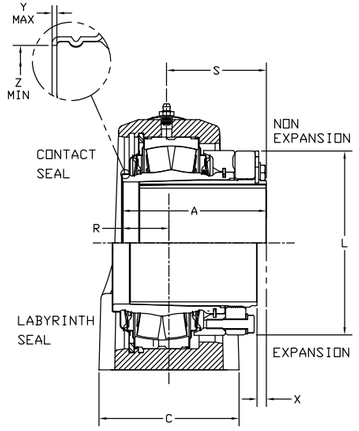


SIZES 206 THRU 308





SIZES 311 THRU 500



IP pillow block – inch

4-bolt

Bearing series	Shaft size	Trident seal				Labyrinth seal			
		Non-expansion		Expansion		Non-expansion		Expansion	
		Part number	Description	Part number	Description	Part number	Description	Part number	Description
22213	2-3/8	069520	P4B-IP-206R	069538	P4B-IP-206RE	069556	P4B-IP-206L	069574	P4B-IP-206LE
	2-7/16	069521	P4B-IP-207R	069539	P4B-IP-207RE	069557	P4B-IP-207L	069575	P4B-IP-207LE
	2-1/2	069522	P4B-IP-208R	069540	P4B-IP-208RE	069558	P4B-IP-208L	069576	P4B-IP-208LE
22215	2-11/16	069523	P4B-IP-211R	069541	P4B-IP-211RE	069559	P4B-IP-211L	069577	P4B-IP-211LE
	2-3/4	069524	P4B-IP-212R	069542	P4B-IP-212RE	069560	P4B-IP-212L	069578	P4B-IP-212LE
	2-15/16	069525	P4B-IP-215R	069543	P4B-IP-215RE	069561	P4B-IP-215L	069579	P4B-IP-215LE
	3	069526	P4B-IP-300R	069544	P4B-IP-300RE	069562	P4B-IP-300L	069580	P4B-IP-300LE
22218	3-3/16	069527	P4B-IP-303R	069545	P4B-IP-303RE	069563	P4B-IP-303L	069581	P4B-IP-303LE
	3-1/4	069528	P4B-IP-304R	069546	P4B-IP-304RE	069564	P4B-IP-304L	069582	P4B-IP-304LE
	3-7/16	069529	P4B-IP-307R	069547	P4B-IP-307RE	069565	P4B-IP-307L	069583	P4B-IP-307LE
	3-1/2	069530	P4B-IP-308R	069548	P4B-IP-308RE	069566	P4B-IP-308L	069584	P4B-IP-308LE
22220	3-11/16	069531	P4B-IP-311R	069549	P4B-IP-311RE	069567	P4B-IP-311L	069585	P4B-IP-311LE
	3-15/16	069532	P4B-IP-315R	069550	P4B-IP-315RE	069568	P4B-IP-315L	069586	P4B-IP-315LE
	4	069533	P4B-IP-400R	069551	P4B-IP-400RE	069569	P4B-IP-400L	069587	P4B-IP-400LE
22222	4-7/16	069534	P4B-IP-407R	069552	P4B-IP-407RE	069570	P4B-IP-407L	069588	P4B-IP-407LE
	4-1/2	069535	P4B-IP-408R	069553	P4B-IP-408RE	069571	P4B-IP-408L	069589	P4B-IP-408LE
22226	4-15/16	069536	P4B-IP-415R	069554	P4B-IP-415RE	069572	P4B-IP-415L	069590	P4B-IP-415LE
	5	069537	P4B-IP-500R	069555	P4B-IP-500RE	069573	P4B-IP-500L	069591	P4B-IP-500LE

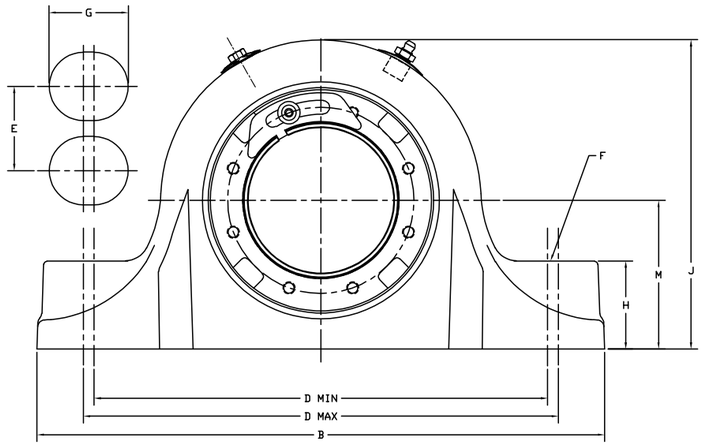
Consult Dodge for sizes not listed.

Shaft size	A	B	C	D		E	F bolt dia.	G	H	J	L	M	R	S	X total exp.	Y	Z
				Min.	Max.												
2-3/8																	
2-7/16	3.42	9.25	3.28	6.94	7.31	1.75	1/2	0.81	1.63	5.59	3.88	2.75	1.08	2.34	1/4	0.03	2.94
2-1/2																	
2-11/16																	
2-3/4	3.50	10.44	3.75	7.94	8.31	1.88	5/8	0.94	1.88	6.44	4.28	3.25	1.09	2.41	1/4	0.03	3.47
2-15/16																	
3																	
3-3/16																	
3-1/4	4.17	13.00	4.13	9.38	10.63	2.00	3/4	1.50	2.25	7.56	5.00	3.75	1.44	2.73	1/4	0.03	4.05
3-7/16																	
3-1/2																	
3-11/16																	
3-15/16	4.70	15.25	4.50	12.12	12.88	2.25	3/4	1.25	2.44	8.44	6.15	4.25	1.65	3.06	5/16	0.03	4.50
4																	
4-7/16	5.23	16.50	4.75	13.00	14.00	2.50	3/4	1.38	2.75	9.63	6.93	4.75	1.75	3.48	3/8	0.04	5.00
4-1/2																	
4-15/16	5.98	18.62	5.38	15.00	16.00	2.75	7/8	1.50	3.00	11.12	8.03	5.50	1.91	4.08	3/8	0.04	5.84
5																	

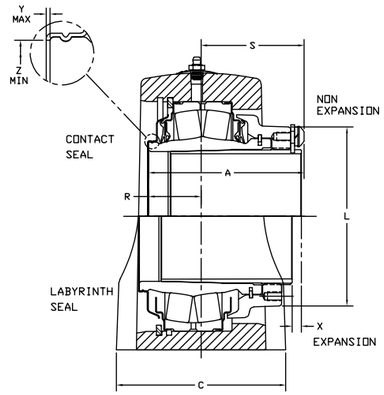
"A" and "R" dimensions do not include "Y" dimension.

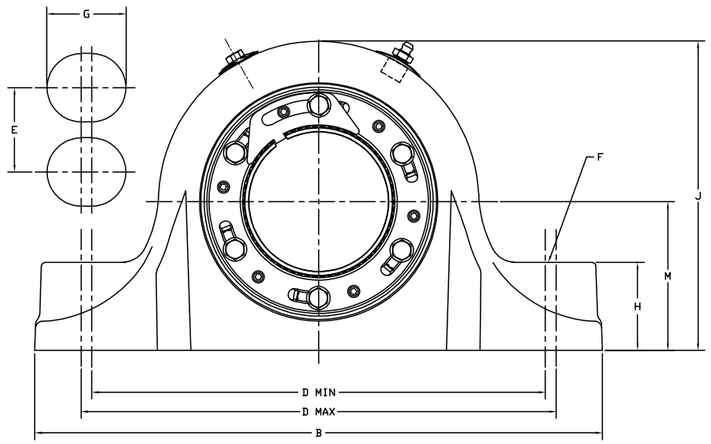
IP pillow block – inch

4-bolt, E-dimensioned

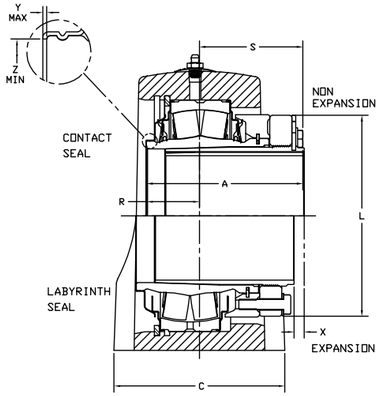


SIZES 204 THRU 308





SIZES 315 THRU 700



IP pillow block – inch

4-bolt, E-dimensioned

Bearing series	Shaft size	Trident seal				Labyrinth seal			
		Non-expansion		Expansion		Non-expansion		Expansion	
		Part number	Description	Part number	Description	Part number	Description	Part number	Description
22213	2-1/4	071204	EP4B-IP-204R	071221	EP4B-IP-204RE	071238	EP4B-IP-204L	071255	EP4B-IP-204LE
	2-7/16	071205	EP4B-IP-207R	071222	EP4B-IP-207RE	071239	EP4B-IP-207L	071256	EP4B-IP-207LE
	2-1/2	071206	EP4B-IP-208R	071223	EP4B-IP-208RE	071240	EP4B-IP-208L	071257	EP4B-IP-208LE
22215	2-11/16	071207	EP4B-IP-211R	071224	EP4B-IP-211RE	071241	EP4B-IP-211L	071258	EP4B-IP-211LE
	2-3/4	071208	EP4B-IP-212R	071225	EP4B-IP-212RE	071242	EP4B-IP-212L	071259	EP4B-IP-212LE
	2-15/16	071209	EP4B-IP-215R	071226	EP4B-IP-215RE	071243	EP4B-IP-215L	071260	EP4B-IP-215LE
	3	071210	EP4B-IP-300R	071227	EP4B-IP-300RE	071244	EP4B-IP-300L	071261	EP4B-IP-300LE
22218	3-3/16	071211	EP4B-IP-303R	071228	EP4B-IP-303RE	071245	EP4B-IP-303L	071262	EP4B-IP-303LE
	3-1/4	071212	EP4B-IP-304R	071229	EP4B-IP-304RE	071246	EP4B-IP-304L	071263	EP4B-IP-304LE
	3-7/16	071213	EP4B-IP-307R	071230	EP4B-IP-307RE	071247	EP4B-IP-307L	071264	EP4B-IP-307LE
	3-1/2	071214	EP4B-IP-308R	071231	EP4B-IP-308RE	071248	EP4B-IP-308L	071265	EP4B-IP-308LE
22220	3-15/16	071215	EP4B-IP-315R	071232	EP4B-IP-315RE	071249	EP4B-IP-315L	071266	EP4B-IP-315LE
	4	071216	EP4B-IP-400R	071233	EP4B-IP-400RE	071250	EP4B-IP-400L	071267	EP4B-IP-400LE
22222	4-7/16	071217	EP4B-IP-407R	071234	EP4B-IP-407RE	071251	EP4B-IP-407L	071268	EP4B-IP-407LE
	4-1/2	071218	EP4B-IP-408R	071235	EP4B-IP-408RE	071252	EP4B-IP-408L	071269	EP4B-IP-408LE
22226	4-15/16	071219	EP4B-IP-415R	071236	EP4B-IP-415RE	071253	EP4B-IP-415L	071270	EP4B-IP-415LE
	5	071220	EP4B-IP-500R	071237	EP4B-IP-500RE	071254	EP4B-IP-500L	071271	EP4B-IP-500LE
22228	5-7/16	071610	EP4B-IP-507R	071618	EP4B-IP-507RE	071626	EP4B-IP-507L	071634	EP4B-IP-507LE
	5-1/2	071611	EP4B-IP-508R	071619	EP4B-IP-508RE	071627	EP4B-IP-508L	071635	EP4B-IP-508LE
22232	5-15/16	071612	EP4B-IP-515R	071620	EP4B-IP-515RE	071628	EP4B-IP-515L	071636	EP4B-IP-515LE
	6	071613	EP4B-IP-600R	071621	EP4B-IP-600RE	071629	EP4B-IP-600L	071637	EP4B-IP-600LE
22236	6-7/16	071614	EP4B-IP-607R	071622	EP4B-IP-607RE	071630	EP4B-IP-607L	071638	EP4B-IP-607LE
	6-1/2	071615	EP4B-IP-608R	071623	EP4B-IP-608RE	071631	EP4B-IP-608L	071639	EP4B-IP-608LE
	6-15/16	071616	EP4B-IP-615R	071624	EP4B-IP-615RE	071632	EP4B-IP-615L	071640	EP4B-IP-615LE
	7	071617	EP4B-IP-700R	071625	EP4B-IP-700RE	071633	EP4B-IP-700L	071641	EP4B-IP-700LE

Consult Dodge for sizes not listed.

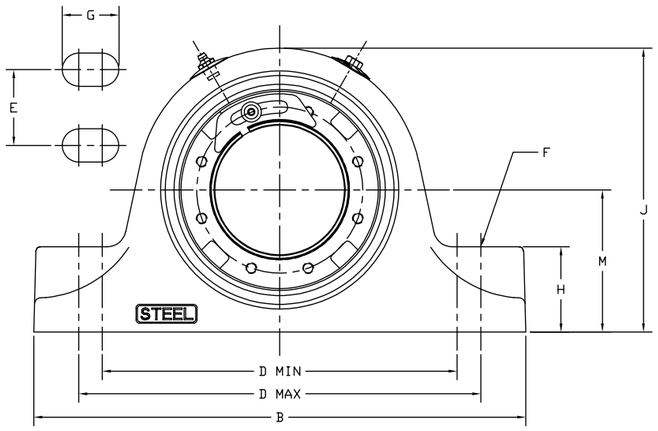
Shaft size	A	B #	C #	D		E	F bolt dia.	G #	H #	J #	L	M	R	S	X total exp.	Y	Z
				Min.	Max.												
2-1/4																	
2-7/16	3.42	10.50	3.49	8.31	8.69	1.87	5/8	0.87	1.63	5.72	3.88	2.75	1.21	2.21	1/4	0.03	2.94
2-1/2																	
2-11/16																	
2-3/4	3.50	12.00	4.00	9.18	9.82	2.13	5/8	1.00	1.88	6.33	4.28	3.125	1.35	2.15	1/4	0.03	3.47
2-15/16																	
3																	
3-3/16																	
3-1/4	4.17	13.50	4.49	10.75	11.25	2.37	3/4	1.13	2.25	7.69	5.00	3.75	1.54	2.67	1/4	0.03	4.05
3-7/16																	
3-1/2																	
3-15/16	4.70	15.25	4.50	12.25	12.75	2.25	3/4	1.13	2.44	8.70	5.56	4.25	1.35	3.35	5/16	0.03	4.50
4																	
4-7/16	5.23	16.63	4.63	13.25	13.75	2.50	3/4	1.13	2.75	9.67	6.44	4.75	1.82	3.41	3/8	0.04	5.00
4-1/2																	
4-15/16	5.98	18.50	5.13	15.25	15.75	2.87	7/8	1.25	3.00	11.16	7.63	5.50	1.93	4.05	3/8	0.04	5.84
5																	
5-7/16	6.17	22	6.25	17.38	19.12	3.75	1	2.00	3.25	13.19	8.75	6.69	1.39	4.77	3/8	0.04	5.92
5-1/2																	
5-15/16	7.08	22	6.25	17.38	19.12	3.75	1	2.00	3.25	13.19	10.25	6.69	2.66	4.42	3/8	0.04	7.02
6																	
6-7/16																	
6-1/2	7.39	26	7.12	21.25	23.25	4.62	1	2.00	3.69	14.94	11.41	7.50	2.46	4.94	23/64	0.04	7.89
6-15/16																	
7																	

"A" and "R" dimensions do not include "Y" dimension.

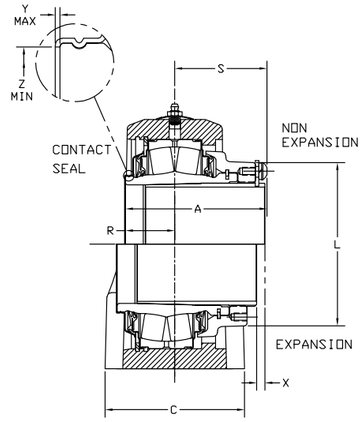
Reference dimension only.

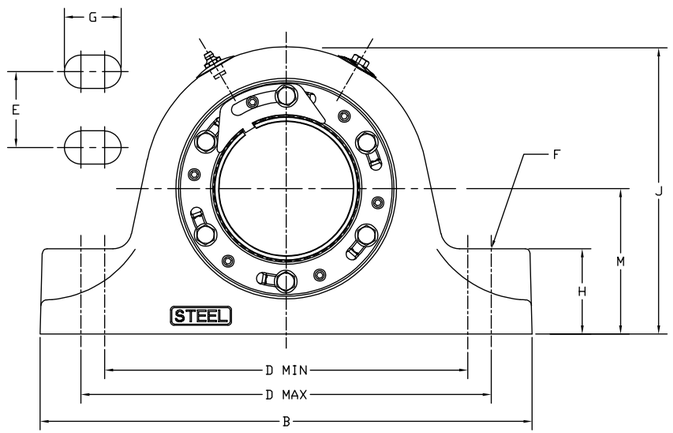
IP pillow block – inch

4-bolt, steel (HD)

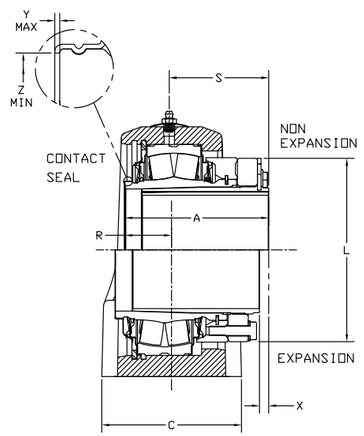


SIZES 206 THRU 308





SIZES 311 THRU 500



Reference Guide
Type E Family (Tapered)
Specialty Tapered
Safety Mount Family (Spherical)
S-2000 (Spherical)
Unified SAF (Spherical)
Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

IP pillow block – inch

4-bolt, steel (HD)

Non-expansion

Shaft size	Part number	Description
2-3/8	071706	SP4B-IP-206R
2-7/16	071707	SP4B-IP-207R
2-1/2	071708	SP4B-IP-208R
2-11/16	071709	SP4B-IP-211R
2-3/4	071710	SP4B-IP-212R
2-15/16	071711	SP4B-IP-215R
3	071712	SP4B-IP-300R
3-3/16	071713	SP4B-IP-303R
3-1/4	071714	SP4B-IP-304R
3-7/16	071715	SP4B-IP-307R
3-1/2	071716	SP4B-IP-308R
3-11/16	071717	SP4B-IP-311R
3-15/16	071718	SP4B-IP-315R
4	071719	SP4B-IP-400R
4-7/16	071720	SP4B-IP-407R
4-1/2	071721	SP4B-IP-408R
4-15/16	071722	SP4B-IP-415R
5	071723	SP4B-IP-500R

Expansion

Shaft size	Part number	Description
2-3/8	071724	SP4B-IP-206RE
2-7/16	071725	SP4B-IP-207RE
2-1/2	071726	SP4B-IP-208RE
2-11/16	071727	SP4B-IP-211RE
2-3/4	071728	SP4B-IP-212RE
2-15/16	071729	SP4B-IP-215RE
3	071730	SP4B-IP-300RE
3-3/16	071731	SP4B-IP-303RE
3-1/4	071732	SP4B-IP-304RE
3-7/16	071733	SP4B-IP-307RE
3-1/2	071734	SP4B-IP-308RE
3-11/16	071735	SP4B-IP-311RE
3-15/16	071736	SP4B-IP-315RE
4	071737	SP4B-IP-400RE
4-7/16	071738	SP4B-IP-407RE
4-1/2	071739	SP4B-IP-408RE
4-15/16	071740	SP4B-IP-415RE
5	071741	SP4B-IP-500RE

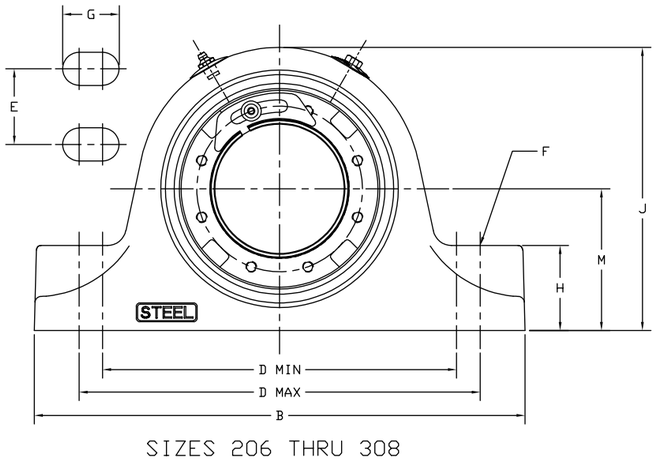
Consult Dodge for sizes not listed.

Shaft size	A	B	C	D		E	F bolt dia.	G	H	J	L	M	R	S	X total exp.	Y	Z
				Min.	Max.												
2-3/8																	
2-7/16	3.42	9.25	3.00	6.88	7.63	1.75	1/2	1.06	1.62	5.61	3.88	2.75	1.17	2.25	1/4	0.03	2.95
2-1/2																	
2-11/16																	
2-3/4	3. 50	10.44	3.13	7.60	9.10	1.88	5/8	1.43	1.88	6.44	4.28	3.25	1.12	2.37	1/4	0.03	3.47
2-15/16																	
3																	
3-3/16																	
3-1/4	4.17	12.30	3.75	8.88	10.88	2.00	3/4	1.88	2.25	7.56	5.00	3.75	1.53	2.63	1/4	0.03	4.05
3-7/16																	
3-1/2																	
3-11/16																	
3-15/16	4.70	14.88	4.31	10.88	13.38	2.25	3/4	2.13	2.44	8.70	6.15	4.25	1.70	3.00	5/16	0.03	4.51
4																	
4-7/16	5.23	16.13	4.75	11.88	14.50	2.50	3/4	2.19	2.75	9.67	6.93	4.75	1.53	3.70	3/8	0.04	5.01
4-1/2																	
4-15/16	5.98	17.50	5.03	15.13	15.88	2.75	7/8	1.37	3.00	11.12	8.03	5.50	2.22	3.77	3/8	0.04	5.86
5																	

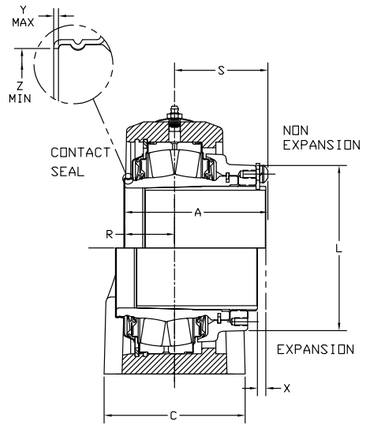
"A" and "R" dimensions do not include "Y" dimension.

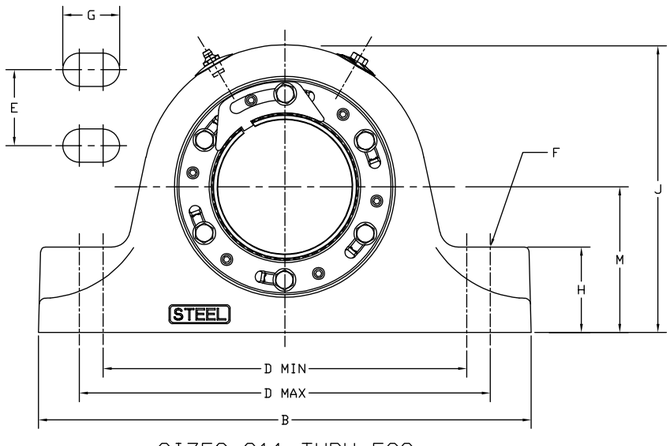
IP pillow block – inch

4-bolt, E-dimensioned steel (HD)

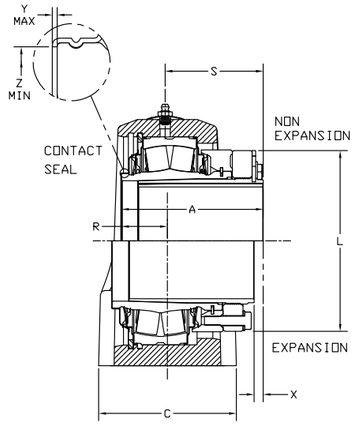


SIZES 206 THRU 308





SIZES 311 THRU 500



IP pillow block – inch

4-bolt, E-dimensioned steel (HD)

Non-expansion

Shaft size	Part number	Description
2-1/4	071906	SEP4B-IP-204R
2-7/16	071907	SEP4B-IP-207R
2-1/2	071908	SEP4B-IP-208R
2-11/16	071909	SEP4B-IP-211R
2-3/4	071910	SEP4B-IP-212R
2-15/16	071911	SEP4B-IP-215R
3	071912	SEP4B-IP-300R
3-3/16	071913	SEP4B-IP-303R
3-1/4	071914	SEP4B-IP-304R
3-7/16	071915	SEP4B-IP-307R
3-1/2	071916	SEP4B-IP-308R
3-15/16	071917	SEP4B-IP-315R
4	071918	SEP4B-IP-400R
4-7/16	071919	SEP4B-IP-407R
4-1/2	071920	SEP4B-IP-408R
4-15/16	071921	SEP4B-IP-415R
5	071922	SEP4B-IP-500R

Expansion

Shaft size	Part number	Description
2-1/4	071923	SEP4B-IP-204RE
2-7/16	071924	SEP4B-IP-207RE
2-1/2	071925	SEP4B-IP-208RE
2-11/16	071926	SEP4B-IP-211RE
2-3/4	071927	SEP4B-IP-212RE
2-15/16	071928	SEP4B-IP-215RE
3	071929	SEP4B-IP-300RE
3-3/16	071930	SEP4B-IP-303RE
3-1/4	071931	SEP4B-IP-304RE
3-7/16	071932	SEP4B-IP-307RE
3-1/2	071933	SEP4B-IP-308RE
3-15/16	071934	SEP4B-IP-315RE
4	071935	SEP4B-IP-400RE
4-7/16	071936	SEP4B-IP-407RE
4-1/2	071937	SEP4B-IP-408RE
4-15/16	071938	SEP4B-IP-415RE
5	071939	SEP4B-IP-500RE

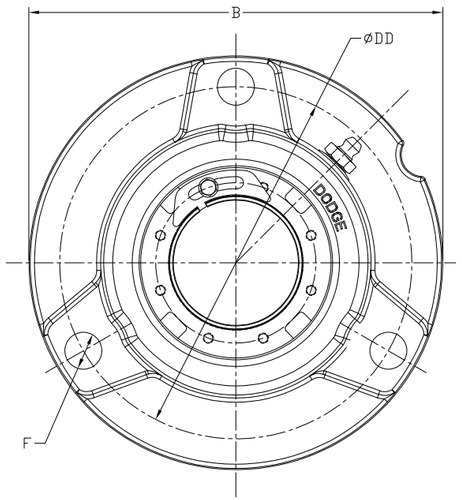
Consult Dodge for sizes not listed.

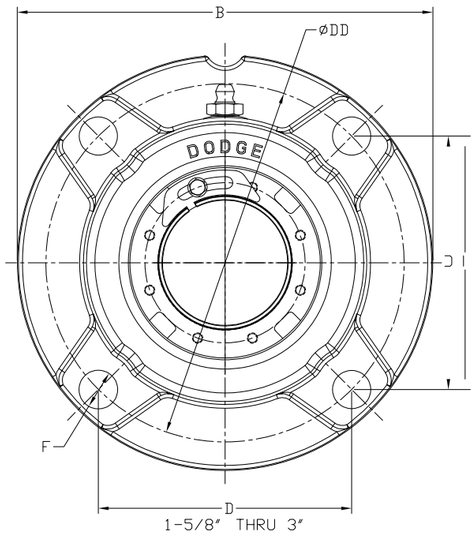
Shaft size	A	B	C	D Min.	D Max.	E	F bolt dia.	G	H	J	L	M	R	S	X total exp.	Y	Z
2-1/4																	
2-7/16	3.42	10.25	3.25	7.13	8.75	1.88	5/8	1.57	1.63	5.71	3.88	2.75	1.21	2.21	1/4	0.03	2.94
2-1/2																	
2-11/16																	
2-3/4	3. 50	10.83	3.38	8.00	9.60	2.12	5/8	1.56	1.88	6.32	4.28	3.13	1.35	2.15	1/4	0.03	3.47
2-15/16																	
3																	
3-3/16																	
3-1/4	4.17	13.63	3.75	9.25	11.25	2.38	3/4	1.88	2.25	7.69	5.00	3.75	1.54	2.63	1/4	0.03	4.05
3-7/16																	
3-1/2																	
3-11/16																	
3-15/16	4.70	14.88	4.31	10.88	13.38	2.25	3/4	2.13	2.44	8.70	5.56	4.25	1.70	3.00	5/16	0.03	4.50
4																	
4-7/16	5.23	16.13	4.75	11.88	14.50	2.50	3/4	2.19	2.75	9.67	6.44	4.75	1.53	3.70	3/8	0.04	5.00
4-1/2																	
4-15/16	5.98	17.50	5.04	15.13	15.88	2.88	7/8	1.38	3.00	11.16	7.63	5.50	1.93	4.05	3/8	0.04	5.84
5																	

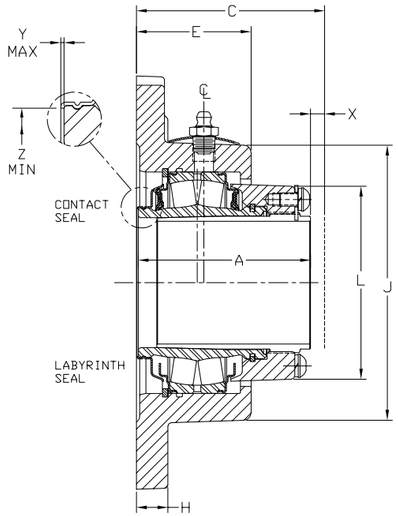
"A" and "R" dimensions do not include "Y" dimension.

IP round flange – inch

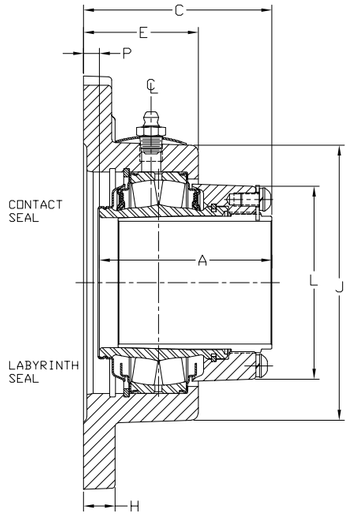
3- and 4-bolt







EXPANSION



NON-EXPANSION

IP round flange – inch

3- and 4-bolt

Bearing series	Shaft size	Trident seal			
		Non-expansion		Expansion	
		Part number	Description	Part number	Description
22208	1-1/8	069592	F3R-IP-102R	069630	F3R-IP-102RE
	1-3/16	069593	F3R-IP-103R	069631	F3R-IP-103RE
	1-1/4	069594	F3R-IP-104R	069632	F3R-IP-104RE
	1-3/8	069595	F3R-IP-106R	069633	F3R-IP-106RE
	1-7/16	069596	F3R-IP-107R	069634	F3R-IP-107RE
	1-1/2	069597	F3R-IP-108R	069635	F3R-IP-108RE
22209	1-5/8	069598	F4R-IP-110R	069636	F4R-IP-110RE
	1-11/16	069599	F4R-IP-111R	069637	F4R-IP-111RE
	1-3/4	069600	F4R-IP-112R	069638	F4R-IP-112RE
22210	1-7/8	069601	F4R-IP-114R	069639	F4R-IP-114RE
	1-15/16	069602	F4R-IP-115R	069640	F4R-IP-115RE
	2	069603	F4R-IP-200R	069641	F4R-IP-200RE
22211	2-3/16	069604	F4R-IP-203R	069642	F4R-IP-203RE
	2-1/4	069605	F4R-IP-204R	069643	F4R-IP-204RE
22213	2-3/8	069606	F4R-IP-206R	069644	F4R-IP-206RE
	2-7/16	069607	F4R-IP-207R	069645	F4R-IP-207RE
	2-1/2	069608	F4R-IP-208R	069646	F4R-IP-208RE
22215	2-11/16	069609	F4R-IP-211R	069647	F4R-IP-211RE
	2-3/4	069610	F4R-IP-212R	069648	F4R-IP-212RE
	2-15/16	069611	F4R-IP-215R	069649	F4R-IP-215RE
	3	069612	F4R-IP-300R	069650	F4R-IP-300RE

Bearing series	Shaft size	Labyrinth seal			
		Non-expansion		Expansion	
		Part number	Description	Part number	Description
22208	1-1/8	069651	F3R-IP-102L	069672	F3R-IP-102LE
	1-3/16	069652	F3R-IP-103L	069673	F3R-IP-103LE
	1-1/4	069653	F3R-IP-104L	069674	F3R-IP-104LE
	1-3/8	069654	F3R-IP-106L	069675	F3R-IP-106LE
	1-7/16	069655	F3R-IP-107L	069676	F3R-IP-107LE
	1-1/2	069656	F3R-IP-108L	069677	F3R-IP-108LE
22209	1-5/8	069657	F4R-IP-110L	069678	F4R-IP-110LE
	1-11/16	069658	F4R-IP-111L	069679	F4R-IP-111LE
	1-3/4	069659	F4R-IP-112L	069680	F4R-IP-112LE
22210	1-7/8	069660	F4R-IP-114L	069681	F4R-IP-114LE
	1-15/16	069661	F4R-IP-115L	069682	F4R-IP-115LE
	2	069662	F4R-IP-200L	069683	F4R-IP-200LE
22211	2-3/16	069663	F4R-IP-203L	069684	F4R-IP-203LE
	2-1/4	069664	F4R-IP-204L	069685	F4R-IP-204LE
22213	2-3/8	069665	F4R-IP-206L	069686	F4R-IP-206LE
	2-7/16	069666	F4R-IP-207L	069687	F4R-IP-207LE
	2-1/2	069667	F4R-IP-208L	069688	F4R-IP-208LE
22215	2-11/16	069668	F4R-IP-211L	069689	F4R-IP-211LE
	2-3/4	069669	F4R-IP-212L	069690	F4R-IP-212LE
	2-15/16	069670	F4R-IP-215L	069691	F4R-IP-215LE
	3	069671	F4R-IP-300L	069692	F4R-IP-300LE

Consult Dodge for sizes not listed.

Shaft size	A	B	C	D	DD	E	F 3-bolt dia.	F 4-bolt dia.	H	J	L	P	X total exp.	Y	Z
1-1/8	2.63	5.88	2.86	4.33	5.00	1.80	1/2	—	0.50	3.75	2.72	0.23	3/16	0.02	1.80
1-3/16															
1-1/4															
1-3/8															
1-7/16															
1-1/2															
1-5/8	2.81	6.38	3.11	4.76	5.50	1.89	—	1/2	0.50	4.25	3.00	0.27	1/4	0.02	2.08
1-11/16															
1-3/4															
1-7/8	2.86	6.69	3.16	4.98	5.75	1.92	—	1/2	0.56	4.50	3.28	0.27	1/4	0.02	2.30
1-15/16															
2															
2-3/16	3.03	7.38	3.34	4.50	6.38	2.05	—	5/8	0.56	4.80	3.50	0.31	1/4	0.03	2.60
2-1/4															
2-3/8	3.42	7.75	3.73	4.77	6.75	2.38	—	5/8	0.64	5.38	3.88	0.31	1/4	0.03	2.95
2-7/16															
2-1/2															
2-11/16	4.70	9.25	3.81	5.56	7.88	2.39	—	3/4	0.75	6.25	4.28	0.31	1/4	0.03	3.47
2-3/4															
2-15/16															
3															

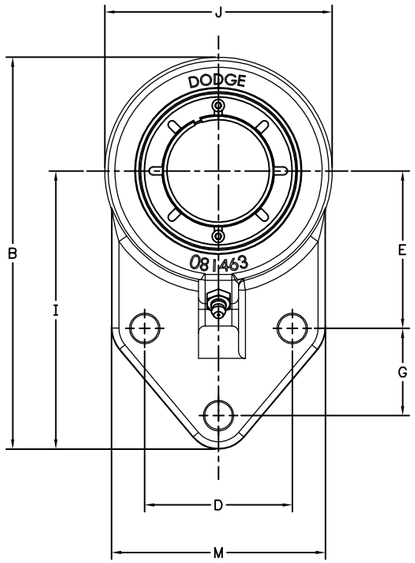
Notes: "P" dimension is for non-expansion only.

"A" and "P" dimensions do not include "Y" dimension.

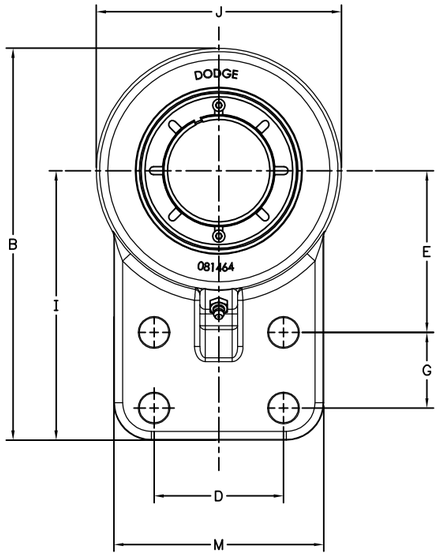
Reference Guide
Type E Family (Tapered)
Specialty Tapered
Safety Mount Family (Spherical)
S-2000 (Spherical)
Unified SAF (Spherical)
Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

IP flange bracket - inch

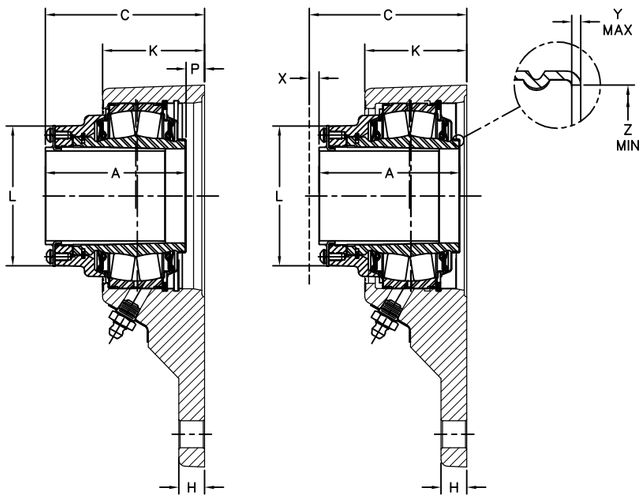
3- and 4-bolt



1-7/16" AND 1-15/16" CONSTRUCTION



2-7/16" CONSTRUCTION



NON-EXPANSION

EXPANSION

IP flange bracket - inch

3- and 4-bolt

Non-expansion

Shaft size	Part number	Description
1-7/16	139092	FB-IP-107R
1-15/16	139093	FB-IP-115R
2-7/16	139094	FB-IP-207R

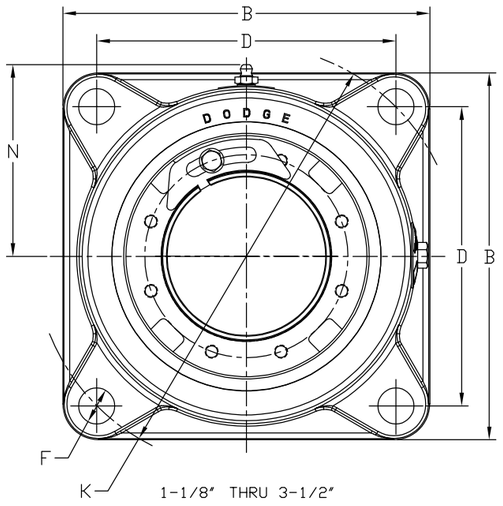
Expansion

Shaft size	Part number	Description
1-7/16	139095	FB-IP-107RE
1-15/16	139096	FB-IP-115RE
2-7/16	139097	FB-IP-207RE

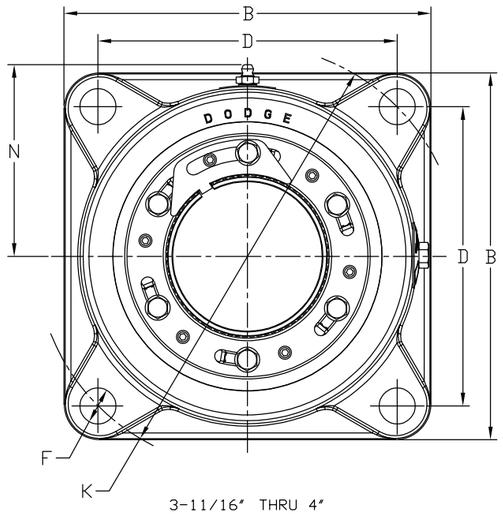
Shaft size	A	B	C	D	E	F bolt dia.	G	H	I	J	K	L	M	P	X total exp	Y	Z
1-7/16	2.63	6.13	2.87	2.00	2.38	1/2	1.25	0.50	4.25	3.75	1.83	2.72	3.25	0.23	3/16	0.020	1.80
1-15/16	2.86	7.31	3.16	2.75	2.94	1/2	1.63	0.48	5.19	4.25	1.95	3.28	4.00	0.30	1/4	0.020	2.30
2-7/16	3.42	9.09	3.72	3.00	3.75	5/8	1.75	0.64	6.25	5.69	2.39	3.88	4.88	0.30	1/4	0.025	2.95

IP square flange – inch

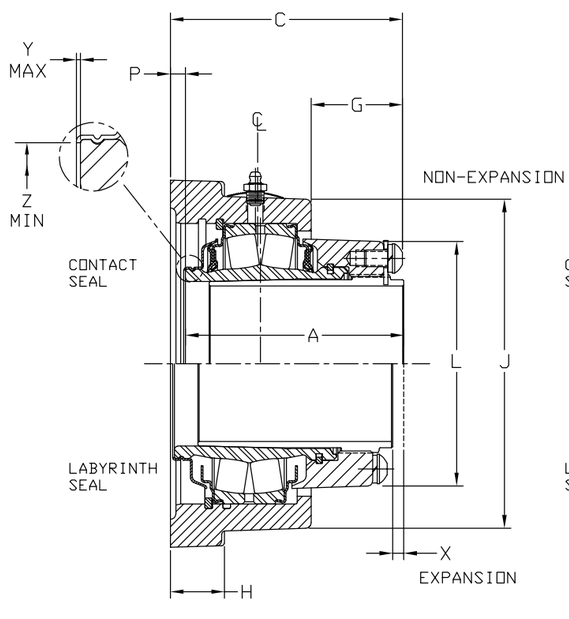
4-bolt

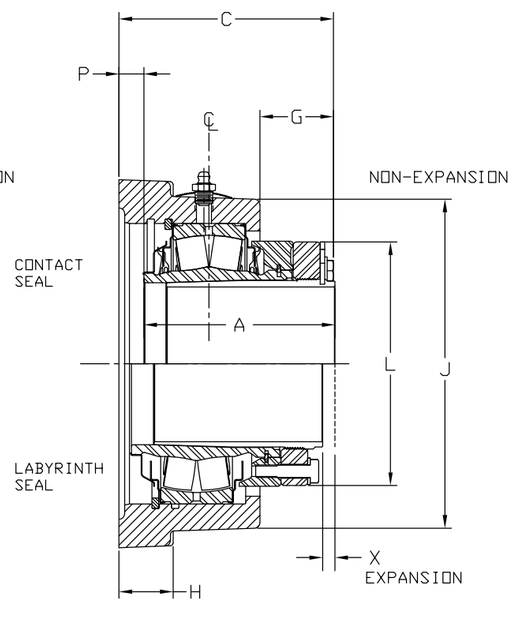


1-1/8″ THRU 3-1/2″



3-11/16″ THRU 4″





IP square flange – inch

4-bolt

Bearing series	Shaft size	Trident seal				Labyrinth seal			
		Non-expansion		Expansion		Non-expansion		Expansion	
		Part number	Description	Part number	Description	Part number	Description	Part number	Description
22208	1-1/8	069693	F4S-IP-102R	069721	F4S-IP-102RE	069749	F4S-IP-102L	069777	F4S-IP-102LE
	1-3/16	069694	F4S-IP-103R	069722	F4S-IP-103RE	069750	F4S-IP-103L	069778	F4S-IP-103LE
	1-1/4	069695	F4S-IP-104R	069723	F4S-IP-104RE	069751	F4S-IP-104L	069779	F4S-IP-104LE
	1-3/8	069696	F4S-IP-106R	069724	F4S-IP-106RE	069752	F4S-IP-106L	069780	F4S-IP-106LE
	1-7/16	069697	F4S-IP-107R	069725	F4S-IP-107RE	069753	F4S-IP-107L	069781	F4S-IP-107LE
	1-1/2	069698	F4S-IP-108R	069726	F4S-IP-108RE	069754	F4S-IP-108L	069782	F4S-IP-108LE
22209	1-5/8	069699	F4S-IP-110R	069727	F4S-IP-110RE	069755	F4S-IP-110L	069783	F4S-IP-110LE
	1-11/16	069700	F4S-IP-111R	069728	F4S-IP-111RE	069756	F4S-IP-111L	069784	F4S-IP-111LE
	1-3/4	069701	F4S-IP-112R	069729	F4S-IP-112RE	069757	F4S-IP-112L	069785	F4S-IP-112LE
22210	1-7/8	069702	F4S-IP-114R	069730	F4S-IP-114RE	069758	F4S-IP-114L	069786	F4S-IP-114LE
	1-15/16	069703	F4S-IP-115R	069731	F4S-IP-115RE	069759	F4S-IP-115L	069787	F4S-IP-115LE
	2	069704	F4S-IP-200R	069732	F4S-IP-200RE	069760	F4S-IP-200L	069788	F4S-IP-200LE
22211	2-3/16	069705	F4S-IP-203R	069733	F4S-IP-203RE	069761	F4S-IP-203L	069789	F4S-IP-203LE
	2-1/4	069706	F4S-IP-204R	069734	F4S-IP-204RE	069762	F4S-IP-204L	069790	F4S-IP-204LE
22213	2-3/8	069707	F4S-IP-206R	069735	F4S-IP-206RE	069763	F4S-IP-206L	069791	F4S-IP-206LE
	2-7/16	069708	F4S-IP-207R	069736	F4S-IP-207RE	069764	F4S-IP-207L	069792	F4S-IP-207LE
	2-1/2	069709	F4S-IP-208R	069737	F4S-IP-208RE	069765	F4S-IP-208L	069793	F4S-IP-208LE
22215	2-11/16	069710	F4S-IP-211R	069738	F4S-IP-211RE	069766	F4S-IP-211L	069794	F4S-IP-211LE
	2-3/4	069711	F4S-IP-212R	069739	F4S-IP-212RE	069767	F4S-IP-212L	069795	F4S-IP-212LE
	2-15/16	069712	F4S-IP-215R	069740	F4S-IP-215RE	069768	F4S-IP-215L	069796	F4S-IP-215LE
	3	069713	F4S-IP-300R	069741	F4S-IP-300RE	069769	F4S-IP-300L	069797	F4S-IP-300LE
22218	3-3/16	069714	F4S-IP-303R	069742	F4S-IP-303RE	069770	F4S-IP-303L	069798	F4S-IP-303LE
	3-1/4	069715	F4S-IP-304R	069743	F4S-IP-304RE	069771	F4S-IP-304L	069799	F4S-IP-304LE
	3-7/16	069716	F4S-IP-307R	069744	F4S-IP-307RE	069772	F4S-IP-307L	069800	F4S-IP-307LE
	3-1/2	069717	F4S-IP-308R	069745	F4S-IP-308RE	069773	F4S-IP-308L	069801	F4S-IP-308LE
	3-11/16	069718	F4S-IP-311R	069746	F4S-IP-311RE	069774	F4S-IP-311L	069802	F4S-IP-311LE
22220	3-15/16	069719	F4S-IP-315R	069747	F4S-IP-315RE	069775	F4S-IP-315L	069803	F4S-IP-315LE
	4	069720	F4S-IP-400R	069748	F4S-IP-400RE	069776	F4S-IP-400L	069804	F4S-IP-400LE

Consult Dodge for sizes not listed.

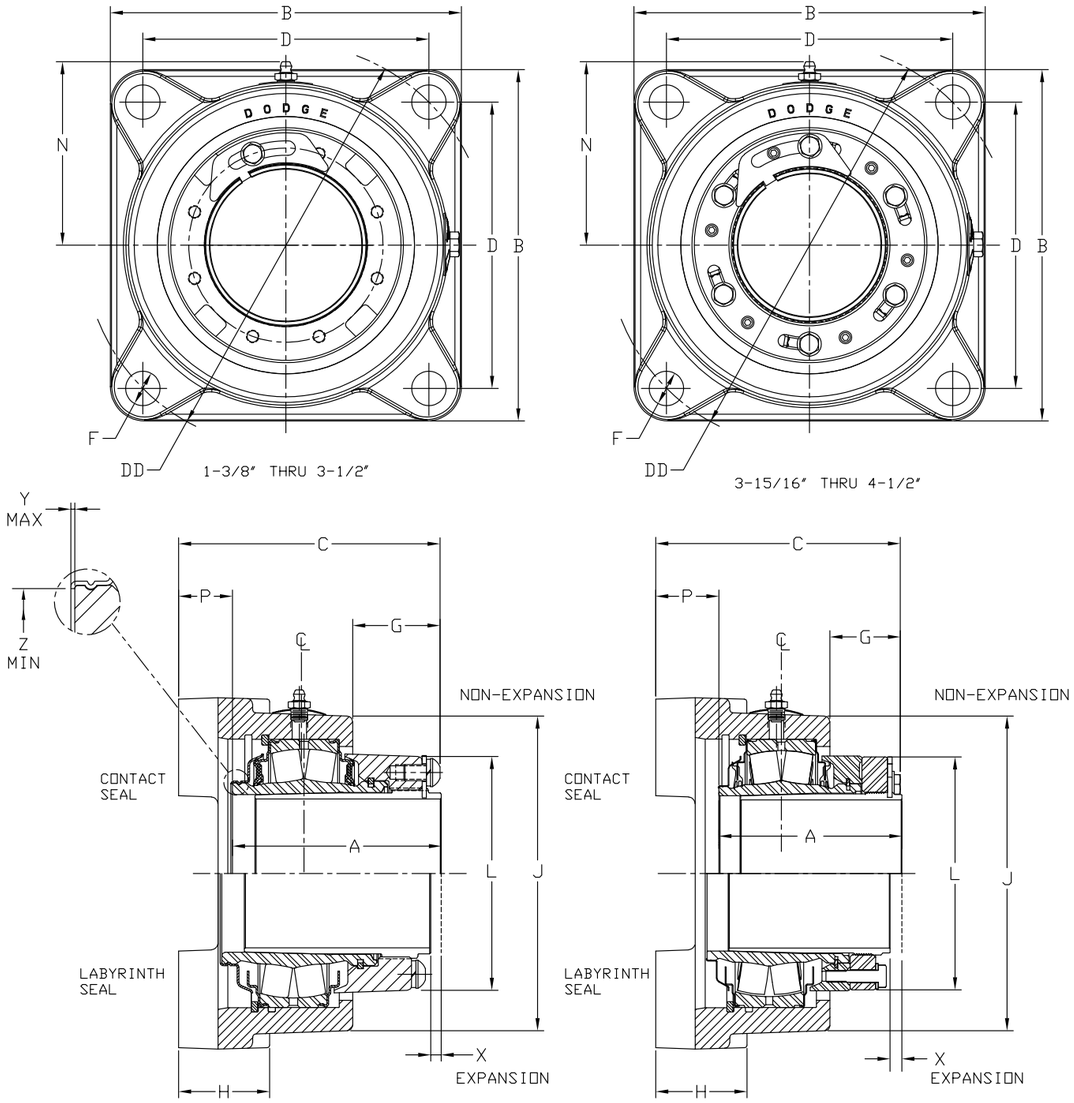
Shaft size	A	B	C	D	F bolt dia.	G	H	J	K	L	N	P	X total exp.	Y	Z
1-1/8 1-3/16 1-1/4 1-3/8 1-7/16 1-1/2	2.63	4.75	2.86	3.53	1/2	1.08	0.50	3.81	5.00	2.72	2.48	0.23	3/16	0.02	1.79
1-5/8 1-11/16 1-3/4	2.81	5.13	3.11	3.89	1/2	1.20	0.50	4.41	5.50	3.00	2.78	0.30	1/4	0.02	2.08
1-7/8 1-15/16 2	2.86	5.29	3.15	4.06	1/2	1.23	0.56	4.97	5.75	3.28	2.91	0.30	1/4	0.02	2.29
2-3/16 2-1/4	3.03	5.88	3.34	4.51	5/8	1.31	0.56	5.16	6.38	3.80	3.09	0.31	1/4	0.02	2.59
2-3/8 2-7/16 2-1/2	3.42	6.13	3.73	4.78	5/8	1.36	0.64	5.63	6.75	3.88	3.41	0.31	1/4	0.025	2.94
2-11/16 2-3/4 2-15/16 3	3.50	7.18	3.81	5.56	3/4	1.42	0.75	6.50	7.88	4.28	3.84	0.31	1/4	0.025	3.47
3-3/16 3-1/4 3-7/16 3-1/2	4.17	8.25	4.48	6.72	3/4	1.59	0.94	7.48	9.50	5.00	4.33	0.31	1/4	0.025	4.05
3-11/16 3-15/16 4	4.70	9.25	5.08	7.61	7/8	1.90	1.06	8.22	10.75	5.56	4.70	0.38	5/16	0.025	4.50

Notes: "P" dimension is for non-expansion only.
"A" and "P" dimensions do not include "Y" dimension.

Reference Guide
Type E Family (Tapered)
Specialty Tapered
Safety Mount Family (Spherical)
S-2000 (Spherical)
Unified SAF (Spherical)
Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

IP square flange – inch

4-bolt, E-dimensioned



IP square flange – inch

4-bolt, E-dimensioned

Bearing series	Shaft size	Trident seal				Labyrinth seal			
		Non-expansion		Expansion		Non-expansion		Expansion	
		Part number	Description	Part number	Description	Part number	Description	Part number	Description
22208	1-3/8	071288	EF4B-IP-106R	071313	EF4B-IP-106RE	071338	EF4B-IP-106L	071364	EF4B-IP-106LE
	1-7/16	071289	EF4B-IP-107R	071314	EF4B-IP-107RE	071339	EF4B-IP-107L	071365	EF4B-IP-107LE
22209	1-1/2	071290	EF4B-IP-108R	071315	EF4B-IP-108RE	071340	EF4B-IP-108L	071366	EF4B-IP-108LE
	1-5/8	071291	EF4B-IP-110R	071316	EF4B-IP-110RE	071341	EF4B-IP-110L	071367	EF4B-IP-110LE
	1-11/16	071292	EF4B-IP-111R	071317	EF4B-IP-111RE	071342	EF4B-IP-111L	071368	EF4B-IP-111LE
22210	1-3/4	071293	EF4B-IP-112R	071318	EF4B-IP-112RE	071343	EF4B-IP-112L	071369	EF4B-IP-112LE
	1-7/8	071294	EF4B-IP-114R	071319	EF4B-IP-114RE	071344	EF4B-IP-114L	071370	EF4B-IP-114LE
	1-15/16	071295	EF4B-IP-115R	071320	EF4B-IP-115RE	071345	EF4B-IP-115L	071371	EF4B-IP-115LE
	2	071296	EF4B-IP-200R	071321	EF4B-IP-200RE	071346	EF4B-IP-200L	071372	EF4B-IP-200LE
22211	2-3/16	071297	EF4B-IP-203R	071322	EF4B-IP-203RE	071347	EF4B-IP-203L	071373	EF4B-IP-203LE
22213	2-1/4	071298	EF4B-IP-204R	071323	EF4B-IP-204RE	071348	EF4B-IP-204L	071374	EF4B-IP-204LE
	2-7/16	071299	EF4B-IP-207R	071324	EF4B-IP-207RE	071349	EF4B-IP-207L	071375	EF4B-IP-207LE
	2-1/2	071300	EF4B-IP-208R	071325	EF4B-IP-208RE	071350	EF4B-IP-208L	071376	EF4B-IP-208LE
22215	2-11/16	071301	EF4B-IP-211R	071326	EF4B-IP-211RE	071351	EF4B-IP-211L	071377	EF4B-IP-211LE
	2-3/4	071302	EF4B-IP-212R	071327	EF4B-IP-212RE	071352	EF4B-IP-212L	071378	EF4B-IP-212LE
	2-15/16	071303	EF4B-IP-215R	071328	EF4B-IP-215RE	071353	EF4B-IP-215L	071379	EF4B-IP-215LE
	3	071304	EF4B-IP-300R	071329	EF4B-IP-300RE	071354	EF4B-IP-300L	071380	EF4B-IP-300LE
22218	3-3/16	071305	EF4B-IP-303R	071330	EF4B-IP-303RE	071355	EF4B-IP-303L	071381	EF4B-IP-303LE
	3-1/4	071306	EF4B-IP-304R	071331	EF4B-IP-304RE	071356	EF4B-IP-304L	071382	EF4B-IP-304LE
	3-7/16	071307	EF4B-IP-307R	071332	EF4B-IP-307RE	071357	EF4B-IP-307L	071383	EF4B-IP-307LE
	3-1/2	071308	EF4B-IP-308R	071333	EF4B-IP-308RE	071358	EF4B-IP-308L	071384	EF4B-IP-308LE
22220	3-15/16	071309	EF4B-IP-315R	071334	EF4B-IP-315RE	071359	EF4B-IP-315L	071385	EF4B-IP-315LE
	4	071310	EF4B-IP-400R	071335	EF4B-IP-400RE	071360	EF4B-IP-400L	071386	EF4B-IP-400LE
22222	4-7/16	071311	EF4B-IP-407R	071336	EF4B-IP-407RE	071361	EF4B-IP-407L	071387	EF4B-IP-407LE
	4-1/2	071312	EF4B-IP-408R	071337	EF4B-IP-408RE	071362	EF4B-IP-408L	071388	EF4B-IP-408LE

Consult Dodge for sizes not listed.

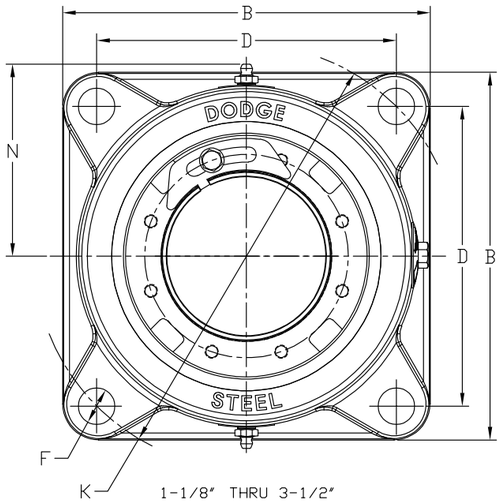
Shaft size	A	B	C	D	DD	F bolt dia.	G	H	J	L	N	P	X total exp.	Y	Z
1-3/8 1-7/16	2.63	4.63	3.15	3.50	4.95	1/2	0.66	1.06	3.88	2.72	2.34	0.53	5/32	0.02	1.80
1-1/2 1-5/8 1-11/16	2.81	5.63	3.64	4.13	5.83	1/2	0.67	1.19	4.18	3.00	2.50	0.83	3/16	0.02	2.08
1-3/4 1-7/8 1-15/16 2	2.86	5.63	3.64	4.38	6.19	1/2	0.65	1.18	4.36	3.28	2.60	0.79	7/32	0.02	2.30
2-3/16	3.03	6.25	3.96	4.88	6.90	5/8	0.68	1.38	4.88	3.50	2.88	0.94	1/4	0.02	2.60
2-1/4 2-7/16 2-1/2	3.42	6.88	4.41	5.37	7.60	5/8	1.04	1.50	5.81	3.88	3.32	0.99	1/4	0.025	2.95
2-11/16 2-3/4 2-15/16 3	3.50	7.75	4.59	6.00	8.49	3/4	0.79	1.61	6.30	4.28	3.58	1.1	1/4	0.025	3.47
3-3/16 3-1/4 3-7/16 3-1/2	4.17	9.25	5.4	7.00	9.90	3/4	1.12	1.88	7.44	5	4.15	1.24	1/4	0.025	4.05
3-15/16 4	4.70	10.25	6.73	7.75	10.96	7/8	1.22	2.12	8.27	5.56	4.58	2.02	5/16	0.025	4.50
4-7/16 4-1/2	5.23	10.88	7.12	8.75	12.37	7/8	1.42	2.43	9.13	6.44	5.01	1.89	3/8	0.036	5.00

Notes: "P" dimension is for non-expansion only.

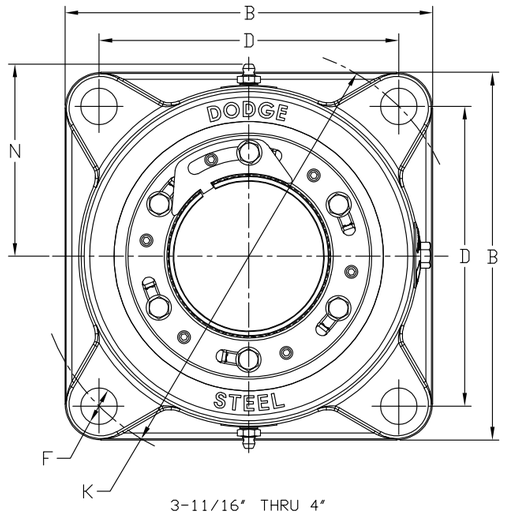
"A" and "P" dimensions do not include "Y" dimension.

IP square flange – inch

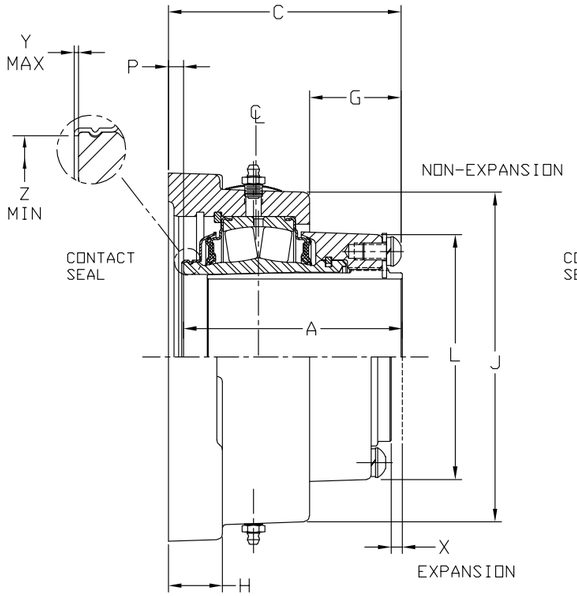
4-bolt, steel (HD)

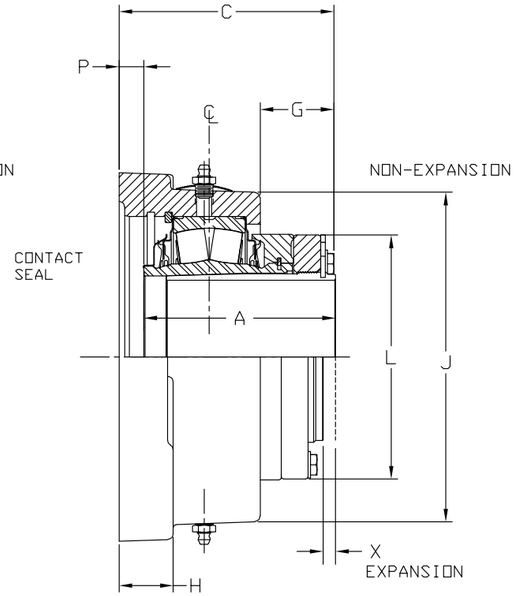


1-1/8″ THRU 3-1/2″



3-11/16″ THRU 4″





IP square flange – inch

4-bolt, steel (HD)

Shaft size	Non-expansion		Expansion	
	Part number	Description	Part number	Description
1-1/8	072170	SF4S-IP-102R	072198	SF4S-IP-102RE
1-3/16	072171	SF4S-IP-103R	072199	SF4S-IP-103RE
1-1/4	072172	SF4S-IP-104R	072200	SF4S-IP-104RE
1-3/8	072173	SF4S-IP-106R	072201	SF4S-IP-106RE
1-7/16	072174	SF4S-IP-107R	072202	SF4S-IP-107RE
1-1/2	072175	SF4S-IP-108R	072203	SF4S-IP-108RE
1-5/8	072176	SF4S-IP-110R	072204	SF4S-IP-110RE
1-11/16	072177	SF4S-IP-111R	072205	SF4S-IP-111RE
1-3/4	072178	SF4S-IP-112R	072206	SF4S-IP-112RE
1-7/8	072179	SF4S-IP-114R	072207	SF4S-IP-114RE
1-15/16	072180	SF4S-IP-115R	072208	SF4S-IP-115RE
2	072181	SF4S-IP-200R	072209	SF4S-IP-200RE
2-3/16	072182	SF4S-IP-203R	072210	SF4S-IP-203RE
2-1/4	072183	SF4S-IP-204R	072211	SF4S-IP-204RE

Shaft size	Non-expansion		Expansion	
	Part number	Description	Part number	Description
2-3/8	072184	SF4S-IP-206R	072212	SF4S-IP-206RE
2-7/16	072185	SF4S-IP-207R	072213	SF4S-IP-207RE
2-1/2	072186	SF4S-IP-208R	072214	SF4S-IP-208RE
2-11/16	072187	SF4S-IP-211R	072215	SF4S-IP-211RE
2-3/4	072188	SF4S-IP-212R	072216	SF4S-IP-212RE
2-15/16	072189	SF4S-IP-215R	072217	SF4S-IP-215RE
3	072190	SF4S-IP-300R	072218	SF4S-IP-300RE
3-3/16	072191	SF4S-IP-303R	072219	SF4S-IP-303RE
3-1/4	072192	SF4S-IP-304R	072220	SF4S-IP-304RE
3-7/16	072193	SF4S-IP-307R	072221	SF4S-IP-307RE
3-1/2	072194	SF4S-IP-308R	072222	SF4S-IP-308RE
3-11/16	072195	SF4S-IP-311R	072223	SF4S-IP-311RE
3-15/16	072196	SF4S-IP-315R	072224	SF4S-IP-315RE
4	072197	SF4S-IP-400R	072225	SF4S-IP-400RE

Consult Dodge for sizes not listed.

Shaft size	A	B	C	D	F bolt dia.	G	H	J	K	L	N	P	X total exp.	Y	Z
1-1/8															
1-3/16															
1-1/4	2.63	4.62	2.87	3.54	1/2	0.84	0.88	3.70	5.00	2.72	2.28	0.24	3/16	0.02	1.80
1-3/8															
1-7/16															
1-1/2															
1-5/8															
1-11/16	2.81	5.37	3.01	3.89	1/2	0.91	0.88	4.41	5.50	3.00	2.62	0.20	7/32	0.02	2.08
1-3/4															
1-7/8															
1-15/16	2.86	5.18	3.15	4.07	1/2	0.91	0.91	4.66	5.75	3.28	2.75	0.29	7/32	0.02	2.30
2															
2-3/16	3.03	5.87	3.26	4.51	5/8	0.93	0.75	5.03	6.38	3.50	2.93	0.23	1/4	0.02	2.60
2-1/4															
2-3/8															
2-7/16	3.42	6.18	3.57	4.77	5/8	0.95	1.00	5.63	6.75	3.80	3.24	0.15	1/4	0.03	2.94
2-1/2															
2-11/16															
2-3/4	3.50	7.18	3.77	5.57	3/4	0.94	1.06	6.51	7.88	4.20	3.67	0.27	1/4	0.03	3.47
2-15/16															
3															
3-3/16															
3-1/4	4.17	8.37	4.27	6.72	3/4	0.94	1.28	7.49	9.50	5.00	4.16	0.10	1/4	0.03	4.50
3-7/16															
3-1/2															
3-11/16															
3-15/16	4.70	9.49	5.07	7.60	1	1.06	1.50	8.22	10.75	5.46	4.55	0.37	5/16	0.03	4.50
4															

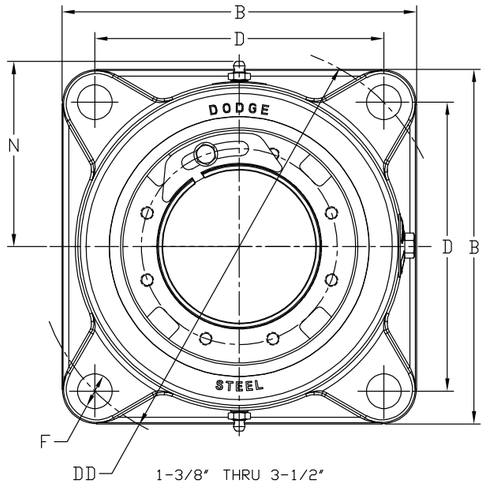
"P" dimension Is for non-expansion only.

"A" and "R" dimensions do not include "Y" dimension.

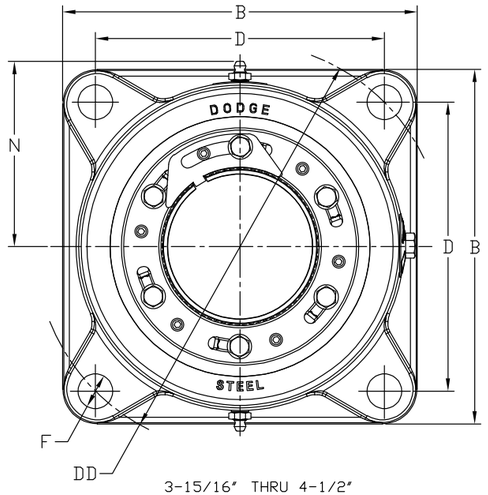
Reference Guide
Type E Family (Tapered)
Specialty Tapered
Safety Mount Family (Spherical)
S-2000 (Spherical)
Unified SAF (Spherical)
Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

IP square flange – inch

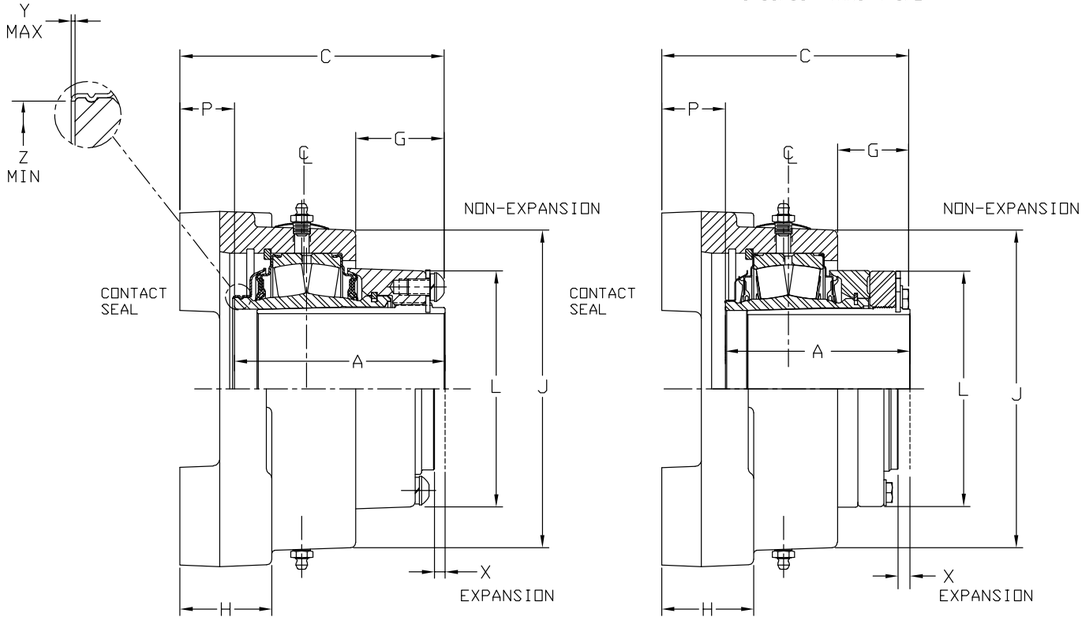
4-bolt, E-dimensioned steel (HD)



1-3/8″ THRU 3-1/2″



3-15/16″ THRU 4-1/2″



IP square flange – inch

4-bolt, E-dimensioned steel (HD)

Shaft size	Non-expansion		Expansion	
	Part number	Description	Part number	Description
1-3/8	072226	SEF4B-IP-106R	072251	SEF4B-IP-106RE
1-7/16	072227	SEF4B-IP-107R	072252	SEF4B-IP-107RE
1-1/2	072228	SEF4B-IP-108R	072253	SEF4B-IP-108RE
1-5/8	072229	SEF4B-IP-110R	072254	SEF4B-IP-110RE
1-11/16	072230	SEF4B-IP-111R	072255	SEF4B-IP-111RE
1-3/4	072231	SEF4B-IP-112R	072256	SEF4B-IP-112RE
1-7/8	072232	SEF4B-IP-114R	072257	SEF4B-IP-114RE
1-15/16	072233	SEF4B-IP-115R	072258	SEF4B-IP-115RE
2	072234	SEF4B-IP-200R	072259	SEF4B-IP-200RE
2-3/16	072235	SEF4B-IP-203R	072260	SEF4B-IP-203RE
2-7/16	072237	SEF4B-IP-207R	072262	SEF4B-IP-207RE
2-1/2	072238	SEF4B-IP-208R	072263	SEF4B-IP-208RE

Shaft size	Non-expansion		Expansion	
	Part number	Description	Part number	Description
2-11/16	072239	SEF4B-IP-211R	072264	SEF4B-IP-211RE
2-3/4	072240	SEF4B-IP-212R	072265	SEF4B-IP-212RE
2-15/16	072241	SEF4B-IP-215R	072266	SEF4B-IP-215RE
3	072242	SEF4B-IP-300R	072267	SEF4B-IP-300RE
3-3/16	072243	SEF4B-IP-303R	072268	SEF4B-IP-303RE
3-1/4	072244	SEF4B-IP-304R	072269	SEF4B-IP-304RE
3-7/16	072245	SEF4B-IP-307R	072270	SEF4B-IP-307RE
3-1/2	072246	SEF4B-IP-308R	072271	SEF4B-IP-308RE
3-15/16	072247	SEF4B-IP-315R	072272	SEF4B-IP-315RE
4	072248	SEF4B-IP-400R	072273	SEF4B-IP-400RE
4-7/16	072249	SEF4B-IP-407R	072274	SEF4B-IP-407RE
4-1/2	072250	SEF4B-IP-408R	072275	SEF4B-IP-408RE

Consult Dodge for sizes not listed

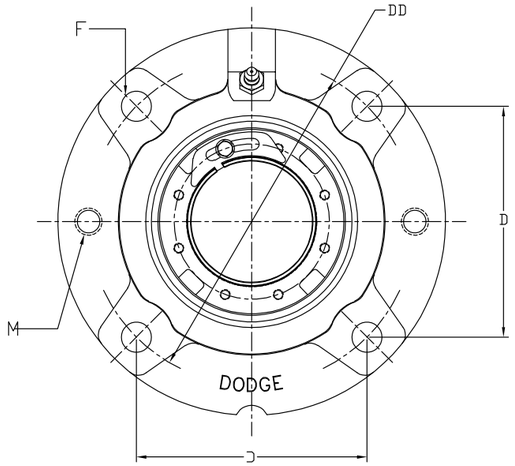
Shaft size	A	B	C	D	DD	F bolt dia.	G	H	J	L	N	P	X total exp.	Y	Z
1-3/8 1-7/16	2.63	4.62	2.87	3.50	4.95	1/2	0.84	0.88	3.70	2.72	2.25	0.24	3/16	0.02	1.80
1-1/2 1-5/8 1-11/16	2.81	5.37	3.01	4.125	5.84	1/2	0.91	0.88	4.41	3.00	2.62	0.20	7/32	0.02	2.08
1-3/4 1-7/8 1-15/16 2	2.86	5.49	3.15	4.38	6.19	1/2	0.91	0.88	4.75	3.28	2.75	0.29	7/32	0.02	2.30
2-3/16	3.03	6.18	3.26	4.87	6.89	5/8	0.93	1.00	5.03	3.50	2.93	0.23	1/4	0.02	2.60
2-7/16 2-1/2	3.42	6.62	3.57	5.37	7.60	5/8	0.95	1.00	5.63	3.80	3.23	0.15	1/4	0.025	2.95
2-11/16 2-3/4 2-15/16 3	3.50	7.43	3.77	6.00	8.49	3/4	0.94	1.06	6.66	4.20	3.75	0.27	1/4	0.025	3.47
3-3/16 3-1/4 3-7/16 3-1/2	4.17	8.62	4.27	7.01	9.91	3/4	0.96	1.31	7.49	5.00	4.17	0.10	1/4	0.025	4.05
3-15/16 4	4.70	9.96	5.04	7.75	10.96	7/8	1.18	1.50	8.22	5.44	4.68	0.34	5/16	0.025	4.50
4-7/16 4-1/2	5.23	10.87	5.59	8.75	12.38	7/8	1.63	1.50	8.76	6.35	4.80	0.36	3/8	0.036	5.00

"P" dimension Is for non-expansion only.

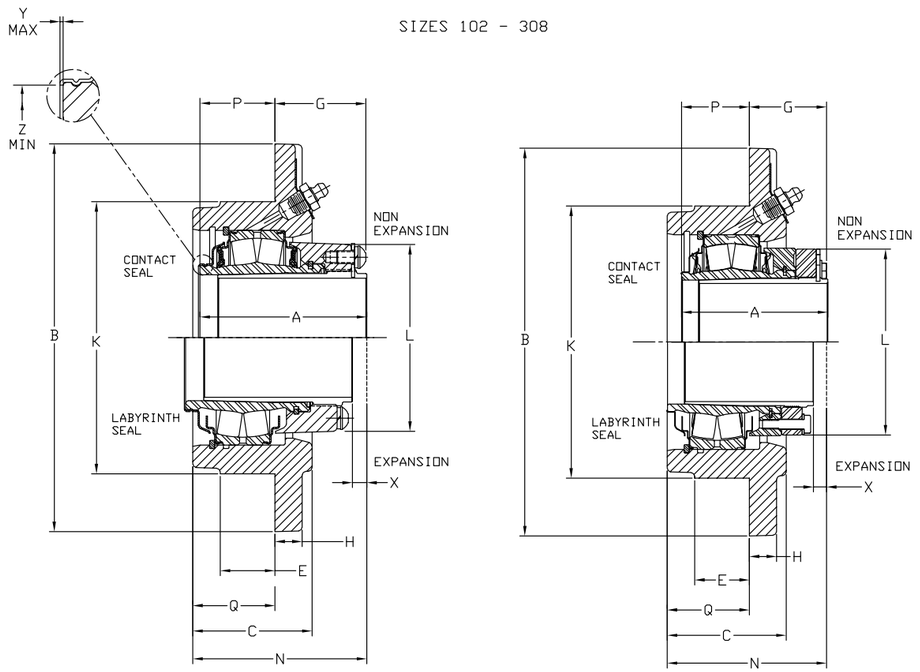
"A" and "R" dimensions do not include "Y" dimension.

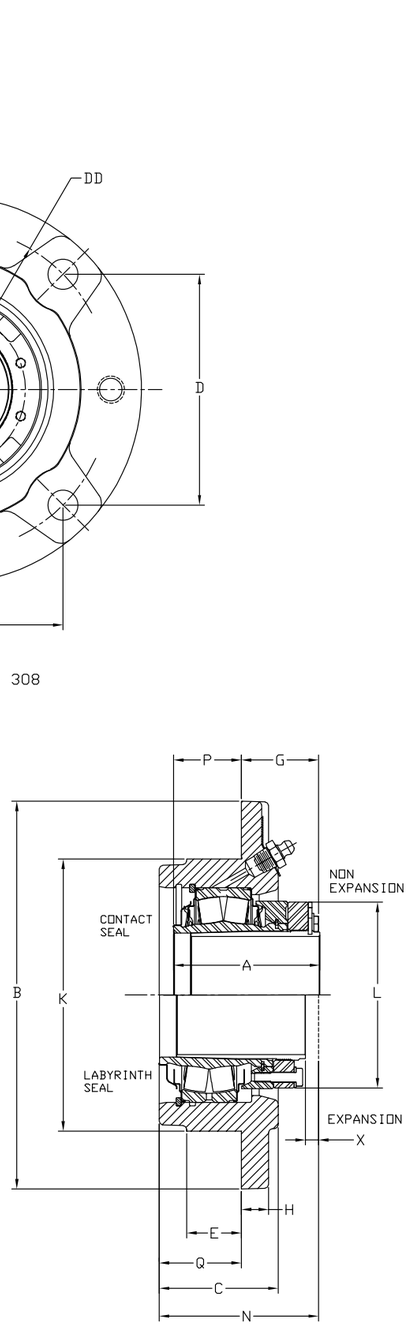
Reference Guide
Type E Family (Tapered)
Specialty Tapered
Safety Mount Family (Spherical)
S-2000 (Spherical)
Unified SAF (Spherical)
Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

IP piloted flange – inch



SIZES 102 - 308





IP piloted flange – inch

Bearing series	Shaft size	Trident seal			
		Non-expansion		Expansion	
		Part number	Description	Part number	Description
22208	1-1/8	069805	FC-IP-102R	069837	FC-IP-102RE
	1-3/16	069806	FC-IP-103R	069838	FC-IP-103RE
	1-1/4	069807	FC-IP-104R	069839	FC-IP-104RE
	1-3/8	069808	FC-IP-106R	069840	FC-IP-106RE
	1-7/16	069809	FC-IP-107R	069841	FC-IP-107RE
	1-1/2	069810	FC-IP-108R	069842	FC-IP-108RE
22209	1-5/8	069811	FC-IP-110R	069843	FC-IP-110RE
	1-11/16	069812	FC-IP-111R	069844	FC-IP-111RE
	1-3/4	069813	FC-IP-112R	069845	FC-IP-112RE
22210	1-7/8	069814	FC-IP-114R	069846	FC-IP-114RE
	1-15/16	069815	FC-IP-115R	069847	FC-IP-115RE
	2	069816	FC-IP-200R	069848	FC-IP-200RE
22211	2-3/16	069817	FC-IP-203R	069849	FC-IP-203RE
	2-1/4	069818	FC-IP-204R	069850	FC-IP-204RE
22213	2-3/8	069819	FC-IP-206R	069851	FC-IP-206RE
	2-7/16	069820	FC-IP-207R	069852	FC-IP-207RE
	2-1/2	069821	FC-IP-208R	069853	FC-IP-208RE
22215	2-11/16	069822	FC-IP-211R	069854	FC-IP-211RE
	2-3/4	069823	FC-IP-212R	069855	FC-IP-212RE
	2-15/16	069824	FC-IP-215R	069856	FC-IP-215RE
	3	069825	FC-IP-300R	069857	FC-IP-300RE
22218	3-3/16	069826	FC-IP-303R	069858	FC-IP-303RE
	3-1/4	069827	FC-IP-304R	069859	FC-IP-304RE
	3-7/16	069828	FC-IP-307R	069860	FC-IP-307RE
	3-1/2	069829	FC-IP-308R	069861	FC-IP-308RE

Bearing series	Shaft size	Labyrinth seal			
		Non-expansion		Expansion	
		Part number	Description	Part number	Description
22208	1-1/8	069869	FC-IP-102L	069901	FC-IP-102LE
	1-3/16	069870	FC-IP-103L	069902	FC-IP-103LE
	1-1/4	069871	FC-IP-104L	069903	FC-IP-104LE
	1-3/8	069872	FC-IP-106L	069904	FC-IP-106LE
	1-7/16	069873	FC-IP-107L	069905	FC-IP-107LE
	1-1/2	069874	FC-IP-108L	069906	FC-IP-108LE
22209	1-5/8	069875	FC-IP-110L	069907	FC-IP-110LE
	1-11/16	069876	FC-IP-111L	069908	FC-IP-111LE
	1-3/4	069877	FC-IP-112L	069909	FC-IP-112LE
22210	1-7/8	069878	FC-IP-114L	069910	FC-IP-114LE
	1-15/16	069879	FC-IP-115L	069911	FC-IP-115LE
	2	069880	FC-IP-200L	069912	FC-IP-200LE
22211	2-3/16	069881	FC-IP-203L	069913	FC-IP-203LE
	2-1/4	069882	FC-IP-204L	069914	FC-IP-204LE
22213	2-3/8	069883	FC-IP-206L	069915	FC-IP-206LE
	2-7/16	069884	FC-IP-207L	069916	FC-IP-207LE
	2-1/2	069885	FC-IP-208L	069917	FC-IP-208LE
22215	2-11/16	069886	FC-IP-211L	069918	FC-IP-211LE
	2-3/4	069887	FC-IP-212L	069919	FC-IP-212LE
	2-15/16	069888	FC-IP-215L	069920	FC-IP-215LE
	3	069889	FC-IP-300L	069921	FC-IP-300LE
22218	3-3/16	069890	FC-IP-303L	069922	FC-IP-303LE
	3-1/4	069891	FC-IP-304L	069923	FC-IP-304LE
	3-7/16	069892	FC-IP-307L	069924	FC-IP-307LE
	3-1/2	069893	FC-IP-308L	069925	FC-IP-308LE

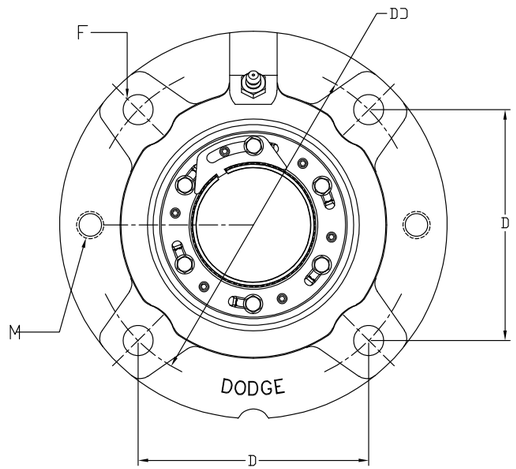
Consult Dodge for sizes not listed.

Shaft size	A	B	C	D	DD	E	F bolt dia.	G	H	K*	L	M	N	P	Q	X total exp.	Y	Z
1-1/8 1-3/16 1-1/4 1-3/8 1-7/16 1-1/2	2.63	5.25	1.84	3.09	4.38	0.75	3/8	1.39	0.50	3. 625	2.72	3/8-16	2.61	1.23	1.22	3/16	0.02	1.80
1-5/8 1-11/16 1-3/4	2.81	6.13	1.91	3.63	5.13	0.88	7/16	1.61	0.50	4.250	3.00	7/16-14	2.86	1.20	1.27	1/4	0.02	2.08
1-7/8 1-15/16 2	2.86	6.38	2.00	3.80	5.38	0.88	7/16	1.59	0.56	4.500	3.28	7/16-14	2.86	1.27	1.27	1/4	0.02	2.30
2-3/16 2-1/4	3.03	7.13	2.19	4.25	6.00	1.00	1/2	1.67	0.56	5.000	3.50	1/2-13	3.08	1.38	1.42	1/4	0.025	2.60
2-3/8 2-7/16 2-1/2	3.42	7.63	2.50	4.59	6.50	1.00	1/2	1.88	0.63	5.500	3.88	1/2-13	3.44	1.55	1.56	1/4	0.025	2.95
2-11/16 2-3/4 2-15/16 3	3.50	8.75	2.63	5.30	7.50	1.25	5/8	1.94	0.75	6.375	4.28	5/8-11	3.56	1.56	1.63	1/4	0.025	3.47
3-3/16 3-1/4 3-7/16 3-1/2	4.17	10.25	3.00	6.09	8.63	1.27	3/4	2.53	0.94	7.375	5.00	3/4-10	4.06	1.64	1.52	1/4	0.025	4.05

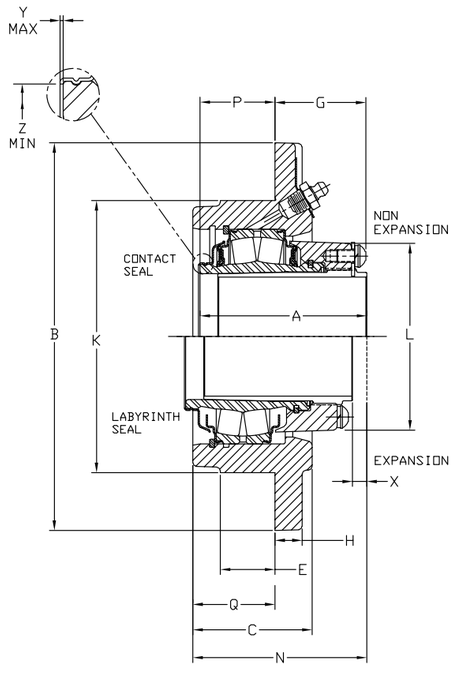
* Pilot diameter tolerance = +0.000, -0.002 inch

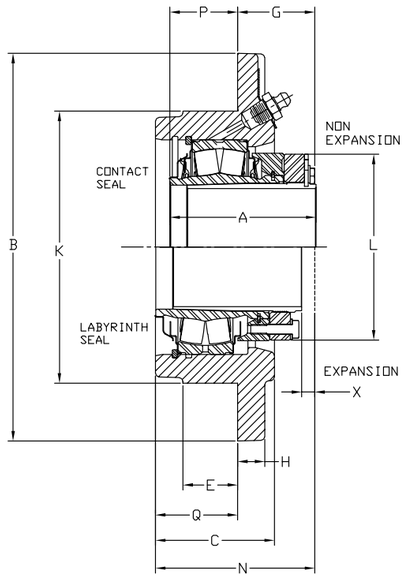
Reference Guide
Type E Family (Tapered)
Specialty Tapered
Safety Mount Family (Spherical)
S-2000 (Spherical)
Unified SAF (Spherical)
Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

IP piloted flange – inch



SIZES 311 - 500





IP piloted flange – inch

Bearing series	Shaft size	Trident seal			
		Non-expansion		Expansion	
		Part number	Description	Part number	Description
22220	3-11/16	069830	FC-IP-311R	069862	FC-IP-311RE
	3-15/16	069831	FC-IP-315R	069863	FC-IP-315RE
	4	069832	FC-IP-400R	069864	FC-IP-400RE
22222	4-7/16	069833	FC-IP-407R	069865	FC-IP-407RE
	4-1/2	069834	FC-IP-408R	069866	FC-IP-408RE
22226	4-15/16	069835	FC-IP-415R	069867	FC-IP-415RE
	5	069836	FC-IP-500R	069868	FC-IP-500RE

Consult Dodge for sizes not listed.

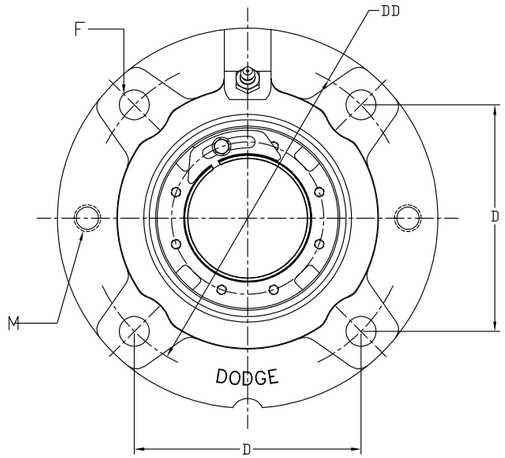
Bearing series	Shaft size	Labyrinth seal			
		Non-expansion		Expansion	
		Part number	Description	Part number	Description
22220	3-11/16	069894	FC-IP-311L	069926	FC-IP-311LE
	3-15/16	069895	FC-IP-315L	069927	FC-IP-315LE
	4	069896	FC-IP-400L	069928	FC-IP-400LE
22222	4-7/16	069897	FC-IP-407L	069929	FC-IP-407LE
	4-1/2	069898	FC-IP-408L	069930	FC-IP-408LE
22226	4-15/16	069899	FC-IP-415L	069931	FC-IP-415LE
	5	069900	FC-IP-500L	069932	FC-IP-500LE

Shaft size	A	B	C	D	DD	E	F bolt dia.	G	H	K*	L	M	N	P	Q	X total exp.	Y	Z
3-11/16																		
3-15/16	4.70	10.88	3.50	6.63	9.38	1.47	3/4	3.01	1.13	8.125	5.56	3/4-10	4.39	1.81	1.91	5/16	0.025	4.50
4																		
4-7/16																		
4-1/2	5.23	13.50	4.00	5.88	11.75	1.45	3/4**	3.81	1.00	10.250	6.44	3/4-10	5.55	1.69	1.98	3/8	0.036	5.00
4-15/16																		
5	5.96	14.75	4.38	6.38	12.75	1.70	7/8**	3.90	1.25	11.000	7.63	3/4-10	6.28	2.13	2.42	3/8	0.036	5.84

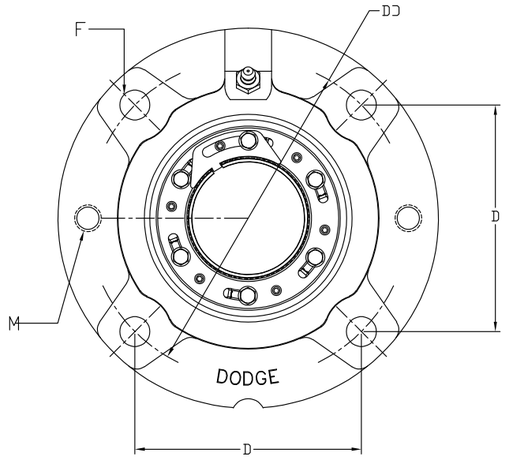
* Pilot diameter tolerance = +0.000, -0.002 inch
** 6 holes, equally spaced.
"P" and "G" dimensions are for non-expansion only.
"A" and "P" dimensions do not include "Y" dimension.

IP piloted flange – inch

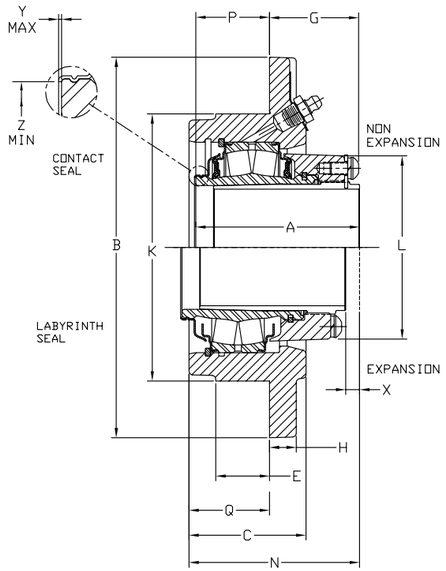
E-dimensioned

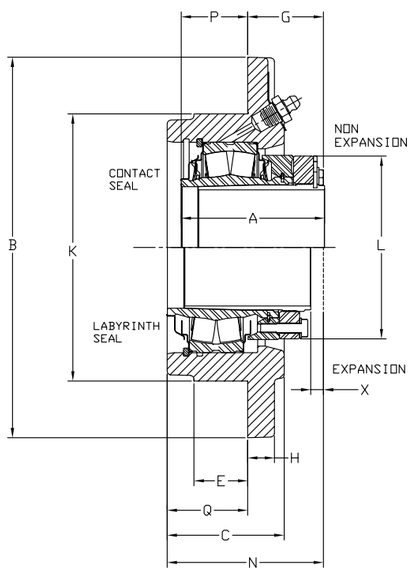


SIZES 106 - 308



SIZES 315 - 500





IP piloted flange – inch

E-dimensioned

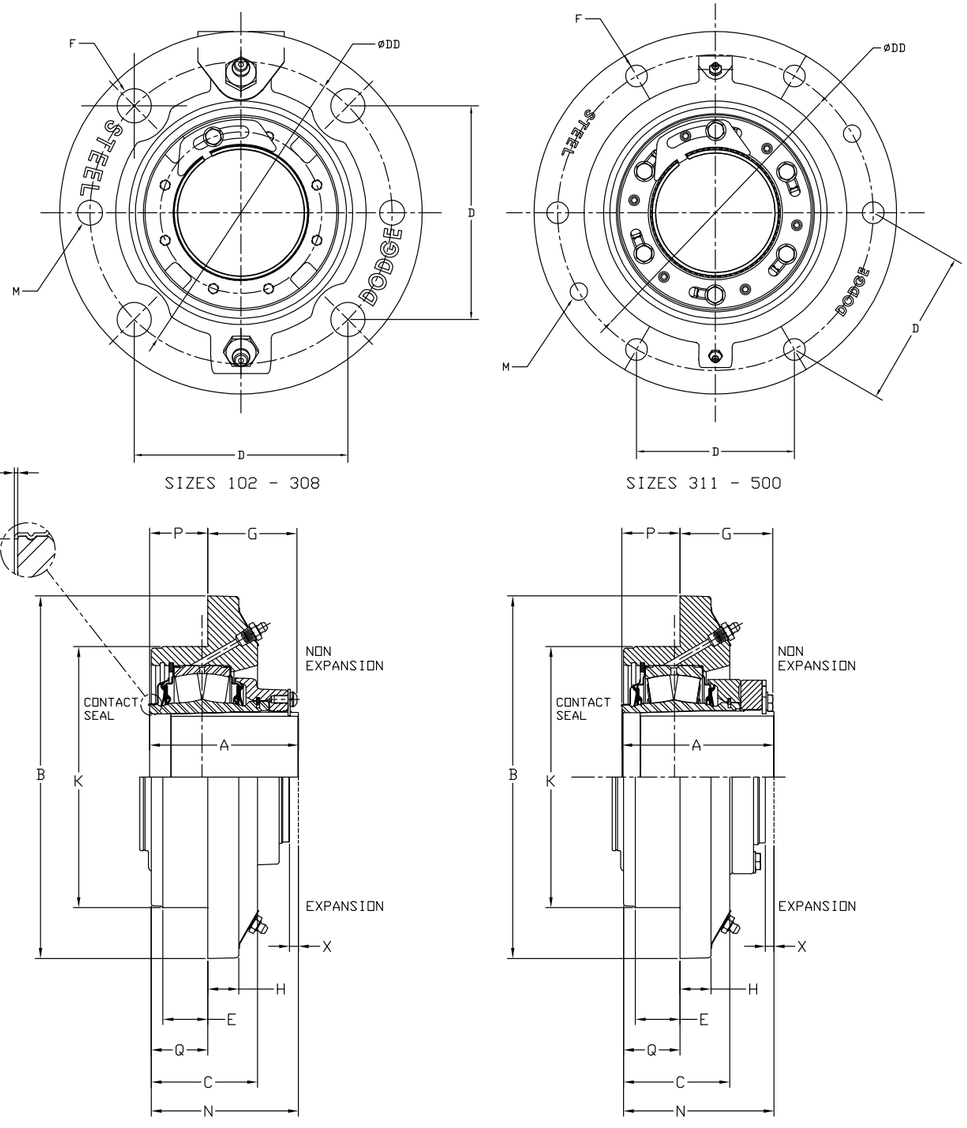
Bearing series	Shaft size	Trident seal			
		Non-expansion		Expansion	
		Part number	Description	Part number	Description
22208	1-3/8	069808	FC-IP-106R	069840	FC-IP-106RE
	1-7/16	069809	FC-IP-107R	069841	FC-IP-107RE
22209	1-1/2	071576	EFC-IP-108R	071579	EFC-IP-108RE
	1-5/8	069811	FC-IP-110R	069843	FC-IP-110RE
	1-11/16	069812	FC-IP-111R	069844	FC-IP-111RE
22210	1-3/4	071577	EFC-IP-112R	071580	EFC-IP-112RE
	1-7/8	069814	FC-IP-114R	069846	FC-IP-114RE
	1-15/16	069815	FC-IP-115R	069847	FC-IP-115RE
	2	069816	FC-IP-200R	069848	FC-IP-200RE
22211	2-3/16	069817	FC-IP-203R	069849	FC-IP-203RE
22213	2-1/4	071578	EFC-IP-204R	071581	EFC-IP-204RE
	2-7/16	069820	FC-IP-207R	069852	FC-IP-207RE
	2-1/2	069821	FC-IP-208R	069853	FC-IP-208RE
22215	2-11/16	069822	FC-IP-211R	069854	FC-IP-211RE
	2-3/4	069823	FC-IP-212R	069855	FC-IP-212RE
	2-15/16	069824	FC-IP-215R	069856	FC-IP-215RE
	3	069825	FC-IP-300R	069857	FC-IP-300RE
22218	3-3/16	069826	FC-IP-303R	069858	FC-IP-303RE
	3-1/4	069827	FC-IP-304R	069859	FC-IP-304RE
	3-7/16	069828	FC-IP-307R	069860	FC-IP-307RE
	3-1/2	069829	FC-IP-308R	069861	FC-IP-308RE
22220	3-15/16	069831	FC-IP-315R	069863	FC-IP-315RE
	4	069832	FC-IP-400R	069864	FC-IP-400RE
22222	4-7/16	071272	EFC-IP-407R	071276	EFC-IP-407RE
	4-1/2	071273	EFC-IP-408R	071277	EFC-IP-408RE
22226	4-15/16	071274	EFC-IP-415R	071278	EFC-IP-415RE
	5	071275	EFC-IP-500R	071279	EFC-IP-500RE

Consult Dodge for sizes not listed.

Bearing series	Shaft size	Labyrinth seal			
		Non-expansion		Expansion	
		Part number	Description	Part number	Description
22208	1-3/8	069872	FC-IP-106L	069904	FC-IP-106LE
	1-7/16	069873	FC-IP-107L	069905	FC-IP-107LE
22209	1-1/2	071582	EFC-IP-108L	071585	EFC-IP-108LE
	1-5/8	069875	FC-IP-110L	069907	EC-IP-110LE
	1-11/16	069876	FC-IP-111L	069908	EC-IP-111LE
22210	1-3/4	071583	EFC-IP-112L	071586	EFC-IP-112LE
	1-7/8	069878	FC-IP-114L	069910	FC-IP-114LE
	1-15/16	069879	FC-IP-115L	069911	FC-IP-115LE
	2	069880	FC-IP-200L	069912	FC-IP-200LE
22211	2-3/16	069881	FC-IP-203L	069913	FC-IP-203LE
22213	2-1/4	071584	EFC-IP-204L	071587	EFC-IP-204LE
	2-7/16	069884	FC-IP-207L	069916	FC-IP-207LE
	2-1/2	069885	FC-IP-208L	069917	FC-IP-208LE
22215	2-11/16	069886	FC-IP-211L	069918	FC-IP-211LE
	2-3/4	069887	FC-IP-212L	069919	FC-IP-212LE
	2-15/16	069888	FC-IP-215L	069920	FC-IP-215LE
	3	069889	FC-IP-300L	069921	FC-IP-300LE
22218	3-3/16	069890	FC-IP-303L	069922	FC-IP-303LE
	3-1/4	069891	FC-IP-304L	069923	FC-IP-304LE
	3-7/16	069892	FC-IP-307L	069924	FC-IP-307LE
	3-1/2	069893	FC-IP-308L	069925	FC-IP-308LE
22220	3-15/16	069895	FC-IP-315L	069927	FC-IP-315LE
	4	069896	FC-IP-400L	069928	FC-IP-400LE
22222	4-7/16	071280	EFC-IP-407L	071284	EFC-IP-407LE
	4-1/2	071281	EFC-IP-408L	071285	EFC-IP-408LE
22226	4-15/16	071282	EFC-IP-415L	071286	EFC-IP-415LE
	5	071283	EFC-IP-500L	071287	EFC-IP-500LE

IP piloted flange – inch

Steel (HD)



IP piloted flange – inch

Steel (HD)

Non-expansion

Shaft size	Part number	Description
1-1/8	072276	SFC-IP-102R
1-3/16	072277	SFC-IP-103R
1-1/4	072278	SFC-IP-104R
1-3/8	072279	SFC-IP-106R
1-7/16	072280	SFC-IP-107R
1-1/2	072281	SFC-IP-108R
1-5/8	072282	SFC-IP-110R
1-11/16	072283	SFC-IP-111R
1-3/4	072284	SFC-IP-112R
1-7/8	072285	SFC-IP-114R
1-15/16	072286	SFC-IP-115R
2	072287	SFC-IP-200R
2-3/16	072288	SFC-IP-203R
2-1/4	072289	SFC-IP-204R
2-7/16	072290	SFC-IP-207R
2-1/2	072291	SFC-IP-208R
2-11/16	072292	SFC-IP-211R
2-3/4	072293	SFC-IP-212R
2-15/16	072294	SFC-IP-215R
3	072295	SFC-IP-300R
3-3/16	072296	SFC-IP-303R
3-1/4	072297	SFC-IP-304R
3-7/16	072298	SFC-IP-307R
3-1/2	072299	SFC-IP-308R
3-11/16	072300	SFC-IP-311R
3-15/16	072301	SFC-IP-315R
4	072302	SFC-IP-400R
4-7/16	072303	SFC-IP-407R
4-1/2	072304	SFC-IP-408R
4-15/16	072305	SFC-IP-415R
5	072306	SFC-IP-500R

Expansion

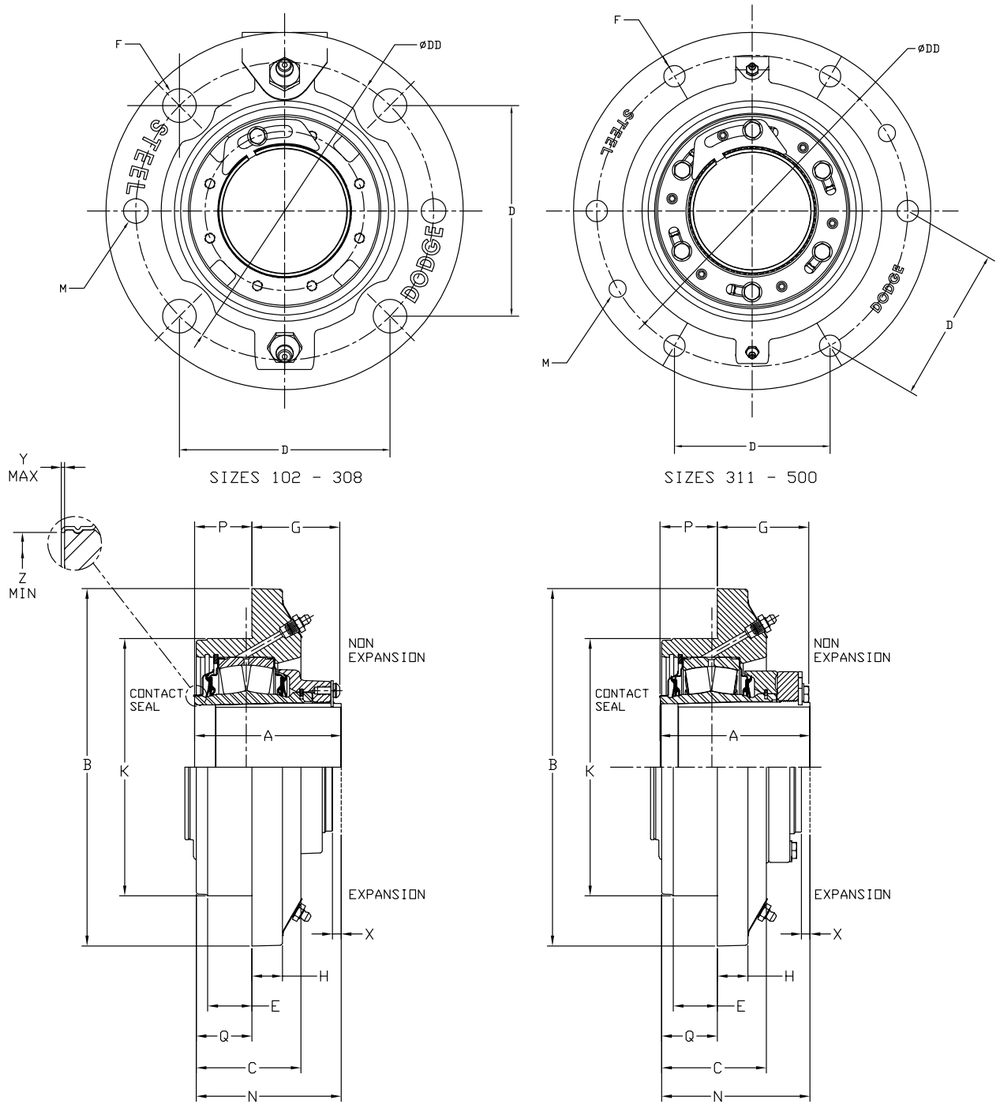
Shaft size	Part number	Description
1-1/8	072307	SFC-IP-102RE
1-3/16	072308	SFC-IP-103RE
1-1/4	072309	SFC-IP-104RE
1-3/8	072310	SFC-IP-106RE
1-7/16	072311	SFC-IP-107RE
1-1/2	072312	SFC-IP-108RE
1-5/8	072313	SFC-IP-110RE
1-11/16	072314	SFC-IP-111RE
1-3/4	072315	SFC-IP-112RE
1-7/8	072316	SFC-IP-114RE
1-15/16	072317	SFC-IP-115RE
2	072318	SFC-IP-200RE
2-3/16	072319	SFC-IP-203RE
2-1/4	072320	SFC-IP-204RE
2-7/16	072321	SFC-IP-207RE
2-1/2	072322	SFC-IP-208RE
2-11/16	072323	SFC-IP-211RE
2-3/4	072324	SFC-IP-212RE
2-15/16	072325	SFC-IP-215RE
3	072326	SFC-IP-300RE
3-3/16	072327	SFC-IP-303RE
3-1/4	072328	SFC-IP-304RE
3-7/16	072329	SFC-IP-307RE
3-1/2	072330	SFC-IP-308RE
3-11/16	072331	SFC-IP-311RE
3-15/16	072332	SFC-IP-315RE
4	072333	SFC-IP-400RE
4-7/16	072334	SFC-IP-407RE
4-1/2	072335	SFC-IP-408RE
4-15/16	072336	SFC-IP-415RE
5	072337	SFC-IP-500RE

Consult Dodge for sizes not listed.

Reference Guide
Type E Family (Tapered)
Specialty Tapered
Safety Mount Family (Spherical)
S-2000 (Spherical)
Unified SAF (Spherical)
Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

IP piloted flange – inch

Steel (HD)



IP piloted flange – inch

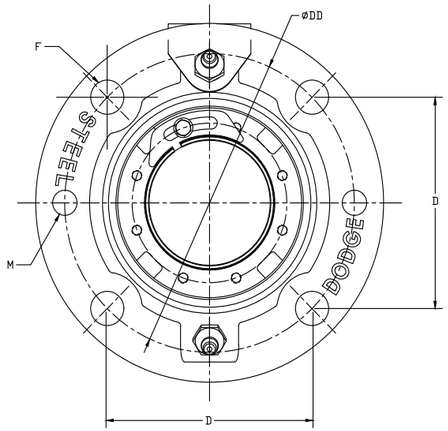
Steel (HD)

Shaft size	A	B	C	D	DD	E	F bolt dia.	G	H	K*	L	M	N	P	Q	X total exp.	Y	Z
1-1/8																		
1-3/16																		
1-1/4	2.63	5.25	1.94	3.09	4.38	—	7/16	1.61	0.50	3.625	2.72	7/16-14	2.78	1.01	1.17	3/16	0.02	1.80
1-3/8																		
1-7/16																		
1-1/2																		
1-5/8																		
1-11/16	2.81	6.13	2.19	3.63	5.13	1.33	7/16	1.44	0.31	4.250	3.00	7/16-14	3.05	1.36	1.61	1/4	0.02	2.08
1-3/4																		
1-7/8																		
1-15/16	2.86	6.38	2.15	3.80	5.38	1.03	7/16	1.63	0.50	4.500	3.28	7/16-14	3.05	1.23	1.42	1/4	0.02	2.30
2																		
2-3/16																		
2-1/4	3.03	7.13	2.42	4.25	6.00	1.02	1/2	1.80	0.56	5.000	3.50	1/2-13	3.34	1.21	1.55	1/4	0.03	2.59
2-3/8																		
2-7/16	3.43	7.63	2.66	4.60	6.50	1.25	1/2	1.86	0.50	5.500	3.80	1/2-13	3.61	1.57	1.75	1/4	0.03	2.94
2-1/2																		
2-11/16																		
2-3/4	3.50	8.75	2.83	5.30	7.50	1.44	5/8	1.89	0.63	6.375	4.20	5/8-11	3.77	1.60	1.88	1/4	0.03	3.47
2-15/16																		
3																		
3-3/16																		
3-1/4	4.17	10.25	3.31	6.10	8.63	1.34	3/4	2.46	0.88	7.375	5.00	3/4-10	4.34	1.70	1.88	1/4	0.03	4.05
3-7/16																		
3-1/2																		
3-11/16																		
3-15/16	4.70	10.88	3.73	6.63	9.375	1.85	3/4	2.58	1.00	8.125	5.44	3/4-10	4.83	2.14	2.25	3/16	0.03	4.50
4																		
4-7/16	5.23	13.50	4.31	5.86	11.75	1.90	3/4 **	3.01	1.00	10.250	6.34	3/4-10	5.70	2.72	2.70	3/8	0.04	5.00
4-1/2																		
4-15/16	5.98	14.75	4.64	6.38	12.75	2.06	7/8 **	2.98	1.03	11.000	7.54	7/8-9	6.08	3.00	3.10	3/8	0.04	5.84
5																		

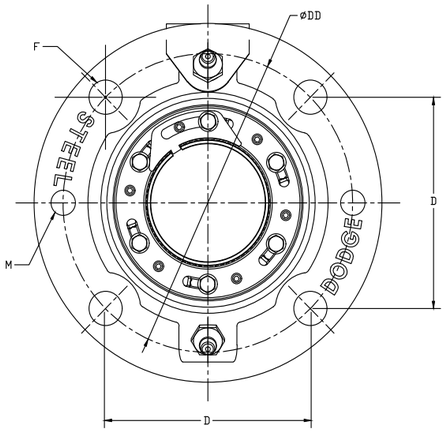
* Pilot diameter tolerance = +0.000, -0.002 inch
** 6 holes, equally spaced.
"P" and "G" dimensions are for non-expansion only.
"A" and "P" dimensions do not include "Y" dimension.

IP narrow piloted flange – inch

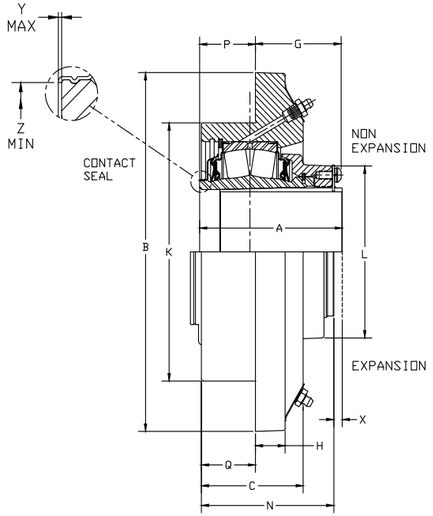
Steel (HD)

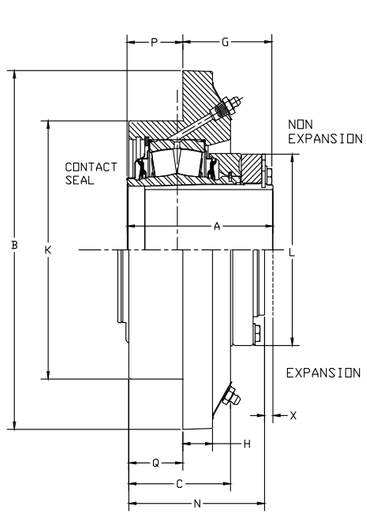


SIZES 107 – 308



SIZES 311 – 405





IP narrow piloted flange – inch

Steel (HD)

Non-expansion

Shaft size	Part number	Description
1-7/16	072338	SFCN-IP-107R
1-1/2	072339	SFCN-IP-108R
1-11/16	072340	SFCN-IP-111R
1-3/4	072341	SFCN-IP-112R
1-15/16	072342	SFCN-IP-115R
2	072343	SFCN-IP-200R
2-3/16	072344	SFCN-IP-203R
2-1/4	072345	SFCN-IP-204R
2-7/16	072346	SFCN-IP-207R
2-1/2	072347	SFCN-IP-208R
2-11/16	072348	SFCN-IP-211R
2-3/4	072349	SFCN-IP-212R
2-15/16	072350	SFCN-IP-215R
3	072351	SFCN-IP-300R
3-3/16	072352	SFCN-IP-303R
3-1/4	072353	SFCN-IP-304R
3-7/16	072354	SFCN-IP-307R
3-1/2	072355	SFCN-IP-308R
3-11/16	072356	SFCN-IP-311R
3-15/16	072358	SFCN-IP-315R
4	072359	SFCN-IP-400R
4-7/16	072360	SFCN-IP-407R
4-1/2	072361	SFCN-IP-408R

Expansion

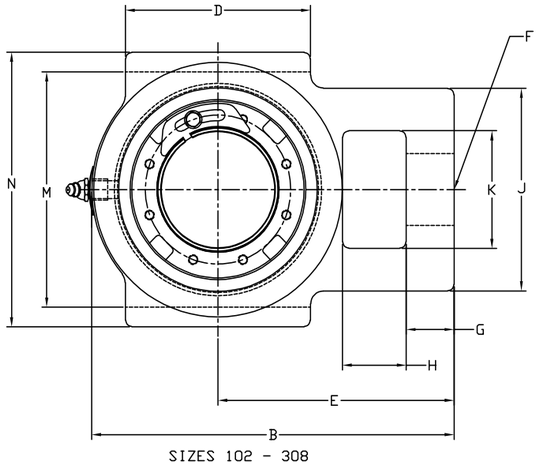
Shaft size	Part number	Description
1-7/16	072362	SFCN-IP-107RE
1-1/2	072363	SFCN-IP-108RE
1-11/16	072364	SFCN-IP-111RE
1-3/4	072365	SFCN-IP-112RE
1-15/16	072366	SFCN-IP-115RE
2	072367	SFCN-IP-200RE
2-3/16	072368	SFCN-IP-203RE
2-1/4	072369	SFCN-IP-204RE
2-7/16	072370	SFCN-IP-207RE
2-1/2	072371	SFCN-IP-208RE
2-11/16	072372	SFCN-IP-211RE
2-3/4	072373	SFCN-IP-212RE
2-15/16	072374	SFCN-IP-215RE
3	072375	SFCN-IP-300RE
3-3/16	072376	SFCN-IP-303RE
3-1/4	072377	SFCN-IP-304RE
3-7/16	072378	SFCN-IP-307RE
3-1/2	072379	SFCN-IP-308RE
3-11/16	072380	SFCN-IP-311RE
3-15/16	072382	SFCN-IP-315RE
4	072383	SFCN-IP-400RE
4-7/16	072384	SFCN-IP-407RE
4-1/2	072385	SFCN-IP-408RE

Shaft Size	A	B	C	D	DD	F bolt dia.	G	H	K*	L	M	N	P	Q	X total exp.	Y	Z
1-7/16 1-1/2	2.63	5.25	1.93	3.09	4.38	7/16	1.84	0.50	3.625	2.72	7/16-14	2.78	0.79	0.94	3/16	0.02	1.80
1-11/16 1-3/4	2.81	6.13	1.95	3.62	5.13	7/16	2.09	0.50	4.250	3.00	7/16-14	2.97	0.73	0.88	1/4	0.02	2.08
1-15/16 2	2.86	6.38	2.10	3.80	5.38	7/16	1.99	0.63	4.500	3.28	7/16-14	3.05	0.88	1.06	1/4	0.02	2.30
2-3/16 2-1/4	3.03	7.30	2.22	4.24	6.00	1/2	2.06	0.58	5.000	3.50	1/2-13	3.19	1.00	1.13	1/4	0.02	2.59
2-7/16 2-1/2	3.42	7.63	2.35	4.60	6.50	1/2	2.40	0.70	5.500	3.80	1/2-13	3.53	1.04	1.13	1/4	0.03	2.94
2-11/16 2-3/4 2-15/16 3	3.50	8.75	2.47	5.30	7.50	5/8	2.35	0.81	6.375	4.20	5/8-11	3.60	1.15	1.25	1/4	0.03	3.47
3-3/16 3-1/4 3-7/16 3-1/2	4.17	10.34	2.79	6.10	8.63	3/4	2.88	1.00	7.375	5.00	3/4-10	4.19	1.30	1.31	1/4	0.03	4.05
3-11/16 3-15/16 4	4.70	10.88	3.61	6.63	9.38	3/4	2.82	1.01	8.125	5.45	3/4-10	4.95	1.88	2.13	5/16	0.03	4.50
4-7/16 4-1/2	5.23	13.50	3.80	5.89	11.75	3/4 **	3.51	1.01	10.250	6.34	3/4-10	5.41	1.74	1.90	3/8	0.04	5.00

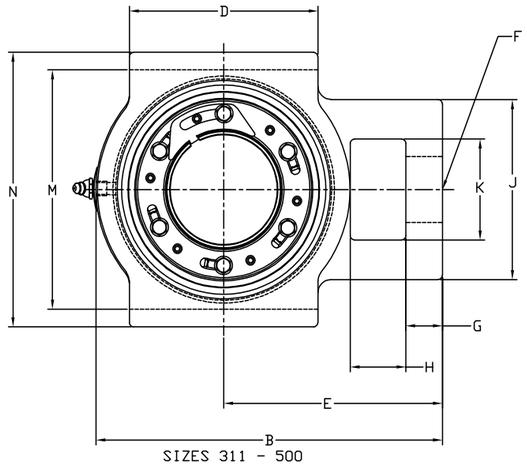
* Pilot diameter tolerance = +0.000, -0.002 inch
** 6 holes, equally spaced.
"P" and "G" dimensions are for non-expansion only.
"A" and "P" dimensions do not include "Y" dimension.

IP take-up – inch

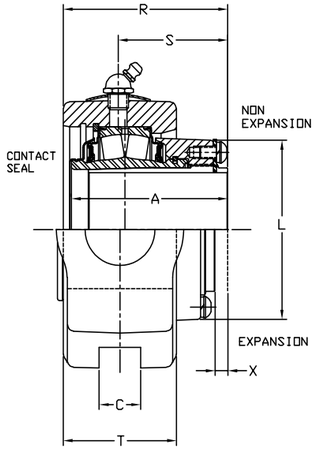
Wide-slot (WS)

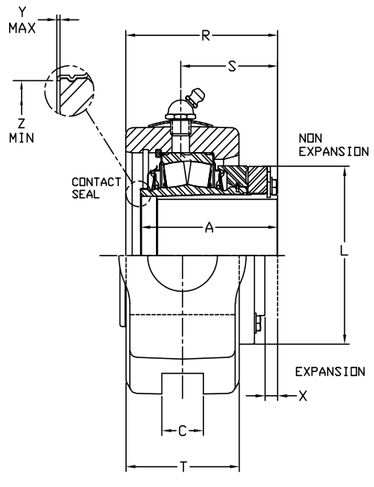


SIZES 102 – 308



SIZES 311 – 500





IP take-up – inch

Wide-slot (WS)

Bearing series	Shaft size	Take-up frame	Trident seal			
			Non-expansion		Expansion	
			Part number	Description	Part number	Description
22208	1-1/8	CP-308	069340	WSTU-IP-102R	069368	WSTU-IP-102RE
	1-3/16		069341	WSTU-IP-103R	069369	WSTU-IP-103RE
	1-1/4		069342	WSTU-IP-104R	069370	WSTU-IP-104RE
	1-3/8		069343	WSTU-IP-106R	069371	WSTU-IP-106RE
	1-7/16		069344	WSTU-IP-107R	069372	WSTU-IP-107RE
	1-1/2		069345	WSTU-IP-108R	069373	WSTU-IP-108RE
22209	1-5/8	CP-400	069346	WSTU-IP-110R	069374	WSTU-IP-110RE
	1-11/16		069347	WSTU-IP-111R	069375	WSTU-IP-111RE
	1-3/4		069348	WSTU-IP-112R	069376	WSTU-IP-112RE
22210	1-7/8	CP-400	069349	WSTU-IP-114R	069377	WSTU-IP-114RE
	1-15/16		069350	WSTU-IP-115R	069378	WSTU-IP-115RE
	2		069351	WSTU-IP-200R	069379	WSTU-IP-200RE
22211	2-3/16	CP-408	069352	WSTU-IP-203R	069380	WSTU-IP-203RE
	2-1/4		069353	WSTU-IP-204R	069381	WSTU-IP-204RE
22213	2-3/8	CP-502	069354	WSTU-IP-206R	069382	WSTU-IP-206RE
	2-7/16		069355	WSTU-IP-207R	069383	WSTU-IP-207RE
	2-1/2		069356	WSTU-IP-208R	069384	WSTU-IP-208RE
22215	2 -11/16	CP-515	069357	WSTU-IP-211R	069385	WSTU-IP-211RE
	2-3/4		069358	WSTU-IP-212R	069386	WSTU-IP-212RE
	2-15/16		069359	WSTU-IP-215R	069387	WSTU-IP-215RE
	3		069360	WSTU-IP-300R	069388	WSTU-IP-300RE
22218	3-3/16	CP-613	069361	WSTU-IP-303R	069389	WSTU-IP-303RE
	3-1/4		069362	WSTU-IP-304R	069390	WSTU-IP-304RE
	3-7/16		069363	WSTU-IP-307R	069391	WSTU-IP-307RE
	3-1/2		069364	WSTU-IP-308R	069392	WSTU-IP-308RE

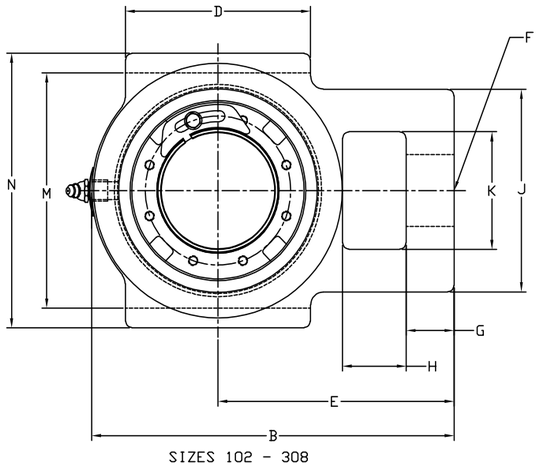
Consult Dodge for sizes not listed.

Shaft size	A	B	C	D	E	F	G	H	J	K	L	M	N	R	S	T	X total exp.	Y	Z
1-1/8 1-3/16 1-1/4 1-3/8 1-7/16 1-1/2	2.63	5.06	0.53	2.75	3.19	7/8	0.69	0.63	2.44	1.44	2.72	3.50	4.13	2.83	1.73	2.06	3/16	0.02	1.80
1-5/8 1-11/16 1-3/4	2.81	5.94	0.69	3.13	3.81	1-1/8	0.94	0.75	3.31	1.94	3.00	4.00	4.75	2.97	1.98	2.03	1/4	0.02	2.08
1-7/8 1-15/16 2	2.86	6.19	0.69	3.63	3.94	1-1/8	0.94	0.75	3.31	1.94	3.28	4.00	4.75	2.94	2.00	2.00	1/4	0.02	2.30
2-3/16 2-1/4	3.03	7.06	0.81	3.63	4.63	1-3/8	0.94	1.25	3.88	2.25	3.50	4.50	5.25	3.19	2.11	2.22	1/4	0.03	2.60
2-3/8 2-7/16 2-1/2	3.42	7.69	1.06	4.38	5.00	1-3/8	1.06	1.25	4.25	2.50	3.83	5.13	5.88	3.44	2.22	2.44	1/4	0.03	2.95
2 -11/16 2-3/4 2-15/16 3	3.50	8.88	1.81	4.50	5.75	1-5/8	1.13	1.50	4.88	2.75	4.28	5.94	6.69	3.67	2.28	2.69	1/4	0.03	3.47
3-3/16 3-1/4 3-7/16 3-1/2	4.16	10.06	1.81	5.50	6.38	1-7/8	1.06	1.63	5.13	2.88	5.00	6.81	7.81	4.22	2.69	3.06	1/4	0.03	4.05

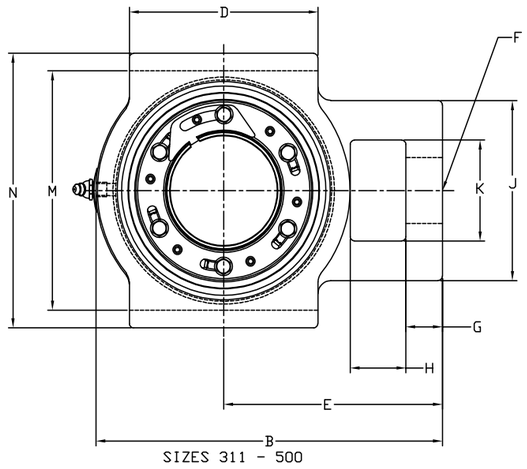
"A" Dimensions do not include "Y" dimension.

IP take-up – inch

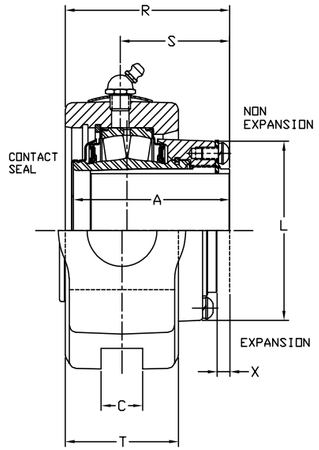
Wide-slot (WS)

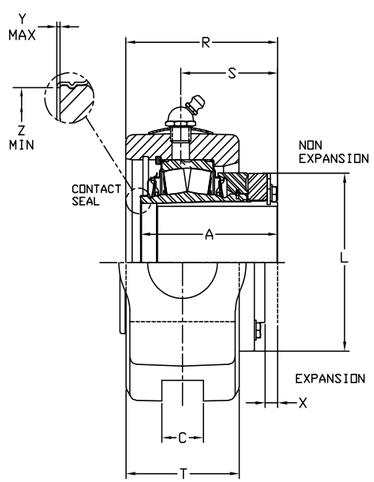


SIZES 102 – 308



SIZES 311 – 500





IP take-up – inch

Wide-slot (WS)

Bearing series	Shaft size	Take-up frame	Trident seal			
			Non-expansion		Expansion	
			Part number	Description	Part number	Description
22220	3-11/16	CP-810	069365	WSTU-IP-311R	069393	WSTU-IP-311RE
	3-15/16		069366	WSTU-IP-315R	069394	WSTU-IP-315RE
	4		069367	WSTU-IP-400R	069395	WSTU-IP-400RE
22222	4-7/16	CP-908	—	WSTU-IP-407R	—	WSTU-IP-407RE
	4-1/2		049878	WSTU-IP-408R	049418	WSTU-IP-408RE
22226	4-15/16	CP-1004	049830	WSTU-IP-415R	049831	WSTU-IP-415RE
	5		064239	WSTU-IP-500R	064240	WSTU-IP-500RE

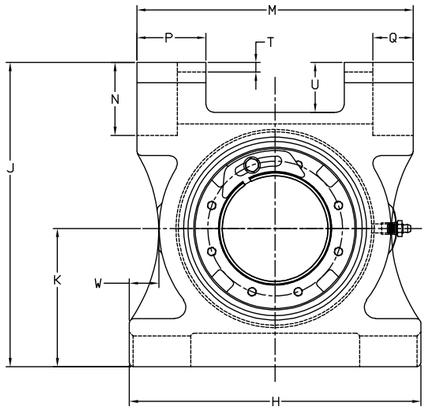
Consult Dodge for sizes not listed.

Shaft size	A	B	C	D	E	F	G	H	J	K	L	M	N	R	S	T	X total exp.	Y	Z
3-11/16																			
3-15/16	4.70	12.56	2.06	7	8.38	2-1/8	2.06	2.13	6	3.38	5.56	8.63	9.44	4.80	3.05	3.44	5/16	0.03	4.50
4																			
4-7/16	5.23	13.38	2.06	7	8.75	2-1/8	2	2.13	6.38	3.38	6.94	9.50	10.31	5.38	3.50	3.77	3/8	0.04	5
4-1/2																			
4-15/16	5.98	15.63	2.06	9	10.31	2-3/8	2.50	2.50	7	3.75	8.13	10.25	11.25	7.16	5.06	4.19	3/8	0.04	5.84
5																			

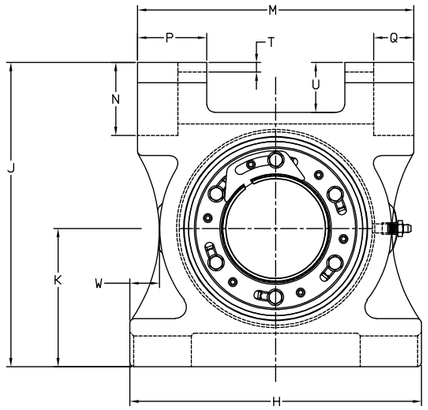
"A" Dimensions do not include "Y" dimension.

IP take-up – inch

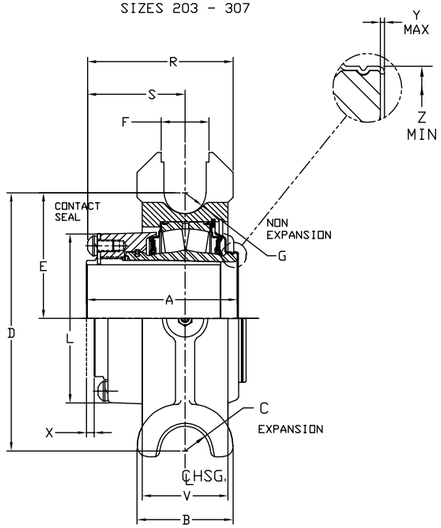
Top-angle heavy-duty universal (TPHU)

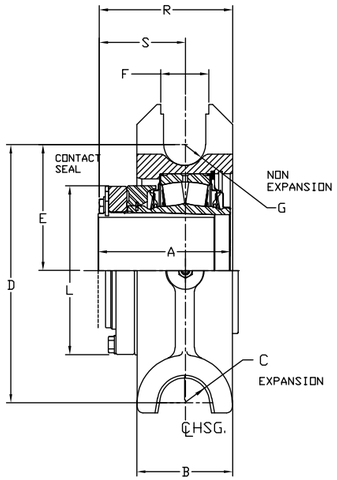


SIZES 203 – 307



SIZES 311 – 415





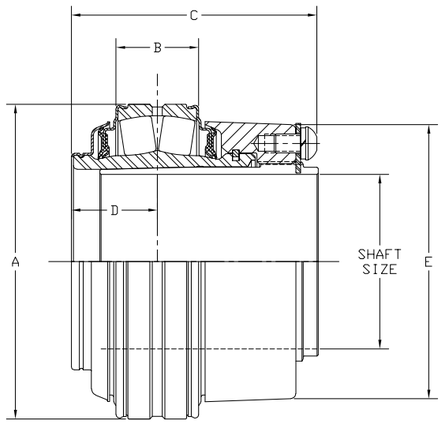
Bearing series	Shaft size	Take-up frame	Trident seal			
			Non-expansion		Expansion	
			Part number	Description	Part number	Description
22211	2-3/16	TPHU120	068231	TPHU-IP-203R	—	TPHU-IP-203RE
22213	2-3/8	TPHU130	062603	TPHU-IP-206R	—	TPHU-IP-206RE
	2-7/16		049438	TPHU-IP-207R	068163	TPHU-IP-207RE
22215	2-15/16	TPHU140	049439	TPHU-IP-215R	068160	TPHU-IP-215RE
22218	3-7/16	TPHU150	062224	TPHU-IP-307R	068164	TPHU-IP-307RE
22220	3-11/16	TPHU160	141513	TPHU-IP-311R	—	TPHU-IP-311RE
	3-15/16		068161	TPHU-IP-315R	068162	TPHU-IP-315RE
	4		140497	TPHU-IP-400R	—	TPHU-IP-400RE
22226	4-15/16	TPHU180	079242	TPHU-IP-415R	079425	TPHU-IP-415RE

Consult Dodge for sizes not listed.

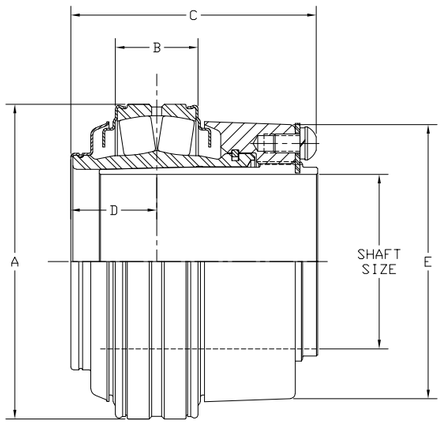
Shaft size	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	V	W	X total exp.	Y	Z
2-3/16	3.94	2.75	0.81	6.25	3.00	1.44	0.56	7.50	7.63	3.50	3.50	7.00	1.94	1.75	1.06	3.56	1.98	0.31	1.56	2.25	0.94	0.25	0.025	2.59
2-3/8 2-7/16	3.42	2.75	0.81	7.14	3.33	1.44	0.56	8.50	8.28	3.84	3.88	8.00	1.88	1.75	1.06	3.59	2.21	0.31	1.44	2.75	1.00	0.25	0.025	2.94
2-15/16	3.50	2.75	0.81	7.13	3.31	1.44	0.56	8.50	8.50	4.00	4.28	8.00	1.94	1.75	1.06	3.66	2.28	0.31	1.50	2.75	1.00	0.25	0.025	3.47
3-7/16	4.17	3.13	0.81	8.41	4.09	1.56	0.69	9.50	10.06	4.50	5.00	9.00	2.53	2.25	1.31	4.25	2.69	0.31	1.78	3.13	0.97	0.25	0.025	4.05
3-11/16 3-15/16 4	4.82	3.13	0.81	9.25	4.56	1.56	0.69	11.00	11.50	5.50	5.56	10.50	2.50	2.31	1.31	4.73	3.17	0.31	2.00	3.13	1.25	0.31	0.025	4.50
4-15/16	6.02	3.50	0.81	12.44	6.06	1.81	0.69	14.38	14.63	7.19	7.63	13.88	2.38	3.94	1.31	6.14	3.91	0.38	1.94	4.45	1.42	0.38	0.036	5.84

"A" Dimensions do not include "Y" dimension.

IP bearing insert – inch



102 – 308
CONTACT SEAL



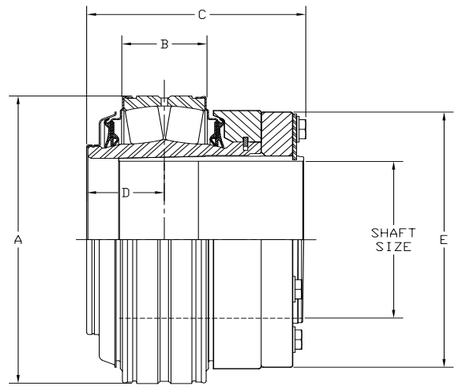
102 – 308
LABYRINTH SEAL

Bearing series	Shaft size	Trident seal		Labyrinth seal		A	B	C	D	E
		Part number	Description	Part number	Description					
22208	1-1/8	070880	INS-IP-102R	070912	INS-IP-102L	3.15	0.95	2.63	0.97	2.72
	1-3/16	070881	INS-IP-103R	070913	INS-IP-103L					
	1-1/4	070882	INS-IP-104R	070914	INS-IP-104L					
	1-3/8	070883	INS-IP-106R	070915	INS-IP-106L					
	1-7/16	070884	INS-IP-107R	070916	INS-IP-107L					
	1-1/2	070885	INS-IP-108R	070917	INS-IP-108L					
22209	1-1/2 *	071590	INS-IPE-108R	071593	INS-IPE-108L	3.35	0.95	2.81	0.95	3.00
	1-5/8	070886	INS-IP-110R	070918	INS-IP-110L					
	1-11/16	070887	INS-IP-111R	070919	INS-IP-111L					
	1-3/4	070888	INS-IP-112R	070920	INS-IP-112L					
22210	1-3/4 *	071591	INS-IPE-112R	071594	INS-IPE-112L	3.54	0.95	2.86	0.98	3.28
	1-7/8	070889	INS-IP-114R	070921	INS-IP-114L					
	1-15/16	070890	INS-IP-115R	070922	INS-IP-115L					
	2	070891	INS-IP-200R	070923	INS-IP-200L					
22211	2-3/16	070892	INS-IP-203R	070924	INS-IP-203L	3.94	1.05	3.03	1.05	3.50
	2-1/4	070893	INS-IP-204R	070925	INS-IP-204L					
22213	2-1/4 *	071592	INS-IPE-204R	071595	INS-IPE-204L	4.72	1.28	3.42	1.21	3.88
	2-3/8	070894	INS-IP-206R	070926	INS-IP-206L					
	2-7/16	070895	INS-IP-207R	070927	INS-IP-207L					
	2-1/2	070896	INS-IP-208R	070928	INS-IP-208L					
22215	2-11/16	070897	INS-IP-211R	070929	INS-IP-211L	5.12	1.28	3.50	1.22	4.28
	2-3/4	070898	INS-IP-212R	070930	INS-IP-212L					
	2-15/16	070899	INS-IP-215R	070931	INS-IP-215L					
	3	070900	INS-IP-300R	070932	INS-IP-300L					
22218	3-3/16	070901	INS-IP-303R	070933	INS-IP-303L	6.30	1.63	4.17	1.48	5.00
	3-1/4	070902	INS-IP-304R	070934	INS-IP-304L					
	3-7/16	070903	INS-IP-307R	070935	INS-IP-307L					
	3-1/2	070904	INS-IP-308R	070936	INS-IP-308L					

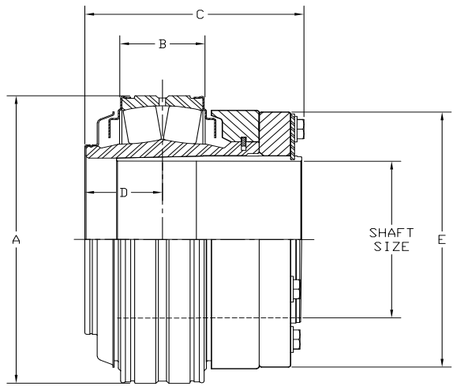
* Inserts for Safety Mount-Type E dimensioned housings only.

Metric shaft sizes available upon request.

IP bearing insert – inch



311 – 700
CONTACT SEAL



311 – 700
LABYRINTH SEAL

Bearing series	Shaft size	Trident seal		Labyrinth seal		A	B	C	D	E
		Part number	Description	Part number	Description					
22220	3-11/16	070905	INS-IP-311R	070937	INS-IP-311L	7.09	1.88	4.82	1.65	5.56
	3-15/16	070906	INS-IP-315R	070938	INS-IP-315L					
	4	070907	INS-IP-400R	070939	INS-IP-400L					
22222	4-7/16	070908	INS-IP-407R	070940	INS-IP-407L	7.87	2.16	5.48	1.94	6.44
	4-1/2	070909	INS-IP-408R	070941	INS-IP-408L					
22226	4-15/16	070910	INS-IP-415R	070942	INS-IP-415L	9.06	2.59	6.02	2.11	7.63
	5	070911	INS-IP-500R	070943	INS-IP-500L					
22228	5-7/16	037925	INS-IP-507R	037933	INS-IP-507L	9.84	2.75	6.48	2.34	8.75
	5-1/2	037926	INS-IP-508R	037934	INS-IP-508L					
22232	5-15/16	037927	INS-IP-515R	037935	INS-IP-515L	11.42	3.22	7.40	2.77	10.25
	6	037928	INS-IP-600R	037936	INS-IP-600L					
22236	6-7/16	037929	INS-IP-607R	037937	INS-IP-607L	12.60	3.47	7.63	2.86	11.41
	6-1/2	037930	INS-IP-608R	037938	INS-IP-608L					
	6-15/16	037931	INS-IP-615R	037939	INS-IP-615L					
	7	037932	INS-IP-700R	037940	INS-IP-700L					
22240	7-3/16	231330	INS-IP-703R	231339	INS-IP-703L	14.17	3.96	8.82	3.21	12.51
22244	7-1/2	231331	INS-IP-708R	231340	INS-IP-708L	15.75	4.35	9.22	3.41	13.95
	7-15/16	231332	INS-IP-715R	231341	INS-IP-715L					
	8	231333	INS-IP-800R	231342	INS-IP-800L					
23048	8-1/2	231334	INS-IP-808R	231343	INS-IP-808L	14.17	3.72	8.57	3.13	13.40
	9	231335	INS-IP-900R	231344	INS-IP-900L					
23052	9-1/2	231336	INS-IP-908R	231345	INS-IP-908L	15.75	4.20	9.17	3.42	14.50
23056	10	231337	INS-IP-1000R	231346	INS-IP-1000L	16.54	4.27	9.21	3.46	15.30
	10-1/2	231338	INS-IP-1008R	231347	INS-IP-1008L					

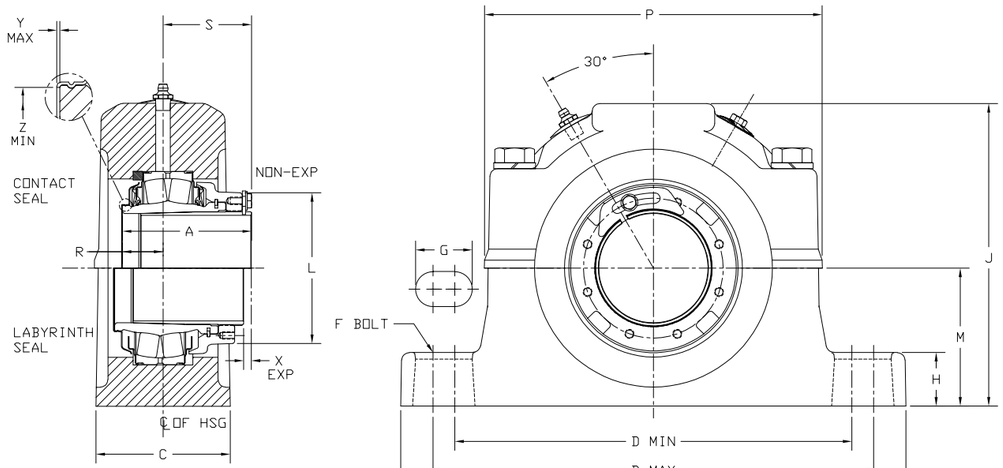
* Inserts for Safety Mount-Type E dimensioned housings only.

Metric shaft sizes available upon request.

Reference Guide
Type E Family (Tapered)
Specialty Tapered
Safety Mount Family (Spherical)
S-2000 (Spherical)
Unified SAF (Spherical)
Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

ISAF pillow block – inch

2- and 4-bolt



SIZES 107 THRU 307

ISAF pillow block – inch

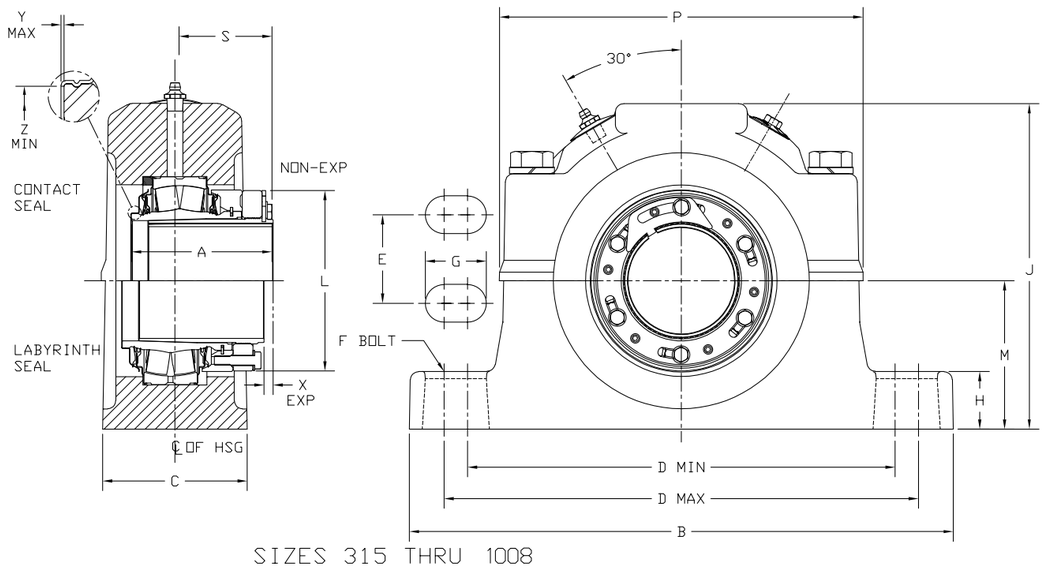
2- and 4-bolt

SAF series	Shaft size	Trident seal				Labyrinth seal			
		Non-expansion		Expansion		Non-expansion		Expansion	
		Part number	Description	Part number	Description	Part number	Description	Part number	Description
509	1-7/16	070054	P2B509-ISAF-107R	070064	P2B509-ISAF-107RE	070074	P2B509-ISAF-107L	070084	P2B509-ISAF-107LE
510	1-11/16	070055	P2B510-ISAF-111R	070065	P2B510-ISAF-111RE	070075	P2B510-ISAF-111L	070085	P2B510-ISAF-111LE
511	1-15/16	070056	P2B511-ISAF-115R	070066	P2B511-ISAF-115RE	070076	P2B511-ISAF-115L	070086	P2B511-ISAF-115LE
513	2-3/16	070057	P2B513-ISAF-203R	070067	P2B513-ISAF-203RE	070077	P2B513-ISAF-203L	070087	P2B513-ISAF-203LE
515	2-7/16	070951	P2B515-ISAF-207R	070955	P2B515-ISAF-207RE	070959	P2B515-ISAF-207L	070963	P2B515-ISAF-207LE
516	2-11/16	070952	P2B516-ISAF-211R	070956	P2B516-ISAF-211RE	070960	P2B516-ISAF-211L	070964	P2B516-ISAF-211LE
517	2-15/16	070953	P2B517-ISAF-215R	070957	P2B517-ISAF-215RE	070961	P2B517-ISAF-215L	070965	P2B517-ISAF-215LE
520	3-7/16	070954	P2B520-ISAF-307R	070958	P2B520-ISAF-307RE	070962	P2B520-ISAF-307L	070966	P2B520-ISAF-307LE
515	2-7/16	070058	P4B515-ISAF-207R	070068	P4B515-ISAF-207RE	070078	P4B515-ISAF-207L	070088	P4B515-ISAF-207LE
516	2-11/16	070094	P4B516-ISAF-211R	070095	P4B516-ISAF-211RE	070096	P4B516-ISAF-211L	070097	P4B516-ISAF-211LE
517	2-15/16	070059	P4B517-ISAF-215R	070069	P4B517-ISAF-215RE	070079	P4B517-ISAF-215L	070089	P4B517-ISAF-215LE
520	3-7/16	070060	P4B520-ISAF-307R	070070	P4B520-ISAF-307RE	070080	P4B520-ISAF-307L	070090	P4B520-ISAF-307LE

SAF series	Shaft size	A	B	C	D		E	F bolt dia.		G	H	J	L	M	P	S	X exp	Y	Z
					Min.	Max.		2-bolt	4-bolt										
509	1-7/16	2.63	8.25	2.19	6.25	7.00	—	1/2	—	0.94	0.88	4.94	2.72	2.25	5.51	1.53	7/32	0.02	1.80
510	1-11/16	2.81	8.25	2.38	6.50	7.00	—	1/2	—	0.88	1.03	5.45	3.00	2.50	5.81	1.73	7/32	0.02	2.08
511	1-15/16	2.86	9.63	2.75	7.38	8.25	—	5/8	—	1.20	1.03	5.97	3.28	2.75	6.38	1.73	17/64	0.02	2.30
513	2-3/16	3.03	11.00	3.25	8.65	9.50	—	5/8	—	1.15	1.03	6.34	3.50	3.00	6.97	1.88	7/32	0.03	2.59
515	2-7/16	3.42	11.13	3.13	8.63	9.63	1.88	5/8	1/2	1.13	1.25	6.86	3.88	3.25	7.42	2.06	5/16	0.03	2.94
516	2-11/16	3.50	12.59	3.50	9.88	11.00	2.13	3/4	5/8	1.31	1.00	7.50	4.28	3.50	8.31	2.16	15/64	0.03	3.47
517	2-15/16	3.50	12.59	3.50	9.88	11.00	2.13	3/4	5/8	1.31	1.25	7.75	4.28	3.75	8.31	2.16	15/64	0.03	3.47
520	3-7/16	4.16	15.36	4.34	11.81	13.13	2.38	7/8	3/4	1.63	1.66	9.25	5.00	4.50	10.13	2.48	3/8	0.03	4.05

ISAF pillow block – inch

4-bolt



SIZES 315 THRU 1008

Reference Guide
Type E Family (Tapered)
Specialty Tapered
Safety Mount Family (Spherical)
S-2000 (Spherical)
Unified SAF (Spherical)
Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

ISAF pillow block – inch

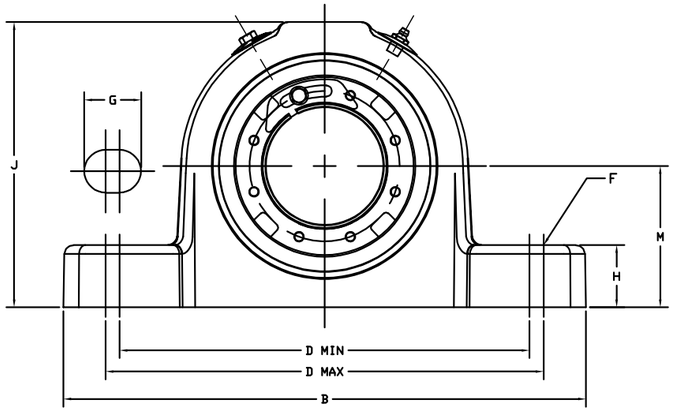
4-bolt

SAF series	Shaft size	Trident seal				Labyrinth seal			
		Non-expansion		Expansion		Non-expansion		Expansion	
		Part number	Description	Part number	Description	Part number	Description	Part number	Description
522	3-15/16	070061	P4B522-ISAF-315R	070071	P4B522-ISAF-315RE	070081	P4B522-ISAF-315L	070091	P4B522-ISAF-315LE
526	4-7/16	070062	P4B526-ISAF-407R	070072	P4B526-ISAF-407RE	070082	P4B526-ISAF-407L	070092	P4B526-ISAF-407LE
528	4-15/16	070063	P4B528-ISAF-415R	070073	P4B528-ISAF-415RE	070083	P4B528-ISAF-415L	070093	P4B528-ISAF-415LE
532	5-7/16	037850	P4B532-ISAF-507R	037854	P4B532-ISAF-507RE	037901	P4B532-ISAF-507L	037902	P4B532-ISAF-507LE
	5-1/2	037903	P4B532-ISAF-508R	037904	P4B532-ISAF-508RE	037905	P4B532-ISAF-508L	037906	P4B532-ISAF-508LE
534	5-15/16	037851	P4B534-ISAF-515R	037855	P4B534-ISAF-515RE	037907	P4B534-ISAF-515L	037908	P4B534-ISAF-515LE
	6	037909	P4B534-ISAF-600R	037910	P4B534-ISAF-600RE	037911	P4B534-ISAF-600L	037912	P4B534-ISAF-600LE
536	6-7/16	037852	P4B536-ISAF-607R	037856	P4B536-ISAF-607RE	037913	P4B536-ISAF-607L	037914	P4B536-ISAF-607LE
	6-1/2	037915	P4B536-ISAF-608R	037916	P4B536-ISAF-608RE	037917	P4B536-ISAF-608L	037918	P4B536-ISAF-608LE
538	6-15/16	037853	P4B528-ISAF-615R	037857	P4B528-ISAF-615RE	037919	P4B528-ISAF-615L	037920	P4B528-ISAF-615LE
	7	037921	P4B538-ISAF-700R	037922	P4B538-ISAF-700RE	037923	P4B538-ISAF-700L	037924	P4B538-ISAF-700LE
540	7-3/16	231292	P4B540-ISAF-703R SML	231300	P4B540-ISAF-703RE SML	231308	P4B540-ISAF-703L SML	231316	P4B540-ISAF-703LE SML
544	7-1/2	231293	P4B544-ISAF-708R SML	231301	P4B544-ISAF-708RE SML	231309	P4B544-ISAF-708L SML	231317	P4B544-ISAF-708LE SML
	7-15/16	231324	P4B544-ISAF-715R SML	231325	P4B544-ISAF-715RE SML	231326	P4B544-ISAF-715L SML	231327	P4B544-ISAF-715LE SML
	8	231294	P4B544-ISAF-800R SML	231302	P4B544-ISAF-800RE SML	231310	P4B544-ISAF-800L SML	231318	P4B544-ISAF-800LE SML
048	8-1/2	231295	P4B048-ISAF-808R SML	231303	P4B048-ISAF-808RE SML	231311	P4B048-ISAF-808L SML	231319	P4B048-ISAF-808LE SML
	8-15/16	231328	P4B048-ISAF-815R SML	231329	P4B048-ISAF-815RE SML	—	—	—	—
	9	231296	P4B048-ISAF-900R SML	231304	P4B048-ISAF-900RE SML	231312	P4B048-ISAF-900L SML	231320	P4B048-ISAF-900LE SML
052	9-1/2	231297	P4B052-ISAF-908R SML	231305	P4B052-ISAF-908RE SML	231313	P4B052-ISAF-908L SML	231321	P4B052-ISAF-908LE SML
	9-15/16	231374	P4B056-ISAF-915R SML	231375	P4B056-ISAF-908RE SML	—	—	—	—
056	10	231298	P4B056-ISAF-1000R SML	231306	P4B056-ISAF-1000RE SML	231314	P4B056-ISAF-1000L SML	231322	P4B056-ISAF-1000LE SML
	10-1/2	231299	P4B056-ISAF-1008R SML	231307	P4B056-ISAF-1008RE SML	231315	P4B056-ISAF-1008L SML	231323	P4B056-ISAF-1008LE SML

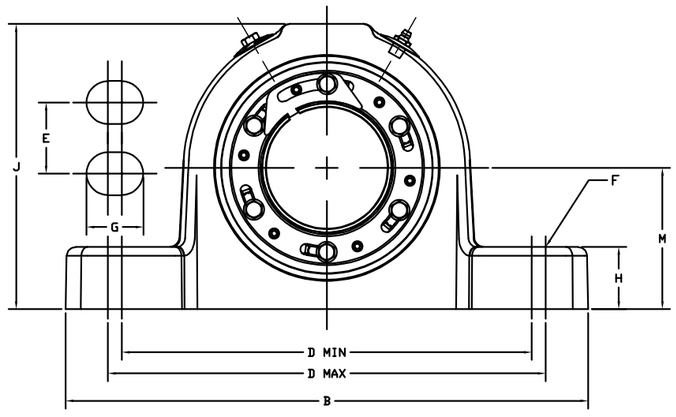
SAF series	Shaft size	A	B	C	D		E	F bolt dia.	G	H	J	L	M	P	S	X exp.	Y	Z
					Min.	Max.												
522	3-11/16 3-15/16 4	4.70	16.50	4.75	12.59	14.50	2.75	3/4	1.83	1.73	10.19	5.56	4.94	10.71	2.86	3/8	0.03	4.50
526	4-3/16 4-7/16 4-1/2	5.23	18.38	5.13	14.50	16.00	3.25	7/8	1.75	2.06	11.65	6.44	6.00	12.47	3.09	3/8	0.04	5.00
528	4-15/16 5	5.98	19.70	5.88	15.63	17.38	3.38	1	2.00	2.06	12.41	7.63	6.00	13.38	3.68	3/8	0.04	5.84
532	5-7/16 5-1/2	6.17	21.65	6.25	17.38	19.25	3.75	1	2.06	2.34	12.50	8.75	6.69	13.38	3.64	3/8	0.04	5.92
534	5-15/16 6	7.08	24.75	6.75	19.38	21.63	4.25	1	2.25	2.88	13.68	10.25	7.06	15.09	4.11	3/8	0.04	7.01
536	6-7/16 6-1/2	7.39	26.75	7.13	20.88	23.63	4.63	1	2.50	3.00	15.13	11.41	7.50	17.38	4.34	3/8	0.04	7.89
538	6-15/16 7	7.39	28.00	7.50	21.63	24.38	4.50	1-1/4	2.75	3.13	15.50	11.41	7.88	13.38	4.34	3/8	0.04	7.89
540	7-3/16	8.82	28.75	8.00	22.50	25.00	5.00	1-1/4	2.64	3.38	16.63	12.51	8.25	18.55	5.36	3/8	0.05	8.60
544	7-1/2 7-15/16 8	9.22	32.75	8.87	24.75	27.88	5.25	1-1/2	3.20	3.75	18.88	13.95	9.50	20.68	5.57	3/8	0.05	9.48
048	8-1/2 8-15/16 9	8.57	28.75	8.00	22.50	25.00	5.00	1-1/4	2.64	3.38	16.63	13.40	8.25	18.55	5.38	5/8	0.05	9.93
052	9-1/2	9.17	32.75	8.87	24.75	27.88	5.25	1-1/2	3.20	3.75	18.88	14.50	9.50	20.68	5.70	17/32	0.05	10.79
056	9-15/16 10 10-1/2	9.21	32.24	8.87	26.25	29.50	5.50	1-1/2	3.26	3.94	20.19	15.30	9.88	21.55	5.69	1-5/8	0.05	11.63

ISN plummer block – metric

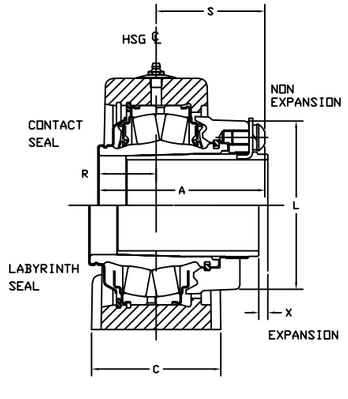
2- and 4-bolt

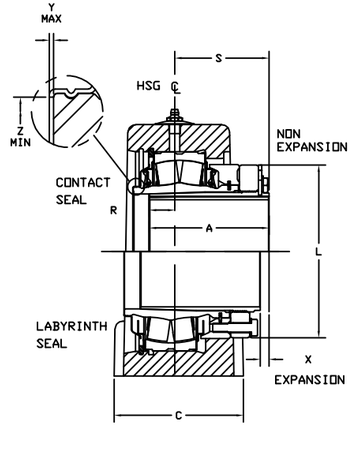


SIZES 30MM THRU 140MM



SIZES 150MM THRU 170MM





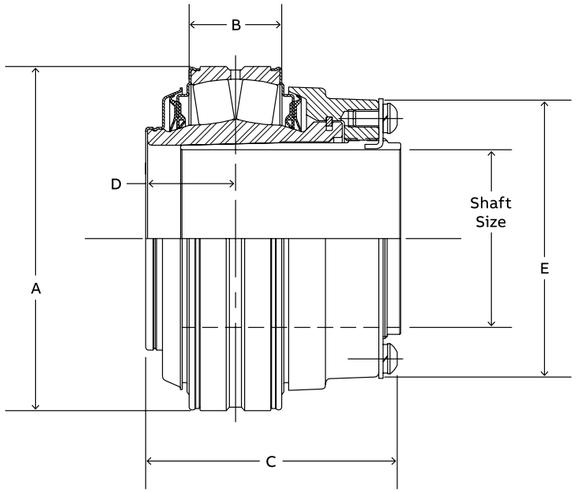
ISN plummer block – metric
2- and 4-bolt

Shaft size	Trident seal				Labyrinth seal			
	Non-expansion		Expansion		Non-expansion		Expansion	
	Part number	Description	Part number	Description	Part number	Description	Part number	Description
30	071000M	P2B507-ISN-030MFR	071017M	P28507-ISN-030MLR	071034M	P28507-ISN-030MFS	071051M	P28507-ISN-030MLS
35	071001M	P2B508-ISN-035MFR	071018M	P2B508-ISN-035MLR	071035M	P2B508-ISN-035MFS	071052M	P2B508-ISN-035MLS
40	071002M	P2B509-ISN-040MFR	071019M	P2B509-ISN-040MLR	071036M	P2N509-ISN-040MFS	071053M	P2B509-ISN-040MLS
45	071003M	P2B510-ISN-045MFR	071020M	P2B510-ISN-045MLR	071037M	P2B510-ISN-045MFS	071054M	P2B510-ISN-045MLS
50	071004M	P2B511-ISN-050MFR	071021M	P2B511-ISN-050MLR	071038M	P2B511-ISN-050MFS	071055M	P2B511-ISN-050MLS
55	071005M	P2B512-ISN-055MFR	071022M	P2B512-ISN-055MLR	071039M	P2B512-ISN-055MFS	071056M	P2B512-ISN-055MLS
60	071006M	P2B513-ISN-060MFR	071023M	P28513-ISN-060MLR	071040M	P2B513-ISN-060MFS	071057M	P28513-ISN-060MLS
65	071007M	P2B515-ISN-065MFR	071024M	P2B515-ISN-065MLR	071041M	P2B515-ISN-065MFS	071058M	P2B515-ISN-065MLS
70	071008M	P2B516-ISN-070MFR	071025M	P2B516-ISN-070MLR	071042M	P2B516-ISN-070MFS	071059M	P2B516-ISN-070MLS
75	071009M	P2B517-ISN-075MFR	071026M	P2B517-ISN-075MLR	071043M	P2B517-ISN-075MFS	071060M	P2B517-ISN-075MLS
80	071010M	P2B518-ISN-080MFR	071027M	P2B518-ISN-080MLR	071044M	P2B518-ISN-080MFS	071061M	P2B518-ISN-080MLS
85	071011M	P2B519-ISN-085MFR	071028M	P2B519-ISN-085MLR	071045M	P2B519-ISN-085MFS	071062M	P2B519-ISN-085MLS
90	071012M	P2B520-ISN-090MFR	071029M	P2B520-ISN-090MLR	071046M	P2B520-ISN-090MFS	071063M	P2B520-ISN-090MLS
100	071013M	P2B522-ISN-100MFR	071030M	P2B522-ISN-100MLR	071047M	P2B522-ISN-100MFS	071064M	P2B522-ISN-100MLS
110	071014M	P2B524-ISN-110MFR	071031M	P2B524-ISN-110MLR	071048M	P2B524-ISN-110MFS	071065M	P2B524-ISN-110MLS
115	071015M	P2B526-ISN-115MFR	071032M	P2B526-ISN-115MLR	071049M	P2B526-ISN-115MFS	071066M	P2B526-ISN-115MLS
125	071016M	P2B528-ISN-125MFR	071033M	P2B528-ISN-125MLR	071050M	P2B528-ISN-125MFS	071067M	P2B528-ISN-125MLS
135	071102M	P2B530-ISN-135MFR	071103M	P28530-ISN-135MLR	071104M	P28530-ISN-135MFS	071105M	P28530-ISN-135MLS
140	071106M	P2B532-ISN-140MFR	071107M	P2B532-ISN-140MLR	071108M	P2B532-ISN-140MFS	071109M	P2B532-ISN-140MLS
150	078822	P4B3134-ISN-150MFR	078823	P4B3134-ISN-150MLR	—	—	—	—
160	078824	P4B3136-ISN-160MFR	078825	P4B3136-ISN-160MLR	—	—	—	—
170	078826	P4B3138-ISN-170MFR	078827	P4B3138-ISN-170MLR	—	—	—	—

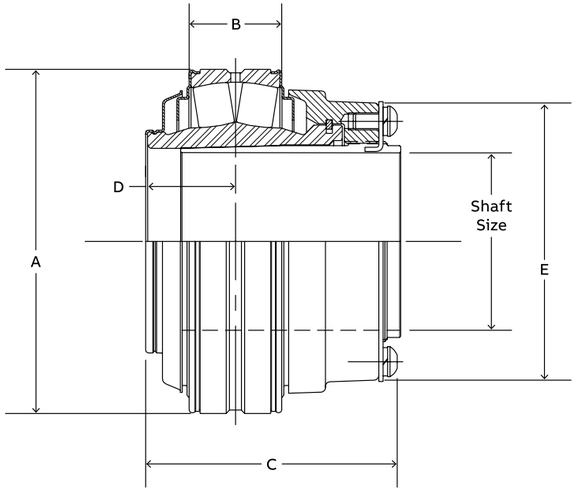
Shaft size	A	B	C	D		E	F bolt dia.	G	H	J	L	M	R	S	X exp.	Y	Z
				Min.	Max.												
30	66.7	184.9	52.0	145.0	155.0	—	M12	20.0	22.0	100.9	67.6	50.0	22.6	44.1	4.0	0.51	45.7
35	66.7	205.9	60.2	150.0	174.6	—	M12	27.3	25.0	110.8	67.6	60.0	22.6	44.1	4.0		
40	71.4	206.3	60.2	155.0	174.6	—	M12	24.8	25.0	114.0	74.7	60.0	20.6	50.8	6.5	0.51	52.8
45	72.6	204.9	60.2	160.0	175.0	—	M12	22.5	25.0	113.8	81.0	60.0	21.8	50.8	6.5	0.51	58.4
50	72.6	253.9	70.2	190.0	215.9	—	M16	31.0	28.0	124.5	81.0	70.0	21.8	50.8	6.5		
55	77.0	253.9	69.9	190.0	216.0	—	M16	31.0	30.0	130.3	87.1	70.0	23.0	54.0	6.5	0.64	66.0
60	86.9	274.9	80.2	205.0	235.0	—	M16	33.0	30.0	152.4	96.5	80.0	30.6	56.3	7.0	0.64	74.7
65	88.9	280.1	80.1	215.0	236.0	—	M16	28.5	30.0	156.0	106.7	80.0	31.4	57.5	7.0	0.64	88.1
70	88.9	315.9	90.2	244.5	268.3	—	M20	34.1	32.0	176.0	106.7	95.0	31.4	57.5	7.0	0.64	88.1
75																	
80	106.0	345.3	100.3	270.0	293.7	—	M20	34.0	35.0	196.7	124.7	100.0	37.7	68.3	7.0	0.64	102.9
85	106.0	345.0	100.2	264.2	296.1	—	M20	37.9	35.0	205.2	124.7	112.0	37.7	68.3	7.0		
90	119.5	379.8	110.2	292.8	327.0	—	M24	43.1	40.0	218.3	138.7	112.0	41.7	77.8	8.0	0.64	114.3
100	119.5	410.0	120.0	314.4	356.0	—	M24	46.8	45.0	239.0	138.7	125.0	41.7	77.8	8.0		
110	133.0	410.0	120.0	314.5	356.0	—	M24	46.8	45.0	260.7	161.3	140.0	44.5	88.5	10.0	0.91	127.0
115	152.0	444.8	130.0	359.6	387.0	—	M24	41.7	50.0	292.8	191.8	150.0	48.4	103.6	10.0	0.91	148.3
125	152.0	500.0	150.2	400.0	427.0	—	M30	48.5	50.0	290.4	191.8	150.0	48.4	103.6	10.0		
135	156.8	539.8	159.8	443.0	457.0	—	M30	42.0	60.0	312.5	222.2	160.0	51.8	105.0	16.3	0.91	150.4
140	179.8	560.0	160.0	463.0	477.0	—	M30	42.0	60.0	345.3	260.4	170.0	62.4	117.4	16.8	0.91	178.3
150	179.8	510.0	180.0	424.0	436.0	100.0	M24	34.0	70.0	344.0	260.4	170.0	62.1	117.7	16.8	0.91	178.1
160	191.8	530.0	190.0	444.0	456.0	110.0	M24	34.0	75.0	366.0	289.3	180.0	65.0	126.8	17.0	0.91	200.4
170	191.8	560.0	210.0	474.0	486.0	120.0	M24	34.0	80.0	385.0	289.3	190.0	65.0	126.8	17.0	0.91	200.4

ISN bearing insert – metric

Contact Seal



Labyrinth Seal



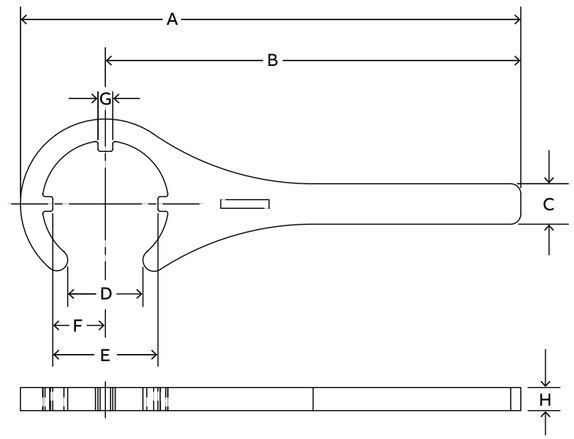
ISN bearing insert – metric

Shaft size	Contact seal		Labyrinth seal		Dimensions (mm)				
	Part number	Description	Part number	Description	A	B	C	D	E
30	071068M	INS-ISN-30MR	071085M	INS-ISN-30MS	80.0	24.0	66.7	24.6	67.6
35	071069M	INS-ISN-35MR	071086M	INS-ISN-35MS					
40	071070M	INS-ISN-40MR	071087M	INS-ISN-40MS	85.0	24.0	71.4	24.2	74.7
45	071071M	INS-ISN-45MR	071088M	INS-ISN-45MS	90.0	24.0	72.6	24.8	81.0
50	071072M	INS-ISN-50MR	071089M	INS-ISN-50MS					
55	071073M	INS-ISN-55MR	071090M	INS-ISN-55MS	100.0	26.3	77.0	26.7	87.1
60	071074M	INS-ISN-60MR	071091M	INS-ISN-60MS	120.0	32.3	86.9	30.7	96.5
65	071075M	INS-ISN-65MR	071092M	INS-ISN-65MS	130.0	32.3	88.9	31.0	106.7
70	071076M	INS-ISN-70MR	071093M	INS-ISN-70MS					
75	071077M	INS-ISN-75MR	071094M	INS-ISN-75MS					
80	071078M	INS-ISN-80MR	071095M	INS-ISN-80MS	160.0	41.3	106.3	37.7	124.7
85	071079M	INS-ISN-85MR	071096M	INS-ISN-85MS					
90	071080M	INS-ISN-90MR	071097M	INS-ISN-90MS	180.0	47.3	120.0	41.8	138.7
100	071081M	INS-ISN-100MR	071098M	INS-ISN-100MS					
110	071082M	INS-ISN-110MR	071099M	INS-ISN-110MS	200.0	54.8	133.0	49.1	161.3
115	071083M	INS-ISN-115MR	071100M	INS-ISN-115MS	230.0	65.8	152.0	53.5	191.8
125	071084M	INS-ISN-125MR	071101M	INS-ISN-125MS					
135	071116M	INS-ISN-135MR	071117M	INS-ISN-135MS	250.0	69.9	156.8	59.4	222.2
140	071118M	INS-ISN-140MR	071119M	INS-ISN-140MS	290.0	81.8	179.8	70.3	260.4
150	079991M	INS-ISN-150MR	—	—					
160	079992M	INS-ISN-160MR	—	—	320.0	88.1	187.7	72.7	289.7
170	079993M	INS-ISN-170MR	—	—					

Reference Guide
Type E Family (Tapered)
Specialty Tapered
Safety Mount Family (Spherical)
S-2000 (Spherical)
Unified SAF (Spherical)
Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

Accessories

Spanner wrench



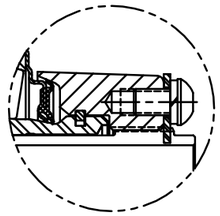
IP – in (mm)

Shaft size	Bearing series	Part number	A	B	C	D	E	F	G	H
1-1/8—1-1/2 (30—35)	22208	066629	10.84 (275.3)	9.00 (228.6)	0.88 (22.4)	1.63 (41.4)	2.28 (57.9)	1.14 (29.0)	0.32 (8.1)	0.50 (12.7)
1-5/8—1-3/4 (40)	22209	066630	11.04 (280.4)	9.00 (228.6)	0.88 (22.4)	1.88 (47.8)	2.48 (63.0)	1.24 (31.5)	0.32 (8.1)	0.50 (12.7)
1-7/8—2 (45—50)	22210	066631	11.20 (284.5)	9.00 (228.6)	0.88 (22.4)	2.13 (54.1)	2.72 (69.2)	1.36 (34.5)	0.32 (8.1)	0.50 (12.7)
2-3/16—2-1/4 (55)	22211	066632	12.38 (314.5)	10.00 (254.0)	0.88 (22.4)	2.38 (60.5)	2.98 (75.7)	1.49 (37.8)	0.44 (11.2)	0.50 (12.7)
2-3/8—2-1/2 (60)	22213	066633	12.63 (320.8)	10.00 (254.0)	1.31 (33.3)	2.63 (66.8)	3.40 (86.4)	1.70 (43.2)	0.44 (11.2)	0.50 (12.7)
2-11/16—3 (65, 70, 75)	22215	066634	16.90 (429.3)	14.00 (355.6)	1.31 (33.3)	3.13 (79.5)	3.80 (96.5)	1.90 (48.3)	0.44 (11.2)	0.50 (12.7)
3-3/16—3-1/2 (80—85)	22218	066635	17.39 (441.7)	14.00 (355.6)	1.31 (33.3)	3.63 (92.2)	4.36 (110.7)	2.18 (55.4)	0.44 (11.2)	0.50 (12.7)

ISN – in (mm)

Shaft size	Bearing series	Part number	A	B	C	D	E	F	G	H
1-1/8—1-1/2 (30—35)	22208	066629	10.84 (275.3)	9.00 (228.6)	0.88 (22.4)	1.63 (41.4)	2.28 (57.9)	1.14 (29.0)	0.32 (8.1)	0.50 (12.7)
1-5/8—1-3/4 (40)	22209	066630	11.04 (280.4)	9.00 (228.6)	0.88 (22.4)	1.88 (47.8)	2.48 (63.0)	1.24 (31.5)	0.32 (8.1)	0.50 (12.7)
1-7/8—2 (45—50)	22210	066631	11.20 (284.5)	9.00 (228.6)	0.88 (22.4)	2.13 (54.1)	2.72 (69.2)	1.36 (34.5)	0.32 (8.1)	0.50 (12.7)
2-1/8 (55)	22211	066632	12.38 (314.5)	10.00 (254.0)	0.88 (22.4)	2.38 (60.5)	2.98 (75.7)	1.49 (37.8)	0.44 (11.2)	0.50 (12.7)
2-3/16—2-1/4 (55)	22213	066633	12.63 (320.8)	10.00 (254.0)	1.31 (33.3)	2.63 (66.8)	3.40 (86.4)	1.70 (43.2)	0.44 (11.2)	0.50 (12.7)
2-7/16—3 (65, 70, 75)	22215	066634	16.90 (429.3)	14.00 (355.6)	1.31 (33.3)	3.13 (79.5)	3.80 (96.5)	1.90 (48.3)	0.44 (11.2)	0.50 (12.7)
3-3/16—3-1/2 (80—85)	22218	066635	17.39 (441.7)	14.00 (355.6)	1.31 (33.3)	3.63 (92.2)	4.36 (110.7)	2.18 (55.4)	0.44 (11.2)	0.50 (12.7)

Lock plate kit



SIZES 102—308 (30—85)

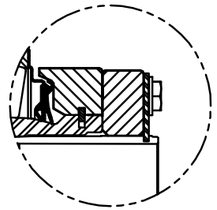
Lock plate kit consists of:

1 Lock plate
1 Button head cap screw
1 lock washer

Size 102-308

Bearing series	Shaft size (in)	Shaft size (mm)	Lock plate kit part number
22208	1-1/8 1-3/16 1-1/4 1-3/8 1-7/16 1-1/2	30 35	048925
22209	1-5/8 1-11/16 1-3/4	40	048926
22210	1-7/8 1-15/16 2	45 50	048927
22211	2-3/16 2-1/4	55	048928
22213	2-3/8 2-7/16 2-1/2	60	048929
22215	2-11/16 2-3/4 2-15/16 3	65 70 75	048930
22218	3-3/16 3-1/4 3-7/16 3-1/2	80 85	048931

Note: Only for use on standard Safety Mount IP, ISAF, and ISN bearings in sizes shown.



SIZES 311—700 (90—170)

Lock plate

1 Lock plate

Size 311-700

Bearing series	Shaft size (in)	Shaft size (mm)	Lock plate kit part number
22220	3-11/16 3-15/16 4	90 100	048404
22222	4-7/16 4-1/2	110	048411
22226	4-15/16 5	115 125	079116
22228	5-7/16 5-1/2	135	079117
22232	5-15/16 6	140 150	079118
22236	6-7/16 6-1/2 6-15/16 7	160 170	079119

Note: Only for use on Safety Mount IP, ISAF, and ISN bearings in sizes shown.

IP/ISAF end covers – inch

Steel, open

Shaft size	Front end				Backside			
	Safety Mount		Safety Mount, E-dimensioned		Safety Mount		Safety Mount, E-dimensioned	
	Part number	Description	Part number	Description	Part number	Description	Part number	Description
1-1/8	070160	IPECO-08-102	070160	IPECO-08-102	072500	S2IPBECO-08-102	072500	S2IPBECO-08-102
1-3/16	070161	IPECO-08-103	070161	IPECO-08-103	072501	S2IPBECO-08-103	072501	S2IPBECO-08-103
1-1/4	070162	IPECO-08-104	070162	IPECO-08-104	072502	S2IPBECO-08-104	072502	S2IPBECO-08-104
1-3/8	070163	IPECO-08-106	070163	IPECO-08-106	072503	S2IPBECO-08-106	072503	S2IPBECO-08-106
1-7/16	070164	IPECO-08-107	070164	IPECO-08-107	072504	S2IPBECO-08-107	072504	S2IPBECO-08-107
1-1/2	070165	IPECO-08-108	070166	IPECO-09-108	072505	S2IPBECO-08-108	072506	S2IPBECO-09-108
1-5/8	070167	IPECO-09-110	070167	IPECO-09-110	072507	S2IPBECO-09-110	072507	S2IPBECO-09-110
1-11/16	070168	IPECO-09-111	070168	IPECO-09-111	072508	S2IPBECO-09-111	072508	S2IPBECO-09-111
1-3/4	070169	IPECO-09-112	070170	IPECO-10-112	072509	S2IPBECO-09-112	072510	S2IPBECO-10-112
1-7/8	070171	IPECO-10-114	070171	IPECO-10-114	072511	S2IPBECO-10-114	072511	S2IPBECO-10-114
1-15/16	070172	IPECO-10-115	070172	IPECO-10-115	072512	S2IPBECO-10-115	072512	S2IPBECO-10-115
2	070173	IPECO-10-200	070173	IPECO-10-200	072513	S2IPBECO-10-200	072513	S2IPBECO-10-200
2-3/16	070174	IPECO-11-203	070174	IPECO-11-203	072514	S2IPBECO-11-203	072514	S2IPBECO-11-203
2-1/4	070175	IPECO-11-204	070176	S2IPECO-13-204	072515	S2IPBECO-11-204	072516	S2IPBECO-13-204
2-3/8	070177	S2IPECO-13-206	070177	S2IPECO-13-206	072517	S2IPBECO-13-206	072517	S2IPBECO-13-206
2-7/16	070178	S2IPECO-13-207	070178	S2IPECO-13-207	072518	S2IPBECO-13-207	072518	S2IPBECO-13-207
2-1/2	070179	S2IPECO-13-208	070179	S2IPECO-13-208	072519	S2IPBECO-13-208	072519	S2IPBECO-13-208
2-11/16	070180	IPECO-15-211	070180	IPECO-15-211	072520	S2IPBECO-15-211	072520	S2IPBECO-15-211
2-3/4	070181	IPECO-15-212	070181	IPECO-15-212	072521	S2IPBECO-15-212	072521	S2IPBECO-15-212
2-15/16	070182	IPECO-15-215	070182	IPECO-15-215	072522	S2IPBECO-15-215	072522	S2IPBECO-15-215
3	070183	IPECO-15-300	070183	IPECO-15-300	072523	S2IPBECO-15-300	072523	S2IPBECO-15-300
3-3/16	070184	S2IPECO-18-303	070184	S2IPECO-18-303	072524	S2IPBECO-18-303	072524	S2IPBECO-18-303
3-1/4	070185	S2IPECO-18-304	070185	S2IPECO-18-304	072525	S2IPBECO-18-304	072525	S2IPBECO-18-304
3-7/16	070186	S2IPECO-18-307	070186	S2IPECO-18-307	072526	S2IPBECO-18-307	072526	S2IPBECO-18-307
3-1/2	070187	S2IPECO-18-308	070187	S2IPECO-18-308	072527	S2IPBECO-18-308	072527	S2IPBECO-18-308
3-11/16	070188	S2IPECO-20-311	070188	S2IPECO-20-311	072528	S2IPBECO-20-311	072528	S2IPBECO-20-311
3-15/16	070189	S2IPECO-20-315	070189	S2IPECO-20-315	072529	S2IPBECO-20-315	072529	S2IPBECO-20-315
4	070190	S2IPECO-20-400	070190	S2IPECO-20-400	072530	S2IPBECO-20-400	072530	S2IPBECO-20-400
4-7/16	070191	S2IPECO-22-407	070191	S2IPECO-22-407	072531	IPBECO-22-407	072531	IPBECO-22-407
4-1/2	070192	S2IPECO-22-408	070192	S2IPECO-22-408	072533	IPBECO-22-408	072533	IPBECO-22-408
4-15/16	070193	S2IPECO-26-415	070193	S2IPECO-26-415	072534	IPBECO-26-415	072534	IPBECO-26-415
5	070194	S2IPECO-26-500	070194	S2IPECO-26-500	072536	IPBECO-26-500	072536	IPBECO-26-500
5-7/16	069933	IPECO-28-507	069933	IPECO-28-507	069933	IPECO-28-507	—	—
5-1/2	069934	IPECO-28-508	069934	IPECO-28-508	069934	IPECO-28-508	—	—
5-15/16	069935	IPECO-32-515	069935	IPECO-32-515	069935	IPECO-32-515	—	—
6	069936	IPECO-32-600	069936	IPECO-32-600	069936	IPECO-32-600	—	—
6-7/16	069937	IPECO-36-607	069937	IPECO-36-607	069937	IPECO-36-607	—	—
6-1/2	069938	IPECO-36-608	069938	IPECO-36-608	069938	IPECO-36-608	—	—
6-15/16	069939	IPECO-36-615	069939	IPECO-36-615	069939	IPECO-36-615	—	—
7	069940	IPECO-36-700	069940	IPECO-36-700	069940	IPECO-36-700	—	—

Note: ISAF product will use the same front end covers on the sides of the housing

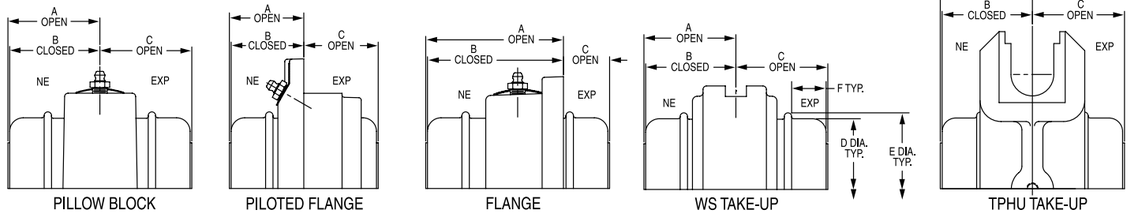
IP/ISAF end covers – inch

Steel, closed

Shaft size	Safety Mount		Safety Mount, E-dimensioned	
	Part number	Description	Part number	Description
1-1/8 to 1-7/16	069960	IPEC08	069960	IPEC08
1-1/2	069960	IPEC08	069961	IPEC09
1-5/8 to 1-11/16	069961	IPEC09	069961	IPEC09
1-3/4	069961	IPEC09	069962	IPEC10
1-7/8 to 2	069962	IPEC10	069962	IPEC10
2-3/16	069963	IPEC11	069963	IPEC11
2-1/4	069963	IPEC11	069964	IPEC13
2-3/8 to 2-1/2	069964	IPEC13	069964	IPEC13
2-11/16 to 3	069965	IPEC15	069965	IPEC15
3-3/16 to 3-1/2	069966	IPEC18	069966	IPEC18
3-11/16 to 4	069967	S2IPEC20	069967	S2IPEC20
4-7/16 to 4-1/2	069968	S2IPEC22	069968	S2IPEC22
4-15/16 to 5	069969	S2IPEC26	069969	S2IPEC26
5-7/16 to 5-1/2	069983	IPEC28	069983	IPEC28
5-15/16 to 6	069984	IPEC32	069984	IPEC32
6-7/16 to 7	069985	IPEC36	069985	IPEC36
7-3/16	231410	END COVER KIT 540/048 SMLG	—	—
7-1/2 to 8	231411	END COVER KIT 544/052 SMLG	—	—
8-1/2 to 9	231410	END COVER KIT 540/048 SMLG	—	—
9-1/2	231411	END COVER KIT 544/052 SMLG	—	—
10 to 10-1/2	231412	END COVER KIT 056 SMLG	—	—

IP/ISAF end covers – inch

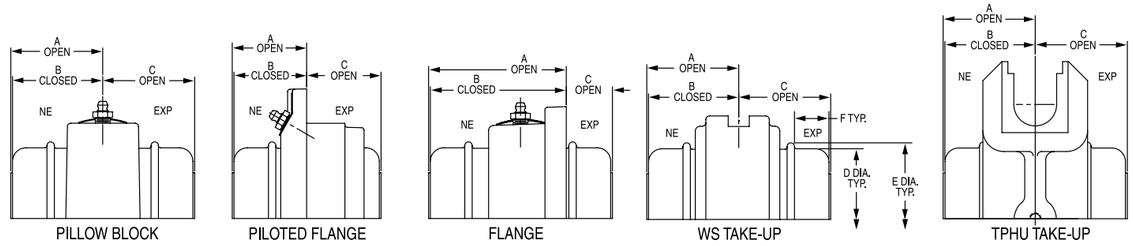
Steel, open/closed



	Shaft size	IP pillow block (2-bolt)	IP pillow block (4-bolt)	IP piloted flange	IP round flange	IP square flange	Wide-slot take-up
A Open		1.88		1.67	3.12	3.45	2.06
B Closed	1-1/8—1-1/2	1.82	—	1.61	3.06	3.39	2.00
C Open		1.92		2.46	0.99	0.99	2.10
A Open		2.06		1.83	3.33	4.07	2.19
B Closed	1-5/8—1-3/4	1.98	—	1.77	3.27	4.01	2.13
C Open		2.04		2.60	1.10	1.10	2.25
A Open		2.75		1.92	3.47	3.95	2.25
B Closed	1-7/8—2	2.69	—	1.86	3.41	3.89	2.19
C Open		2.89		2.83	1.28	1.28	2.45
A Open		2.31		2.00	3.69	4.53	2.42
B Closed	2-3/16—2-1/4	2.25	—	1.94	3.63	4.47	2.36
C Open		2.38		3.00	1.32	1.32	2.54
A Open		3.14	3.14	2.18	4.04	4.72	2.53
B Closed	2-3/8—2-1/2	3.07	3.07	2.09	3.95	4.63	2.44
C Open		3.40	3.40	3.24	1.37	1.37	2.77
A Open		2.70	2.70	2.29	4.18	5.06	2.70
B Closed	2-11/16—3	2.61	2.61	2.20	4.09	4.97	2.61
C Open		3.11	3.11	3.54	1.66	1.66	3.06
A Open		3.05	3.05	2.91		5.78	3.07
B Closed	3-3/16—3-1/2	2.92	2.92	2.78	—	5.65	2.94
C Open		3.29	3.29	3.59		1.63	3.31
A Open			3.76	3.32		7.17	3.52
B Closed	3-11/16—4	—	3.63	3.19	—	7.04	3.39
C Open			3.76	4.13		1.94	3.80
A Open			3.93	4.02			
B Closed	4-7/16—4-1/2	—	3.80	3.89	—	—	—
C Open			4.25	4.16			
A Open			5.07	4.24			
B Closed	4-15/16—5	—	4.94	4.11	—	—	—
C Open			5.30	4.91			

IP/ISAF end covers – inch

Steel, open/closed

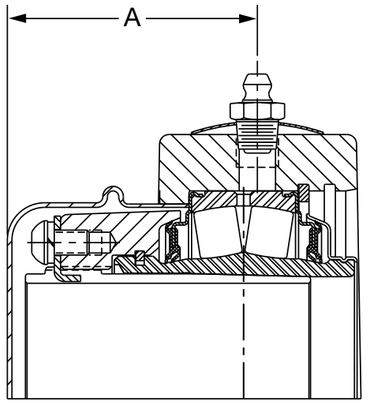


	Shaft size	E-IP pillow block (2-bolt)	E-IP pillow block (4-bolt)	E-IP piloted flange	E-IP square flange	D	E	F
A Open		1.88		1.67	3.45			
B Closed	1-3/8—1-7/16	1.82	—	1.61	3.39	2.94	3.19	3/4
C Open		1.92		2.46	1.20			
A Open		2.06		1.83	4.07			
B Closed	1-1/2—1-11/16	1.98	—	1.77	4.01	3.27	3.39	7/8
C Open		2.04		2.60	1.20			
A Open		2.75		1.92	3.95			
B Closed	1-3/4—2	2.69	—	1.86	3.89	3.52	3.61	1-1/64
C Open		2.89		2.83	1.38			
A Open		2.31		2.00	4.53			
B Closed	2-3/16	2.25	—	1.94	4.47	3.77	3.95	1-1/32
C Open		2.38		3.00	1.43			
A Open		3.14	3.14	2.18	4.72			
B Closed	2-1/4—2-1/2	3.07	3.07	2.09	4.63	4.41	4.64	1
C Open		3.40	3.40	3.24	1.69			
A Open		2.70	2.70	2.29	5.06			
B Closed	2-11/16—3	2.61	2.61	2.20	4.97	4.92	5.06	1-7/32
C Open		3.11	3.11	3.54	1.62			
A Open		3.05	3.05	2.91	5.78			
B Closed	3-3/16—3-1/2	2.92	2.92	2.78	5.65	5.98	6.22	1-1/8
C Open		3.29	3.29	3.59	1.38			
A Open			3.76	3.31	7.17			
B Closed	3-15/16—4	—	3.63	3.19	7.04	6.67	6.91	1-3/8
C Open			3.76	4.13	2.06			
A Open			3.93	3.85	7.62			
B Closed	4-7/16—4-1/2	—	3.80	3.72	7.49	7.31	7.56	1-43/64
C Open			4.25	4.68	4.23			
A Open			5.07	4.08				
B Closed	4-15/16—5	—	4.94	3.95	—	8.44	8.69	1-29/32
C Open			5.30	5.37				

	Shaft size	ISAF pillow block (2-bolt)	ISAF pillow block (4-bolt)
A Open		2.06	
B Closed	1-7/16	2.00	—
C Open		2.07	
A Open		2.18	
B Closed	1-11/16	2.12	—
C Open		2.16	
A Open		3.00	
B Closed	1-15/16	2.94	—
C Open		3.02	
A Open		2.44	
B Closed	2-3/16	2.38	—
C Open		2.42	
A Open		3.33	3.33
B Closed	2-7/16	3.24	3.24
C Open		3.28	3.28
A Open		2.92	2.92
B Closed	2-11/16	2.85	2.85
C Open		3.05	3.05
A Open		2.94	2.94
B Closed	2-15/16	2.85	2.85
C Open		3.09	3.09
A Open		3.27	3.27
B Closed	3-7/16	3.14	3.14
C Open		3.22	3.22
A Open			3.67
B Closed	3-15/16	—	3.54
C Open			3.65
A Open			4.02
B Closed	4-7/16	—	3.89
C Open			3.99
A Open			5.09
B Closed	4-15/16	—	4.96
C Open			5.03
A Open			5.08
B Closed	5-7/16	—	4.95
C Open			5.02
A Open			5.75
B Closed	5-15/16	—	5.62
C Open			5.69
A Open			5.76
B Closed	6-7/16—6-15/16	—	5.63
C Open			5.70

Reference Guide
Type E Family (Tapered)
Specialty Tapered
Safety Mount Family (Spherical)
S-2000 (Spherical)
Unified SAF (Spherical)
Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

ISN end cover – metric



PILLOW BLOCK

Housing series	Shaft size (mm)	Front side closed cover		Front side open cover		Back side open cover		A Dimensions (mm)
		Part number	Description	Part number	Description	Part number	Description	
507	30	069960	IPEC08	070251	IPECO-08-30mm	070620	IPBECO-08-30mm	49.5
508	35	069960	IPEC08	070252	IPECO-08-35mm	070621	IPBECO-08-35mm	49.5
509	40	069961	IPEC09	070253	IPECO-09-40mm	070622	IPBECO-09-40mm	55.0
510	45	069962	IPEC10	070254	IPECO-10-45mm	070623	IPBECO-10-45mm	58.3
511	50	069962	IPEC10	070255	IPECO-10-50mm	070624	IPBECO-10-50mm	58.3
512	55	069963	IPEC11	070256	IPECO-11-55mm	070625	IPBECO-11-55mm	61.7
513	60	069964	IPEC13	070257	IPECO-13-60mm	070626	IPBECO-13-60mm	66.3
515	65	069965	IPEC15	070258	IPECO-15-65mm	070627	IPBECO-15-65mm	70.0
516	70	069965	IPEC15	070259	IPECO-15-70mm	070628	IPBECO-15-70mm	70.0
517	75	069965	IPEC15	070260	IPECO-15-75mm	070629	IPBECO-15-75mm	70.0
518	80	069966	S2IPEC18	070261	IPECO-18-80mm	070630	IPBECO-18-80mm	78.3
519	85	069966	S2IPEC18	070262	IPECO-18-85mm	070631	IPBECO-18-85mm	78.3
520	90	069967	S2IPEC20	070263	IPECO-20-90mm	070632	IPBECO-20-90mm	91.2
522	100	069967	S2IPEC20	070264	IPECO-20-100mm	070633	IPBECO-20-100mm	91.2
524	110	069968	S2IPEC22	070265	IPECO-22-110mm	070634	IPBECO-22-110mm	97.7
526	115	069969	S2IPEC26	070266	IPECO-29-115mm	070635	IPBECO-29-115mm	111.4
528	125	069969	S2IPEC26	070267	IPECO-26-125mm	070636	IPBECO-26-125mm	111.4
530	135	069983	IPEC28	—	—	—	—	125.2
532	140	069984	IPEC30	—	—	—	—	143.2

Notes

S-2000 (spherical)

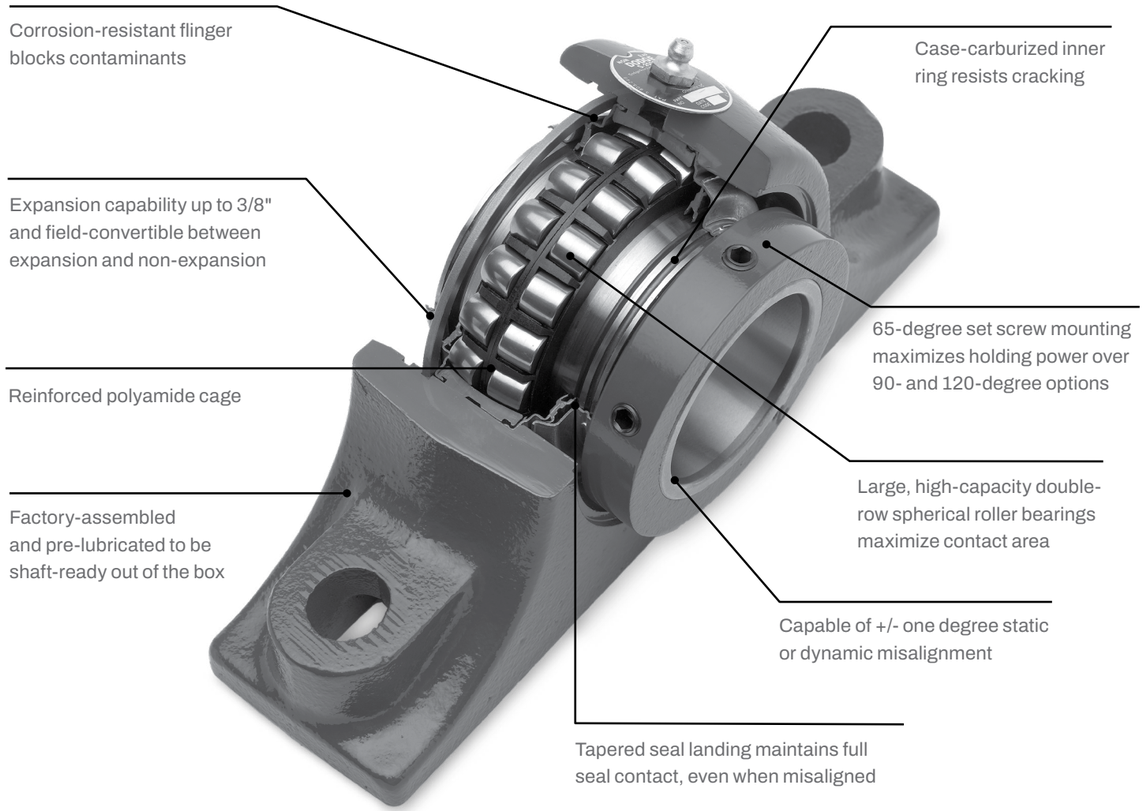
B23-1 **S-2000 (spherical)**
B23-2 **Features and benefits**
B23-5 **Specification**
B23-5 **How to order**
B23-6 **Nomenclature**
B23-7 **Selection**
B23-14 **Dimensions**
B23-14 Pillow block
B23-18 Pillow block, E-dimensioned
B23-22 Pillow block, steel
B23-26 Pillow block, E-dimensioned steel
B23-30 Round flange
B23-32 Flange bracket
B23-34 Square flange
B23-36 Square flange, E-dimensioned
B23-38 Square flange, steel
B23-40 Piloted flange
B23-42 Piloted flange, E-dimensioned
B23-44 Wide-slot take-up
B23-48 Top-angle heavy-duty universal take-up
B23-50 Insert
B23-52 **Accessories**

Features and benefits

S-2000

Overview

Designed for easy installation using set screw mounting, S-2000 mounted spherical roller bearings are the premier, high-performance solution to maximize your application output. The bearings are available in standard and type E dimensions for drop-in replacement with most brands on the market and can be installed quickly to maximize uptime. A variety of housing styles and sealing options are available for S-2000 bearings, making them ideal for material- and air-handling applications.

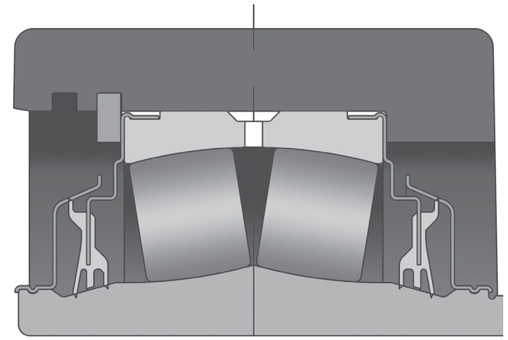


S-2000

Superior sealing system

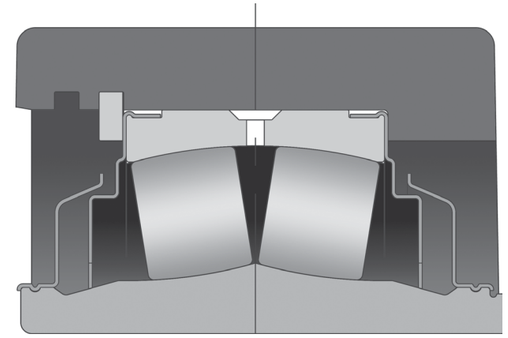
Trident seals for low-to-medium speed

- Face-rubbing triple-lip seal and steel flinger shield from contamination
- Tapered seal landing maintains positive contact up to +/- one degree misalignment
- Patented design



Labyrinth seals for high speeds

- High speed for relatively clean environments
- Face-rubbing triple-lip seal and steel flinger shield from contamination
- Seal operates with up to +/- one degree of misalignment
- Patented design



S-2000
E-dimensioned units

E-dimensioned units are dimensionally interchangeable with Type E mounted tapered roller bearings. Available in two- and four-bolt pillow block, flange, and piloted flange housing styles.

Steel-housed (HD) units

S-2000 bearings are available in high-quality, durable steel housings designed specifically for harsh applications that demand superior housing strength. With all the features of the S-2000 bearings, the high-capacity cast-steel housings provide additional toughness and resistance to impact-loading in industry-common dimensions. Housing configurations include two- and four-bolt pillow blocks and four-bolt flanges.

Specification
S-2000

S-2000 mounted spherical roller bearings are general purpose, high-capacity, double-row spherical roller bearings. All are mounted in single-piece, high-precision housings machined to industry-leading tolerances. Bearings are mounted to shafts by means of set screw collars, with 65- degree set screw spacing for maximum clamping force.

Housings are available in a variety of styles from pillow blocks, flanges, piloted flanges, and take-ups. Standard housing material is a high-performance cast iron. S-2000 HD housings use a high quality, durable steel. Stainless hardware is available for applications in extremely harsh environments.

How to order

There are two ways to specify Dodge bearings—by six-digit part number or by description. Most of the products offered have part numbers with listings shown throughout this catalog. Use of part numbers ensures accurate order processing.

When part numbers are not shown, the product may be specified by description. This method is used when ordering units that include modifications or options. To order by description, use the nomenclature key shown for each product, adding any special instructions to the end of the description for options not covered by the nomenclature.

Special bearing requirements

Depending on the bearing, a wide variety of lubricants, seals, locking devices, finishes, and adjustments are available for a wide range of applications from general purpose to extreme ambient temperatures, high speeds, or high loads.

Special lubricant options usually involve set-up charges, minimum quantities, and price premiums. To order, specify the type of lubricant required at the end of the product name or after the standard part number.

Example:

F4B-XX-207 except with Mobil HTS #2 grease

or

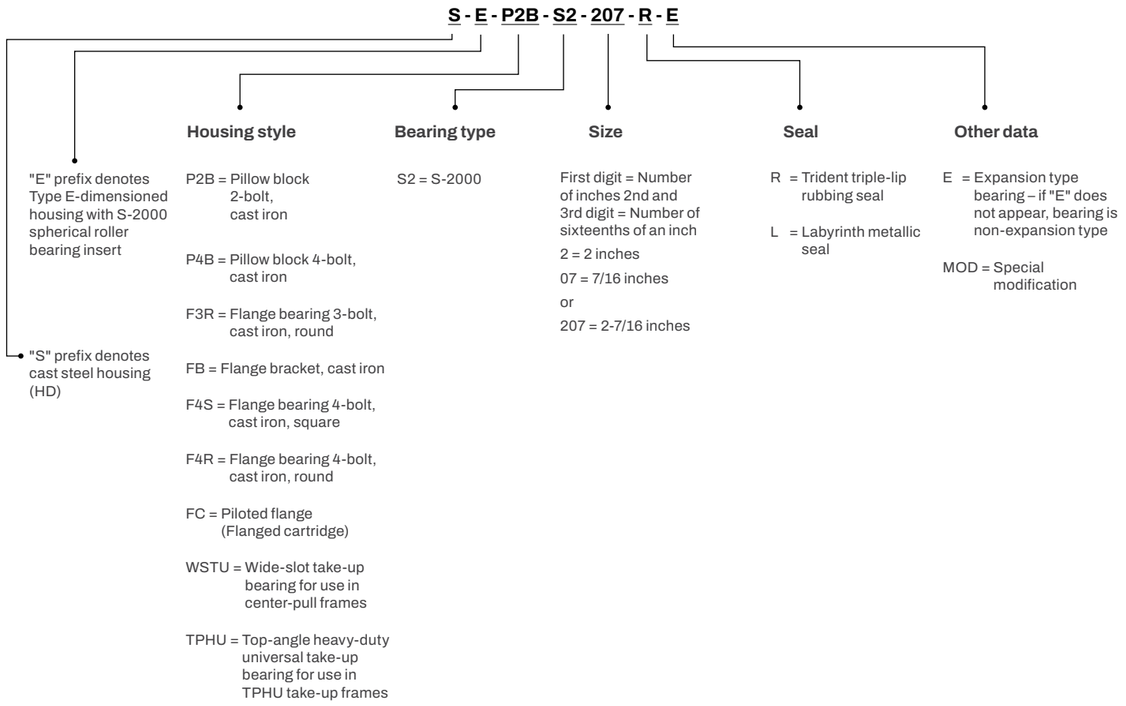
P/N-XXXXXX except with Mobil HTS #2 grease

Other special requirements not listed

For applications requiring modifications not listed, contact Application Engineering for bearings at +1 864 284 5700.

Nomenclature

S-2000



Selection

S-2000

Dodge spherical roller bearings have the capacity to carry heavy radial loads and combined radial and thrust loads. The maximum recommended load which can be applied is limited by various components in the system such as bearing, housing, shaft, shaft attachment, speed and life requirements as listed in this catalog. Dodge spherical roller bearings have been applied successfully even when these limits have been exceeded under controlled operating conditions. Contact Application Engineering at +1 864 284 5700 for applications which exceed the recommendations of this catalog.

L_{10} life – The fatigue life which may be expected from at least 90 percent of a given group of bearings operating under identical conditions.

$$L_{10} = \left(\frac{C_{90}}{P}\right)^{10/3} \times \left(\frac{16{,}667}{rpm}\right)$$

Where:

C_{90} = Dynamic capacity (Table 1)

P = Equivalent radial load

General

Heavy service – For heavy shock loads, frequent shock loads, or severe vibrations, add up to 50 percent (according to severity of conditions) to the equivalent radial load. Consult Application Engineering for additional selection assistance.

Thrust load values shown in the table below are recommended as a guide for general applications that will give adequate L_{10} life for pillow blocks. The maximum thrust load should not exceed values shown on table below. Where substantial radial load is also present, it is advisable to calculate actual L_{10} life to assure that it meets the requirements. The effectiveness of the shaft attachment to carry thrust load depends on proper tightening, shaft tolerance (see table below) and shaft deflections. Therefore, it is advisable to use auxiliary thrust carrying devices such as shaft shoulder, snap ring or a thrust collar to locate the bearing under thrust loads heavier than shown below, or where extreme reliability is desired.

Speed range (rpm)	20—200	201—2,000	Over 2,000
Recommended thrust load	C/20	C/40	C/60

The shaft tolerances recommended below are adequate for normal radial and radial/thrust load applications. The radial load is limited by the attachment to the shaft (see Table 1). Where the applied radial load (F_R) exceeds this limit (maximum allowable slip fit radial load), a snug-to-light press fit of the shaft is required. Since the allowable load, especially at a low speed, is very large, the shaft should be checked to assure adequate shaft strength. The magnitude and direction of both the thrust and radial load must be taken into account when selecting a housing. When pillow blocks are utilized, heavy loads should be directed through the base. Where uplift loads are involved, see Tables 4, 5, and 6 for maximum values. Where a load pulls the housing away from the mounting base, both the hold-down bolts and housing must be of adequate strength. Auxiliary load carrying devices such as shear bars are advisable for side or end loading of pillow blocks and radial loads for flange units.

Shaft tolerances

Shaft size (in)	Tolerance (in)
Up—1-1/2	+0.0000 to -0.0005
1-9/16—4	+0.000 to -0.001
4-7/16—5	+0.000 to -0.0015

L_{10} life adjustment – The calculated L_{10} life obtained from this procedure is subject to life adjustment factors in accordance with ABMA standards described on Table 5. Consult Application Engineering for assistance.

Selecting bearings supporting radial loads only

1. Define L_{10} life (h) desired
2. Establish bearing radial load, F_R (F_R = P for pure radial load conditions)
3. Establish speed (rpm)

Using the easy selection Table 2, under the rpm column, the equivalent radial load that equals or is higher than the application radial load for the desired life. The shaft size on the far left will be the minimum shaft size that you can use for your application. If the desired life is different than the values shown on the chart, use alternate Method A shown below.

Example:

L_{10} life = 30,000 h

Radial load = 4,000 lb

Speed = 1,020 rpm

At the intersection of the 1,020 rpm column and the 30,000 hours L_{10} life row, the equivalent radial load of 4,721 pounds for a 2-7/16-inch bearing exceeds the 4,000 pounds applied radial load. A bearing with a bore of 2-7/16 inches may be used for this application.

Alternate method A – Selecting a bearing for an L_{10} life value not shown in the Easy Selection chart.

The L_{10} life equation can be rearranged so that the bearing dynamic capacity C is identified in terms of L_{10}, speed and P.

$$C = \left(\frac{L_{10} \times rpm}{16{,}667} \right)^{0.3} X \quad P$$

($P = F_R$ for pure radial load conditions)

Since the L_{10}, speed and P are known, solve for C. Select from the dynamic capacity column on Table 1 the C value equal to or greater than the C value just calculated. The bore size on the far left represents the proper bore size selection. Check that the application speed does not exceed the maximum speed on Table 1. Also check that the radial load does not exceed the maximum allowable slip fit radial load shown on Table 1. If it does, a line-to-line to light press fit of shaft is required. When selecting an L_{10} life of less than 30,000 hours, particular attention must be paid to shaft deflection and proper lubricant selection.

Selecting bearings supporting combination radial and thrust loads

When a bearing supports both a radial load and a thrust load, the loading on the two rows is shared unequally depending on the ratio of thrust to radial load. The use of the X (radial factor) and Y (thrust factor) from Table 1 converts the applied through load and radial loads to an equivalent radial load having the same effect on the life of the bearing as a radial load of this magnitude.

The equivalent radial load:

$$P = XF_R + YF_A$$

Where:

P = Equivalent radial load

F_R = Radial load (see Table 1 for allowable slip fit maximum load)

F_A = Thrust (axial) load

e = Thrust load to radial load factor (Table 1)

X = Radial load factor (Table 1)

Y = Thrust load factor (Table 1)

To find X and Y, calculate F_A/F_R and compare to e for the selected bore size. Determine X and Y from Table 1 depending on whether F_A/F_R is equal to or less than e, or F_A/F_R is greater than e. Substitute all known values into the equivalent radial load equation. P (equivalent radial load) can be used in the life formula to determine L_{10}, or it can be compared to the equivalent radial load ratings for the speed and hours life desired in the easy selection Table 2.

Selecting bearings supporting only thrust loads

Spherical roller bearings generally are not recommended for pure thrust load applications. However, they will perform satisfactorily under very light pure thrust loads. Consult Application Engineering at +1 864 284 5700.

Selecting lubrication

S-2000 spherical roller bearings are lubricated at the factory with Mobilgrease XHP 222 grease. Mobilgrease XHP 222 grease is a superior industrial grease using a lithium-complex thickener and highly-refined base oil. This grease will adequately handle low and medium speeds with low and medium loads at normal temperatures as defined on Table 3. For very low and high speeds, for heavy loads and for low and high temperatures, special greases must be used. Contact Application Engineering at +1 864 284 5700. Dodge engineers will recommend bearings and lubricants for the above unusual conditions. Dodge also has the expertise to custom design and build special bearings for your needs. The only maintenance requirement is periodic relubrication at regular intervals as outlined in the appropriate instruction manuals.

Misalignment considerations

In nearly all applications, good design practice requires two bearings supporting the shaft. In cases where three or more bearings are installed, unless precautions are taken to line the bearings up both vertically and horizontally, it is possible to induce heavy loads. In the case of two bearings, alignment is not as critical, especially with unitized spherical roller bearings. S-2000 bearings are designed to allow a maximum of +/- one degree of static and dynamic misalignment. To ensure good alignment, mounting surfaces must be checked for flatness and must lie in the same plane. When tightening base bolts, each bolt should be alternately tightened in incremental torque values until full torque is achieved to prevent the angular shifting of the pillow block that occurs when one bolt is tightened to its full torque. Shimming may be required to minimize misalignment. Full shims are recommend—partial shims could create housing flexing, causing the insert to pinch within the housing bore.

Table 1: S-2000 spherical roller bearings capacity table

Shaft size (in)	Bearing series	e	$F_A/F_R < e$		$F_A/F_R > e$		Max. allowable slip fit radial load F_R* (lb)	Dynamic capacity (C) (lb)	Static capacity (C_0) (lb)	Maximum speed **	
			X	Y	X	Y				Labyrinth (rpm)	Trident (rpm)
1-3/8											
1-7/16	22208	0.28	1.0	2.4	0.67	3.6	3,750	22,700	21,000	3,600	2,900
1-1/2											
1-11/16											
1-3/4	22209	0.26	1.0	2.6	0.67	3.9	3,750	23,400	22,000	3,360	2,460
1-15/16	22210	0.24	1.0	2.8	0.67	4.2	4,000	24,500	24,000	3,180	2,200
2											
2-3/16	22211	0.23	1.0	2.9	0.67	4.3	4,860	29,000	29,000	2,700	1,950
2-7/16	22213	0.24	1.0	2.8	0.67	4.2	6,840	45,000	47,500	2,250	1,740
2-11/16											
2-15/16	22215	0.22	1.0	3.1	0.67	4.6	7,500	48,600	53,000	2,040	1,490
3											
3-7/16	22218	0.23	1.0	2.9	0.67	4.3	11,500	77,600	81,500	1,560	1,280
3-15/16	22220	0.24	1.0	2.8	0.67	4.2	14,400	96,000	104,000	1,320	1,075
4-7/16	22222	0.25	1.0	2.7	0.67	4.1	18,400	123,000	132,000	1,200	990
4-15/16	22226	0.26	1.0	2.6	0.67	3.9	25,700	171,000	196,000	1,020	870

* If load exceeds the maximum allowable slip fit load, line- to-line to light press fit of shaft required. Maximum slip fit radial loads apply if recommended shaft sizes are used.

** Maximum speed is dependent on load and ambient conditions, consult Application Engineering.

S-2000

Vibration frequencies
Anti-friction mounted bearings

More and more manufacturing facilities are getting involved with plant-wide preventive maintenance programs. By monitoring vibration levels of motors, pumps, fans and compressors, maintenance supervisors can predict imminent failures.

Knowing that a piece of equipment is showing signs of potential failure permits scheduling of maintenance at an appropriate time and avoids the consequences of catastrophic failures. Shown in Tables are vibration frequencies generated by bearing components defects. All frequencies are based on unity inner ring or cone rotation.

How to use the tables

If a 2-7/16-inch pillow block bearing is rotating at a speed of 1,000 rpm, the vibration due to a failed component will show up at the frequencies listed in the corresponding size line in the table.

Frequency

Cup nick or spall = 1,000 x 9.251 = 9,251 rpm
Cone nick or spall = 1,000 x 11.749 = 11,749 rpm
*Roller nick or spall = 1,000 x 4.011 x 2 = 8,022 rpm
Cage (train) frequency (inner ring rotation) = 1,000 x 0.441 = 441 rpm

Since all the values in the tables are based on unity inner ring or cone rotation, the vibration due to flaws will show up at the frequencies obtained by multiplying the speed (rpm) times the factors found on the appropriate table. The resulting product will have units of rpm.

S-2000 spherical roller bearing parameters for vibration analysis (1-RPS)

Basic bearing series	S-2000 bore size (in)	Number of rollers	Mean diameter of rollers (in)	Pitch diameter (in)	Contact angle (°)	Outer ring frequency (Hz)	Inner ring frequency (Hz)	* Roller spin frequency (Hz)	Cage frequency (Hz)
22208	1-3/8—1-1/2	15	0.449	2.449	10.583	6.149	8.851	2.640	0.410
22209	1-11/16—1-3/4	17	0.429	2.665	9.750	7.151	9.849	3.027	0.421
22210	1-15/16—2	18	0.433	2.858	9.083	7.653	10.347	3.226	0.425
22211	2-3/16	19	0.465	3.189	8.750	8.132	10.868	3.361	0.428
22213	2-7/16	18	0.583	3.795	9.083	7.635	10.365	3.182	0.424
22215	2-11/16—3	20	0.575	4.197	8.250	8.645	11.355	3.584	0.432
22218	3-7/16	18	0.780	5.079	8.833	7.635	10.365	3.183	0.424
22220	3-15/16—4	18	0.878	5.705	9.000	7.632	10.368	3.174	0.424
22222	4-7/16	17	1.020	6.287	9.417	7.140	9.860	3.004	0.420
22226	4-15/16	18	1.118	7.307	9.750	7.643	10.357	3.193	0.425
22228	—	18	1.217	7.933	9.583	7.639	10.361	3.186	0.424
22232	—	18	1.409	9.189	9.667	7.639	10.361	3.185	0.424
22236	—	18	1.559	10.157	9.417	7.637	10.363	3.183	0.424

Outer ring frequency = N x rpm x (1 - (Bd x cos a / Pd)) / 120
Inner ring frequency = N x rpm x (1 + (Bd x cos a / Pd)) / 120
Roller spin frequency = Pd x rpm x (1 - (Bd x cos a / Pd)^2) / (120 x Bd)
Cage frequency = rpm x (1 - (Bd x cos a / Pd)) / 120

Pd = Pitch diameter
N = Number of rollers
Bd = Roller diameter
a = Contact angle

* Roller spin frequencies are listed at one times roller spin frequency. For a thorough analysis, it is important to check frequency level at two times rotational speed of rollers, as this is the frequency that a single roller defect will contact the raceways of the bearing. In other words, a roller defect will strike both inner and outer ring in one revolution of the roller.

Table 2: Easy selection table for S-2000 double row spherical roller bearings

Shaft size (in)	L_{10} life (h)	Equivalent radial load rating (lb) at various speeds (rpm)																
		50	100	150	250	500	870	1,020	1,200	1,320	1,560	1,750	2,040	2,250	2,700	3,180	3,360	3,600
1-3/8 to 1-1/2	10,000	8,183	6,646	5,885	5,049	4,101	3,473	3,311	3,154	3,065	2,915	2,816	2,690	2,612	2,473	2,354	2,316	2,268
	30,000	5,885	4,780	4,233	3,631	2,950	2,498	2,382	2,268	2,204	2,097	2,026	1,934	1,878	1,778	1,693	1,666	1,631
	40,000	5,399	4,385	3,883	3,331	2,706	2,291	2,185	2,081	2,022	1,923	1,858	1,775	1,723	1,631	1,553	1,528	1,496
	60,000	4,780	3,883	3,438	2,950	2,396	2,029	1,934	1,842	1,790	1,703	1,645	1,571	1,526	1,445	1,375	1,353	1,325
	100,000	4,101	3,331	2,950	2,530	2,055	1,741	1,660	1,581	1,536	1,461	1,411	1,348	1,309	1,239	1,180	1,161	1,137
1-11/16 to 1-3/4	10,000	8,435	6,851	6,067	5,205	4,227	3,580	3,413	3,251	3,159	3,005	2,903	2,773	2,692	2,549	2,427	2,387	—
	30,000	6,067	4,928	4,363	3,743	3,041	2,575	2,455	2,338	2,272	2,161	2,088	1,994	1,936	1,833	1,745	1,717	—
	40,000	5,565	4,520	4,002	3,434	2,789	2,362	2,252	2,145	2,084	1,983	1,915	1,829	1,776	1,682	1,601	1,575	—
	60,000	4,928	4,002	3,544	3,041	2,470	2,092	1,994	1,899	1,846	1,755	1,696	1,620	1,573	1,489	1,418	1,395	—
	100,000	4,227	3,434	3,041	2,609	2,119	1,794	1,711	1,629	1,583	1,506	1,455	1,390	1,349	1,278	1,216	1,196	—
1-15/16 to 2	10,000	8,831	7,173	6,352	5,449	4,426	3,749	3,574	3,404	3,308	3,146	3,040	2,903	2,819	2,669	2,541	—	—
	30,000	6,352	5,159	4,568	3,919	3,183	2,696	2,570	2,448	2,379	2,263	2,186	2,088	2,027	1,919	1,828	—	—
	40,000	5,827	4,733	4,191	3,595	2,920	2,473	2,358	2,246	2,182	2,076	2,005	1,915	1,860	1,761	1,676	—	—
	60,000	5,159	4,191	3,711	3,183	2,586	2,190	2,088	1,988	1,932	1,838	1,776	1,696	1,647	1,559	1,484	—	—
	100,000	4,426	3,595	3,183	2,731	2,218	1,879	1,791	1,706	1,658	1,577	1,523	1,455	1,413	1,338	1,273	—	—
2-3/16	10,000	10,454	8,491	7,518	6,450	5,239	4,437	4,230	4,029	3,915	3,724	3,598	3,436	3,337	3,159	—	—	—
	30,000	7,518	6,107	5,407	4,639	3,768	3,191	3,043	2,898	2,816	2,678	2,588	2,471	2,400	2,272	—	—	—
	40,000	6,897	5,602	4,960	4,256	3,457	2,927	2,791	2,658	2,583	2,457	2,374	2,267	2,201	2,084	—	—	—
	60,000	6,107	4,960	4,392	3,768	3,061	2,592	2,471	2,354	2,287	2,176	2,102	2,007	1,949	1,845	—	—	—
	100,000	5,239	4,256	3,768	3,233	2,626	2,224	2,120	2,019	1,962	1,866	1,803	1,722	1,672	1,583	—	—	—
2-7/16	10,000	16,221	13,176	11,667	10,009	8,130	6,885	6,564	6,252	6,076	5,779	5,583	5,332	5,177	—	—	—	—
	30,000	11,667	9,476	8,391	7,199	5,847	4,952	4,721	4,497	4,370	4,156	4,015	3,835	3,724	—	—	—	—
	40,000	10,702	8,693	7,697	6,603	5,364	4,543	4,331	4,125	4,008	3,813	3,683	3,518	3,416	—	—	—	—
	60,000	9,476	7,697	6,815	5,847	4,749	4,022	3,835	3,652	3,549	3,376	3,261	3,115	3,025	—	—	—	—
	100,000	8,130	6,603	5,847	5,016	4,075	3,451	3,290	3,133	3,045	2,896	2,798	2,672	2,595	—	—	—	—
2-11/16 to 3	10,000	17,519	14,230	12,600	10,810	8,780	7,436	7,089	6,752	6,562	6,241	6,030	5,758	—	—	—	—	—
	30,000	12,600	10,234	9,062	7,775	6,315	5,348	5,099	4,856	4,719	4,489	4,337	4,142	—	—	—	—	—
	40,000	11,558	9,388	8,313	7,132	5,793	4,906	4,677	4,455	4,329	4,118	3,978	3,799	—	—	—	—	—
	60,000	10,234	8,313	7,361	6,315	5,129	4,344	4,142	3,945	3,833	3,646	3,522	3,364	—	—	—	—	—
	100,000	8,780	7,132	6,315	5,418	4,401	3,727	3,553	3,384	3,289	3,128	3,022	2,886	—	—	—	—	—
3-7/16	10,000	27,972	22,721	20,118	17,260	14,019	11,873	11,320	10,781	10,477	9,965	—	—	—	—	—	—	—
	30,000	20,118	16,341	14,470	12,414	10,083	8,539	8,141	7,754	7,535	7,167	—	—	—	—	—	—	—
	40,000	18,455	14,990	13,273	11,387	9,249	7,833	7,468	7,113	6,912	6,575	—	—	—	—	—	—	—
	60,000	16,341	13,273	11,753	10,083	8,190	6,936	6,613	6,298	6,121	5,822	—	—	—	—	—	—	—
	100,000	14,019	11,387	10,083	8,650	7,026	5,951	5,673	5,403	5,251	4,994	—	—	—	—	—	—	—

Only the labyrinth seal (L seal) may be used to the right of the heavy line.

In the light shaded area, a line-to-line to light press fit on the shaft is required.

S-2000

Table 2: Easy selection table for S-2000 double row spherical roller bearings

Shaft size (in)	L_{10} life (h)	Equivalent radial load rating (lb) at various speeds (rpm)																
		50	100	150	250	500	870	1,020	1,200	1,320	1,560	1,750	2,040	2,250	2,700	3,180	3,360	3,600
3-15/16	10,000	34,605	28,108	24,889	21,352	17,344	14,688	14,004	13,337	12,962	—	—	—	—	—	—	—	—
	30,000	24,889	20,216	17,900	15,357	12,474	10,564	10,072	9,593	9,322	—	—	—	—	—	—	—	—
	40,000	22,831	18,544	16,420	14,087	11,442	9,691	9,239	8,799	8,551	—	—	—	—	—	—	—	—
	60,000	20,216	16,420	14,540	12,474	10,132	8,581	8,181	7,792	7,572	—	—	—	—	—	—	—	—
	100,000	17,344	14,087	12,474	10,702	8,692	7,362	7,019	6,685	6,496	—	—	—	—	—	—	—	—
4-7/16	10,000	44,338	36,013	31,889	27,358	22,221	18,819	17,942	17,089	—	—	—	—	—	—	—	—	—
	30,000	31,889	25,902	22,935	19,676	15,982	13,535	12,905	12,291	—	—	—	—	—	—	—	—	—
	40,000	29,252	23,760	21,039	18,049	14,661	12,416	11,838	11,274	—	—	—	—	—	—	—	—	—
	60,000	25,902	21,039	18,629	15,982	12,982	10,994	10,482	9,983	—	—	—	—	—	—	—	—	—
	100,000	22,221	18,049	15,982	13,711	11,137	9,432	8,993	8,565	—	—	—	—	—	—	—	—	—
4-15/16	10,000	61,640	50,067	44,333	38,034	30,893	26,164	24,944	—	—	—	—	—	—	—	—	—	—
	30,000	44,333	36,009	31,885	27,355	22,219	18,817	17,941	—	—	—	—	—	—	—	—	—	—
	40,000	40,667	33,032	29,249	25,093	20,382	17,262	16,457	—	—	—	—	—	—	—	—	—	—
	60,000	36,009	29,249	25,899	22,219	18,047	15,285	14,572	—	—	—	—	—	—	—	—	—	—
	100,000	30,893	25,093	22,219	19,062	15,483	13,113	12,502	—	—	—	—	—	—	—	—	—	—

Only the labyrinth seal (L seal) may be used to the right of the heavy line.

In the light shaded area, a line-to-line to light press fit on the shaft is required.

Table 3: Definition of operating conditions for unitized spherical roller bearings

Low speed	Up to 20% of maximum speed (rpm) (Table 1)
Medium speed	Over 20% to 80% of maximum speed (rpm)
High speed	Over 80% of maximum speed (rpm)
Light load	Up to 8% of C (Table 1)
Normal load	Over 8% to 18% of C
Heavy load	Over 18% of C C = Dynamic capacity
Low temperature	-20 °F to -100 °F
Medium temperature	Over 20 °F to 200 °F
High temperature	Over 200 °F to 250 °F

S-2000

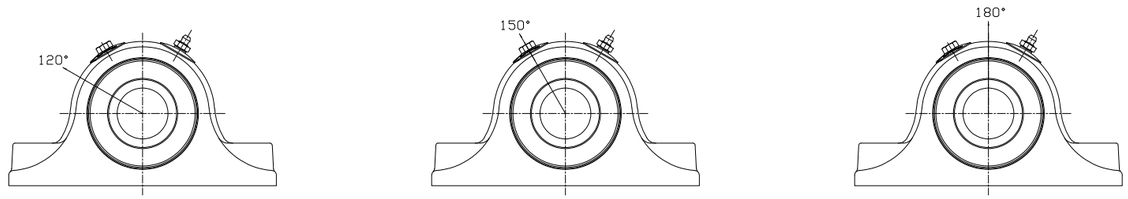


Table 4: S-2000 housing rating, 2-bolt, cast iron*

Bore size (in)	Maximum recommended housing cap loads (lb)		
	120°	150°	180°
1-3/8 to 1-1/2	2,110	2,640	3,100
1-5/8 to 1-3/4	2,380	2,980	3,500
1-15/16 to 2	3,130	3,910	4,600
2-3/16	3,330	4,160	4,900
2-7/16	3,330	4,160	4,900
2-11/16 to 3	4,420	5,520	6,500
3-3/16 to 3-7/16	4,620	5,780	6,800
3-15/16	7,500	9,350	11,000

Table 5: S-2000 housing rating, 4-bolt, cast iron*

Bore size (in)	Maximum recommended housing cap loads (lb)		
	120°	150°	180°
1-15/16 - 2	3,200	4,000	4,700
2-3/16	3,300	4,100	4,800
2-7/16	3,810	4,760	5,600
2-11/16 to 3	4,620	5,780	6,800
3-7/16	4,700	5,870	6,900
3-15/16	7,500	9,350	11,000
4-7/16	9,900	12,330	14,500
4-15/16	13,400	16,750	19,700

* When utilizing heavy cap loads on pillow block housings, the installation must adhere to the following procedures:

1. The pillow block base bolts must be of high strength (Grade 8) bolts and properly tightened to mounting structure.
2. Stop bars (shear strips) should be used against the plummer block where side loads are encountered.
3. In all cases where loads are heavy, the L_{10} life of the bearing should be checked for proper selection and life requirements.

Table 6: S-2000 steel (HD) - housing ratings*

Shaft sizes (in)	Bearing series	Maximum recommended housing loads (lb)	
		P2B	P4B
1-3/8 1-7/16 1-1/2	22208	24,400	—
1-11/16 1-3/4	22209	26,400	—
1-15/16 2	22210	30,200	—
2-3/16	22211	35,400	—
2-7/16	22213	51,300	52,800
2-11/16 2-15/16 3	22215	59,700	60,000
3-7/16	22218	90,700	95,500
3-15/16	22220	—	115,000
4-7/16	22222	—	152,100
4-15/16	22226	—	188,200

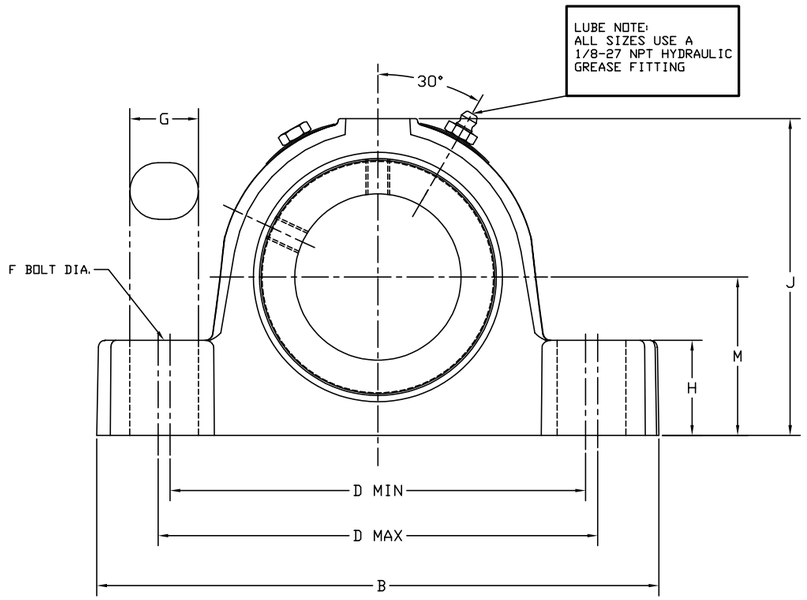
* It is important to note that the values listed above are housing fracture loads from various applied directions. These loads may exceed bearing, mounting bolt and/or shaft capacities. Applications subject to heavy housing loads, particularly shock loads, must adhere to the following procedures.

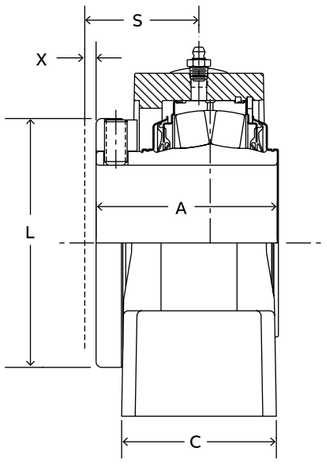
1. The pillow block base bolts must be of high strength (Grade 8) bolts and properly tightened to mounting structure.
2. Stop bars (shear strips) should be used against the plummer block where side loads are encountered.
3. In all cases where loads are heavy, the L_{10} life of the bearing should be checked for proper selection and life requirements.,

Dimensions

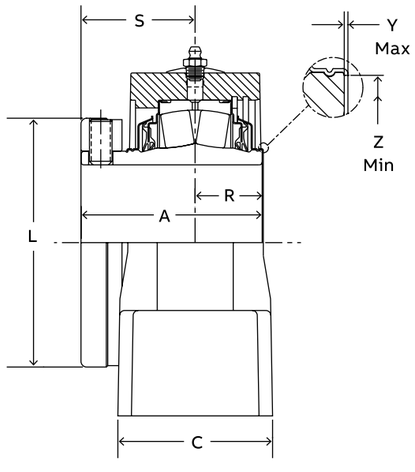
S-2000 pillow block – inch

2-bolt





Expansion



Non-Expansion

S-2000 pillow block – inch

2-bolt

Trident seal

Bearing series	Shaft size	Non-expansion		Expansion	
		Part number	Description	Part number	Description
22208	1-3/8	070272	P2B-S2-106R	070295	P2B-S2-106RE
	1-7/16	070273	P2B-S2-107R	070296	P2B-S2-107RE
	1-1/2	070274	P2B-S2-108R	070297	P2B-S2-108RE
22209	1-11/16	070276	P2B-S2-111R	070299	P2B-S2-111RE
	1-3/4	070277	P2B-S2-112R	070300	P2B-S2-112RE
22210	1-15/16	070278	P2B-S2-115R	070301	P2B-S2-115RE
	2	070279	P2B-S2-200R	070302	P2B-S2-200RE
22211	2-3/16	070280	P2B-S2-203R	070303	P2B-S2-203RE
22213	2-7/16	070282	P2B-S2-207R	070305	P2B-S2-207RE
22215	2-11/16	070284	P2B-S2-211R	070307	P2B-S2-211RE
	2-15/16	070285	P2B-S2-215R	070308	P2B-S2-215RE
	3	070286	P2B-S2-300R	070309	P2B-S2-300RE
22218	3-7/16	070288	P2B-S2-307R	070311	P2B-S2-307RE
22220	3-15/16	070290	P2B-S2-315R	070313	P2B-S2-315RE

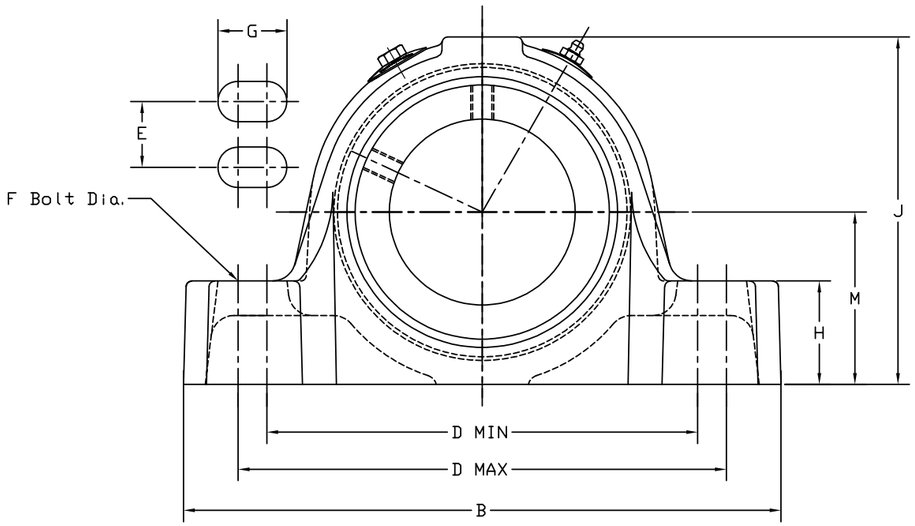
Labyrinth seal

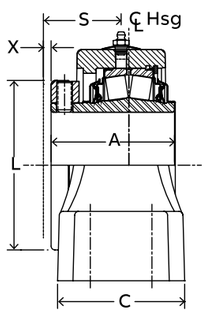
Bearing series	Shaft size	Non-expansion		Expansion	
		Part number	Description	Part number	Description
22208	1-3/8	070318	P2B-S2-106L	070341	P2B-S2-106LE
	1-7/16	070319	P2B-S2-107L	070342	P2B-S2-107LE
	1-1/2	070320	P2B-S2-108L	070343	P2B-S2-108LE
22209	1-11/16	070322	P2B-S2-111L	070345	P2B-S2-111LE
	1-3/4	070323	P2B-S2-112L	070346	P2B-S2-112LE
22210	1-15/16	070324	P2B-S2-115L	070347	P2B-S2-115LE
	2	070325	P2B-S2-200L	070348	P2B-S2-200LE
22211	2-3/16	070326	P2B-S2-203L	070349	P2B-S2-203LE
22213	2-7/16	070328	P2B-S2-207L	070351	P2B-S2-207LE
22215	2-11/16	070330	P2B-S2-211L	070353	P2B-S2-211LE
	2-15/16	070331	P2B-S2-215L	070354	P2B-S2-215LE
	3	070332	P2B-S2-300L	070355	P2B-S2-300LE
22218	3-7/16	070334	P2B-S2-307L	070357	P2B-S2-307LE
22220	3-15/16	070336	P2B-S2-315L	070359	P2B-S2-315LE

Shaft size	A	B	C	D		F bolt dia.	G	H	J	L	M	R	S	X total exp	Y	Z
				Min.	Max.											
1-3/8																
1-7/16	2.53	6.88	1.95	4.81	5.20	1/2	0.81	1.13	3.88	2.75	1.88	0.88	1.66	3/16	0.020	1.80
1-1/2																
1-11/16																
1-3/4	2.67	7.38	2.06	5.31	5.70	1/2	0.81	1.25	4.27	3.19	2.13	0.81	1.86	1/4	0.020	2.08
1-15/16																
2	2.84	8.38	2.50	6.06	6.44	5/8	0.95	1.31	4.56	3.44	2.25	0.86	1.98	1/4	0.020	2.30
2-3/16	2.94	8.88	2.63	6.56	6.94	5/8	0.95	1.50	5.00	3.75	2.50	0.91	2.03	1/4	0.025	2.60
2-7/16	3.20	9.25	2.81	6.94	7.31	5/8	0.95	1.63	5.59	4.06	2.75	1.13	2.08	1/4	0.025	2.95
2-11/16																
2-15/16	3.59	10.44	3.08	7.94	8.31	3/4	1.06	1.88	6.38	4.70	3.25	1.14	2.45	1/4	0.025	3.47
3																
3-7/16	4.02	13.00	3.42	9.38	10.63	7/8	1.63	2.25	7.50	5.50	3.75	1.41	2.61	1/4	0.025	4.05
3-15/16	4.47	15.25	3.94	10.63	12.88	1	2.25	2.44	8.38	6.00	4.25	1.56	2.91	5/16	0.025	4.50

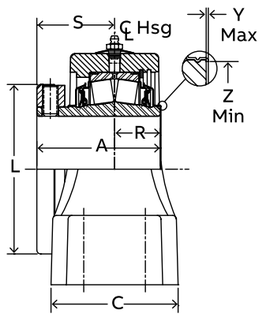
S-2000 pillow blocks – inch

4-bolt

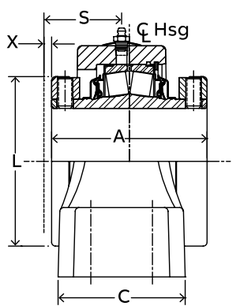




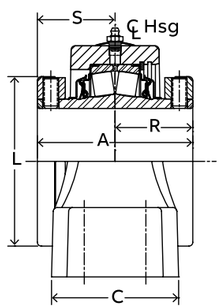
1-15/16 thru 3-15/16"
Construction
Expansion



1-15/16 thru 3-15/16"
Construction
Non-Expansion



4-7/16 thru 4-15/16"
Construction
Expansion



4-7/16 thru 4-15/16"
Construction
Non-Expansion

S-2000 pillow blocks – inch

4-bolt

Trident seal

Bearing series	Shaft size	Non-expansion		Expansion	
		Part number	Description	Part number	Description
22210	1-15/16	070361	P4B-S2-115R	070379	P4B-S2-115RE
	2	070362	P4B-S2-200R	070380	P4B-S2-200RE
22211	2-3/16	070363	P4B-S2-203R	070381	P4B-S2-203RE
22213	2-7/16	070365	P4B-S2-207R	070383	P4B-S2-207RE
22215	2-11/16	070367	P4B-S2-211R	070385	P4B-S2-211RE
	2-15/16	070368	P4B-S2-215R	070386	P4B-S2-215RE
	3	070369	P4B-S2-300R	070387	P4B-S2-300RE
22218	3-7/16	070371	P4B-S2-307R	070389	P4B-S2-307RE
22220	3-15/16	070373	P4B-S2-315R	070391	P4B-S2-315RE
22222	4-7/16	070375	P4B-S2-407R	070393	P4B-S2-407RE
22226	4-15/16	070377	P4B-S2-415R	070395	P4B-S2-415RE

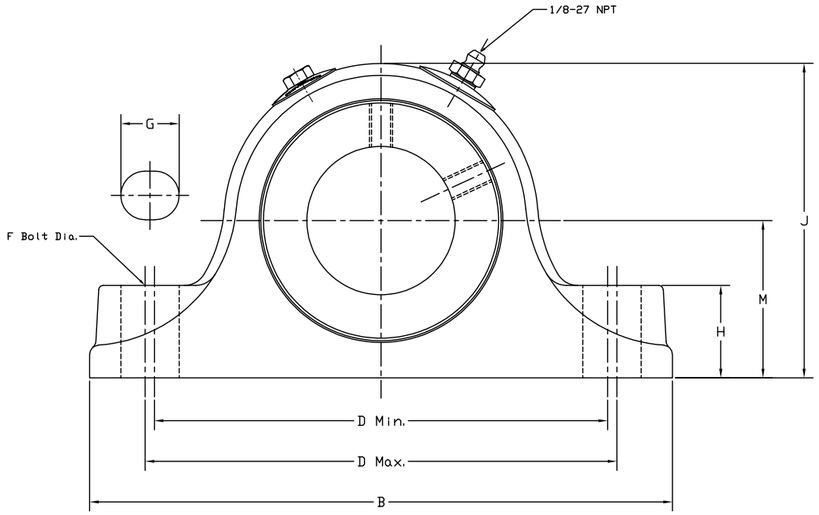
Labyrinth seal

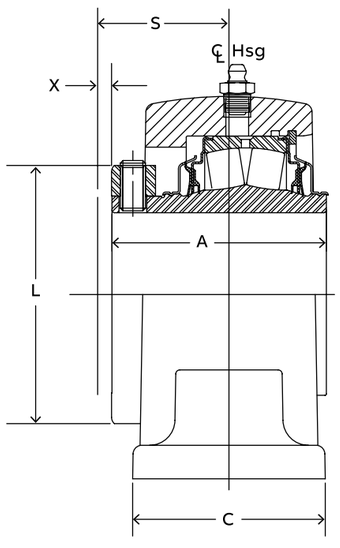
Bearing series	Shaft size	Non-expansion		Expansion	
		Part number	Description	Part number	Description
22210	1-15/16	070397	P4B-S2-115L	070415	P4B-S2-115LE
	2	070398	P4B-S2-200L	070416	P4B-S2-200LE
22211	2-3/16	070399	P4B-S2-203L	070417	P4B-S2-203LE
22213	2-7/16	070401	P4B-S2-207L	070419	P4B-S2-207LE
22215	2-11/16	070403	P4B-S2-211L	070421	P4B-S2-211LE
	2-15/16	070404	P4B-S2-215L	070422	P4B-S2-215LE
	3	070405	P4B-S2-300L	070423	P4B-S2-300LE
22218	3-7/16	070407	P4B-S2-307L	070425	P4B-S2-307LE
22220	3-15/16	070409	P4B-S2-315L	070427	P4B-S2-315LE
22222	4-7/16	070411	P4B-S2-407L	070429	P4B-S2-407LE
22226	4-15/16	070413	P4B-S2-415L	070431	P4B-S2-415LE

Shaft size	A	B	C	D		E	F bolt dia.	G	H	J	L	M	R	S	X total exp	Y	Z
				Min.	Max.												
1-15/16	2.84	8.00	3.19	6.06	6.44	1.59	1/2	0.81	1.31	4.56	3.44	2.25	0.84	2.0	1/4	0.020	2.30
2																	
2-3/16	2.94	8.88	3.25	6.56	6.94	1.69	1/2	0.81	1.50	5.00	3.75	2.50	0.91	2.03	1/4	0.025	2.60
2-7/16	3.20	9.25	3.38	6.94	7.31	1.75	1/2	0.81	1.63	5.59	4.06	2.75	1.08	2.13	1/4	0.025	2.95
2-11/16																	
2-15/16	3.59	10.44	3.75	7.94	8.31	1.88	5/8	0.94	1.88	6.44	4.70	3.25	1.09	2.50	1/4	0.025	3.47
3																	
3-7/16	4.02	13.00	4.13	9.38	10.63	2.00	3/4	1.50	2.25	7.56	5.50	3.75	1.44	2.58	1/4	0.025	4.05
3-15/16	4.47	15.25	4.50	12.13	12.88	2.25	3/4	1.25	2.44	8.44	6.00	4.25	1.64	2.83	5/16	0.025	4.50
4-7/16	6.53	16.50	4.75	13.00	14.00	2.50	3/4	1.38	2.75	9.63	6.45	4.75	3.08	3.45	3/8	—	—
4-15/16	6.91	18.63	5.38	15.00	16.00	2.75	7/8	1.50	3.00	11.13	7.45	5.50	3.27	3.64	3/8	—	—

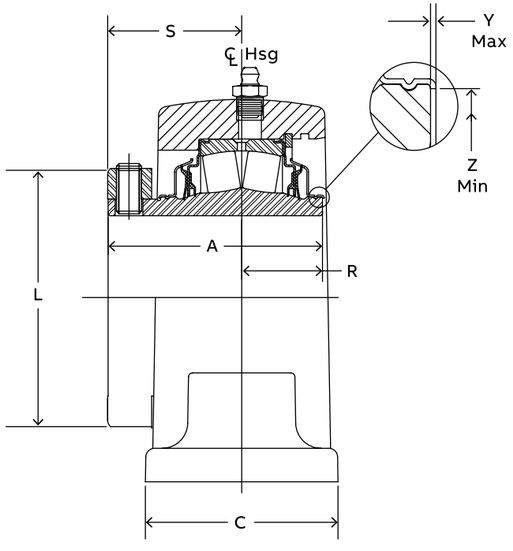
S-2000 pillow block – inch

2-bolt, E-dimensioned





Expansion



Non-Expansion

S-2000 pillow block – inch

2-bolt, E-dimensioned

Trident seal

Bearing series	Shaft size	Non-expansion		Expansion	
		Part number	Description	Part number	Description
22208	1-3/8	071389	EP2B-S2-106R	071400	EP2B-S2-106RE
	1-7/16	071390	EP2B-S2-107R	071401	EP2B-S2-107RE
22209	1-11/16	071391	EP2B-S2-111R	071402	EP2B-S2-111RE
22210	1-15/16	071392	EP2B-S2-115R	071403	EP2B-S2-115RE
	2	071393	EP2B-S2-200R	071404	EP2B-S2-200RE
22211	2-3/16	071394	EP2B-S2-203R	071405	EP2B-S2-203RE
22213	2-7/16	071395	EP2B-S2-207R	071406	EP2B-S2-207RE
22215	2-11/16	071396	EP2B-S2-211R	071407	EP2B-S2-211RE
	2-15/16	071397	EP2B-S2-215R	071408	EP2B-S2-215RE
	3	071398	EP2B-S2-300R	071409	EP2B-S2-300RE
22218	3-7/16	071399	EP2B-S2-307R	071410	EP2B-S2-307RE

Labyrinth seal

Bearing series	Shaft size	Non-expansion		Expansion	
		Part number	Description	Part number	Description
22208	1-3/8	071411	EP2B-S2-106L	071422	EP2B-S2-106LE
	1-7/16	071412	EP2B-S2-107L	071423	EP2B-S2-107LE
22209	1-11/16	071413	EP2B-S2-111L	071424	EP2B-S2-111LE
22210	1-15/16	071414	EP2B-S2-115L	071425	EP2B-S2-115LE
	2	071415	EP2B-S2-200L	071426	EP2B-S2-200LE
22211	2-3/16	071416	EP2B-S2-203L	071427	EP2B-S2-203LE
22213	2-7/16	071417	EP2B-S2-207L	071428	EP2B-S2-207LE
22215	2-11/16	071418	EP2B-S2-211L	071429	EP2B-S2-211LE
	2-15/16	071419	EP2B-S2-215L	071430	EP2B-S2-215LE
	3	071420	EP2B-S2-300L	071431	EP2B-S2-300LE
22218	3-7/16	071421	EP2B-S2-307L	071432	EP2B-S2-307LE

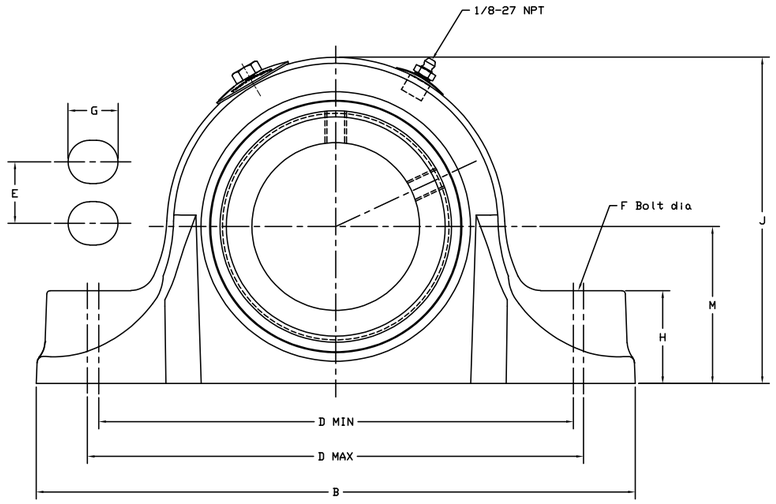
Shaft size	A	B #	C #	D		F bolt dia.	G #	H #	J	L	M	R	S	X total exp	Y	Z	Set screw size	S/S torque (lb-in)
				Min.	Max.													
1-3/8 1-7/16	2.53	7.37	2.12	5.63	5.88	1/2	0.75	1.13	3.85	2.55	1.88	1.03	1.50	5/32	0.020	1.80	5/16-18	165
1-11/16	2.67	7.88	2.38	6.13	6.38	1/2	0.75	1.25	4.25	3.01	2.13	0.98	1.69	3/16	0.020	2.08	5/16-18	165
1-15/16 2	2.84	8.87	2.49	6.88	7.12	5/8	0.88	1.31	4.47	3.44	2.25	1.08	1.76	7/32	0.020	2.30	3/8-16	290
2-3/16	2.94	9.62	2.56	7.63	7.88	5/8	0.88	1.50	5.00	3.50	2.50	1.06	1.88	1/4	0.025	2.60	3/8-16	290
2-7/16 2-11/16	3.20	10.50	2.87	8.38	8.62	5/8	0.88	1.63	5.71	4.06	2.75	1.20	2.00	1/4	0.025	2.95	3/8-16	290
2-15/16 3	3.59	12.00	2.99	9.31	9.69	3/4	1.07	1.88	6.32	4.61	3.13	1.34	2.25	1/4	0.025	3.47	1/2-13	620
3-7/16	4.01	14.00	3.49	10.81	11.19	7/8	1.19	2.25	7.69	5.50	3.75	1.51	2.50	1/4	0.025	4.05	1/2-13	620

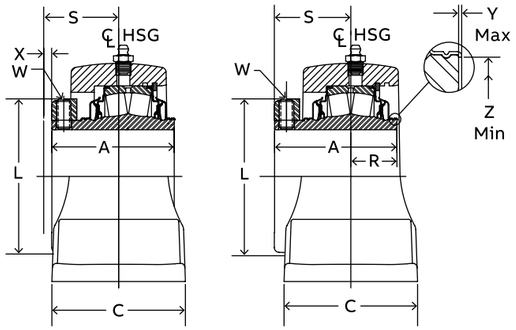
"A" and "R" dimensions do not include "Y" dimension.

Reference dimension only.

S-2000 pillow block – inch

4-bolt, E-dimensioned



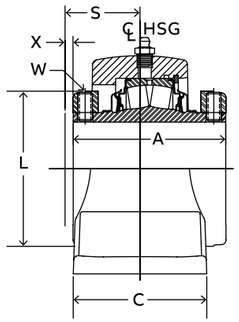


2-7/16 thru 3-15/16" Construction

Expansion

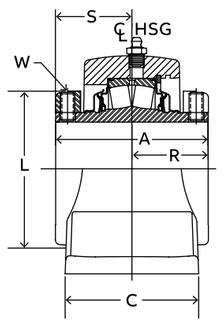
2-7/16 thru 3-15/16" Construction

Non-Expansion



4-7/16 thru 4-15/16" Construction

Expansion



4-7/16 thru 4-15/16" Construction

Non-Expansion

S-2000 pillow block – inch

4-bolt, E-dimensioned

Trident seal

Bearing series	Shaft size	Non-expansion		Expansion	
		Part number	Description	Part number	Description
22213	2-7/16	071433	EP4B-S2-207R	071441	EP4B-S2-207RE
	2-11/16	071434	EP4B-S2-211R	071442	EP4B-S2-211RE
22215	2-15/16	071435	EP4B-S2-215R	071443	EP4B-S2-215RE
	3	071436	EP4B-S2-300R	071444	EP4B-S2-300RE
22218	3-7/16	071437	EP4B-S2-307R	071445	EP4B-S2-307RE
22220	3-15/16	071438	EP4B-S2-315R	071446	EP4B-S2-315RE
22222	4-7/16	071439	EP4B-S2-407R	071447	EP4B-S2-407RE
22226	4-15/16	071440	EP4B-S2-415R	071448	EP4B-S2-415RE

Labyrinth seal

Bearing series	Shaft size	Non-expansion		Expansion	
		Part number	Description	Part number	Description
22213	2-7/16	071449	EP4B-S2-207L	071457	EP4B-S2-207LE
	2-11/16	071450	EP4B-S2-211L	071458	EP4B-S2-211LE
22215	2-15/16	071451	EP4B-S2-215L	071459	EP4B-S2-215LE
	3	071452	EP4B-S2-300L	071460	EP4B-S2-300LE
22218	3-7/16	071453	EP4B-S2-307L	071461	EP4B-S2-307LE
22220	3-15/16	071454	EP4B-S2-315L	071462	EP4B-S2-315LE
22222	4-7/16	071455	EP4B-S2-407L	071463	EP4B-S2-407LE
22226	4-15/16	071456	EP4B-S2-415L	071464	EP4B-S2-415LE

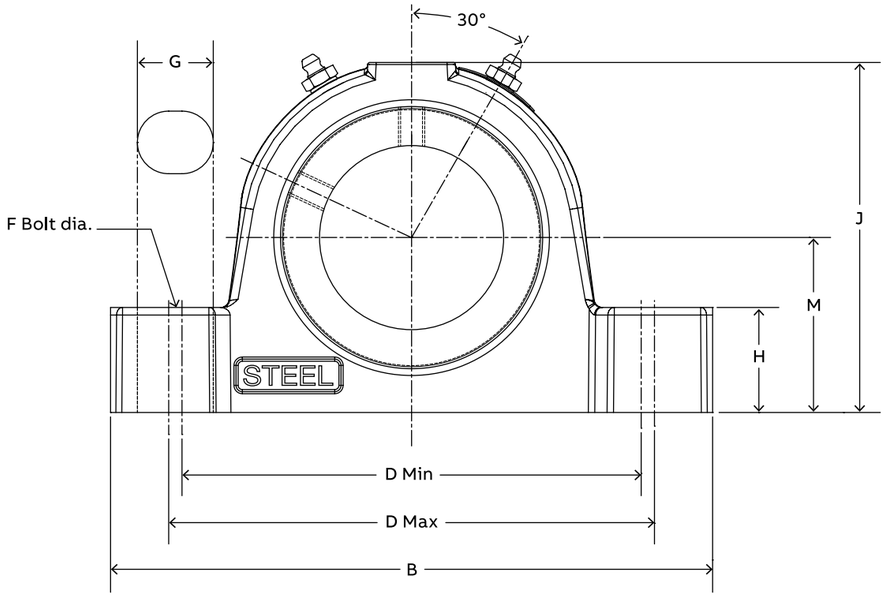
Shaft size	A	B #	C #	D		E	F bolt dia.	G #	H #	J #	L	M	R	S	X total exp	Y	Z	Set screw size	S/S torque (lb-in)
				Min.	Max.														
2-7/16	3.20	10.50	3.49	8.31	8.69	1.87	5/8	0.87	1.63	5.72	4.06	2.75	1.20	2.00	1/4	0.025	2.94	3/8	290
2-11/16																			
2-15/16	3.59	12.00	4.00	9.18	9.82	2.13	5/8	1.00	1.88	6.33	4.61	3.13	1.34	2.25	1/4	0.025	3.47	1/2	620
3																			
3-7/16	4.01	13.50	4.49	10.75	11.25	2.37	3/4	1.13	2.25	7.69	5.50	3.75	1.51	2.50	1/4	0.025	4.05	1/2	620
3-15/16	4.47	15.25	4.50	12.25	12.75	2.25	3/4	1.13	2.44	8.70	6.00	4.25	1.34	3.13	5/16	0.025	4.50	5/8	1325
4-7/16	6.53	16.63	4.63	13.25	13.75	2.50	3/4	1.13	2.75	9.67	6.45	4.75	3.08	3.38	3/8	—	—	5/8	1325
4-15/16	6.91	18.50	5.13	15.25	15.75	2.87	7/8	1.25	3.00	11.16	7.45	5.50	3.29	3.62	3/8	—	—	5/8	1325

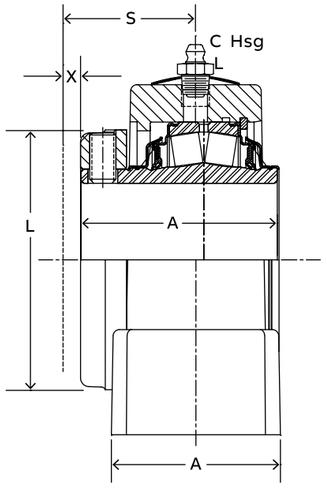
Notes: "A" and "R" dimensions do not include "Y" dimension.

Reference dimension only.

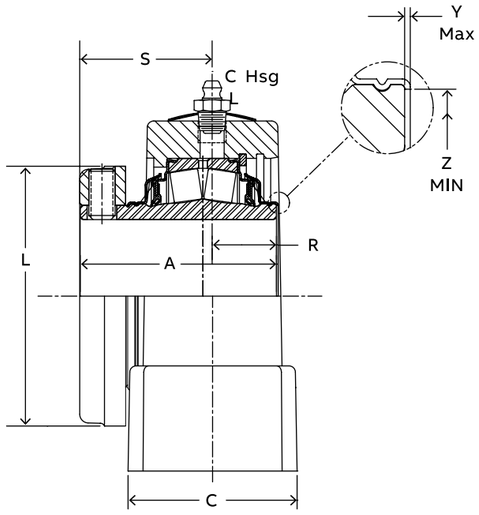
S-2000 pillow block – inch

2-bolt, steel (HD)





Expansion



Non-Expansion

S-2000 pillow block – inch

2-bolt, steel (HD)

Non-expansion

Shaft size	Part number	Description
1-3/8	071790	SP2B-S2-106R
1-7/16	071791	SP2B-S2-107R
1-1/2	071792	SP2B-S2-108R
1-11/16	071793	SP2B-S2-111R
1-3/4	071794	SP2B-S2-112R
1-15/16	071795	SP2B-S2-115R
2	071796	SP2B-S2-200R
2-3/16	071797	SP2B-S2-203R
2-7/16	071798	SP2B-S2-207R
2-11/16	071799	SP2B-S2-211R
2-15/16	071800	SP2B-S2-215R
3	071801	SP2B-S2-300R
3-7/16	071802	SP2B-S2-307R
3-15/16	071803	SP2B-S2-315R

Expansion

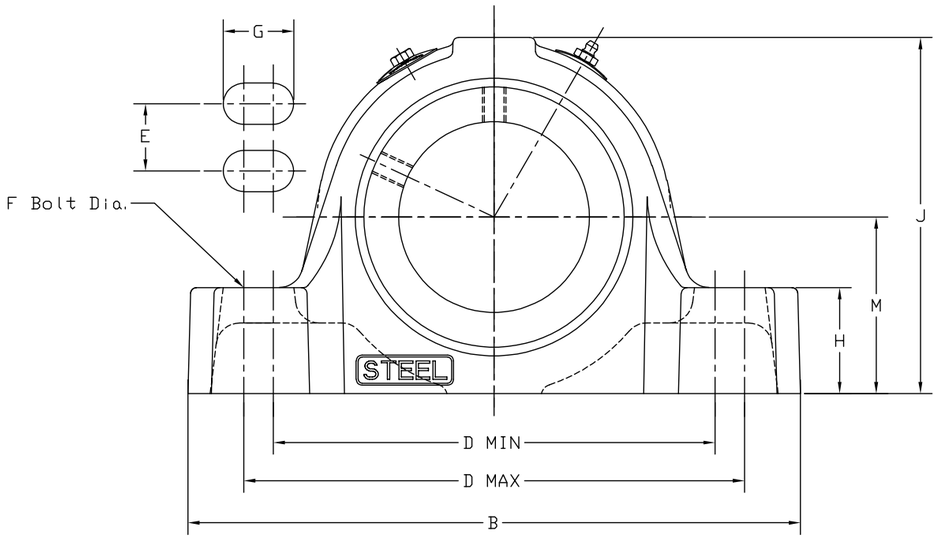
Shaft size	Part number	Description
1-3/8	071804	SP2B-S2-106RE
1-7/16	071805	SP2B-S2-107RE
1-1/2	071806	SP2B-S2-108RE
1-11/16	071807	SP2B-S2-111RE
1-3/4	071808	SP2B-S2-112RE
1-15/16	071809	SP2B-S2-115RE
2	071810	SP2B-S2-200RE
2-3/16	071811	SP2B-S2-203RE
2-7/16	071812	SP2B-S2-207RE
2-11/16	071813	SP2B-S2-211RE
2-15/16	071814	SP2B-S2-215RE
3	071815	SP2B-S2-300RE
3-7/16	071816	SP2B-S2-307RE
3-15/16	071817	SP2B-S2-315RE

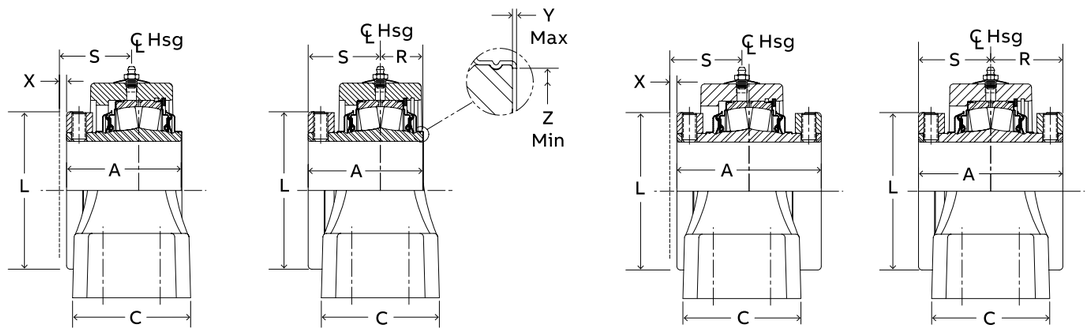
Shaft size	A	B	C	D		F bolt dia.	G	H	J	L	M	R	S	X total exp	Y	Z
				Min.	Max.											
1-3/8 1-7/16 1-1/2	2.53	6.88	2.25	4.69	6.00	1/2	1.28	1.13	3.88	2.75	1.88	0.86	1.67	3/16	0.020	1.80
1-11/16 1-3/4	2.67	7.13	2.37	5.25	5.75	1/2	0.88	1.25	4.27	3.19	2.13	0.91	1.76	1/4	0.020	2.08
1-15/16 2	2.84	8.38	2.44	5.93	6.36	5/8	0.97	1.31	4.56	3.44	2.25	0.89	1.95	1/4	0.020	2.30
2-3/16	2.94	8.88	2.50	6.50	7.00	5/8	1.04	1.50	5.00	3.75	2.50	0.99	1.95	1/4	0.025	2.59
2-7/16	3.00	9.25	2.90	6.81	7.43	5/8	1.07	1.63	5.60	4.06	2.75	1.17	2.03	1/4	0.025	2.94
2-11/16 2-15/16 3	3.59	10.44	2.91	7.70	8.40	3/4	1.23	1.88	6.38	4.70	3.25	1.11	2.48	1/4	0.025	3.47
3-7/16	4.02	13.00	3.41	9.25	10.75	7/8	1.75	2.25	7.50	5.50	3.75	1.43	2.61	1/4	0.025	4.05
3-15/16	4.47	14.25	3.89	10.04	12.6	1	2.40	2.44	8.37	6.00	4.25	1.59	2.91	5/16	0.025	4.50

"A" and "R" dimensions do not include "Y" dimension.

S-2000 pillow block – inch

4-bolt, steel (HD)





2-7/16 thru 3-7/16
Expansion

2-7/16 thru 3-7/16
Non-Expansion

4-15/16
Expansion

4-15/16
Non-Expansion

S-2000 pillow block – inch

4-bolt, steel (HD)

Non-expansion

Shaft size	Part number	Description
2-7/16	071821	SP4B-S2-207R
2-11/16	071822	SP4B-S2-211R
2-15/16	071823	SP4B-S2-215R
3	071824	SP4B-S2-300R
3-7/16	071825	SP4B-S2-307R
3-15/16	071826	SP4B-S2-315R
4-7/16	071827	SP4B-S2-407R
4-15/16	071828	SP4B-S2-415R

Expansion

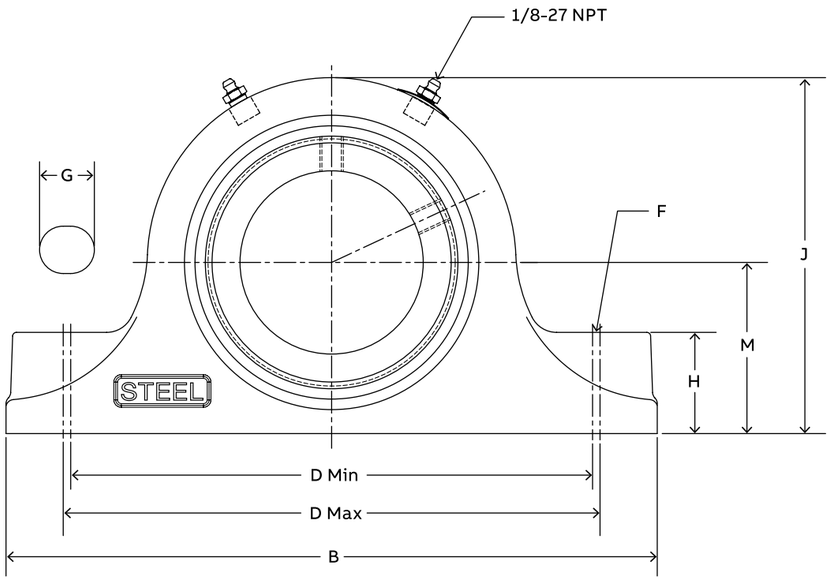
Shaft size	Part number	Description
2-7/16	071832	SP4B-S2-207RE
2-11/16	071833	SP4B-S2-211RE
2-15/16	071834	SP4B-S2-215RE
3	071835	SP4B-S2-300RE
3-7/16	071836	SP4B-S2-307RE
3-15/16	071837	SP4B-S2-315RE
4-7/16	071838	SP4B-S2-407RE
4-15/16	071839	SP4B-S2-415RE

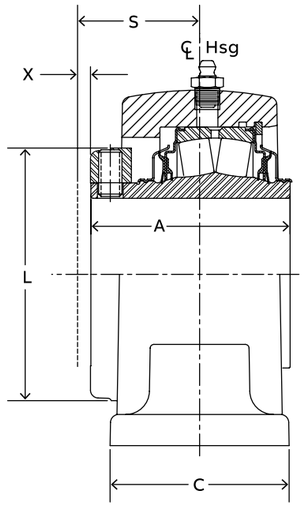
Shaft size	A	B	C	D		E	F bolt dia.	G	H	J	L	M	R	S	X total exp	Y	Z
				Min.	Max.												
2-7/16 2-11/16	3.20	9.25	3.00	6.88	7.63	1.75	1/2	1.06	1.63	5.61	4.06	2.75	1.19	2.90	1/4	0.025	2.94
2-15/16 3	3.59	10.44	3.13	7.60	9.10	1.88	5/8	1.43	1.88	6.44	4.70	3.00	1.14	2.46	1/4	0.025	3.47
3-7/16	4.02	12.30	3.75	8.88	10.88	2.00	3/4	1.88	2.25	7.56	5.50	3.75	1.48	2.54	1/4	0.025	4.05
3-15/16	4.47	14.88	4.31	10.88	13.38	2.25	3/4	2.13	2.44	8.70	6.00	4.25	1.25	3.22	5/16	0.025	4.50
4-7/16	6.53	16.13	4.75	11.88	14.5	2.50	3/4	2.19	2.75	9.67	6.45	4.75	2.87	3.66	3/8	0.036	5.00
4-15/16	6.91	17.50	5.03	15.13	15.88	2.75	7/8	1.37	3.00	11.12	7.45	5.50	3.35	3.56	3/8	0.036	5.84

"A" and "R" dimensions do not include "Y" dimension.

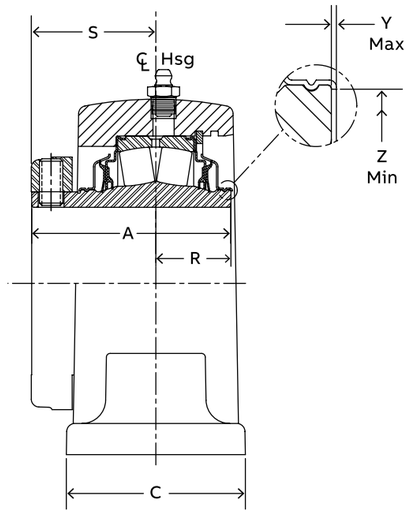
S-2000 pillow block – inch

2-bolt, E-dimensioned steel (HD)





Expansion



Non-Expansion

S-2000 pillow block – inch

2-bolt, E-dimensioned steel (HD)

Non-expansion

Shaft size	Part number	Description
1-3/8	071940	SEP2B-S2-106R
1-7/16	071941	SEP2B-S2-107R
1-11/16	071942	SEP2B-S2-111R
1-15/16	071943	SEP2B-S2-115R
2	071944	SEP2B-S2-200R
2-3/16	071945	SEP2B-S2-203R
2-7/16	071946	SEP2B-S2-207R
2-11/16	071947	SEP2B-S2-211R
2-15/16	071948	SEP2B-S2-215R
3	071949	SEP2B-S2-300R
3-7/16	071950	SEP2B-S2-307R

Expansion

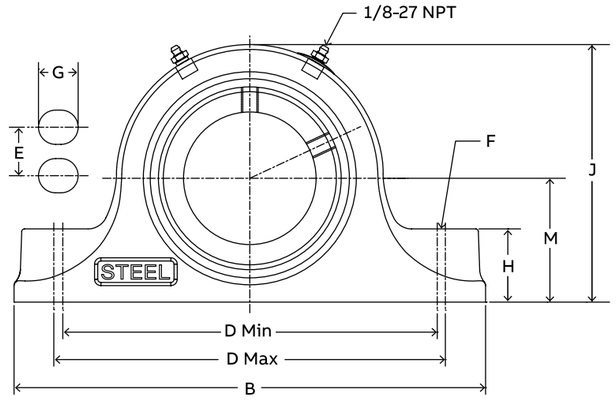
Shaft size	Part number	Description
1-3/8	071951	SEP2B-S2-106RE
1-7/16	071952	SEP2B-S2-107RE
1-11/16	071953	SEP2B-S2-111RE
1-15/16	071954	SEP2B-S2-115RE
2	071955	SEP2B-S2-200RE
2-3/16	071956	SEP2B-S2-203RE
2-7/16	071957	SEP2B-S2-207RE
2-11/16	071958	SEP2B-S2-211RE
2-15/16	071959	SEP2B-S2-215RE
3	071960	SEP2B-S2-300RE
3-7/16	071961	SEP2B-S2-307RE

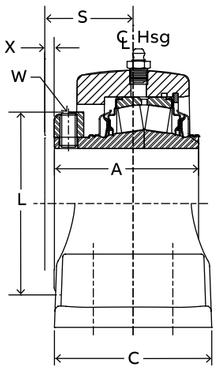
Shaft size	A	B	C	D		F bolt dia.	G	H	J	L	M	R	S	X total exp	Y	Z	Set screw size	S/S torque (lb-in)
				Min.	Max.													
1-3/8 1-7/16	2.53	6.88	2.25	4.69	5.88	1/2	1.22	1.13	3.84	2.55	1.88	1.03	1.50	5/32	0.020	1.80	5/16-18	165
1-11/16	2.67	7.88	2.38	5.70	6.50	1/2	1.02	1.25	4.26	3.01	2.13	0.98	1.69	3/16	0.020	2.08	5/16-18	165
1-15/16 2	2.84	8.88	2.44	6.00	7.12	5/8	1.32	1.31	4.47	3.26	2.25	1.08	1.76	7/32	0.020	2.30	3/8-16	290
2-3/16 2-7/16 2-11/16	3.20	10.25	2.90	6.88	8.62	5/8	1.63	1.63	5.71	3.86	2.75	1.20	2.00	1/4	0.025	2.95	3/8-16	290
2-15/16 3	3.59	11.63	2.91	7.88	9.62	3/4	1.75	1.88	6.32	4.61	3.13	1.34	2.25	1/4	0.025	3.47	1/2-13	620
3-7/16	4.01	13.50	3.41	9.38	11.25	7/8	1.94	2.25	7.69	5.50	3.75	1.51	2.50	1/4	0.025	4.05	1/2-13	620

"A" and "R" dimensions do not include "Y" dimension.

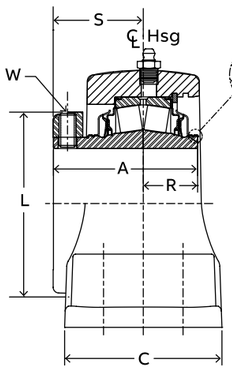
S-2000 pillow block – inch

4-bolt, E-dimensioned steel (HD)

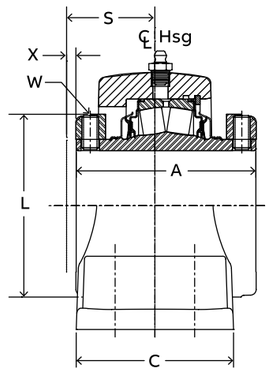




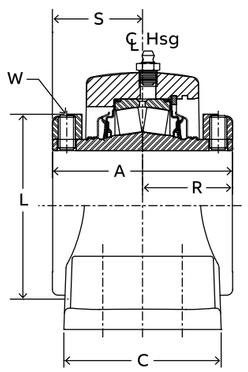
2-7/16 thru 3-15/16
Construction
Expansion



2-7/16 thru 3-15/16
Construction
Non-Expansion



4-7/16 thru 4-15/16
Construction
Expansion



4-7/16 thru 4-15/16
Construction
Non-Expansion

S-2000 pillow block – inch

4-bolt, E-dimensioned steel (HD)

Non-expansion

Shaft size	Part number	Description
2-7/16	071962	SEP4B-S2-207R
2-11/16	071963	SEP4B-S2-211R
2-15/16	071964	SEP4B-S2-215R
3	071965	SEP4B-S2-300R
3-7/16	071966	SEP4B-S2-307R
3-15/16	071967	SEP4B-S2-315R
4-7/16	071968	SEP4B-S2-407R
4-15/16	071969	SEP4B-S2-415R

Expansion

Shaft size	Part number	Description
2-7/16	071970	SEP4B-S2-207RE
2-11/16	071971	SEP4B-S2-211RE
2-15/16	071972	SEP4B-S2-215RE
3	071973	SEP4B-S2-300RE
3-7/16	071974	SEP4B-S2-307RE
3-15/16	071975	SEP4B-S2-315RE
4-7/16	071976	SEP4B-S2-407RE
4-15/16	071977	SEP4B-S2-415RE

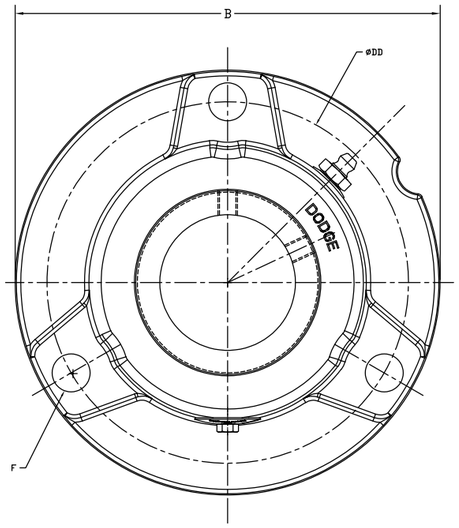
Shaft size	A	B	C	D		E	F bolt dia.	G	H	J	L	M	R	S	X total exp	Y	Z	Set screw size	S/S torque (lb-in)
				Min.	Max.														
2-7/16	3.20	10.25	3.25	7.13	8.75	1.88	5/8	1.57	1.63	5.71	3.86	2.75	1.20	2.00	1/4	0.025	2.94	3/8	290
2-11/16																			
2-15/16	3.59	10.83	3.38	8.00	9.60	2.12	5/8	1.56	1.88	6.32	4.61	3.13	1.34	2.25	1/4	0.025	3.47	1/2	620
3																			
3-7/16	4.01	13.63	3.75	9.25	11.25	2.38	3/4	1.88	2.25	7.69	5.50	3.75	1.51	2.50	1/4	0.025	4.05	1/2	620
3-15/16	4.47	14.88	4.31	10.88	13.88	2.25	3/4	2.13	2.44	8.70	6.00	4.25	1.25	3.22	5/16	0.025	4.50	5/8	1325
4-7/16	6.53	16.13	4.75	11.88	14.50	2.50	3/4	2.19	2.75	9.67	6.45	4.75	2.87	3.66	3/8	0.036	5.00	5/8	1325
4-15/16	6.91	17.50	5.04	15.13	15.88	2.88	7/8	1.38	3.00	11.16	7.45	5.50	3.29	3.62	3/8	N/A	N/A	5/8	1325

"A" and "R" dimensions do not include "Y" dimension.

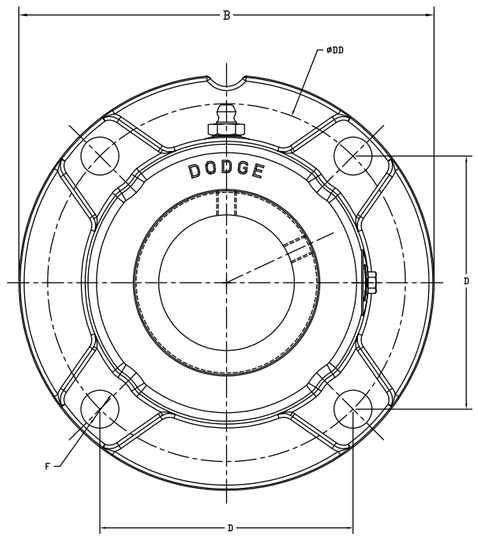
Reference dimension only.

S-2000 round flange – inch

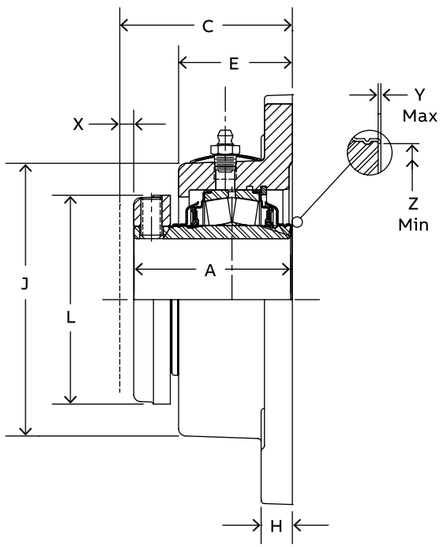
3- and 4-bolt



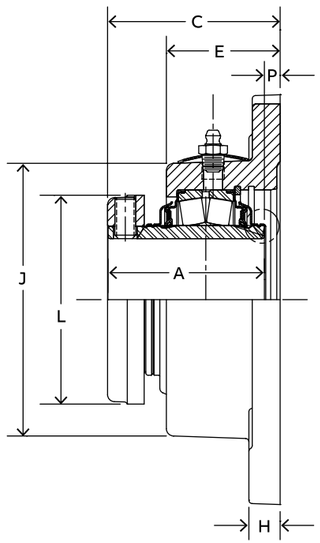
1-3/8″ thru 1-1/2″
CONSTRUCTION



1-11/16″ thru 3″
CONSTRUCTION



Expansion



Non-Expansion

S-2000 round flange – inch

3- and 4-bolt

Trident seal

Bearing series	Shaft size	Non-expansion		Expansion	
		Part number	Description	Part number	Description
22208	1-3/8	070436	F3R-S2-106R	070470	F3R-S2-106RE
	1-7/16	070437	F3R-S2-107R	070471	F3R-S2-107RE
	1-1/2	070438	F3R-S2-108R	070472	F3R-S2-108RE
22209	1-11/16	070440	F4R-S2-111R	070474	F4R-S2-111RE
	1-3/4	070441	F4R-S2-112R	070475	F4R-S2-112RE
22210	1-15/16	070442	F4R-S2-115R	070476	F4R-S2-115RE
	2	070443	F4R-S2-200R	070477	F4R-S2-200RE
22211	2-3/16	070444	F4R-S2-203R	070478	F4R-S2-203RE
22213	2-7/16	070446	F4R-S2-207R	070480	F4R-S2-207RE
22215	2-11/16	070448	F4R-S2-211R	070482	F4R-S2-211RE
	2-15/16	070449	F4R-S2-215R	070483	F4R-S2-215RE
	3	070450	F4R-S2-300R	070484	F4R-S2-300RE

Labyrinth seal

Bearing series	Shaft size	Non-expansion		Expansion	
		Part number	Description	Part number	Description
22208	1-3/8	070491	F3R-S2-106L	070523	F3R-S2-106LE
	1-7/16	070492	F3R-S2-107L	070524	F3R-S2-107LE
	1-1/2	070493	F3R-S2-108L	070525	F3R-S2-108LE
22209	1-11/16	070495	F4R-S2-111L	070527	F4R-S2-111LE
	1-3/4	070496	F4R-S2-112L	070528	F4R-S2-112LE
22210	1-15/16	070497	F4R-S2-115L	070529	F4R-S2-115LE
	2	070498	F4R-S2-200L	070530	F4R-S2-200LE
22211	2 - 3/16	070499	F4R-S2-203L	070531	F4R-S2-203LE
22213	2-7/16	070501	F4R-S2-207L	070533	F4R-S2-207LE
22215	2-11/16	070503	F4R-S2-211L	070535	F4R-S2-211LE
	2-15/16	070504	F4R-S2-215L	070536	F4R-S2-215LE
	3	070505	F4R-S2-300L	070537	F4R-S2-300LE

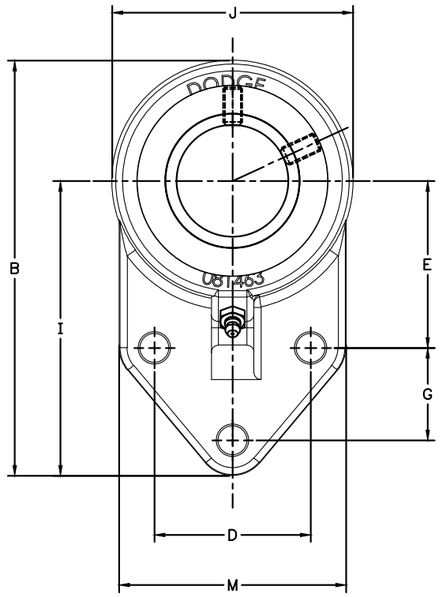
Shaft size	A	B	C	D	DD	E	F bolt dia.	H	J	L	P	X total exp	Y	Z
1-3/8														
1-7/16	2.53	5.88	2.77	4.33	5.00	1.80	1/2*	0.50	3.84	2.75	0.23	3/16	0.020	1.80
1-1/2														
1-11/16	2.67	6.38	2.97	3.89	5.50	1.89	1/2**	0.50	4.34	3.19	0.30	1/4	0.020	2.08
1-3/4														
1-15/16	2.84	6.69	3.14	4.06	5.75	1.92	1/2**	0.56	4.59	3.44	0.30	1/4	0.020	2.30
2														
2-3/16	2.94	7.38	3.23	4.50	6.38	2.05	5/8**	0.56	4.98	3.75	0.30	1/4	0.025	2.60
2-7/16	3.20	7.75	3.50	4.77	6.75	2.38	5/8**	0.77	5.50	406	0.30	1/4	0.025	2.95
2-11/16														
2-15/16	3.59	9.25	3.89	5.56	7.88	2.39	3/4**	0.88	6.36	4.70	0.30	1/4	0.025	3.47
3														

* 3 equally spaced bolt holes.

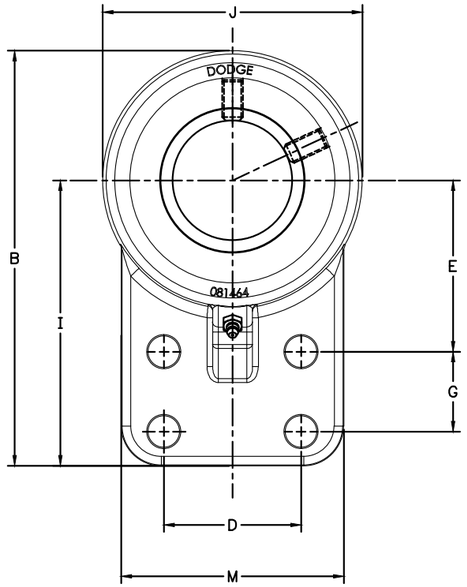
** 4 equally spaced bolt holes.

S-2000 flange bracket - inch

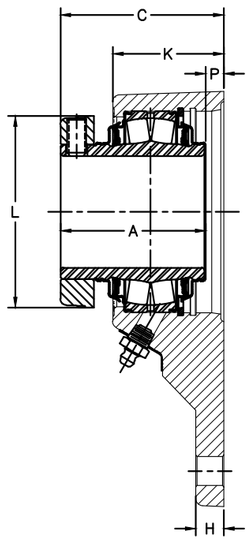
3- and 4-bolt



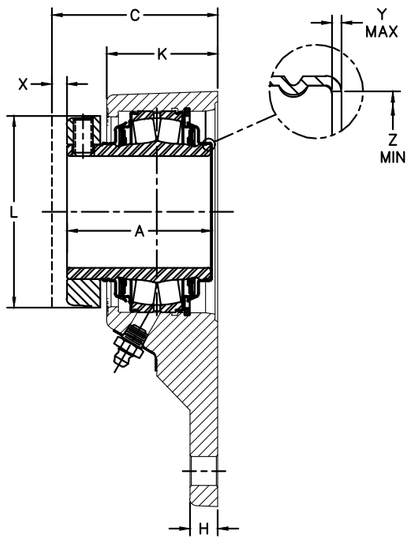
1-7/16" and 1-15/16" constuction



2-7/16" constuction



Non-Expansion



Expansion

S-2000 flange bracket - inch

3- and 4-bolt

Non-expansion

Shaft size	Part number	Description
1-7/16	081468	FB-S2-107R
1-15/16	081469	FB-S2-115R
2-7/16	081470	FB-S2-207R

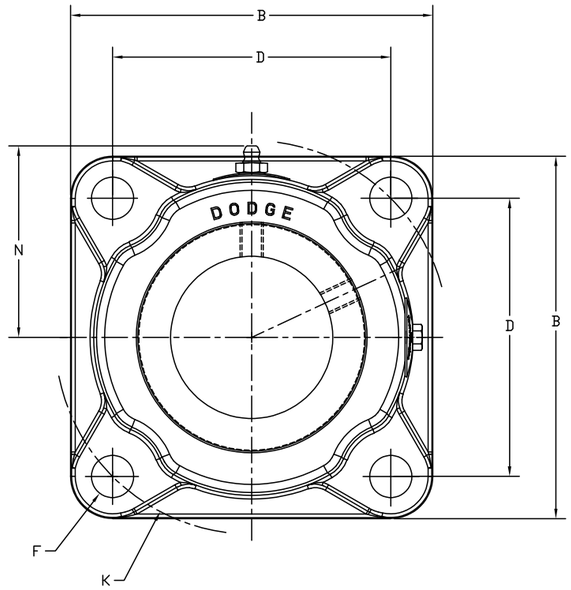
Expansion

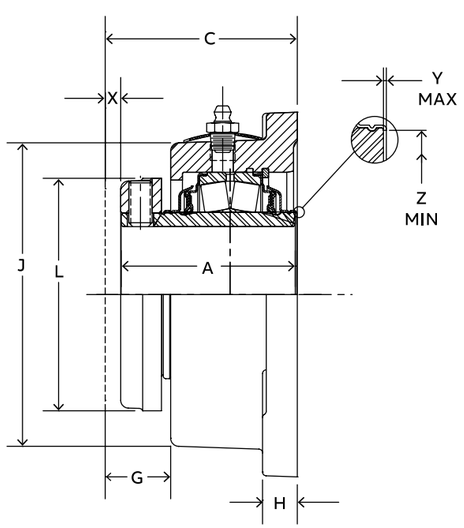
Shaft size	Part number	Description
1-7/16	139089	FB-S2-107RE
1-15/16	139090	FB-S2-115RE
2-7/16	139091	FB-S2-207RE

Shaft size	A	B	C	D	E	F bolt dia.	G	H	I	J	K	L	M	P	X total exp	Y	Z
1-7/16	2.53	6.13	2.77	2.00	2.38	1/2	1.25	0.50	4.25	3.75	1.83	2.75	3.25	0.23	3/16	0.020	1.80
1-15/16	2.84	7.31	3.14	2.75	2.94	1/2	1.63	0.48	5.19	4.25	1.95	3.44	4.00	0.30	1/4	0.020	2.30
2-7/16	3.20	9.09	3.50	3.00	3.75	5/8	1.75	0.64	6.25	5.69	2.39	3.97	4.88	0.30	1/4	0.025	2.95

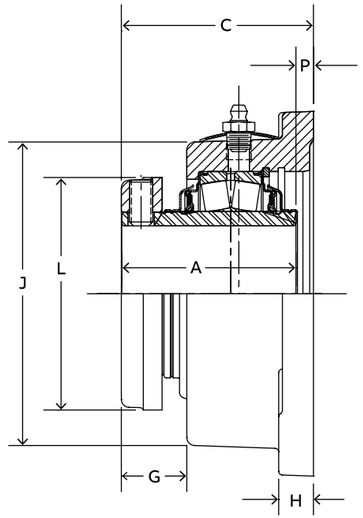
S-2000 square flange – inch

4-bolt





Expansion



Non-Expansion

S-2000 square flange – inch

4-bolt

Trident seal

Bearing series	Shaft size	Non-expansion		Expansion	
		Part number	Description	Part number	Description
22208	1-3/8	070541	F4S-S2-106R	070564	F4S-S2-106RE
	1-7/16	070542	F4S-S2-107R	070565	F4S-S2-107RE
	1-1/2	070543	F4S-S2-108R	070566	F4S-S2-108RE
22209	1-11/16	070545	F4S-S2-111R	070568	F4S-S2-111RE
	1-3/4	070546	F4S-S2-112R	070569	F4S-S2-112RE
22210	1-15/16	070547	F4S-S2-115R	070570	F4S-S2-115RE
	2	070548	F4S-S2-200R	070571	F4S-S2-200RE
22211	2-3/16	070549	F4S-S2-203R	070572	F4S-S2-203RE
22213	2-7/16	070551	F4S-S2-207R	070574	F4S-S2-207RE
22215	2-11/16	070553	F4S-S2-211R	070576	F4S-S2-211RE
	2-15/16	070554	F4S-S2-215R	070577	F4S-S2-215RE
	3	070555	F4S-S2-300R	070578	F4S-S2-300RE
22218	3-7/16	070557	F4S-S2-307R	070580	F4S-S2-307RE
22220	3-15/16	070559	F4S-S2-315R	070582	F4S-S2-315RE

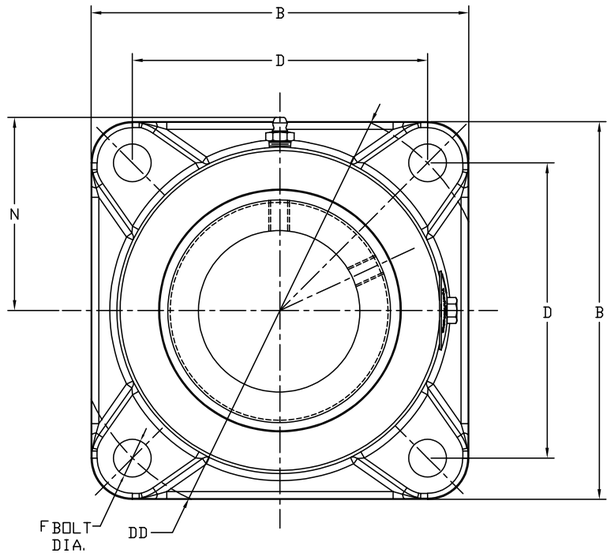
Labyrinth seal

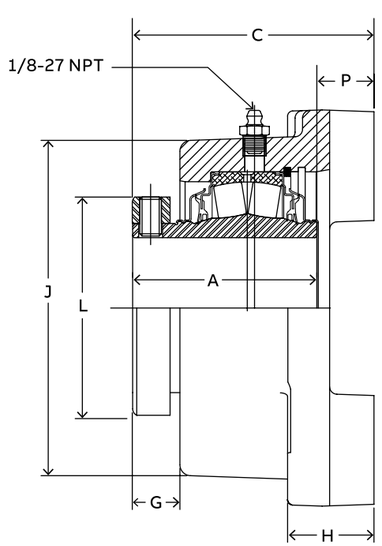
Bearing series	Shaft size	Non-expansion		Expansion	
		Part number	Description	Part number	Description
22208	1-3/8	070600	F4S-S2-106L	070853	F4S-S2-106LE
	1-7/16	070601	F4S-S2-107L	070854	F4S-S2-107LE
	1-1/2	070602	F4S-S2-108L	070855	F4S-S2-108LE
22209	1-11/16	070604	F4S-S2-111L	070857	F4S-S2-111LE
	1-3/4	070605	F4S-S2-112L	070858	F4S-S2-112LE
22210	1-15/16	070606	F4S-S2-115L	070859	F4S-S2-115LE
	2	070607	F4S-S2-200L	070860	F4S-S2-200LE
22211	2-3/16	070608	F4S-S2-203L	070861	F4S-S2-203LE
22213	2-7/16	070610	F4S-S2-207L	070863	F4S-S2-207LE
22215	2-11/16	070612	F4S-S2-211L	070865	F4S-S2-211LE
	2-15/16	070613	F4S-S2-215L	070866	F4S-S2-215LE
	3	070614	F4S-S2-300L	070867	F4S-S2-300LE
22218	3-7/16	070616	F4S-S2-307L	070869	F4S-S2-307LE
22220	3-15/16	070618	F4S-S2-315L	070871	F4S-S2-315LE

Shaft size	A	B	C	D	F bolt dia.	G	H	J	K	L	N	P	X total exp	Y	Z
1-3/8 1-7/16 1-1/2	2.53	4.75	2.77	3.53	1/2	0.99	0.50	3.81	5.00	2.75	2.48	0.23	3/16	0.020	1.80
1-11/16 1-3/4	2.67	5.13	2.97	3.89	1/2	1.08	0.50	4.41	5.50	3.19	2.78	0.30	1/4	0.020	2.08
1-15/16 2	2.84	5.30	3.16	4.06	1/2	1.23	0.56	4.97	5.75	3.44	2.91	0.31	1/4	0.020	2.30
2-3/16	2.94	5.88	3.25	4.52	5/8	1.20	0.56	5.02	6.38	3.75	3.09	0.31	1/4	0.025	2.60
2-7/16	3.20	6.13	3.52	4.78	5/8	1.14	0.64	5.63	6.75	4.06	3.41	0.31	1/4	0.025	2.95
2-11/16 2-15/16 3	3.59	7.19	3.91	5.56	3/4	1.52	0.75	6.50	7.88	4.70	3.84	0.31	1/4	0.025	3.47
3-7/16	4.00	8.25	4.31	6.72	3/4	1.44	0.94	7.48	9.50	5.50	4.33	0.31	1/4	0.025	4.05
3-15/16	4.47	9.25	4.84	7.61	7/8	1.55	1.06	8.22	10.75	6.00	4.70	0.38	5/16	0.025	4.50

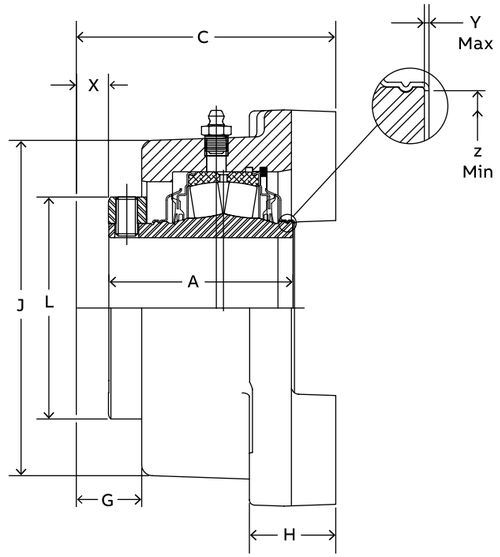
S-2000 square flange – inch

4-bolt, E-dimensioned





Non-Expansion



Expansion

S-2000 square flange – inch

4-bolt, E-dimensioned

Trident seal

Bearing series	Shaft size	Non-expansion		Expansion	
		Part number	Description	Part number	Description
22208	1-3/8	071469	EF4B-S2-106R	071482	EF4B-S2-106RE
	1-7/16	071470	EF4B-S2-107R	071483	EF4B-S2-107RE
22209	1-11/16	071471	EF4B-S2-111R	071484	EF4B-S2-111RE
22210	1-15/16	071472	EF4B-S2-115R	071485	EF4B-S2-115RE
	2	071473	EF4B-S2-200R	071486	EF4B-S2-200RE
22211	2-3/16	071474	EF4B-S2-203R	071487	EF4B-S2-203RE
22213	2-7/16	071475	EF4B-S2-207R	071488	EF4B-S2-207RE
	2-11/16	071476	EF4B-S2-211R	071489	EF4B-S2-211RE
22215	2-15/16	071477	EF4B-S2-215R	071490	EF4B-S2-215RE
	3	071478	EF4B-S2-300R	071491	EF4B-S2-300RE
22218	3-7/16	071479	EF4B-S2-307R	071492	EF4B-S2-307RE
22220	3-15/16	071480	EF4B-S2-315R	071493	EF4B-S2-315RE
22222	4-7/16	071481	EF4B-S2-407R	071494	EF4B-S2-407RE

Labyrinth seal

Bearing series	Shaft size	Non-expansion		Expansion	
		Part number	Description	Part number	Description
22208	1-3/8	071495	EF4B-S2-106L	071508	EF4B-S2-106LE
	1-7/16	071496	EF4B-S2-107L	071509	EF4B-S2-107LE
22209	1-11/16	071497	EF4B-S2-111L	071510	EF4B-S2-111LE
22210	1-15/16	071498	EF4B-S2-115L	071511	EF4B-S2-115LE
	2	071499	EF4B-S2-200L	071512	EF4B-S2-200LE
22211	2-3/16	071500	EF4B-S2-203L	071513	EF4B-S2-203LE
22213	2-7/16	071501	EF4B-S2-207L	071514	EF4B-S2-207LE
	2-11/16	071502	EF4B-S2-211L	071515	EF4B-S2-211LE
22215	2-15/16	071503	EF4B-S2-215L	071516	EF4B-S2-215LE
	3	071504	EF4B-S2-300L	071517	EF4B-S2-300LE
22218	3-7/16	071505	EF4B-S2-307L	071518	EF4B-S2-307LE
22220	3-15/16	071506	EF4B-S2-315L	071519	EF4B-S2-315LE
22222	4-7/16	071507	EF4B-S2-407L	071520	EF4B-S2-407LE

Shaft size	A	B #	C #	D	DD	F bolt dia.	G	H #	J #	L	N	P	X total exp	Y	Z	Set screw size	S/S torque (lb-in)
1-3/8 1-7/16	2.53	4.62	3.06	3.50	4.95	1/2	0.57	1.06	3.88	2.55	2.34	0.53	5/32	0.020	1.80	5/16-18	165
1-11/16	2.67	5.37	3.50	4.13	5.83	1/2	0.53	1.19	4.18	3.01	2.51	0.84	3/16	0.020	2.08	5/16-18	165
1-15/16 2	2.84	5.62	3.63	4.37	6.19	1/2	0.65	1.18	4.36	3.44	2.60	0.78	7/32	0.020	2.30	3/8-16	290
2-3/16	2.94	6.25	3.87	4.87	6.89	5/8	0.60	1.38	4.88	3.50	2.88	0.93	1/4	0.025	2.60	3/8-16	290
2-7/16	3.20	6.88	4.19	5.37	7.60	5/8	0.83	1.50	5.81	4.06	3.32	0.98	1/4	0.025	2.95	3/8-16	290
2-11/16 2-15/16 3	3.59	7.76	4.69	6.00	8.49	3/4	0.88	1.61	6.30	4.61	3.58	1.09	1/4	0.025	3.47	1/2-13	620
3-7/16	4.01	9.25	5.25	7.00	9.90	3/4	0.96	1.87	7.44	5.50	4.15	1.24	1/4	0.025	4.05	1/2-13	620
3-15/16	4.48	10.25	6.50	7.75	10.96	7/8	1.00	2.12	8.27	6.00	4.58	2.02	5/16	0.025	4.50	5/8-11	1,325
4-7/16	6.53	10.88	7.10	8.75	12.37	7/8	1.39	2.43	9.13	6.45	5.01	0.56	3/8	—	—	5/8-11	1,325

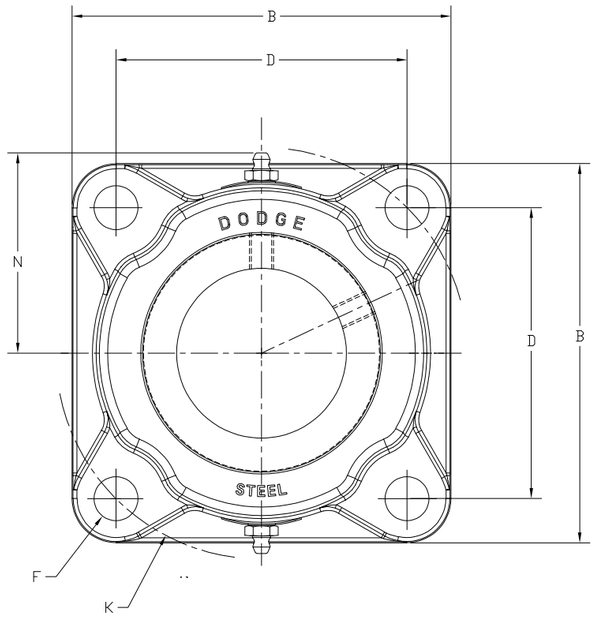
Notes: "P" dimension is for the non-expansion only.

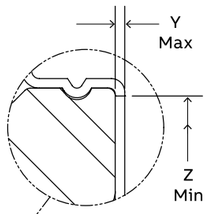
"A" and "R" dimensions do not include "Y" dimension.

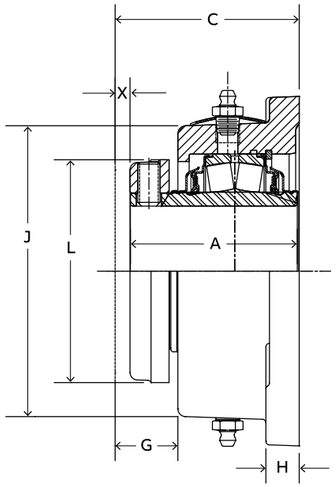
Reference dimension only.

S-2000 square flange – inch

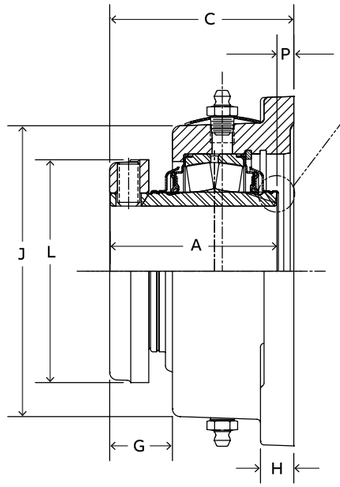
4-bolt, steel (HD)







Expansion



Non-Expansion

S-2000 square flange – inch

4-bolt, steel (HD)

Non-expansion

Shaft size	Part number	Description
1-3/8	072386	SF4S-S2-106R
1-7/16	072387	SF4S-S2-107R
1-1/2	072388	SF4S-S2-108R
1-11/16	072389	SF4S-S2-111R
1-3/4	072390	SF4S-S2-112R
1-15/16	072391	SF4S-S2-115R
2	072392	SF4S-S2-200R
2-3/16	072393	SF4S-S2-203R
2-7/16	072394	SF4S-S2-207R
2-11/16	072395	SF4S-S2-211R
2-15/16	072396	SF4S-S2-215R
3	072397	SF4S-S2-300R
3-7/16	072398	SF4S-S2-307R
3-15/16	072399	SF4S-S2-315R

Expansion

Shaft size	Part number	Description
1-3/8	072400	SF4S-S2-106RE
1-7/16	072401	SF4S-S2-107RE
1-1/2	072402	SF4S-S2-108RE
1-11/16	072403	SF4S-S2-111RE
1-3/4	072404	SF4S-S2-112RE
1-15/16	072405	SF4S-S2-115RE
2	072406	SF4S-S2-200RE
2-3/16	072407	SF4S-S2-203RE
2-7/16	072408	SF4S-S2-207RE
2-11/16	072409	SF4S-S2-211RE
2-15/16	072410	SF4S-S2-215RE
3	072411	SF4S-S2-300RE
3-7/16	072412	SF4S-S2-307RE
3-15/16	072413	SF4S-S2-315RE

Shaft size	A	B	C	D	F bolt dia.	G	H	J	K	L	N	P	X total exp	Y	Z
1-3/8															
1-7/16	2.53	4.62	2.77	3.54	1/2	0.76	0.88	3.70	5.00	2.75	2.25	0.24	3/16	0.02	1.80
1-1/2															
1-11/16	2.67	5.37	2.87	3.89	1/2	0.77	0.88	4.41	5.50	3.19	2.62	0.20	1/4	0.02	2.08
1-3/4															
1-15/16	2.84	5.18	3.16	4.07	1/2	0.91	0.91	4.66	5.75	3.44	2.75	0.32	1/4	0.02	2.30
2															
2-3/16	2.94	5.87	3.16	4.51	5/8	0.83	0.75	5.03	6.38	3.75	2.93	0.22	1/4	0.02	2.59
2-7/16	3.20	6.18	3.34	4.77	5/8	0.72	1.00	5.63	6.75	4.06	3.23	0.14	1/4	0.025	2.94
2-11/16															
2-15/16	3.59	7.18	3.87	5.57	3/4	1.04	1.06	6.51	7.88	4.70	3.75	0.28	1/4	0.025	3.47
3															
3-7/16	4.00	8.37	4.11	6.72	3/4	0.78	1.28	7.49	9.50	5.50	4.17	0.11	1/4	0.025	4.05
3-15/16	4.48	9.49	4.84	7.60	1	0.85	1.50	8.22	10.75	6.00	4.68	0.36	5/32	0.025	4.50

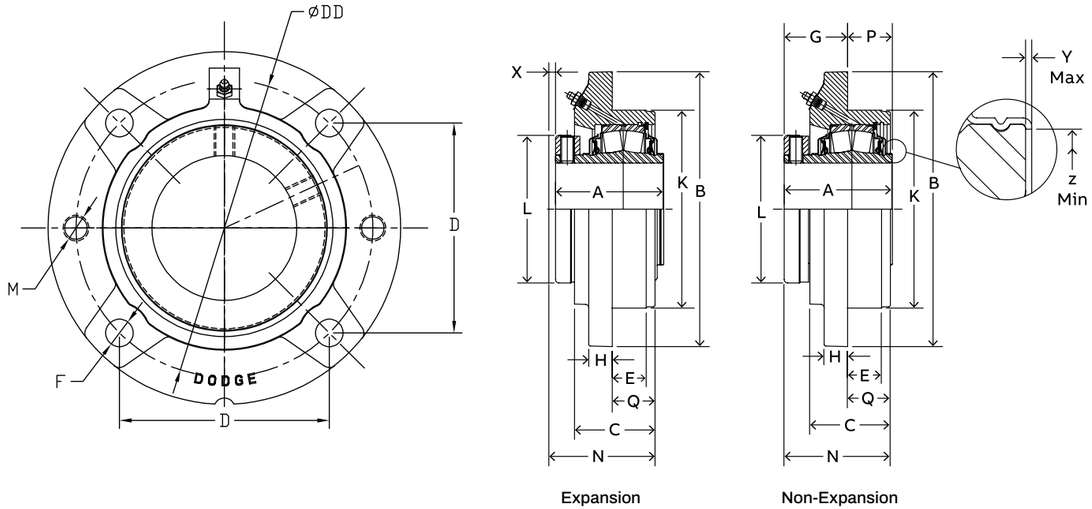
"P" dimension is for non-expansion only.

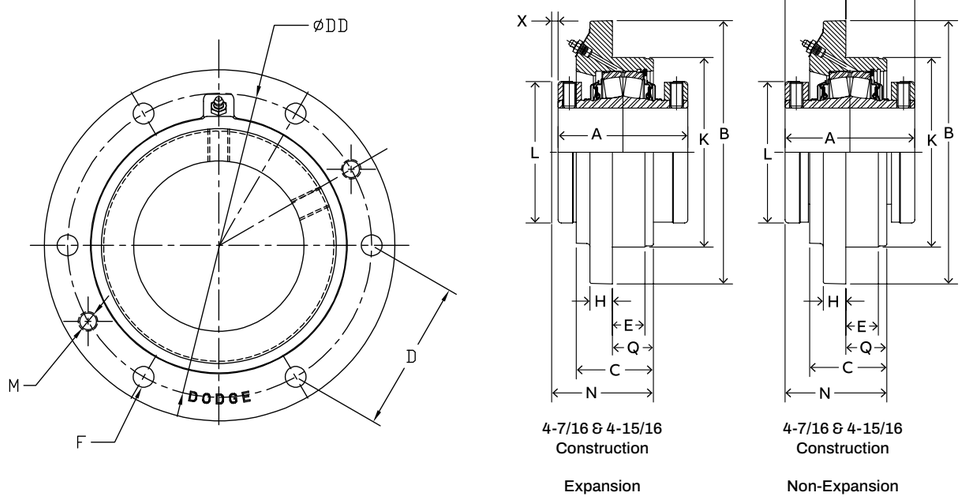
"A" and "P" dimensions do not include "Y" dimension.

Reference Guide
Type E Family (Tapered)
Specialty Tapered
Safety Mount Family (Spherical)
S-2000 (Spherical)
Unified SAF (Spherical)
Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

S-2000 piloted flange – inch

4-bolt





S-2000 piloted flange – inch

4-bolt

Trident seal

Bearing series	Shaft size	Non-expansion		Expansion	
		Part number	Description	Part number	Description
22208	1-3/8	070644	FC-S2-106R	070671	FC-S2-106RE
	1-7/16	070645	FC-S2-107R	070672	FC-S2-107RE
	1-1/2	070646	FC-S2-108R	070673	FC-S2-108RE
22209	1-11/16	070648	FC-S2-111R	070675	FC-S2-111RE
	1-3/4	070649	FC-S2-112R	070676	FC-S2-112RE
22210	1-15/16	070650	FC-S2-115R	070677	FC-S2-115RE
	2	070651	FC-S2-200R	070678	FC-S2-200RE
22211	2-3/16	070652	FC-S2-203R	070679	FC-S2-203RE
22213	2-7/16	070654	FC-S2-207R	070681	FC-S2-207RE
22215	2-11/16	070656	FC-S2-211R	070683	FC-S2-211RE
	2-15/16	070657	FC-S2-215R	070684	FC-S2-215RE
	3	070658	FC-S2-300R	070685	FC-S2-300RE
22218	3-7/16	070660	FC-S2-307R	070687	FC-S2-307RE
22220	3-15/16	070662	FC-S2-315R	070689	FC-S2-315RE
22222	4-7/16 **	070664	FC-S2-407R	070691	FC-S2-407RE
22226	4-15/16 **	070666	FC-S2-415R	070693	FC-S2-415RE

Labyrinth seal

Bearing series	Shaft size	Non-expansion		Expansion	
		Part number	Description	Part number	Description
22208	1-3/8	070698	FC-S2-106L	070725	FC-S2-106LE
	1-7/16	070699	FC-S2-107L	070726	FC-S2-107LE
	1-1/2	070700	FC-S2-108L	070727	FC-S2-108LE
22209	1-11/16	070702	FC-S2-111L	070729	FC-S2-111LE
	1-3/4	070703	FC-S2-112L	070730	FC-S2-112LE
22210	1-15/16	070704	FC-S2-115L	070731	FC-S2-115LE
	2	070705	FC-S2-200L	070732	FC-S2-200LE
22211	2-3/16	070706	FC-S2-203L	070733	FC-S2-203LE
22213	2-7/16	070708	FC-S2-207L	070735	FC-S2-207LE
22215	2-11/16	070710	FC-S2-211L	070737	FC-S2-211LE
	2-15/16	070711	FC-S2-215L	070738	FC-S2-215LE
	3	070712	FC-S2-300L	070739	FC-S2-300LE
22218	3-7/16	070714	FC-S2-307L	070741	FC-S2-307LE
22220	3-15/16	070716	FC-S2-315L	070743	FC-S2-315LE
22222	4-7/16 **	070718	FC-S2-407L	070745	FC-S2-407LE
22226	4-15/16 **	070720	FC-S2-415L	070747	FC-S2-415LE

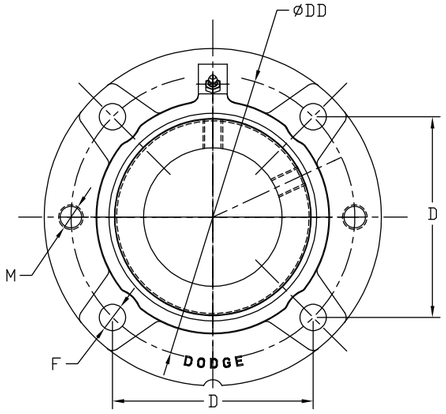
Shaft size	A	B	C	D	DD	E	F bolt dia.	G	H	K*	L	M	N	P	Q	X total exp	Y	Z
1-3/8																		
1-7/16	2.53	5.25	1.84	3.09	4.38	0.75	3/8	1.31	0.50	3.63	2.75	3/8-16	2.55	1.22	1.22	3/16	0.020	1.80
1-1/2																		
1-11/16	2.67	6.13	1.91	3.63	5.13	0.88	7/16	1.45	0.50	4.25	3.19	7/16-14	2.72	1.22	1.27	1/4	0.020	2.08
1-3/4																		
1-15/16	2.84	6.38	2.00	3.80	5.38	0.88	7/16	1.59	0.56	4.50	3.44	7/16-14	2.86	1.25	1.27	1/4	0.020	2.30
2																		
2-3/16	2.94	7.13	2.19	4.25	6.00	1.00	1/2	1.56	0.56	5.00	3.75	1/2-13	2.98	1.38	1.42	1/4	0.025	2.59
2-7/16	3.20	7.63	2.50	4.59	6.50	1.00	1/2	1.64	0.63	5.50	4.06	1/2-13	3.20	1.56	1.56	1/4	0.025	2.94
2-11/16																		
2-15/16	3.59	8.75	2.63	5.30	7.50	1.25	5/8	2.03	0.75	6.38	4.70	5/8-11	3.64	1.56	1.63	1/4	0.025	3.47
3																		
3-7/16	4.00	10.25	3.00	6.09	8.63	1.27	3/4	2.36	0.94	7.38	5.50	3/4-10	3.88	1.64	1.52	1/4	0.025	4.05
3-15/16	4.47	10.88	3.50	6.63	9.38	1.47	3/4	2.66	1.13	8.13	6.00	3/4-10	4.56	1-31	1.91	5/16	0.025	4.50
4-7/16	6.53	13.58	4.00	5.88	11.75	1.45	3/4**	3.53	1.00	10.25	6.45	3/4-10	5.50	3.00	1.98	3/8	—	—
4-15/16	6.91	14.84	4.38	6.38	12.75	1.70	7/8**	3.44	1.25	11.00	7.45	7/8-9	5.86	3.47	2.42	3/8	—	—

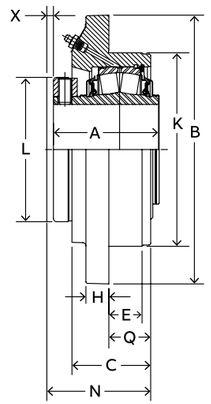
* Pilot diameter tolerance = +0.000, -0.002 inch

** Housing utilize 6 bolts equally spaced.

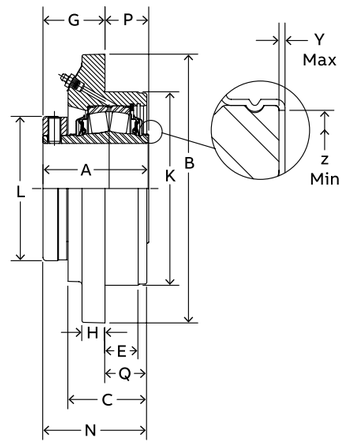
S-2000 piloted flange – inch

4-bolt, E-dimensioned

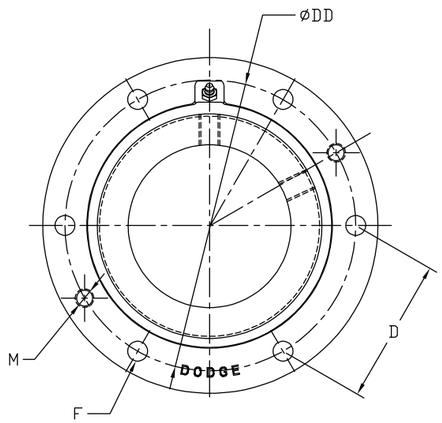


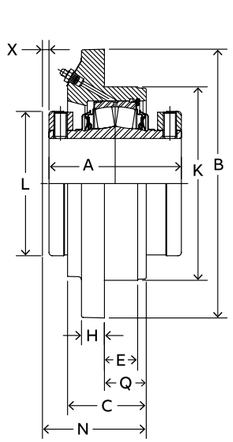


Expansion



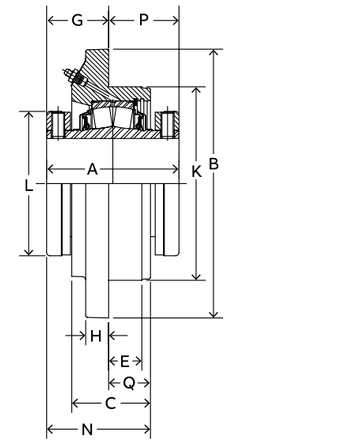
Non-Expansion





4-7/16 & 4-15/16 Construction

Expansion



4-7/16 & 4-15/16 Construction

Non-Expansion

S-2000 piloted flange – inch

4-bolt, E-dimensioned

Trident seal

Bearing series	Shaft size	Non-expansion		Expansion	
		Part number	Description	Part number	Description
22208	1-3/8	070644	FC-S2-106R	070671	FC-S2-106RE
	1-7/16	070645	FC-S2-107R	070672	FC-S2-107RE
22209	1-11/16	070648	FC-S2-111R	070675	FC-S2-111RE
22210	1-15/16	070650	FC-S2-115R	070677	FC-S2-115RE
	2	070651	FC-S2-200R	070678	FC-S2-200RE
22211	2-3/16	070652	FC-S2-203R	070679	FC-S2-203RE
22213	2-7/16	070654	FC-S2-207R	070681	FC-S2-207RE
22215	2-11/16	070656	FC-S2-211R	070683	FC-S2-211RE
	2-15/16	070657	FC-S2-215R	070684	FC-S2-215RE
	3	070658	FC-S2-300R	070685	FC-S2-300RE
22218	3-7/16	070660	FC-S2-307R	070687	FC-S2-307RE
22220	3-15/16	070662	FC-S2-315R	070689	FC-S2-315RE
22222	4-7/16	071521	EFC-S2-407R	071523	EFC-S2-407RE
22226	4-15/16	071522	EFC-S2-415R	071524	EFC-S2-415RE

Labyrinth seal

Bearing series	Shaft size	Non-expansion		Expansion	
		Part number	Description	Part number	Description
22208	1-3/8	070698	FC-S2-106L	070725	FC-S2-106LE
	1-7/16	070699	FC-S2-107L	070726	FC-S2-107LE
22209	1-11/16	070702	FC-S2-111L	070729	FC-S2-111LE
22210	1-15/16	070704	FC-S2-115L	070731	FC-S2-115LE
	2	070705	FC-S2-200L	070732	FC-S2-200LE
22211	2-3/16	070706	FC-S2-203L	070733	FC-S2-203LE
22213	2-7/16	070708	FC-S2-207L	070735	FC-S2-207LE
22215	2-11/16	070710	FC-S2-211L	070737	FC-S2-211LE
	2-15/16	070711	FC-S2-215L	070738	FC-S2-215LE
	3	070712	FC-S2-300L	070739	FC-S2-300LE
22218	3-7/16	070714	FC-S2-307L	070741	FC-S2-307LE
22220	3-15/16	070716	FC-S2-315L	070743	FC-S2-315LE
22222	4-7/16	071525	EFC-S2-407L	071527	EFC-S2-407LE
22226	4-15/16	071526	EFC-S2-415L	071528	EFC-S2-415LE

Shaft size	A	B #	C #	D	DD	E #	F bolt dia.	G	H #	K ##	L	M	N	P	Q #	X total exp	Y	Z	Set screw size	S/S torque (lb-in)
1-3/8	2.53	5.25	1.84	3.09	4.38	0.75	3/8	1.31	0.50	3.625	2.55	3/8-16	2.53	1.22	1.22	3/16	0.020	1.80	5/16	165
1-7/16																				
1-11/16	2.67	6.13	1.91	3.63	5.13	0.88	7/16	1.45	0.50	4.250	3.01	7/16-14	2.72	1.22	1.26	1/4	0.020	2.08	5/16	165
1-15/16	2.84	6.38	2.00	3.80	5.38	0.88	7/16	1.59	0.56	4.500	3.44	7/16-14	2.86	1.25	1.26	1/4	0.020	2.30	3/8	290
2																				
2-3/16	2.94	7.13	2.19	4.25	6.00	1.00	1/2	1.56	0.56	5.000	3.50	1/2-13	2.98	1.38	1.42	1/4	0.025	2.59	3/8	290
2-7/16	3.20	7.63	2.50	4.59	6.50	1.00	1/2	1.64	0.63	5.500	4.06	1/2-13	3.20	1.56	1.56	1/4	0.025	2.94	3/8	290
2-11/16																				
2-15/16	3.59	8.75	2.63	5.30	7.50	1.25	5/8	2.03	0.75	6.375	4.61	5/8-11	3.64	1.56	1.63	1/4	0.025	3.47	1/2	620
3																				
3-7/16	4.01	10.25	3.00	6.09	8.63	1.26	3/4	2.36	0.94	7.375	5.50	3/4-10	3.88	1.65	1.52	1/4	0.025	4.05	1/2	620
3-15/16	4.47	10.88	3.50	6.63	9.38	1.47	3/4	2.66	1.13	8.125	6.00	3/4-10	4.56	1.81	1.91	5/16	0.025	4.50	5/8	1,325
4-7/16	6.53	13.50	4.58	5.88	11.75	1.45	3/4 **	3.00	0.94	10.250	6.45	3/4-10	5.63	3.53	2.63	3/8	—	—	5/8	1,325
4-15/16	6.91	14.75	4.88	6.38	12.75	1.70	7/8 **	2.97	1.25	11.000	7.45	7/8-9	5.95	3.94	3.01	3/8	—	—	5/8	1,325

Pilot diameter tolerance = +0.000, -0.002 inch

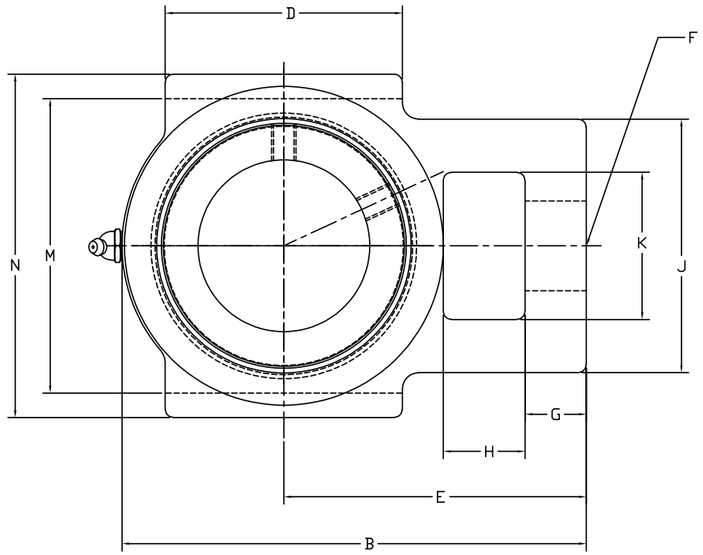
Reference dimension only.

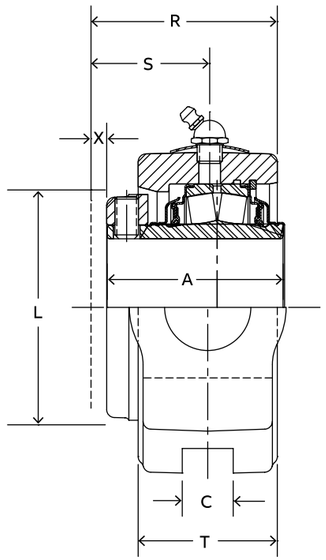
Notes: "P" and "G" dimensions are for non-expansion only.

"A" and "P" dimensions do not include "Y" dimension.

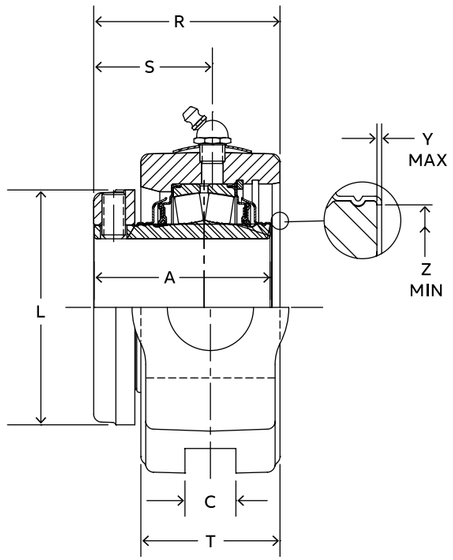
S-2000 take-up – inch

Wide-slot (WS)





Expansion



Non-Expansion

S-2000 take-up – inch

Wide-slot (WS)

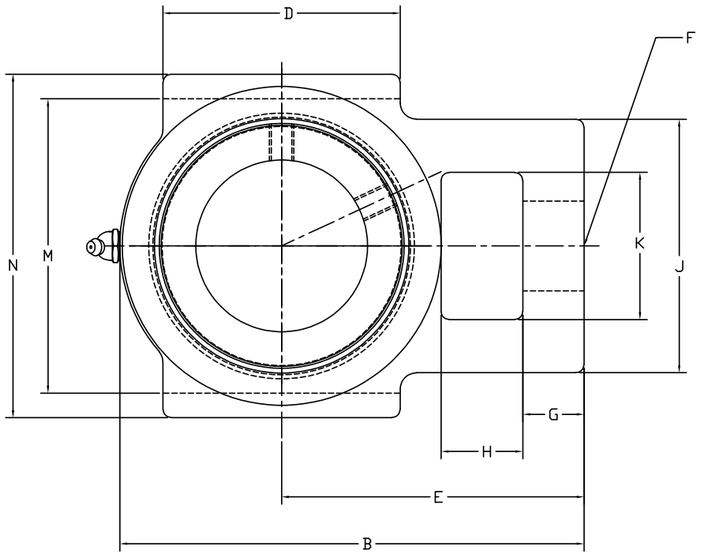
Trident seal

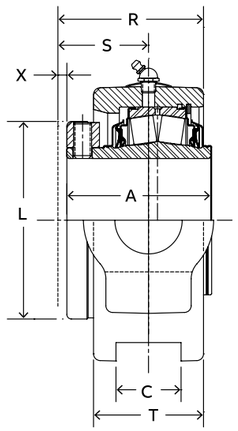
Bearing series	Shaft size	Take-up frame	Non-expansion		Expansion	
			Part number	Description	Part number	Description
22208	1-3/8	CP-308	070752	WSTU-S2-106R	070779	WSTU-S2-106RE
	1-7/16		070753	WSTU-S2-107R	070780	WSTU-S2-107RE
	1-1/2		070754	WSTU-S2-108R	070781	WSTU-S2-108RE
22209	1-11/16	CP-400	070756	WSTU-S2-111R	070783	WSTU-S2-111RE
	1-3/4		070757	WSTU-S2-112R	070784	WSTU-S2-112RE
22210	1-15/16	CP-400	070758	WSTU-S2-115R	070785	WSTU-S2-115RE
	2		070759	WSTU-S2-200R	070786	WSTU-S2-200RE
22211	2-3/16	CP-408	070760	WSTU-S2-203R	070787	WSTU-S2-203RE

Shaft size	A	B	C	D	E	F	G	H	J	K	L	M	N	R	S	T	X total exp	Y	Z
1-3/8																			
1-7/16	2.53	5.06	0.53	2.75	3.19	7/8	0.69	0.63	2.44	1.44	2.75	3.50	4.13	2.73	1.70	2.06	3/16	0.020	1.80
1-1/2																			
1-11/16	2.67	5.94	0.69	3.13	3.81	1-1/8	0.94	0.75	3.31	1.94	3.19	4.00	4.75	2.83	1.81	2.03	1/4	0.020	2.08
1-3/4																			
1-15/16	2.84	6.19	0.69	3.63	3.94	1-1/8	0.94	0.75	3.31	1.94	3.44	4.00	4.75	2.94	1.94	2.00	1/4	0.020	2.30
2																			
2-3/16	2.94	7.06	0.81	3.63	4.63	1-3/8	0.94	1.25	3.88	2.25	3.75	4.50	5.25	3.09	1.98	2.22	1/4	0.020	2.59

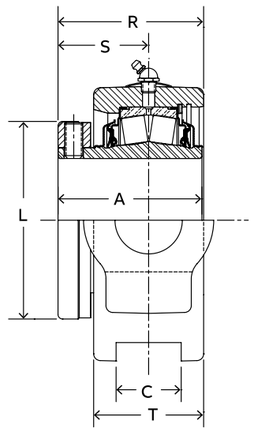
S-2000 take-up – inch

Wide-slot (WS)

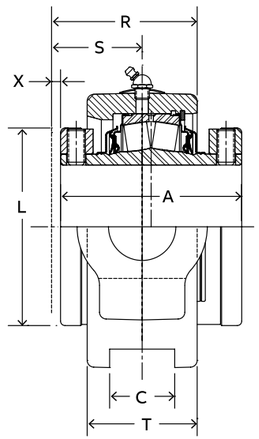




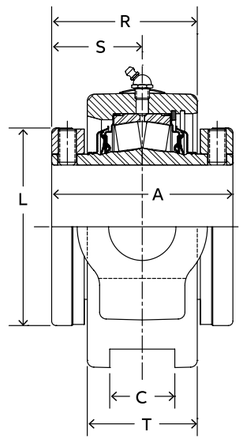
1-3/8 thru 3-15/16" Construction



1-3/8 thru 3-15/16" Construction



4-7/16 thru 4-15/16" Construction



4-7/16 thru 4-15/16" Construction

S-2000 take-up – inch

Wide-slot (WS)

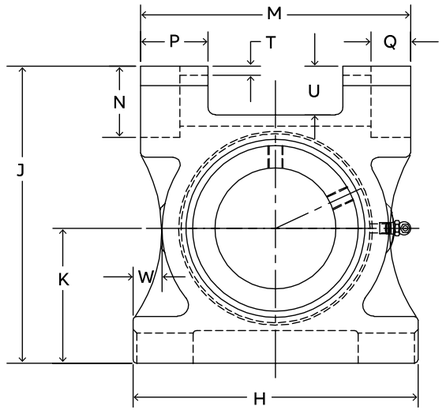
Trident seal

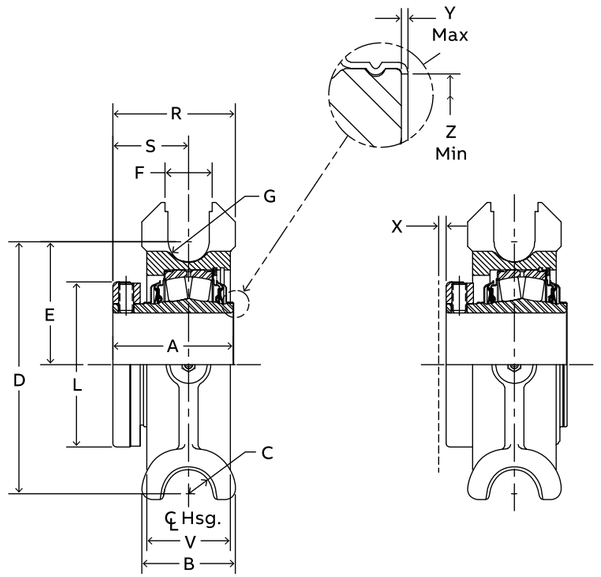
Bearing series	Shaft size	Take-up frame	Non-expansion		Expansion	
			Part number	Description	Part number	Description
22213	2-7/16	CP-502	070762	WSTU-S2-207R	070789	WSTU-S2-207RE
	2-11/16		070764	WSTU-S2-211R	070791	WSTU-S2-211RE
22215	2-15/16	CP-515	070765	WSTU-S2-215R	070792	WSTU-S2-215RE
	3		070766	WSTU-S2-300R	070793	WSTU-S2-300RE
22218	3-7/16	CP-613	070768	WSTU-S2-307R	070795	WSTU-S2-307RE
22220	3-15/16	CP-810	070770	WSTU-S2-315R	070797	WSTU-S2-315RE
22222	4-7/16	CP-908	070772	WSTU-S2-407R	070799	WSTU-S2-407RE
22226	4-15/16	CP-1004	070774	WSTU-S2-415R	070801	WSTU-S2-415RE

Shaft size	A	B	C	D	E	F	G	H	J	K	L	M	N	R	S	T	X total exp	Y	Z
2-7/16	3.20	7.69	1.06	4.38	5.00	1-3/8	1.06	1.25	4.25	2.50	4.06	5.13	5.88	3.20	2.00	2.44	1/4	0.025	2.94
2-11/16																			
2-15/16	3.59	8.88	1.81	4.50	5.75	1-5/8	1.13	1.50	4.88	2.75	4.70	5.94	6.69	3.75	2.41	2.69	1/4	0.025	3.47
3																			
3-7/16	4.00	10.06	1.81	5.50	6.38	1-7/8	1.06	1.63	5.13	2.88	5.50	6.81	7.81	4.05	2.52	3.06	1/4	0.025	4.05
3-15/16	4.47	12.56	2.06	7.00	6.38	2-1/8	2.06	2.13	6.00	3.38	6.00	8.63	9.44	4.58	2.86	3.44	5/16	0.025	4.50
4-7/16	6.53	13.38	2.06	7.00	8.75	2-1/8	2.00	2.13	6.78	3.38	6.45	9.50	10.33	5.34	3.47	3.75	3/8	—	—
4-15/16	6.91	15.63	2.06	9.00	10.31	2-3/8	2.50	2.50	7.00	3.75	7.45	10.25	11.25	5.73	3.64	4.19	3/8	—	—

S-2000 take-up – inch

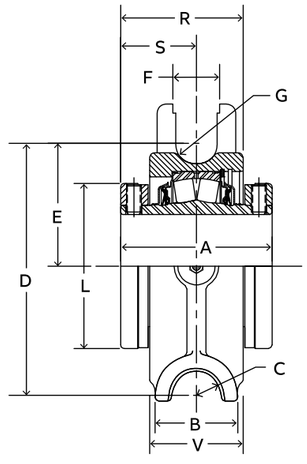
Top-angle heavy-duty universal (TPHU)



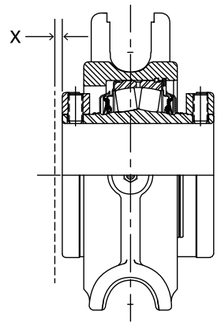


1-3/8" thru 3-15/16"
Construction
Non-Expansion

1-3-8" thru 3-15/16
Construction
Expansion



4-7/16" thru 5"
Construction
Non-Expansion



4-7-16" thru 5"
Construction
Expansion

S-2000 take-up – inch
Top-angle heavy-duty universal (TPHU)

Trident seal

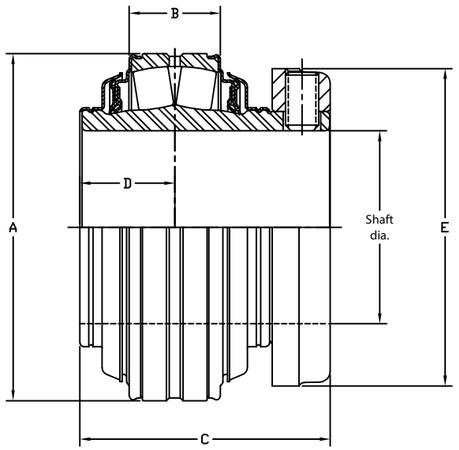
Bearing series	Shaft size	Take-up frame		Non-expansion		Expansion	
				Part number	Description	Part number	Description
22210	1-15/16	TP10	TPHU110	070811	TPHU-S2-115R	070829	TPHU-S2-115RE
	2			070812	TPHU-S2-200R	070830	TPHU-S2-200RE
22211	2-3/16	TP30	TPHU120	070813	TPHU-S2-203R	070831	TPHU-S2-203RE
22213	2-7/16	TP40	TPHU130	070815	TPHU-S2-207R	070833	TPHU-S2-207RE
22215	2-11/16	TP40	TPHU140	070817	TPHU-S2-211R	070835	TPHU-S2-211RE
	2-15/16			070818	TPHU-S2-215R	070836	TPHU-S2-215RE
	3			070819	TPHU-S2-300R	070837	TPHU-S2-300RE
22218	3-7/16	TP50	TPHU150	070821	TPHU-S2-307R	070839	TPHU-S2-307RE
22220	3-15/16	TP60	TPHU160	070823	TPHU-S2-315R	070841	TPHU-S2-315RE
22222	4-7/16	N/A	TPHU170	070825	TPHU-S2-407R	070843	TPHU-S2-407RE
22226	4-15/16	N/A	TPHU180	070827	TPHU-S2-415R	070845	TPHU-S2-415RE

Shaft size	A	B	C	D	E	F	G	H	J	K	L	M
1-15/16	2.84	2.38	0.81	5.19	2.38	1.06	0.44	6.50	6.44	3.06	3.44	6.00
2												
2-3/16	2.94	2.75	0.81	6.25	3.00	1.44	0.56	7.50	7.63	3.50	3.75	7.00
2-7/16	3.20	2.75	0.81	7.14	3.33	1.44	0.56	8.50	8.28	3.84	4.06	8.00
2-11/16												
2-15/16	3.59	2.75	0.81	7.13	3.31	1.44	0.56	8.50	8.50	4.00	4.70	8.00
3												
3-7/16	4.00	3.13	0.81	8.41	4.09	1.56	0.69	9.50	10.06	4.50	5.50	9.00
3-15/16	4.47	3.13	0.81	9.25	4.56	1.56	0.69	11.00	11.50	5.50	6.00	10.50
4-7/16	6.53	3.38	0.81	10.19	5.00	1.56	0.69	11.00	12.38	6.00	6.45	10.50
4-15/16	6.91	3.50	0.81	12.44	6.06	1.81	0.69	14.38	14.63	7.19	7.45	13.88

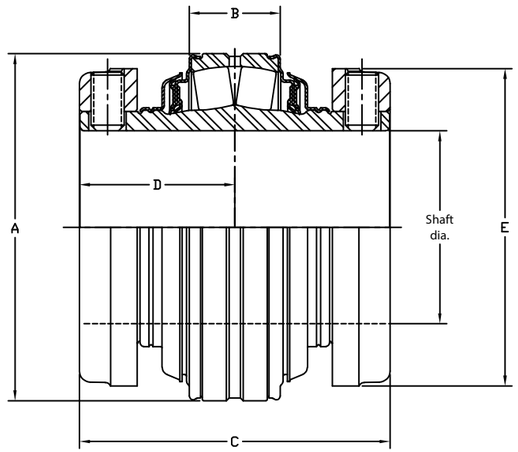
Shaft size	N	P	Q	R	S	T	U	V	W	X total exp	Y	Z
1-15/16	1.66	1.25	0.81	3.19	2.00	0.31	1.06	2.00	0.88	0.25	0.020	2.30
2												
2-3/16	1.94	1.75	1.06	3.39	2.02	0.31	1.56	2.25	0.94	0.25	0.025	2.59
2-7/16	1.88	1.75	1.06	3.53	2.16	0.31	1.44	2.75	1.00	0.25	0.025	2.94
2-11/16	1.94	1.75	1.06	3.83	2.45	0.31	1.50	2.75	1.00	0.25	0.025	3.47
2-15/16												
3												
3-7/16	2.53	2.25	1.31	4.22	2.66	0.31	1.78	3.13	0.97	0.25	0.025	4.05
3-15/16	2.50	2.31	1.31	4.52	2.95	0.31	2.00	3.13	1.25	0.31	0.025	4.50
4-7/16	2.44	2.31	1.31	5.45	3.45	0.38	1.94	4.00	0.86	0.38	0.036	5.00
4-15/16	2.38	3.94	1.31	5.88	3.66	0.38	1.94	4.45	1.42	0.38	0.036	5.84

S-2000 bearing insert – inch

Contact Seal

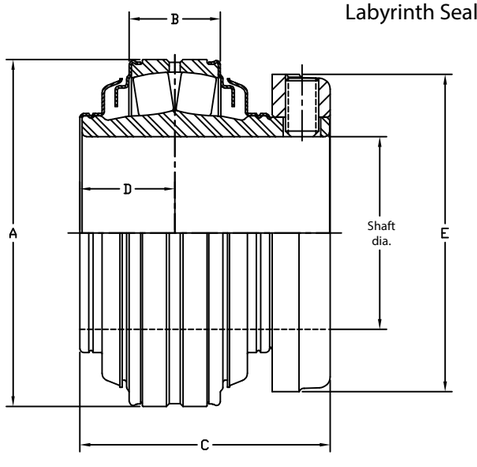


1-3/8 thru 3-15/16" Construction

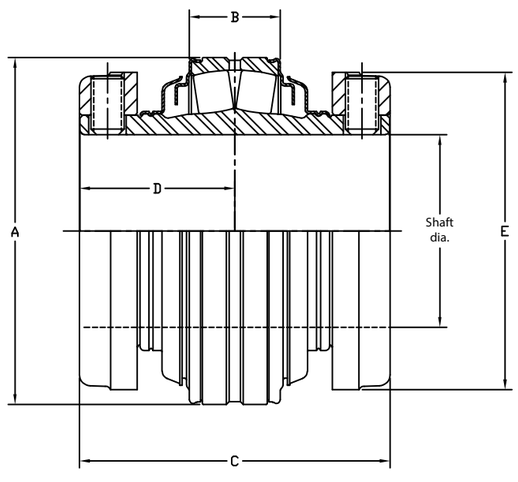


4-7/16 thru 4-15/16" Construction

Labyrinth Seal



1-3/8 thru 3-15/16" Construction



4-7/16 thru 4-15/16" Construction

Reference Guide
Type E Family (Tapered)
Specialty Tapered
Safety Mount Family (Spherical)
S-2000 (Spherical)
Unified SAF (Spherical)
Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

S-2000 bearing insert – inch

Trident seal

Bearing series	Shaft size	Part number	Description
22208	1-3/8	070000	INS-S2-106R
	1-7/16	070001	INS-S2-107R
	1-1/2	070002	INS-S2-108R
22209	1-11/16	070003	INS-S2-111R
	1-3/4	070004	INS-S2-112R
22210	1-15/16	070005	INS-S2-115R
	2	070006	INS-S2-200R
22211	2-3/16	070007	INS-S2-203R
22213	2-7/16	070008	INS-S2-207R
22215	2-11/16	070009	INS-S2-211R
	2-15/16	070010	INS-S2-215R
	3	070011	INS-S2-300R
22218	3-7/16	070012	INS-S2-307R
22220	3-15/16	070013	INS-S2-315R
22222	4-7/16	070014	INS-S2-407R
22226	4-15/16	070015	INS-S2-415R

Labyrinth seal

Bearing series	Shaft size	Part number	Description
22208	1-3/8	070016	INS-S2-106L
	1-7/16	070017	INS-S2-107L
	1-1/2	070018	INS-S2-108L
22209	1-11/16	070019	INS-S2-111L
	1-3/4	070020	INS-S2-112L
22210	1-15/16	070021	INS-S2-115L
	2	070022	INS-S2-200L
22211	2-3/16	070023	INS-S2-203L
22213	2-7/16	070024	INS-S2-207L
22215	2-11/16	070025	INS-S2-211L
	2-15/16	070026	INS-S2-215L
	3	070027	INS-S2-300L
22218	3-7/16	070028	INS-S2-307L
22220	3-15/16	070029	INS-S2-315L
22222	4-7/16	070030	INS-S2-407L
22226	4-15/16	070031	INS-S2-415L

Shaft size	A	B	C	D	E
1-3/8 1-7/16 1-1/2	3.15	0.95	2.53	0.97	2.66
1-11/16 1-3/4	3.35	0.95	2.66	0.95	3.10
1-15/16 2	3.54	0.95	2.84	1.00	3.34
2-3/16	3.94	1.05	2.94	1.05	3.66
2-7/16	4.72	1.28	3.20	1.21	3.97
2-11/16 2-15/16 3	5.12	1.28	3.59	1.22	4.63
3-7/16	6.30	1.63	4.00	1.48	5.50
3-15/16	7.10	1.88	4.48	1.65	6.00
4-7/16	7.87	2.16	6.53	3.27	6.45
4-15/16	9.10	2.59	6.91	3.45	7.45

Accessories

S-2000 end covers – inch

Steel, open

Shaft size	Front end				Backside			
	S2 and S2-HD		S2-E and S2-HD-E		S2 and S2-HD		S2-E and S2-HD-E	
	Part number	Description	Part number	Description	Part number	Description	Part number	Description
1-3/8	070240	S2ECO-08-106	070240	S2ECO-08-106	072503	S2IPBECO-08-106	072503	S2IPBECO-08-106
1-7/16	070241	S2ECO-08-107	070241	S2ECO-08-107	072504	S2IPBECO-08-107	072504	S2IPBECO-08-107
1-1/2	070242	S2ECO-08-108	070242	S2ECO-08-108	072505	S2IPBECO-08-108	072506	ES2IPBECO-09-108
1-11/16	070243	S2ECO-09-111	070243	S2ECO-09-111	072508	S2IPBECO-09-111	072508	S2IPBECO-09-111
1-3/4	070244	S2ECO-09-112	070244	S2ECO-09-112	072509	S2IPBECO-09-112	072510	ES2IPBECO-10-112
1-15/16	070245	S2ECO-10-115	070245	S2ECO-10-115	072512	S2IPBECO-10-115	072512	S2IPBECO-10-115
2	070246	S2ECO-10-200	070246	S2ECO-10-200	072513	S2IPBECO-10-200	072513	S2IPBECO-10-200
2-3/16	070247	S2ECO-11-203	070247	S2ECO-11-203	072514	S2IPBECO-11-203	072514	S2IPBECO-11-203
2-7/16	070178	S2IPECO-13-207	070178	S2IPECO-13-207	072518	S2IPBECO-13-207	072518	S2IPBECO-13-207
2-11/16	070248	S2ECO-15-211	070248	S2ECO-15-211	072520	S2IPBECO-15-211	072520	S2IPBECO-15-211
2-15/16	070249	S2ECO-15-215	070249	S2ECO-15-215	072522	S2IPBECO-15-215	072522	S2IPBECO-15-215
3	070250	S2ECO-15-300	070250	S2ECO-15-300	072523	S2IPBECO-15-300	072523	S2IPBECO-15-300
3-7/16	070186	S2IPECO-18-307	070186	S2IPECO-18-307	072526	S2IPBECO-18-307	072526	S2IPBECO-18-307
3-15/16	070189	S2IPECO-20-315	070189	S2IPECO-20-315	072529	S2IPBECO-20-315	072529	S2IPBECO-20-315
4-7/16	070191	S2IPECO-22-407	070191	S2IPECO-22-407	072532	S2BECO-22-407	072532	S2BECO-22-407
4-15/16	070193	S2IPECO-26-415	070193	S2IPECO-26-415	072535	S2BECO-26-415	072535	S2BECO-26-415

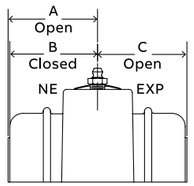
S-2000 end covers – inch

Steel, closed

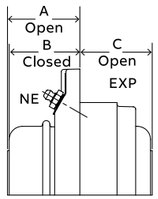
Shaft size	S2 and S2-HD		S2-E and S2-HD-E	
	Part number	Description	Part number	Description
1-3/8—1-1/2	069970	S2EC08	069960	IPEC08
1-11/16—1-3/4	069971	S2EC09	069961	IPEC09
1-15/16—2	069972	S2EC10	069962	IPEC10
2-3/16	069973	S2EC11	069963	IPEC11
2-7/16	069964	S2EC13	069964	IPEC13
2-11/16—3	069975	S2EC15	069965	IPEC15
3-7/16	069966	S2IPEC18	069966	S2IPEC18
3-15/16	069967	S2IPEC20	069967	S2IPEC20
4-7/16	069968	S2IPEC22	069968	S2IPEC22
4-15/16	069969	S2IPEC26	069969	S2IPEC26

S-2000 end covers – inch

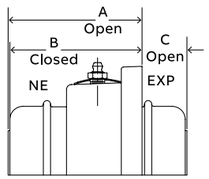
Steel, open/closed



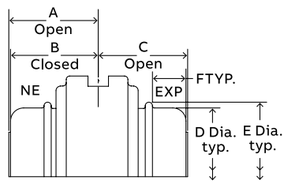
Pillow block



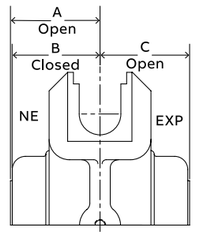
Piloted flange



Flange



WS Take-Up



TP and TPHU Take-Up

	Shaft size	S-2000 pillow block (2-bolt)	S-2000 pillow block (4-bolt)	*E-S-2000 pillow block (2-bolt)	*E-S-2000 pillow block (4-bolt)	S-2000 piloted flange	*E-S-2000 piloted flange	S-2000 round flange	S-2000 square flange	*E-S-2000 square flange	Wide-slot take-up	Top angle take-up	D	E	F
A Open	1-3/8	2.03		2.03		1.67	1.67	3.12	3.45	3.45	2.06				
B Closed	1-7/16	1.97	—	1.97	—	1.61	1.61	3.06	3.39	3.39	2.00	—	2.94	3.19	0.75
C Open	1-1/2	2.11		2.11		2.46	2.46	0.99	0.99	1.20	2.10				
A Open		2.22		2.22		1.83	1.83	3.33	4.07	4.07	2.19				
B Closed	1-11/16	2.16	—	2.16	—	1.77	1.77	3.27	4.01	4.01	2.13	—	3.27	3.39	0.88
C Open		2.25		2.25		2.60	2.60	1.10	1.10	1.20	2.25				
A Open		2.22		2.22		1.83	1.83	3.33	4.07	4.07	2.19				
B Closed	1-3/4	2.16	—	2.16	—	1.77	1.77	3.27	4.01	4.01	2.13	—	3.27	3.39	0.88
C Open		2.25		2.25		2.60	2.60	1.10	1.10	1.20	2.25				
A Open		2.31	2.31	2.31		1.92	1.92	3.47	3.95	3.95	2.25	2.31			
B Closed	1-15/16—2	2.25	2.25	2.25	—	1.86	1.86	3.41	3.89	3.89	2.19	2.25	3.52	3.61	1.02
C Open		2.45	2.45	2.45		2.83	2.83	1.28	1.28	1.38	2.45	2.43			
A Open		2.47	2.47	2.47		2.00	2.00	3.69	4.53	4.53	2.42	2.47			
B Closed	2-3/16	2.41	2.41	2.41	—	1.94	1.94	3.63	4.47	4.47	2.36	2.40	3.77	3.95	1.03
C Open		2.54	2.54	2.54		3.00	3.00	1.32	1.32	1.40	2.54	2.54			
A Open		2.53	2.53	2.53	2.53	2.18	2.18	4.04	4.72	4.72	2.53	2.70			
B Closed	2-7/16	2.44	2.44	2.44	2.44	2.09	2.09	3.95	4.63	4.63	2.44	2.61	4.41	4.64	1.00
C Open		2.77	2.77	2.77	2.77	3.24	3.24	1.37	1.37	2.77	2.77	2.72			
A Open	2-11/16	2.65	2.65	2.65	2.65	2.29	2.29	4.18	5.06	5.06	2.70	2.73			
B Closed	2-15/16	2.56	2.56	2.56	2.56	2.20	2.20	4.09	4.97	4.97	2.61	2.64	4.92	5.06	1.22
C Open	3	3.06	3.06	3.06	3.06	3.54	3.54	1.66	1.66	1.69	3.06	3.06			
A Open		3.07	3.07	3.07	3.07	2.91	2.91		5.78	5.78	3.07	3.07			
B Closed	3-7/16	2.94	2.94	2.94	2.94	2.78	2.78	—	5.65	5.65	2.94	2.94	5.98	6.22	1.13
C Open		3.31	3.31	3.31	3.31	3.59	3.59		1.63	1.66	3.31	3.31			
A Open		3.49	3.49		3.49	3.32	3.32		7.17	7.17	3.52	3.61			
B Closed	3-15/16	3.36	3.36	—	3.36	3.19	3.19	—	7.04	7.04	3.39	3.48	6.67	6.91	1.38
C Open		3.80	3.80		3.80	4.13	4.13		1.94	1.38	3.80	3.83			
A Open			3.96		3.91	4.02	3.85			7.62	3.97	3.96			
B Closed	4-7/16	—	3.83	—	3.78	3.89	3.72	—	—	7.49	3.84	3.83	7.31	7.56	1.67
C Open			4.23		4.23	4.16	4.68			2.06	4.23	4.23			
A Open			4.49		4.46	4.24	4.08				4.49	4.49			
B Closed	5	—	4.36	—	4.33	4.11	3.95	—	—	—	4.36	4.36	8.44	8.69	1.91
C Open			4.69		4.69	4.91	5.37				4.69	4.68			

Notes

Unified SAF (spherical)

B24-1	**Unified SAF (spherical)**
B24-2	**Features and benefits**
B24-6	**Specification**
B24-7	**Nomenclature**
B24-11	**Selection**
B24-34	**Dimensions**
B24-34	Adapter mount
B24-34	USAF 500 series Split-Sphere
B24-38	USAF 500 series
B24-60	USAF 500 series air handling
B24-62	SAF-XT 500 series
B24-66	SAFS 500 series
B24-74	USAF 600 series
B24-82	USDAF large-bore
B24-90	Direct mount
B24-90	USAF 200 series
B24-102	USAF 300 series
B24-116	**Accessories**

Features and benefits

Unified SAF

Overview

Capable of withstanding harsh environments, Unified SAF (USAF) bearings have built-in design advancements to provide maximum strength and durability for long-lasting operation. USAF bearings are available in a large range of shaft sizes and bearing series to fit any application.

Key features

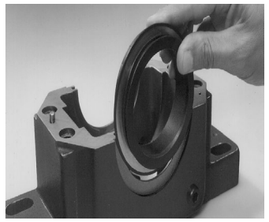
- Multiple seal options available
- Capable of oil lubrication for easier maintenance
- Cast-in dimples locate drill holes for lube fitting, vents, and mounting modifications
- Standard housings have two oversized drains adaptable for circulating oil systems
- Pry slots allow for easy separation of the pillow block
- Sensor-ready for condition monitoring
- OPTIFY Intelli-Lube compatible to effortlessly extend the life of your bearings

Unified SAF

Product options

Cast-iron, closed-end housings provide maximum protection in high-pressure washdown environments.

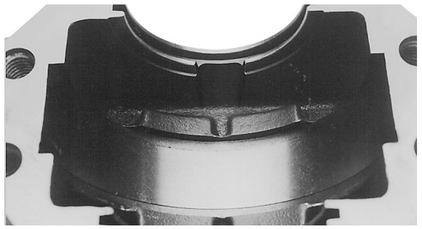
Housings are available with stainless-steel hardware and a nylon coating modification for performance in extremely wet and dirty environments.



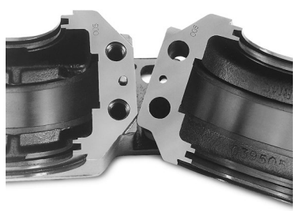
Drop-in Triple-Tect seal can be easily installed on-site and provides an additional layer of protection against contamination.

Undercut bearing seat allows full lateral travel of expansion bearing, preventing stabilization ring from binding and streamlining installation.

Large-capacity oil sump lowers operating temperatures, while exclusive oil-equalization passage simplifies maintenance and allows oil to be drained completely from either side.



Oil-return slots are cast into the interior seal grooves, retaining lubrication and allowing oil in the seal grooves to return to the oil sump rather than leaking.



Offset dowels with matched numbers on the cap and base joint simplify assembly for easier installation.

Unified SAF

Split-Sphere insert

Dodge offers a split-race spherical bearing that fits SAF housings and replaces bearing and adapter assemblies. In instances where the shaft must be stripped of components to permit sliding the new bearing to its proper shaft location, split-race spherical bearings provide valuable savings in labor and time.

Standard dimensions

Our Split-Sphere bearing has the same OD dimensions as a standard spherical bearing. This allows use of a Split-Sphere pillow block on the inaccessible end of a shaft and a standard pillow block on the accessible end. Dodge offers the only split-race bearings made to standard SAF pillow block dimensions.

If required, the backing dimension of the Split-Sphere block can be increased by shimming to meet the requirements of any roller bearing it replaces.

Simplified replacements

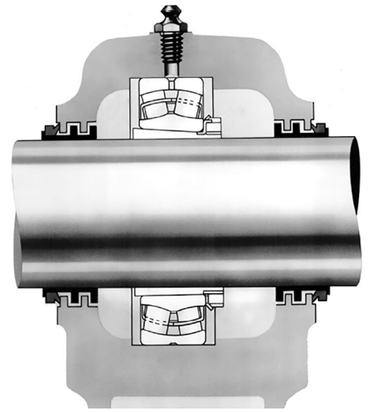
To replace a standard spherical roller bearing with a Split-Sphere insert, remove the cap, elevate the shaft enough to support the load, and burn off the failed bearing and adapter with a torch.

The Split-Sphere lower halves and split seals can then be slipped under the shaft. Bolt the upper halves in place, lower the shaft, and replace the cap. Shaft-mounted components, motors, and other machinery can remain in place.

Unified SAF

SAF-XT

The SAF-XT pillow block housing provides SAF dimensional interchangeability in a more compact design, requiring less shaft to fit in tighter spaces. The offset of the bearing seat in the housing allows the bearing position to be optimized closer to the load. With four bolt caps, cap removal pry slots, elongated bolt holes, and dimpled feet for doweling, SAF-XT offers easier installation in challenging environments. Its enhanced sealing system allows for effective purging for optimized lubrication and effective protection from contamination.



In contrast to costly, competitive auxiliary seals featuring up to three grease fittings, SAF-XT pillow blocks feature one grease fitting—reducing opportunity for voids while minimizing relubrication time. Grease relief channels result in self-centering positive contact sealing. The thinner housing design minimizes sump cavity for maximum efficiency during relubrication and purging—contributing to streamlined maintenance and enhanced life.

SAFS

SAFS pillow block utilizes a steel housing, mounting 22200K series spherical roller bearings on 2-7/16- to 8-inches shafts.

Steel-housed pillow blocks are well-suited for applications requiring either grease or oil lubrication where adapter mounting is preferred and thrust loads are limited. Cast steel housings provide greater resistance to impact and shock loading than cast iron pillow blocks.

Our SAFS pillow block feature the Triple-Tect sealing system—a combination labyrinth and face-rubbing contact seal. LER triple-ring seals, purgeable auxiliary seals, end covers, and Split-Sphere bearings and seals are available with the SAF pillow block where required.

Reference Guide
Type E Family (Tapered)
Specialty Tapered
Safety Mount Family (Spherical)
S-2000 (Spherical)
Unified SAF (Spherical)
Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

Specification

Unified SAF

Housing

Standard housing material is a high-performance cast-iron. SAFS pillow block housings utilize a cast steel.

Special drilling

The standard offering includes a W33 lube hole and fitting, along with a cap vent hole. Unified bearings also come standard with dual oversized drain holes in the base. Additional holes may be drilled to meet customer specifications for lube, vent and sensor locations. To order, specify holes required from Table 5 and add to the end of the description. Order by description instead of part number. Minimum order quantities will be required for this special drilling.

Special finishes

A variety of finishes are available for extra corrosion resistance. The standard finish is USDA-approved, water-based paint. When special finishes are specified, Dodge recommends the use of stainless-steel cap bolts and grease fittings. To order, specify the "type of finish" required and "stainless bolts and fittings" at the end of the description. Order by description for special finishes.

Bearings

Standard bearings offered are 22200 and 22300 series metal-caged, double-row spherical roller bearings with C3 fits in both direct and adapter mounts (shaft sizes larger than 8 inches are standard with C0 fit). Other double-row spherical bearing series are available on request including 23000 and 23200 in both direct and adapter mount. Self-aligning ball bearing series 1200, 1300 and 2200 in both adapter and direct mount are available on request. To order, specify bearing "series" or "fit" at the end of the description.

For applications requiring modifications not listed, contact Application Engineering at +1 864 284 5700.

Nomenclature

Unified SAF

Complete pillow block

P2B - 515 - USAF - 207 - TT

Housing style

P2B = 2-Bolt pillow block, cast iron, both ends open

P4B = 4-Bolt pillow block, cast iron, both ends open

CP2B = 2-Bolt pillow block, cast iron, one end closed

CP4B = 4-Bolt pillow block, cast iron, one end closed

Bearing series and housing size

2XX = For direct mount 22200 series bearing

3XX = For direct mount 22300 series bearing

5XX = For adapter mounted 22200K series bearing

6XX = For adapter mounted 22300K series bearing

0XX = For adapter mounted 23000K series bearing

Type of mounted bearing

USAF = Unified SAF pillow block (inch dimensions)

USDAF = Unified SDAF pillow block

SS = Split-Sphere pillow block

SAF-XT = Unified SAF-XT pillow block (inch dimensions)

SAFS = Unified SAFS pillow block (steel)

Size inches

First digit = Number of inches
2nd and 3rd digit = Number of sixteenths of an inch

2 = 2 inches
07 = 7/16 inches
or
207 = 2-7/16 inches

Seal type

TT = Triple-Tect
LER = Metal labyrinth
SS = Split non-metallic labyrinth
TTDN = Drop-in Triple-Tect
AUX = Auxiliary (Taconite)
EC = End cover

Bearing

BRG - 22215K - C3AH

Bearing

BRG = Roller bearing

Bearing series

Spherical
Solid ring type
222 = 22200 Series
223 = 22300 Series
230 = 23000 Series
231 = 23100 Series
232 = 23200 Series

SS = Spherical
Split Ring type

K = Tapered adapter sleeve mounting
Otherwise bearing has cylindrical bore for direct mounting

Other data

C3 = Bearing clearance
AH = Air Handling reference

Unified SAF

Housing only (housing and stab ring)

H4S - 515 - USAF

Housing style

H2S = 2-bolt pillow block, cast iron, both ends open

H4S = 4-bolt pillow block, cast iron, both ends open

CH2S = 2-bolt pillow block, cast iron, one end closed

Housing type and size

2XX = For direct mount 22200 series bearing

3XX = For direct mount 22300 series bearing

5XX = For adapter mounted 22200K series bearing

6XX = For adapter mounted 22300K series bearing

0XX = For adapter mounted 23000K series bearing

31XX = For adapter mounted 23100K series bearing

32XX = For adapter mounted 23200K series bearing

Type of mounted bearing housing

USAF = Unified SAF cast iron pillow block housing (inch dimensions)

USDAF = Unified SDAF cast iron pillow block housing (inch dimensions)

Unified SAF

Seals

28 - TT - 207

Seal group number

Seals of the same group number all fit the same housings

Type of seal

TT = Triple-Tect

TTDN = Triple-Tect with drop-in feature

LER = Metallic labyrinth seal

AUX = Auxiliary (taconite) seal

SS = Split seal (non-metallic LER)

Seal bore size

Inches and 16ths
2 = 2 inches and
07 =7/16 inches or
207 = 2-7/16 inches

Seal group number and shaft size	Fits housing sizes	Seal group number and shaft size	Fits housing sizes	Seal group number and shaft size	Fits housing sizes
08-107	308, 509, 609	50-315	522, 622	78-715	544
10-111	309, 510, 610	50-400	522, 622	78-800	544
12-114	310	52-403	222, 322, 524, 624	80-805	244
12-115	308, 511, 611	54-407	526, 626	80-806	238, 338
14-201	311	54-408	220, 320, 526, 626	82-812	240
14-202	309	54-409	224, 324	84-907	052
14-203	513, 613	56-414	222, 322	84-908	052
14-204	312	56-415	226, 326, 528, 628	84-909	244
18-206	310	56-500	528, 628	90-807	048
20-207	515, 615	58-503	530, 630	90-808	048
20-208	515, 615	58-505	224, 324, 228, 328	90-815	048
22-207	313	60-507	532, 632	90-900	048
22-209	311	60-508	532, 632	92-915	056
22-210	314	62-512	230, 330	92-1000	056
24-211	516, 616	62-514	226, 236	94-1007	056L
24-212	516, 616	64-515	534, 634	94-1008	056L
24-213	215, 315	64-600	534, 634	96-1015	060, 3160, 3260
26-214	312	64-601	232, 332	96-1100	060, 3160, 3260
28-215	517, 617	66-604	228, 328	98-1107	064
28-300	216, 316, 517, 617	68-607	234, 334, 536	98-1108	064
28-301	313	68-608	536	100-1115	064L, 3164, 3264
32-303	217, 317	70-610	230, 330	100-1200	064L, 3164, 3264
32-304	314	72-614	236	102-1207	068, 168, 268
34-303	518	72-615	538, 638	104-1215	072
36-306	218	72-700	232, 332, 538, 638	104-1300	072
38-307	215, 315	74-703	540	106-1307	072L, 3172
38-310	216, 316	74-704	238, 338	106-1308	072L, 3172
42-315	217, 317	76-707	234, 334	108-1315	076, 3176
44-402	218	76-708	544S	108-1400	076, 3176
46-307	520, 620	76-710	240	110-1500	80
46-308	520, 620	78-713	236	112-1512	84
50-313	220, 320				

Unified SAF

Adapter assemblies

SNW - 15 - 207

Adapter assembly type

SNW = Sleeve, nut and washer assembly through 44 (8-inch) size

SNP = Sleeve, nut and lock plate assembly 048 (8-7/16-inch) and larger sizes

Bearing size

Up to 8-inch shaft size last two digits of bearing numerical description. For larger sizes last four digits.

Adapter bore size

Inches and 16ths

2 = 2 inches and
07 =7/16 inches
or
207 = 2-7/16 inches

H3 - 15 - SNW - 207

Adapter assembly type

H3 = Adapter series for 22200K series bearings through 4-inch bore size

H31 = Adapter series for 22200K and 23100K series bearings greater than 4 inches

H23 = Adapter series for 22300K series bearings

H32 = Adapter series for 23200K series bearings

Bearing size

Last two digits of bearing numerical description.

SNW

SNW = Sleeve, nut and washer assembly through 544 (8-inch) size

SNP = Sleeve, nut and plate assembly from 048 through 084, 3156 through 3176, and 3252 through 3268

Adapter bore size

Inches and 16ths
2 = 2 inches and
07 =7/16 inches
or
207 = 2-7/16 inches

Selection

Unified SAF

USAF, SAF-XT, SAFS, USDAF

USAF 500, 600, 200, 300 Series and USDAF 23000, 23100, 23200

Unified SAF spherical roller bearings have the capacity to carry heavy radial loads and combined radial and thrust loads. The maximum recommended load which can be applied is limited by various components in the system such as bearing, housing, shaft, shaft attachment, speed and life requirements as listed in this catalog. USAF spherical roller bearings have been applied successfully even when these limits have been exceeded under controlled operating conditions. Contact Application Engineering at +1 864 284 5700 for applications which exceed the recommendations of this catalog.

L_{10} life – The fatigue life which may be expected from at least 90 percent of a given group of bearings operating under identical conditions.

$$L_{10}\text{ life, hours} = \left(\frac{C}{P}\right)^{10/3} \times \left(\frac{16{,}667}{\text{rpm}}\right)$$

Where:

C = Dynamic capacity (Table 1)

P = Equivalent radial load

General

Heavy service - For heavy shock loads, frequent shock loads, or severe vibrations, add up to 50 percent (according to severity of conditions) to the equivalent radial load to obtain a modified equivalent radial load. Consult Application Engineering for additional selection assistance.

Thrust load values shown in the table below are recommended as a guide for general applications that will give adequate L_{10} life. Where substantial radial loads are also present, it is advisable to calculate actual L_{10} life to assure that it meets the requirements.

The shaft tolerances recommended below are adequate for adapter-mounted bearings. Since the allowable load, especially at a low speed, is very large, the shaft should be checked to assure adequate shaft strength.

Speed range (rpm)	20—200	201—2,000	Over 2,000
Recommended thrust load	C/20*	C/40*	C/60*

* Use the smaller of this value or the adapter maximum allowable thrust load list in Table 1.

The magnitude and direction of both the thrust and radial load must be taken into account when selecting a housing. When pillow blocks are utilized, heavy loads should be directed through the base. Where uplift loads are involved, see Table 6 for maximum values. Where a load pulls the housing away from the mounting base, both the hold-down bolts and housing must be of adequate strength. Auxiliary load carrying devices such as shear bars are advisable for side or end loading of pillow blocks.

Note: Spherical bearings require a radial load at least equal to the thrust load for proper operation ($F_A/F_R = 1$). If the thrust load exceeds this limit, consult Application Engineering.

Shaft tolerances

Shaft size (in)	Tolerance (in)
Up to 1-1/2	+0.000 to -0.002
1-9/16—2-1/2	+0.000 to -0.003
2-5/8—4	+0.000 to -0.004
4-3/16—6	+0.000 to -0.005
6-7/16 and above	+0.000 to -0.006

Selecting bearing supporting radial loads only

1. Define L_{10} life (h) desired
2. Establish bearing radial load, F_R

   F_R = P for Pure Radial Load Conditions

   P = Equivalent radial Load Conditions
3. Establish speed (rpm)

Using the easy selection Table 2, under the rpm column, find the equivalent radial load that equals or is higher than the application radial load for the desired life. The shaft size on the far left will be the minimum shaft size that you can use for your application. If the desired life is different than the values shown on the chart, use alternate method A shown below.

If the desired life is different than the values shown on the chart, use alternate method A shown below.

Example:

L_{10} life = 30,000 h

Radial load = 4,000 lb

Speed = 1,000 rpm

At the intersection of the 950 rpm column and the 30,000 hours L_{10} life row, the equivalent radial load of 4,555 pounds exceeds the 4,000 pounds application radial load for shaft size 1-7/16 adapter mount (22309K series bearing) and for shaft size 45 mm direct mount (22309 series bearing). Also, the equivalent radial load of 4,555 pounds exceeds the 4,000 pounds.

Application radial load for shaft size 2-3/16 inch adapter mount (22213K series bearing) and for shaft size 65 mm direct mount (22213 series bearing). Therefore, the follow bearings can be used to meet the application conditions of the above example:

1. 1-7/16 in adapter mount		22309K bearing
2. 45 mm direct mount		22309 bearing
	or	
3. 2-3/16 in adapter mount		22213K bearing
4. 65 mm direct mount		22213 bearing

Alternate method A – Selecting a bearing for an L_{10} life value not shown in the Easy Selection chart.

The L_{10} life equation can be rearranged so that the bearing dynamic capacity C is identified in terms of L_{10}, speed and P.

$$C = \left(\frac{L_{10} \times rpm}{16{,}667} \right)^{0.3} X \; P$$

($P = F_R$ for pure radial load conditions)

Since the L_{10}, speed and P are known, solve for C. Select from the dynamic capacity column on Table 1, the C value equal to or greater than the C value just calculated. The bore size on the far left represents the proper bore size selection. Check that the application speed does not exceed the maximum speed from Table 1. When selecting an L_{10} life of less than 30,000 hours, particular attention must be paid to shaft deflection and proper lubricant selection.

Selecting bearings supporting combination radial and thrust loads

When a bearing supports both a radial load and a thrust load, the loading on the two rows is shared unequally depending on the ratio of thrust to radial load. The use of the X (radial factor) and Y (thrust factor) from Table 1, converts the applied thrust load and radial loads to an equivalent radial load having the same effect on the life of the bearing as a radial load of this magnitude.

Equation 1

The equivalent radial load:

$$P = XF_R + YF_A$$

Where:

P = Equivalent radial load

F_R = Radial load

F_A = Thrust (axial) load

e = Thrust load to radial load factor (Table 1)

X = Radial load factor (Table 1)

Y = Thrust load factor (Table 1)

Calculate F_A/F_R and compare to e for the selected bore size. Determine X and Y from Table 1, depending on whether F_A/F_R is equal to or less than e, or F_A/F_R is greater than e. Substitute all known values into the equivalent radial load equation. P (equivalent radial load) can be used in the life formula to determine L_{10}, or it can be compared to the equivalent radial load ratings for the speed and hours life desired in the easy selection.

Selecting bearings supporting only thrust loads

Spherical roller bearings generally are not recommended for pure thrust load applications. They will perform satisfactorily under very light pure thrust loads. Consult Application Engineering at +1 864 284 5700.

Axial expansion capability

Axial expansion capability for Unified SAF 500, 600, 200 and 300 pillow blocks is shown on Table 7. Dodge supplies all SAF pillow block housings with the appropriate stabilizing ring. When the stabilizing ring is used, the pillow block becomes a non-expansion pillow block. Not using the stabilizing ring allows shaft and bearing axial expansion. Proper mounting of the stabilizing ring is shown on housing dimension pages.

Unified SAF
USAF, SAF-XT, SAFS, USDAF

Table 1: Radial and thrust factors for USAF spherical bearing

Shaft size				$F_A/F_R \le e$		$F_A/F_R > e$					Maximum speed (rpm)	
Adapter mount (in)	Direct mount (mm)	Bearing series	e	X	Y	X	Y	Adapter maximum allowable thrust load (lb) †	Dynamic capacity (C) (lb)	Static capacity (C_0) (lb)	Grease	Oil
—	40	22308	0.36	1	1.9	0.67	2.8	—	35,500	33,500	4,300	5,300
1-7/16	—	22209	0.26	1	2.6	0.67	3.9	698	24,500	23,600	5,600	7,000
	45	22309	0.36	1	1.9	0.67	2.8	1,092	42,500	41,500	3,800	4,800
1-11/16	—	22210	0.24	1	2.8	0.67	4.2	775	26,000	26,500	5,300	6,700
	50	22310	0.36	1	1.9	0.67	2.8	1,348	51,000	50,000	3,400	4,300
1-15/16	—	22211	0.23	1	2.9	0.67	4.4	927	31,500	32,500	4,500	5,600
	55	22311	0.36	1	1.9	0.67	2.8	1,672	60,000	58,500	3,200	4,000
—	60	22312	0.35	1	1.9	0.67	3	—	69,500	69,500	2,800	3,600
2-3/16	—	22213	0.24	1	2.8	0.67	4.2	1,359	45,500	47,500	3,800	4,500
	65	22313	0.34	1	2	0.67	3	2,104	78,000	81,500	2,600	3,400
—	70	22314	0.34	1	2	0.67	3	—	86,500	86,500	2,400	3,200
2-7/16	75	22215	0.22	1	3.1	0.67	4.6	1,568	48,000	53,000	3,400	4,300
2-1/2		22315	0.34	1	2	0.67	3	2,782	100,000	102,000	2,200	3,000
2-11/16	80	22216	0.22	1	3.1	0.67	4.7	1,780	56,000	60,000	3,200	4,000
2-3/4		22316	0.34	1	2	0.67	3	3,128	112,000	114,000	2,200	3,000
2-15/16	85	22217	0.22	1	3.1	0.67	4.5	2,063	68,000	73,500	3,000	3,800
3		22317	0.33	1	2	0.67	3	3,438	122,000	125,000	2,000	2,800
3-3/16	90	22218	0.23	1	2.9	0.67	4.3	2,429	78,000	85,000	2,600	3,400
3-7/16	100	22220	0.24	1	2.8	0.67	4.2	3,102	96,500	106,000	2,200	3,000
3-1/2		22320	0.34	1	2	0.67	3	4,920	183,000	208,000	1,700	2,200
3-15/16	110	22222	0.25	1	2.7	0.67	4	3,931	122,000	134,000	2,000	2,800
4		22322	0.33	1	2.1	0.67	3.1	5,934	212,000	240,000	1,500	1,900
4-3/16	120	22224	0.25	1	2.7	0.67	4	4,693	143,000	166,000	1,900	2,400
		22324	0.33	1	2.1	0.67	3.1	6,959	240,000	265,000	1,400	1,800
4-7/16	130	22226	0.26	1	2.6	0.67	3.9	5,610	170,000	200,000	1,800	2,200
4-1/2		22326	0.33	1	2.1	0.67	3.1	8,152	280,000	310,000	1,300	1,700
4-15/16	140	22228	0.25	1	2.7	0.67	4	6,419	196,000	236,000	1,700	2,200
5		22328	0.34	1	2	0.67	3	9,628	325,000	365,000	1,200	1,600
5-3/16	150	22230	0.25	1	2.7	0.67	4	7,383	228,000	275,000	1,600	2,000
		22330	0.33	1	2	0.67	3	10,923	365,000	415,000	1,100	1,500
5-7/16	160	22232	0.26	1	2.6	0.67	3.9	8,630	260,000	315,000	1,500	1,800
5-1/2		22332	0.37	1	1.8	0.67	2.7	12,298	325,000	365,000	1,000	1,400
5-15/16	170	22234	0.26	1	2.6	0.67	3.9	9,858	300,000	355,000	1,300	1,700
6		22334	0.37	1	1.8	0.67	2.7	13,755	360,000	475,000	950	1,300
6-7/16	180	22236	0.25	1	2.7	0.67	4	10,437	305,000	375,000	1,300	1,600
6-1/2		22336	0.37	1	1.8	0.67	2.7	15,291	405,000		900	1,100
6-15/16	190	22238	0.28	1	2.4	0.67	3.6	11,786	270,000	415,000	1,200	1,300
7		22338	0.37	1	1.8	0.67	2.7	16,910	415,000	570,000	850	1,100
7-3/16	200	22240	0.29	1	2.3	0.67	3.5	13,215	300,000	450,000	1,100	1,200
7-1/2				1								
7-15/16	220	22244	0.29	1	2.3	0.67	3.5	16,020	365,000	550,000	950	1,000
8				1								
8-7/16				1								
8-1/2	—	23048	0.25	1	2.7	0.67	4.1	14,887	260,000	490,000	950	1,000
8-15/16, 9				1								
9-7/16	—	23052	0.26	1	2.6	0.67	3.9	18,232	340,000	630,000	900	950
9-1/2				1								
9-15/16, 10				1								
10-7/16	—	23056	0.25	1	2.7	0.67	4.1	20,000	345,000	670,000	850	900
10-1/2				1								

† If the thrust load exceeds adapter maximum allowable thrust load, auxiliary methods of carrying thrust are required.

Unified SAF

Vibration frequencies
Anti-friction mounted bearings

More and more manufacturing facilities are getting involved with plant-wide preventive maintenance programs. By monitoring vibration levels of motors, pumps, fans and compressors, maintenance supervisors can predict imminent failures.

Knowing that a piece of equipment is showing signs of potential failure permits scheduling of maintenance at an appropriate time and avoids the consequences of catastrophic failures. Shown in tables are vibration frequencies generated by bearing components defects. All frequencies are based on unity inner ring or cone rotation.

How to use the tables

If a 2-7/16-inch pillow block bearing is rotating at a speed of 1,000 rpm, the vibration due to a failed component will show up at the frequencies listed in the corresponding size line in the table.

Frequency

Cup nick or spall = 1,000 x 9.251 = 9,251 rpm
Cone nick or spall = 1,000 x 11.749 = 11,749 rpm
*Roller nick or spall = 1,000 x 4.011 x 2 = 8,022 rpm
Cage (train) frequency (inner ring rotation) = 1,000 x 0.441 = 441 rpm

Since all the values in the tables are based on unity inner ring or cone rotation, the vibration due to flaws will show up at the frequencies obtained by multiplying the speed (rpm) times the factors found on the appropriate table. The resulting product will have units of rpm.

USAF and SAF-XT spherical roller bearing parameters for vibration analysis (1-RPS)

Basic bearing series	Bore size (in)	Number of rollers	Mean diameter of rollers (in)	Pitch diameter (in)	Contact angle (°)	Outer ring frequency (Hz)	Inner ring frequency (Hz)	Roller spin frequency * (Hz)	Cage frequency (Hz)
22209	1-7/16	18	0.408	2.626	9.633	7.623	10.377	3.147	0.424
22210	1-11/16	19	0.415	2.819	8.917	8.120	10.880	3.328	0.427
22211	1-15/16	19	0.465	3.097	8.833	8.092	10.908	3.260	0.426
22213	2-3/16	20	0.534	3.761	9.117	8.599	11.401	3.456	0.430
22215	2-7/16—2-1/2	20	0.587	4.093	8.433	8.582	11.418	3.419	0.429
22216	2-11/16—2-3/4	20	0.622	4.410	8.333	8.604	11.396	3.475	0.430
22217	2-15/16—3	20	0.679	4.723	8.367	8.578	11.422	3.409	0.429
22218	3-3/16	20	0.702	5.024	8.917	8.620	11.380	3.510	0.431
22220	3-7/16—3-1/2	19	0.823	5.609	8.917	8.123	10.877	3.336	0.428
22222	3-15/16—4	18	0.979	6.185	9.583	7.595	10.405	3.082	0.422
22224	4-3/16	19	0.999	6.700	9.633	8.103	10.897	3.280	0.426
22226	4-7/16—4-1/2	19	1.071	7.205	9.950	8.109	10.891	3.292	0.427
22228	4-15/16—5	18	1.217	7.933	9.583	7.639	10.361	3.186	0.424
22230	5-3/16	18	1.315	8.559	9.500	7.636	10.364	3.180	0.424
22232	5-7/16—5-1/2	18	1.409	9.189	9.667	7.639	10.361	3.185	0.424
22234	5-15/16—6	17	1.583	9.740	9.833	7.139	9.861	2.998	0.420
22236	6-7/16—6-1/2	18	1.559	10.157	9.417	7.637	10.363	3.183	0.424
22238	6-15/16—7	20	1.496	10.669	10.667	8.622	11.378	3.498	0.431
22240	7-3/16	19	1.614	11.021	10.833	8.133	10.867	3.343	0.428
22244	7-1/2—8	19	1.850	12.480	10.833	8.117	10.883	3.301	0.427
23048	8-7/16—9	29	1.142	12.008	9.333	13.140	15.860	5.213	0.453
23052	9-7/16—9-1/2	27	1.378	13.228	9.667	12.114	14.886	4.749	0.449
23056	9-15/16—10-1/2	28	1.378	13.976	9.333	12.638	15.362	5.023	0.451

Outer ring frequency = N x rpm x (1 - (Bd x cos a / Pd)) / 120
Inner ring frequency = N x rpm x (1 + (Bd x cos a / Pd)) / 120
Roller spin frequency = Pd x rpm x (1 - (Bd x cos a / Pd)^2) / (120 x Bd)
Cage frequency = rpm x (1 - (Bd x cos a / Pd)) / 120

Pd = Pitch diameter
N = Number of rollers
Bd = Roller diameter
a = Contact angle

* Roller spin frequencies are listed at one times roller spin frequency. For a thorough analysis, it is important to check frequency level at two times rotational speed of rollers, as this is the frequency that a single roller defect will contact the raceways of the bearing. In other words, a roller defect will strike both inner and outer ring in one revolution of the roller.

Reference Guide
Type E Family (Tapered)
Specialty Tapered
Safety Mount Family (Spherical)
S-2000 (Spherical)
Unified SAF (Spherical)
Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

Unified SAF

Vibration frequencies
Anti-friction mounted bearings

USAF air-handling spherical roller bearing parameters for vibration analysis (1-RPS)

Bore size (in)	Basic bearing series	Number of rollers per row	Diameter of rollers (in)	Pitch diameter (in)	Contact angle (°)	Outer ring frequency (Hz)	Inner ring frequency (Hz)	Roller spin frequency* (Hz)	Cage frequency (Hz)
1-7/16	22209E1K	17	0.3937	2.5976	10.0000	7.231	9.769	3.226	0.425
1-11/16	22210E1K	19	0.3937	2.7976	9.2500	8.180	10.820	3.484	0.431
1-15/16	22211E1K	18	0.4528	3.0921	8.9200	7.698	10.302	3.343	0.428
2-3/16	22213E1K	19	0.5315	3.7110	9.2500	8.157	10.843	3.421	0.429
2-7/16—2-1/2	22215E1K	21	0.5315	4.1098	8.3300	9.156	11.846	3.803	0.436
2-11/16—2-3/4	22216E1K	20	0.5709	4.3638	8.2500	8.705	11.295	3.758	0.435
2-15/16—3	22217E1K	20	0.6299	4.6811	8.5000	8.669	11.331	3.650	0.434
3-3/16	22218E1K	20	0.6693	4.9602	8.8300	8.667	11.333	3.640	0.433
3-7/16—3-1/2	22220E1K	19	0.7677	5.5606	9.0000	8.205	10.795	3.554	0.432
3-15/16—4	22222E1K	19	0.8661	6.1559	9.4200	8.181	10.819	3.485	0.431
4-3/16	22224E1K	19	0.9252	6.6382	9.5800	8.194	10.806	3.520	0.431
4-7/16 —4-1/2	22226E1K	19	0.9843	7.1358	9.9200	8.209	10.791	3.558	0.432
4-15/16—5	22228E1K	19	1.0630	7.7232	9.6700	8.211	10.789	3.566	0.432

Outer ring frequency = N x rpm x (1 - (Bd x cos a / Pd)) / 120
Inner ring frequency = N x rpm x (1 + (Bd x cos a / Pd)) / 120
Roller spin frequency = Pd x rpm x (1 - (Bd x cos a / Pd)^2) / (120 x Bd)
Cage frequency = rpm x (1 - (Bd x cos a / Pd)) / 120

Pd = Pitch diameter
N = Number of rollers
Bd = Roller diameter
a = Contact angle

* Roller spin frequencies are listed at one times roller spin frequency. For a thorough analysis, it is important to check frequency level at two times rotational speed of rollers, as this is the frequency that a single roller defect will contact the raceways of the bearing. In other words, a roller defect will strike both inner and outer ring in one revolution of the roller.

Split-spherical roller bearing parameters for vibration analysis

Bore size (in)	Basic bearing series	Number of rollers per row	Diameter of rollers (in)	Pitch diameter (in)	Contact angle (°)	Outer ring frequency (Hz)	Inner ring frequency (Hz)	Roller spin frequency * (Hz)	Cage frequency (Hz)
2-3/16	22213SS	17	0.559	3.414	9.000	7.125	9.875	2.973	0.419
2-7/16	22215SS	18	0.551	3.748	9.083	7.693	10.307	3.328	0.427
2-11/16	22216SS	19	0.579	3.950	8.667	8.124	10.876	3.341	0.428
2-15/16	22217SS	20	0.575	4.153	8.250	8.630	11.370	3.545	0.431
3-3/16	22218SS	19	0.654	4.435	8.167	8.114	10.886	3.321	0.427
3-7/16	22220SS	18	0.780	5.079	8.833	7.635	10.365	3.183	0.424
3-15/16—4	22222SS	18	0.878	5.634	9.000	7.615	10.385	3.132	0.423
4-3/16	22224SS	17	1.110	6.203	9.417	7.000	10.000	2.708	0.412
4-7/16—4-1/2	22226SS	18	1.047	6.727	9.417	7.618	10.382	3.136	0.423
4-15/16	22228SS	18	1.118	7.202	9.750	7.623	10.377	3.145	0.424
5-3/16	22230SS	18	1.217	7.822	9.583	7.620	10.380	3.139	0.423
5-7/16	22232SS	18	1.315	8.442	9.500	7.617	10.383	3.134	0.423
5-15/16—6	22234SS	18	1.409	9.059	9.667	7.620	10.380	3.138	0.423
6-7/16—6-1/2	22236SS	18	1.409	9.059	9.667	7.620	10.380	3.138	0.423
6-15/16—7	22238SS	18	1.559	10.021	9.417	7.619	10.381	3.138	0.423
7-3/16	22240SS	16	1.579	10.716	9.417	6.837	9.163	3.322	0.427
7-1/2 - 8	22244SS	16	1.752	11.257	9.500	6.772	9.228	3.137	0.423
8-1/2 - 9	23048SS	20	1.307	11.189	8.083	8.843	11.157	4.223	0.442
9-1/2	23052SS	22	1.339	11.949	8.417	9.781	12.219	4.408	0.445
10	23056SS	20	1.539	13.175	8.667	8.845	11.155	4.222	0.442

Outer ring frequency = N x rpm x (1 - (Bd x cos a / Pd)) / 120
Inner ring frequency = N x rpm x (1 + (Bd x cos a / Pd)) / 120
Roller spin frequency = Pd x rpm x (1 - (Bd x cos a / Pd)^2) / (120 x Bd)
Cage frequency = rpm x (1 - (Bd x cos a / Pd)) / 120

Pd = Pitch diameter
N = Number of rollers
Bd = Roller diameter
a = Contact angle

* Roller spin frequencies are listed at one times roller spin frequency. For a thorough analysis, it is important to check frequency level at two times rotational speed of rollers, as this is the frequency that a single roller defect will contact the raceways of the bearing. In other words, a roller defect will strike both inner and outer ring in one revolution of the roller.

Unified SAF

Vibration frequencies

Anti-friction mounted bearings

USDAF spherical roller bearing parameters for vibration analysis (1-RPS)

Bore size (in)	Basic bearing series	Number of rollers per row	Diameter of rollers (in)	Pitch diameter (in)	Contact angle (°)	Outer ring frequency (Hz)	Inner ring frequency (Hz)	* Roller spin frequency (Hz)	Cage frequency (Hz)
10-15/16—11	23060K	27	1.575	15.066	9.500	12.108	14.892	4.732	0.448
11-7/16—12	23064K	28	1.575	15.850	9.333	12.627	15.373	4.983	0.451
12-7/16—12-1/2	23068K	27	1.732	17.007	9.500	12.144	14.856	4.860	0.450
12-15/16—13-1/2	23072K	28	1.732	17.793	9.333	12.655	15.345	5.089	0.452
13-15/16—14	23076K	30	1.732	18.587	9.000	13.620	16.381	5.320	0.454
15	23080K	29	1.929	19.822	9.167	13.107	15.893	5.091	0.452
15-3/4	23084K	30	1.929	20.609	9.000	13.613	16.387	5.296	0.454
9-7/16—9-1/2	23152K	23	1.693	13.914	12.500	10.134	12.866	4.051	0.441
10-7/16—10-1/2	23156K	24	1.732	14.711	12.000	10.618	13.382	4.191	0.442
10-15/16—11	23160K	23	1.89	15.923	12.333	10.167	12.834	4.156	0.442
11-15/16—12	23164K	23	2.087	17.044	12.833	10.127	12.873	4.025	0.440
12-7/16—12-1/2	23168K	23	2.244	18.272	12.833	10.123	12.877	4.013	0.440
13-7/16—13-1/2	23172K	24	2.244	19.077	12.333	10.621	13.379	4.195	0.443
13-15/16—14	23176K	25	2.323	19.833	12.000	11.068	13.932	4.213	0.443
8-15/16—9	23248K	20	1.929	13.523	14.000	8.616	11.384	3.438	0.431
9-7/16—9-1/2	23252K	19	2.126	14.745	14.000	8.171	10.829	3.400	0.430
10-7/16—10-1/2	23256K	20	2.126	15.537	13.583	8.670	11.330	3.590	0.434
10-15/16—11	23260K	20	2.323	16.706	13.833	8.650	11.350	3.530	0.433
11-15/16—12	23264K	20	2.441	17.878	14.000	8.675	11.325	3.598	0.434
12-7/16—12-1/2	23268K	20	2.638	19.048	14.167	8.657	11.343	3.545	0.433

Outer ring frequency = N x rpm x (1 - (Bd x cos a / Pd)) / 120

Inner ring frequency = N x rpm x (1 + (Bd x cos a / Pd)) / 120

Roller spin frequency = Pd x rpm x (1 - (Bd x cos a / Pd)^2) / (120 x Bd)

Cage frequency = rpm x (1 - (Bd x cos a / Pd)) / 120

* Roller spin frequencies are listed at one times roller spin frequency. For a thorough analysis, it is important to check frequency level at two times rotational speed of rollers, as this is the frequency that a single roller defect will contact the raceways of the bearing. In other words, a roller defect will strike both inner and outer ring in one revolution of the roller.

Unified SAF

USAF, SAF-XT, SAFS, USDAF

Table 2: Selection table for Unified SAF pillow blocks

Shaft size				Equivalent radial load rating (lb) at various speeds (rpm)																
Adapter mount (in)	Direct mount (mm)	Bearing series	L_{10} life (h)	50	100	250	500	750	950	1,300	1,500	1,800	2,000	2,600	3,000	3,200	3,400	4,500	5,600
			10,000	12,797	10,394	7,896	6,413	5,679	5,290	4,815	4,613	4,367	4,231	3,911	3,747	3,675	3,609	3,318	—
—	40	22308	30,000	9,204	7,476	5,679	4,613	4,084	3,805	3,463	3,318	3,141	3,043	2,813	2,695	2,643	2,595	2,386	—
			60,000	7,476	6,072	4,613	3,747	3,318	3,090	2,813	2,695	2,551	2,472	2,285	2,189	2,147	2,108	1,938	—
			10,000	8,831	7,173	5,449	4,426	3,919	3,651	3,323	3,183	3,014	2,920	2,699	2,586	2,536	2,490	2,290	2,144
	—	22209	30,000	6,352	5,159	3,919	3,183	2,819	2,626	2,390	2,290	2,168	2,100	1,941	1,860	1,824	1,791	1,647	1,542
			60,000	5,159	4,191	3,183	2,586	2,290	2,133	1,941	1,860	1,761	1,706	1,577	1,511	1,82	1,455	1,338	1,253
1-7/16			10,000	15,320	12,444	9,453	7,678	6,799	6,333	5,765	5,522	5,228	5,066	4,682	4,485	4,399	4,320	3,972	—
	45	22309	30,000	11,018	8,950	6,799	5,522	4,890	4,555	4,146	3,972	3,760	3,643	3,368	3,226	3,164	3,107	2,857	—
			60,000	8,950	7,269	5,522	4,485	3,972	3,700	3,368	3,226	3,054	2,959	2,735	2,620	2,570	2,524	2,320	—
			10,000	9,372	7,613	5,783	4,697	4,159	3,874	3,527	3,378	3,199	3,099	2,864	2,744	2,691	2,643	2,430	2,275
	—	22210	30,000	6,741	5,475	4,159	3,378	2,991	2,787	2,536	2,430	2,300	2,229	2,060	1,974	1,936	1,901	1,748	1,637
			60,000	5,475	4,447	3,378	2,744	2,430	2,263	2,060	1,974	1,869	1,810	1,673	1,603	1,572	1,544	1,419	1,329
1-11/16			10,000	18,384	14,932	11,343	9,214	8,158	7,600	6,917	6,627	6,274	6,079	5,619	5,383	5,279	5,184	—	—
	50	22310	30,000	13,222	10,740	8,158	6,627	5,868	5,466	4,975	4,766	4,512	4,372	4,041	3,871	3,797	3,729	—	—
			60,000	10,740	8,723	6,627	5,383	4,766	4,440	4,041	3,871	3,665	3,551	3,282	3,144	3,084	3,029	—	—
			10,000	11,355	9,223	7,006	5,691	5,039	4,694	4,273	4,093	3,875	3,755	3,470	3,325	3,261	3,202	2,944	2,757
	—	22211	30,000	8,167	6,633	5,039	4,093	3,624	3,376	3,073	2,944	2,787	2,700	2,496	2,391	2,345	2,303	2,117	1,983
			60,000	6,633	5,388	4,093	3,325	2,944	2,742	2,496	2,391	2,264	2,193	2,027	1,942	1,905	1,871	1,720	1,611
1-15/16			10,000	21,628	17,567	13,345	10,840	9,598	8,941	8,138	7,796	7,381	7,152	6,610	6,332	6,211	6,099	—	—
	55	22311	30,000	15,555	12,635	9,598	7,796	6,903	6,431	5,853	5,607	5,309	5,144	4,754	4,554	4,467	4,387	—	—
			60,000	12,635	10,263	7,796	6,332	5,607	5,223	4,754	4,554	4,312	4,178	3,862	3,699	3,628	3,563	—	—
			10,000	25,052	20,349	15,458	12,556	11,118	10,357	9,427	9,031	8,550	8,284	7,657	7,335	7,194	7,065	—	—
—	60	22312	30,000	18,018	14,635	11,118	9,031	7,996	7,449	6,780	6,495	6,149	5,958	5,507	5,276	5,174	5,081	—	—
			60,000	14,635	11,888	9,031	7,335	6,495	6,050	5,507	5,276	4,995	4,839	4,473	4,285	4,203	4,127	—	—
			10,000	16,401	13,322	10,120	8,220	7,279	6,780	6,171	5,912	5,597	5,423	5,013	4,802	4,710	4,625	4,252	—
	—	22213	30,000	11,796	9,581	7,279	5,912	5,235	4,877	4,439	4,252	4,026	3,901	3,605	3,454	3,388	3,327	3,058	—
2-3/16			60,000	9,581	7,783	5,912	4,802	4,252	3,961	3,605	3,454	3,270	3,168	2,928	2,805	2,752	2,702	2,484	—
			10,000	28,116	22,838	17,349	14,092	12,478	11,623	10,580	10,135	9,596	9,297	8,593	8,232	8,074	7,929	—	—
	65	22313	30,000	20,222	16,425	12,478	10,135	8,974	8,360	7,609	7,289	6,901	6,687	6,180	5,921	5,807	5,703	—	—
			60,000	16,425	13,342	10,135	8,232	7,289	6,790	6,180	5,921	5,606	5,431	5,020	4,809	4,717	4,632	—	—
			10,000	31,180	25,326	19,239	15,627	13,837	12,890	11,732	11,239	10,641	10,310	9,530	9,129	8,954	—	—	—
—	70	22314	30,000	22,426	18,215	13,837	11,239	9,952	9,271	8,438	8,084	7,653	7,415	6,854	6,566	6,440	—	—	—
			60,000	18,215	14,795	11,239	9,129	8,084	7,530	6,854	6,566	6,217	6,023	5,567	5,333	5,231	—	—	—
			10,000	17,302	14,054	10,676	8,672	7,679	7,153	6,511	6,237	5,905	5,721	5,288	5,066	4,969	4,879	—	—
	75	22215	30,000	12,444	10,108	7,679	6,237	5,523	5,145	4,683	4,486	4,247	4,115	3,803	3,644	3,574	3,509	—	—
2-7/16			60,000	10,108	8,210	6,237	5,066	4,486	4,179	3,803	3,644	3,450	3,342	3,089	2,959	2,903	2,850	—	—
2-1/2			10,000	36,047	29,279	22,242	18,066	15,997	14,902	13,564	12,994	12,302	11,919	11,017	10,554	—	—	—	—
	75	22315	30,000	25,926	21,058	15,997	12,994	11,505	10,718	9,755	9,345	8,848	8,573	7,924	7,591	—	—	—	—
			60,000	21,058	17,105	12,994	10,554	9,345	8,706	7,924	7,591	7,187	6,963	6,436	6,166	—	—	—	—
			10,000	20,186	16,396	12,456	10,117	8,958	8,345	7,596	7,276	6,889	6,675	6,170	5,910	5,797	5,692	—	—
	80	22216	30,000	14,518	11,793	8,958	7,276	6,443	6,002	5,463	5,233	4,955	4,801	4,437	4,251	4,169	4,094	—	—
2-11/16			60,000	11,793	9,579	7,276	5,910	5,233	4,875	4,437	4,251	4,025	3,899	3,604	3,453	3,387	3,325	—	—
2-3/4			10,000	40,372	32,793	24,911	20,234	17,917	16,690	15,191	14,553	13,778	13,350	12,339	11,821	—	—	—	—
	80	22316	30,000	29,037	23,585	17,917	14,553	12,886	12,004	10,926	10,467	9,910	9,601	8,875	8,502	—	—	—	—
			60,000	23,585	19,157	14,553	11,821	10,467	9,750	8,875	8,502	8,049	7,799	7,208	6,905	—	—	—	—

Note: Dark shaded areas require circulating oil.
Light shaded areas require static oil.

Unified SAF

USAF, SAF-XT, SAFS, USDAF

Table 2: Selection table for Unified SAF pillow blocks

Shaft size				Equivalent radial load rating (lb) at various speeds (rpm)															
Adapter mount (in)	Direct mount (mm)	Bearing series	L_{10} life (h)	50	100	250	500	750	950	1,300	1,500	1,800	2,000	2,600	3,000	3,200	3,400	4,500	5,600
2-15/16 3	85	22217	10,000	24,512	19,910	15,125	12,285	10,878	10,133	9,223	8,836	8,365	8,105	7,492	7,177	7,039	6,912	—	—
			30,000	17,629	14,320	10,878	8,836	7,824	7,288	6,634	6,355	6,017	5,829	5,388	5,162	5,063	4,971	—	—
			60,000	14,320	11,631	8,836	7,177	6,355	5,920	5,388	5,162	4,887	4,735	4,377	4,193	4,112	4,038	—	—
	85	22317	10,000	43,977	35,720	27,135	22,041	19,516	18,180	16,548	15,852	15,008	14,541	13,441	—	—	—	—	—
			30,000	31,629	25,691	19,516	15,852	14,037	13,076	11,901	11,401	10,794	10,459	9,667	—	—	—	—	—
			60,000	25,691	20,868	15,852	12,876	11,401	10,621	9,667	9,261	8,768	8,495	7,852	—	—	—	—	—
3-3/16	90	22218	10,000	28,116	22,838	17,349	14,092	12,478	11,623	10,580	10,135	9,596	9,297	8,593	8,232	8,074	7,929	—	—
			30,000	20,222	16,425	12,478	10,135	8,974	8,360	7,609	7,289	6,901	6,687	6,180	5,921	5,807	5,703	—	—
			60,000	16,425	13,342	10,135	8,232	7,289	6,790	6,180	5,921	5,606	5,431	5,020	4,809	4,717	4,632	—	—
3-7/16 3-1/2	100	22220	10,000	34,785	28,254	21,464	17,434	15,437	14,380	13,089	12,539	11,871	11,502	10,631	10,185	—	—	—	—
			30,000	25,018	20,321	15,437	12,539	11,103	10,343	9,414	9,018	8,538	8,273	7,646	7,325	—	—	—	—
			60,000	20,321	16,506	12,539	10,185	9,018	8,401	7,646	7,325	6,935	6,719	6,211	5,950	—	—	—	—
	100	22320	10,000	65,966	53,581	40,703	33,061	29,275	27,270	24,821	23,778	22,513	21,812	—	—	—	—	—	—
			30,000	47,444	38,536	29,275	23,778	21,055	19,613	17,852	17,102	16,192	15,688	—	—	—	—	—	—
			60,000	38,536	31,301	23,778	19,314	17,102	15,931	14,500	13,891	13,152	12,742	—	—	—	—	—	—
3 -15/16 4	110	22222	10,000	43,977	35,720	27,135	22,041	19,516	18,180	16,548	15,852	15,008	14,541	1,441	—	—	—	—	—
			30,000	31,629	25,691	19,516	15,852	14,037	13,076	11,901	11,401	10,794	10,459	9,667	—	—	—	—	—
			60,000	25,691	20,868	15,852	12,876	11,401	10,621	9,667	9,261	8,768	8,495	7,852	—	—	—	—	—
	110	22322	10,000	76,419	62,072	47,153	38,300	33,914	31,592	28,755	27,546	26,080	—	—	—	—	—	—	—
			30,000	54,962	44,643	33,914	27,546	24,391	22,722	20,681	19,812	18,758	—	—	—	—	—	—	—
			60,000	44,643	36,262	27,546	22,375	19,812	18,456	16,798	16,092	15,236	—	—	—	—	—	—	—
4-3/16	120	22224	10,000	51,547	41,869	31,806	25,835	22,876	21,310	19,396	18,581	17,592	17,045	—	—	—	—	—	—
			30,000	37,074	30,113	22,876	18,581	16,453	15,326	13,950	13,364	12,652	12,259	—	—	—	—	—	—
			60,000	30,113	24,460	18,581	15,092	13,364	12,449	11,331	10,855	10,277	9,957	—	—	—	—	—	—
	120	22324	10,000	86,512	70,270	53,381	43,359	38,393	35,764	32,553	31,185	29,525	—	—	—	—	—	—	—
			30,000	62,222	50,540	38,393	31,185	27,613	25,723	23,413	22,429	21,235	—	—	—	—	—	—	—
			60,000	50,540	41,051	31,185	25,330	22,429	20,893	19,017	18,218	17,248	—	—	—	—	—	—	—
4-7/16 4-1/2	130	22226	10,000	61,279	49,774	37,812	30,712	27,195	25,333	23,058	22,089	20,913	20,263	—	—	—	—	—	—
			30,000	44,074	35,799	27,195	22,089	19,559	18,220	16,584	15,887	15,041	14,573	—	—	—	—	—	—
			60,000	35,799	29,078	22,089	17,942	15,887	14,799	13,470	12,904	12,217	11,837	—	—	—	—	—	—
	130	22326	10,000	100,931	81,981	62,278	50,585	44,792	41,725	37,978	36,382	—	—	—	—	—	—	—	—
			30,000	72,592	58,963	44,792	36,382	32,215	30,010	27,315	26,167	—	—	—	—	—	—	—	—
			60,000	58,963	47,893	36,382	29,551	26,167	24,375	22,186	21,254	—	—	—	—	—	—	—	—
4-15/16 5	140	22228	10,000	70,652	57,387	43,594	35,410	31,354	29,208	26,585	25,467	24,112	23,362	—	—	—	—	—	—
			30,000	50,814	41,274	31,354	25,467	22,551	21,007	19,120	18,317	17,342	16,802	—	—	—	—	—	—
			60,000	41,274	33,525	25,467	20,686	18,317	17,063	15,530	14,878	14,086	13,648	—	—	—	—	—	—
	140	22328	10,000	117,152	95,157	72,287	58,715	51,990	48,431	44,082	42,229	—	—	—	—	—	—	—	—
			30,000	84,258	68,439	51,990	42,229	37,393	34,833	31,705	30,372	—	—	—	—	—	—	—	—
			60,000	68,439	55,590	42,229	34,301	30,372	28,293	25,752	24,670	—	—	—	—	—	—	—	—
5-3/16	150	22230	10,000	82,187	66,756	50,712	41,191	36,473	33,976	30,925	29,625	28,049	27,176	—	—	—	—	—	—
			30,000	59,111	48,013	36,473	29,625	26,232	24,436	22,242	21,307	20,173	19,545	—	—	—	—	—	—
			60,000	48,013	38,998	29,625	24,063	21,307	19,849	18,066	17,307	16,386	15,876	—	—	—	—	—	—
	150	22330	10,000	131,571	106,869	81,184	65,942	58,389	54,392	49,507	—	—	—	—	—	—	—	—	—
			30,000	94,629	76,862	58,389	47,427	41,995	39,120	35,607	—	—	—	—	—	—	—	—	—
			60,000	76,862	62,432	47,427	38,522	34,110	31,775	28,922	—	—	—	—	—	—	—	—	—

Note: Dark shaded areas require circulating oil.
Light shaded areas require static oil.

Unified SAF
USAF, SAF-XT, SAFS, USDAF

Table 2: Selection table for Unified SAF pillow blocks

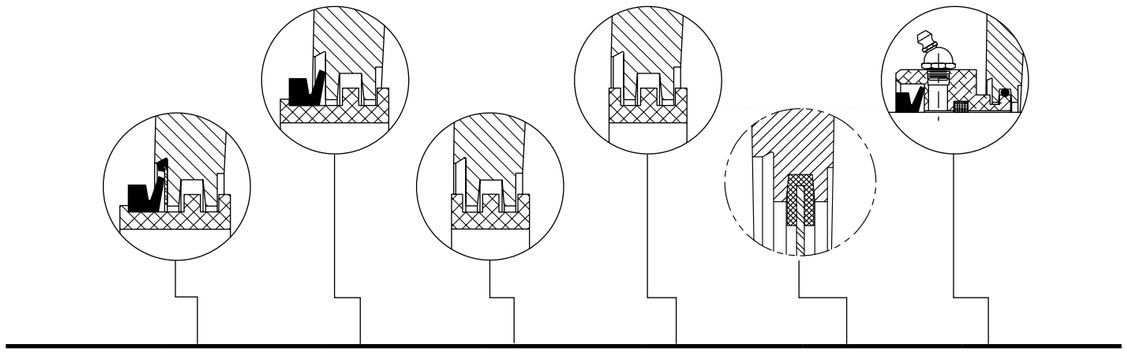
Shaft size				Equivalent radial load rating (lb) at various speeds (rpm)															
Adapter mount (in)	Direct mount (mm)	Bearing series	L_{10} life (h)	50	100	250	500	750	950	1,300	1,500	1,800	2,000	2,600	3,000	3,200	3,400	4,500	5,600
5-7/16 5-1/2	160	22232	10,000	93,722	76,126	57,829	46,972	41,592	38,745	35,265	33,783	31,985	—	—	—	—	—	—	—
			30,000	67,407	54,751	41,592	33,783	29,914	27,866	25,364	24,298	23,004	—	—	—	—	—	—	—
			60,000	54,751	44,472	33,783	27,441	24,298	22,634	20,602	19,736	18,685	—	—	—	—	—	—	—
	160	22332	10,000	117,152	95,157	72,287	58,715	51,990	48,431	44,082	—	—	—	—	—	—	—	—	—
			30,000	84,258	68,439	51,990	42,229	37,393	34,833	31,705	—	—	—	—	—	—	—	—	—
			60,000	68,439	55,590	42,229	34,301	30,372	28,293	25,752	—	—	—	—	—	—	—	—	—
5-15/16 6	170	22234	10,000	108,140	87,837	66,726	54,199	47,991	44,706	40,691	38,981	—	—	—	—	—	—	—	—
			30,000	77,777	63,175	47,991	38,981	34,516	32,153	29,266	28,036	—	—	—	—	—	—	—	—
			60,000	63,175	51,314	38,981	31,662	28,036	26,117	23,771	22,772	—	—	—	—	—	—	—	—
	170	22334	10,000	129,768	105,405	80,071	65,038	57,589	53,647	48,829	—	—	—	—	—	—	—	—	—
			30,000	93,332	75,809	57,589	46,777	41,420	38,584	35,119	—	—	—	—	—	—	—	—	—
			60,000	75,809	61,576	46,777	37,995	33,643	31,340	28,525	—	—	—	—	—	—	—	—	—
6-7/16 6-1/2	180	22236	10,000	109,943	89,301	67,838	55,102	48,791	45,451	41,369	39,631	—	—	—	—	—	—	—	—
			30,000	79,073	64,227	48,791	39,631	35,092	32,689	29,753	28,503	—	—	—	—	—	—	—	—
			60,000	64,227	52,169	39,631	32,190	28,503	26,552	24,167	23,152	—	—	—	—	—	—	—	—
6-15/16 7	190	22238	10,000	97,326	79,053	60,054	48,779	43,192	40,235	36,622	—	—	—	—	—	—	—	—	—
			30,000	69,999	56,857	43,192	35,083	31,065	28,938	26,339	—	—	—	—	—	—	—	—	—
			60,000	56,857	46,182	35,083	28,496	25,232	23,505	21,394	—	—	—	—	—	—	—	—	—
	190	22338	10,000	147,597	121,508	92,305	72,975	66,388	61,843	—	—	—	—	—	—	—	—	—	—
			30,000	107,591	87,391	66,388	53,923	47,747	44,479	—	—	—	—	—	—	—	—	—	—
			60,000	87,391	70,984	53,923	43,799	38,783	36,128	—	—	—	—	—	—	—	—	—	—
7-3/16	200	22240	10,000	108,140	87,837	66,726	54,199	47,991	44,706	—	—	—	—	—	—	—	—	—	—
			30,000	77,777	63,175	47,991	38,981	34,516	32,153	—	—	—	—	—	—	—	—	—	—
			60,000	63,175	51,314	38,981	31,662	28,036	26,117	—	—	—	—	—	—	—	—	—	—
7-1/2 7-15/16 8	220	22244	10,000	131,571	106,869	81,184	65,942	58,389	54,392	—	—	—	—	—	—	—	—	—	—
			30,000	94,629	76,862	58,389	47,427	41,995	39,120	—	—	—	—	—	—	—	—	—	—
			60,000	76,862	62,432	47,427	38,522	34,110	31,775	—	—	—	—	—	—	—	—	—	—
8-7/16 8 -1/2 8-15/16, 9		23048	10,000	93,722	76,126	57,829	46,972	41,592	38,745	—	—	—	—	—	—	—	—	—	—
			30,000	67,407	54,751	41,592	33,783	29,914	27,866	—	—	—	—	—	—	—	—	—	—
			60,000	54,751	44,472	33,783	27,441	24,298	22,634	—	—	—	—	—	—	—	—	—	—
9-7/16 9-1/2		23052	10,000	122,559	99,549	75,623	61,425	54,390	50,666	—	—	—	—	—	—	—	—	—	—
			30,000	88,147	71,598	54,390	44,178	39,118	36,440	—	—	—	—	—	—	—	—	—	—
			60,000	71,598	58,155	44,178	35,884	31,774	29,599	—	—	—	—	—	—	—	—	—	—
9-15/16 10 10-7/16 10-1/2		23056	10,000	124,361	101,013	76,735	62,328	55,190	—	—	—	—	—	—	—	—	—	—	—
			30,000	89,444	72,651	55,190	44,828	39,694	—	—	—	—	—	—	—	—	—	—	—
			60,000	72,651	59,011	44,828	36,412	32,241	—	—	—	—	—	—	—	—	—	—	—

Note: Dark shaded areas require circulating oil.
Light shaded areas require static oil.

Unified SAF

USAF, SAF-XT, SAFS, USDAF

Sealing systems



Environment/ application	USAF/USN SAF-XT	USAF/USN SAF-XT	USAF/USN SAF-XT	USAF/USN SAF-XT	USAF/USN SAF-XT	USAF/USN SAF-XT
Dusty/dirty	+	+	▲	▲	++	+
Wet/moisture laden	+	+	○	○	++	+
High pressure power washdown	▲	▲	○	○	++	+
✪ High temperature	○	○	○	+	▲	○
★ High speed	+	+	+	++	NS	○
Chemical	▲	▲	○	○	▲	▲
Misalignment	+	+	+	+	NS	▲

Notes: ++ Very Good
+ Good
▲ Questionable (Depends on condition. Consult Application Engineering)
✪ High temperature is above 200 °F
★ Consideration of high speed can be a function of type and bearing design
○ Not recommended
NS Not seal limited

Drop-in Triple-Tect seal

The patented drop-in Triple-Tect seal has all the sealing features of the standard Triple-Tect, but is pre-assembled at the factory for a fast, easy installation on-site. The drop-in Triple-Tect seal assembly consists of a seal ring, V-ring seal and stainless metal seal with rubber bead.

While lowering the shaft bearing and seal assembly into the housing base, the stainless metal seal with rubber bead fits in the outboard "V-shaped" housing groove.

The stainless metal seal gives superior sealing surface to the V-ring and positions the V-ring for easy cap to base housing assembly.

Unified SAF

USAF, SAF-XT, SAFS, USDAF

Selecting lubrication

Unified SAF pillow blocks are lubricated upon installation by the user and designed to handle either grease or oil lubrication.

Grease lubrication

Unified SAF bearings are designed to meet the rigorous demands of dirty, dusty, or wet environments. In order to properly protect bearings during installation, pack the bearing insert 100 percent full of grease immediately after properly mounting the bearing on the shaft. If the speed of the application falls between 20 percent and 80 percent of maximum rpm (Table 1), pack the lower half of the housing one-third to one-half full. If the speed of the application is less than 20 percent of maximum rpm, pack bearing housing cavity 100 percent full. If the speed exceeds 80 percent of maximum rpm, pack the lower half of the housing one-third full.

At each re-greasing cycle, for applications up to 80 percent of maximum rpm, slowly add grease until fresh grease is seen purging at the seals. Re-greasing should be done while running. Remote re-greasing lines should be added to avoid endangering personnel. If the speed is greater than 80 percent of maximum rpm, add 4 strokes of a handgun at each re-greasing cycle for bores up to 2 inches. For bores greater than 2 inches up to 5 inches, add 8 strokes of a handgun at each re-greasing cycle. For bores greater than 5 inches up to 10-1/2 inches, add 16 strokes of a handgun at each re-greasing cycle. For bores greater than 10-1/2 inches up to 12-1/2 inches, add 32 strokes of a handgun at each re-greasing cycle. For bores greater than 12-1/2 inches up to 15-3/4 inches, add 64 strokes of a handgun at each regreasing cycle. For units running above 80 percent of maximum rpm, running temperature should be monitored. If a drastic change in running temperature is noted, Dodge recommends removing the used grease completely and recharging with fresh grease per the above instructions.

Select a grease with a viscosity at an operating temperature which will provide full film lubrication (see Table 3 below). Use a 50 °F to 100 °F increase in bearing temperature above ambient, depending on speed and load. Use Table 4 as a general guide for re-greasing the bearings. A small amount of grease at frequent intervals is preferable to a large amount of grease at infrequent intervals. For special applications involving high speeds, high loads, or very low speeds, consult Application Engineering at +1 864 284 5700.

Table 3: Viscosity of oil, or oil in grease

dN Δ	Viscosity for loads up to 18% of dynamic capacity	(cSt)	dN Δ	Viscosity for loads up to 18% of dynamic capacity	(cSt)
100	3,500	700	1,400	625	140
200	3,150	680	1,600	525	120
300	2,750	590	1,800	450	95
400	2,375	500	2,000	400	85
500	2,000	460	3,000	300	63
600	1,750	360	4,000	200	43
700	1,500	320	5,000	150	32
800	1,300	280	6,000	130	28
900	1,075	220	7,000	110	22
1,000	900	140	8,000	100	20

Δ dN = Bore diameter (in) x speed (rpm).

* For loads above 18% of dynamic capacity, an EP grease with viscosity selected from above is recommended.

Unified SAF

USAF, SAF-XT, SAFS, USDAF

Oil lubrication

Unified SAF bearings are designed to accept oil lubrication. Oil lubrication is normally required at high speeds as well as high loads, or whenever heat from an external source is flowing into the bearing. Oil lubrication may be static or circulating. With static oil, fill the bearing cavity with oil up to the center line of the lowest roller. This height is identified as "W" on the dimension drawings. Mount an oil sight gauge in the drilled and tapped hole on the side of the pillow block for visual indication of this level. The oil level may drop or rise during operation depending on the direction of rotation of the bearing. Both the static oil level and the running oil level should be marked on the oil sight gauge and properly identified. Oil should be replaced at least semi-annually. For circulating oil, the oil flow rate and size of factory drilled and tapped return drains are shown in Table 5, up to an 8-inch bore. The viscosity of the oil should be selected based on the guidelines shown in Table 3. If the speed of the application is within the specifications of this catalog, and if the temperature of the bearings is 80 °F to 100 °F or greater above ambient, a lighter viscosity oil may be required.

Table 4: Re-greasing intervals, months*, based on 12 hours per day, 150 °F max.

Shaft size		Speed (rpm)								
Adapter mounting (in)	Direct mounting (mm)	250	500	750	1,000	1,250	1,500	2,000	2,500	3,000
1-7/16 —1-15/16	40—55	8	6	4	3	2	1	0.50	0.50	0.25
2-3/16	60—65	7	5	3	2	1	1	0.50	0.25	0.25
2-7/16 —3	70—85	6	4	3	2	1	0.50	0.25	0.25	—
3-3/16 —3-1/2	90—100	5	3	2	1	0.50	0.50	0.25	—	—
3-15/16 — 4-1/2	110—130	4	3	2	1	0.50	0.25	—	—	—
4-15/16 —5-1/2	140—160	3	2	1	0.50	0.25	—	—	—	—
5-15/16 —7-3/16	170—200	2	1	1	0.50	—	—	—	—	—
7-1/2 —9-1/2	220	1	1	0.50	—	—	—	—	—	—
9-15/16 —10-1/2	—	1	0.50	—	—	—	—	—	—	—
10-15/16 —12-1/2	—	1	0.50	—	—	—	—	—	—	—
12-15/16 —15-3/4	—	0.50	0.25	—	—	—	—	—	—	—

* For continuous operations, 24 hours per day, decrease greasing interval by 50%

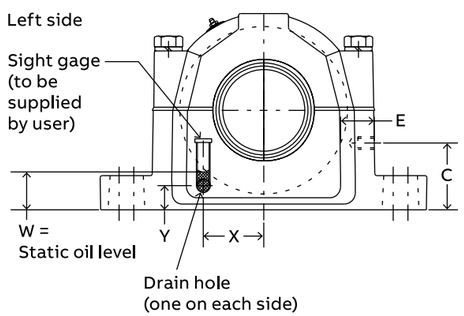
Unified SAF

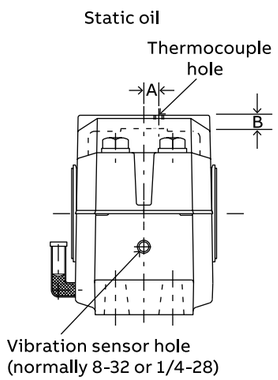
Circulating oil

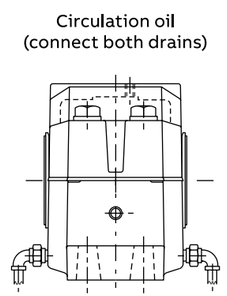
Table 5: Circulating oil flow rates, drain hole sizes, thermocouple location and vibration sensor location

Shaft size								Circulating oil flow*		Static Oil level (in) W**		Drain hole, Dry sump ***			Thermocouple hole		Vibration ▲ sensor hole	
500 Adapter mounting (in)	200 Direct mounting (mm)	600 Adapter mounting (in)	300 Direct mounting (mm)	USAF housing designation				Amount sufficient for normal lubrication (gpm)	Maximum amount for heat dissipation due to external heat source (gpm)	500 and 200 series	600 and 300 series	Location (in)			Location (in)	Wall thick. (in)	Location (in)	Wall thick. (in)
												X	Y	Size	A	B	C	E
1-7/16	—	—	—	509	—	—	—	0.0025	0.070	0.92	—	1.09	0.63	1-8/27	0.25	0.38	1.56	1.31
1-11/16	—	—	40	510	—	—	308	0.0030	0.090	1.09	1.19	1.35	1.18	1-8/27	0.27	0.30	1.14	0.97
1-15/16	—	1-7/16	45	511	—	609	309	0.0040	0.100	1.16	1.28	1.31	0.83	1-8/27	0.28	0.53	1.89	1.13
—	—	1-11/16	50	—	—	610	310	0.0045	0.120	—	1.38							
2-3/16	—	1-15/16	55	513	—	611	311	0.0050	0.150	1.11	1.44	1.66	0.78	1-8/27	0.34	0.58	2.02	1.13
2-7/16 2-1/2	75	—	60	515	215	—	312	0.0060	0.175	1.16	1.31	1.78	0.88	1/4-18	0.36	0.63	2.25	1.19
2-11/16 2-3/4	80	2-3/16	65	516	216	613	313	0.0065	0.195	1.25	1.41	1.97	0.95	1/4-18	0.31	0.50	2.28	1.52
2-15/16 3	85	—	70	517	217	—	314	0.0075	0.200	1.38	1.47	2.13	1.06	3/8-18	0.41	0.67	2.50	1.44
3-3/16	90	2-7/16 2-1/2	75	518	218	615	315	0.0080	0.250	1.47	1.59	2.25	1.13	3/8-18	0.44	0.61	2.72	1.45
—	—	2-11/16 2-3/4	80	—	—	616	316	0.0100	0.260	1.69	1.69	2.28	1.17	3/8-18	0.53	0.66	2.73	1.47
3-7/16 3-1/2	100	2-15/16 3	85	520	220	617	317	0.0110	0.350	1.64	1.75	2.63	1.25	3/8-18	0.53	0.70	3.08	1.67

* Based on oil temperature of 130 °F to 150 °F and oil level at center line of lowest roller. For maximum oil flow values, both drains should be used.
Mount block with drain holes on right side of block center line when rotation is CCW, unless cast closed end.
Mount block with drain holes on left side of block center line when rotation is CW.
** Static oil level is measured from bottom of block base to meniscus on oil sight gauge. (Non-rotating mode)
*** For wet sump, consult Application Engineering.
▲ For vibration sensors supplied by the user.







Unified SAF

Circulating oil

Table 5: Circulating oil flow rates, drain hole sizes, thermocouple location and vibration sensor location (continued)

Shaft size								Circulating oil flow*		Static Oil level (in) W**		Drain hole, Dry sump ***			Thermocouple hole		Vibration ▲ sensor hole	
500 Adapter mounting (in)	200 Direct mounting (mm)	600 Adapter mounting (in)	300 Direct mounting (mm)	USAF housing designation				Amount sufficient for normal lubrication	Maximum amount for heat dissipation due to external heat source	500 and 200 series	600 and 300 series	Location (in)			Location (in)	Wall thick. (in)	Location (in)	Wall thick. (in)
								(gpm)	(gpm)			X	Y	Size	A	B	C	E
3-15/16	110	—	—	522	222	—	—	0.015	0.42	1.80	—	2.88	1.34	3/8-18	0.53	0.53	3.36	1.72
4																		
4-3/16	120	3-7/16	100	524	224	620	320	0.0175	0.48	1.84	2.03	2.19	1.38	1/2-14	0.69	0.77	3.38	1.86
		3-1/2																
4-7/16	130	3-15/16	110	526	226	622	322	0.019	0.55	2.34	2.41	2.31	1.63	1/2-14	0.75	1.00	4.03	2.16
4-1/2		4																
4-15/16	140	—	—	528	228	—	—	0.023	0.6	2.03	—	3.68	1.47	1/2-14	0.75	0.89	4.03	2.16
5																		
5-3/16	150	4-3/16	120	530	230	624	324	0.025	0.75	2.03	2.38	3.59	1.36	1/2-14	0.81	0.88	4.34	2.25
5-7/16	160	4-7/16	130	532	232	626	326	0.03	0.8	2.09	2.44	4.03	1.33	1/2-14	0.91	0.92	4.52	2.22
5-1/2		4-1/2																
5-15/16	170	4-15/16	140	534	234	628	328	0.035	0.85	2.19	2.56	4.16	1.33	1/2-14	1.00	1.39	4.97	2.70
6		5																
6-7/16	180	5-3/16	150	536	236	630	330	0.037	0.875	2.42	2.63	4.22	1.63	1/2-14	1.00	1.33	5.25	2.75
6-1/2																		
6-15/16	190	5-7/16	160	538	238	632	332	0.039	1	2.53	2.69	4.75	1.61	1/2-14	1.13	1.25	5.50	2.75
7		5-1/2																
7-3/16	200	5-15/16	170	540	240	634	334	0.042	1	2.47	2.75	4.91	1.53	1/2-14	1.13	1.25	5.81	2.84
		6																
7-1/2	220	6-15/16	190	544S	244	638	338	0.05	1.4	3.25	2.38	5.44	2.03	1/2-14	1.19	1.50	6.63	2.36
		7																
7-15/16		—		544														
8																		

* Based on oil temperature of 130 °F - 150 °F and oil level at center line of lowest roller. For maximum oil flow values, both drains should be used.

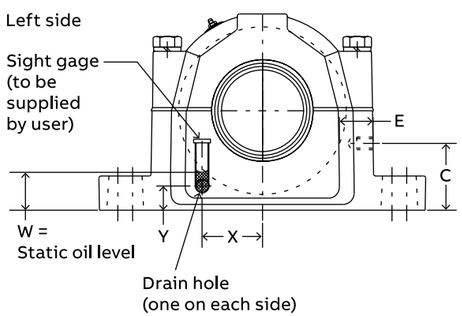
Mount block with drain holes on right side of block center line when rotation is CCW, unless cast closed end.

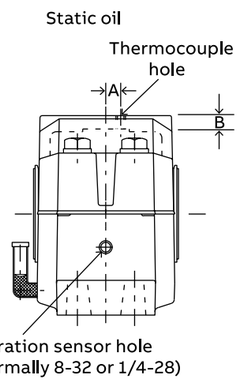
Mount block with drain holes on left side of block center line when rotation is CW.

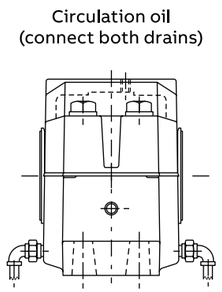
** Static oil level is measured from bottom of block base to meniscus on oil sight gauge. (Non-rotating mode)

*** For wet sump, consult Application Engineering.

▲ For vibration sensors supplied by the user.

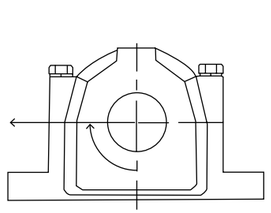


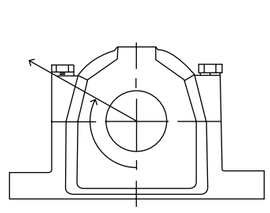


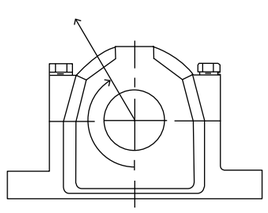


Unified SAF

Housing ratings







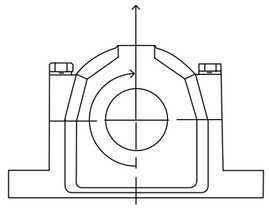


Table 6: USAF housing ratings and cap bolt ratings*

Pillow block designation				Recommended housing cap loads ★				Recommended cap bolt loads			Cap bolt information ★		
USAF	USAF	USAF	USAF	P90 (lb)	P120 (lb)	P150 (lb)	P180 (lb)	P120 (lb)	P150 (lb)	P180 (lb)	Cap bolt (no.) size	Torque (lb-ft)	SAE grade
509	—	—	—	6,600	4,200	3,600	4,600	19,800	11,300	9,900	(4) 3/8-16	24—30	5
510	—	—	308	7,800	5,000	4,400	5,400	19,800	11,300	9,900	(4) 3/8-16	24—30	5
511	—	610	310	11,400	7,165	6,575	7,875	27,120	15,600	13,560	(4)7/16-14	40—50	5
513	—	611	311	13,360	8,260	7,680	9,200	27,120	15,600	13,560	(4) 7/16-14	40—50	5
515	215	—	312	13,360	8,260	7,680	9,220	36,200	20,800	18,100	(4) 1/2-13	60—75	5
516	216	613	313	12,800	8,000	7,400	8,900	57,600	33,000	28,800	(4) 5/8-11	120—150	5
517	217	—	314	13,600	9,200	8,400	10,200	57,600	33,000	28,800	(4) 5/8-11	120—150	5
518	218	615	315	17,500	11,350	10,200	12,100	57,600	33,000	28,800	(4) 5/8-11	120—150	5
—	—	616	316	17,600	12,000	10,500	12,200	57,600	33,000	28,800	(4) 5/8-11	120—150	5
520	220	617	317	22,500	14,200	12,660	14,700	85,200	48,900	42,600	(4) 3/4-10	208—260	5
522	222	—	—	28,100	17,500	15,500	17,800	85,200	48,900	42,600	(4) 3/4-10	208—260	5
524	224	620	320	24,500	15,400	13,700	15,800	85,200	48,900	42,600	(4) 3/4-10	208—260	5
526	226	622	322	28,970	18,000	15,900	18,300	11,800	67,800	59,000	(4) 7/8-9	320—430	5
528	228	—	—	35,800	22,100	19,400	22,300	154,400	88,700	77,200	(4) 1-8	512—640	5
530	230	624	324	40,000	24,700	21,600	25,000	154,400	88,700	77,200	(4) 1-8	512—640	5
532	232	626	326	40,200	24,800	21,700	25,100	154,400	88,700	77,200	(4) 1-8	512—640	5
534	234	628	328	52,000	32,200	28,200	33,000	154,400	88,700	77,200	(4) 1-8	512—640	5
536	236	630	330	78,200	49,200	43,300	52,800	154,400	88,700	77,200	(4) 1-8	512—640	5
538	238	632	332	80,600	50,800	44,800	54,800	215,200	123,000	107,600	(4) 1-1/4-7	896—1,120	5
540	240	634	334	83,800	53,000	46,700	57,500	215,200	123,000	107,600	(4) 1-1/4-7	896—1,120	5
544	244	638	338	101,800	65,600	58,200	73,800	312,000	179,000	156,000	(4) 1-1/2-6	1,560—1,950	5
048	—	—	—	83,800	53,000	46,700	54,800	215,200	123,000	107,600	(4) 1-1/4-7	896—1,120	5
052	—	—	—	101,800	65,600	58,200	73,800	312,000	179,000	156,000	(4) 1-1/2-6	1,560—1,950	5
056	—	—	—	110,200	71,800	64,000	82,100	312,000	179,000	156,000	(4) 1-1/2-6	1,560—1,950	5

* When utilizing heavy cap loads on pillow block housings, the installation must adhere to the following procedures.

1. The pillow block base bolts must have high strength (Grade 8) bolts and be properly tightened to mounting structure.
2. Stop bars (shear strips) must be used against the pillow block where side loads are encountered.
3. In all cases where loads are heavy, the L_{10} life of the bearing should be checked for proper selection and life requirements.

★ For USDAF housing and cap bolt ratings consult Application Engineering at +1 864 284 5700.

Unified SAF

USAF, SAF-XT, SAFS, USDAF

Expansion capabilities

Table 7: Unified 500, 200, 600 and 300 series and Split-Sphere pillow blocks total expansion capability

Shaft size								
500 Adapter mounting (in)	200 Direct mounting (mm)	600 Adapter mounting (in)	300 Direct mounting (mm)	USAF housing designation				Total expansion (in)
1-7/16	—	—	—	509	—	—	—	1/4
1-11/16	—	—	40	510	—	—	308	1/4
1-15/16	—	1-7/16	45	511	—	609	309	1/4
—	—	1-11/16	50	-	—	610	310	7/16
2-3/16	—	1-15/16	55	513	—	611	311	5/16
2-7/16 2-1/2	75	—	60	515	215	—	312	1/4
2-11/16 2-3/4	80	2-7/16	65	516	216	613	313	3/8
2-15/16 3	85	—	70	517	217	—	314	3/8
3-3/16	90	2-7/16 2-1/2	75	518	218	615	315	3/8
—	—	2-11/16 2-3/4	80	—	—	616	316	3/8
3-7/16 3-1/2	100	2-15/16 3	85	520	220	617	317	3/8
3-15/16, 4	110			522	222			3/8
4-3/16	120	3-7/16 3-1/2	100	524	224	620	320	3/8
4-7/16, 4-1/2	130	3-15/16, 4	110	526	226	622	322	3/8
4-15/16 5	140			528	228			3/8
5-3/16	150	4-3/16	120	530	230	624	324	3/8
5-7/16 5-1/2	160	4-7/16,4-1/2	130	532	232	626	326	3/8
5-15/16 6	170	4-15/16,5	140	534	234	628	328	3/8
6-7/16 6-1/2	180	5-3/16	150	536	236	630	330	3/8
6-15/16 7	190	5-7/16 5-1/2	160	538	238	632	332	3/8
7-3/16	200	5-15/16, 6	170	540	240	634	334	3/8
7-1/2	220	6-15/16 7	190	544S	244	638	338	3/8
7-15/16 8	—	—		544				
8-7/16, 8-1/2 8-15/16, 9	—	—	—	048	—	—	—	5/8
9-7/16, 9-1/2	—	—	—	052	—	—	—	9/16
9-15/16, 10	—	—	—	056	—	—	—	1-5/8
10-7/16 10-1/2	—	—	—	056L	—	—	—	1-5/8

Unified SAF

USDAF large-bore pillow block

Table 8: Radial and thrust factors for USDAF spherical bearings

Shaft size (in)	Bearing series	e	$F_A/F_R \le e$		$F_A/F_R > e$		Adapter Maximum allowable thrust load (lb)*	Dynamic capacity (C) (lb)	Max. rpm	
			X	Y	X	Y			Grease	Oil
23000K series										
10-15/16, 11	23060K	0.25	1	2.70	0.67	4.00	23,875	440,000	630	800
11-7/16, 11-1/2, 11-15/16, 12	23064K	0.25	1	2.70	0.67	4.10	26,114	455,000	600	750
12-7/16, 12-1/2	23068K	0.25	1	2.70	0.67	4.00	30,498	530,000	560	700
12-15/16, 13, 13-7/16, 13-1/2	23072K	0.25	1	2.70	0.67	4.10	32,535	550,000	530	670
13-15/16, 14	23076K	0.24	1	2.80	0.67	4.20	34,598	570,000	500	630
15	23080K	0.24	1	2.80	0.67	4.10	39,926	680,000	450	560
15-3/4	23084K	0.24	1	2.80	0.67	4.20	42,489	710,000	450	560

* If the thrust load exceeds adapter maximum allowable thrust load, auxiliary methods of carrying thrust are required.

Table 9: Selection table for USDAF spherical bearings

Shaft size (in)	Bearing series	L_{10} life (h)	Equivalent radial load rating (lb) at various speeds (rpm) *												
			50	100	150	200	250	300	400	500	550	600	650	700	750
23000K series															
10-15/16, 11	23060K	50,000	97,865	79,491	70,387	64,567	60,386	57,172	52,445	49,049	47,666	46,438	45,336	44,339	43,431
		80,000	84,995	69,037	61,130	56,076	52,445	49,653	45,548	42,598	41,397	40,331	39,374	38,508	37,719
		100,000	79,491	64,567	57,172	52,445	49,049	46,438	42,598	39,840	38,717	37,719	36,824	36,015	35,277
11-7/16, 11-1/2 11-15/16, 12	23064K	50,000	101,201	82,201	72,786	66,768	62,445	59,121	54,233	50,721	49,291	48,021	46,882	45,851	44,912
		80,000	87,892	71,391	63,214	57,987	54,233	51,346	47,100	44,050	42,809	41,706	40,716	39,821	39,005
		100.000	82,201	66,768	59,121	54,233	50,721	46,021	44,050	41,198	40,037	39,005	38,080	37,243	36,480
12-7/16, 12-1/2	23068K	50,000	117,883	95,751	84,784	77,774	72,738	68,866	63,172	59,081	57,416	55,937	54,609	53,409	—
		80,000	102,380	83,158	73,634	67,546	63,172	59,809	54,864	51,312	49,665	48,580	47,428	46,385	—
		100,000	95,751	77,774	68,866	63,172	59,081	55,937	51,312	47,989	46,636	45,435	44,357	43,381	—
12-15/16, 13 13-7/16, 13-1/2	23072K	50,000	122,331	99,364	87,984	80,709	75,483	71,465	65,556	61,311	59,583	58,048	56,670	—	—
		80,000	106,243	86,296	76,413	70,094	65,556	62,066	56,934	53,248	51,747	50,414	49,217	—	—
		100,000	99,363	80,709	71,465	65,556	61,311	56,048	53,248	49,800	48,396	47,149	46,031	—	—
13-15/16, 14	23076K	50,000	126,780	102,977	91,183	83,643	78,227	74,064	67,940	63,540	61,749	60,158	—	—	—
		80,000	110,107	89,435	79,191	72,643	67,940	64,323	59,005	55,184	53,629	52,247	—	—	—
		100,000	102,977	83,643	74,064	67,940	63,540	60,158	55,184	51,611	50,156	48,864	—	—	—
15	23080K	50,000	151,246	122,850	108,780	99,785	93,324	88,357	81,051	75,803	73,666	—	—	—	—
		80,000	131,355	106,694	94,474	86,662	81,051	76,737	70,392	65,834	63,978	—	—	—	—
		100,000	122,850	99,785	88,357	81,051	75,803	71,768	65,834	61,571	59,835	—	—	—	—
15-3/4	23084K	50,000	157,919	128,270	113,579	104,187	97,441	92,255	84,627	79,147	76,916	—	—	—	—
		80,000	137,151	111,401	98,642	90,486	84,627	80,122	73,497	66,736	66,601	—	—	—	—
		100,000	128,270	104,187	92,255	84,627	79,147	74,934	68,738	64,287	62,475	—	—	—	—

* Oil lubrication to the right of the heavy line.

Unified SAF

USAF 500 series Split-Sphere

Dodge Split-Sphere roller bearings have the capacity to carry heavy radial loads and combined radial and thrust loads. The maximum recommended load which can be applied is limited by various components in the system such as bearing, housing, shaft, shaft attachment, speed and life requirements as listed in this catalog. Dodge spherical roller bearings have been applied successfully even when these limits have been exceeded under controlled operating conditions. Contact Dodge Application Engineering at +1 864 284 5700 for applications which exceed the recommendations of this catalog.

L_{10} life – The fatigue life which may be expected from at least 90 percent of a given group of bearings operating under identical conditions.

$$L_{10}\text{ life, hours} = \left(\frac{C}{P}\right)^{10/3} \times \left(\frac{16{,}667}{\text{rpm}}\right)$$

Where:

C = Dynamic capacity (Table 10)
P = Equivalent radial load

(See equation 1 for definition of P)

General

Heavy service – For heavy shock loads, frequent shock loads, or severe vibrations, increase the equivalent radial load up to 50 percent (according to severity of conditions) to obtain a Modified equivalent radial load. Consult Dodge Application Engineering for additional selection assistance.

Thrust load values shown in the table below are recommended as a guide for general applications that will give adequate L_{10} life. Where substantial radial load is also present, it is advisable to calculate actual L_{10} life to assure that the bearing meets the requirements.

Speed range (rpm)	20—200	201—2,000	Over 2,000
Recommended thrust load	C/20*	C/40*	C/60*

* Use the smaller of this value or the maximum allowable thrust load listed in Table 10.

The shaft tolerances recommended below are adequate for normal radial and radial/thrust load applications. Since the allowable load, especially at a low speed, is very large, the shaft should be checked to assure adequate shaft strength.

The magnitude and direction of both the thrust and radial load must be taken into account when selecting a housing. When pillow blocks are utilized, heavy loads should be directed through the base. Where uplift loads are involved, see Table 6 for maximum values. Spherical bearings require a radial load at least equal to the thrust load for proper operation. It is advisable to calculate actual L_{10} life to assure adequate conditions (normally at least 30,000 hours life). Where a load pulls the housing away from the mounting base, both the hold-down bolts and housing must be of adequate strength. Auxiliary load carrying devices such as shear bars are advisable for side or end loading of pillow blocks.

Shaft tolerances

Shaft sizes (in)	Tolerance (in)
Up to 1-1/2	+0.000 to -0.002
1-9/16 to 2-1/2	+0.000 to -0.003
2-5/8 to 4	+0.000 to -0.004
4-7/16 to 6	+0.000 to -0.005

Note: Polyamide cages may limit bearing operating temperature.

Unified SAF

USAF 500 series Split-Sphere

Selecting bearings supporting radial loads only

1. Define the desired L_{10} life in hours
2. Establish bearing radial load, F_R
3. Establish speed (rpm)
4. Calculate the equivalent radial load
($P = F_R \times 1.1^* =$ Equivalent radial load)

Using the easy selection Table 11, under the rpm column find the equivalent load that equals or is slightly higher than the application radial load multiplied by a 1.1 factor for the desired life. The shaft size on the far left will be the minimum shaft size that you can use for your application. If the desired life is different than the values shown on the chart, use alternate Method A shown below.

Example:

L_{10} life = 30,000 h
Radial load = 4,000 lb
Speed = 950 rpm

At the intersection of the 950 rpm column and the 30,000 hours L_{10} life row, the equivalent radial load of 4,445 pounds exceeds the 4,400 pounds (4000 x 1.1) application equivalent radial load for shaft size 2-7/16—2-1/2 inches. A Split-Sphere bearing with shaft size of 2-7/16—2-1/2 inches may be used for this application.

Alternate method A – Selecting a bearing for an L_{10} life value not shown in the Easy Selection chart.

The L_{10} life equation can be rearranged so that the bearing dynamic capacity C is identified in terms of L_{10}, speed and P.

$$C = \left(\frac{L_{10} \times \text{rpm}}{16{,}667}\right)^{0.3} \times P$$

($P = F_R \times 1.1^* =$ Equivalent radial load)

Since the L_{10}, speed, and F_R are known, solve for C. Select from the dynamic capacity column on Table 10 the C value equal to or just greater than the C value just calculated. The bore size on the far left represents the minimum shaft size selection. Check that the application speed does not exceed the maximum speed on Table 10. When selecting an L_{10} life of less than 30,000 hours, particular attention must be given to shaft deflection and proper lubricant selection.

* The application factor, 1.1, compensates for the gaps and relief area on either side of the gaps.

At no time should F_R or P exceed 20 percent of the dynamic capacity C.

Unified SAF
USAF 500 series Split-Sphere

Selecting bearings supporting combination radial and thrust loads

When a bearing supports both a radial load and a thrust load, the loading on the two rows is shared unequally depending on the ratio of thrust to radial load. The use of the X (radial factor) and Y (thrust factor) from Table 10 converts the applied thrust load and radial loads to an equivalent radial load having the same effect on the life of the bearing as a radial load of this magnitude.

Equation 1

The equivalent radial load:

$$P = (XF_R + YF_A) \times 1.1^*$$

Where:

- P = Equivalent radial load
- F_R = Radial load
- F_A = Thrust (axial) load (** see note)
- e = Thrust load or radial load factor (Table 10)
- X = Radial load factor (Table 10)
- Y = Thrust load factor (Table 10)

To find X and Y, calculate F_A/F_R and compare to e for the selected bore size. Determine X and Y from Table 10 depending on whether F_A/F_R is equal to or less than e, or F_A/F_R is greater than e. Substitute all known values into the equivalent radial load equation. P (equivalent radial load) can be used in the life formula to determine L_{10}, or it can be compared to the equivalent radial load ratings for the speed and hours life desired in the easy selection chart.

Selecting bearings supporting only thust loads

Spherical roller bearings generally are not recommended for pure thrust load applications. They will perform satisfactorily under very light pure thrust loads. Consult Dodge Application Engineering at +1 864 284 5700.

Axial expansion capability

The axial expansion capability of Split-Sphere pillow blocks is the same as the Unified 500 pillow blocks. See Table 7.

* The application factor, 1.1, compensates for the gaps and relief area on either side of the gaps.

** Spherical bearings require a radial load at least equal to the thrust load for proper operation ($F_A/F_R = 1$). If the thrust load exceeds this limit, consult Application Engineering.

At no time should F_R or P exceed 20 percent of the dynamic capacity C.

Table 10: Split-Sphere bearings radial and thrust factor

Shaft size (in)	Replaces bearing series	e	$F_A/F_R \le e$		$F_A/F_R > e$		Max. allow. thrust load F_A (lb)	Dynamic* capacity (C) (lb)	Max. speed (rpm)
			X	Y	X	Y			
2-3/16	22213K	0.24	1	2.80	0.67	4.20	1,200	35,000	2,600
2-7/16	22215K	0.24	1	2.80	0.67	4.20	1,200	41,500	2,350
2-15/16—3	22217K	0.22	1	3.10	0.67	4.60	1,700	45,000	2,200
3-3/16	22218K	0.22	1	2.90	0.67	4.60	1,700	52,000	2,100
3-7/16	22220K	0.23	1	2.80	0.67	4.30	1,700	71,000	1,700
3-15/16—4	22222K	0.24	1	2.80	0.67	4.20	3,100	90,000	1,450
4-7/16	22226K	0.25	1	2.70	0.67	4.00	3,100	132,000	1,200
4-15/16	22228K	0.26	1	2.60	0.67	3.90	3,100	153,000	1,100
5-7/16	22232K	0.25	1	2.70	0.67	4.00	5,000	204,000	1,000
5-15/16—6	22234K	0.26	1	2.60	0.67	3.90	5,000	232,000	950

* At no time load on a Split-Sphere bearing should exceed 20% of the dynamic capacity C.

Unified SAF
USAF 500 series Split-Sphere

Table 11: Selection table for Split-Sphere spherical roller bearings

Shaft size (in)	L_{10} life (h)	Equivalent radial load rating (lb) at various speeds (rpm)													
		50	100	250	375	450	800	950	1,100	1,200	1,300	1,700	2,100	2,350	2,600
2-3/16	10,000	7,000	7,000	7,000	6,990	6,620	5,570	5,290	5,060	4,930	4,815	4,440	4,170	4,030	3,910
	30,000	7,000	7,000	5,680	5,030	4,760	4,005	3,805	3,640	3,545	3,465	3,195	3,000	2,900	2,810
	50,000	7,000	6,415	4,870	4,315	4,085	3,435	3,265	3,125	3,045	2,970	2,740	2,570	2,485	2,415
	100,000	6,415	5,210	3,955	3,505	3,315	2,790	2,650	2,535	2,470	2,415	2,225	2,090	2,020	1,960
2-7/16	10,000	8,300	8,300	8,300	8,175	7,740	6,510	6,185	5,920	5,765	5,630	5,195	4,875	4,710	—
	30,000	8,300	8,300	6,640	5,880	5,565	4,685	4,445	4,255	4,145	4,050	3,735	3,505	3,390	—
	50,000	8,300	7,495	5,695	5,045	4,775	4,015	3,815	3,650	3,555	3,475	3,205	3,005	2,905	—
	100,000	7,495	6,090	4,625	4,095	3,880	3,265	3,100	2,965	2,890	2,820	2,600	2,445	2,360	—
2-15/16 3	10,000	9,000	9,000	9,000	8,860	8,390	7,060	705	6,415	6,250	6,105	5,630	5,285	—	—
	30,000	9,000	9,000	7,200	6,375	6,035	5,080	4,820	4,615	4,495	4,390	4,050	3,800	—	—
	50,000	9,000	8,130	6,175	5,470	5,175	4,355	4,135	3,960	3,855	3,765	3,475	3,260	—	—
	100,000	8,130	6,605	5,015	4,440	4,205	3,540	3,360	3,215	3,135	3,060	2,820	2,650	—	—
3-3/16	10,000	10,400	10,400	10,400	10,240	9,695	8,160	7,750	7,415	7,225	7,055	6,505	6,105	—	—
	30,000	10,400	10,400	8,320	7,365	6,975	5,870	5,575	5,335	5,195	5,070	4,680	4,390	—	—
	50,000	10,400	9,395	7,135	6,320	5,980	5,035	4,780	4,575	4,455	4,350	4,015	3,770	—	—
	100,000	9,395	7,630	5,795	5,130	4,860	4,090	3,885	3,715	3,620	3,535	3,260	3,060	—	—
3-7/16	10,000	14,200	14,200	14,200	13,985	13,240	11,140	10,580	10,125	9,865	9,630	8,885	—	—	—
	30,000	14,200	14,200	11,355	10,055	9,520	8,010	7,610	7,280	7,095	6,925	6,390	—	—	—
	50,000	14,200	12,825	9,745	8,630	8,170	6,875	6,530	6,245	6,085	5,940	5,480	—	—	—
	100,000	12,825	10,420	7,915	7,010	6,635	5,585	5,300	5,075	4,945	4,825	4,455	—	—	—
3-15/16 4	10,000	18,000	18,000	18,000	17,725	16,780	14,120	13,410	12,835	12,505	12,205	—	—	—	—
	30,000	18,000	18,000	14,395	12,750	12,070	10,155	9,645	9,230	8,995	8,780	—	—	—	—
	50,000	18,000	16,260	12,350	10,935	10,355	8,715	8,275	7,920	7,715	7,530	—	—	—	—
	100,000	16,260	13,205	10,030	8,885	8,410	7,075	6,720	6,430	6,265	6,120	—	—	—	—
4-7/16	10,000	26,400	26,400	26,400	25,995	24,615	20,710	19,670	18,825	18,340	—	—	—	—	—
	30,000	26,400	26,400	21,115	18,695	17,700	14,895	14,145	13,540	13,190	—	—	—	—	—
	50,000	26,400	23,845	18,115	16,040	15,185	12,780	12,135	11,615	11,315	—	—	—	—	—
	100,000	23,845	19,370	14,715	13,030	12,335	10,380	9,860	9,435	9,190	—	—	—	—	—
4-15/16	10,000	30,600	30,600	30,600	30,130	28,530	24,005	22,800	21,820	—	—	—	—	—	—
	30,000	30,600	30,600	24,475	21,670	20,520	17,265	16,400	15,690	—	—	—	—	—	—
	50,000	30,600	27,640	20,995	18,590	17,605	14,810	14,070	13,460	—	—	—	—	—	—
	100,000	27,640	22,450	17,055	15,100	14,300	12,030	11,425	10,935	—	—	—	—	—	—
5-7/16	10,000	40,800	40,800	40,800	40,175	38,040	32,010	30,400	—	—	—	—	—	—	—
	30,000	40,800	40,800	32,635	28,895	27,360	23,020	21,865	—	—	—	—	—	—	—
	50,000	40,800	36,855	27,995	24,790	23,470	19,750	18,755	—	—	—	—	—	—	—
	100,000	36,855	29,935	22,740	20,135	19,065	16,040	15,235	—	—	—	—	—	—	—
5-15/16 6	10,000	46,400	46,400	46,400	45,690	43,260	36,400	34,570	—	—	—	—	—	—	—
	30,000	46,400	46,400	37,115	32,860	31,115	26,180	24,865	—	—	—	—	—	—	—
	50,000	46,400	41,915	31,840	28,195	26,690	22,460	21,330	—	—	—	—	—	—	—
	100,000	41,915	34,045	25,860	22,900	21,680	18,245	17,325	—	—	—	—	—	—	—

Unified SAF

USAF 500 series Split-Sphere

Selecting lubrication

Dodge Split-Sphere roller bearings are lubricated by the user at installation. Dodge Split-Sphere roller bearings can be run with either grease or oil lubrication.

Grease lubrication

In order to properly protect the bearing during installation, pack the bearing insert 100 percent full of grease immediately after properly mounting the bearing on the shaft. If the rpm of the application falls between 20 percent and 80 percent of maximum rpm (Table 10), pack the lower half of the housing one-third to one-half full. If the rpm of the application is less than 20 percent of maximum rpm, pack bearing housing cavity 100 percent full. If the rpm exceeds 80 percent of maximum rpm, pack the lower half of the housing one-third full.

At each re-greasing cycle, for applications up to 80 percent of maximum rpm, slowly add grease until fresh grease is seen purging at the seals. Re-greasing should be done while running. Remote re-greasing lines should be added to avoid endangering personnel. If the rpm is greater than 80 percent of maximum rpm, add four strokes of a handgun at each re-greasing cycle for bores up to 2 inches. For bores greater than 2 inches, up to 5 inches, add eight strokes of a handgun at each re-greasing cycle. For bores greater than 5 inches up to 6 inches, add 16 strokes of a handgun at each re-greasing cycle. For units running above 80 percent of maximum rpm, running temperature should be monitored. If a drastic change in running temperature is noted, Dodge recommends removing the used grease completely and recharging with fresh grease per the above instructions.

Select a grease with a viscosity at an operating temperature which will provide full film lubrication (see Table 12). Use a 50 °F to 100 °F increase in bearing temperature above ambient, depending on rpm and load. Use Table 13 as a general guide for re-greasing the bearings. A small amount of grease at frequent intervals is preferable to a large amount of grease at infrequent intervals. For special applications involving high speeds, high loads, or very low speeds, consult Dodge Application Engineering at +1 864 284 5700.

Table 12: Viscosity of oil in grease

dN Δ	Viscosity for loads up to 18% of dynamic capacity ♦ (SUS @ operating temperature)	dN Δ	Viscosity for loads up to 18% of dynamic capacity ♦ (SUS. @ operating temperature)
100	3,500	1,400	625
200	3,150	1,600	525
300	2,750	1,800	450
400	2,375	2,000	400
500	2,000	3,000	300
600	1,750	4,000	200
700	1,500	5,000	150
800	1,300	6,000	130
900	1,075	7,000	110
1000	900	8,000	100

Δ dN = Bore diameter (in) x rpm.

♦ For loads above 18% of dynamic capacity, an EP grease with the viscosity selected from above is recommended.

Table 13: Re-greasing intervals (months* – based on 12 hours per day, 150 °F Max.)

Shaft size (in)	Speed (rpm)							
	250	500	750	100	1,250	1,500	2,000	2,500
1-7/16—1-15/16	8	6	4	3	2	1	0.50	0.50
2-3/16	7	5	3	2	1	1	0.50	0.25
2-7/16—3	6	4	3	2	1	0.50	0.25	0.25
3-3/16—3-1/2	5	3	2	1	0.50	0.50	0.25	—
3-15/16—4-7/16	4	3	2	1	0.50	0.25	—	—
4-15/16—5-1/2	3	2	1	0.50	0.25	—	—	—
5-15/16—6	2	1	1	0.50	—	—	—	—

* For continuous operation, 24 hrs./day, reduce the re-greasing intervals by half.

Unified SAF

USAF 500 series Split-Sphere

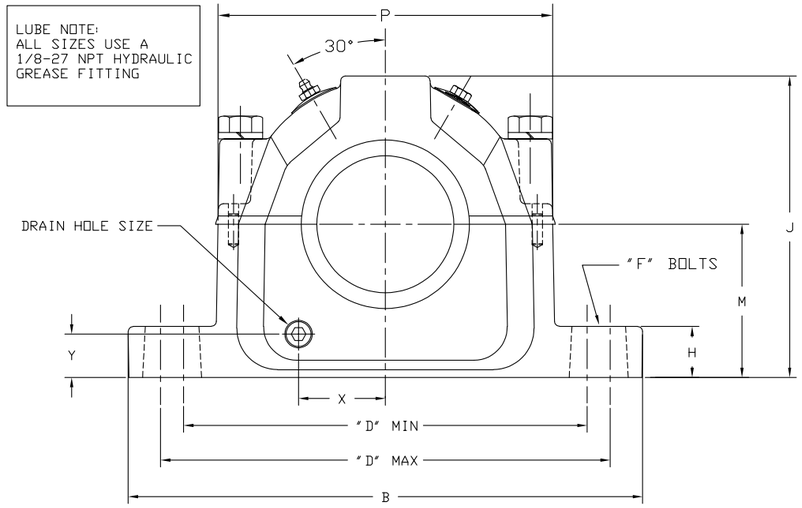
Table 14: USAF 500 series Split-Sphere pillow block ratings

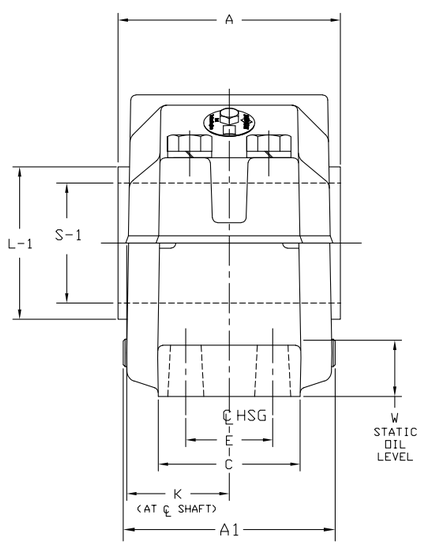
Shaft diameter S-1	Complete pillow block description part number	Housing with stab ring description part number	Bearing description part number	Dynamic capacity (C) (lb)	Max. rpm (grease)	Split LER seal description part number
2-3/16	P2B13-SS-203	H2S-513-USAF	BRG13SS203	32,500	2,600	14SS203
	043958	043998	043393			043501
	P4B13-SS-203	H4S-513-USAF	BRG13SS203	32,500	2,600	14SS203
	046110	039669	043393			043501
2-7/16	P2B15-SS-207	H2S-515-USAF	BRG15SS207	39,000	2,350	20SS207
	043959	044000	043400			043502
	P4B15-SS-207	H4S-515-USAF	BRG15SS207	39,000	2,350	20SS207
	043964	044003	043400			043502
2-11/16	P2B16-SS-211	H2S-516-USAF	BRG16SS211	40,500	2,300	24SS211
	043960	044198	043401			043504
	P4B16-SS-211	H4S-516-USAF	BRG16SS211	40,500	2,300	24SS211
	043965	044007	043401			043504
2-15/16	P2B17-SS-215	H2S-517-USAF	BRG17SS215	41,500	2,200	28SS215
	043961	044010	043402			043506
	P4B17-SS-215	H4S-517-USAF	BRG17SS215	41,500	2,200	28SS215
	043966	044013	043402			043506
3-3/16	P2B18-SS-303	H2S-518-USAF	BRG18SS303	47,500	2,000	34SS303
	043962	044199	043403			043508
	P4B18-SS-303	H4S-518-USAF	BRG18SS303	47,500	2,000	34SS303
	043967	044114	043403			043508
3-7/16	P2B20-SS-307	H2S-520-USAF	BRG20SS307	64,000	1,700	46SS307
	043963	044020	043404			043509
	P4B20-SS-307	H4S-520-USAF	BRG20SS307	64,000	1,700	46SS307
	043968	044023	043404			043509
3-15/16	P4B22-SS-315	H4S-522-USAF	BRG22SS315	80,000	1,450	50SS315
	043969	044025	043405			043511
4	P4B22-SS-400	H4S-522-USAF	BRG22SS400	80,000	1,450	50SS400
	043970	044025	043406			043512
4 3/16	P4B24-SS-403	H4S-524-USAF	BRG24SS403	102,000	1,300	52SS403
	043971	044202	043421			043513
4-7/16	P4B26-SS-407	H4S-526-USAF	BRG26SS407	120,000	1,200	54SS407
	043972	044031	043407			043514
4-15/16	P4B28-SS-415	H4S-528-USAF	BRG28SS415	143,000	1,100	56SS415
	043974	044034	043408			043516
5-7/16	P4B32-SS-507	H4S-532-USAF	BRG32SS507	190,000	950	60SS507
	043976	044040	043410			043519
5-15/16	P4B34-SS-515	H4S-534-USAF	BRG34SS515	216,000	900	64SS515
	043977	044043	043411			043520
6	P4B34-SS-600	H4S-534-USAF	BRG34SS600	216,000	900	64SS600
	043978	044043	043412			043521

Dimensions

USAF 500 series Split-Sphere pillow block – inch

2- and 4-bolt, adapter mount





USAF 500 series Split-Sphere pillow block – inch

2- and 4-bolt, adapter mount

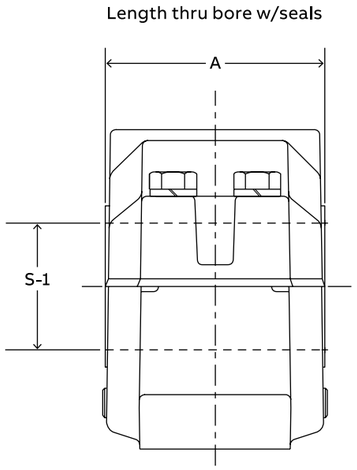
S-1 shaft size	Housing	A	▲ A1	B	C	D				E
						2-bolt		4-bolt		
2-3/16	513	4.72	4.64	11.00	3.13	8.13	9.50	8.13	9.50	1.88
2-7/16	515	4.47	5.20	11.13	3.13	8.63	9.63	8.63	9.63	1.88
2-11/16	516	4.72	5.44	12.59	3.50	9.63	11.00	9.63	11.00	2.13
2-15/16	517	4.83	5.39	12.59	3.50	9.88	11.00	9.88	11.00	2.13
3-3/16	518	5.70	6.16	13.63	3.88	10.25	11.75	10.38	11.63	2.13
3-7/16	520	6.19	6.78	15.36	4.34	11.63	13.13	11.63	13.13	2.38
3-15/16 4	522	6.59	7.08	16.50	4.75	—	—	12.59	14.50	2.75
4-7/16	526	7.50	8.27	18.38	5.13	—	—	14.50	16.00	3.25
4-15/16	528	7.88	8.77	19.69	5.88	—	—	15.63	17.38	3.38
5-7/16	532	9.20	9.92	21.66	6.75	—	—	17.38	19.25	3.75
5-15/16 6	534	9.13	9.72	24.75	6.75	—	—	19.38	21.63	4.25

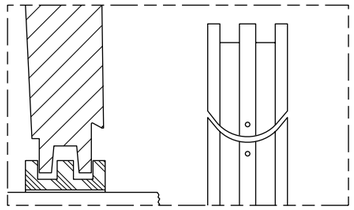
S-1 shaft size	Housing	F		H	J	K	M	P
		2-bolt	4-bolt					
2-3/16	513	5/8	1/2	1.03	5.94	2.16	3.00	6.50
2-7/16	515	5/8	1/2	1.25	6.44	2.31	3.25	7.06
2-11/16	516	3/4	5/8	1.06	6.75	2.42	3.50	7.94
2-15/16	517	3/4	5/8	1.25	7.38	2.47	3.75	8.19
3-3/16	518	3/4	5/8	1.44	7.75	2.84	4.00	8.66
3-7/16	520	7/8	3/4	1.66	8.75	3.16	4.50	9.78
3-15/16 4	522	—	3/4	1.78	9.41	3.30	4.94	10.59
4-7/16	526	—	7/8	2.06	11.53	3.75	6.00	12.41
4-15/16	528	—	1	2.06	11.81	4.00	6.00	13.25
5-7/16	532	—	1	2.34	13.31	4.63	6.69	14.91
5-15/16 6	534	—	1	2.88	14.56	4.63	7.06	16.81

▲ Housing width with drain plugs.

USAF 500 series Split-Sphere pillow block – inch

Seals



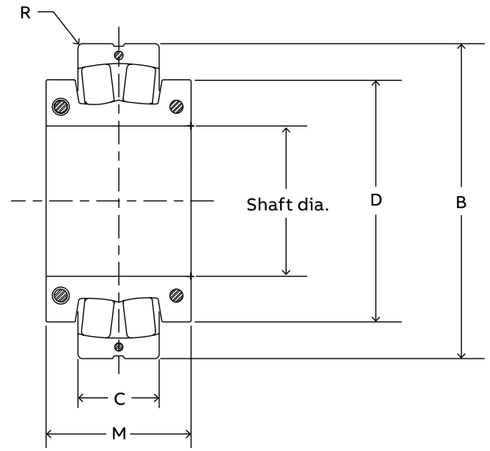


Split Seal
Permits easy installation in hard-to-reach applications without removing shaft.
Non-metallic split LER.

S-1 shaft size	Housing	Seal group	Seal part number	A
2-3/16	513	14	043501	4.72
2-7/16	515	20	043502	4.47
2-11/16	516	24	043504	4.72
2-15/16	517	28	043506	4.83
3-3/16	518	34	043508	5.70
3-7/16	520	46	043509	6.19
3-15/16	522	50	043511	6.59
4			043512	
4-3/16	524	52	043513	7.31
4-7/16	526	54	043514	7.50
4-15/16	528	56	043516	7.88
5-7/16	532	60	043519	9.20
5-15/16	534	64	043520	9.13
6			043521	
6-7/16	536	68	043522	9.69

USAF 500 series Split-Sphere pillow block – inch

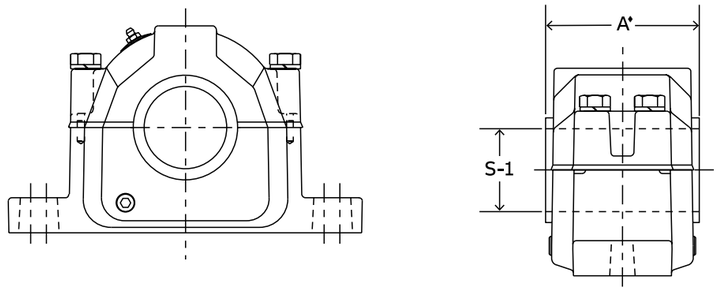
22200 Split-Sphere roller bearings



Shaft diameter (in)	Housing	Bearing descriptive number	Bearing part number	Approx. weight (lb)	B in (mm)	C in (mm)	M in (mm)	D in	R in
2-3/16	513	22213SS203	043393	5.07	4.7244 (120)	1.2205 (31)	2.1654 (55)	3.3464	0.06
2-7/16	515	22215SS207	043400	5.73	5.1181 (130)	1.2205 (31)	2.3622 (60)	3.4646	0.06
2-11/16	516	22216SS211	043401	7.12	5.5118 (140)	1.2992 (33)	2.4409 (62)	3.701	0.08
2-15/16	517	22217SS215	043402	9.04	5.9055 (150)	1.4173 (36)	2.6772 (68)	4.0157	0.08
3-3/16	518	22218SS303	043403	10.1	6.2992 (160)	1.5748 (40)	2.7559 (70)	4.4094	0.08
3-7/16	520	22220SS307	043404	14.2	7.0866 (180)	1.811 (46)	2.9921 (76)	4.6457	0.08
3-15/16	522	22222SS315	043405	22.0	7.874 (200)	2.0866 (53)	3.622 (92)	5.4331	0.08
4		22222SS400	043406						
4-7/16	526	22226SS407	043407	32.2	9.0551 (230)	2.5197 (64)	4.0945 (104)	5.9842	0.12
4-15/16	528	22228SS415	043408	43.2	9.8425 (250)	2.6772 (68)	4.3307 (110)	6.6929	0.12
5-7/16	532	22232SS507	043410	69.4	11.4173 (290)	3.1496 (80)	4.8819 (124)	7.4016	0.12
5-15/16	534	22234SS515	043411	82.2	12.2047 (310)	3.3858 (86)	5.0394 (128)	7.9527	0.12
6		22234SS600	043412						

USAF 500 series pillow block - inch

2- and 4-bolt, adapter mount, open end

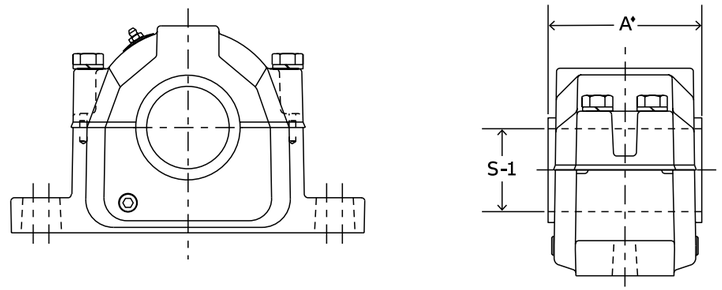


Shaft diameter S-1	Complete pillow block with TT seals description part number	Complete pillow block with LER seals description part number	Housing with stab ring description part number	Bearing description part number	Dynamic capacity (C) (lb)	Max. rpm (grease)
1-7/16	P2B509-USAF-107TT	P2B509-USAF-107LER	H2S-509-USAF	BRG22209KC3	24,500	5,600
	043015	043246	043995	422134		
1-11/16	P2B510-USAF-111TT	P2B510-USAF-111LER	H2S-510-USAF	BRG22210KC3	26,000	5,300
	043048	043247	043996	422137		
1-15/16	P2B511-USAF-115TT	P2B511-USAF-115LER	H2S-511-USAF	BRG22211KC3	31,500	4,500
	043248	040750	043997	422123		
2-3/16	P2B513-USAF-203TT	P2B513-USAF-203LER	H2S-513-USAF	BRG22213KC3	45,500	3,800
	043249	040751	043998	422124		
	P4B513-USAF-203TT	—	H4S-513-USAF	BRG22213KC3		
	039579		039669	422124		
2-7/16	P2B515-USAF-207TT	P2B515-USAF-207LER	H2S-515-USAF	BRG22215KC3	48,000	3,400
	041860	040752	044000	422001		
	P4B515-USAF-207TT	P4B515-USAF-207LER	H4S-515-USAF	BRG22215KC3		
	041861	040772	044003	422001		
2-1/2	P2B515-USAF-208TT	P2B515-USAF-208LER	H2S-515-USAF	BRG22215KC3	48,000	3,400
	041862	040753	044000	422001		
	P4B515-USAF-208TT	P4B515-USAF-208LER	H4S-515-USAF	BRG22215KC3		
	041863	040773	044003	422001		
2-11/16	P2B516-USAF-211TT	P2B516-USAF-211LER	H2S-516-USAF	BRG22216KC3	56,000	3,200
	042406	040754	044198	422003		
	P4B516-USAF-211TT	P4B516-USAF-211LER	H4S-516-USAF	BRG22216KC3		
	044015	040774	044007	422003		
2-3/4	P2B516-USAF-212TT	P2B516-USAF-212LER	H2S-516-USAF	BRG22216KC3	56,000	3,200
	042409	040755	044198	422003		
	P4B516-USAF-212TT	P4B516-USAF-212LER	H4S-516-USAF	BRG22216KC3		
	042423	040775	044007	422003		
2-15/16	P2B517-USAF-215TT	P2B517-USAF-215LER	H2S-517-USAF	BRG22217KC3	68,000	3,000
	041864	040756	044010	422005		
	P4B517-USAF-215TT	P4B517-USAF-215LER	H4S-517-USAF	BRG22217KC3		
	041865	040776	044013	422005		
3	P2B517-USAF-300TT	P2B517-USAF-300LER	H2S-517-USAF	BRG22217KC3	68,000	3,000
	041866	040757	044010	422005		
	P4B517-USAF-300TT	P4B517-USAF-300LER	H4S-517-USAF	BRG22217KC3		
	041867	040777	044013	422005		
3-3/16	P2B518-USAF-303TT	P2B518-USAF-303LER	H2S-518-USAF	BRG22218KC3	78,000	2,600
	042422	040827	044199	422007		
	P4B518-USAF-303TT	P4B518-USAF-303LER	H4S-518-USAF	BRG22218KC3		
	044115	040778	044114	422007		

♦ Length through bore with seals.

USAF 500 series pillow block – inch

2- and 4-bolt, adapter mount, open end



Shaft diameter S-1	SNW description part number	Triple-Tect description part number	TTDN description part number	# LER description part number	Aux description part number	End cover description part number
1-7/16	H309-SNW-107	08TT107	—	08LER107	—	EC08
	046350	043578		042193		040700
1-11/16	H310-SNW-111	10TT111	—	10LER111	—	EC10
	046351	043579		042199		040701
1-15/16	H311-SNW-115	12TT115	12TTDN115	12LER115	12AUX115	EC12
	046352	043540	039852	042512	041687	040702
2-3/16	H313-SNW-203	14TT203	14TTDN203	14LER203	14AUX203	EC14
	046353	043541	039853	042513	041688	040703
	H313-SNW-203	14TT203	14TTDN203	14LER203	14AUX203	EC14
	046353	043541	039853	042513	041688	040703
2-7/16	H315-SNW-207	20TT207	20TTDN207	20LER207	20AUX207	EC20
	046354	043542	039538	042514	042380	040704
	H315-SNW-207	20TT207	20TTDN207	20LER207	20AUX207	EC20
	046354	043542	039538	042514	042380	040704
2-1/2	H315-SNW-208	20TT208	20TTDN208	20LER208	20AUX208	EC20
	046355	043543	039854	042515	040890	040704
	H315-SNW-208	20TT208	20TTDN208	20LER208	20AUX208	EC20
	046355	043543	039854	042515	040890	040704
2-11/16	H316-SNW-211	24TT211	24TTDN211	24LER211	24AUX211	EC24
	046356	043544	039855	042516	042381	040705
	H316-SNW-211	24TT211	24TTDN211	24LER211	24AUX211	EC24
	046356	043544	039855	042516	042381	040705
2-3/4	H316-SNW-212	24TT212	24TTDN212	24LER212	24AUX212	EC24
	046357	043545	039856	042517	040891	040705
	H316-SNW-212	24TT212	24TTDN212	24LER212	24AUX212	EC24
	046357	043545	039856	042517	040891	040705
2-15/16	H317-SNW-215	28TT215	28TTDN215	28LER215	28AUX215	EC28
	046358	043546	039530	042518	042382	040706
	H317-SNW-215	28TT215	28TTDN215	28LER215	28AUX215	EC28
	046358	043546	039530	042518	042382	040706
3	H317-SNW-300	28TT300	28TTDN300	28LER300	28AUX300	EC28
	046359	043547	039857	042519	040918	040706
	H317-SNW-300	28TT300	28TTDN300	28LER300	28AUX300	EC28
	046359	043547	039857	042519	040918	040706
3-3/16	H318-SNW-303	34TT303	34TTDN303	34LER303	34AUX303	EC34
	046360	043548	039858	042520	040892	040707
	H318-SNW-303	34TT303	34TTDN303	34LER303	34AUX303	EC34
	046360	043548	039858	042520	040892	040707

Note: # LER seals are made from aluminum unless otherwise noted by the * symbol.

If an * appears by the part number, the LER seal is manufactured from steel.

♦ Length through bore with seals.

USAF 500 series pillow block – inch

2- and 4-bolt, adapter mount, open end

Shaft diameter S-1	Complete pillow block with TT seals description part number	Complete pillow block with LER seals description part number	Housing with stab ring description part number	Bearing description part number	Dynamic capacity (C) (lb)	Max speed (rpm) (grease)
3-7/16	P2B520-USAF-307TT	P2B520-USAF-307LER	H2S-520-USAF	BRG22220KC3	96,500	2,200
	041868	040758	044020	422009		
	P4B520-USAF-307TT	P4B520-USAF-307LER	H4S-520-USAF	BRG22220KC3		
	041869	040989	044023	422009		
3-1/2	P2B520-USAF-308TT	P2B520-USAF-308LER	H2S-520-USAF	BRG22220KC3	96,500	2,200
	041870	040759	044020	422009		
	P4B520-USAF-308TT	P4B520-USAF-308LER	H4S-520-USAF	BRG22220KC3		
	041871	040779	044023	422009		
3-15/16	P4B522-USAF-315TT	P4B522-USAF-315LER	H4S-522-USAF	BRG22222KC3	122,000	2,000
	041872	040990	044025	422011		
4	P4B522-USAF-400TT	P4B522-USAF-400LER	H4S-522-USAF	BRG22222KC3	122,000	2,000
	041873	040760	044025	422011		
4-3/16	P4B524-USAF-403TT	P4B524-USAF-403LER	H4S-524-USAF	BRG22224KC3	143,000	1,900
	042431	040761	044202	422013		
4-7/16	P4B526-USAF-407TT	P4B526-USAF-407LER	H4S-526-USAF	BRG22226KC3	170,000	1,800
	041874	040991	044031	422015		
4-1/2	P4B526-USAF-408TT	P4B526-USAF-408LER	H4S-526-USAF	BRG22226KC3	170,000	1,800
	041875	040762	044031	422015		
4-15/16	P4B528-USAF-415TT	P4B528-USAF-415LER	H4S-528-USAF	BRG22228KC3	196,000	1,700
	041876	040992	044034	422017		
5	P4B528-USAF-500TT	P4B528-USAF-500LER	H4S-528-USAF	BRG22228KC3	196,000	1,700
	041877	040763	044034	422017		
5-3/16	P4B530-USAF-503TT	—	H4S-530-USAF	BRG22230KC3	228,000	1,600
	042438		044203	422019		
5-7/16	P4B532-USAF-507TT	P4B532-USAF-507LER	H4S-532-USAF	BRG22232KC3	260,000	1,500
	041878	040993	044040	422021		
5-1/2	P4B532-USAF-508TT	P4B532-USAF-508LER	H4S-532-USAF	BRG22232KC3	260,000	1,500
	041879	040764	044040	422021		
5-15/16	P4B534-USAF-515TT	P4B534-USAF-515LER	H4S-534-USAF	BRG22234KC3	300,000	1,300
	041880	040994	044043	422023		
6	P4B534-USAF-600TT	P4B534-USAF-600LER	H4S-534-USAF	BRG22234KC3	300,000	1,300
	041881	040765	044043	422023		
6-7/16	P4B536-USAF-607TT	P4B536-USAF-607LER	H4S-536-USAF	BRG22236KC3	305,000	1,300
	041882	040766	044046	422025		
6-1/2	P4B536-USAF-608TT	P4B536-USAF-608LER	H4S-536-USAF	BRG22236KC3	305,000	1,300
	041883	040767	044046	422025		
6-15/16	P4B538-USAF-615TT	P4B538-USAF-615LER	H4S-538-USAF	BRG22238KC3	270,000	1,200
	041884	040768	044049	422027		
7	P4B538-USAF-700TT	P4B538-USAF-700LER	H4S-538-USAF	BRG22238KC3	270,000	1,200
	041885	040769	044049	422027		
7-3/16	P4B540-USAF-703TT	—	H4S-540-USAF	BRG22240KC3	300,000	900
	039606		039681	422064		
7-1/2	P4B544-USAF-708TT	P4B544-USAF-708LER	H4S-544S-USAF	BRG22244KC3	365,000	950
	042445	040828	044054	422029		
7-15/16	P4B544-USAF-715TT	P4B544-USAF-715LER	H4S-544-USAF	BRG22244KC3	365,000	950
	041886	040770	044055	422029		

USAF 500 series pillow block – inch

2- and 4-bolt, adapter mount, open end

Shaft diameter S-1	SNW description part number	Triple-Tect description part number	TTDN description part number	# LER description part number	Aux description part number	End cover description part number
3-7/16	H320-SNW-307	46TT307	46TTDN307	46LER307	46AUX307	EC46
	046361	043549	039859	042521	042383	040708
	H320-SNW-307	46TT307	46TTDN307	46LER307	46AUX307	EC46
	046361	043549	039859	042521	042383	040708
3-1/2	H320-SNW-308	46TT308	46TTDN308	46LER308	46AUX308	EC46
	046362	043550	039860	042522	040919	040708
	H320-SNW-308	46TT308	46TTDN308	46LER308	46AUX308	EC46
	046362	043550	039860	042522	040919	040708
3-15/16	H322-SNW-315	50TT315	50TTDN315	50LER315	50AUX315	EC50
	046363	043551	039861	042523	042384	040709
4	H322-SNW-400	50TT400	50TTDN400	50LER400	50AUX400	EC50
	046364	043552	039862	042524	040893	040709
4-3/16	H3124-SNW-403	52TT403	52TTDN403	52LER403	52AUX403	EC52
	046430	043553	039863	042525	044360	040710
4-7/16	H3126-SNW-407	54TT407	54TTDN407	54LER407	54AUX407	EC54
	046431	043554	039864	042526	042385	040711
4-1/2	H3126-SNW-408	54TT408	54TTDN408	54LER408	54AUX408	EC54
	046432	043555	039865	042527	042386	040711
4-15/16	H3128-SNW-415	56TT415	56TTDN415	56LER415	56AUX415	EC56
	046433	043556	039866	042528	042387	040712
5	H3128-SNW-500	56TT500	56TTDN500	56LER500	56AUX500	EC562
	046434	043557	039867	042529	040894	040712
5-3/16	SNW30X503	58TT503	—	58LER503	—	EC58
	043618	043558		042530		040713
5-7/16	SNW32X507	60TT507	—	60LER507	60AUX507	EC60
	043619	043559		042531	042388	040714
5-1/2	SNW32X508	60TT508	—	60LER508	60AUX508	EC60
	043634	043574		042532	040895	040714
5-15/16	SNW34X515	64TT515	—	64LER515	64AUX515	EC64
	043620	043560		042533	042389	040681
6	SNW34X600	64TT600	—	64LER600	64AUX600	EC64
	043621	043561		042534	041646	040681
6-7/16	SNW36X607	68TT607	—	68LER607	68AUX607	EC68
	043622	043562		042535	042390	040682
6-1/2	SNW36X608	68TT608	—	68LER608	68AUX608	EC68
	043623	043563		042536	042391	040682
6-15/16	SNW38X615	72TT615	—	72LER615	72AUX615	EC72
	043624	043564		042537	042392	040683
7	SNW38X700	72TT700	—	72LER700	72AUX700	EC72
	043625	043565		042538	043109	040683
7-3/16	SNW40X703	74TT703	—	74LER703	74AUX703	—
	046545	046421		043386	040690	
7-1/2	SNW44X708	76TT708	—	76LER708	76AUX708	EC76
	043627	043567		042539	040896	040684
7-15/16	SNW44X715	78TT715	—	78LER715	78AUX715	EC78
	043626	043566		042540	042393	040685

Note: # LER seals are made from aluminum unless otherwise noted by the * symbol.

If an * appears by the part number, the LER seal is manufactured from steel.

USAF 500 series pillow block – inch

2- and 4-bolt, adapter mount, open end

Shaft diameter S-1	Complete pillow block description part number	Housing with stab ring description part number	Bearing description part number	Dynamic capacity (C) (lb)	Max speed (rpm) (grease)
8	P4B544-USAF-800TT	H4S-544-USAF	BRG22244KC3	365,000	950
	041887	044055	422029		
8-7/16	P4B048-USAF-807TT	H4S-048-USAF	BRG23048KC3	260,000	950
	042447	044200	422031		
8-1/2	P4B048-USAF-808TT	H4S-048-USAF	BRG23048KC3	260,000	950
	042448	044200	422031		
8-15/16	P4B048-USAF-815TT	H4S-048-USAF	BRG23048KC3	260,000	950
	042449	044200	422031		
9	P4B048-USAF-900TT	H4S-048-USAF	BRG23048KC3	260,000	950
	042453	044200	422031		
9-7/16	P4B052-USAF-907TT	H4S-052-USAF	BRG23052KC3	340,000	900
	042454	422542	422543		
9-1/2	P4B052-USAF-908TT	H4S-052-USAF	BRG23052KC3	340,000	900
	422544	422542	422543		
9-15/16	P4B056-USAF-915TT	H4S-056-USAF	BRG23056KC3	345,000	850
	042458	422560	422030		
10	P4B056-USAF-1000TT	H4S-056-USAF	BRG23056KC3	345,000	850
	041628	422560	422030		
10-7/16	P4B056-USAF-1007TT	H4S-056L-USAF	BRG23056KC3	345,000	850
	042463	044201	422030		
10-1/2	P4B056-USAF-1008TT	H4S-056L-USAF	BRG23056KC3	345,000	850
	042464	044201	422030		

USAF 500 series pillow block – inch

2- and 4-bolt, adapter mount, open end

Shaft diameter S-1	SNW description part number	Triple-Tect description part number	TTDN part number	# LER description part number	Aux description part number	End cover description part number
8	SNW44X800	78TT800	—	78LER800	78AUX800	EC78
	043628	043568		042541*	042394	040685
8-7/16	SNP3048X807	90TT807	—	90LER807	90AUX807	EC90
	043629	043569		042542*	040897	042368
8-1/2	SNP3048X808	90TT808	—	90LER808	90AUX808	EC90
	043630	043570		042543*	040898	042368
8-15/16	SNP3048X815	90TT815	—	90LER815	—	EC90
	043631	043571		042544*		042368
9	SNP3048X900	90TT900	—	90LER900	90AUX900	EC90
	043632	043572		042545*	040995	042368
9-7/16	SNP3052X907	84TT907	—	84LER907	84AUX907	EC84
	043585	043538		042510*	040900	422606
9-1/2	SNP3052X908	84TT908	—	84LER908	84AUX908	EC84
	422538	422545		422594	040901	422606
9-15/16	SNP3056X915	92TT915	—	92LER915	—	EC92
	043586	043575		042511*		042369
10	SNP3056X1000	92TT1000	—	92LER1000	92AUX1000	EC92
	043633	043573		041082*	042395	042369
10-7/16	SNP3056X1007	94TT1007	—	94LER1007	—	EC94
	043580	047940		042036*		040689
10-1/2	SNP3056X1008	94TT1008	—	94LER1008	94AUX1008	EC94
	422567	047941		422573*	042396	040689

Note: # LER seals are made from aluminum unless otherwise noted by the * symbol.

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Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

USAF 500 series pillow block – inch

2- and 4-bolt, adapter mount, closed end

Shaft dia. S-1	Complete pillow block description part number	Housing description part number	Bearing description part number	Dynamic capacity (C) (lb)	Max rpm (grease)	SNW description part number	Triple-Tect description part number	Drop-in Triple-Tect description part number	# LER description part number	Aux taconite description part number
1-7/16	CP2B509-USAF-107TT	CH2S-509-USAF	BRG22209KC3	24,500	5,600	H309-SNW-107	08TT107	—	08LER107	—
	039575	039665	422134			046350	043578		042193	
1-11/16	CP2B510-USAF-111TT	CH2S-510-USAF	BRG22210KC3	26,000	5,300	H310-SNW-111	10TT111	—	10LER111	—
	039576	039666	422137			046351	043579		042199	
1-15/16	CP2B511-USAF-115TT	CH2S-511-USAF	BRG22211KC3	31,500	4,500	H311-SNW-115	12TT115	12TTDN115	12LER115	12AUX115
	039577	039667	422123			046352	043540	039852	042512	041687
2-3/16	CP2B513-USAF-203TT	CH2S-513-USAF	BRG22213KC3	45,500	3,800	H313-SNW-203	14TT203	14TTDN203	14LER203	14AUX203
	039578	039668	422124			046353	043541	039853	042513	041688
	CP4B513-USAF-203TT	CH4S-513-USAF	BRG22213KC3	45,500	3,800	H313-SNW-203	14TT203	14TTDN203	14LER203	14AUX203
	039580	039670	422124			046353	043541	039853	042513	041688
2-7/16	CP2B515-USAF-207TT	CH2S-515-USAF	BRG22215KC3	48,000	3,400	H315-SNW-207	20TT207	20TTDN207	20LER207	20AUX207
	039581	039544	422001			046354	043542	039538	042514	042380
	CP4B515-USAF-207TT	CH4S-515-USAF	BRG22215KC3	48,000	3,400	H315-SNW-207	20TT207	20TTDN207	20LER207	20AUX207
	039582	039545	422001			046354	043542	039538	042514	042380
2-1/2	CP2B515-USAF-208TT	CH2S-515-USAF	BRG22215KC3	48,000	3,400	H315-SNW-208	20TT208	20TTDN208	20LER208	20AUX208
	039583	039544	422001			046355	043543	039854	042515	040890
	CP4B515-USAF-208TT	CH4S-515-USAF	BRG22215KC3	48,000	3,400	H315-SNW-208	20TT208	20TTDN208	20LER208	20AUX208
	039584	039545	422001			046355	043543	039854	042515	040890
2-11/16	CP2B516-USAF-211TT	CH2S-516-USAF	BRG22216KC3	56,000	3,200	H316-SNW-211	24TT211	24TTDN211	24LER211	24AUX211
	039585	039671	422003			046356	043544	039855	042516	042381
	CP4B516-USAF-211TT	CH4S-516-USAF	BRG22216KC3	56,000	3,200	H316-SNW-211	24TT211	24TTDN211	24LER211	24AUX211
	039586	039672	422003			046356	043544	039855	042516	042381
2-3/4	CP2B516-USAF-212TT	CH2S-516-USAF	BRG22216KC3	56,000	3,200	H316-SNW-212	24TT212	24TTDN212	24LER212	24AUX212
	039587	039671	422003			046357	043545	039856	042517	040891
	CP4B516-USAF-212TT	CH4S-516-USAF	BRG22216KC3	56,000	3,200	H316-SNW-212	24TT212	24TTDN212	24LER212	24AUX212
	039588	039672	422003			046357	043545	039856	042517	040891
2-15/16	CP2B517-USAF-215TT	CH2S-517-USAF	BRG22217KC3	68,000	3,000	H317-SNW-215	28TT215	28TTDN215	28LER215	28AUX215
	039589	039508	422005			046358	043546	039530	042518	042382
	CP4B517-USAF-215TT	CH4S-517-USAF	BRG22217KC3	68,000	3,000	H317-SNW-215	28TT215	28TTDN215	28LER215	28AUX215
	039590	039509	422005			046358	043546	039530	042518	042382
3	CP2B517-USAF-300TT	CH2S-517-USAF	BRG22217KC3	68,000	3,000	H317-SNW-300	28TT300	28TTDN300	28LER300	28AUX300
	039591	039508	422005			046359	043547	039857	042519	040918
	CP4B517-USAF-300TT	CH4S-517-USAF	BRG22217KC3	68,000	3,000	H317-SNW-300	28TT300	28TTDN300	28LER300	28AUX300
	039592	039509	422005			046359	043547	039857	042519	040918
3-3/16	CP2B518-USAF-303TT	CH2S-518-USAF	BRG22218KC3	78,000	2,600	H318-SNW-303	34TT303	34TTDN303	34LER303	34AUX303
	039593	039673	422007			046360	043548	039858	042520	040892
	CP4B518-USAF-303TT	CH4S-518-USAF	BRG22218KC3	78,000	2,600	H318-SNW-303	34TT303	34TTDN303	34LER303	34AUX303
	039594	039674	422007			046360	043548	039858	042520	040892
3-7/16	CP2B520-USAF-307TT	CH2S-520-USAF	BRG22220KC3	96,500	2,200	H320-SNW-307	46TT307	46TTDN307	46LER307	46AUX307
	039595	039675	422009			046361	043549	039859	042521	042383
	CP4B520-USAF-307TT	CH4S-520-USAF	BRG22220KC3	96,500	2,200	H320-SNW-307	46TT307	46TTDN307	46LER307	46AUX307
	039596	039676	422009			046361	043549	039859	042521	042383

Note: # LER seals are made from aluminum unless otherwise noted by the * symbol.

If an * appears by the part number, the LER seal is manufactured from steel.

USAF 500 series pillow block – inch

2- and 4-bolt, adapter mount, closed end

Shaft dia. S-1	Complete pillow block description part number	Housing description part number	Bearing description part number	Dynamic capacity (C) (lb)	Max rpm LER (grease)	SNW description part number	Triple-Tect description part number	Drop-in Triple-Tect description part number	# LER description part number	Aux taconite description part number
3-1/2	CP2B520-USAF-308TT	CH2S-520-USAF	BRG22220KC3	96,500	2,200	H320-SNW-308	46TT308	46TTDN308	46LER308	46AUX308
	039597	039675	422009			046362	043550	039860	042522	040919
	CP4B520-USAF-308TT	CH4S-520-USAF	BRG22220KC3	96,500	2,200	H320-SNW-308	46TT308	46TTDN308	46LER308	46AUX308
	039598	039676	422009			046362	043550	039860	042522	040919
3-15/16	CP4B522-USAF-305TT	CH4S-522-USAF	BRG22222KC3	122,000	2,000	H322-SNW-315	50TT315	50TTDN315	50LER315	50AUX315
	039599	039677	422011			046363	043551	039861	042523	042384
4	CP4B522-USAF-400TT	CH4S-522-USAF	BRG22222KC3	122,000	2,000	H322-SNW-400	50TT400	50TTDN400	50LER400	50AUX400
	039600	039677	422011			046364	043552	039862	042524	040893
4-3-16	CP4B524-USAF-403TT	CH4S-524-USAF	BRG22224KC3	143,000	1,900	H3124-SNW-403	52TT403	52TTDN403	52LER403	52AUX403
	039601	039678	422013			046430	043553	039863	042525	044360
4-7/16	CP4B526-USAF-407TT	CH4S-526-USAF	BRG22226KC3	170,000	1,800	H3126-SNW-407	54TT407	54TTDN407	54LER407	54AUX407
	039602	039679	422015			046431	043554	039864	042526	042385
4-1/2	CP4B526-USAF-408TT	CH4S-526-USAF	BRG22226KC3	170,000	1,800	H3126-SNW-408	54TT408	54TTDN408	54LER408	54AUX408
	039603	039679	422015			046432	043555	039865	042527	042386
4-15/16	CP4B528-USAF-415TT	CH4S-528-USAF	BRG22228KC3	196,000	1,700	H3128-SNW-415	56TT415	56TTDN415	56LER415	56AUX415
	039604	039680	422017			046433	043556	039866	042528	042387
5	CP4B528-USAF-500TT	CH4S-528-USAF	BRG22228KC3	196,000	1,700	H3128-SNW-500	56TT500	56TTDN500	56LER500	56AUX500
	039605	039680	422017			046434	043557	039867	042529	040894
5-3/16	CP4B530-USAF-503TT	CH4S-530-USAF	BRG2223KC3	228,000	1,600	SNW30X503	58TT503	—	58LER503	—
	039138	039217	422019			043618	043558		042530	
5-7/16	CP4B532-USAF-507TT	CH4S-532-USAF	BRG22232KC3	260,000	1,500	SNW32X507	60TT507	—	60LER507	60AUX507
	039141	039218	422021			043619	043559		042531	
5-1/2	CP4B532-USAF-508TT	CH4S-532-USAF	BRG22232KC3	260,000	1,500	SNW32X508	60TT508	—	60LER508	60AUX508
	039142	039218	422021			043634	043574		042532	040895
5-15/16	CP4B534-USAF-515TT	CH4S-534-USAF	BRG22234KC3	300,000	1,300	SNW34X515	64TT515	—	64LER515	64AUX515
	039147	039219	422023			043620	043560		042533	042389
6	CP4B534-USAF-600TT	CH4S-534-USAF	BRG22234KC3	300,000	1,300	SNW34X600	64TT600	—	64LER600	64AUX600
	039148	039219	422023			043621	043561		042534	041646
6-7/16	CP4B536-USAF-607TT	CH4S-536-USAF	BRG22236KC3	305,000	1,300	SNW36X607	68TT607	—	68LER607	68AUX607
	039151	039220	422025			043622	042562		042535	042390
6-1/2	CP4B536-USAF-608TT	CH4S-536-USAF	BRG22236KC3	305,000	1,300	SNW36X608	68TT608	—	68LER608	68AUX608
	039152	039220	422025			043623	043563		042536	042391
6-15/16	CP4B538-USAF-615TT	CH4S-538-USAF	BRG22238KC3	270,000	1,200	SNW38X615	72TT615	—	72LER615	72AUX615
	039155	039221	422027			043624	043564		042537	042392
7	CP4B538-USAF-700TT	CH4S-538-USAF	BRG22238KC3	270,000	1,200	SNW38X700	72TT700	—	72LER700	72AUX700
	039156	039221	422027			043625	043565		042538	043109
7-3/16	CP4B540-USAF-703TT	CH4S-540-USAF	BRG22240KC3	300,000	900	SNW40X703	74TT703	—	74LER703	74AUX703
	039159	039222	422064			046545	046421		043386	040690
7-1/2	CP4B544-USAF-708TT	CH4S-544S-USAF	BRG22244KC3	365,000	950	SNW44X708	76TT708	—	76LER708	76AUX708
	039160	039223	422029			043627	043567		042539	040896
7-15/16	CP4B544-USAF-715TT	CH4S-544-USAF	BRG22244KC3	365,000	950	SNW44X715	78TT715	—	78LER715	78AUX715
	039163	039224	422029			043626	043566		042540	042393

Note: # LER seals are made from aluminum unless otherwise noted by the * symbol.

If an * appears by the part number, the LER seal is manufactured from steel.

USAF 500 series pillow block – inch

2- and 4-bolt, adapter mount, closed end

Shaft dia. S-1	Complete pillow block description part number	Housing description part number	Bearing description part number	Dynamic capacity (C) (lb)	Max. rpm LER (grease)	SNW description part number	Triple-Tect description part number	Drop-in Triple-Tect description part number	# LER description part number	Aux taconite description part number
8	CP4B544-USAF-800TT	CH4S-544-USAF	BRG22244KC3	365,000	950	SNW44X800	78TT800	—	78LER800	78AUX800
	039164	039224	422029			043628	043568		042541*	042394
8-7/16	CP4B048-USAF-807TT	CH4S-048-USAF	BRG23048KC3	260,000	800	SNP3048X807	90TT807	—	90LER807	90AUX807
	039165	039225	422031			043629	043569		042542*	040897
8-1/2	CP4B048-USAF-808TT	CH4S-048-USAF	BRG23048KC3	260,000	800	SNP3048X808	90TT808	—	90LER808	90AUX808
	039166	039225	422031			043630	043570		042543*	040898
8-15/16	CP4B048-USAF-815TT	CH4S-048-USAF	BRG23048KC3	260,000	800	SNP3048X815	90TT815	—	90LER815	—
	039167	039225	422031			043631	043571		042544*	
9	CP4B048-USAF-900TT	CH4S-048-USAF	BRG23048KC3	260,000	800	SNP3048X900	90TT900	—	90LER900	90AUX900
	039168	039225	422031			043632	043572		042545*	040995
9-7/16	CP4B052-USAF-907TT	CH4S-052-USAF	BRG23052KC3	340,000	750	SNP3052X907	84TT907	—	84LER907	84AUX907
	039169	039226	422543			043585	043538		042510*	040900
9-1/2	CP4B052-USAF-908TT	CH4S-052-USAF	BRG23052KC3	340,000	750	SNP3052X908	84TT908	—	84LER908	84AUX908
	039170	039226	422543			422538	422545		042594*	040901
9-15/16	CP4B056-USAF-915TT	CH4S-056-USAF	BRG23056KC3	345,000	700	SNP3056X915	92TT915	—	92LER915	—
	039171	039227	422030			043586	043575		042511*	
10	CP4B056-USAF-1000TT	CH4S-056-USAF	BRG23056KC3	345,000	700	SNP3056X1000	92TT1000	—	92LER1000	92AUX1000
	039172	039227	422030			043633	043573		041082*	042395
10-7/16	CP4B056-USAF-1007TT	CH4S-056L-USAF	BRG23056KC3	345,000	700	SNP3056X1007	94TT1007	—	94LER1007	—
	039173	039228	422030			043580	047940		042036*	
10-1/2	CP4B056-USAF-1008TT	CH4S-056L-USAF	BRG23056KC3	345,000	700	SNP3056X1008	94TT1008	—	94LER1008	94AUX1008
	039174	039228	422030			422567	047941		422573*	042396

Note: # LER seals are made from aluminum unless otherwise noted by the * symbol.

If an * appears by the part number, the LER seal is manufactured from steel.

Reference Guide
Type E Family (Tapered)
Specialty Tapered
Safety Mount Family (Spherical)
S-2000 (Spherical)
Unified SAF (Spherical)
Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

USAF 500 series pillow block – inch

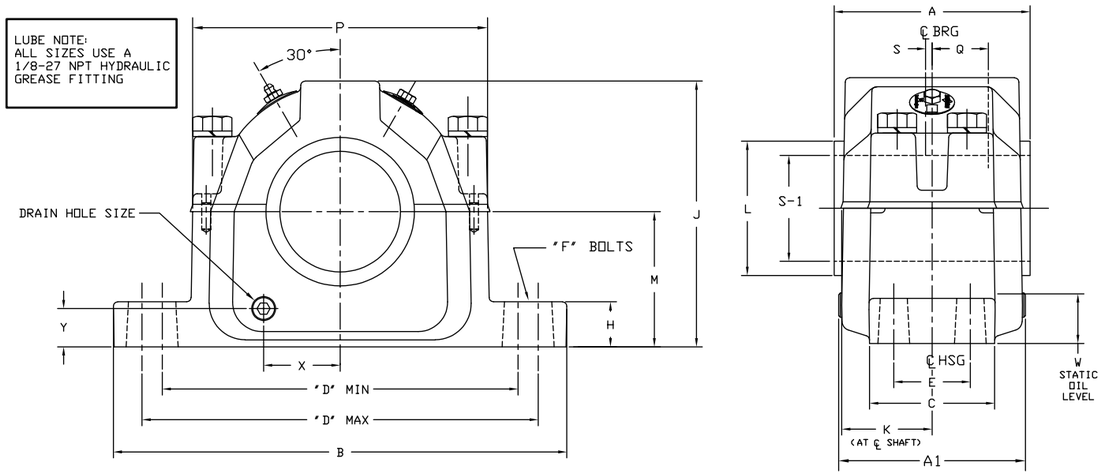
2- and 4-bolt, adapter mount

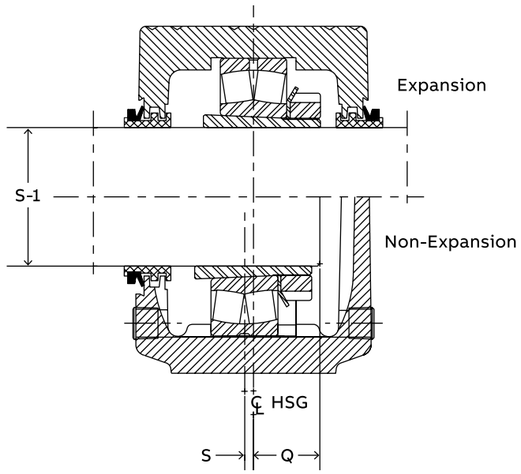
Shaft dia. S-1	Housing	500 Housing †							
		Through housing				Closed end housing			
		2-bolt		4-bolt		2-bolt		4-bolt	
		Part number	Appox. weight (lb)	Part number	Approx. weight (lb)	Part number	Appox. weight (lb)	Part number	Appox. weight (lb)
1-7/16	509	043995	9.5	—	—	039665	10.0	—	—
1-11/16	510	043996	11.3	—	—	039666	12.1	—	—
1-15/16	511	043997	15.6	039762	22.5	039667	16.5	—	—
2-3/16	513	043998	21.4	039669	22.5	039668	22.4	039670	23.5
2-7/16 2-1/2	515	044000	24.8	044003	26.4	039544	26.6	039545	27.9
2-11/16 2-3/4	516	044198	28.0	044007	28.0	039671	29.0	039672	29.0
2-15/16 3	517	044010	34.7	044013	38.3	039508	37.0	039509	40.6
3-3/16	518	044199	36.8	044114	37.2	039673	40.7	039674	41.2
3-7/16 3-1/2	520	044020	61.2	044023	61.8	039675	65.3	039676	65.9
3-15/16 4	522	—	—	044025	78.9	—	—	039677	84.0
4-3/16	524	—	—	044202	90.6	—	—	039678	96.1
4-7/16 4-1/2	526	—	—	044031	121.6	—	—	039679	128.2
4-15/16 5	528	—	—	044034	152.2	—	—	039680	162.2
5-3/16	530	—	—	044203	170.5	—	—	039217	182.3
5-7/16 5-1/2	532	—	—	044040	220.1	—	—	039218	235.2
5-15/16 6	534	—	—	044043	269.9	—	—	039219	282.8
6-7/16 6-1/2	536	—	—	044046	328.5	—	—	039220	349.7
6-15/16 7	538	—	—	044049	384.7	—	—	039221	409.4
7-3/16	540	—	—	039681	393.0	—	—	039222	403.0
7-1/2	544S	—	—	044054	624.0	—	—	039223	634.0
7-15/16 8	544	—	—	044055	621.0	—	—	039224	631.0
8-7/16 8-1/2 8-15/16 9	048 ♦	—	—	044200	386.0	—	—	039225	412.2
9-7/16 9-1/2	052 ♦	—	—	422542	575.0	—	—	039226	590.4
9-15/16 10	056 ♦	—	—	422560	692.0	—	—	039227	722.6
10-7/16 10-1/2	056L ♦	—	—	044201	690.0	—	—	039228	720.0

† Includes stabilizing ring(s). If a ♦ appears, the housing comes with two.

USAF 500 series pillow block – inch

2- and 4-bolt, adapter mount





USAF 500 series pillow block – inch

2- and 4-bolt, adapter mount

S-1 shaft size	Housing	A1▲	B	C	D				E	F bolt diameter	
					2-bolt		4-bolt				
					Min.	Max.	Min.	Max.		2-bolt	4-bolt
1-7/16	509	3.88	8.25	2.38	6.25	7.00	—	—	—	1/2	—
1-11/16	510	4.06	8.25	2.34	6.50	7.00	—	—	—	1/2	—
1-15/16	511	4.25	9.63	2.75	7.38	8.25	—	—	—	5/8	—
2-3/16	513	4.64	11.00	3.13	8.50	9.50	8.13	9.50	1.88	5/8	1/2
2-7/16 2-1/2	515	5.20	11.13	3.13	8.63	9.63	8.63	9.63	1.88	5/8	1/2
2-11/16 2-3/4	516	5.44	12.59	3.50	9.63	11.00	9.63	11.00	2.13	3/4	5/8
2-15/16 3	517	5.39	12.59	3.50	9.88	11.00	9.88	11.00	2.13	3/4	5/8
3-3/16	518	6.16	13.63	3.88	10.25	11.75	10.38	11.63	2.13	3/4	5/8
3-7/16 3-1/2	520	6.39	15.36	4.34	11.63	13.13	11.63	13.13	2.38	7/8	3/4
3-15/16 4	522	7.16	16.50	4.75	—	—	12.59	14.50	2.75	—	3/4
4-3/16	524	8.05	16.50	4.72	—	—	13.25	14.50	2.75	—	3/4
4-7/16 4-1/2	526	8.27	18.38	5.13	—	—	14.50	16.00	3.25	—	7/8
4-15/16 5	528	8.77	19.69	5.88	—	—	15.63	17.38	3.38	—	1

S-1 shaft size	Housing	H	J	K	L ♥	M	P	Q ★	S ●	W Static oil level	X	Y	Drain hole size
1-7/16	509	0.88	4.30	1.78	1.82	2.25	4.88	1.03	0.13	0.92	1.09	0.63	1/8-27 NPSI
1-11/16	510	1.03	4.59	1.88	2.07	2.50	5.13	1.11	0.13	1.08	1.25	0.81	1/8-27 NPSI
1-15/16	511	1.03	5.25	1.97	2.30	2.75	5.78	1.20	0.13	1.16	1.94	0.83	1/8-27 NPSI
2-3/16	513	1.03	5.94	2.16	2.55	3.00	6.50	1.38	0.16	1.11	1.66	0.78	1/8-27 NPSI
2-7/16 2-1/2	515	1.25	6.44	2.31	2.80	3.25	7.06	1.39	0.13	1.16	1.78	0.88	1/4-18 NPSF
2-11/16 2-3/4	516	1.06	6.75	2.42	3.69	3.50	7.94	1.44	0.18	1.25	1.97	0.95	1/4-18 NPSF
2-15/16 3	517	1.25	7.38	2.47	3.42	3.75	8.19	1.50	0.19	1.38	2.13	1.06	3/8-18 NPSF
3-3/16	518	1.44	7.75	2.84	3.69	4.00	8.66	1.72	0.19	1.47	2.50	1.13	3/8-18 NPSF
3-7/16 3-1/2	520	1.66	8.75	3.16	3.83	4.50	9.78	1.92	0.19	1.64	2.63	1.25	3/8-18 NPSF
3-15/16 4	522	1.78	9.41	3.30	4.33	4.94	10.59	2.09	0.19	1.80	2.88	1.34	3/8-18 NPSF
4-3/16	524	1.50	10.25	3.64	4.59	5.25	11.25	2.28	0.19	1.84	3.19	1.38	1/2-14 NPSF
4-7/16 4-1/2	526	2.06	11.53	3.75	4.94	6.00	12.41	2.47	0.19	2.34	3.31	1.63	1/2-14 NPSF
4-15/16 5	528	2.06	11.81	4.00	5.36	6.00	13.25	2.45	0.19	2.03	3.63	1.47	1/2-14 NPSF

▲ Housing width with drain plugs.

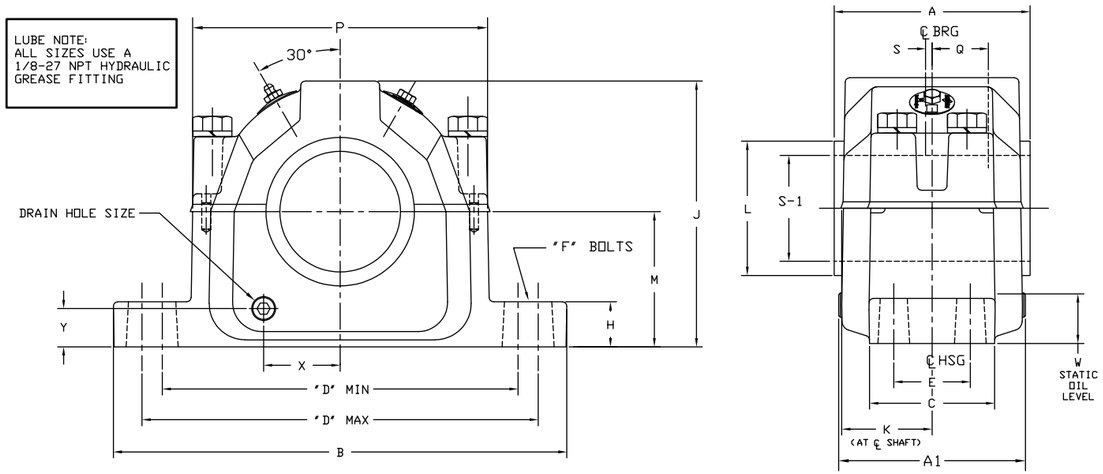
★ Distance shaft should extend beyond housing centerline if pillow block is closed end style.

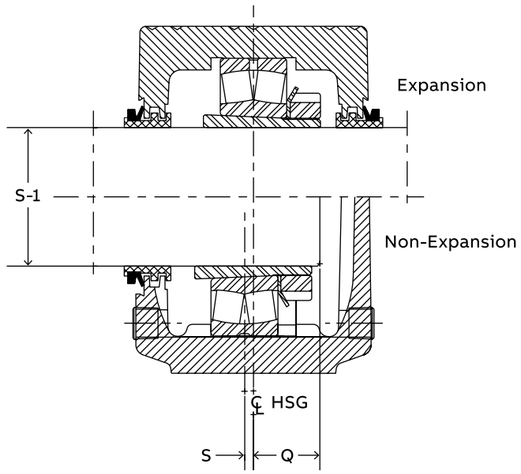
● Non-expansion bearing offset from centerline. For expansion bearing S = 0.

♥ Dimensions shown with Triple-Tect seals installed

USAF 500 series pillow block – inch

2- and 4-bolt, adapter mount





USAF 500 series pillow block – inch

2- and 4-bolt, adapter mount

S-1 shaft size	Housing	A1▲	B	C	D 2-bolt Min.	D 2-bolt Max.	D 4-bolt Min.	D 4-bolt Max.	E	F bolt diameter 2-bolt	F bolt diameter 4-bolt
5-3/16	530	9.36	20.88	6.25	—	—	16.75	18.25	3.75	—	1
5-7/16 5-1/2	532	9.92	21.66	6.25	—	—	17.38	19.25	3.75	—	1
5-15/16 6	534	9.91	24.75	6.75	—	—	19.38	21.63	4.25	—	1
6-7/16 6-1/2	536	10.41	26.75	7.13	—	—	20.88	23.63	4.63	—	1
6-15/16 7	538	10.81	28.00	7.50	—	—	21.63	24.38	4.50	—	1-1/4
7-3/16	540	11.53	28.75	8.00	—	—	22.50	25.00	5.00	—	1-1/4
7-1/2	544S	12.30	32.75	8.80	—	—	24.75	27.88	5.25	—	1-1/2
7-15/16 8	544										
8-7/16 8-1/2 8-15/16 9	048	11.53	28.75	8.00	—	—	22.50	25.00	5.00	—	1-1/4
9-7/16 9-1/2	052	12.30	32.75	8.88	—	—	24.75	27.88	5.25	—	1-1/2
9-15/16 10	056	13.66	34.25	9.00	—	—	26.25	29.50	5.50	—	1-1/2
10-7/16 10-1/2	056L										

S-1 shaft size	Housing	H	J	K	L ♥	M	P	Q ★	S ●	W Static oil level	X	Y	Drain hole size
5-3/16	530	2.38	12.50	4.33	5.77	6.31	14.31	2.45	0.19	2.03	3.59	1.33	1/2-14NPSF
5-7/16 5-1/2	532	2.34	13.31	4.63	5.88	6.69	14.91	2.97	0.19	2.09	4.03	1.33	1/2-14NPSF
5-15/16 6	534	2.88	14.56	4.63	6.44	7.06	16.81	3.13	0.19	2.19	4.16	1.33	1/2-14NPSF
6-7/16 6-1/2	536	3.00	15.13	4.88	6.80	7.50	17.19	3.16	0.19	2.42	4.22	1.63	1/2-14NPSF
6-15/16 7	538	3.13	15.81	5.06	7.38	7.88	18.00	3.30	0.19	2.53	4.75	1.61	1/2-14NPSF
7-3/16	540	3.38	16.63	5.44	8.09	8.25	19.00	3.50	0.19	2.47	4.91	1.53	1/2-14NPSF
7-1/2	544S	3.75	18.88	5.81	7.94 8.33	9.50	21.25	3.73	0.19	3.25	5.44	2.03	1/2-14NPSF
7-15/16 8	544												
8-7/16 8-1/2 8-15/16 9	48	3.38	16.63	5.44	9.33	8.25	19.00	3.56	0.00	2.25	—	—	—
9-7/16 9-1/2	52	3.75	18.88	5.81	9.98	9.50	21.25	3.88	0.00	2.89	—	—	—
9-15/16 10	56	4.00	20.00	6.38	10.38	9.88	22.31	4.00	0.00	2.36	—	—	—
10-7/16 10-1/2	056L												

▲ Housing width with drain plugs.

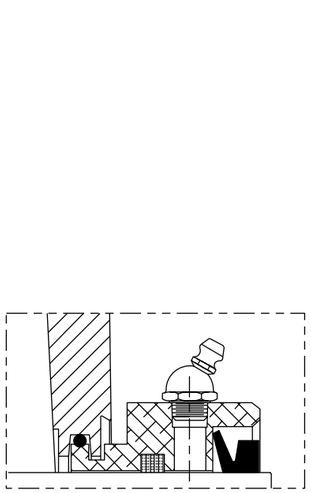
★ Distance shaft should extend beyond housing centerline if pillow block is closed end style.

● Non-expansion bearing offset from centerline. For expansion bearing S = 0.

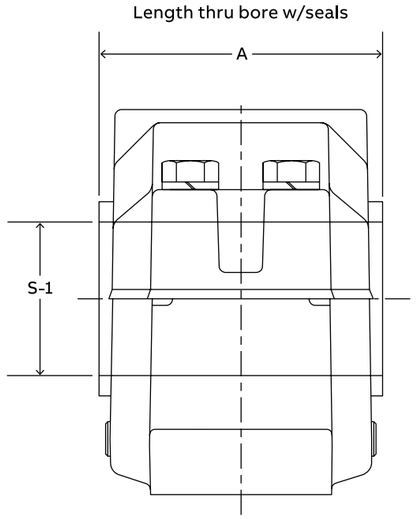
♥ Dimensions shown with Triple-Tect seals installed.

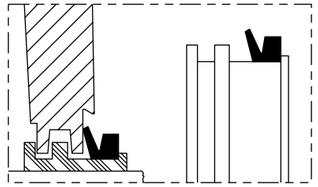
USAF 500 series pillow block – inch

Seals

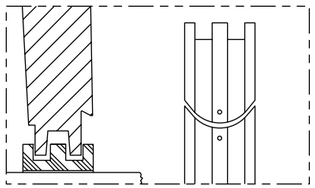


Auxiliary Taconite Seal
For dusty environments and low to moderate speeds

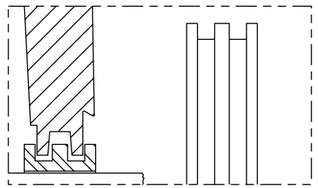




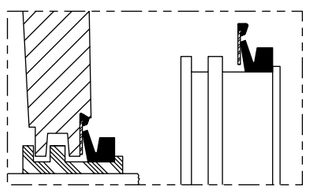
Triple-Tect Seal
General purpose seal for wet or dirty environments



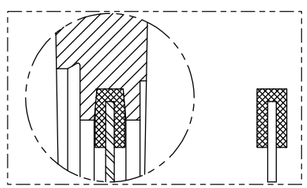
Split Seal
Permits easy installation in hard-to-reach applications without removing shaft.
Non-metallic split LER



LER Seal
High speed seal for relatively clean environments



Drop-in Triple-Tect Seal
Dodge exclusive, popular Triple-Tect features with simplified installation.



End Cover Seal
Allows use of open shaft housing as closed-end

USAF 500 series pillow block – inch

Seals

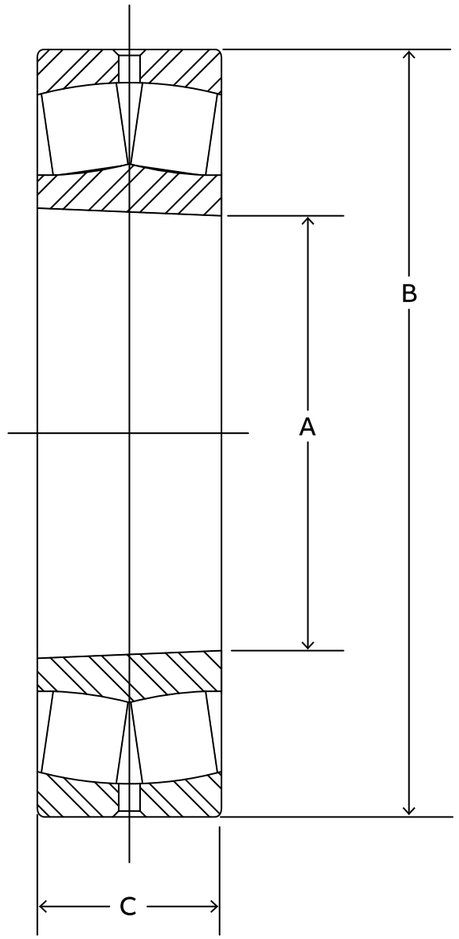
S-1 shaft size	Housing	Seal group	Part numbers					A			
			Triple-Tect (TT)	Triple-Tect drop-in (TTDN)	#Metal labyrinth (LER)	Auxiliary taconite (AUX)	End cover	TT	TTDN	LER	AUX
1-7/16	509	8	043578	—	042193	—	—	3.97	3.97	3.42	6.56
1-11/16	510	10	043579	—	042199	—	040701	4.14	4.14	3.61	6.73
1-15/16	511	12	043540	039852	042512	041687	040702	4.34	4.34	3.83	6.69
2-3/16	513	14	043541	039853	042513	041688	040703	4.72	4.72	4.19	7.56
2-7/16	515	20	043542	039538	042514	042380	040704	4.94	4.94	4.47	7.47
2-1/2			043543	039854	042515	040890	040704				
2-11/16	516	24	043544	039855	042516	042381	040705	5.33	5.33	4.72	7.72
2-3/4			043545	039856	042517	040891	040705				
2-15/16	517	28	043546	039530	042518	042382	040706	5.44	5.44	4.83	7.95
3			043547	039857	042519	040918	040706				
3-3/16	518	34	043548	039858	042520	040892	040707	6.20	6.20	5.70	8.27
3-7/16	520	46	043549	039859	042521	042383	040708	6.78	6.78	6.19	9.06
3-1/2			043550	039860	042522	040919	040708				
3-15/16	522	50	043551	039861	042523	042384	040709	7.06	7.13	6.59	9.05
4			043552	039862	042524	040893	040709				
4-3/16	524	52	043553	039863	042525	044360	040710	7.91	7.59	7.31	—
4-7/16	526	54	043554	039864	042526	042385	040711	8.08	8.08	7.50	10.63
4-1/2			043555	039865	042527	042386	040711				
4-15/16	528	56	043556	039866	042528	042387	040712	8.47	8.47	7.88	11.13
5			043557	039867	042529	040894	040712				
5-3/16	530	58	043558	—	042530	—	040713	9.28	9.28	8.70	-
5-7/16	532	60	043559	—	042531	042388	040714	9.78	9.78	9.20	11.95
5-1/2			043574		042532	040895	040714				
5-15/16	534	64	043560	—	042533	042389	040681	9.83	9.83	9.13	11.88
6			043561		042534	041646	040681				
6-7/16	536	68	043562	—	042535	042390	040682	10.39	10.39	9.69	12.94
6-1/2			043563		042536	042391	040682				
6-15/16	538	72	043564	—	042537	042392	040683	10.69	10.69	9.98	13.23
7			043565		042538	043109	040683				
7-3/16	540	74	046421	—	043386	040690	040691	11.44	—	10.72	15.28
7-1/2	544S	76	043567	—	042539	040896	040684	12.13	12.13	11.34	—
7-15/16	544	78	043566	—	042540	042393	040685				15.97
8			043568		042541*	042394	040685				
8-7/16	048	90	043569	—	042542*	040897	042368	12.06	—	11.72	15.53
8-1/2			043570		042543*	040898	042368				
8-15/16			043571		042544*	040899	042368				
9			043572		042545*	040995	042368				
9-7/16	052	84	043538	—	042510*	040900	422606	12.77	—	11.41	16.22
9-1/2			422545		422594*	040901	422606				
9-15/16	056	92	043575	—	042511*	—	042369	13.92	—	12.66	17.13
10			043573		041082*	042395	042369				
10-7/16	056L	94	047940	—	042036*	—	—	14.05	—	12.66	17.13
10-1/2			047941		422573*	042396	—				

Note: # LER seals are made from aluminum unless otherwise noted by the * symbol.

If an * appears by the part number, the LER seal is manufactured from steel.

USAF 500 series pillow block – inch

22200K and 23000K spherical roller bearings



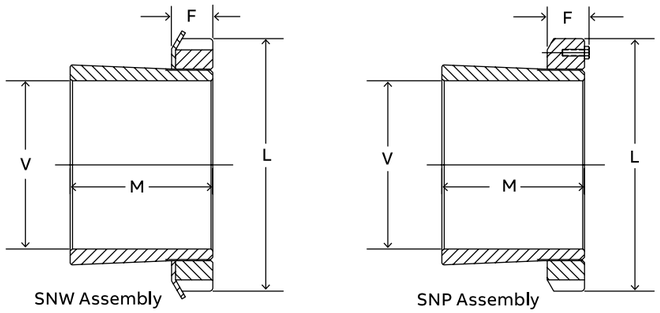
USAF 500 series pillow block – inch

22200K and 23000K spherical roller bearings

S-1 shaft size (in)	Housing	Bearing number	Part number	Approx. weight (lb)	A in (mm)	B in (mm)	C in (mm)
1-7/16	509	22209K	422134	1.2	1.7717 (45)	3.3465 (85)	0.9055 (23)
1-11/16	510	22210K	422137	1.3	1.9685 (50)	3.5233 (90)	0.9055 (23)
1-15/16	511	22211K	422123	1.8	2.1654 (55)	3.9370 (100)	0.9843 (25)
2-3/16	513	22213K	422124	3.2	2.5591 (65)	4.7244 (120)	1.2205 (31)
2-7/16 2-1/2	515	22215K	422001	3.6	2.9528 (75)	5.1181 (130)	1.2205 (31)
2-11/16 2-3/4	516	22216K	422003	4.4	3.1496 (80)	5.5188 (140)	1.2992 (33)
2-15/16 3	517	22217K	422005	5.5	3.3465 (85)	5.9055 (150)	1.4173 (36)
3-3/16	518	22218K	422007	7.0	3.5433 (90)	6.2992 (160)	1.5748 (40)
3-7/16 3-1/2	520	22220K	422009	10.4	3.9370 (100)	7.0866 (180)	1.8110 (46)
3-15/16 4	522	22222K	422011	14.9	4.3307 (110)	7.8740 (200)	2.0866 (53)
4-3/16	524	22224K	422013	18.7	4.7244 (120)	8.4646 (215)	2.2865 (58)
4-7/16 4-1/2	526	22226K	422015	23.4	5.1181 (130)	9.0551 (230)	2.5197 (64)
4-15/16 5	528	22228K	422017	29.5	5.5118 (140)	9.8425 (250)	2.6772 (68)
5-3/16	530	22230K	422019	37.5	5.9055 (150)	10.6299 (270)	2.8740 (73)
5-7/16 5-1/2	532	22232K	422021	48.1	6.2992 (160)	11.4173 (290)	3.1496 (80)
5-15/16 6	534	22234K	422023	58.0	6.6929 (170)	12.2047 (310)	3.3858 (86)
6-7/16 6-1/2	536	22236K	422025	60.8	7.0866 (180)	12.5984 (320)	3.3858 (86)
6-15/16 7	538	22238K	422027	78.9	7.4803 (190)	13.3858 (340)	3.6220 (92)
7-3/16	540	22240K	422064	94.1	7.8740 (200)	14.1732 (360)	3.8583 (98)
7-1/2	544S	22244K	422029	129.0	8.6614 (220)	15.7480 (400)	4.2520 (108)
7-15/16 8	544						
8-7/16 8-1/2 8-15/16 9	048	23048K	422031	73.4	9.4488 (240)	14.1732 (360)	3.6220 (92)
9-7/16 9-1/2	052	23052K	422543	106.0	10.2362 (260)	15.7480 (400)	4.0945 (104)
9-15/16 10	056	23056K	422030	114.0	11.0236 (280)	16.5354 (420)	4.1732 (106)
10-7/16 10-1/2	056L						

USAF 500 series pillow block – inch

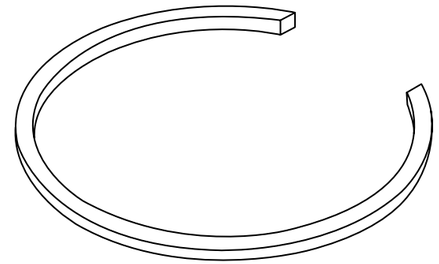
Adapter assembly



V Shaft diameter	Housing	SNW/SNP description	Part number	Approx. weight (lb)	L	F Max	M
1-7/16	509	H309-SNW-107	046350	1.0	2.53	0.52	1.58
1-11/16	510	H310-SNW-111	046351	1.0	2.69	0.58	1.77
1-15/16	511	H311-SNW-115	046352	0.8	2.97	0.58	1.85
2-3/16	513	H313-SNW-203	046353	1.6	3.38	0.64	2.10
2-7/16	515	H315-SNW-207	046354	2.6	3.88	0.69	2.29
2-1/2		H315-SMW-208	046355	2.3			
2-11/16	516	H316-SNW-211	046356	2.6	4.16	0.69	2.37
2-3/4		H316-SNW-212	046357	2.6			
2-15/16	517	H317-SNW-215	046358	3.0	4.41	0.72	2.47
3		H317-SNW-300	046359	2.5			
3-3/16	518	H318-SNW-303	046360	3.1	4.66	0.80	2.63
3-7/16	520	H320-SNW-307	046361	4.6	5.19	0.83	2.87
3-1/2		H320-SNW-308	046362	4.4			
3-15/16	522	H322-SNW-315	046363	5.6	5.72	0.86	3.19
4		H322-SNW-400	046364	5.0			
4-3/16	524	H3124-SNW-403	046430	6.5	6.12	0.92	3.47
4-7/16	526	H3126-SNW-407	046431	9.2	6.75	0.95	3.76
4-1/2		H3126-SNW-408	046432	8.6			
4-15/16	528	H3128-SNW-415	046433	10.0	7.09	1.02	3.97
5		H3128-SNW-500	046434	9.0			
5-3/16	530	SNW30-503	043618	12.7	7.69	1.08	4.22
5-7/16	532	SNW32-507	043619	15.9	8.06	1.14	4.57
5-1/2		SNW32-508	043634	15.0			
5-15/16	534	SNW34-515	043620	17.6	8.66	1.23	4.83
6		SNW34-600	043621	17.0			
6-7/16	536	SNW36-607	043622	17.0	9.06	1.27	5.02
6-1/2		SNW36-608	043623	18.0			
6-15/16	538	SNW38-615	043624	18.0	9.47	1.30	5.26
7		SNW38-700	043625	17.0			
7-3/16	540	SNW40-703	046545	30.7	9.84	1.36	5.48
7-1/2	544S	SNW44-708	043627	30.2	11.00	1.42	5.90
7-15/16	544	SNW44-715	043626	36.0			
8		SNW44-800	043628	34.7			
8-7/16	048	SNP048-807	043629	38.0	11.44	1.73	5.44
8-1/2		SNP048-808	043630	30.0			
8-15/16		SNP048-815	043631	28.0			
9		SNP048-900	043632	22.0			
9-7/16	052	SNP052-907	043585	41.1	12.19	1.80	6.02
9-1/2		SNP052-908	422538	40.0			
9-15/16	056	SNP056-915	043586	43.7	13.00	1.89	6.19
10		SNP056-1000	043633	42.0			
10-7/16	056L	SNP056-1007	043580	30.0			
10-1/2		SNP056-1008	422567	28.0			

USAF 500 series pillow block – inch

Stabilization rings



Housing	Stabilizing ring number	Stabilizing ring part number ▲
509	9-9	041987
510	10-8	042335
511	11-9	042315
513	13-0	042316
515/215	15-0	041174
516/216	16-13	041172
517/217	17-14	041175
518/218	18-15	041173
520/220	20-17	041176
522/222	22-19	041177
524/224	24-20	041185
526/226	26-0	041178
528/228	28-0	041179
530/230	30-0	041186
532/232	32-0	041180
534/234	34-0	041181
536/236	36-30	041184
538/238	38-32	041182
540/240	40-34	046639
544S/544/244	44-38	041183
* 048	A8897	041161
* 052	A8898	422554
* 056/056L	A8819	041213

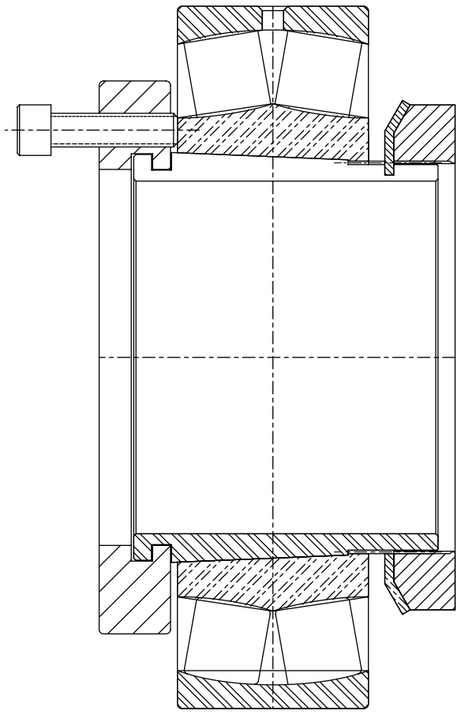
* Two stabilizing rings required per housing.

▲ Part numbers for reference only.
Housings come equipped with stabilizing rings enclosed.

Housing	Stabilizing ring number	Stabilizing ring part number ▲
308	10-8	042335
609/309	11-9	042315
610/310	0-10	046642
611/311	6-11	046632
312	15-0	041174
613/313	16-13	041172
314	17-14	041175
615/315	18-15	041173
616/316	19-16	046643
617/317	20-17	041176
620/320	24-20	041185
622/322	0-22	046635
624/324	0-24	046634
626/326	0-26	046637
628/328	0-28	046638
630/330	36-30	041184
632/332	38-32	041182
634/334	40-34	046639
638/338	44-38	041183

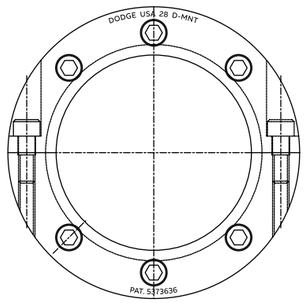
USAF
D-Mount adapter system

- Saves time removing bearing from shaft
- Reduces the use of blue flame torches
- Increases uptime
- Lowers maintenance costs

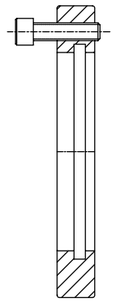


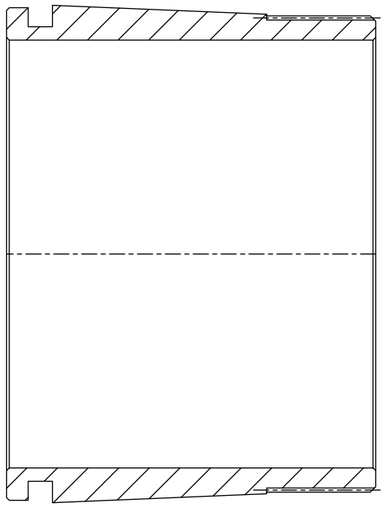
D-Mount tool - SNW - Bearing with tool assembled ready to remove bearing

For use on 22209K through 22244K size bearings



D-Mount tool





D-Mount adapter sleeve

How it works

Split D-Mount tool is mounted on D-Mount adapter and uses socket head cap screws to force the inner ring off the taper to unlock the bearing from the adapter sleeve. No additional space allowance is required.

This adapter sleeve is used in place of the standard adapter sleeve.

USAF
D-Mount adapter system

D-Mount adapter with removal feature – inch

Part number	Description
046960	DH09-SNW-107
046961	DH10-SNW-111
046962	DH11-SNW-115
046963	DH13-SNW-203
046964	DH15-SNW-207
046965	DH15-SNW-208
046966	DH16-SNW-211
046967	DH16-SNW-212
046968	DH17-SNW-215
046969	DH17-SNW-300
046970	DH18-SNW-303
046971	DH20-SNW-307
046972	DH20-SNW-308
046973	DH22-SNW-315
046974	DH22-SNW-400
046975	DH24-SNW-403
046976	DH26-SNW-407
046977	DH26-SNW-408
046978	DH28-SNW-415
046979	DH28-SNW-500
046980	DH30-SNW-503
046981	DH32-SNW-507
046982	DH32-SNW-508
046983	DH34-SNW-515
046984	DH34-SNW-600
046985	DH36-SNW-607
046986	DH36-SNW-608
046987	DH38-SNW-615
046988	DH38-SNW-700
046989	DH40-SNW-703
046991	DH44-SNW-708
046992	DH44-SNW-715
046993	DH44-SNW-800

D-Mount adapter with removal feature – metric

Part number	Description
047815 *	DH09-SNW-40M
047816 *	DH10-SNW-45M
047817 *	DH11-SNW-50M
047818 *	DH12-SNW-55M
047819 *	DH13-SNW-60M
047820 *	DH15-SNW-65M
047821 *	DH16-SNW-70M
047822 *	DH17-SNW-75M
047823 *	DH18-SNW-80M
047824 *	DH19-SNW-85M
047825 *	DH20-SNW-90M
047826 *	DH22-SNW-100M
047827 *	DH24-SNW-110M
047828 *	DH26-SNW-115M
047829 *	DH28-SNW-125M
047830 *	DH30-SNW-135M
047831 *	DH32-SNW-140M

* Made to order.

D-Mount adapter removal tools

Part number	Description
046872	D-Mount Tool 09
046873	D-Mount Tool 10
046874	D-Mount Tool 11
046850	D-Mount Tool 12
046875	D-Mount Tool 13
046876	D-Mount Tool 15
046877	D-Mount Tool 16
046878	D-Mount Tool 17
046879	D-Mount Tool 18
046851	D-Mount Tool 19
046880	D-Mount Tool 20
046881	D-Mount Tool 22
046882	D-Mount Tool 24
046883	D-Mount Tool 26
046884	D-Mount Tool 28
046885	D-Mount Tool 30
046886	D-Mount Tool 32
046887	D-Mount Tool 34
046891	D-Mount Tool 36
046892	D-Mount Tool 38
046893	D-Mount Tool 40
046894	D-Mount Tool 44

Reference Guide
Type E Family (Tapered)
Specialty Tapered
Safety Mount Family (Spherical)
S-2000 (Spherical)
Unified SAF (Spherical)
Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

USAF 500 series air handling pillow block – inch

1200 series self-aligning double-row ball bearings

Shaft size	Housing series	Housing part number		Bearing		SNW part number	Seal part number # LER (2-Req)	Stab ring for fixed units		
		2-bolt	4-bolt	Part number	Description			Description	Qty req.	Part number
1-7/16	509	043995	—	052637	1209K.C3	046350	042193	SR-9-0	1	058902
1-11/16	510	043996	—	052638	1210K.C3	046351	042199 *	SR-10-8	1	058903
1-15/16	511	043997	—	052639	1211K.C3	046352	042512	SR-11-9	1	058699
2-3/16	513	043998	039669	052640	1213K.C3	046353	042513	SR-13	2	042316
2-7/16	515	044000	044003	052641	1215K.C3	046354	042514	SR-15-0	2	058904
2-11/16	516	044198	044007	052642	1216K.C3	046356	042516	SR-1516	2	058905
2-15/16	517	044010	044013	052643	1217K.C3	046358	042518	SR-1517	2	058906
3-3/16	518	044199	044114	052570	1218K.C3	046360	042520	SR-1518	2	058907
3-7/16	520	044020	044023	052644	1220K.C3	046361	042521	SR-1520	2	058908
3-15/16	522	—	044025	051841	1222K.C3	046363	042523	SR-1522	2	058909

Standard housings come with stabilizing ring for fixing spherical roller bearings.

With the use of the 12xx series ball bearings, if a fixed bearing is required, special stabilizing rings are needed.

Remove standard stab ring, which comes with housing, and replace with the above ball bearing stab rings.

The 4-3/16-inch unit is not available as a fixed unit due to non-standard stab ring width. (2) special width 0.503-0.057 inch would be needed.

In cases where two stab rings are needed, one should be placed on each side of the bearing.

Note: LER seals are made from aluminum unless otherwise noted by the * symbol.

If an * appears by the part number, the LER seal is manufactured from steel.

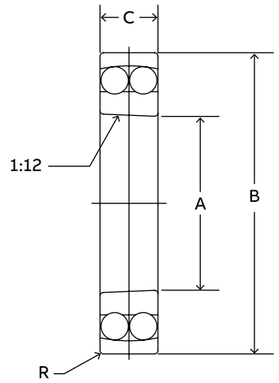
Stabilizing ring dimensions

Stab ring	
OD	Width
3.31	0.382—0.386
3.51	0.382—0.386
3.9	0.382—0.386
4.68	0.311—0.315
5.08	0.236—0.232
5.47	0.326—0.330
5.87	0.346—0.350
6.26	0.386—0.390
7.04	0.425—0.429
7.83	0.484—0.488

Reference Guide
Type E Family (Tapered)
Specialty Tapered
Safety Mount Family (Spherical)
S-2000 (Spherical)
Unified SAF (Spherical)
Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

USAF 500 series air handling pillow block – inch

1200 series self-aligning double-row ball bearings



Shaft size	Bearing series	e	$F_A/F_R \le e$	$F_A/F_R > e$	Dynamic capacity (C)	Static capacity (C_0)	Maximum speed (rpm)	
			Y	Y			Grease	Oil
107	1209	0.21	3.0	4.7	4,900	1,660	7,500	9,000
111	1210	0.20	3.2	4.9	5,100	1,830	7,000	8,500
115	1211	0.19	3.3	5.1	6,000	2,240	6,300	7,500
203	1213	0.18	3.6	5.5	6,950	2,800	5,300	6,300
207	1215	0.17	3.6	5.6	8,800	3,450	4,800	5,600
211	1216	0.16	3.9	6.0	9,000	3,800	4,300	5,000
215	1217	0.17	3.7	5.8	11,000	4,550	4,000	4,800
303	1218	0.17	3.7	5.8	12,900	5,300	3,800	4,500
307	1220	0.18	3.6	5.5	15,600	6,700	3,200	3,800
315	1222	0.17	3.6	5.6	19,600	8,650	2,800	3,400
403	1224	0.20	3.11	4.81	27,000	11,800	2,800	3,400

Note: Peq = F_R + YFA when $F_A / F_R \le e$

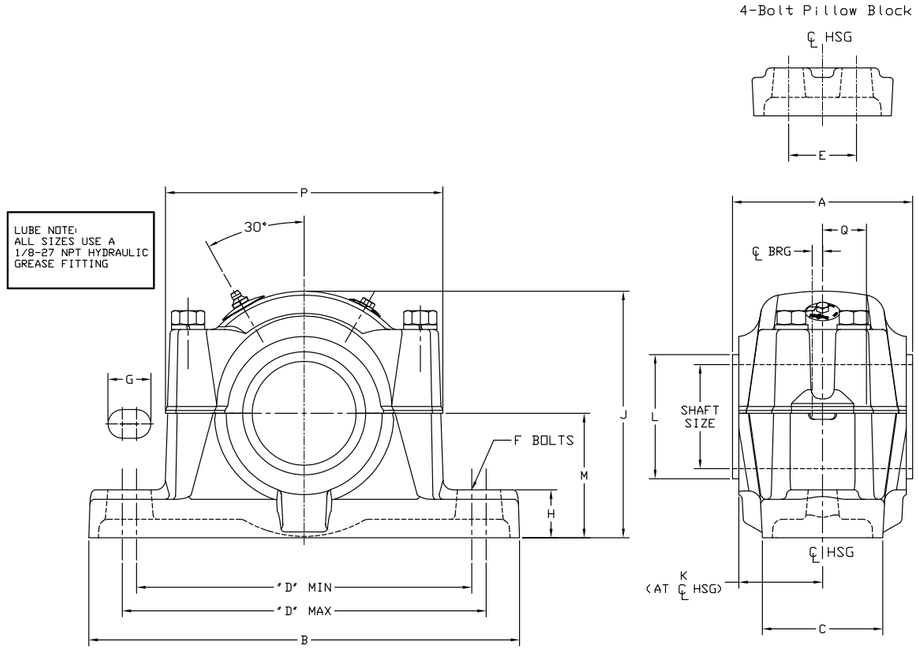
Peq = 0.65 F_R + YFA when $F_A / F_R > e$

$$L_{10} = \left(\frac{C}{P}\right)^3 \times \left(\frac{16{,}667}{rpm}\right)$$

Shaft	Housing	Bearing number	A	B	C	R
			in (mm)	in (mm)	in (mm)	in (mm)
107	509	1209K.C3	1.7717 (45)	3.3465 (85)	0.7480 (19)	0.043 (1.1)
111	510	1210K.C3	1.9685 (50)	3.5433 (90)	0.7874 (20)	0.043 (1.1)
115	511	1211K.C3	2.1654 (55)	3.9370 (100)	0.8268 (21)	0.059 (1.5)
203	513	1213K.C3	2.5591 (65)	4.7244 (120)	0.9055 (23)	0.059 (1.5)
207	515	1215K.C3	2.9528 (75)	5.1181 (130)	0.9843 (25)	0.059 (1.5)
211	516	1216K.C3	3.1496 (80)	5.5118 (140)	1.0236 (26)	0.079 (2.0)
215	517	1217K.C3	3.3465 (85)	5.9055 (150)	1.1024 (28)	0.079 (2.0)
303	518	1218K.C3	3.5433 (90)	6.2992 (160)	1.1811 (30)	0.079 (2.0)
307	520	1220K.C3	3.9370 (100)	7.0866 (180)	11.3386 (34)	0.083 (2.1)
315	522	1222K.C3	4.3307 (110)	7.8740 (200)	1.4960 (38)	0.083 (2.1)
403	524	1224K.C3	4.7244 (120)	8.4646 (215)	1.6535 (42)	0.083 (2.1)

SAF-XT 500 series pillow block – inch

2-bolt, adapter mount



22200K Adapter mount bearing

Shaft size (in) ▲	Complete pillow block designation SAF-XT	Part number ★	Weight	A			B	C	D		F bolt dia.	G	H	J	K	L ♥	M	P	Q ♦	S C_L of housing to C_L of bearing	
				Std.	Optional				Min.	Max.										Exp. block	Non-Exp. block
				Triple-Tect	LER	AUX.															
1-15/16	22511	042001	17.3	4.14	3.63	5.55	9.63	2.75	7.50	7.75	5/8	0.88	0.94	5.25	1.84	2.30	2.75	5.63	0.97	0.19	0.30
2-3/16	22513	042002	23.8	4.53	4.00	5.81	11.00	3.13	8.25	9.38	5/8	1.31	1.00	5.94	2.03	2.55	3.00	6.41	1.13	0.25	0.39
2-7/16	22515	042003	29.7	4.91	4.42	7.44	11.25	3.13	8.75	9.50	5/8	1.12	1.25	6.44	2.19	2.80	3.25	7.00	1.20	0.16	0.27
2-1/2		042004	29.6																		
2-11/16	22516	042005	36.3	5.23	4.61	7.63	13.00	3.50	10.13	10.63	3/4	1.12	1.50	6.88	2.28	3.69	3.50	7.94	1.28	0.19	0.38
2-3/4		042006	36.1																		
2-15/16	22517	042007	42.3	5.48	4.86	7.88	13.00	3.50	10.25	10.75	3/4	1.12	1.50	7.38	2.41	3.42	3.75	7.94	1.38	0.19	0.38
3		042008	42.1																		
3-3/16	22518	042009	52.5	5.95	5.44	8.00	13.75	3.88	10.75	11.25	3/4	1.12	1.63	7.75	2.66	3.69	4.00	8.44	1.41	0.30	0.48
3-7/16	22520	042010	69.5	6.22	5.63	8.50	15.25	4.38	11.88	12.63	7/8	1.38	1.75	8.75	2.75	3.83	4.50	9.44	1.53	0.38	0.56
3-1/2		042011	69.2																		

▲ Sizes not listed will be quoted on application.

★ Furnished unless otherwise specified. Includes (1) Housing with Spacer, (1) Standard Spherical Bearing, (1) SNW Assembly and (2) Triple-Tect seals.

♦ Distance shaft should extend beyond housing centerline (CL) if pillow block is closed end style.

♥ Dimensions shown with Triple-Tect seals installed.

Note: SAF-XT pillow blocks use Unified adapters, seals and bearings.

All Unified 500 series accessories are available for use with SAF-XT except Drop-In Triple-Tect and Split-Sphere which are Unified exclusives.

SAF-XT 500 series pillow block – inch

4-bolt, adapter mount

Shaft size (in)▲	Complete pillow block designation SAF-XT	Part number ★ P4B-SFXT	Weight	A			B	C	D		E	F bolt dia.	G	H	J	K	L ♥	M	P	Q ♦	S C_L of housing to C_L of bearing	
				Std.	Optional				Min.	Max.											Exp	Non-Exp
				Triple-Tect	LER	AUX.																
2-7/16	22515	042015	29.7	4.91	4.42	7.44	11.25	3.13	8.63	9.63	1.88	1/2	1.13	1.25	6.44	2.19	2.80	3.25	7.00	1.20	0.16	0.27
2-1/2		042016	29.6																			
2-11/16	22516	042017	36.3	5.23	4.61	7.63	13.00	3.50	9.08	10.88	2.13	5/8	1.25	1.50	6.88	2.28	3.17	3.50	7.94	1.28	0.19	0.38
2-3/4		042030	36.1																			
2-15/16	22517	042019	42.3	5.48	4.86	7.88	13.00	3.50	10.00	11.00	2.13	5/8	1.25	1.50	7.38	2.41	3.42	3.75	7.94	1.38	0.19	0.38
3		042020	42.1																			
3-3/16	22518	042021	52.5	5.95	5.44	8.00	13.75	3.88	10.50	11.50	2.13	5/8	1.25	1.63	7.75	2.66	3.69	4.00	8.44	1.41	0.59	0.48
3-7/16	22520	042022	69.5	6.22	5.63	8.50	15.25	4.38	11.75	12.75	2.38	3/4	1.38	1.75	8.75	2.75	3.83	4.50	9.44	1.53	0.38	0.56
3-1/2		042023	69.2																			
3-15/16	22522	042024	92.9	6.80	6.31	8.64	16.50	4.75	12.88	14.13	2.75	3/4	1.50	2.00	9.63	3.03	4.33	4.94	10.56	1.73	0.38	0.55
4		042025	92.6																			
4-3/16	22524	042270	101.8	6.97	6.38	8.89	16.50	4.75	13.25	14.50	2.75	3/4	1.50	1.75	10.25	3.06	4.59	5.25	10.81	1.81	0.42	0.61
4-7/16	22526	042271	148	7.41	6.81	9.45	18.38	5.13	14.50	16.00	3.25	7/8	1.75	2.50	11.69	3.28	4.94	6.00	11.63	1.95	0.45	0.64
4-1/2		042272	147.7																			
4-15/16	22528	042273	173.9	7.66	7.06	10.33	20.13	5.88	15.63	17.38	3.38	1	2.00	23.50	12.13	3.41	5.36	6.00	12.44	2.05	0.50	0.69
5		042274	173.6																			
5-3/16	22530	042282	215	7.97	7.38	10.64	21.25	6.25	16.75	18.50	3.75	1	2.00	2.50	12.31	3.56	5.77	6.31	13.56	2.14	0.56	0.75
5-7/16	22532	042283	245	8.28	7.69	10.45	22.00	6.25	17.38	19.13	3.75	1	2.00	2.75	13.69	3.72	5.88	6.69	14.19	2.33	0.58	0.77
5-1/2		042284	244																			
5-15/16	22534	042303	300	8.66	7.94	10.70	24.75	6.75	19.63	21.38	4.25	1	2.00	2.88	14.56	3.84	6.44	7.06	16.31	2.47	0.58	0.78
6		042304	299																			
6-7/16	22536	042305	372	8.84	8.13	11.39	26.75	7.13	21.38	23.13	4.63	1	2.00	3.00	15.25	3.94	6.80	7.50	17.88	2.53	0.55	0.75
6-1/2		042306	371																			
6-15/16	22538	042307	407	9.34	8.63	11.47	28.00	7.50	22.13	23.88	4.50	1-1/4	2.25	3.13	16.00	4.19	7.38	7.88	18.31	2.61	0.63	0.81
7		042308	406																			
7-1/2	22544	042309	626	10.66	9.94	13.20	32.75	8.75	25.13	27.88	5.25	1-1/2	3.00	3.88	19.25	4.84	7.94	9.50	20.63	2.92	0.72	0.91
7-15/16	22544	042370	625	10.66	9.94	13.20	32.75	8.75			5.25	1-1/2	3.00	3.88	19.25	4.84	8.33	9.50	20.63	2.92	0.72	0.91
8		042371	624																			
8-7/16	23048	042372 †	408	10.50	9.06	12.58	28.75	8.00	22.50	25.00	5.00	1-1/4	2.75	3.25	17.06	4.41	9.33	8.25	18.31	2.94	0.78	0.78
8-1/2		042373	407																			
8-15/16		042374	406																			
9		042375	405																			
9-7/16	23052	042377	624	10.36	9.94	13.45	32.75	8.75	25.13	27.89	5.25	1-1/2	3.00	3.88	19.25	4.84	9.98	9.50	20.63	3.22	0.70	0.70
9-1/2		422556																				
9-15/16	23056	042378 ●	707	13.77	12.50	15.70	32.00	11.25	25.75	27.75	7.25	1-3/4	2.88	4.00	19.88	6.16	10.38	9.50	20.75	3.81	0.88	0.88
10		042376																				
10-7/16		042379 ●																				
10-1/2		422572 ●																				

▲ Sizes not listed will be quoted on application.

★ Includes (1) Housing with Spacer, (1) Standard Spherical Bearing, (1)

SNW – Assembly (SNP above 8,) and (2) Triple-Tect seals unless otherwise noted.

♦ Distance shaft should extend beyond housing centerline (CL) if pillow block is closed end style.

♥ Dimensions shown with Triple-Tect seals installed.

● Made-to-order - Consult Dodge for delivery

† Assembled to order. Consult Dodge for delivery

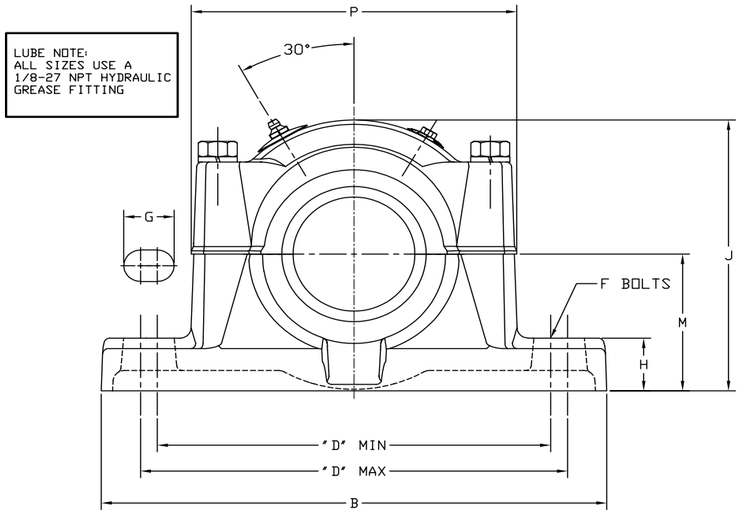
Note: SAF-XT pillow blocks use USAF 500 adapters, seals, and bearings.

Part numbers for these individual components can be found on pages B24-39 through B24-43.

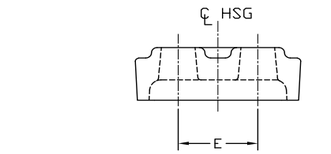
All USAF 500 Series accessories are available for use with SAF-XT except Drop-In Triple-Tect seals and Split-Sphere components which are Unified exclusives

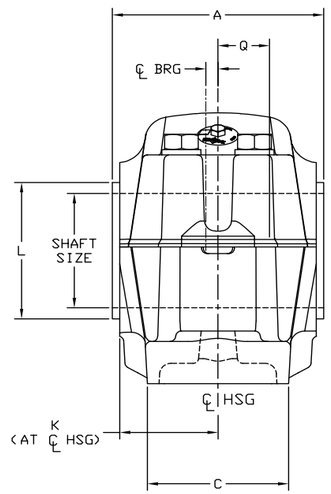
SAF-XT 500 series pillow block – inch

2- and 4-bolt, adapter mount



4-Bolt Pillow Block





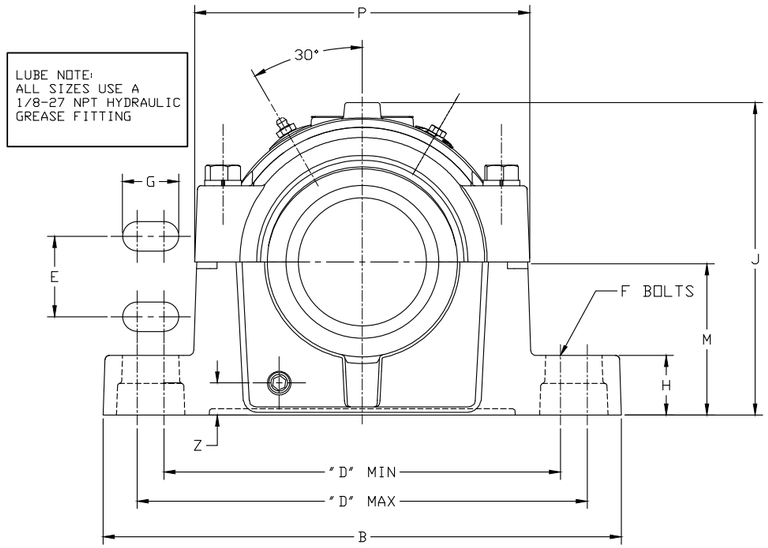
SAF-XT 500 series pillow block – inch

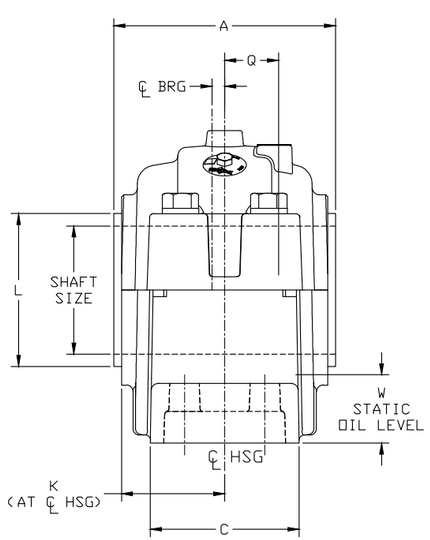
2- and 4-bolt, adapter mount

S-1 Size in (mm)	Shaft housing	2-bolt		4-bolt	
		Part number	Approx. weight (lbs)	Part number	Approx. weight (lbs)
1-15/16	511	042100	13.75	—	—
2-3/16	513	042103	18.00	—	—
(55,60)	513M	046323	18.00		
2-7/16, 2-1/2	515	042106	22.75	042109	22
(65)	515M	046324	22.00	046325	22
2-11/16 2-3/4	516	042111	30.5	042114	30
2-15/16 3	517	042116	31.5	042119	32
3-3/16	518	042121	38	042124	40
3-7/16 3-1/2	520	042126	51.5	042129	52
3-15/16 4	522	—	—	042131	68
4-3/16	524	—	—	042134	70
(110)	524M			046326	
4-7/16 4-1/2	526	—	—	042137	108
4-15/16 5	528	—	—	042140	143
5-3/16	530	—	—	042143	120
5-7/16 5-1/2	532	—	—	042146	168
5-15/16 6	534	—	—	042149	220
6-7/16 6-1/2	536	—	—	042152	266
6-15/16 7	538	—	—	042155	295
7-1/2	544S	—	—	042167	443
7-15/16 8	544	—	—	042158	443
8-7/16, 8-1/2 8-15/16, 9	48	—	—	042161	308
9-7/16 9-1/2	52	—	—	422555	440
9-15/16 10	56	—	—	042164	549
10-7/16 10-1/2	056L	—	—	422571	620

SAFS 500 series pillow block – inch

2- and 4-bolt, adapter mount, steel housing





SAFS 500 series pillow block – inch

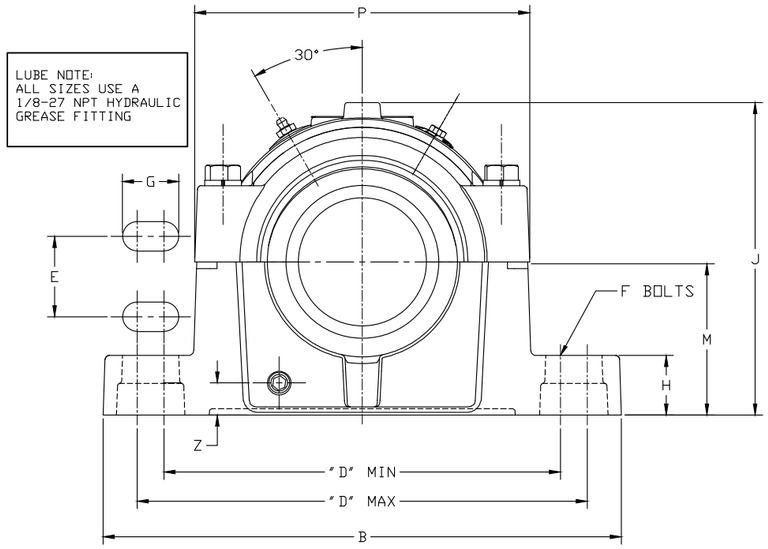
2- and 4-bolt, adapter mount, steel housing

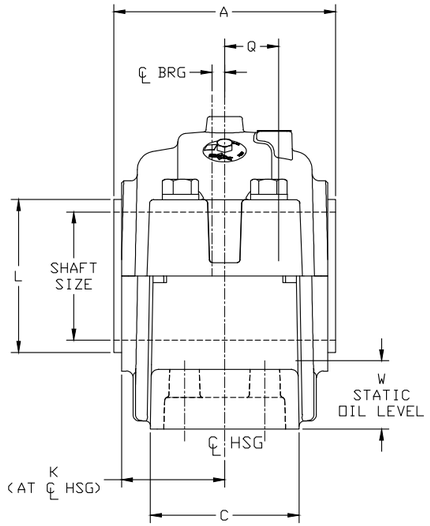
Shaft size	Housing number	Part numbers				Approx. weight (lb)	A with seals			B	C
		SAFS 2-bolt		SAFS 4-bolt			Std.	Optional			
		Complete pillow block ★	Housing only	Complete pillow block★	Housing only		Triple-Tect	LER	Aux.		
2-7/16	515	042400	042425	042410	042428	24	5.16	4.67	7.44	11.25	3.13
2-1/2	515	042401	042425	042411	042428						
2-11/16	516	042407	044231	042408	044232	32	5.42	4.80	7.63	13.00	3.50
2-3/4	516	042420	044231	042421	044232						
2-15/16	517	042402	042433	042412	042436	35	5.61	4.98	7.80	13.00	3.50
3	517	042403	042433	042413	042436						
3-3/16	518	042424	044233	042430	044234	44	6.14	5.63	8.00	13.75	3.88
3-7/16	520	042404	042440	042414	042443	74	6.41	5.81	8.50	15.25	4.38
3-1/2	520	042405	042440	042415	042443						
3-15/16	522	—	—	042416	042450	97	6.86	6.38	8.64	16.50	4.75
4	522			042417	042450						
4-3/16	524	—	—	042432	044235	120	8.03	7.44	8.89	16.50	4.75
4-7/16	526	—	—	042568	042455	160	8.47	7.88	9.45	18.38	5.13
4-1/2	526			042575	042455						
4-15/16	528	—	—	042569	042460	175	8.09	7.50	10.33	20.13	5.88
5	528			042576	042460						
5-3/16	530	—	—	042439	044236	220	8.75	8.16	10.69	21.25	6.25
5-7/16	532	—	—	042570	042465	245	9.22	8.63	10.45	22.00	6.25
5-1/2	532			042577	042465						
5-15/16	534	—	—	042571	042469	310	9.91	9.13	11.88	24.75	6.75
6	534			042578	042469						
6-7/16	536	—	—	042572	042468	345	10.34	9.63	11.39	26.75	7.13
6-1/2	536			042579	042468						
6-15/16	538	—	—	042573	042472	400	10.84	10.13	11.16	28.00	7.50
7	538			042580	042472						
7-1/2	544	—	—	042446	042477	640	12.09	11.63	13.20	32.75	8.75
7-15/16	544			042581	042477						
8	544			042574	042477						

★ Includes: (1) Housing with spacers, (1) Standard spherical bearing, (1) SNW assembly (SNP above 8 inches) and (2) Triple-Tect seals unless otherwise noted.

SAFS 500 series pillow block – inch

2- and 4-bolt, adapter mount, steel housing





SAFS 500 series pillow block – inch

2- and 4-bolt, adapter mount, steel housing

Shaft size	Dimension D 2-bolt Min.	D 2-bolt Max.	D 4-bolt Min.	D 4-bolt Max.	E	Bolt dia. F 2B	F 4B	G	H	J	K	L ■	M	P	Q ♦	S ★	W	Z
2-7/16	8.75	9.50	8.63	9.63	1.88	5/8	1/2	1.13	1.25	6.44	2.31	2.80	3.25	7.06	1.34	0.13	1.16	0.63
2-1/2																		
2-11/16	10.13	10.63	9.88	10.88	2.13	3/4	5/8	1.25	1.50	6.88	2.38	3.17	3.50	8.00	1.47	0.19	1.25	0.63
2-3/4																		
2-15/16	10.25	10.75	10.00	11.00	2.13	3/4	5/8	1.13, 2B 1.25, 4B	1.50	7.38	2.47	3.42	3.75	8.25	1.56	0.19	1.38	0.75
3																		
3-3/16	10.75	11.25	10.50	11.50	2.13	3/4	5/8	1.25	1.63	7.75	2.75	3.69	4.00	8.25	1.70	0.19	1.47	0.69
3-7/16	11.88	12.63	11.75	12.75	2.38	7/8	3/4	1.38	1.75	8.75	2.91	3.83	4.50	9.81	1.89	0.19	1.64	0.94
3-1/2																		
3-15/16	—	—	12.88	14.13	2.75	—	3/4	1.50	2.00	9.63	3.13	4.33	4.94	10.63	2.08	0.19	1.80	1.13
4																		
4-3/16	—	—	13.25	14.50	2.75	—	3/4	1.50	1.75	10.25	3.66	4.59	5.25	11.50	2.22	0.19	1.84	1.00
4-7/16	—	—	14.50	16.00	3.25	—	7/8	1.75	2.50	11.56	3.88	4.94	6.00	12.81	2.41	0.19	2.34	1.28
4-1/2																		
4-15/16	—	—	15.63	17.38	3.78	—	1	2.00	2.50	12.00	3.69	5.36	6.00	13.56	2.53	0.19	2.03	1.19
5																		
5-3/16	—	—	16.75	18.50	3.75	—	1	2.00	2.50	12.81	4.06	5.77	6.31	14.50	2.69	0.19	2.03	1.19
5-7/16	—	—	17.38	19.13	3.75	—	1	2.00	2.75	13.69	4.25	5.88	6.69	15.13	2.89	0.19	2.09	1.22
5-1/2																		
5-15/16	—	—	19.38	21.63	4.25	—	1	2.00	2.88	14.56	4.63	6.44	7.06	16.81	3.13	0.19	2.19	1.56
6																		
6-7/16	—	—	21.38	23.13	4.63	—	1	2.00	3.00	15.25	4.81	6.80	7.50	17.19	3.08	0.19	2.42	1.09
6-1/2																		
6-15/16	—	—	22.13	23.88	4.50	—	1-1/4	2.25	3.13	16.13	5.13	7.38	7.88	17.08	3.23	0.19	2.53	1.31
7																		
7-1/2																		
7-15/16	—	—	25.13	27.88	5.25	—	1-1/2	3.00	3.88	19.25	5.75	7.44 8.33	9.50	20.75	3.64	0.19	3.25	1.88
8																		

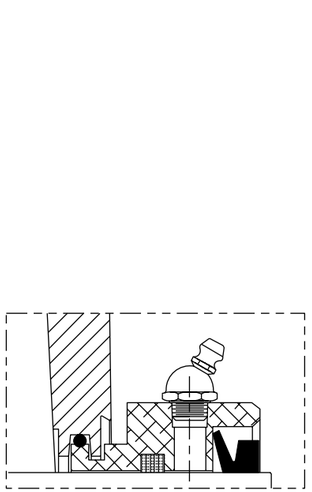
♦ Distance shaft should extend beyond housing centerline of pillow block is closed end style.

★ Non-expansion bearing offset from centerline. For expansion bearing S=0.

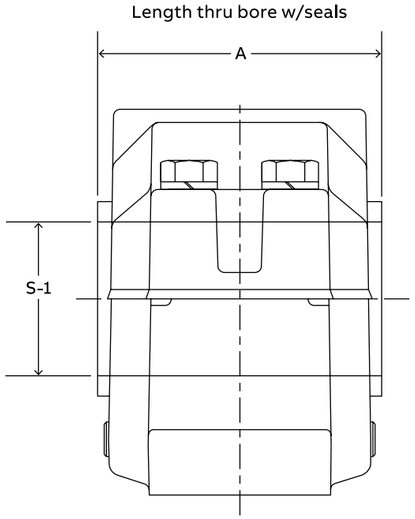
■ Based on Triple-Tect seals.

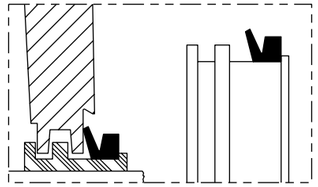
SAFS and SAF-XT 500 series pillow block – inch

Seals

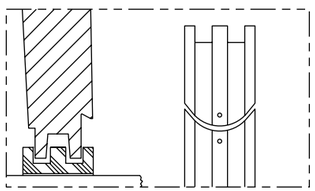


Auxiliary Taconite Seal
For dusty environments and low to moderate speeds

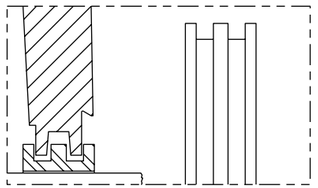




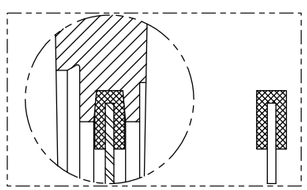
Triple-Tect Seal
General purpose seal for wet or dirty environments



Split Seal
Permits easy installation in hard-to-reach applications without removing shaft.
Non-metallic split LER



LER Seal
High speed seal for relatively clean environments



End Cover Seal
Allows use of open shaft housing as closed-end

SAFS and SAF-XT 500 series pillow block – inch

Seals

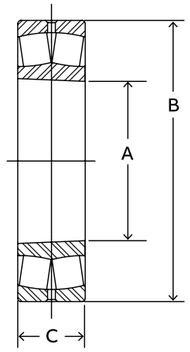
S-1 shaft size	Housing	Seal group	Part numbers			
			Triple-Tect (TT)	# Metal labyrinth (LER)	Auxiliary taconite (AUX)	End cover
1-15/16	511	12	043540	042512	041687	040702
2-3/16	513	14	043541	042513	041688	040703
2-7/16	515	20	043542	042514	042380	040704
2-1/2			043543	042515	040890	040704
2-11/16	516	24	043544	042516	042381	040705
2-3/4			043545	042517	040891	040705
2-15/16	517	28	043546	042518	042382	040706
3			043547	042519	040918	040706
3-3/16	518	34	043548	042520	040892	040707
3-7/16	520	46	043549	042521	042383	040708
3-1/2			043550	042522	040919	040708
3-15/16	522	50	043551	042523	042384	040709
4			043552	042524	040893	040709
4-3/16	524	52	043553	042525	044360	040710
4-7/16	526	54	043554	042526	042385	040711
4-1/2			043555	042527	042386	040711
4-15/16	528	56	043556	042528	042387	040712
5			043557	042529	040894	040712
5-3/16	530	58	043558	042530	079967	040713
5-7/16	532	60	043559	042531	042388	040714
5-1/2			043574	042532	040895	040714
5-15/16	534	64	043560	042533	042389	040681
6			043561	042534	041646	040681
6-7/16	536	68	043562	042535	042390	040682
6-1/2			043563	042536	042391	040682
6-15/16	538	72	043564	042537	042392	040683
7			043565	042538	043109	040683
7-3/16	540	74	046421	043386	040690	040691
7-1/2	544S	76	043567	042539	040896	040684
7-15/16	544	78	043566	042540	042393	040685
8			043568	042541*	042394	040685
8-7/16	048	90	043569	042542*	040897	042368
8-1/2			043570	042543*	040898	042368
8-15/16			043571	042544*	040899	042368
9			043572	042545*	040995	042368
9-7/16	052	84	043538	042510*	040900	422606
9-1/2			422545	042594*	040901	422606
9-15/16	056	92	043575	042511*	040873	042369
10			043573	041082*	042395	042369
10-7/16	056L	94	047940	042036*	045778	042397
10-1/2			047941	422573*	042396	042397

Note: # LER seals are made from aluminum unless otherwise noted by the * symbol.

If an * appears by the part number, the LER seal is manufactured from steel.

SAFS and SAF-XT 500 series pillow block – inch

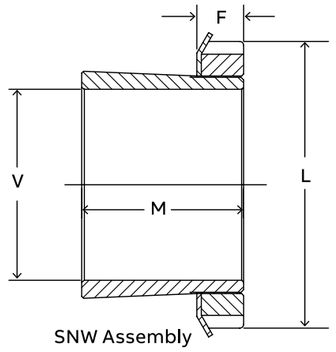
22200K and 23000K spherical roller bearings



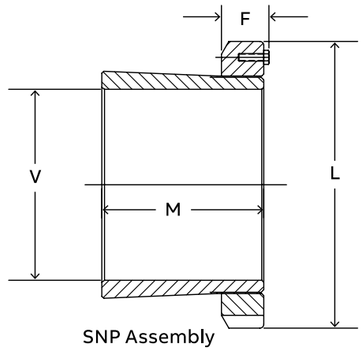
S1 Shaft size	Housing	Bearing number	Part number	Approx. weight (lb)	A in (mm)	B in (mm)	C in (mm)
1-15/16	511	22211K	422123	1.8	2.1654 (55)	3.9370 (100)	0.9843 (25)
2-3/16	513	22213K	422124	3.2	2.5591 (65)	4.7244 (120)	1.2205 (31)
2-7/16 2-1/2	515	22215K	422001	3.6	2.9528 (75)	5.1181 (130)	1.2205 (31)
2-11/16 2-3/4	516	22216K	422003	4.4	3.1496 (80)	5.5188 (140)	1.2992 (33)
2-15/16 3	517	22217K	422005	5.5	3.3465 (85)	5.9055 (150)	1.4173 (36)
3-3/16	518	22218K	422007	7.0	3.5433 (90)	6.2992 (160)	1.5748 (40)
3-7/16 3-1/2	520	22220K	422009	10.4	3.9370 (100)	7.0866 (180)	1.8110 (46)
3-15/16 4	522	22222K	422011	14.9	4.3307 (110)	7.8740 (200)	2.0866 (53)
4-3/16	524	22224K	422013	18.7	4.7244 (120)	8.4646 (215)	2.2865 (58)
4-7/16 4-1/2	526	22226K	422015	23.4	5.1181 (130)	9.0551 (230)	2.5197 (64)
4-15/16 5	528	22228K	422017	29.5	5.5118 (140)	9.8425 (250)	2.6772 (68)
5-3/16	530	22230K	422019	37.5	5.9055 (150)	10.6299 (270)	2.8740 (73)
5-7/16 5-1/2	532	22232K	422021	48.1	6.2992 (160)	11.4173 (290)	3.1496 (80)
5-15/16 6	534	22234K	422023	58.0	6.6929 (170)	12.2047 (310)	3.3858 (86)
6-7/16 6-1/2	536	22236K	422025	60.8	7.0866 (180)	12.5984 (320)	3.3858 (86)
6-15/16 7	538	22238K	422027	78.9	7.4803 (190)	13.3858 (340)	3.6220 (92)
7-3/16	540	22240K	422064	94.1	7.8740 (200)	14.1732 (360)	3.8583 (98)
7-1/2 7-15/16 8	544S 544	22244K	422029	129.0	8.6614 (220)	14.7480 (400)	4.2520 (108)
8-7/16 8-1/2 8-15/16 9	048	23048K	422031	73.4	9.4488 (240)	14.1732 (360)	3.6220 (92)
9-7/16 9-1/2	052	23052K	422543	106.0	10.2362 (260)	15.7480 (400)	4.0945 (104)
9-15/16 10 10-7/16 10-1/2	056 056L	23056K	422030	114.0	11.0236 (280)	16.5354 (430)	4.1732 (106)

SAFS and SAF-XT 500 series pillow block – inch

Adapter assembly



SNW Assembly

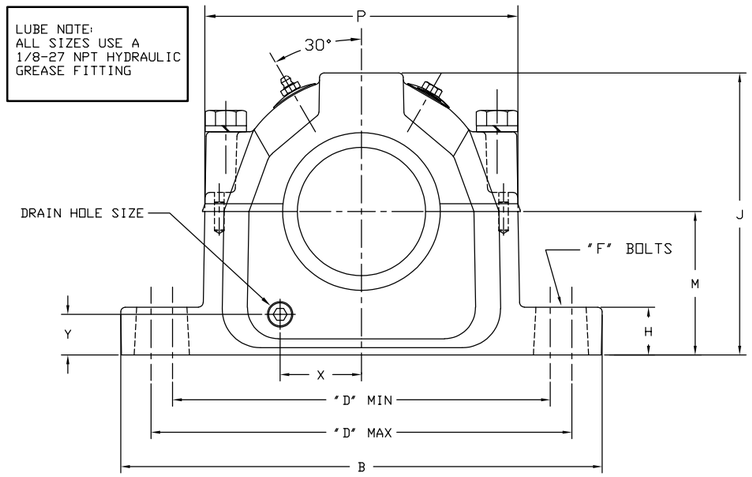


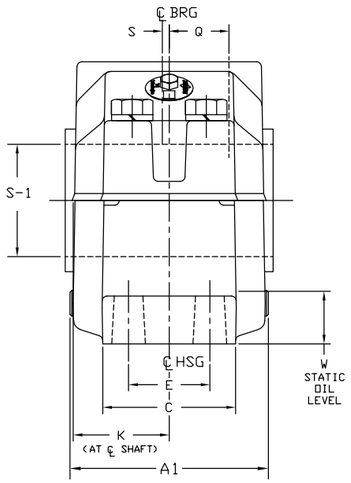
SNP Assembly

V Shaft size	Housing	SNW/SNP number	Part number	Approx. weight (lb)	L	F max	M
1-15/16	511	H311-SNW-115	046352	0.8	2.97	0.58	1.85
2-3/16	513	H313-SNW-203	046353	1.6	3.38	0.64	2.10
2-7/16	515	H315-SNW-207	046354	2.6	3.88	0.69	2.29
2-1/2		H315-SMW-208	046355	2.3			
2-11/16	516	H316-SNW-211	046356	2.6	4.16	0.69	2.37
2-3/4		H316-SNW-212	046357	2.6			
2-15/16	517	H317-SNW-215	046358	3.0	4.41	0.72	2.47
3		H317-SNW-300	046359	2.5			
3-3/16	518	H318-SNW-303	046360	3.1	4.66	0.80	2.63
3-7/16	520	H320-SNW-307	046361	4.6	5.19	0.83	2.87
3-1/2		H320-SNW-308	046362	4.4			
3-15/16	522	H322-SNW-315	046363	5.6	5.72	0.86	3.19
4		H322-SNW-400	046364	5.0			
4-3/16	524	H3124-SNW-403	046430	6.5	6.12	0.92	3.47
4-7/16	526	H3126-SNW-407	046431	9.2	6.75	0.95	3.76
4-1/2		H3126-SNW-408	046432	8.6			
4-15/16	528	H3128-SNW-415	046433	10.0	7.09	1.02	3.97
5		H3128-SNW-500	046434	9.0			
5-3/16	530	H3130-SNW-503	043618	12.7	7.69	1.08	4.22
5-7/16	532	H3132-SNW-507	043619	15.9	8.06	1.14	4.57
5-1/2		H3132-SNW-508	043634	15.0			
5-15/16	534	H3134-SNW-515	043620	17.6	8.66	1.23	4.83
6		H3134-SNW-600	043621	17.0			
6-7/16	536	H3136-SNW-607	043622	17.0	9.06	1.27	5.02
6-1/2		H3136-SNW-608	043623	18.0			
6-15/16	538	H3138-SNW-615	043624	18.0	9.47	1.30	5.26
7		H3138-SNW-700	043625	17.0			
7-3/16	540	H3140-SNW-703	046545	30.7	9.84	1.36	5.48
7-1/2	544S	H3144-SNW-708	043627	30.2	11.00	1.42	5.90
7-15/16	544	H3144-SNW-715	043626	36.0			
8		H3144-SNW-800	043628	34.7			
8-7/16	048	H3048-SNP-807	043629	38.0	11.44	1.73	5.44
8-1/2		H3048-SNP-808	043630	30.0			
8-15/16		H3048-SNP-815	043631	28.0			
9		H3048-SNP-900	043632	22.0			
9-7/16	052	H3052-SNP-907	043585	41.1	12.19	1.80	6.02
9-1/2		H3052-SNP-908	422538	40.0			
9-15/16	056	H3056-SNP-915	043586	43.7	13.00	1.89	6.19
10		H3056-SNP-1000	043633	42.0			
10-7/16	056L	H3056-SNP-1007	043580	30.0			
10-1/2		H3056-SNP-1008	422567	28.0			

USAF 600 series pillow block – inch

2- and 4-bolt, adapter mount





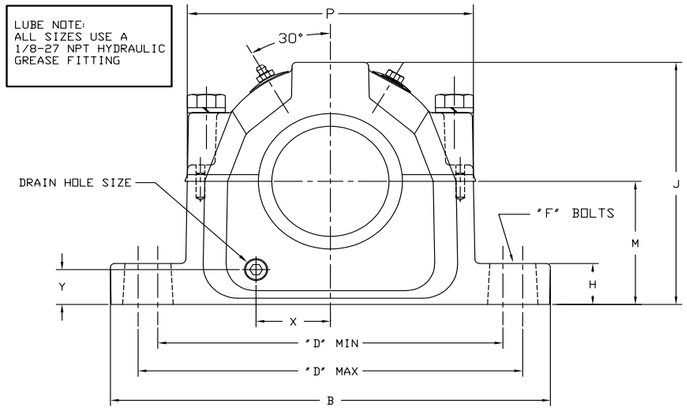
Shaft size S-1	Complete pillow block description part number	Housing with stab ring description part number	Bearing description part number	Dynamic capacity (C) (lb)	Max rpm (grease)	SNW description part number	Triple-Tect description part number	TTDN description part number	# LER description part number	End cover description part number
1-11/16	P2B610-USAF-111TT	H2S-610-USAF	BRG22310KC3	42,500	3,400	H2310-SNW-111	10TT111	—	10LER111	EC10
	035929	035431	423372			046680	043579		042199*	040701
1-15/16	P2B611-USAF-115TT	H2S-611-USAF	BRG22311KC3	50,000	3,200	H2311-SNW-115	12TT115	12TTDN115	12LER115	EC12
	039404	039760	423102			046551	043540	039582	042512	040702
	P4B611-USAF-115TT	H4S-611-USAF	BRG22311KC3	50,000	3,200	H2311-SNW-115	12TT115	12TTDN115	12LER115	EC12
	039413	039762	423102			046551	043540	039582	042512	040702
2-3/16	P2B613-USAF-203TT	H2S-613-USAF	BRG22313KC3	65,500	2,600	H2313-SNW-203	14TT203	14TTDN203	14LER203	EC14
	039405	039764	423104			046552	043541	039583	042513	040703
	P4B613-USAF-203TT	H4S-613-USAF	BRG22313KC3	65,500	2,600	H2313-SNW-203	14TT203	14TTDN203	14LER203	EC14
	039414	039766	423104			046552	043541	039583	042513	040703
2-7/16	P2B615-USAF-207TT	H2S-615-USAF	BRG22315KC3	83,000	2,200	H2315-SNW-207	20TT207	20TTDN207	20LER207	EC20
	039406	039768	423106			046553	043542	039538	042514	040704
	P4B615-USAF-207TT	H4S-615-USAF	BRG22315KC3	83,000	2,200	H2315-SNW-207	20TT207	20TTDN207	20LER207	EC20
	039415	039770	423106			046553	043542	039538	042514	040704
2-11/16	P2B616-USAF-211TT	H2S-616-USAF	BRG22316KC3	93,000	2,200	H2316-SNW-211	24TT211	24TTDN211	24LER211	EC24
	035930	035432	423373			046682	043544	039855	042516	040705
	P4B616-USAF-211TT	H4S-616-USAF	BRG22316KC3	93,000	2,200	H2316-SNW-211	24TT211	24TTDN211	24LER211	EC24
	035931	035433	423373			046682	043544	039855	042516	040705
2-15/16	P2B617-USAF-215TT	H2S-617-USAF	BRG22317KC3	102,000	2,000	H2317-SNW-215	28TT215	28TTDN215	28LER215	EC28
	039407	039772	423108			046554	043546	039530	042518	040706
	P4B617-USAF-215TT	H4S-617-USAF	BRG22317KC3	102,000	2,000	H2317-SNW-215	28TT215	28TTDN215	28LER215	EC28
	039416	039774	423108			046554	043546	039530	042518	040706
3-7/16	P4B620-USAF-307TT	H4S-620-USAF	BRG22320KC3	146,000	1,700	H2320-SNW-307	46TT307	46TTDN307	46LER307	EC46
	039417	039776	423110			046555	043549	039859	042521	040708
4-3/16	P4B624-USAF-403TT	H4S-624-USAF	BRG22324KC3	204,000	1,400	H2324-SNW-403	52TT403	52TTDN403	52LER403	EC52
	039419	039780	422140			046557	043553	039863	042525	040710
4-7/16	P4B626-USAF-407TT	H4S-626-USAF	BRG22326KC3	236,000	1,300	H2326-SNW-407	54TT407	54TTDN407	54LER407	EC54
	039420	039781	423114			046558	043554	039864	042526	040711
4-15/16	P4B628-USAF-415TT	H4S-628-USAF	BRG22328KC3	275,000	1,200	H2328-SNW-415	56TT415	56TTDN415	56LER415	EC56
	039421	039553	422035			046559	043556	039866	042528	040712
5-3/16	P4B630-USAF-503TT	H4S-630-USAF	BRG22330KC3	310,000	1,100	H2330-SNW-503	58TT503	—	58LER503	EC58
	039422	039782	423116			046560	043558		042530	040713
5-7/16	P4B632-USAF-507TT	H4S-632-USAF	BRG22332KC3	325,000	1,000	H2332-SNW-507	60TT507	—	60LER507	EC60
	039423	039783	423118			046561	043559		042531	040714
5-15/16	P4B634-USAF-515TT	H4S-634-USAF	BRG22334KC3	360,000	950	H2332-SNW-515	64TT515	—	64LER515	EC64
	039424	039784	423120			046562	043560		042533	040681
6	P4B634-USAF-600TT	H4S-634-USAF	BRG22334KC3	360,000	950	H2334-SNW-600	64TT600	—	64LER600	EC64
	039425	039784	423120			046563	043561		042534	040681
6-15/16	P4B638-USAF-615TT	H4S-638-USAF	BRG22338KC3	415,000	850	H2338-SNW-615	72TT615	—	72LER615	EC72
	039426	039785	423122			046564	043564		042537	040683
7	P4B638-USAF-700TT	H4S-638-USAF	BRG22338KC3	415,000	850	H2338-SNW-700	72TT700	—	72LER700	EC72
	039427	039785	423122			046565	043565		042538	040683

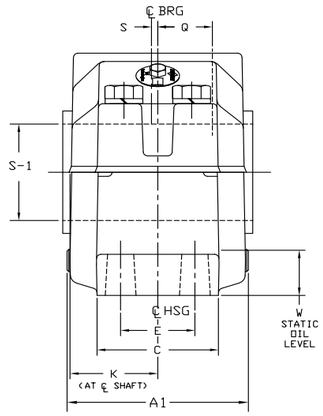
Note: LER seals are made from aluminum unless otherwise noted by the * symbol.

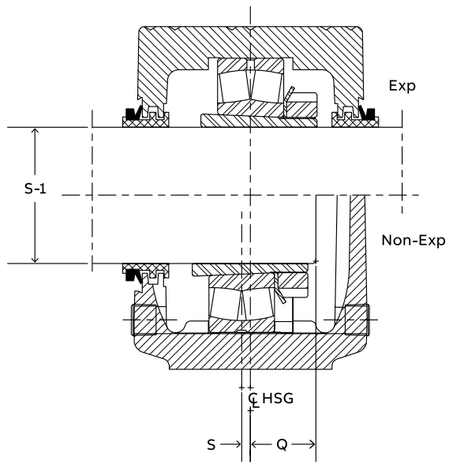
If an * appears by the part number, the LER seal is manufactured from steel.

USAF 600 series pillow block – inch

2- and 4-bolt, adapter mount







USAF 600 series pillow block – inch

2- and 4-bolt, adapter mount

S-1 shaft size	Housing	A1 ▲	B	C	D				E	F	
					2-bolt		4-bolt			bolt diameter	
					Min.	Max.	Min.	Max.		2-bolt	4-bolt
1-11/16	610	4.70	10.63	2.75	7.75	9.00	—	—	—	5/8	—
1-15/16	611	4.64	11.00	3.38	8.13	9.50	8.13	9.50	1.88	5/8	1/2
2-3/16	613	5.44	12.59	3.50	9.63	11.00	9.63	11.00	2.13	3/4	5/8
2-7/16	615	6.16	13.63	3.88	10.25	11.75	10.38	11.63	2.13	3/4	5/8
2-11/16	616	6.38	14.17	3.88	10.88	12.38	10.63	12.50	2.13	3/4	5/8
2-15/16	617	6.78	15.36	4.34	11.63	13.13	11.63	13.13	2.38	7/8	3/4
3-7/16	620	8.05	16.50	4.72	—	—	13.25	14.50	2.75	—	3/4
4-3/16	624	9.36	20.88	6.25	—	—	16.75	18.25	3.75	—	1
4-7/16	626	9.92	21.66	6.25	—	—	17.38	19.25	3.75	—	1
4-15/16	628	9.91	24.75	6.75	—	—	19.38	21.63	4.25	—	1
5-3/16	630	10.41	26.75	7.13	—	—	20.88	23.63	4.63	—	1
5-7/16	632	10.81	28.00	7.50	—	—	21.63	24.38	4.50	—	1-1/4
5-15/16 6	634	11.53	28.75	8.00	—	—	22.50	25.00	5.00	—	1-1/4
6-15/16 7	638	12.30	32.75	8.88	—	—	24.75	27.88	5.25	—	1-1/2

S-1 shaft size	Housing	H	J	K	M	P	Q ★	S ●	W Static oil level	X	Y	Drain hole size
1-11/16	610	1.41	5.72	2.20	3.00	6.13	1.38	0.22	1.38	1.53	0.98	1/8-27NPSI
1-15/16	611	1.28	6.19	2.16	3.25	6.50	1.42	0.13	1.44	1.66	1.03	1/8-27NPSI
2-3/16	613	1.06	6.75	2.42	3.50	7.44	1.98	0.19	1.41	1.97	0.95	1/4-18NPSF
2-7/16	615	1.44	7.75	2.84	4.00	8.66	1.77	0.19	1.59	2.25	1.13	3/8-18NPSF
2-11/16	616	1.22	8.25	2.95	4.25	9.03	1.83	0.19	1.69	2.38	1.17	3/8-18NPSF
2-15/16	617	1.66	8.75	3.16	4.50	9.78	1.91	0.19	1.75	2.63	1.25	3/8-18NPSF
3-7/16	620	1.50	10.25	3.64	5.25	11.25	2.30	0.19	2.03	3.19	1.38	1/2-14NPSF
4-3/16	624	2.38	12.50	4.33	6.31	14.94	2.64	0.19	2.38	3.59	1.33	1/2-14NPSF
4-7/16	626	2.34	13.31	4.63	6.69	14.91	2.84	0.19	2.44	4.03	1.33	1/2-14NPSF
4-15/16	628	2.88	14.56	4.63	7.06	16.81	3.09	0.19	2.56	4.16	1.33	1/2-14NPSF
5-3/16	630	3.00	15.13	4.88	7.50	17.19	3.27	0.19	2.63	4.22	1.63	1/2-14NPSF
5-7/16	632	3.13	15.81	5.26	7.88	18.00	3.44	0.19	2.69	4.75	1.61	1/2-14NPSF
5-15/16 6	634	3.38	16.63	5.44	8.25	19.00	3.59	0.19	2.75	4.91	1.53	1/2-14NPSF
6-15/16 7	638	3.75	18.88	5.81	9.50	21.25	3.89	0.19	3.38	5.44	2.03	1/2-14NPSF

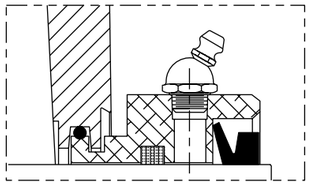
▲ Housing width with drain plugs.

★ Distance shaft should extend beyond housing centerline if pillow block is closed end style.

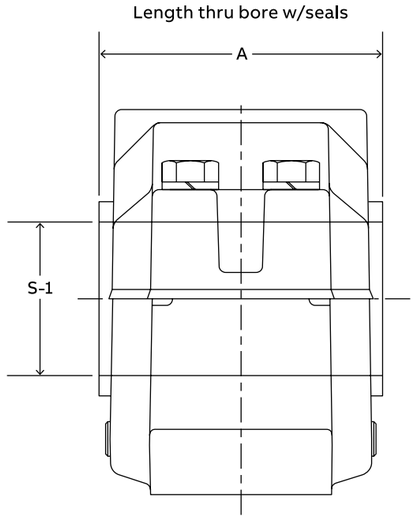
● Non-expansion bearing offset from centerline. For expansion bearing S=0.

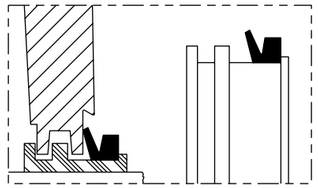
USAF 600 series pillow block – inch

Seals

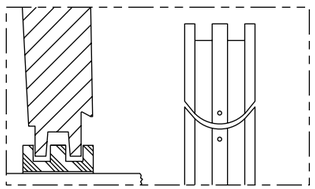


Auxiliary Taconite Seal
For dusty environments and low to moderate speeds

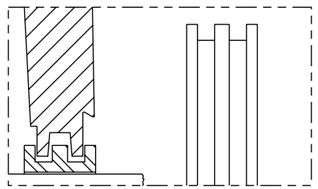




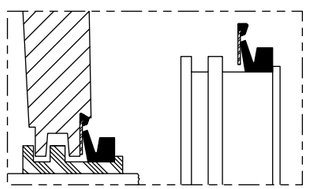
Triple-Tect Seal
General purpose seal for wet or dirty environments



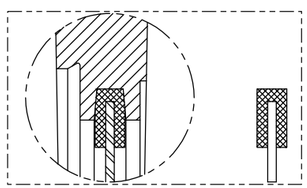
Split Seal
Permits easy installation in hard-to-reach applications without removing shaft.
Non-metallic split LER



LER Seal
High speed seal for relatively clean environments



Drop-in Triple-Tect Seal
Dodge exclusive, popular Triple-Tect features with simplified installation.



End Cover Seal
Allows use of open shaft housing as closed-end

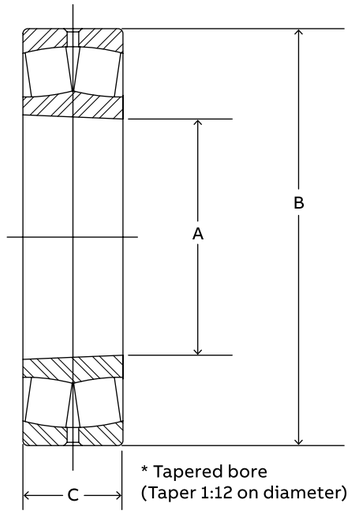
USAF 600 series pillow block – inch
Seals

S-1 shaft size	Housing	Seal group	Part numbers				A		
			Triple-Tect (TT)	Triple-Tect drop-in (TTDN)	#Metal labyrinth (LER)	End cover	TT	TTDN	LER
1-11/16	610	10	043479	—	042199*	040701	4.81	4.81	4.28
1-15/16	611	12	043540	039582	042512	040702	4.8	4.8	4.19
2-3/16	613	14	043541	039583	042513	040703	5.34	5.34	4.69
2-7/16	615	20	043542	039538	042514	040704	6.2	6.2	5.59
2-11/16	616	24	043544	039855	042516	040705	6.42	6.42	5.81
2-15/16	617	28	043546	039530	042518	040706	6.39	6.39	6.17
3-7/16	620	46	043549	039859	042521	040708	7.86	7.86	7.33
4-3/16	624	52	043553	039863	042525	040710	9.28	9.28	8.69
4-7/16	626	54	043554	039864	042526	040711	9.84	9.84	9.2
4-15/16	628	56	043556	039866	042528	040712	9.78	9.78	9.13
5-3/16	630	58	043558	—	042530	040713	10.39	10.39	9.7
5-7/16	632	60	043559	—	042531	040714	10.69	10.69	9.98
5-15/16	634	64	043560	—	042533	040681	11.44	11.44	10.73
6			043561	—	042534				
6-15/16	638	72	043564	—	042537	040683	12.44	12.44	11.7
7			043565	—	042538				

Note: # LER seals are made from aluminum unless otherwise noted by the * symbol.
If an * appears by the part number, the LER seal is manufactured from steel.

USAF 600 series pillow block – inch

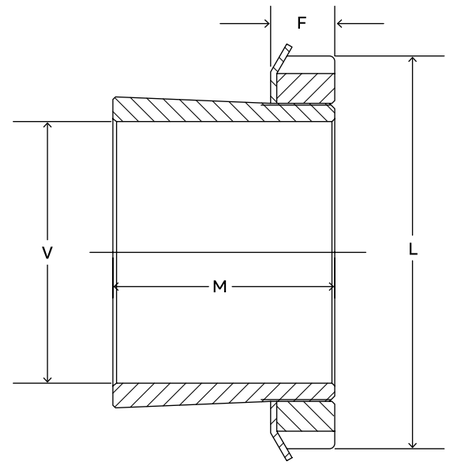
22300K spherical roller bearings



Shaft size	Housing	Bearing number	Part number	Approx. weight (lb)	A*	B	C
					in (mm)	in (mm)	in (mm)
1-7/16	609	22309K	423100	3.0	1.7717 (45)	3.9370 (100)	1.4171 (36)
1-11/16	610	22310K	423372	3.9	1.9685 (50)	4.3307 (110)	1.5748 (40)
1-15/16	611	22311K	423102	5.1	2.1654 (55)	4.7244 (120)	1.6929 (43)
2-3/16	613	22313K	423104	7.8	2.5591 (65)	5.5118 (140)	1.8898 (48)
2-7/16	615	22315K	423106	11.5	2.9528 (75)	6.2992 (160)	2.1654 (55)
2-11/16	616	22316K	423373	13.1	3.1496 (80)	6.6929 (170)	2.2835 (58)
2-15/16	617	22317K	423108	15.7	3.3465 (85)	7.0866 (180)	2.3622 (60)
3-7/16	620	22320K	423110	28.0	3.9370 ((100)	8.4646 (215)	2.8740 (73)
3-15/16	622	22322K	423112	38.8	4.3307 (110)	9.4488 (240)	3.1496 (80)
4-3/16	624	22324K	422140	48.3	4.7244 (120)	10.2362 (260)	3.3858 (86)
4-7/16	626	22326K	423114	59.7	5.1181 (130)	11.0236 (280)	3.6614 (93)
4-15/16	628	22328K	422035	75.4	5.5118 (140)	11.8110 (300)	4.0157 (102)
5-3/16	630	22330K	423116	90.4	5.9055 (150)	12.5984 (320)	4.2520 (108)
5-7/16	632	22332K	423118	113.0	6.2992 (160)	13.3858 (340)	4.4882 (114)
5-15/16 6	634	22334K	423120	132.0	6.6929 (170)	14.1732 (360)	4.7244 (120)
6-15/16 7	638	22338K	423122	179.0	7.4803 (190)	15.7480 (400)	5.1969 (132)

USAF 600 series pillow block – inch

Adapter assembly



V Shaft size	Housing	Adapter number	Part number	Approx. weight (lb)	L	F max	M
1-7/16	609	H2309-107	046550	0.63	2.53	0.52	1.97
1-11/16	610	H2310-111	046680	0.80	2.69	0.58	2.17
1-15/16	611	H2311-115	046551	0.86	2.97	0.58	2.32
2-3/16	613	H2313-203	046552	1.50	3.38	0.64	2.56
2-7/16	615	H2315-207	046553	2.55	3.88	0.69	2.87
2-11/16	616	H2316-211	046682	3.00	4.16	0.69	3.07
2-15/16	617	H2317-215	046554	3.20	4.41	0.72	3.23
3-7/16	620	H2320-307	046555	5.30	5.19	0.83	3.82
3-15/16	622	H2322-315	046556	5.75	5.72	0.86	4.13
4-3/16	624	H2324-403	046557	7.4	6.12	0.92	4.41
4-7/16	626	H2326-407	046558	10.7	6.75	0.95	4.76
4-15/16	628	H2328-415	046559	12.0	7.09	1.02	5.16
5-3/16	630	H2330-503	046560	15.6	7.69	1.08	5.47
5-7/16	632	H2332-507	046561	21.7	8.06	1.14	5.79
5-15/16	634	H2334-515	046562	22.0	8.66	1.23	8.06
6		H2334-600	046563	21.0			
6-15/16	638	H2338-615	046564	22.9	9.47	1.30	6.65
7		H2338-700	046565	21.6			

USDAF large-bore pillow block – inch

Adapter mount

Shaft size	Housing	Open housing description part number	Closed housing description part number	Bearing description part number	Dynamic capacity (C) (lb)	Max rpm LER (grease)	SNP description part number	Triple-Tect description part number	# LER description part number	Aux description part number
10-15/16	060	H4S-USDAF-060	CH4S-USDAF-060	23060K	440,000	630	H3060-SNP-1015	96TT1015	96LER1015	96AUX1015
		422580	037426	422582			043581	047942	042037*	045781
11	060	H4S-USDAF-060	CH4S-USDAF-060	23060K	440,000	630	H3060-SNP-1100	96TT1100	96LER1100	96AUX1100
		422580	037426	422582			422576	047943	422588*	044440
11-7/16	064	H4S-USDAF-064	CH4S-USDAF-064	23064K	455,000	600	H3064-SNP-1107	98TT1107	98LER1107	98AUX1107
		422502	037427	422531			043582	047944	042038*	045784
11-1/2	064	H4S-USDAF-064	CH4S-USDAF-064	23064K	455,000	600	H3064-SNP-1108	98TT1108	98ER1108	98AUX1107
		422502	037427	422531			043583	047945	042039*	045787
11-15/16	064L	H4S-USDAF-064L	CH4S-USDAF-064L	23064K	455,000	600	H3064L-SNP-1115	100TT1115	100ER1115	100AUX1115
		422529	037428	422531			043584	047946	042040*	045790

Note: LER seals are made from aluminum unless otherwise noted by the * symbol.

If an * appears by the part number, the LER seal is manufactured from steel.

USDAF large-bore pillow block – inch

Adapter mount

Shaft size	Housing	Open housing description part number	Closed housing description part number	Bearing description part number	Dynamic capacity (C) (lb)	Max rpm LER (grease)	SNP description part number	Triple-Tect description part number	# LER description part number	Aux description part number
12	064L	H4S-USDAF-064L	CH4S-USDAF-064L	23064K	455,000	600	H3064L-SNP-1200	100TT1200	100ER1200	100AUX1200
		422529	037428	422531			422525	047947	422535*	045793
12-7/16	068	H4S-USDAF-068	CH4S-USDAF-068	23068K	530,000	560	H3064-SNP-1207	102TT1207	102ER1207	102AUX1207
		035183	035185	421282			047632	047948	046498*	046567
12-1/2	068	H4S-USDAF-068	CH4S-USDAF-068	23068K	530,000	560	H3068-SNP-1208	102TT1208	102ER1208	102AUX1208
		035183	035185	421282			047635	047949	046499*	046568
12-15/16	072	H4S-USDAF-072	CH4S-USDAF-072	23072K	550,000	530	H3072-SNP-1215	104TT1215	104ER1215	102AUX1215
		044164	037429	422036			043635	047950	042090*	045796
13	072	H4S-USDAF-072	CH4S-USDAF-072	23072K	550,000	530	H3072-SNP-1300	104TT1300	072ER1300	104AUX1300
		044164	037429	422036			043636	047951	042091*	045799
13-7/16	072L	H4S-USDAF-072L	CH4S-USDAF-072L	23072K	550,000	530	H3072L-SNP-1307	106TT1307	106ER1307	106AUX1307
		044165	037430	422036			043637	047952	042092*	045802
13-1/2	072L	H4S-USDAF-072L	CH4S-USDAF-072L	23072K	550,000	530	H3072L-SNP-1308	106TT1308	106ER1308	106AUX1308
		044165	037430	422036			043638	047953	042093*	045805
13-15/16	076	H4S-USDAF-076	CH4S-USDAF-076	23076K	570,000	500	H3076-SNP-1315	108TT1315	108ER1315	108AUX1315
		044166	037431	422054			043639	047954	042094*	045808
14	076	H4S-USDAF-076	CH4S-USDAF-076	23076K	570,000	500	H3076-SNP-1400	108TT1400	108ER1400	108AUX1400
		044166	037431	422054			043640	047955	042095*	046569
15	080	H4S-USDAF-080	CH4S-USDAF-080	23080K	680,000	450	H3080-SNP-1500	110TT1500	110ER1500	110AUX1500
		035417	035418	421283			040830	047956	050474*	046570
15-3/4	84	H4S-USDAF-084	CH4S-USDAF-084	23084K	710,000	450	H3084-SNP-1512	112TT1512	112ER1512	112AUX1512
		035943	035944	421284			047636	047957	046566*	046572

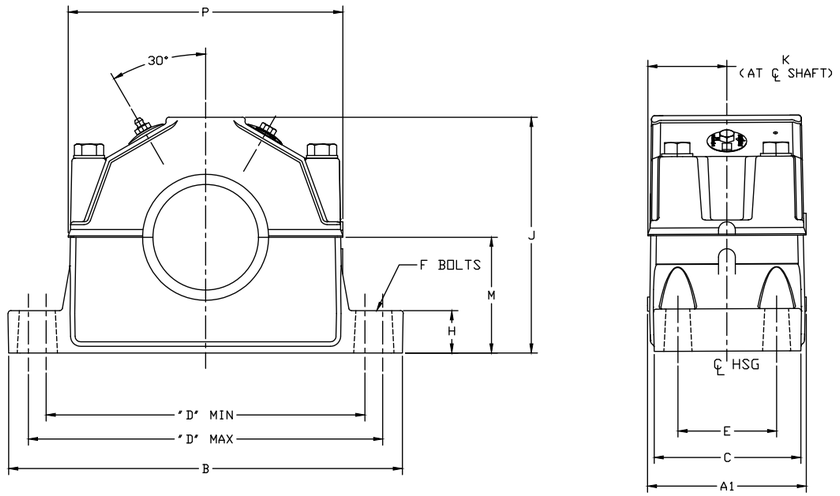
Note: LER seals are made from aluminum unless otherwise noted by the * symbol.

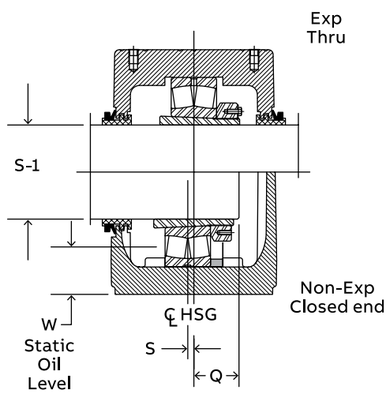
If an * appears by the part number, the LER seal is manufactured from steel.

Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

USDAF large-bore pillow block – inch

Adapter mount





USDAF large-bore pillow block – inch
Adapter mount

S-1 shaft size	Housing	Bearing number	A1 ▲	B	C	D		E	F Base bolt size (4 req'd)	H
						Min.	Max.			
10-15/16	060	23060K	16.36	38.25	14.75	31.63	34.63	9.00	1-5/8	3.38
11-7/16	064	23064K								
11-1/2										
11-15/16	064L									
12										
12-7/16	068	23068K	15.85	39.00	15.25	32.00	34.00	10.00	1-7/8	4.19
12-1/2										
12-15/16	072	23072K	16.98	41.75	15.75	35.00	36.50	10.25	1-7/8	4.50
13										
13-7/16	072L									
13-1/2										
13-15/16	076	23076K								
14										
15	080	23080K	18.38	46.00	17.13	39.25	40.75	11.00	2	5.25
15-3/4	084	23084K								

S-1 shaft size	Housing	Bearing number	J	K	M	P	Q ★	S ●	Total exp.
10-15/16	060	23060K	23.44	7.72	12.00	26.50	4.31	0.19	3/8
11-7/16	064	23064K					4.45		
11-1/2									
11-15/16	064L								
12									
12-7/16	068	23068K	24.00	7.47	12.00	26.38	4.81	0.19	3/8
12-1/2									
12-15/16	072	23072K	25.75	8.16	12.81	29.13	4.81	0.19	3/8
13									
13-7/16	072L								
13-1/2									
13-15/16	076	23076K	29.00	8.75	14.50	33.17	5.95	0.19	3/8
14									
15	080	23080K					5.36	0.19	3/8
15-3/4	084	23084K					5.39	0.19	3/8

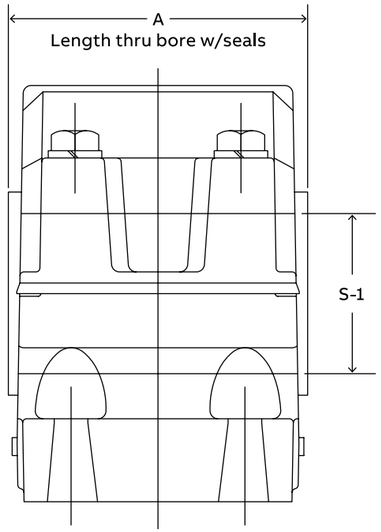
▲ Housing width with drain plugs.

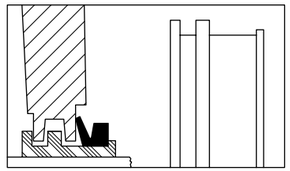
★ Distance shaft should extend beyond housing centerline if pillow block is closed end style.

● Non-expansion bearing offset from centerline. For expansion bearing S = 0.

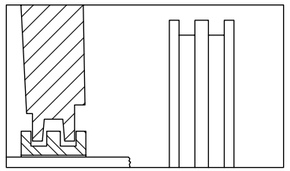
USDAF large-bore pillow block – inch

Seals

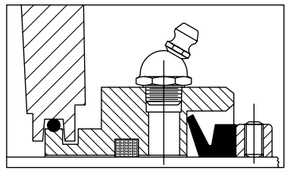




Triple-Tect seal
General purpose seal for wet or dirty environments



LER seal
High speed seal for relatively clean environments



Auxiliary Taconite seal
For dusty environments and low to moderate speeds

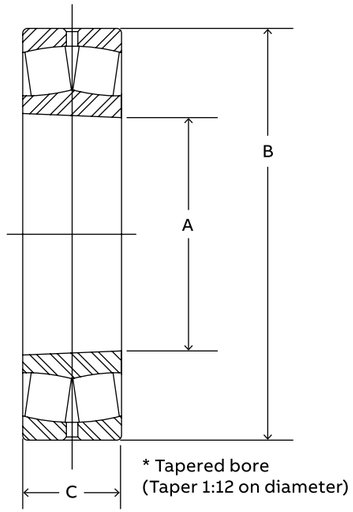
USDAF large-bore pillow block – inch
Seals

S-1 Shaft size	Housing	Seal group	Part numbers			A		
			Triple-Tect (TT)	Metal labyrinth (LER)	Auxiliary (AUX)	TT	LER	AUX*
10-15/16	060	96	047942	042037	045781	16.53	15.25	19.84
11			047943	422588	044440			19.59
11-7/16	064	98	047944	042038	045784			19.84
11-1/2			047945	042039	045787			
11-15/16	064L	100	047946	042040	045790			
2			047947	422535	045793			
12-7/16	068	102	047948	046498	046567	16.09	14.81	19.41
12-1/2			047949	046499	046568			
12-15/16	072	104	047950	042090	045796	17.44	16.23	20.52
13			047951	042091	045799			
13-7/16	072L	106	047952	042092	045802			
13-1/2			047953	042093	045805			
13-15/16	076	108	047954	042094	045808			20.77
14			047955	042095	046569			
15	080	110	047956	050474	046570	18.63	17.42	21.97
15-3/4	084	112	047957	046566	046572			22.23

* Includes collar.

USDAF large-bore pillow block – inch

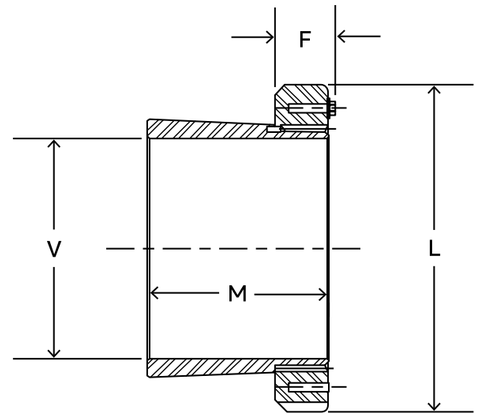
23000 spherical roller bearings



Housing	Bearing number	Part number	Approx. weight (lb)	A* in (mm)	B in (mm)	C in (mm)
060	23060K	422582	150	11.8110 (300)	18.1102 (460)	4.6457 (118)
064/064L	23064K	422531	161	12.5984 (320)	18.8976 (480)	4.7638 (121)
068	23068K	421282	218	13.3858 (340)	20.4724 (520)	5.2362 (133)
072/072L	23072K	422036	226	14.1732 (360)	21.2598 (540)	5.2756 (134)
076	23076K	422054	240	14.9606 (380)	22.0472 (560)	5.3150 (135)
080	23080K	421283	309	15.7480 (400)	23.6220 (600)	5.8268 (148)
084	20384K	421284	330	16.5354 (420)	24.4094 (620)	5.9055 (150)

USDAF large-bore pillow block – inch

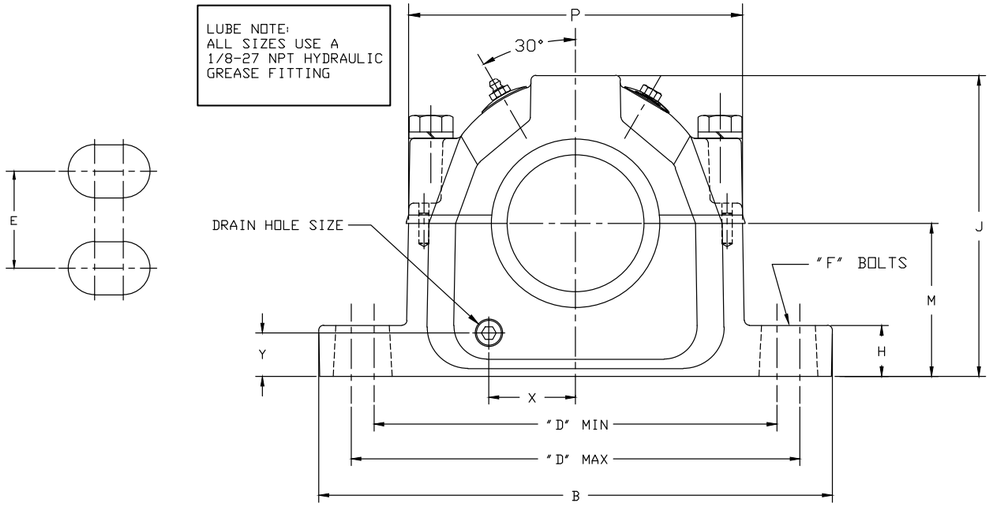
Adapter assembly

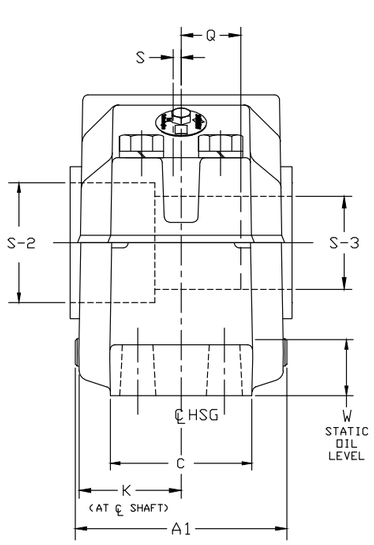


Housing	Bearing number	SNP number	Part number	Approx weight (lb)	V Shaft size	L	F max	M
060	23060K	SNP3060-1015	043581	59.0	10-15/16	14.19	1.94	6.72
		SNP3060-1100	422576	56.8	11			
064	23064K	SNP3064-1107	043582	82.7	11-7/16	15.01	2.03	6.94
		SNP3064-1108	043583	80.5	11-1/2			
064L		SNP3064-1115	043584	65.0	11-15/16			
		SNP3064-1200	422525	62.5	12			
068	23068K	SNP3068-1207	047632	78.0	12-7/16	15.76	2.16	7.53
		SNP3068-1208	047635	75.4	12-1/2			
072	23072K	SNP3072-1215	043635	107.7	12-15/16	16.51	2.16	7.57
		SNP3072-1300	043636	105.0	13			
072L		SNP3072-1307	043637	86.0	13-7/16			
		SNP3072-1308	043638	83.2	13-1/2			
076	23076K	SNP3076-1315	043639	94.3	13-15/16	17.76	2.36	7.73
		SNP3076-1400	043640	91.5	14			
080	23080K	SNP3080-1500	040830	100.0	15	18.51	2.52	8.40
084	23084K	SNP3084-1512	047636	105.0	15-3/4	19.32	2.52	8.49

USAF 200 series pillow block – inch

2- and 4-bolt, direct mount





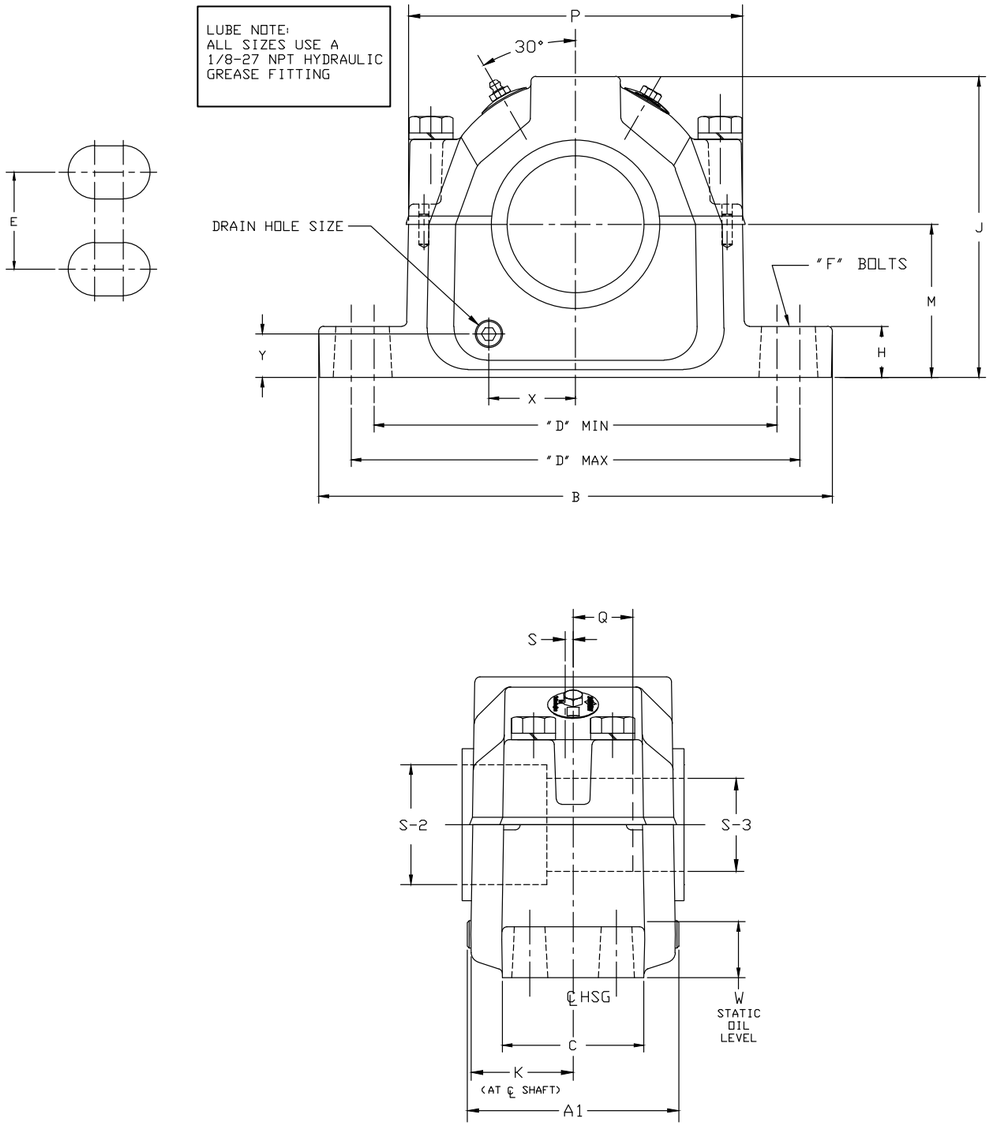
USAF 200 series pillow block – inch

2- and 4-bolt, direct mount

Shaft size S-2	Shaft size S-3	Bearing bore (mm)	Complete pillow block description part number	Housing description part number	Bearing description part number	Dynamic capacity (C) (lb)	Max. rpm (grease)	Lock nut description part number
3-7/16	2-13/16	75	P2B215-USAF-307TT	H2S-215-USAF	BRG22215C3	48,000	3,400	AN15
			039175	039682	421265			460901
			P4B215-USAF-307TT	H4S-215-USAF	BRG22215C3	48,000	3,400	AN15
			039177	039684	421265			460901
3-5/8	3	80	P2B216-USAF-310TT	H2S-216-USAF	BRG22216C3	56,000	3,200	AN16
			039179	039686	421266			460902
			P4B216-USAF-310TT	H4S-216-USAF	BRG22216C3	56,000	3,200	AN16
			039181	039688	421266			460902
3-15/16	3-3/16	85	P2B217-USAF-315TT	H2S-217-USAF	BRG22217C3	68,000	3,000	AN17
			039183	039690	421267			460903
			P4B217-USAF-315TT	H4S-217-USAF	BRG22217C3	68,000	3,000	AN17
			039185	039692	421267			460903
4-1/8	3-3/8	90	P2B218-USAF-402TT	H2S-218-USAF	BRG22218C3	78,000	2,600	AN18
			039187	039694	421268			460904
			P4B218-USAF-402TT	H4S-218-USAF	BRG22218C3	78,000	2,600	AN18
			039189	039696	421268			460904
4-1/2	3-13/16	100	P2B220-USAF-408TT	H2S-220-USAF	BRG22220C3	96,500	2,200	AN20
			039191	039698	421269			460905
			P4B220-USAF-408TT	H4S-220-USAF	BRG22220C3	96,500	2,200	AN20
			039193	039700	421269			460905
4-7/8	4-3/16	110	P4B222-USAF-414TT	H4S-222-USAF	BRG22222C3	122,000	2,000	AN22
			039195	039702	421270			460906
5-5/16	4-9/16	120	P4B224-USAF-505TT	H4S-224-USAF	BRG22224C3	143,000	1,900	AN24
			039197	039704	421271			041071
5-7/8	4-15/16	130	P4B226-USAF-514TT	H4S-226-USAF	BRG22226C3	170,000	1,800	AN26
			039199	039706	421272			041064
6-1/4	5-5/16	140	P4B228-USAF-604TT	H4S-228-USAF	BRG22228C3	196,000	1,700	AN28
			039201	039708	421273			041065
6-5/8	5-3/4	150	P4B230-USAF-610TT	H4S-230-USAF	BRG22230C3	228,000	1,600	AN30
			039203	039710	421274			041072
7	6-1/16	160	P4B232-USAF-700TT	H4S-232-USAF	BRG22232C3	260,000	1,500	AN32
			039205	039711	421275			041066
7-7/16	6-7/16	170	P4B234-USAF-707TT	H4S-234-USAF	BRG22234C3	308,000	1,300	AN34
			039207	039712	421276			041067
7-13/16	6-7/8	180	P4B236-USAF-713TT	H4S-236-USAF	BRG22236C3	308,000	1,300	AN36
			039209	039713	421277			041070
8-3/8	7-1/4	190	P4B238-USAF-806TT	H4S-238-USAF	BRG22238C3	270,000	1,200	AN38
			039211	039714	421278			041068
8-3/4	7-5/8	200	P4B240-USAF-812TT	H4S-240-USAF	BRG22240C3	300,000	900	AN40
			039213	039715	421279			040838
9-9/16	8-5/16	220	P4B244-USAF-909TT	H4S-244-USAF	BRG22244C3	365,000	950	AN44
			039215	039716	421280			041069

USAF 200 series pillow block – inch

2- and 4-bolt, direct mount



USAF 200 series pillow block – inch

2- and 4-bolt, direct mount

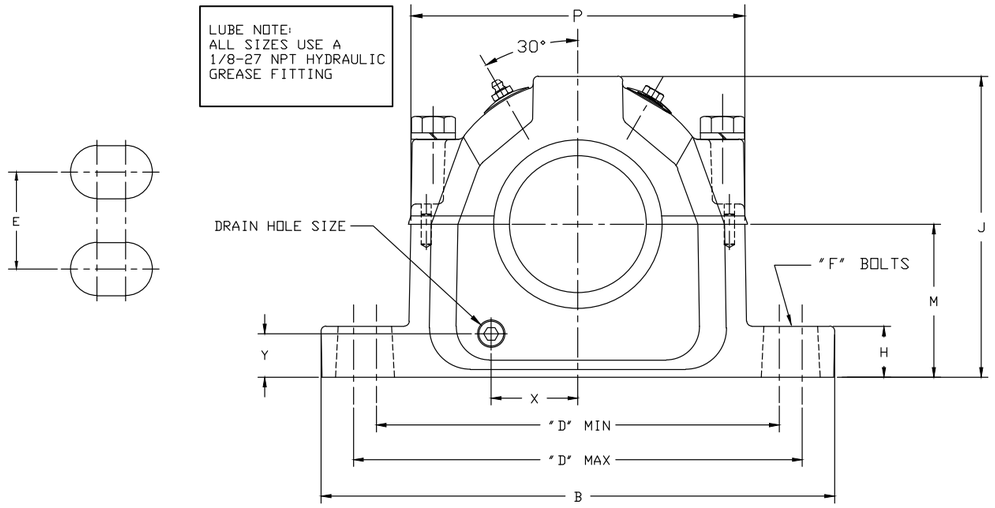
Shaft size		Bearing bore (mm)	Lock washer description part number	Triple-Tect description part number		TTDN description part number		# LER description part number		End cover description part number
S-2	S-3			S2	S3	S2	S3	S2	S3	
3-7/16	2-13/16	75	W15	38TT307	24TT213	38TTDN307	24TTDN213	38LER307	24LER213	EC24
			419150	046401	046400	039568	039289	045928*	045927*	040705
			W15	38TT307	24TT213	38TTDN307	24TTDN213	38LER307	24LER213	EC24
			419150	046401	046400	039568	039289	045928*	045927*	040705
3-5/8	3	80	W16	38TT310	28TT300	38TTDN310	28TTDN300	38LER310	28LER300	EC28
			419152	046402	043547	039291	039857	045931	042519	040706
			W16	38TT310	28TT300	38TTDN310	28TTDN300	38LER310	28LER300	EC28
			419152	046402	043547	039291	039857	045931	042519	040706
3-15/16	3-3/16	85	W17	42TT315	32TT303	42TTDN315	32TTDN303	42LER315	32LER303	EC32
			419154	046404	046403	039515	039292	042089	042088	057260
			W17	42TT315	32TT303	42TTDN315	32TTDN303	42LER315	32LER303	EC32
			419154	046404	046403	039515	039292	042089	042088	057260
4-1/8	3-3/8	90	W18	44TT402	36TT306	—	—	44LER402	36LER306	—
			419156	046406	046405			045936*	045934*	
			W18	44TT402	36TT306	—	—	44LER402	36LER306	—
			419156	046406	046405			045936*	045934*	
4-1/2	3-13/16	100	W20	54TT408	50TT313	—	—	54LER408	50LER313	EC50
			419158	043555	046407			042527	045939	040709
			W20	54TT408	50TT313	—	—	54LER408	50LER313	EC50
			419158	043555	046407			042527	045939	040709
4-7/8	4-3/16	110	W22	56TT414	52TT403	56TTDN414	52TTDN403	56LER414	52LER403	EC52
			419160	046408	043553	039297	039863	042098	042525	040710
5-5/16	4-9/16	120	W24	58TT510	54TT409	—	—	58LER505	54LER409	EC54
			419162	046411	046409			042248	045943	040711
5-7/8	4-18/16	130	W26	62TT514	56TT415	—	—	62LER514	56LER415	EC56
			419164	046410	043556			042085	042528	040712
6-1/4	5-5/16	140	W28	66TT604	58TT505	—	—	66LER604	58LER505	EC58
			419166	046412	046411			042249	042248	040713
6-5/8	5-3/4	150	W30	70TT610	62TT512	—	—	70LER610	62LER512	—
			419168	046414	046413			045951	045949	
7	6-1/16	160	W32	72TT700	64TT601	—	—	72LER700	64LER601	EC64
			419170	043565	046415			042538	045953	040681
7-7/16	6-7/16	170	W34	76TT707	68TT607	—	—	76LER707	68LER607	EC68
			419172	046416	043562			042049	042535	040682
7-13/16	6-7/8	180	W36	78TT711	72TT614	—	—	78LER711	72LER614	EC72
			419174	046417	046418			042221	042220	040683
8-3/8	7-1/4	190	W38	80TT806	74TT704	—	—	80LER806	74LER704	EC74
			419176	046420	046419			042031*	042032*	040691
8-3/4	7-5/8	200	W40	82TT812	76TT710	—	—	82LER812	76LER710	EC7
			419171	046423	046422			045956*	045955*	040684
9-9/16	8-5/16	220	W44	84TT909	80TT805	—	—	84LER909	80LER805	—
			419178	046425	046424			042029*	042028*	

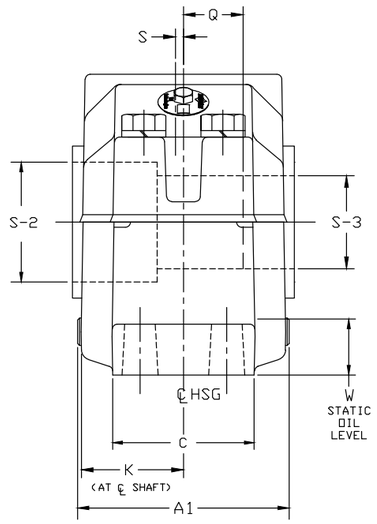
Note: LER seals are made from aluminum unless otherwise noted by the * symbol.

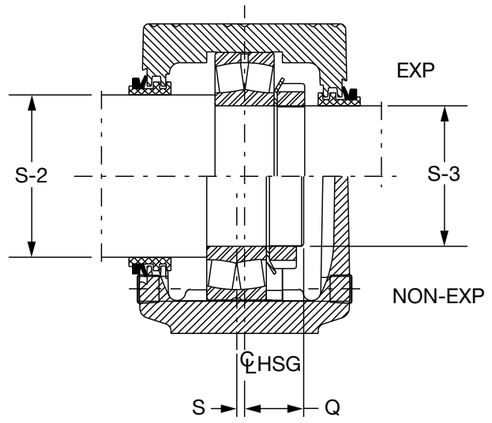
If an * appears by the part number, the LER seal is manufactured from steel.

USAF 200 series pillow block – inch

2- and 4-bolt, direct mount







USAF 200 series pillow block – inch

2- and 4-bolt, direct mount

S-2 Shaft size	S-3 Shaft size	Housing	A1 ▲	B	C	D 2-bolt Min.	D 2-bolt Max.	D 4-bolt Min.	D 4-bolt Max.	E	F bolt dia. 2-bolt	F bolt dia. 4-bolt
3-7/16	2-13/16	215	5.20	11.13	3.13	8.63	9.68	8.63	9.63	1.88	5/8	1/2
3-5/8	3	216	5.44	12.59	3.50	9.63	11.00	9.68	11.00	2.13	3/4	5/8
3-15/16	3-3/16	217	5.39	12.59	3.50	9.88	11.00	9.88	11.00	2.13	3/4	5/8
4-1/8	3-3/8	218	6.16	13.63	3.88	10.25	11.75	10.38	11.63	2.13	3/4	5/8
4-1/2	3-13/16	220	6.78	15.36	4.34	11.63	13.13	11.63	13.13	2.38	7/8	3/4
4-7/8	4-3/16	222	7.08	16.50	4.75	—	—	12.59	14.50	2.75	—	3/4
5-5/16	4-9/16	224	8.05	16.50	4.72	—	—	13.25	14.50	2.75	—	3/4
5-7/8	4-15/16	226	8.27	18.58	5.13	—	—	14.50	16.00	3.25	—	7/8
6-1/4	5-5/16	228	8.77	19.69	5.88	—	—	15.63	17.38	3.38	—	1
6-5/8	5-3/4	230	9.36	20.88	6.25	—	—	16.75	18.25	3.75	—	1
7	6-1/16	232	9.92	21.66	6.25	—	—	17.38	19.25	3.75	—	1
7-7/16	6-7/16	234	9.91	24.75	6.75	—	—	19.38	21.63	4.25	—	1
7-13/16	6-7/8	236	10.41	26.75	7.13	—	—	20.88	23.63	4.63	—	1
8-3/8	7-1/4	238	10.81	28.00	7.50	—	—	21.63	24.88	4.50	—	1-1/4
8-3/4	7-5/8	240	11.53	28.75	8.00	—	—	22.50	25.00	5.00	—	1-1/4
9-9/16	8-5/16	244	12.30	32.75	8.88	—	—	24.75	27.88	5.25	—	1-1/2

S-2 Shaft size	S-3 Shaft size	Housing	H	J	K	M	P	Q ★	S ●	W Static oil level	X	Y	Drain hole size
3-7/16	2-13/16	215	1.25	6.44	2.31	3.25	7.06	1.39	0.13	1.16	1.78	0.88	1/4-18NPSF
3-5/8	3	216	1.06	6.75	2.42	3.50	7.94	1.44	0.19	1.25	1.97	0.95	1/4-18NPSF
3-15/16	3-3/16	217	1.25	7.38	2.47	3.75	8.19	1.50	0.19	1.38	1.13	1.06	3/8-18NPSF
4-1/8	3-3/8	218	1.44	7.75	2.84	4.00	8.66	1.72	0.19	1.47	1.25	1.13	3/8-18NPSF
4-1/2	3-13/16	220	1.66	8.75	3.16	4.50	9.78	1.92	0.19	1.64	2.63	1.25	3/8-18NPSF
4-7/8	4-3/16	222	1.78	9.41	3.30	4.94	10.59	2.09	0.19	1.80	2.88	1.34	3/8-18NPSF
5-5/16	4-9/16	224	1.50	10.25	3.64	5.25	11.25	2.28	0.19	1.84	3.19	1.38	1/2-14NPSF
5-7/8	4-15/16	226	2.06	11.53	3.75	6.00	12.41	2.47	0.19	1.34	3.31	1.63	1/2-14NPSF
6-1/4	5-5/16	228	2.06	11.81	4.00	6.00	13.25	2.45	0.19	2.03	3.63	1.47	1/2-14NPSF
6-5/8	5-3/4	230	2.38	12.50	4.33	6.31	14.31	2.61	0.19	2.03	3.59	1.33	1/2-14NPSF
7	6-1/16	232	2.34	13.31	4.63	6.69	14.91	2.91	0.19	2.09	4.03	1.33	1/2-14NPSF
7-7/16	6-7/16	234	2.88	14.56	4.63	7.06	16.81	3.13	0.19	2.19	4.16	1.33	1/2-14NPSF
7-13/16	6-7/8	236	3.00	15.13	4.88	7.50	17.19	3.16	0.19	2.42	4.22	1.63	1/2-14NPSF
8-3/8	7-1/4	238	3.13	15.81	5.06	7.88	18.00	3.30	0.19	2.53	4.75	1.61	1/2-14NPSF
8-3/4	7-5/8	240	3.38	16.63	5.44	8.25	19.00	3.50	0.19	2.47	4.91	1.53	1/2-14NPSF
9-9/16	8-5/16	244	3.75	18.88	5.81	9.50	21.25	3.42	0.19	3.25	5.44	2.03	1/2-14NPSF

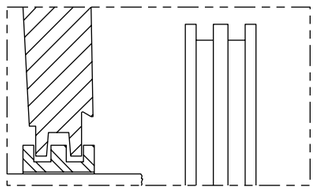
▲ Housing width with drain plugs.

★ Distance shaft should extend beyond housing centerline if pillow block is closed end style.

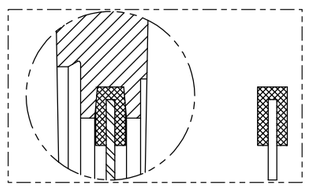
● Non-expansion bearing offset from centerline. For expansion bearing S = 0.

USAF 200 series pillow block – inch

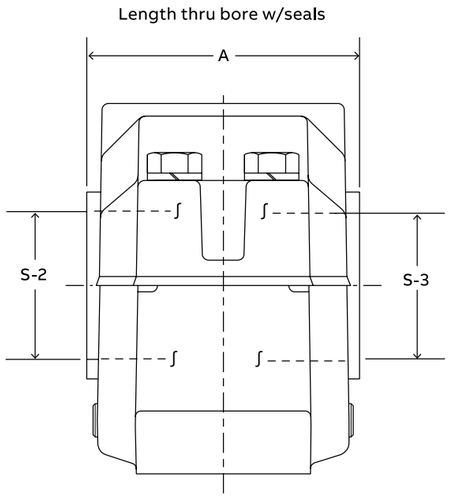
Seals

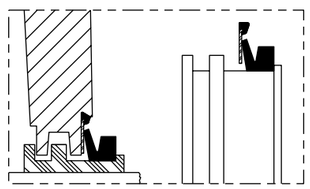


LER Seal
High speed seal for relatively clean environments

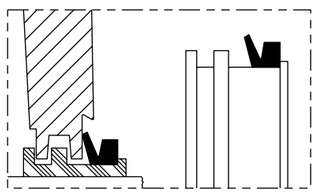


End Cover Seal
Allows use of open shaft housing as closed-end





Drop-in Triple-Tect Seal
Dodge exclusive, popular Triple-Tect features with simplified installation.



Triple-Tect Seal
General purpose seal for wet or dirty environments

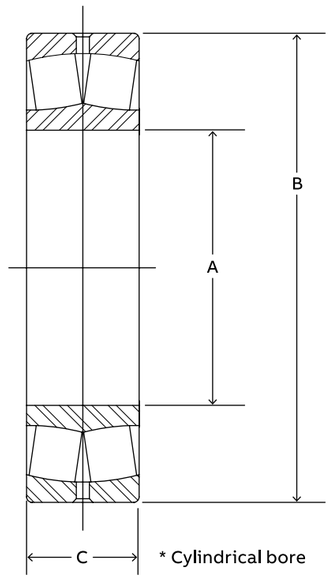
S-2 Shaft size	S-3 Shaft size	Housing	Seal group		Part number							A		
					Triple-Tect (TT)		Triple-Tect drop-in (TTDN)		# Metal labyrinth (LER)		End cover part number	TT	TTDN	LER
			S-2	S-3	S-2	S-3	S-2	S-3	S-2	S-3	S-3			
3-7/16	2-13/16	215	33	24	046401	046400	039568	039289	045928*	045927*	040705	5.09	5.09	4.47
3-5/8	3	216	38	28	046402	043547	039291	039857	045931	042519	040706	5.33	5.33	4.72
3-15/16	3-3/16	217	42	32	046404	046403	039515	039292	042089	042088	—	5.44	5.44	4.83
4-1/8	3-3/8	218	44	36	046406	046405	—	—	045936*	045934*	—	6.27	6.27	5.70
4-1/2	3-13/16	220	54	50	043555	046407	—	—	042527	045939	040709	6.84	6.84	6.31
4-7/8	4-3/16	222	56	52	046408	043553	039297	039863	042098	042525	040710	7.19	7.19	6.59
5-5/16	4-9/16	224	58	54	046411	046409	—	—	042248	045943	040711	7.91	7.91	7.31
5-7/8	4-15/16	226	62	56	046410	043556	—	—	042085	042528	040712	8.14	8.14	7.50
6-1/4	5-5/16	228	66	58	046412	046411	—	—	042249	042248	040713	8.53	8.53	7.88
6-5/8	5-3/4	230	70	62	046414	046413	—	—	045951	045949	—	9.41	9.41	8.70
7	6-1/16	232	72	64	043565	046415	—	—	042538	045953	040681	9.91	9.91	9.20
7-7/16	6-7/16	234	76	68	046416	043562	—	—	042049	042535	040682	9.83	9.83	9.13
7-13/16	6-7/8	236	78	72	046417	046418	—	—	042221	042220	040683	10.41	10.41	9.69
8-3/8	7-1/4	238	80	74	046420	046419	—	—	042031*	042032*	—	11.00	11.00	9.98
8-3/4	7-5/8	240	82	76	046423	046422	—	—	045956	045955	040684	11.78	11.78	10.72
9-9/16	8-5/16	244	84	80	046425	046424	—	—	042029*	042028*	040687	12.30	12.30	11.41

Note: LER seals are made from aluminum unless otherwise noted by the * symbol.

If an * appears by the part number, the LER seal is manufactured from steel.

USAF 200 series pillow block – inch

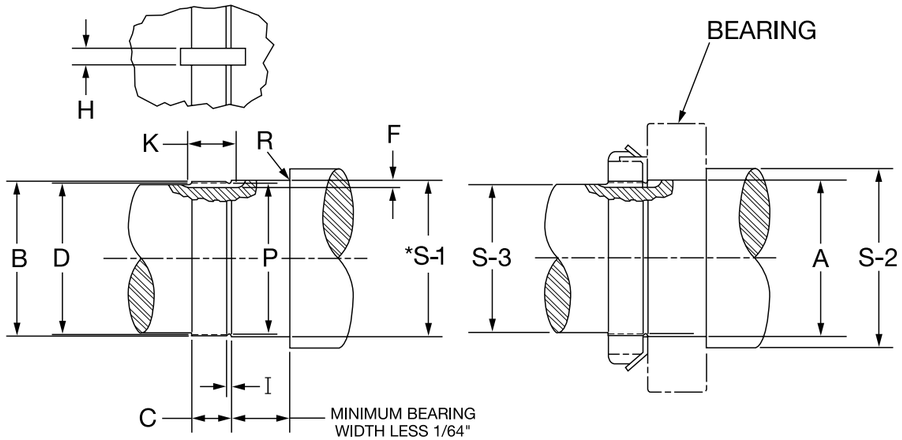
22200 spherical roller bearings



Bearing bore (mm)	Housing	Bearing number	Part number	Approx. weight (lb)	A in (mm)	B in (mm)	C in (mm)
75	215	22215	421265	3.6	2.9528 (75)	5.1181 (130)	1.2205 (31)
80	216	22216	421266	4.4	3.1496 (80)	5.5118 (140)	1.2992 (33)
85	217	22217	421267	5.5	3.3465 (85)	5.9055 (150)	1.4173 (36)
90	218	22218	421268	7.1	3.5433 (90)	6.2992 (160)	1.5748 (40)
100	220	22220	421269	10.4	3.9370 (100)	7.0866 (180)	1.8110 (46)
110	222	22222	421270	14.8	4.3307 (110)	7.8740 (200)	2.0866 (53)
120	224	22224	421271	18.7	4.7244 (120)	8.4646 (215)	2.2835 (58)
130	226	22226	421272	23.1	5.1181 (130)	9.0551 (230)	2.5197 (64)
140	228	22228	421273	29.8	5.5118 (140)	9.8425 (250)	2.6772 (68)
150	230	22230	421274	35.5	5.9055 (150)	10.6299 (270)	2.8740 (73)
160	232	22232	421275	47.8	6.2992 (160)	11.4173 (290)	3.1496 (80)
170	234	22234	421276	58.0	6.6929 (170)	12.2047 (310)	3.3858 (86)
180	236	22236	421277	60.8	7.0866 (180)	12.5984 (320)	3.3858 (86)
190	238	22238	421278	82.2	7.4803 (190)	13.3858 (340)	3.6220 (92)
200	240	22240	421279	97.9	7.8740 (200)	14.1732 (360)	3.8583 (98)
220	244	22244	421280	135.0	8.6614 (220)	15.7480 (400)	4.2520 (108)

USAF 200 series pillow block – inch

Shaft details



Nominal bearing bore diameter (mm)	Shaft bearing seat diameters (in)					
	Normal load			High load		
	* S-1		Mean fit	* S-1		Mean fit
	Max.	Min.		Max.	Min.	
75	2.9540	2.9532	0.0011 T	2.9543	2.9536	0.0014 T
80	3.1508	3.1501	0.0012 T	3.1511	3.1504	0.0015 T
85	3.3479	3.3470		3.3484	3.3475	
90	3.5447	3.5438		3.5452	3.5443	
95	3.7416	3.7407		3.7421	3.7412	
100	3.9384	3.9375	0.0014 T	3.9389	3.9380	0.0019 T
105	4.1353	4.1344		4.1358	4.1349	
110	4.3321	4.3312		4.33Z6	4.3317	
120	4.7258	4.7249		4.7263	4.7254	
125	4.9229	4.9219		4.9235	4.9225	
130	5.1197	5.1187		5.1203	5.1193	
140	5.5134	5.5124		5.5140	5.5130	
150	5.9071	5.9061	0.0016 T	5.9077	5.9067	0.0022 T
160	6.3008	6.2998		6.3014	6.3004	
170	6.6945	6.6935		6.6951	6.6941	
180	7.0882	7.0872		7.0888	7.0878	
190	7.4821	7.4809		7.4829	7.4817	0.0026 T
200	7.8758	7.8746	0.0019 T	7.8772	7.8760	0.0032 T
220	8.6632	8.6620		8.6646	8.6634	

Normal load P/C = 0.10 to 0.18

High load P/C > 0.18

Where: P = Equivalent dynamic load on the bearing (lb)

C = Basic dynamic load rating of bearing (lb)

T = Tight fit

Reference Guide
Type E Family (Tapered)
Specialty Tapered
Safety Mount Family (Spherical)
S-2000 (Spherical)
Unified SAF (Spherical)
Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

USAF 200 series pillow block – inch

Shaft details

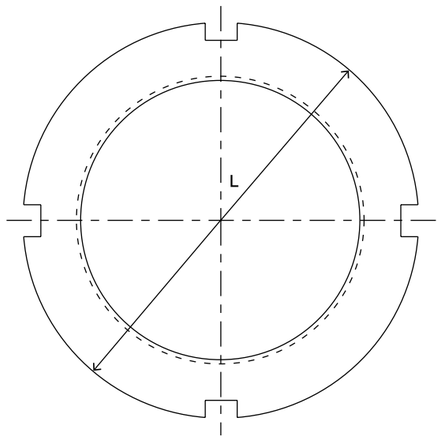
Housing	Lock nut and washer kit part number	A Bearing bore	S-2	S-3	Keyway			R Max radius
					F Depth +1/64 -0	H Width +1/64 -0	K Full depth length	
215	046756	2.9528 (75 mm)	3-7/16	2-13/16	1/8	5/16	15/16	0.059
216	046757	3.1496 (80 mm)	3-5/8	3	1/8	3/8	15/16	0.079
217	046758	3.3465 (85 mm)	3-15/16	3-3/16	1/8	3/8	31/32	0.079
218	046759	3.5433 (90 mm)	4-1/8	3-3/8	5/32	3/8	1-1/16	0.079
220	046760	3.9370 (100 mm)	4-1/2	3-13/16	5/32	3/8	1-3/16	0.079
222	046761	4.3307 (110 mm)	4-7/8	4-3/16	3/16	3/8	1-7/32	0.079
224	046762	4.7244 (120 mm)	5-5/16	4-9/16	3/16	3/8	1-1/4	0.079
226	046763	5.1181 (130 mm)	5-7/8	4-15/16	3/16	1/2	1-5/16	0.098
228	046764	5.5118 (140 mm)	6-1/4	5-5/16	3/16	5/8	1-3/8	0.098
230	046765	5.9055 (150 mm)	6-5/8	5-3/4	7/32	5/8	1-1/2	0.098
232	046766	6.2992 (160 mm)	7	6-1/16	15/64	5/8	1-9/16	0.098
234	046767	6.6929 (170 mm)	7-7/16	6-7/16	15/64	3/4	1-19/32	0.118
236	046768	7.0866 (180 mm)	7-13/16	6-7/8	15/64	3/4	1-5/8	0.118
238	046769	7.4803 (190 mm)	8-3/8	7-1/4	15/64	3/4	1-21/32	0.118
240	046770	7.8740 (200 mm)	8-3/4	7-5/8	15/64	7/8	1-23/32	0.118
244	046771	8.6614 (220 mm)	9-9/16	8-5/16	3/8	1-1/16	1-9/16	0.118

Housing	Threads per inch	B Thread major diameter		D Thread pitch diameter		C Thread length +1/64 -0	I Thread relief +1/64 -0	P† Thread relief diameter
		Max.	Min.	Max.	Min.			
215	12	2.9330	2.9218	2.8789	2.8735	11/16	5/32	2.7995
216	12	3.1370	3.1258	3.0829	3.0770	11/16	5/32	3.0035
217	12	3.3400	3.3288	3.2859	3.2800	23/32	5/32	3.2065
218	12	3.5270	3.5158	3.4729	3.4655	13/16	5/32	3.3935
220	12	3.9180	3.9068	3.8639	3.8565	7/8	5/32	3.7845
222	12	4.325	4.3138	4.2709	4.2626	29/32	5/32	4.1915
224	12	4.716	4.7048	4.6619	4.6536	15/16	5/32	4.5825
226	12	5.106	5.0948	5.0519	5.0436	1	5/32	4.9725
228	12	5.497	5.4858	5.4429	5.4346	1-1/16	5/32	5.3635
230	12	5.888	5.8768	5.8339	5.8256	1-1/8	5/32	5.7545
232	8	6.284	6.2688	6.2028	6.1937	1-3/16	1/4	6.0993
234	8	6.659	6.6438	6.5778	6.5687	1-7/32	1/4	6.4743
236	8	7.066	7.0508	6.9848	6.9757	1-1/4	1/4	6.8813
238	8	7.472	7.4568	7.3908	7.3817	1-9/32	1/4	7.2873
240	8	7.847	7.8318	7.7658	7.7544	1-11/32	1/4	7.6623
244	8	8.628	8.6128	8.5468	8.5347	1-3/8	1/4	8.4433

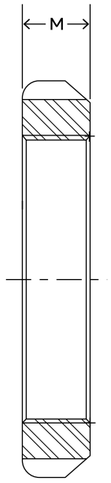
† Tolerance +/-0.005 through 2.6672 dia.; +/-0.010 for larger sizes.

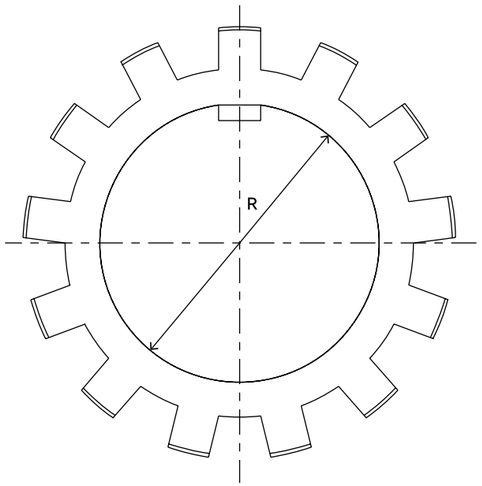
USAF 200 series pillow block – inch

Lock nut and washer

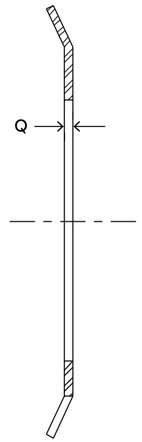


Locknut





Lockwasher



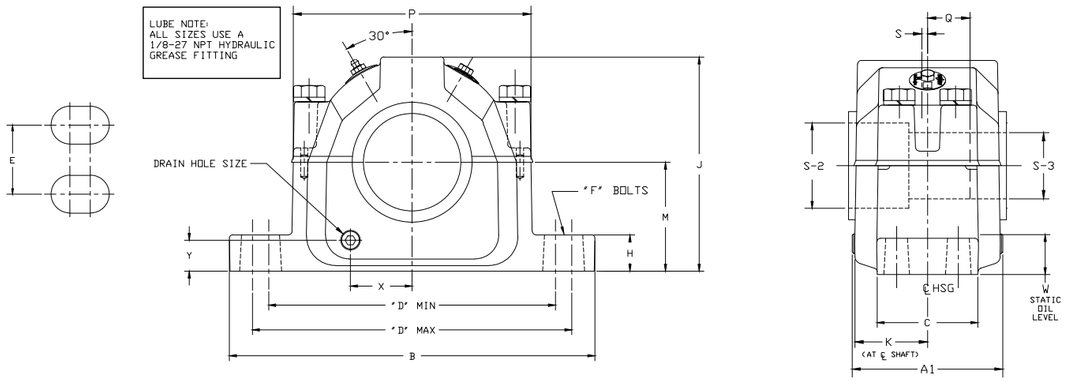
USAF 200 series pillow block – inch

Lock nut and washer

Housing	Lock nut		Lock washer		L	M	R	Q
	Description	Part number	Description	Part number				
215	AN15	460901	W15	419150	3.88	0.59	2.988	0.072
216	AN16	460902	W16	419152	4.16	0.59	3.192	0.072
217	AN17	460903	W17	419154	4.41	0.62	3.410	0.072
218	AN18	460904	W18	419156	4.66	0.69	3.597	0.094
220	AN20	460905	W20	419158	5.19	0.75	4.003	0.094
222	AN22	460906	W22	419160	5.72	0.78	4.410	0.125
224	AN24	041071	W24	419162	6.12	0.81	4.816	0.125
226	AN26	041064	W26	419164	6.75	0.88	5.209	0.125
228	AN28	041065	W28	419166	7.09	0.94	5.600	0.125
230	AN30	041072	W30	419168	7.69	0.97	6.001	0.156
232	AN32	041066	W32	419170	8.06	1.03	6.407	0.156
234	AN34	041067	W34	419172	8.66	1.06	6.782	0.156
236	AN36	041070	W36	419174	9.06	1.09	7.189	0.156
238	AN38	041068	W38	419176	9.47	1.12	7.595	0.156
240	AN40	040838	W40	419171	9.84	1.19	8.000	0.156
244	N44	041069	W44	419178	11.00	1.25	8.719	0.156

USAF 300 series pillow block – inch

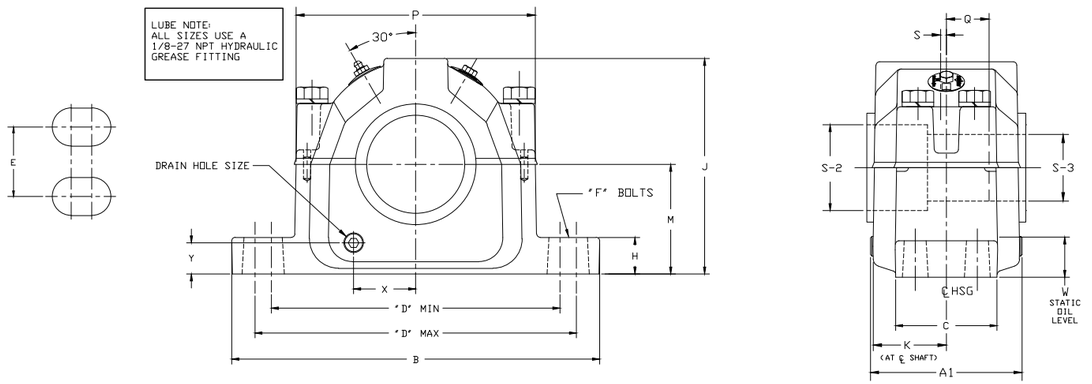
2- and 4-bolt, direct mount



Shaft size		Bearing bore (mm)	Complete pillow block description part number	Housing description part number	Bearing description part number	Dynamic capacity (C) (lb)	Max. rpm (grease)	Shaft lock nut description part number
S-2	S-3							
1-15/16	1-7/16	40	P2B308-USAF-115TT	H2S-308-USAF	BRG22308C3	35,500	4,300	N08
			039355	039717	423124			407305
2-1/8	1-11/16	45	P2B309-USAF-202TT	H2S-309-USAF	BRG22309C3	42,500	3,800	N09
			039356	039719	423125			419187
2-3/8	1-7/8	50	P2B310-USAF-206TT	H2S-310-USAF	BRG22310C3	51,000	3,400	N10
			035915	035437	423143			419188
2-9/16	2-1/16	55	P2B311-USAF-209TT	H2S-311-USAF	BRG22311C3	60,000	3,200	N11
			039371	039723	423126			419184
2-7/8	2-1/4	60	P2B312-USAF-214TT	H2S-312-USAF	BRG22312C3	69,500	2,800	N12
			039358	039725	423127			407302
			P4B312-USAF-214TT	H4S-312-USAF	BRG22312C3	69,500	2,800	N12
			039372	039727	423127			407302
3-1/6	2-7/16	65	P2B313-USAF-301TT	H2S-313-USAF	BRG22313C3	78,000	2,600	N13
			039359	039729	423128			419185
			P4B313-USAF-301TT	H4S-313-USAF	BRG22313C3	78,000	2,600	N13
			039373	039731	423128			419185
3-1/4	2-5/8	70	P2B314-USAF-304TT	H2S-314-USAF	BRG22314C3	86,500	2,400	N14
			039360	039733	423129			407036
			P4B314-USAF-304TT	H4S-314-USAF	BRG22314C3	86,500	2,400	N14
			039374	039735	423129			407036
3-7/16	2-13/16	75	P2B315-USAF-307TT	H2S-315-USAF	BRG22315C3	100,000	2,200	AN15
			039361	039737	423130			460901
			P4B315-USAF-307TT	H4S-315-USAF	BRG22315C3	100,000	2,200	AN15
			039375	039739	423130			460901
3-5/8	3	80	P2B316-USAF-310TT	H2S-316-USAF	BRG22316C3	112,000	2,200	AN16
			035916	035438	423144			460902
			P4B316-USAF-310TT	H4S-316-USAF	BRG22316C3	112,000	2,200	AN16
			035917	035439	423144			460902
3-15/16	3-3/16	85	P2B317-USAF-315TT	H2S-317-USAF	BRG22317C3	122,000	2,000	AN17
			039362	039741	423131			460903
			P4B317-USAF-315TT	H4S-317-USAF	BRG22317C3	122,000	2,000	AN17
			039376	039743	423131			460903

USAF 300 series pillow block – inch

2- and 4-bolt, direct mount



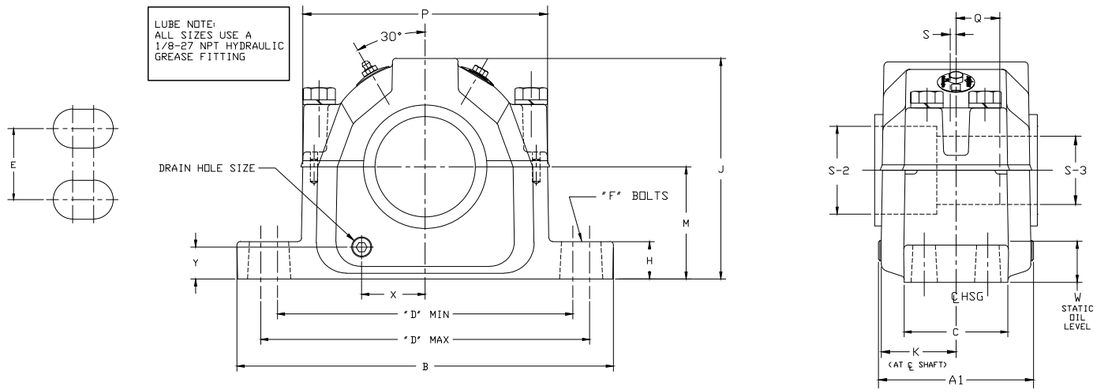
Shaft size		Bearing bore (mm)	Lock washer description part number	Triple-Tect description part number		TTDN description part number		# LER description part number		End cover description part number
S-2	S-3			S-2	S-3	S2	S3	S-2	S-3	
1-15/16	1-7/16	40	W08	12TT115	08TT107	—	—	12LER115	08LER107	EC-08
			419151	043540	043578			042512	042193	040700
2-1/8	1-11/16	45	W09	14TT202	10TT111	—	—	14LER202	10LER111	EC-10
			419180	046464	043579			046472	042199	040701
2-3/8	1-7/8	50	W10	18TT206	12TT114	—	—	18LER206	12LER114	EC-12
			419181	046166	046167			046175	046176	040702
2-9/16	2-1/16	55	W11	22TT209	14TT201	22TTDN209	14TTDN201	22LER209	14LER201	EC-14
			419182	046466	046463	035748	035745	046474	046471	040703
2-7/8	2-1/4	60	W11	22TT209	14TT201	22TTDN209	14TTDN201	22LER209	14LER201	EC-14
			419182	046466	046463	035748	035745	046474	046471	040703
			W12	26TT214	14TT204	26TTDN214	14TTDN204	26LER214	14LER204	EC-14
			419008	046468	046465	035750	035747	046476	046473	040703
			W12	26TT214	14TT204	26TTDN214	14TTDN204	26LER214	14LER204	EC-14
			419008	046468	046465	035750	035747	046476	046473	040703
3-1/6	2-7/16	65	W13	28TT301	22TT207	28TTDN301	22TTDN207	28LER301	22LER207	—
			419183	046469	046168	035751	035744	046477	046177	
			W13	28TT301	22TT207	28TTDN301	22TTDN207	28LER301	22LER207	—
			419183	046469	046168	035751	035744	046477	046177	
3-1/4	2-5/8	70	W14	32TT304	22TT210	32TTDN304	22TTDN210	32LER304	22LER210	—
			419153	046470	046467	035752	035749	046478	046475	
			W14	32TT304	22TT210	32TTDN304	22TTDN210	32LER304	22LER210	—
			419153	046470	046467	035752	035749	046478	046475	
3-7/16	2-13/16	75	W15	38TT307	24TT213	38TTDN307	24TTDN213	38LER307	24LER213	EC24
			419150	046401	046400	039568	039289	045928	045927	040705
			W15	38TT307	24TT213	38TTDN307	24TTDN213	38LER307	24LER213	EC24
			419150	046401	046400	039568	039289	045928	045927	040705
3-5/8	3	80	W16	38TT310	28TT300	38TTDN310	28TTDN300	38LER310	28LER300	EC28
			419152	046402	042547	039291	039857	045931	042519	040706
			W16	38TT310	28TT300	38TTDN310	28TTDN300	38LER310	28LER300	EC28
			419152	046402	042547	039291	039857	045931	042519	040706
3-15/16	3-3/16	85	W17	42TT315	32TT303	42TTDN315	32TTDN303	42LER315	32LER303	—
			419154	046404	046403	039515	039292	042089	042088	
			W17	42TT315	32TT303	42TTDN315	32TTDN303	42LER315	32LER303	—
			419154	046404	046403	039515	039292	042089	042088	

Note: LER seals are made from aluminum unless otherwise noted by the * symbol.

If an * appears by the part number, the LER seal is manufactured from steel.

USAF 300 series pillow block – inch

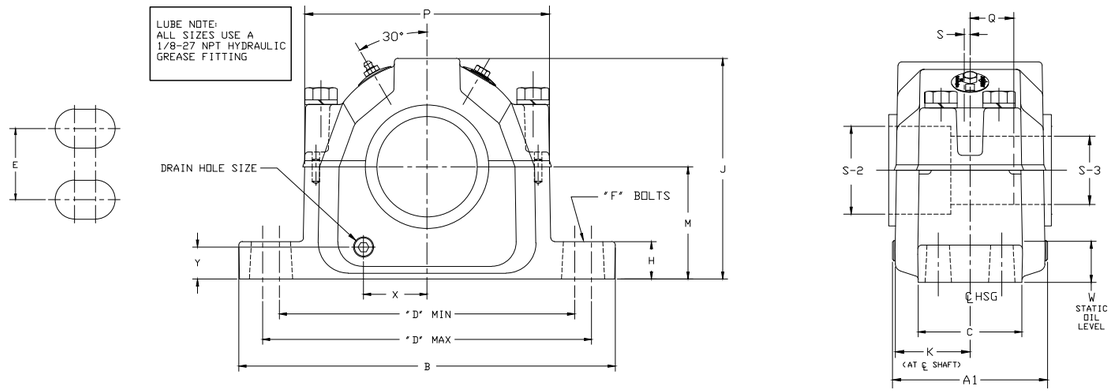
2- and 4-bolt, direct mount



Shaft size		Bearing bore (mm)	Complete pillow block description part number	Housing description part number	Bearing description part number	Dynamic capacity (C) (lb)	Max. rpm (grease)	Lock nut description part number
S-2	S-3							
4-1/2	3-13/16	100	P4B320-USAF-408TT	H4S-320-USAF	BRG22320C3	146,000	1,700	AN204
			039377	039745	423132			060905
4-7/8	4-3/16	110	P4B322-USAF-414TT	H4S-322-USAF	BRG22322C3	180,000	1,500	AN224
			039378	039747	423133			060906
5-5/16	4-9/16	120	P4B324-USAF-505TT	H4S-324-USAF	BRG22324C3	204,000	1,400	AN24
			039380	039749	423134			041071
5-7/8	4-15/16	130	P4B326-USAF-514TT	H4S-326-USAF	BRG22326C3	236,000	1,300	AN26
			039381	039750	423135			041064
6-1/4	5-5/16	140	P4B328-USAF-604TT	H4S-328-USAF	BRG22328C3	275,000	1,200	AN28
			039382	039751	423136			041065
6-5/8	5-3/4	150	P4B330-USAF-610TT	H4S-330-USAF	BRG22330C3	310,000	1,100	AN30
			039383	039752	423137			041072
7	6-1/16	160	P4B332-USAF-700TT	H4S-332-USAF	BRG22332C3	325,000	1,000	AN32
			039384	039753	423138			041066
7-7/16	6-7/16	170	P4B334-USAF-707TT	H4S-334-USAF	BRG22334C3	360,000	950	AN34
			039385	039754	423139			041067
8-3/8	7-1/4	190	P4B338-USAF-806TT	H4S-338-USAF	BRG22338C3	415,000	850	AN38
			039386	039755	423140			041068

USAF 300 series pillow block – inch

2- and 4-bolt, direct mount

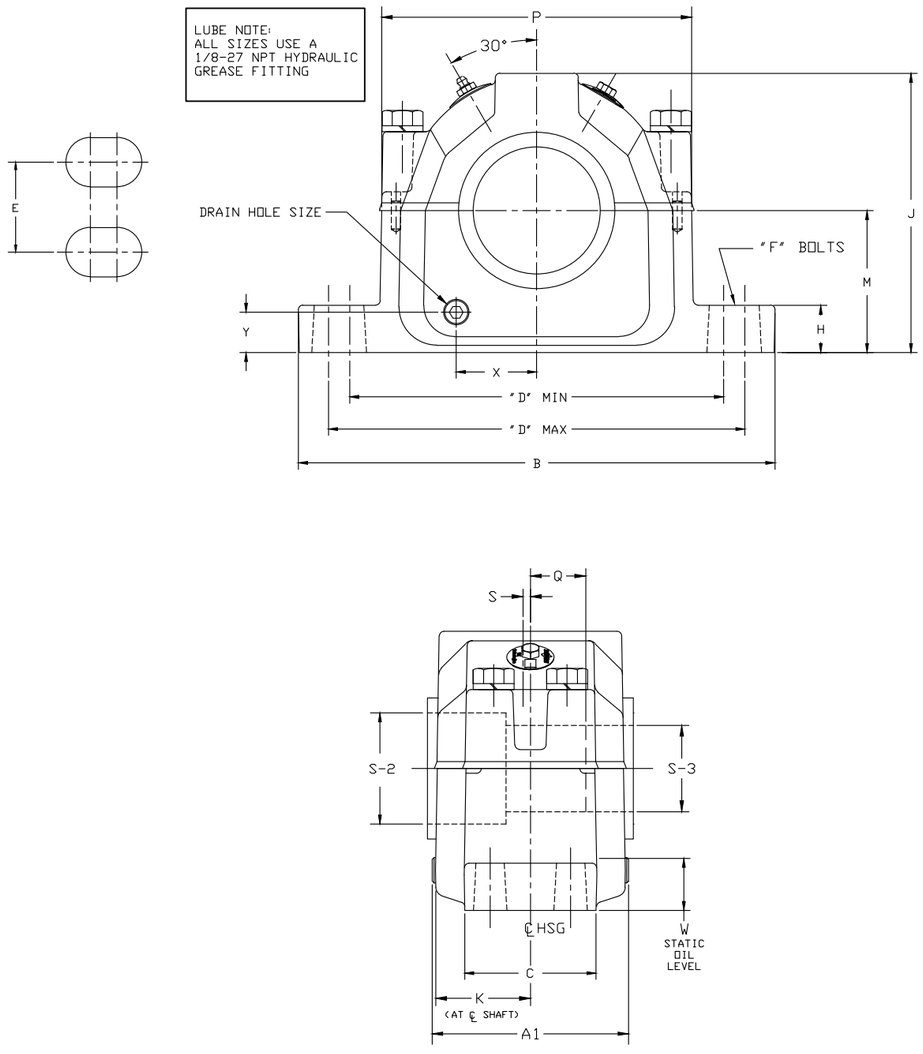


Shaft size		Bearing bore (mm)	Lock washer description part number	Triple-Tect part number		TTDN part number		# LER part number		End cover description part number
S-2	S-3			S-2	S-3	S-2	S-3	S-2	S-3	
4-1/2	3-13/16	100	W20	54TT408	50TT313	—	—	54LER408	50LER313	EC50
			419158	043555	046407			042527	045939	040709
4-7/8	4-3/16	110	W22	56TT414	52TT403	56TTDN414	52TTDN403	56LER414	52LER403	EC52
			419160	046408	043553	039297	039863	042098	042525	040710
5-5/16	4-9/16	120	W24	58TT510	54TT409	—	—	58LER505	54LER409	EC54
			419162	046411	046409			042248	045943	040711
5-7/8	4-15/16	130	W26	62TT514	56TT415	—	—	62LER514	56LER415	EC56
			419164	046410	043556			042085	042528	040712
6-1/4	5-5/16	140	W28	66TT604	58TT505	—	—	66LER604	58LER505	EC58
			419166	046412	046411			042249	042248	040713
6-5/8	5-3/4	150	W30	70TT610	62TT512	—	—	70LER610	62LER512	—
			419168	046414	046413			045951	045949	
7	6-1/16	160	W32	72TT700	64TT601	—	—	72LER700	64LER601	EC64
			419170	043565	046415			042538	045953	040681
7-7/16	6-7/16	170	W34	76TT707	68TT607	—	—	76LER707	68LER607	EC68
			419172	046416	043562			042049	042535	040682
8-3/8	7-1/4	190	W38	80TT806	74TT704	—	—	80LER806	74LER704	EC74
			419176	046420	046419			042031	042032	040691

Note: LER seals are made from aluminum unless otherwise noted by the * symbol.

USAF 300 series pillow block – inch

2- and 4-bolt, direct mount



USAF 300 series pillow block – inch

2- and 4-bolt, direct mount

S-2 Shaft size	S-3 Shaft size	Housing	A1 ▲	B	C	D				E	F	
						2-bolt		4-bolt			bolt diameter	
						Min.	Max.	Min.	Max.		2-bolt	4-bolt
1-15/16	1-7/16	308	4.06	8.25	2.34	6.50	7.00	—	—	—	1/2	—
2-1/8	1-11/16	309	4.25	9.63	2.75	7.38	8.25	—	—	—	5/8	—
2-3/8	1-7/8	310	4.70	10.63	2.75	7.75	9.00	—	—	—	5/8	—
2-9/16	2-1/16	311	4.64	11.00	3.13	8.13	9.50	8.13	9.50	1.88	5/8	1/2
2-7/8	2-1/4	312	5.20	11.13	3.13	8.63	9.63	8.63	9.63	1.88	5/8	1/2
3-1/16	2-7/16	313	5.44	12.59	3.50	9.63	11.00	9.63	11.00	2.13	3/4	5/8
3-1/4	2-5/8	314	5.39	12.59	3.50	9.88	11.00	9.88	11.00	2.13	3/4	5/8
3-7/16	2-13/16	315	6.16	13.63	3.88	10.25	11.75	10.38	11.63	2.13	3/4	5/8
3-5/8	3	316	6.38	14.17	3.88	10.88	12.38	10.63	12.50	2.13	3/4	5/8
3-15/16	3-3/16	317	6.78	15.36	4.34	11.63	13.13	11.63	13.13	2.38	7/8	3/4
4-1/2	3-13/16	320	8.05	16.50	4.72	—	—	13.25	14.50	2.75	—	3/4
4-7/8	4-3/16	322	8.27	18.38	5.13	—	—	14.50	16.00	3.25	—	7/8
5-5/16	4-9/16	324	9.36	20.88	6.25	—	—	16.75	18.25	3.75	—	1
5-7/8	4-15/16	326	9.92	21.66	6.25	—	—	17.38	19.25	3.75	—	1
6-1/4	5-5/16	328	9.91	24.75	6.75	—	—	19.38	21.63	4.25	—	1
6-5/8	5-3/4	330	10.41	26.75	7.13	—	—	20.88	23.63	4.63	—	1
7	6-1/16	332	10.81	28.00	7.50	—	—	21.63	24.38	4.50	—	1-1/4
7-7/16	6-7/16	334	11.53	28.75	8.00	—	—	22.50	25.00	5.00	—	1-1/4
8-3/8	7-1/4	338	12.30	32.75	8.88	—	—	24.75	27.88	5.25	—	1-1/2

S-2 Shaft size	S-3 Shaft size	Housing	H	J	K	M	P	Q ★	S ●	W Static oil level	X	Y	Drain hole size
1-15/16	1-7/16	308	1.03	4.58	1.88	2.50	5.13	1.17	0.13	1.19	1.25	0.81	1/8-27NPSI
2-1/8	1-11/16	309	1.03	5.25	1.97	2.75	5.78	1.23	0.13	1.28	1.94	0.83	1/8-27NPSI
2-3/8	1-7/8	310	1.41	5.72	2.20	3.00	6.13	1.38	0.22	1.38	1.53	0.95	1/8-27NPSI
2-9/16	2-1/16	311	1.03	5.94	2.16	3.00	6.50	1.42	0.13	1.44	1.66	0.78	1/8-27NPSI
2-7/8	2-1/4	312	1.25	6.44	2.31	3.25	7.06	1.52	0.13	1.31	1.78	0.88	1/4-18NPSF
3-1/16	2-7/16	313	1.06	6.75	2.42	3.50	7.94	1.58	0.19	1.41	1.97	0.95	1/4-18NPSF
3-1/4	2-5/8	314	1.25	7.38	2.47	3.75	8.19	1.64	0.19	1.47	1.13	1.06	3/8-18NPSF
3-7/16	2-13/16	315	1.44	7.75	2.84	4.00	8.66	1.77	0.19	1.59	1.25	1.13	3/8-18NPSF
3-5/8	3	316	1.22	8.25	2.95	4.25	9.03	1.83	0.19	1.69	2.38	1.17	3/8-18NPSF
3-15/16	3-3/16	317	1.66	8.75	3.16	4.50	9.78	1.91	0.19	1.75	2.63	1.25	3/8-18NPSF
4-1/2	3-13/16	320	1.50	10.25	3.64	5.25	11.25	2.30	0.19	2.03	3.19	1.38	1/2-14NPSF
4-7/8	4-3/16	322	2.06	11.53	3.75	6.00	12.41	2.50	0.19	2.41	3.31	1.63	1/2-14NPSF
5-5/16	4-9/16	324	2.38	12.50	4.33	6.31	14.31	2.64	0.19	2.38	3.59	1.33	1/2-14NPSF
5-7/8	4-15/16	326	2.34	13.31	4.63	6.69	14.91	2.84	0.19	2.44	4.03	1.33	1/2-14NPSF
6-1/4	5-5/16	328	2.88	14.56	4.63	7.06	16.81	3.09	0.19	2.56	4.16	1.33	1/2-14NPSF
6-5/8	5-3/4	330	3.00	15.13	4.88	7.50	17.19	3.27	0.19	2.63	4.22	1.63	1/2-14NPSF
7	6-1/16	332	3.13	15.81	5.06	7.88	18.00	3.44	0.19	2.69	4.75	1.61	1/2-14NPSF
7-7/16	6-7/16	334	3.38	16.63	5.44	8.25	19.00	3.59	0.19	2.75	4.91	1.58	1/2-14NPSF
8-3/8	7-1/4	338	3.75	18.88	5.81	9.50	21.25	3.89	0.19	3.38	5.44	2.03	1/2-14NPSF

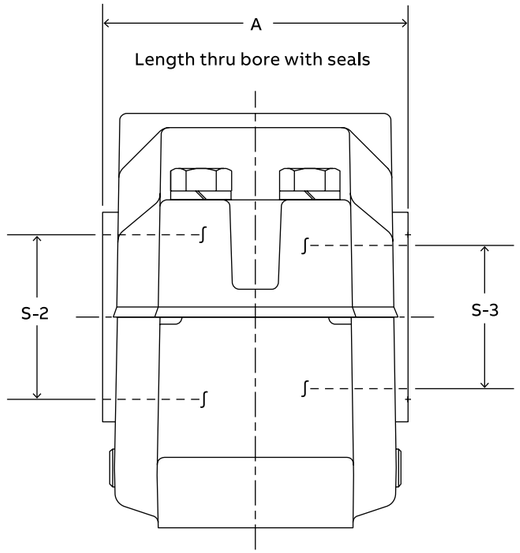
▲ Housing width with drain plugs.

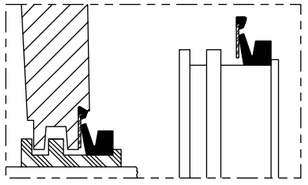
★ Distance shaft should extend beyond housing centerline if pillow block is closed end style

● Non-expansion bearing offset from centerline. For expansion bearing S=0.

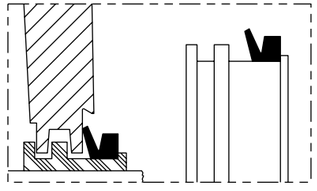
USAF 300 series pillow block – inch

Seals

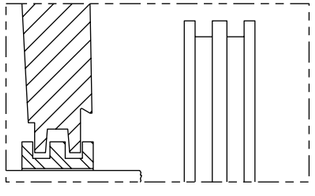




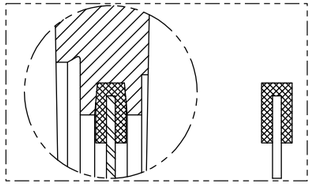
Drop-in Triple-Tect Seal
Dodge exclusive, popular Triple-Tect features with simplified installation.



Triple-Tect Seal
General purpose seal for wet or dirty environments



LER Seal
High speed seal for relatively clean environments



End Cover Seal
Allows use of open shaft housing as closed-end

USAF 300 series pillow block – inch
Seals

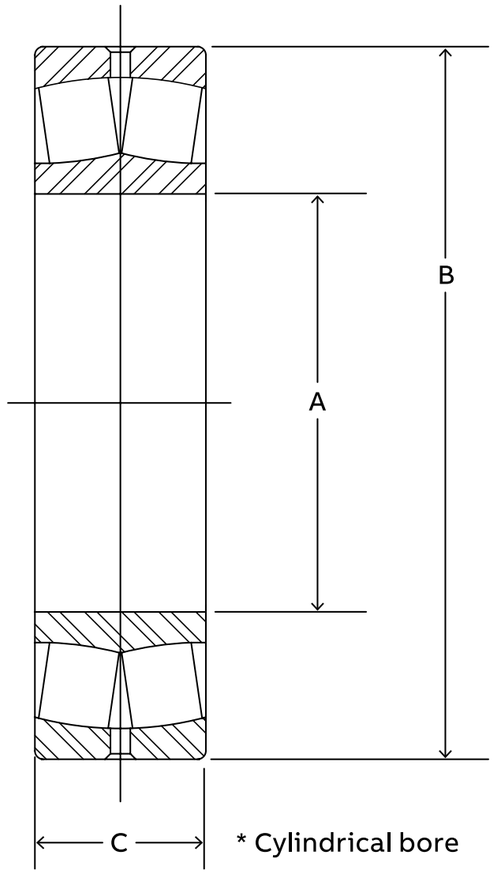
S-2 Shaft size	S-3 Shaft size	Housing	Seal group		Part number							A		
					Triple-Tect (TT)		Triple-Tect drop-In (TTDN)		# Metal labyrinth (LER)		End cover	TT	TTDN	LER
			S-2	S-3	S-2	S-3	S-2	S-3	S-2	S-3	S-3			
1-15/16	1-7/16	308	12	8	043540	043578	—	—	042512	042193	040700	4.19	4.19	3.64
2-1/8	1-11/16	309	14	10	046464	043579	—	—	046472	042199	040701	4.36	4.36	3.83
2-3/8	1-7/8	310	18	12	046166	046167	—	—	046175	046176	040702	4.81	4.81	4.28
2-9/16	2-1/16	311	22	14	046466	046463	035748	035745	046474*	046471*	040703	4.80	4.80	4.19
2-7/8	2-1/4	312	26	14	046468	046465	035750	035747	046476	046473	040703	5.02	5.02	4.42
3-1/16	2-7/16	313	28	22	046469	046168	035751	035744	046477	046177	—	5.34	5.34	4.69
3-1/4	2-5/8	314	32	22	046470	046467	035752	035749	046478	046475	—	5.44	5.44	4.80
3-7/16	2-13/16	315	38	24	046401	046400	039290	039289	045928*	045927*	040705	6.20	6.20	5.59
3-5/8	3	316	38	28	046402	043547	039291	039857	045931	042519	040706	6.42	6.42	5.81
3-15/16	3-3/16	317	42	32	046404	046403	039515	039292	042089	042088	—	6.39	6.39	6.17
4-1/2	3-13/16	320	54	50	043555	046407	—	—	042527	045939	040709	7.86	7.86	7.33
4-7/8	4-3/16	322	56	52	046408	043553	039297	039863	042098	042525	040710	8.09	8.09	7.50
5-5/16	4-9/16	324	58	54	046411	046409	—	—	042248	045943	040711	9.28	9.28	8.69
5-7/8	4-15/16	326	62	56	046410	043556	—	—	042085	042528	040712	9.84	9.84	9.20
6-1/4	5-5/16	328	66	58	046412	046411	—	—	042249	042248	040713	9.78	9.78	9.13
6-5/8	5-3/4	330	70	62	046414	046413	—	—	045951	045949	—	10.39	10.39	9.70
7	6-1/16	332	72	64	043565	046415	—	—	042538	045953	040681	10.69	10.69	9.98
7-7/16	6-7/16	334	76	68	046416	043562	—	—	042049	042535	040682	11.44	11.44	10.73
8-3/8	7-1/4	338	80	74	046420	046419	—	—	042031	042032	—	12.44	12.44	11.70

Note: LER seals are made from aluminum unless otherwise noted by the * symbol.

If an * appears by the part number, the LER seal is manufactured from steel.

USAF 300 series pillow block – inch

22300 spherical roller bearings



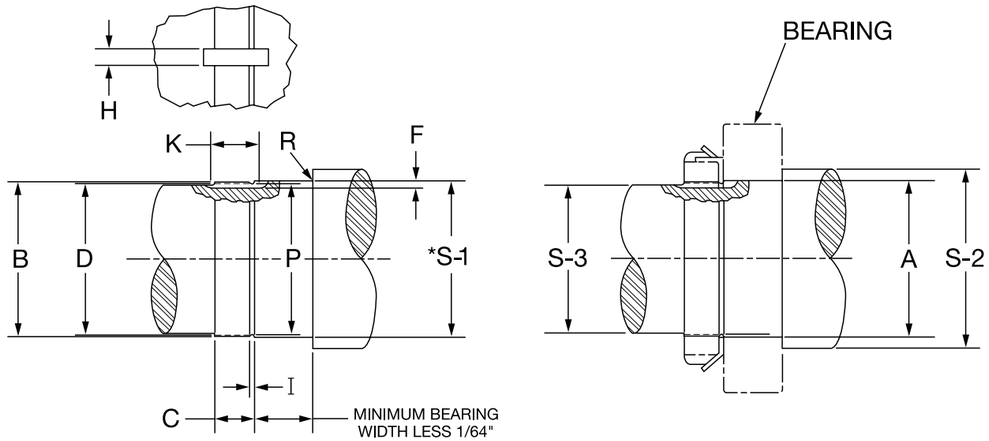
USAF 300 series pillow block – inch

22300 spherical roller bearings

Shaft size under bearing (mm)	Housing	Bearing number	Part number	Approx. weight (lb)	A in (mm)	B in (mm)	C in (mm)
40	308	22308	423124	2.3	1.5748 (40)	3.5433 (90)	1.2992 (33)
45	309	22309	423125	3.0	1.7717 (45)	3.9370 (100)	1.4173 (36)
50	310	22310	423143	3.9	1.9685 (50)	4.3307 (110)	1.5758 (40)
55	311	22311	423126	5.1	2.1654 (55)	4.7244 (120)	1.6929 (43)
60	312	22312	423127	6.5	2.3622 (60)	5.1181 (130)	1.8110 (46)
65	313	22313	423128	7.8	2.5591 (65)	5.5118 (140)	1.8898 (48)
70	314	22314	423129	9.3	2.7559 (70)	5.9055 (150)	2.0079 (51)
75	315	22315	423130	11.5	2.9528 (75)	6.2992 (160)	2.1654 (55)
80	316	22316	423144	13.1	3.1496 (80)	6.6929 (170)	2.2835 (58)
85	317	22317	423131	15.7	3.3465 (85)	7.0866 (180)	2.3622 (60)
100	320	22320	423132	28.0	3.9370 (100)	8.4646 (215)	2.8740 (73)
110	322	22322	423133	38.8	4.3307 (110)	9.4488 (240)	3.1496 (80)
120	324	22324	423134	48.3	4.7244 (120)	10.2362 (260)	3.3858 (86)
130	326	22326	423135	59.7	5.1181 (130)	11.0236 (280)	3.6614 (93)
140	328	22328	423136	75.4	5.5118 (140)	11.8110 (300)	4.0157 (102)
150	330	22330	423137	90.4	5.9055 (150)	12.5984 (320)	4.2520 (108)
160	332	22332	423138	113.0	6.2992 (160)	13.3858 (350)	4.4882 (114)
170	334	22334	423139	132.0	6.6929 (170)	14.1732 (360)	4.7244 (120)
190	338	22338	423140	179.0	7.4803 (190)	15.7480 (400)	5.1969 (132)

USAF 300 series pillow block – inch

Shaft details



Nominal bearing bore diameter (mm)	Shaft bearing seat diameters (in)					
	Normal load			High load		
	* S-1		Mean fit	* S-1		Mean fit
	Max.	Min.		Max.	Min.	
40	1.5758	1.5752	0.0009 T	1.5761	1.5655	0.0012 T
45	1.7727	1.7721		1.7730	1.7724	
50	1.9697	1.9689		1.9700	1.9693	
55	2.1666	2.1658		2.1669	2.1662	
60	2.3634	2.3626	0.0011 T	2.3637	2.3630	0.0014 T
65	2.5603	2.5595		2.5606	2.5599	
70	2.7571	2.7563		2.7574	2.7567	
75	2.9540	2.9532		2.9543	2.9536	
80	3.1508	3.1501	0.0012 T	3.1511	3.1504	0.0015 T
85	3.3479	3.3470		3.3484	3.3475	
100	3.9384	3.9375	0.0014 T	3.9389	3.9380	0.0019 T
110	4.3321	4.3312		4.3326	4.3317	
120	4.7258	4.7249		47263	4.7254	
130	5.1197	5.1187		5.1203	5.1193	
140	5.5134	5.5124		5.5140	5.5130	
150	5.9071	5.9061	0.0016 T	5.9077	5.9067	0.0022 T
160	6.3008	6.2998		6.3014	6.3004	
170	6.6945	6.6935		6.6951	6.6941	
190	7.4821	7.4809	0.0019 T	7.4829	7.4817	0.0026 T

Normal load P/C = 0.10 to 0.18

High load P/C > 0.18

Where: P = Equivalent dynamic load on the bearing (lb)

C = Basic dynamic load rating of bearing (lb)

T = Tight fit

Reference Guide
Type E Family (Tapered)
Specialty Tapered
Safety Mount Family (Spherical)
S-2000 (Spherical)
Unified SAF (Spherical)
Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

USAF 300 series pillow block – inch

Shaft details

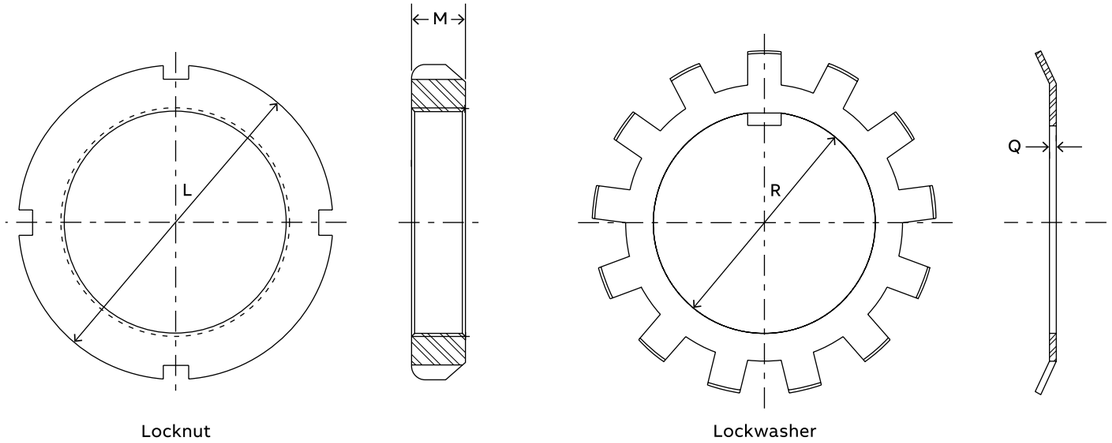
Housing	Lock nut and washer kit part number	A Bearing bore in (mm)	S-2	S-3	Keyway			R Max radius
					F Depth +1/64 -0	H Width +1/64 -0	K Full depth length	
308	046751	1.5748 (40)	1-15/16	1-7/16	3/32	5/16	21/32	0.059
309	046752	1.7717 (45)	2-1/8	1-11/16	3/32	5/16	11/16	0.059
310	046753	1.9685 (50)	2-3/8	1-7/8	3/32	5/16	3/4	0.079
311	046754	2.1654 (55)	2-9/16	2-1/16	1/8	5/16	3/4	0.079
312	046772	2.3622 (60)	2-7/8	2-1/4	1/8	5/16	25/32	0.079
313	046755	2.5591 (65)	3-1/16	2-7/16	1/8	5/16	13/16	0.079
314	046773	2.7559 (70)	3-1/4	2-5/8	1/8	5/16	29/32	0.079
315	046756	2.9528 (75)	3-7/16	2-13/16	1/8	5/16	15/16	0.079
316	046757	3.1496 (80)	3-5/8	3	1/8	3/8	15/16	0.079
317	046758	3.3465 (85)	3-15/16	3-3/16	1/8	3/8	31/32	0.098
320	046760	3.9370 (100)	4-1/2	3-13/16	5/32	3/8	1-3/16	0.098
322	046761	4.3307 (110)	4-7/8	4-3/16	3/16	3/8	1-7/32	0.098
324	046762	4.7244 (120)	5-5/16	4-9/16	3/16	3/8	1-1/4	0.098
326	046763	5.1181 (130)	5-7/8	4-15/16	3/16	1/2	1-5/16	0.118
328	046764	5.5118 (140)	6-1/4	5-5/16	3/16	5/8	1-3/8	0.118
330	046765	5.9055 (150)	6-5/8	5-3/4	7/32	5/8	1-1/2	0.118
332	046766	6.2992 (160)	7	6-1/16	15/64	5/8	1-9/16	0.118
334	046767	6.6929 (170)	7-7/16	6-7/16	15/64	3/4	1-19/32	0.118
338	046769	7.4803 (190)	8-3/8	7-1/4	15/64	3/4	1-21/32	0.157

Housing	Threads per inch	B Thread major diameter		D Thread pitch diameter		C Thread length +1/64 -0	I Thread relief +1/64 -0	P† Thread relief diameter
		Max.	Min.	Max.	Min.			
308	18	1.5630	1.5548	1.5269	1.5224	17/32	3/32	1.4792
309	18	1.7670	1.7588	1.7309	1.7204	17/32	1/8	1.6832
310	18	1.9670	1.9588	1.9309	1.9264	19/32	1/8	1.8832
311	18	2.1570	2.1488	2.1209	2.1159	19/32	1/8	2.0732
312	18	2.3600	2.3518	2.3239	2.3188	5/8	1/8	2.2762
313	18	2.5480	2.5398	2.5119	2.5068	21/32	1/8	2.4642
314	18	2.7510	2.7428	2.7149	2.7098	21/32	1/8	2.6672
315	12	2.9330	2.9218	2.8789	2.8735	11/16	5/32	2.7995
316	12	3.1370	3.1258	3.0829	3.0770	11/16	5/32	3.0035
317	12	3.3400	3.3288	3.2859	3.2800	23/32	5/32	3.2065
320	12	3.9180	3.9068	3.8639	3.8565	7/8	5/32	3.7845
322	12	4.325	4.3138	4.2709	4.2626	29/32	5/32	4.1915
324	12	4.716	4.7048	4.6619	4.6536	15/16	5/32	4.5825
326	12	5.106	5.0948	5.0519	5.0436	1	5/32	4.9725
328	12	5.497	5.4858	5.4429	5.4346	1-1/16	5/32	5.3635
330	12	5.888	5.8768	5.8339	5.8256	1-1/8	5/32	5.7545
332	8	6.284	6.2688	6.2028	6.1937	1-3/16	1/4	6.0993
334	8	6.659	6.6438	6.5778	6.5687	1-7/32	1/4	6.4743
338	8	7.472	7.4568	7.3908	7.3817	1-9/32	1/4	7.2873

† Tolerance +/-0.005 through 2.6672 dia.; +/-0.010 for larger sizes.

USAF 300 series pillow block – inch

Lock nut and washer



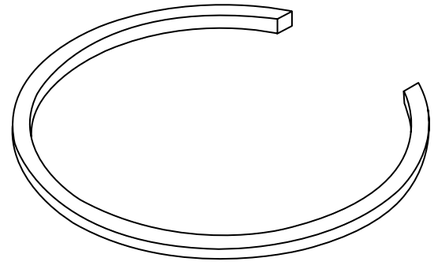
Locknut

Lockwasher

Housing	Lock nut		Lock washer		L	M	R	Q
	Description	Part number	Description	Part number				
308	N08	407305	W08	419151	2.25	0.44	1.583	0.048
309	N09	419187	W09	419180	2.53	0.44	1.792	0.048
310	N10	419188	W10	419181	2.69	0.50	1.992	0.048
311	N11	419184	W11	419182	2.97	0.50	2.182	0.053
312	N12	407302	W12	419008	3.16	0.53	2.400	0.053
313	N13	419185	W13	419183	3.38	0.56	2.588	0.053
314	N14	407306	W14	419153	3.62	0.56	2.791	0.053
315	AN15	460901	W15	419150	3.88	0.59	2.988	0.072
316	AN16	460902	W16	419152	4.16	0.59	3.192	0.072
317	AN17	460903	W17	419154	4.41	0.62	3.410	0.072
320	AN20	460905	W20	419158	5.19	0.75	4.003	0.094
322	AN22	460906	W22	419160	5.72	0.78	4.410	0.125
324	AN24	041071	W24	419162	6.12	0.81	4.816	0.125
326	AN26	041064	W26	419164	6.75	0.88	5.209	0.125
328	AN28	041065	W28	419166	7.09	0.94	5.600	0.125
330	AN30	041072	W30	419168	7.69	0.97	6.001	0.156
332	AN32	041066	W32	419170	8.06	1.03	6.407	0.156
334	AN34	041067	W34	419172	8.66	1.06	6.782	0.156
338	AN38	041068	W38	419176	9.47	1.12	7.595	0.156

USAF 300 series pillow block – inch

Stabilization ring



Housing	Stabilizing ring number	Stabilizing ring part number ▲
509	9-9	041987
510	10-8	042335
511	11-9	042315
513	13-0	042316
515/215	15-0	041174
516/216	16-13	041172
517/217	17-14	041175
518/218	18-15	041173
520/220	20-17	041176
522/222	22-19	041177
524/224	24-20	041185
526/226	26-0	041178
528/228	28-0	041179
530/230	30-0	041186
532/232	32-0	041180
534/234	34-0	041181
536/236	36-30	041184
538/238	38-32	041182
540/240	40-34	046639
544S/544/244	44-38	041183
* 048	A8897	041161
* 052	A8898	422554
* 056/056L	A8819	041213

Housing	Stabilizing ring number	Stabilizing ring part number ▲
308	10-8	042335
609/309	11-9	042315
610/310	0-10	046642
611/311	6-11	046632
312	15-0	041174
613/313	16-13	041172
314	17-14	041175
615/315	18-15	041173
616/316	19-16	046643
617/317	20-17	041176
620/320	24-20	041185
622/322	0-22	046635
624/324	0-24	046634
626/326	0-26	046637
628/328	0-28	046638
630/330	36-30	041184
632/332	38-32	041182
634/334	40-34	046639
638/338	44-38	041183

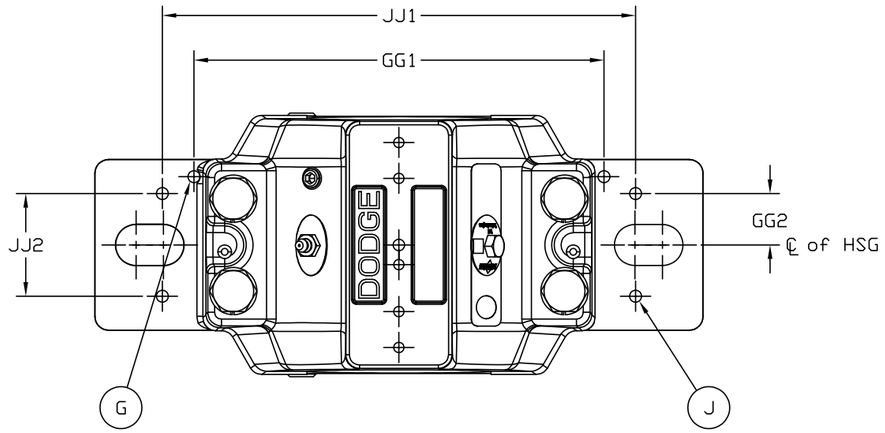
* Two stabilizing rings required per housing.

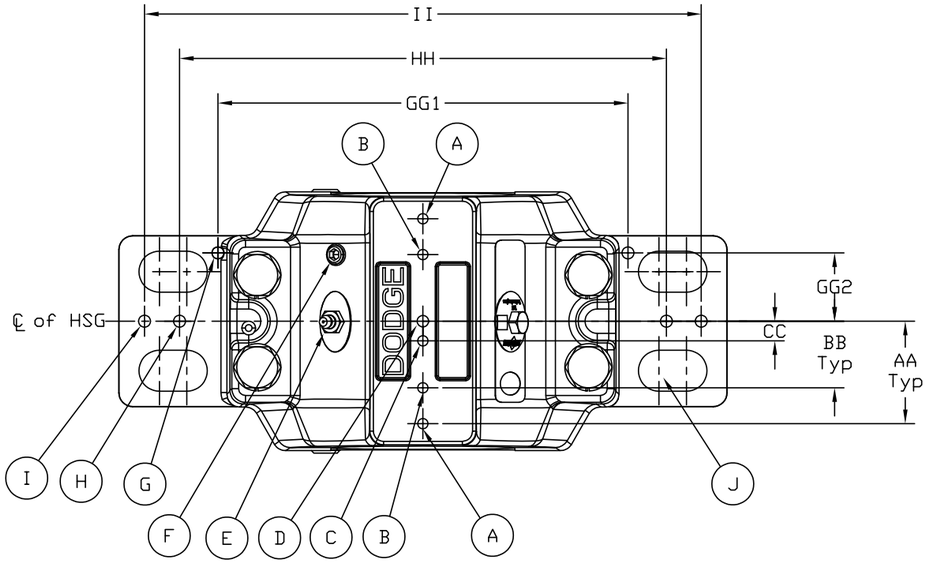
▲ Part numbers for reference only.
Housings come equipped with stabilizing rings enclosed.

Accessories

USAF 200 and 500 series pillow block – inch

Dowel pin, lubrication, and mounting hole positions





USAF 200 and 500 series pillow block – inch

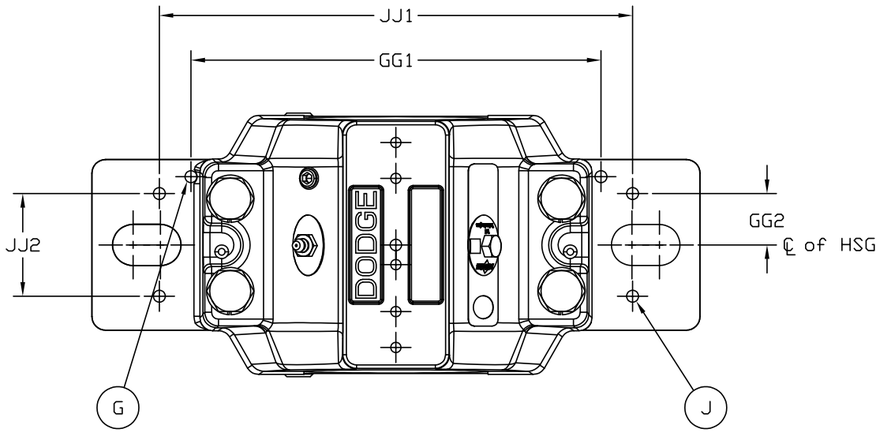
Dowel pin, lubrication, and mounting hole positions

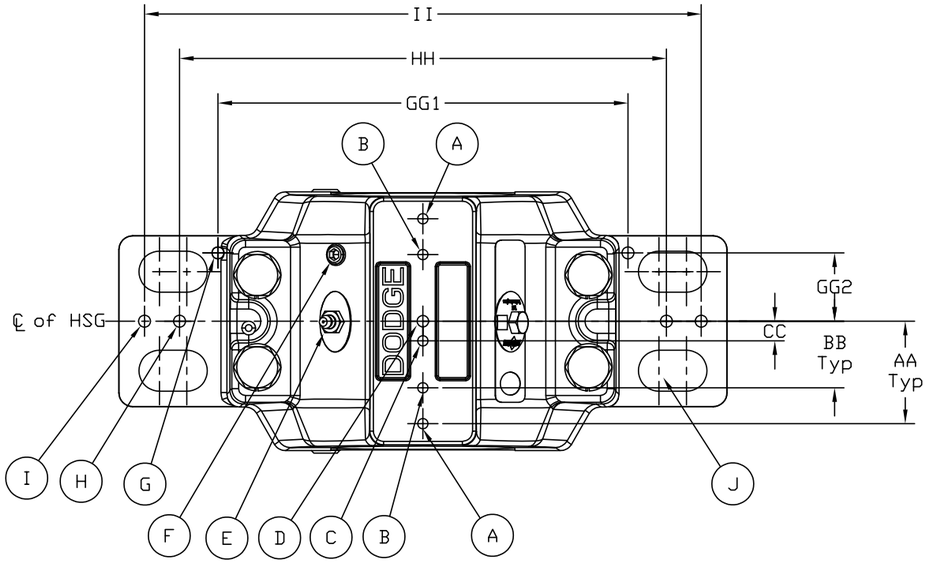
Item	Description
A	Optional seal grease location
B	Optional location for vent, vibration pickup and/or grease location for non W33 grooved bearing
C	Position for thermocouple location
D	Position for lubrication of bearing with W33 groove
E	Lubrication port for W33 groove Groove bearing drilled standard on pillow blocks
F	Pre-drilled and tap location for vent or side lubrication for bearing without W33 groove
G	Dowel pin location for metric plummer blocks
H	Drilling location for two bolt mounting or optional dowel pin location
I	Optional location for dowel pin location
J	Drilling location for four bolt mounting or optional dowel pin location

USAF housing	AA	BB	CC	GG1	GG2	G Max dia.	HH	H		II	JJ1	JJ2	J	
								Hole size	Bolt size				Hole size	Bolt size
509	1.45	0.84	0.25	5.31	0.91	15/64	—	—	—	—	6.31	1.34	7/16	3/8
510	1.53	0.89	0.27	5.31	0.91	15/64	—	—	—	—	6.31	1.34	7/16	3/8
511	1.66	1.00	0.28	6.69	1.06	5/16	—	—	—	—	7.88	1.56	9/16	1/2
513	1.84	1.28	0.34	7.50	1.25	5/16	9.06	11/16	5/8	10.25	8.66	1.88	9/16	1/2
515/215	1.88	1.22	0.36	7.50	1.25	5/16	9.06	11/16	5/8	10.25	8.66	1.88	9/16	1/2
516/216	2.03	1.38	0.31	8.59	1.38	5/16	10.25	13/16	3/4	11.59	9.94	2.06	11/16	5/8
517/217	2.06	1.47	0.41	8.59	1.38	5/16	10.25	13/16	3/4	11.59	9.94	2.06	11/16	5/8
518/218	2.38	1.50	0.44	9.44	1.45	5/16	11.91	13/16	3/4	12.63	11.03	2.28	11/16	5/8
520/220	2.09	1.72	0.53	10.25	1.61	5/16	12.59	15/16	7/8	14.36	11.81	2.59	13/16	3/4
522/222	2.81	1.94	0.59	11.03	1.78	15/32	13.78	15/16	7/8	15.50	12.91	2.91	13/16	3/4
524/224	3.13	1.91	0.69	11.42	1.78	15/32	13.88	15/16	7/8	15.88	13.00	2.91	13/16	3/4
526/226	3.25	2.09	0.75	12.78	2.05	15/32	14.97	1-1/16	1	17.38	14.56	3.09	15/16	7/8
528/228	3.48	2.53	0.75	13.59	2.16	15/32	16.53	1-5/16	1-1/4	18.69	15.75	3.63	1-1/16	1
530/230	3.84	2.53	0.81	14.75	2.38	15/32	17.72	1-5/16	1-1/4	19.50	16.94	3.94	1-1/16	1
532/232	4.09	2.56	0.91	15.56	2.36	15/32	18.50	1-5/16	1-1/4	20.28	17.72	3.94	1-1/16	1
534/234	4.13	3.00	1.00	—	—	—	20.50	1-9/16	1-1/2	23.38	—	—	—	—
536/236	4.31	3.00	1.00	—	—	—	22.25	1-9/16	1-1/2	25.25	—	—	—	—
538/238	4.50	3.13	1.13	—	—	—	23.00	1-9/16	1-1/2	26.63	—	—	—	—
540/240	4.86	3.22	1.13	—	—	—	23.75	1-9/16	1-1/2	27.25	—	—	—	—
544/244	5.20	3.63	1.19	—	—	—	26.83	1-13/16	1-3/4	30.75	—	—	—	—
048	4.86	3.22	1.13	—	—	—	23.75	1-9/16	1-1/2	27.25	—	—	—	—
052	5.20	3.63	1.19	—	—	—	26.83	1-13/16	1-3/4	30.75	—	—	—	—
056	5.67	3.75	1.20	—	—	—	27.88	2-1/16	2	32.25	—	—	—	—

USAF 300 and 600 series pillow block – inch

Dowel pin, lubrication, and mounting hole positions





Item	Description
A	Optional seal grease location
B	Optional location for vent, vibration pickup and/or grease location for non W33 grooved bearing
C	Position for thermocouple location
D	Position for lubrication of bearing with W33 groove
E	Lubrication port for W33 groove Groove bearing drilled standard on pillow blocks
F	Pre-drilled and tap location for vent or side lubrication for bearing without W33 groove
G	Dowel pin location for metric plummer blocks
H	Drilling location for two bolt mounting or optional dowel pin location
I	Optional location for dowel pin location
J	Drilling location for four bolt mounting or optional dowel pin location

USAF housing	AA	BB	CC	GG1	GG2	G Max dia.	HH	H		II	JJ1	JJ2	J	
								Hole size	Bolt size				Hole size	Bolt size
308	1.53	0.89	0.27	5.31	0.91	15/64	—	—	—	—	6.31	1.34	7/16	3/8
609/309	1.66	1.00	0.28	6.69	1.06	5/16	—	—	—	—	7.88	1.56	9/16	1/2
610/310	1.84	1.00	0.34	6.77	1.06	5/16	—	—	—	—	7.88	1.56	9/16	1/2
611/311	1.84	1.56	0.34	7.50	1.25	5/16	9.06	11/16	5/8	10.25	8.66	1.88	9/16	1/2
312	1.88	1.22	0.36	7.50	1.25	5/16	9.06	11/16	5/8	10.25	8.66	1.88	9/16	1/2
613/313	2.03	1.38	0.31	8.59	1.38	5/16	10.25	13/16	3/4	11.59	9.94	2.06	11/16	5/8
314	2.06	1.47	0.41	8.59	1.38	5/16	10.25	13/16	3/4	11.59	9.94	2.06	11/16	5/8
615/315	2.38	1.50	0.44	9.44	1.45	5/16	11.41	13/16	3/4	12.63	11.03	2.28	11/16	5/8
616/316	2.53	1.63	0.53	9.44	1.45	5/16	11.41	13/16	3/4	13.00	11.03	2.28	11/16	5/8
617/317	2.69	1.72	0.53	10.25	1.61	5/16	12.59	15/16	7/8	14.36	11.81	2.59	13/16	3/4
620/320	3.13	1.91	0.69	11.42	1.18	15/32	13.88	15/16	7/8	15.88	13.00	2.91	13/16	3/4
622/322	3.25	2.09	0.75	12.78	2.05	15/32	14.99	1-1/16	1	17.38	14.56	3.16	15/16	7/8
624/324	3.84	2.53	0.81	14.75	2.38	15/32	17.72	1-5/16	1-1/4	19.50	16.94	3.94	1-1/16	1
626/326	4.09	2.56	0.91	15.56	2.36	15/32	18.50	1-5/16	1-1/4	20.28	17.72	3.94	1-1/16	1
628/328	4.13	3.00	1.00	—	—	—	20.50	1-9/16	1-1/2	23.38	—	—	—	—
630/330	4.31	3.00	1.00	—	—	—	22.25	1-9/16	1-1/2	25.25	—	—	—	—
632/332	4.50	3.13	1.13	—	—	—	23.00	1-9/16	1-1/2	26.62	—	—	—	—
634/334	4.86	3.22	1.13	—	—	—	23.75	1-9/16	1-1/2	27.25	—	—	—	—
638/338	5.20	3.63	1.19	—	—	—	26.31	1-13/16	1-3/4	30.75	—	—	—	—

USAF housing versus seal group – inch

Interchange chart

All Dodge seals are identified as follows:

24 - TT - 211

- 211 — Shaft size in inches and 16ths
- TT — Seal type
- 24 — Seal group

Seal group numbers identify common housing seal grooves found on different series housings.
The standard shaft sizes for various housings are shown.

Shaft size	Housing	Seal* group
1-7/16	509	08
	308	
	609	
1-11/16	510	10
	309	
	610	
1-7/8	310	12
1-15/16	511	
	308	
	611	
2-1/16	311	14
2-1/8	309	
2-3/16	513	
	613	
2-1/4	312	
2-3/8	310	18
2-7/16	515	20
	615	
	313	22
2-1/2	515	20
	615	
2-5/8	314	22
2-9/16	311	
2-11/16	516	24
	616	
2-3/4	516	
	616	
2-13/16	215	26
	315	
2-7/8	312	
2-15/16	517	28
	617	
3	216	
	316	
	517	
	617	
3-1/16	313	32
3-3/16	217	
	317	
	518	34
3-1/4	314	32
3-3/8	218	36
3-7/16	215	38
	315	
	520	46
	620	
3-1/2	520	
	620	

Shaft size	Housing	Seal* group
3-5/8	216	38
	316	
3-13/16	220	50
	320	
3-15/16	217	42
	317	
	522	50
	622	
4	522	
	622	
4-1/8	218	44
4-3/16	524	52
	222	
	624	
	322	
4-7/16	526	54
	626	
4-1/2	220	
	320	
	526	
	626	
4-9/16	224	56
	324	
4-7/8	222	
	322	
4-15/16	226	
	326	
	528	
	628	
5	528	58
	628	
5-3/16	530	
	630	
5-5/16	224	60
	228	
	324	
	328	
5-7/16	532	
	632	
5-1/2	532	62
	632	
5-3/4	230	
	330	
5-7/8	226	64
	326	
5-15/16	534	
	634	
6	534	
	634	
6-1/16	232	
	332	

Shaft size	Housing	Seal* group
6-1/4	228	66
	328	
6-7/16	334	68
	234	
	536	
6-1/2	536	
6-5/8	230	70
	330	
6-7/8	236	72
6-15/16	538	
	638	
7	232	
	332	
	538	
	638	
7-3/16	540	74
7-1/4	238	
	338	
7-7/16	334	76
	234	
7-1/2	544S	
7-5/8	240	
7-13/16	236	78
7-15/16	544	
8		
8-5/16	244	80
8-3/8	238	
	338	
8-7/16	048	90
8-1/2		
8-3/4	240	82
8-15/16	048	90
9		
9-7/16	052	84
9-1/2		
9-9/16	244	
9-15/16	56	92
10		
10-7/16	056L	94
10-1/2		
10-15/16	060	96
11		
11-7/16	064	98
11-1/2		

Shaft size	Housing	Seal* group
11-15/16	064L	100
12		
12-7/16	068	102
12-1/2		
12-15/16	072	104
13		
13-7/16	072L	106
13-1/2		
13-15/16w	076	108
14		
15	080	110
15-3/4	084	112

* Seal groups in 200/300 housing require two seals of different diameters.

Cool Lube-2 system

The Cool Lube system provides an attractive and reliable alternative to conventional grease and static oil bearing lubrication methods for industrial fan applications. It is particularly suited for applications where bearing operating temperatures and speeds approach maximum permissible levels and for harsh and dirty environments.

Enhance your spherical roller or Sleevoil bearing operation by continuous oil cooling, filtration, and proper oil level maintenance. 80 percent of all mounted bearing failures are caused by contamination and lubrication issues, and the Cool Lube system helps to minimize this risk.

The Cool Lube system provides reduced maintenance costs and increased uptime by providing:

- **Bearing temperature reduction:** Increases bearing reliability through bearing temperature reduction. Reducing bearing operating temperatures is proven to significantly increase roller bearing fatigue life.
- **Oil filtration:** Increases bearing life and extends maintenance periods through continuous oil filtration. Cool Lube System continuously circulates and filters harmful particles from the bearing oil sump.
- **Automatic oil level control:** Cool Lube System will maintain the proper oil level within the oil sump.

One Cool Lube system for two (2) mounted spherical roller bearings:

Dodge part numbers with flow meter range of 0.05 to 0.50 gpm

- 063485 for three phase motor
- 063486 for single phase motor
- 078327 for XP (explosion proof) *three phase motor
- 078328 for 575 VAC three phase motor

Dodge part numbers with flow meter range of 0.50 to 4.0 gpm (for Sleevoil bearings)

- 063487 for three phase motor
- 063488 for single phase motor
- 078289 for XP (Exp. Proof) *three phase motor
- 078290 for 575 VAC three phase motor

* Contact Dodge Engineering for full motor classification information at engineering@dodgeindustrial.com

Cool Lube-2 system specifications:

- 5 gallon tank with removable cover
- Pump 2.0 gpm flow
- In-line filter with clog indicator and clog auto-bypass
- 3-way valve to change filter while unit is in operation
- Pump safety relief valve
- Bearing line relief valve
- Filter and bearing supply pressure gauges
- Air to oil heat exchanger
- Two supply line needle valves and flow meters with flow range 0.05 to 0.50 gpm or 0.5 to 4.0 gpm
- Temperature gauge
- Oil sight gauge
- Reservoir breather cap
- NEMA motors
- All components mounted to a base plate

Optional features:

- 260 watt oil heater with thermostat sold separately.
  If required order one of the following:
  - Part number 434725: 260 W x 120 V heater
  - Part number 434726: 260 W x 240 V heater
- Temperature/Oil level switch assembly
  - Part number 434941 (sold separately)
- Larger 6 gpm system available, part number 140687

Note: Replacement filter part number 078358

Cool Lube-2 system

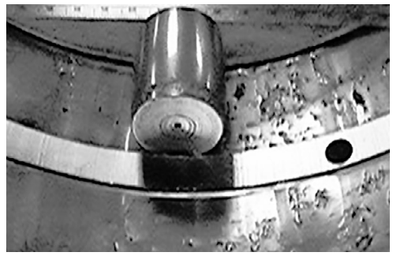
Cool Lube system helps to

Prevent bearing mechanical distress

- Lowers internal bearing friction thus decreasing bearing operating temperatures
- Minimizes roller to raceway, metal to metal contact
- Reduces roller skidding damage that can occur in lightly loaded applications
- Supplies lubricant directly to load carrying rolling elements
- Increases lube life due to lower temperatures
- Minimizes cage sliding friction wear
- Minimizes effect of ineffective sealing

Prevent bearing contamination

- Filters out contamination which has passed through seals
- Helps to remove water contamination due to condensation from bearings if a water absorbing filter is used
- Flushes worn raceway, rollers and cage particles from bearings
- Removes contamination caused during installation



Lower maintenance costs

- Oil change outs are simple
- No need to break housing cap bolts to clean out old grease
- Oil can be inspected for distress on a regular basis to determine oil PM schedule
- Lower bearing temperatures increase service life
- Lower contamination levels increase service life

Once bearing raceway fatigue begins progression of damage is rapid.

At first sign of damage **After 1,000 hours** **After 1,200 hours**

Notes

Specialty spherical

B25-1	**Specialty spherical**
B25-2	**Features and benefits**
B25-2	**Specification**
B25-3	**How to order**
B25-3	**Nomenclature**
B25-4	**Selection**
B25-10	**Dimensions**
B25-10	Unisphere® II pillow block
B25-12	Unisphere II flange
B25-14	Unisphere II bearing inserts

Features and benefits

Unisphere II

Unisphere II mounted spherical roller bearings are general purpose, high-capacity double-row spherical roller bearings. Unisphere II bearings are mounted in single-piece, precision-machined housings. The bearings are mounted to shafts by means of set screw collars featuring 65-degree set screw spacing for maximum clamping force. With the capability to withstand combined radial and thrust loads, Unisphere II bearings are built for survival in a variety of rugged conditions to maximize uptime and cost savings.

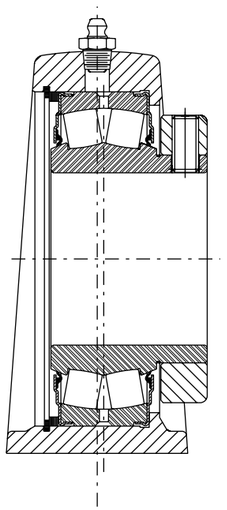
Key features

- High-capacity, double-row spherical rollers offer approximately five times the capacity rating of ball bearings
- Dimensionally-interchangeable with mounted ball bearings in length-through-bore, base-to-center height, and footprint
- 65-degree Springlok collar maximizes holding power
- Proven "R" seal features contact lip crimped to the outer raceway, preventing contamination for extended life
- Tapered seal landing maintains full contact during maximum misalignment
- Ductile-iron pillow block housing with 65,000 psi tensile strength is 92 percent the strength of steel
- 2-bolt pillow blocks and 4-bolt flanges in bore sizes from 1-7/16 inch to 4 inch
- Sensor-ready for condition monitoring
- Intelli-Lube compatible to effortlessly extend the life of your bearings

Specification

Unisphere II pillow block housings are made of high-performance ductile iron with a 65,000 psi tensile strength. Unisphere II flange housings are made of high-performance cast iron. Housings are engineered for performance in extremely harsh environments, with special finishes and stainless hardware available if required.

Housings are available in a variety of standard configurations from pillow blocks to flanges. Rubbing lip seals are standard on all units.



Compact, power-dense design

How to order

Unisphere II

There are two ways to specify Dodge bearings—by six-digit part number or by description. Most of the products offered have part numbers with listings shown throughout this catalog. Use of part numbers ensures accurate order processing.

When part numbers are not shown, the product may be specified by description. This method is used when ordering units that include modifications or options. To order by description, use the nomenclature key shown for each product, adding any special instructions to the end of the description for options not covered by the nomenclature.

Special bearing requirements

Depending on the bearing, a wide variety of lubricants, seals, locking devices, finishes, and adjustments are available for a wide range of applications from general purpose to extreme ambient temperatures, high speeds, or high loads.

Special lubricant options usually involve set-up charges, minimum quantities, and price premiums. To order, specify the type of lubricant required at the end of the product name or after the standard part number.

Example:

F4B-XX-207 except with Mobil HTS #2 grease

or

P/N-XXXXXX except with Mobil HTS #2 grease

Other special requirements not listed

For applications requiring modifications not listed, contact Application Engineering for bearings at +1 864 284 5700.

Nomenclature

P2B - UN2 - 207 - R - E

Housing style

P2B = Pillow block
2-bolt,
ductile iron

F4B = Flange bearing
4-bolt, cast iron

Bearing

UN2 = Unisphere II

Size

Inches and 16th

2 = 2 inches
07 = 7/16 inches
or
207 = 2-7/16 inches

Seal type

R = Single lip
rubbing seal

L= Labyrinth
metallic seal

Other data

E = Expansion

Note: If E does not appear after seal type then bearing is non-expansion type

Selection

Unisphere II

Unisphere II mounted spherical roller bearings have the capacity to carry both heavy radial loads and combined radial and thrust loads. The maximum recommended load which can be applied is limited by various components in the system such as bearing, housing, shaft, shaft attachment, speed, and life requirements as listed in this catalog. Unisphere II spherical roller bearings have been applied successfully even when these limits have been exceeded under controlled operating conditions. Contact Application Engineering at +1 864 284 5700 for applications which exceed the recommendations of this catalog.

L_{10} life – The fatigue life which may be expected from at least 90 percent of a given group of bearings operating under identical conditions.

$$L_{10} = \left(\frac{C}{P}\right)^{10/3} \times \left(\frac{16{,}667}{rpm}\right)$$

Where: C = Dynamic capacity (Table 1 and Table 2)
P = Equivalent radial load

General

Heavy service - For heavy shock loads, frequent shock loads, or severe vibrations, add up to 50 percent (according to severity of conditions) to the equivalent radial load to obtain a modified equivalent radial load. Consult Application Engineering for additional selection assistance.

Thrust load values shown in the table below are recommended as a guide for general applications that will give adequate L_{10} life. Spherical bearings require a radial load at least equal to the thrust load for proper operation. If the thrust load exceeds this limit, consult Application Engineering. Where substantial radial load is also present, it is advisable to calculate actual L_{10} life to assure that it meets the requirements. The effectiveness of the shaft attachment to carry thrust load depends on proper tightening of the set screws, shaft tolerance and shaft deflections. Therefore, it is advisable to use auxiliary thrust carrying devices such as shaft shoulder, snap ring or a thrust collar to locate the bearing under thrust loads heavier than shown below, or where extreme reliability is desired.

Speed range (rpm)	20—200	201—2,000	Over 2,000
Recommended thrust load	C/20	C/40	C/60

The shaft tolerances recommended below are adequate for normal radial and radial/thrust load applications. The radial load is limited by the attachment to the shaft (see Table 1). Where the applied radial load (F_R) exceeds this limit (maximum allowable slip fit radial load), a snug-to-light press fit of the shaft is required. Since the allowable load, especially at a low speed, is very large, the shaft should be checked to assure adequate shaft strength.

The magnitude and direction of both the thrust and radial load must be taken into account when selecting a housing. When pillow blocks are utilized, heavy loads should be directed through the base. Where uplift loads are involved, see Table 5 for maximum values. Where a load pulls the housing away from the mounting base, both the hold-down bolts and housing must be of adequate strength. Auxiliary load carrying devices such as shear bars are advisable for side or end loading of pillow blocks and radial loads for flange units.

Shaft tolerances

Shaft size (in)	Unisphere II (in)
Up to 1-1/2	+0.0000 to -0.0005
1-9/16 to 4	+0.000 to -0.001
4-7/16 to 5	+0.000 to -0.0015

Bearing supporting radial loads only

1. Define L_{10} life (h) desired
2. Establish bearing radial load, F_R
   (F_R = P for pure radial load conditions)
3. Establish speed (rpm)

Using the easy selection Table 2, find, under the rpm column, the equivalent radial load that equals or is slightly higher than the application radial load for the desired life. The shaft size on the far left will be the minimum shaft size that you can use for your application.

If the desired life is different than the values shown on the chart, use alternate method A shown below.

Example:

L_{10} life = 30,000 h

Radial load = 4,000 lb

Speed = 1,020 rpm

At the intersection of the 1,000 rpm column and the 30,000 hours L_{10} life row, the equivalent radial load of 4,362 pounds exceeds the 3,800 pounds radial load for shaft sizes 2-1/8 to 2-1/4 inches. A bearing with bore ranging from 2-1/8 to 2-1/4 inches may be used for this application.

Unisphere II

Alternate method A – Selecting a bearing for an L_{10} life value not shown in the Easy Selection chart.

The L_{10} life equation can be rearranged so that the bearing dynamic capacity C is identified in terms of L_{10}, speed and P.

$$C = \left(\frac{L_{10} \times rpm}{16{,}667}\right)^{0.3} \times P$$

($P = F_R$ for pure radial load conditions)

Since the L_{10}, speed and P are known, solve for C. Select from the dynamic capacity column on Table 1 the C value equal to or greater than the C value just calculated. The bore size on the far left represents the proper bore size selection. Check that the application speed does not exceed the maximum speed on Table 1. Also check that the radial load does not exceed the maximum allowable slip fit radial load shown on Table 1. If it does, a line-to-line to light press fit of shaft is required. When selecting an L_{10} life of less than 30,000 hours, particular attention must be paid to shaft deflection and proper lubricant selection.

Selecting bearings supporting combination radial and thrust loads

When a bearing supports both a radial load and a thrust load, the loading on the two rows is shared unequally depending on the ratio of thrust to radial load. The use of the X (radial factor) and Y (thrust factor) from Table 1 converts the applied thrust load and radial loads to an equivalent radial load having the same effect on the life of the bearing as a radial load of this magnitude.

The equivalent radial load:

$$P = XF_R + YF_A$$

Where:

P = Equivalent radial load

F_R = Radial load (see Table 1 for allowable slip fit maximum load)

F_A = Thrust (axial) load

e = Thrust load to radial load factor (Table 1)

X = Radial load factor (Table 1)

Y = Thrust load factor (Table 1)

To find X and Y, calculate F_A/F_R and compare to e for the selected bore size. Determine X and Y from Table 1 depending on whether F_A/F_R is equal to or less than e, or F_A/F_R is greater than e. Substitute all known values into the equivalent radial load equation. P (equivalent radial load) can be used in the life formula to determine L_{10}, or it can be compared to the equivalent radial load ratings for the speed and hours life desired in the easy selection Table 2.

Selecting bearings supporting only thrust loads

Spherical roller bearings generally are not recommended for pure thrust load applications. However, they will perform satisfactorily under very light pure thrust loads. Consult Application Engineering at +1 864 284 5700.

Selecting lubrication

Unisphere II spherical roller bearings are lubricated at the factory with Mobilgrease XHP222 grease. Mobilgrease XHP222 is a superior industrial grease using a lithium complex thickener and highly refined base oil. This grease will adequately handle low and medium speeds with low and medium loads at normal temperatures as defined on Table 4. For very low and high speeds, for heavy loads and for low and high temperatures, special greases must be used. Contact Application Engineering at +1 864 284 5700. Dodge engineers will recommend bearings and lubricants for the above unusual conditions. Dodge also has the expertise to custom design and build special bearings for your needs. The only maintenance requirement for Unisphere II bearings is periodic relubrication at regular intervals as outlined in the appropriate instruction manuals.

Misalignment considerations

In nearly all applications, good design practice requires two bearings supporting the shaft. In cases where three or more bearings are installed, unless precautions are taken to line the bearings up both vertically and horizontally, it is possible to induce heavy loads. In the case of two bearings, alignment is not as critical, especially with Unisphere II bearings. These bearings are designed to allow a maximum of +/-1 degree of static and dynamic misalignment. However, for optimum seal performance, misalignment should be kept under +/-0.5 degree. To ensure good alignment, mounting surfaces must be checked for flatness and must lie in the same plane. When tightening base bolts, each bolt should be alternately tightened in incremental torque values until full torque is achieved to prevent the angular shifting of the pillow block that occurs when one bolt is tightened to its full torque. Shimming may be required to minimize misalignment.

Reference Guide
Type E Family (Tapered)
Specialty Tapered
Safety Mount Family (Spherical)
S-2000 (Spherical)
Unified SAF (Spherical)
Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

Unisphere II

Table 1: Unisphere II spherical roller bearings and thrust factors

Shaft size (in)	Bearing series	e	$F_A/F_R \leq e$		$F_A/F_R > e$		Max. allowable slip fit radial load F_R* (lb)	Dynamic capacity (C) (lb)	Static capacity (C_0) (lb)	Maximum speed (rpm)
			X	Y	X	Y				
1-7/16	22208	0.28	1	2.4	0.67	3.6	3,750	20,800	21,000	3,000
1-1/2										
1-11/16	22209	0.26	1	2.6	0.67	3.9	3,750	20,800	22,000	2,800
1-3/4										
1-15/16	22210	0.24	1	2.8	0.67	4.2	4,000	22,000	24,000	2,625
2										
2-3/16	22211	0.23	1	2.9	0.67	4.3	4,860	27,000	29,000	2,325
2-7/16	22213	0.24	1	2.8	0.67	4.2	6,840	39,000	47,500	1,900
2-1/2										
2-11/16	22215	0.22	1	3.1	0.67	4.6	7,500	41,500	53,000	1,700
2-3/4										
2-15/16										
3										
3-7/16	22218	0.23	1	2.9	0.67	4.3	11,500	65,500	81,500	1,400
3-1/2										
3-15/16	22220	0.24	1	2.8	0.67	4.2	14,400	83,000	104,000	1,250
4										

* If load exceeds the maximum allowable slip fit load, line-to-line to light press fit of shaft required.
Maximum slip fit radial loads apply if recommended shaft sizes are used.

Unisphere II

Vibration frequencies
Anti-friction mounted bearings

More and more manufacturing facilities are getting involved with plant-wide preventive maintenance programs. By monitoring vibration levels of motors, pumps, fans and compressors, maintenance supervisors can predict imminent failures.

Knowing that a piece of equipment is showing signs of potential failure permits scheduling of maintenance at an appropriate time and avoids the consequences of catastrophic failures. Shown in Tables are vibration frequencies generated by bearing components defects. All frequencies are based on unity inner ring or cone rotation.

How to use the tables

If a 2-7/16-inch pillow block bearing is rotating at a speed of 1,000 rpm, the vibration due to a failed component will show up at the frequencies listed in the corresponding size line in the table.

Frequency

Cup nick or spall = 1,000 x 9.251 = 9,251 rpm
Cone nick or spall = 1,000 x 11.749 = 11,749 rpm
*Roller nick or spall = 1,000 x 4.011 x 2 = 8,022 rpm
Cage (train) frequency (inner ring rotation) = 1,000 x 0.441 = 441 rpm

Since all the values in the tables are based on unity inner ring or cone rotation, the vibration due to flaws will show up at the frequencies obtained by multiplying the speed (rpm) times the factors found on the appropriate table. The resulting product will have units of rpm.

Unisphere II spherical roller bearing parameters for vibration analysis (1-RPS)

Basic bearing series	Unisphere II bore size (in)	Number of rollers	Mean diameter of rollers (in)	Pitch diameter (in)	Contact angle (°)	Outer ring frequency (Hz)	Inner ring frequency (Hz)	* Roller spin frequency (Hz)	Cage frequency (Hz)
22208	1-7/16—1-1/2	15	0.449	2.449	10.583	6.149	8.851	2.640	0.410
22209	1-11/16—1-3/4	17	0.429	2.665	9.750	7.151	9.849	3.027	0.421
22210	1-15/16—2	18	0.433	2.858	9.083	7.653	10.347	3.226	0.425
22211	2-3/16	19	0.465	3.189	8.750	8.132	10.868	3.361	0.428
22213	2-7/16—2-1/2	18	0.583	3.795	9.083	7.635	10.365	3.182	0.424
22215	2-11/16—3	20	0.575	4.197	8.250	8.645	11.355	3.584	0.432
22218	3-7/16—3-1/2	18	0.780	5.079	8.833	7.635	10.365	3.183	0.424
22220	3-15/16—4	18	0.878	5.705	9.000	7.632	10.368	3.174	0.424
22222	—	17	1.020	6.287	9.417	7.140	9.860	3.004	0.420
22226	—	18	1.118	7.307	9.750	7.643	10.357	3.193	0.425
22228	—	18	1.217	7.933	9.583	7.639	10.361	3.186	0.424
22232	—	18	1.409	9.189	9.667	7.639	10.361	3.185	0.424
22236	—	18	1.559	10.157	9.417	7.637	10.363	3.183	0.424

Outer ring frequency = N x rpm x (1 - (Bd x cos a / Pd)) / 120
Inner ring frequency = N x rpm x (1 + (Bd x cos a / Pd)) / 120
Roller spin frequency = Pd x rpm x (1 - (Bd x cos a / Pd)^2) / (120 x Bd)
Cage frequency = rpm x (1 - (Bd x cos a / Pd)) / 120

Pd = Pitch diameter
N = Number of rollers
Bd = Roller diameter
a = Contact angle

* Roller spin frequencies are listed at one times roller spin frequency. For a thorough analysis, it is important to check frequency level at two times rotational speed of rollers, as this is the frequency that a single roller defect will contact the raceways of the bearing. In other words, a roller defect will strike both inner and outer ring in one revolution of the roller.

Table 2: Easy selection table for Unisphere II spherical roller bearings

Shaft size (in)	L_{10} life (h)	Equivalent radial load rating (lb) at various speeds (rpm)														
		50	100	150	250	500	870	1,020	1,250	1,400	1,700	1,900	2,325	2,625	2,800	3,000
1-7/16—1-1/2	10,000	7,498	6,090	5,393	4,626	3,758	3,182	3,034	2,855	2,759	2,603	2,518	2,370	2,285	2,241	2,195
	30,000	5,393	4,380	3,878	3,327	2,703	2,289	2,182	2,053	1,984	1,872	1,811	1,704	1,643	1,612	1,579
	40,000	4,947	4,018	3,558	3,052	2,479	2,100	2,002	1,883	1,820	1,717	1,661	1,563	1,508	1,479	1,448
	60,000	4,380	3,558	3,150	2,703	2,195	1,859	1,773	1,668	1,612	1,521	1,471	1,384	1,335	1,309	1,282
	100,000	3,758	3,052	2,703	2,319	1,883	1,595	1,521	1,431	1,383	1,305	1,262	1,188	1,145	1,123	1,100
1-11/16—1-3/4	10,000	7,498	6,090	5,393	4,626	3,758	3,182	3,034	2,855	2,759	2,603	2,518	2,370	2,285	2,241	2,195
	30,000	5,393	4,380	3,878	3,327	2,703	2,289	2,182	2,053	1,984	1,872	1,811	1,704	1,643	1,612	1,579
	40,000	4,947	4,018	3,558	3,052	2,479	2,100	2,002	1,883	1,820	1,717	1,661	1,563	1,508	1,479	1,448
	60,000	4,380	3,558	3,150	2,703	2,195	1,859	1,773	1,668	1,612	1,521	1,471	1,384	1,335	1,309	1,282
	100,000	3,758	3,052	2,703	2,319	1,883	1,595	1,521	1,431	1,383	1,305	1,262	1,188	1,145	1,123	1,100
1-15/16—2	10,000	7,930	6,441	5,704	4,893	3,975	3,366	3,209	3,019	2,918	2,753	2,663	2,506	2,417	—	—
	30,000	5,704	4,633	4,102	3,519	2,859	2,421	2,308	2,172	2,099	1,980	1,915	1,803	1,738	—	—
	40,000	5,232	4,250	3,763	3,228	2,622	2,221	2,117	1,992	1,925	1,817	1,757	1,654	1,595	—	—
	60,000	4,633	3,763	3,332	2,859	2,322	1,966	1,875	1,764	1,705	1,608	1,556	1,464	1,412	—	—
	100,000	3,975	3,228	2,859	2,452	1,992	1,687	1,608	1,513	1,463	1,380	1,335	1,256	1,211	—	—
2-3/16	10,000	9,733	7,905	7,000	6,005	4,878	4,131	3,939	3,706	3,582	3,379	3,268	3,076	—	—	—
	30,000	7,000	5,686	5,035	4,319	3,508	2,971	2,833	2,665	2,576	2,430	2,350	2,212	—	—	—
	40,000	6,421	5,216	4,618	3,962	3,218	2,726	2,599	2,445	2,363	2,229	2,156	2,029	—	—	—
	60,000	5,686	4,618	4,089	3,508	2,850	2,413	2,301	2,165	2,092	1,974	1,909	1,797	—	—	—
	100,000	4,878	3,962	3,508	3,010	2,445	2,070	1,974	1,857	1,795	1,694	1,638	1,542	—	—	—
2-7/16 2-1/2	10,000	14,058	11,419	10,111	8,674	7,046	5,967	5,689	5,352	5,173	4,881	4,721	—	—	—	—
	30,000	10,111	8,213	7,272	6,239	5,068	4,292	4,092	3,850	3,721	3,510	3,395	—	—	—	—
	40,000	9,275	7,534	6,671	5,723	4,649	3,937	3,753	3,531	3,413	3,220	3,114	—	—	—	—
	60,000	8,213	6,671	5,907	5,068	4,116	3,486	3,324	3,127	3,022	2,851	2,758	—	—	—	—
	100,000	7,046	5,723	5,068	4,348	3,531	2,991	2,851	2,683	2,593	2,446	2,366	—	—	—	—
2-11/16—3	10,000	14,959	12,151	10,759	9,230	7,497	6,350	6,054	5,696	5,505	5,194	—	—	—	—	—
	30,000	10,759	8,739	7,738	6,639	5,392	4,567	4,354	4,096	3,959	3,735	—	—	—	—	—
	40,000	9,870	8,017	7,098	6,090	4,946	4,189	3,994	3,758	3,632	3,427	—	—	—	—	—
	60,000	8,739	7,098	6,285	5,392	4,380	3,709	3,537	3,327	3,216	3,034	—	—	—	—	—
	100,000	7,497	6,090	5,392	4,626	3,758	3,182	3,034	2,855	2,759	2,603	—	—	—	—	—
3-7/16—3-1/2	10,000	23,611	19,178	16,981	14,569	11,833	10,022	9,555	8,989	8,689	—	—	—	—	—	—
	30,000	16,981	13,793	12,213	10,478	8,511	7,208	6,872	6,465	6,249	—	—	—	—	—	—
	40,000	15,577	12,653	11,203	9,612	7,807	6,612	6,304	5,931	5,732	—	—	—	—	—	—
	60,000	13,793	11,203	9,920	8,511	6,913	5,855	5,582	5,251	5,076	—	—	—	—	—	—
	100,000	11,833	9,612	8,511	7,302	5,931	5,023	4,789	4,505	4,355	—	—	—	—	—	—
3-15/16—4	10,000	29,919	24,302	21,518	18,461	14,995	12,699	12,108	11,391	—	—	—	—	—	—	—
	30,000	21,518	17,478	15,476	13,278	10,785	9,134	8,708	8,193	—	—	—	—	—	—	—
	40,000	19,739	16,033	14,197	12,180	9,893	8,378	7,988	7,515	—	—	—	—	—	—	—
	60,000	17,478	14,197	12,571	10,785	8,760	7,419	7,073	6,655	—	—	—	—	—	—	—
	100,000	14,995	12,180	10,785	9,252	7,515	6,365	6,068	5,709	—	—	—	—	—	—	—

In the light shaded area, a line-to-line to light press fit on the shaft is required.

Table 3: Unisphere II maximum axial expansion

Bore size (in)	Maximum expansion (in)
1-7/16—1-1/2	5/32
1-11/16—1-3/4	5/32
1-15/16—2	5/32
2-3/16	5/32
2-7/16—2-1/2	3/16
2-11/16—3	3/16
3-7/16—3-1/2	3/16
3-15/16—4	7/32

Table 4: Definition of operating conditions for unitized spherical roller bearings

Low speed	Up to 20% of maximum speed (rpm) (Table 1)
Medium speed	Over 20% to 80% of maximum speed (rpm)
High speed	Over 80% of maximum speed (rpm)
Light load	Up to 8% of C (Table 1)
Normal load	Over 8% to 18% of C
Heavy load	Over 18% of C C = Dynamic capacity
Low temperature	-20 °F to -100 °F
Medium temperature	Over 20 °F to 200 °F
High temperature	Over 200 °F to 400 °F

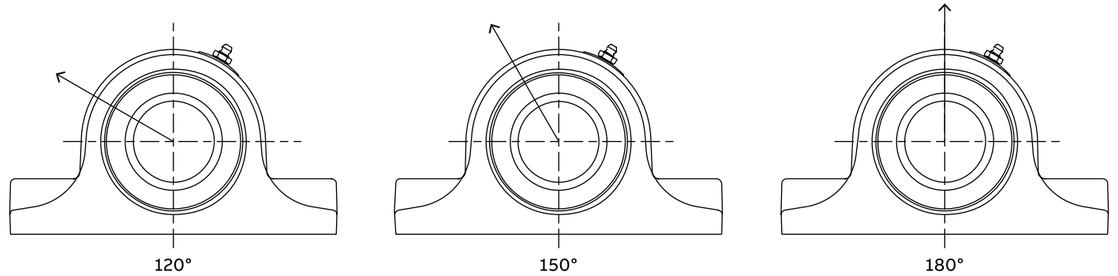


Table 5: Unisphere II housing ratings, ductile *

Bore sizes (in)	Pillow block designation	Maximum recommended housing cap load (lb)		
		P120	P150	P180
1-7/16—1-1/2	UN2107	5,500	6,750	8,000
1-11/16—1-3/4	UN2111	6,800	8,600	10,000
1-15/16—2	UN2115	8,000	9,900	11,700
2-3/16	UN2203	10,200	12,500	14,800
2-7/16—2-1/2	UN2207	10,200	12,400	14,900
2-11/16—3	UN2215	12,900	15,900	18,900
3-7/16—3-1/2	UN2307	11,900	14,600	17,400
3-15/16—4	UN2315	16,900	20,800	24,600

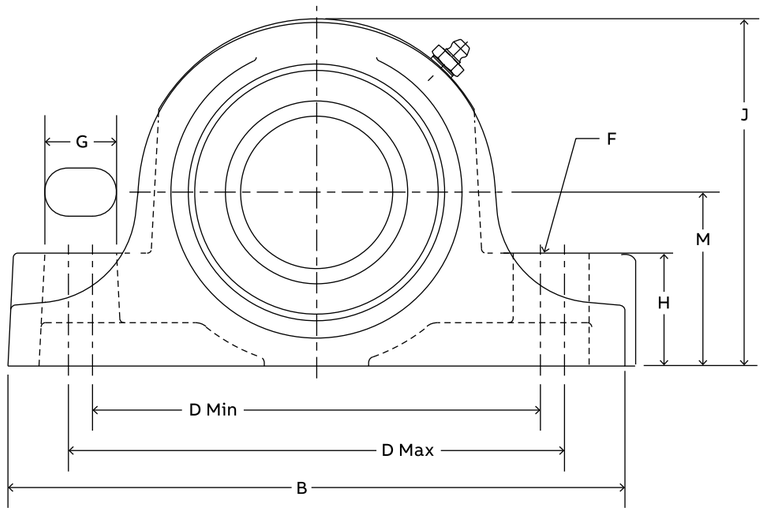
* When utilizing heavy cap loads on pillow block housings, the installation must adhere to the following procedures:

1. The pillow block base bolts must be of high strength (Grade 8) bolts and properly tightened to mounting structure.
2. Stop bars (shear strips) should be used against the plummer block where side loads are encountered.
3. In all cases where loads are heavy, the L_{10} life of the bearing should be checked for proper selection and life requirements.

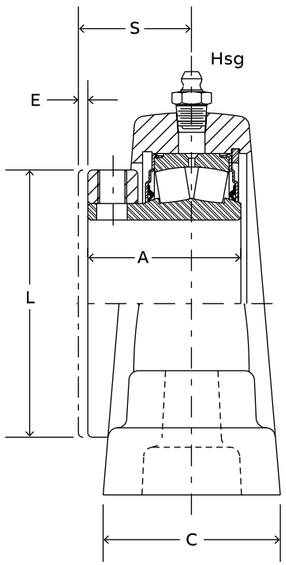
Dimensions

Unisphere II pillow block – inch

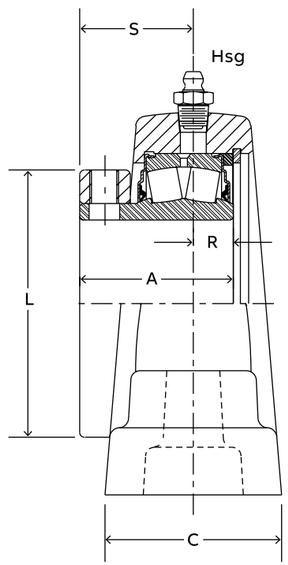
2-bolt



Note: All sizes use a 1/8-27 NPT hydraulic grease fitting



Expansion



Non-Expansion

Unisphere II pillow block – inch

2-bolt

Bearing series	Shaft size	Non-expansion		Expansion		Approx. weight (lb)
		Part number	Description	Part number	Description	
22208	1-7/16	048000	P2B-UN2-107	048017	P2B-UN2-107E	5.5
	1-1/2	048001	P2B-UN2-108	048018	P2B-UN2-108E	5.4
22209	1-11/16	048002	P2B-UN2-111	048019	P2B-UN2-111E	6.9
	1-3/4	048003	P2B-UN2-112	048020	P2B-UN2-112E	6.8
22210	1-15/16	048004	P2B-UN2-115	048021	P2B-UN2-115E	8.0
	2	048005	P2B-UN2-200	048022	P2B-UN2-200E	7.6
22211	2-3/16	048006	P2B-UN2-203	048023	P2B-UN2-203E	9.8
22213	2-7/16	048007	P2B-UN2-207	048024	P2B-UN2-207E	13.6
	2-1/2	048008	P2B-UN2-208	048025	P2B-UN2-208E	13.4
22215	2-11/16	048009	P2B-UN2-211	048026	P2B-UN2-211E	19.3
	2-3/4	048010 †	P2B-UN2-212	048027 †	P2B-UN2-212E	19.0
	2-15/16	048011	P2B-UN2-215	048028	P2B-UN2-215E	18.2
	3	048012	P2B-UN2-300	048029	P2B-UN2-300E	18.1
22218	3-7/16	048013	P2B-UN2-307	048030	P2B-UN2-307E	28.4
	3-1/2	048014 †	P2B-UN2-308	048031 †	P2B-UN2-308E	27.0
22220	3-15/16	048015	P2B-UN2-315	048032	P2B-UN2-315E	37.4
	4	048016 †	P2B-UN2-400	048033 †	P2B-UN2-400E	37.0

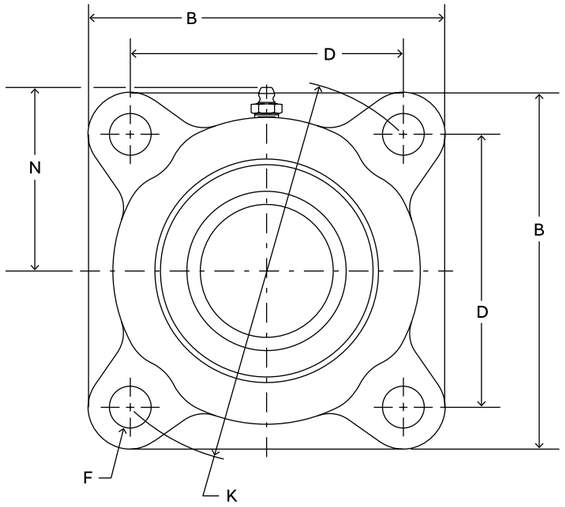
† Assembled to order. Consult customer support for delivery.

Shaft size	A	B	C	D		E total exp.	F bolt dia.	G	H	J	L	M	R	S
				Min.	Max.									
1-7/16 1-1/2	1.69	6.88	1.95	4.69	5.50	5/32	1/2	0.97	0.97	3.88	2.75	1.88	0.50	1.19
1-11/16 1-3/4	1.91	7.38	2.06	5.19	5.88	5/32	1/2	0.91	1.31	4.25	3.00	2.13	0.47	1.44
1-15/16 2	1.91	8.38	2.06	5.94	6.69	5/32	5/8	1.06	1.38	4.56	3.25	2.25	0.47	1.44
2-3/16	2.00	8.88	2.31	6.44	7.13	5/32	5/8	1.03	1.63	5.00	3.50	2.50	0.52	1.48
2-7/16 2-1/2	2.20	9.25	2.56	6.81	7.44	3/16	5/8	1.00	1.75	5.69	4.06	2.75	0.66	1.55
2-11/16 2-3/4 2-15/16 3	2.45	10.44	2.56	7.81	8.44	3/16	3/4	1.13	2.25	6.44	4.72	3.25	0.77	1.69
3-7/16 3-1/2	2.86	13.00	2.81	9.25	10.75	3/16	7/8	1.69	2.25	7.50	5.50	3.75	0.94	1.91
3-15/16 4	3.33	14.25	3.31	10.00	11.88	7/32	1	2.00	2.50	8.44	6.47	4.13	1.13	2.19

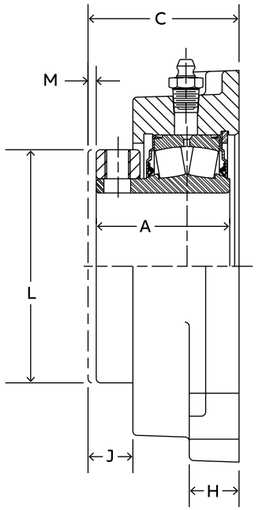
Note: Dimensions shown are for non-expansion units. The expansion bearing center and housing center are on the same centerline.

Unisphere II flange – inch

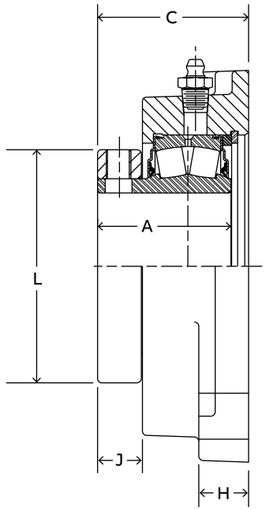
4-bolt



Note: All sizes use a 1/8-27 NPT hydraulic grease fitting



Expansion



Non-Expansion

Unisphere II flange – inch

4-bolt

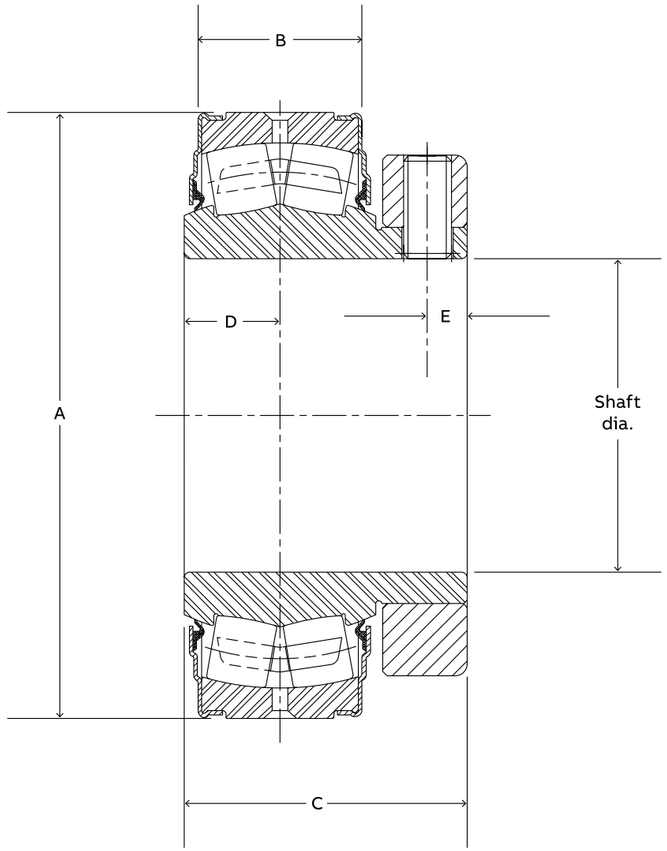
Bearing series	Shaft size	Non-expansion		Expansion		Approx. weight (lb)
		Part number	Description	Part number	Description	
22208	1-7/16	048034	F4B-UN2-107	048051	F4B-UN2-107E	5.20
	1-1/2	048035	F4B-UN2-108	048052	F4B-UN2-108E	5.10
22209	1-11/16	048036	F4B-UN2-111	048053	F4B-UN2-111E	6.70
	1-3/4	048037	F4B-UN2-112	048054	F4B-UN2-112E	6.70
22210	1-15/16	048038	F4B-UN2-115	048055	F4B-UN2-115E	6.90
	2	048039	F4B-UN2-200	048056	F4B-UN2-200E	6.70
22211	2-3/16	048040	F4B-UN2-203	048057	F4B-UN2-203E	8.40
22213	2-7/16	048041	F4B-UN2-207	048058	F4B-UN2-207E	10.50
	2-1/2	048042	F4B-UN2-208	048059	F4B-UN2-208E	10.40
22215	2-11/16	048043	F4B-UN2-211	048060 †	F4B-UN2-211E	17.30
	2-3/4	048044	F4B-UN2-212	048061 †	F4B-UN2-212E	17.00
	2-15/16	048045	F4B-UN2-215	048062	F4B-UN2-215E	16.20
	3	048046	F4B-UN2-300	048063	F4B-UN2-300E	15.90
22218	3-7/16	048047	F4B-UN2-307	048064	F4B-UN2-307E	24.70
	3-1/2	048048 †	F4B-UN2-308	048065 †	F4B-UN2-308E	30.00
22220	3-15/16	048049	F4B-UN2-315	048066	F4B-UN2-315E	41.40
	4	048050	F4B-UN2-400	048067 †	F4B-UN2-400E	41.00

† Assembled to order. Consult customer support for delivery.

Shaft size	A	B	C	D	F bolt dia.	H	J	K	L	M total exp.	N
1-7/16 1-1/2	1.69	4.75	1.91	3.53	1/2	0.75	0.56	5.00	2.75	5/32	2.44
1-11/16 1-3/4	1.91	5.13	2.16	3.91	1/2	0.75	0.72	5.50	3.00	5/32	2.75
1-15/16 2	1.91	5.31	2.17	4.06	1/2	0.69	0.70	5.75	3.25	5/32	2.88
2-3/16	2.00	5.88	2.27	4.50	5/8	0.75	0.67	6.38	3.50	5/32	3.06
2-7/16 2-1/2	2.20	6.13	2.44	4.78	5/8	1.00	0.63	6.75	4.06	3/16	3.38
2-11/16 2-3/4 2-15/16 3	2.45	7.19	2.59	5.56	3/4	0.94	0.78	7.88	4.72	3/16	3.81
3-7/16 3-1/2	2.86	8.34	3.08	6.72	3/4	1.19	0.86	9.50	5.50	3/16	4.31
3-15/16 4	3.33	9.47	3.69	7.63	7/8	1.06	1.05	10.75	6.47	7/32	4.69

Note: Dimensions shown are for non-expansion units. The expansion bearing center and housing center are on the same centerline.

Unisphere II bearing insert with seal – inch



Unisphere II bearing insert with seal – inch

Bearing series	Shaft size	Part number †	Description	Approx. weight (lb)
22208	1-7/16	421243	BRG-UN2-107	1.5
	1-1/2	421244	BRG-UN2-108	1.4
22209	1-11/16	421245	BRG-UN2-111	1.6
	1-3/4	421246	BRG-UN2-112	1.5
22210	1-15/16	421247	BRG-UN2-115	1.8
	2	421248	BRG-UN2-200	1.7
22211	2-3/16	421249	BRG-UN2-203	2.3
22213	2-7/16	421250	BRG-UN2-207	4.1
	2-1/2	421251	BRG-UN2-208	3.9
22215	2-11/16	421252	BRG-UN2-211	5.6
	2-3/4	421253	BRG-UN2-212	5.4
	2-15/16	421254	BRG-UN2-215	4.8
	3	421255	BRG-UN2-300	4.6
22218	3-7/16	421256	BRG-UN2-307	9.2
	3-1/2	421257	BRG-UN2-308	8.6
22220	3-15/16	421258	BRG-UN2-315	12.4
	4	421259	BRG-UN2-400	12.1

† Assembled-to-order size. Consult customer support for delivery.

Shaft size	A	B	C	D	E
1-7/16 1-1/2	3.1496	0.95	1.69	0.56	0.29
1-11/16 1-3/4	3.3465	0.95	1.91	0.58	0.32
1-15/16 2	3.5433	0.95	1.91	0.59	0.32
2-3/16	3.9370	1.03	2.00	0.64	0.32
2-7/16 2-1/2	4.7244	1.27	2.20	0.75	0.32
2-11/16 2-3/4 2-15/16 3	5.1181	1.27	2.45	0.80	0.44
3-7/16 3-1/2	6.2992	1.62	2.86	0.95	0.44
3-15/16 4	7.0866	1.86	3.33	1.09	0.51

Reference Guide
Type E Family (Tapered)
Specialty Tapered
Safety Mount Family (Spherical)
S-2000 (Spherical)
Unified SAF (Spherical)
Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

Notes

Reference Guide
Type E Family (Tapered)
Specialty Tapered
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Solidlube (Plain)
Sleeve (Plain)
Accessories

Sleevoil (hydrodynamic)

B26-1 **Sleevoil (hydrodynamic)**
B26-2 **Features and benefits**
B26-6 **How to order**
B26-6 **Nomenclature**
B26-7 **Selection**
B26-8 **Dimensions**
B26-8 Sleevoil RTL-series
B26-10 Sleevoil R-series
B26-18 **Accessories**

Features and benefits

Sleevoil

RTL-series pillow block

RTL pillow block blocks offer excellent radial and thrust load capacities, and they are the preferred bearing for use on newer installations and designs. Large coolant chambers provide especially effective heat dissipation when used with circulating coolant systems. This provides exceptionally strong bearing performance near high-heat sources or gases.

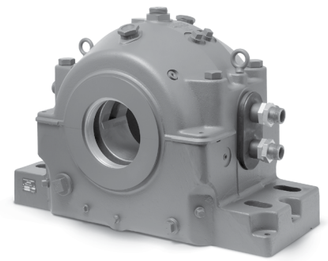
The inner liner of Sleevoil RTL-series has a center cavity which provides flooding lubrication to the thrust plates. This cavity acts as a reservoir to provide lubrication even during start-up and divides the radial area into two individual load sections. In the non-expansion configuration, a single thrust collar is required. If a split collar is used, a shaft recess is necessary.

Coolant chambers, which cool both the thrust and radial load zones allow the use of water, air, or oil as the internal coolant.

Expansion pillow blocks are furnished as standard. When non-expansion blocks are specified, a thrust collar and thrust plate kit are required.

Key features

- Reliable, high-speed operation, suitable for heavy loads
- Three times the thrust load capability of the R-series
- Suitable for operation near high-heat sources
- Pre-machined for thermocouples, circulating oil kit, vibration detector adapter kit, auxiliary seal kits, end cap kit, proximity probes, and heater and thermostat



RTL-series pillow block

Sleevoil

RTL-series pillow block

RTL Spherical upgrade

The RTL bearing was redesigned for maximum performance and easier maintenance in 2014 (RTL Spherical). Additional upgrades have also been made to the bearing since the RTL Spherical was introduced.

The RTL Spherical upgrade reduces the effects of system vibration and subsequent fretting corrosion between the housing and liner by means of an additional spherical seat on top of the liner and inside of the upper housing cap (as noted in image). These new features create a "ball and socket" fit between the liner and housing. Tightening the housing cap bolts during installation places a firm grip on the liner and increases its stability, thus eliminating the need for periodically torquing the housing plunger screw.

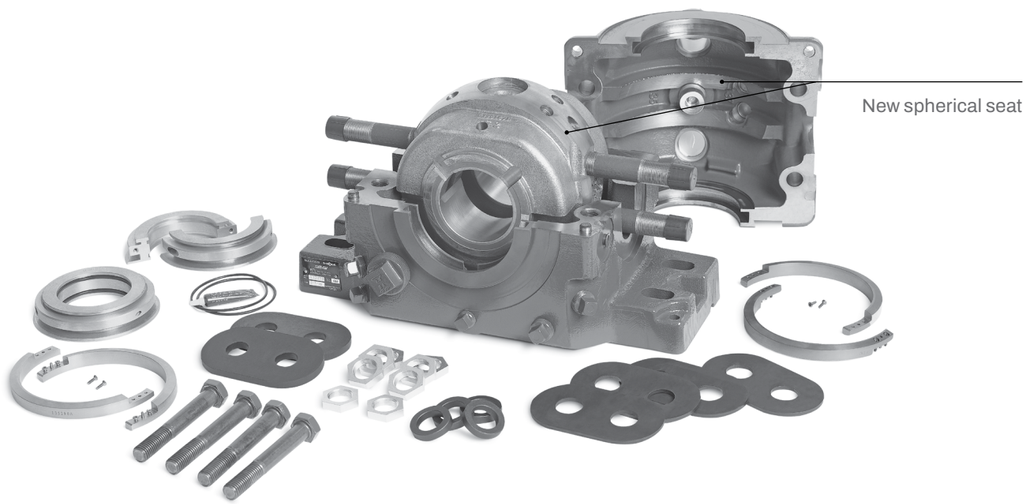
Newer designed RTL Spherical liners will fit in older housings, however the benefits will not be witnessed unless using the newer style housing. Older, pre-2014 liners cannot be used in the new housings as they will not physically fit.

RTL Spherical housings may be recognized by: a machined "flat" on top of the housing near the plunger screw, the housing name plate has the word "Spherical" on it, and the new spherical seats are present inside of the upper housing cap. Use Instruction manual MN3085 when using the newer style RTL Spherical housing. Note that for some (but not all) RTL accessories and replacement parts listed in this catalog, it is important to know which RTL housing version you have: standard RTL manufactured prior to 2014 - or RTL Spherical that was manufactured in 2014 and later.

Additional RTL upgrades since the introduction of RTL Spherical include, but are not limited to:

- Tin based babbitt, offering higher temperature and wear resistance
- Proximity Probe holes included, for added condition monitoring and downtime prevention
- Additional grommet plate to reduce chance of oil leaks
- Dual circulating oil outlet drains to prevent oil back-up
- Additional RTD/Thermocouple holes for easier installation and condition monitoring ability
- Bi-directional tapered land thrust plates that offer increased thrust capacity, trapezoidal oil rings, and more

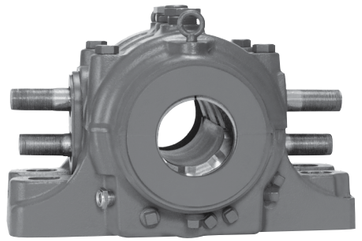
Contact your local Field Sales Engineer to learn more about upgrading your RTL bearing for maximum performance and uptime.



Sleevoil
R-series pillow block

Sleevoil pillow blocks have unmatched cooling capabilities. Water-cooled (WC) and externally-cooled (XC) types operate at higher speeds and load ranges than plain units and function well near high temperature sources.

- R-series jacketed liners designated as XC can be air-, oil-, or water-cooled
- Thrust collars convert the expansion bearing into a non-expansion bearing
- Short series housings require less shaft space and are for expansion bearings only
- Housings for bore sizes 3-7/16-inch and greater are pre-machined for thermocouples, heaters, thermostats, vibration detector adapter kits, auxiliary seal kits, end cap kits, and circulating oil kits



R-series pillow block

1-7/16-inch bore size

- Offered as plain pillow block

1-11/16 to 3-7/16-inch bore size

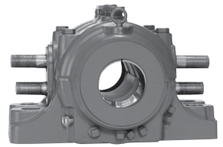
- Offered as plain/water-cooled (PL-WC) pillow blocks

PL-WC pillow block
Plain – water cooled

Sleevoil
R-series pillow block

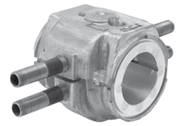
3-15/16 to 8-inch bore size

- Offered as plain/externally-cooled (PL-XC) pillow blocks, standard and short series



STL
Standard length

SSL
Short series length

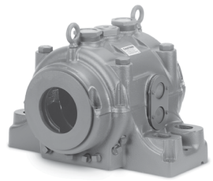


PL-XC liner assembly
Plain – externally cooled

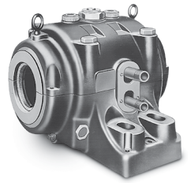
Note: 3-15/16 through 8-inch "WC" liners and housings have been discontinued. WC liners and/our housings in this size must be replaced by PL-XC complete pillow blocks including the appropriate STL or SSL housings.

9 to 14-inch bore sizes

- Offered as plain (PL) or externally cooled (XC), standard or short series length



Plain pillow block



XC pillow block
Externally cooled

How to order

Sleevoil

R and RTL series

When ordering replacement Sleevoil bearings and parts, it is extremely important to reference the original, six-digit bearing part numbers. Sleevoil bearings are commonly modified at the factory due to the needs of the initial equipment design, and using improperly specified parts may damage equipment. Standard, unmodified products offered have part numbers with listings shown throughout this catalog. Use of part numbers ensures accurate order processing.

When part numbers are not shown, the product may be specified by description. This method is used when ordering units that include modifications or options. To order by description, use the nomenclature key shown for each product, adding any special instructions to the end of the description for options not covered by the nomenclature.

Other special requirements not listed

For applications requiring modifications or part numbers not listed, contact Application Engineering for bearings at +1 864 284 5700.

Shaft requirements

For standard Sleevoil bearings, the required shaft tolerance for satisfactory operation is nominal +0.000 to -0.002 inches, with a surface finish of 32 microinches.

OEM equipment specifications may have required modifications, including non-standard shaft and bore dimensions and tolerances. Consult construction drawings or Dodge Application Engineering if bearing or liner part numbers not found in this catalog (non-standard).

Nomenclature

Common

PB = Pillow block
HSG = Housing
LNR = Liner assembly
TC = Thrust collar

R-series

PL-WC = Plain – water cooled
PL-XC = Plain – externally cooled
XC = Externally cooled
WC = Water cooled
PL = Plain
STD = Standard series housing
SSH = Short series housing
STL = Standard series housing, loaded
SSL = Short series housing, loaded
BTP = Bronze thrust plates
(BTP1-Type 1 lower liner only;
BTP2-Type 2 upper and lower liner)

RTL-series

RTL = Radial thrust loaded
RTL spherical = Radial thrust loaded, spherical design (2014+)
TPK = Thrust plate kit

The product offering has 6-digit part numbers with listing shown throughout this catalog. Use of part numbers ensures accurate order processing.

Terminology glossary

Sleevoil pillow block: contains a liner and a modular housing assembly; optional accessories sold separately

Sleevoil liner: cast iron, babbitt-lined internal bore that accepts the radial load of the system—typically including a water jacket and coolant pipes, except in plain R-series configurations

Sleevoil modular housing assembly: same as a pillow block, except without the liner, that contains a housing, hardware, standard seals, and oil rings; does not contain coolant pipes, extra seals, accessories, or pedestal mounting bolts

Expansion and non-expansion: typical Sleevoil applications require one expansion pillow block and one non-expansion pillow block, where the non-expansion unit accepts the driven system axial load; thrust accessories can be added to Sleevoil pillow blocks for use in non-expansion locations

Note: Complete parts lists for Sleevoil are available in the back of each respective product instruction manual, and up-to-date instruction manuals can be found on PT Place at dodge.ptplace.com

Selection

Sleevoil application inquiry form

Please forward completed inquiry form to Application engineering: engineering@dodgeindustrial.com or +1 864 284 5700

Company name _____ Date _____

Address _____ Response is required by _____

Contact name _____ Phone ( ) _____

Customer reference _____ Email _____

Installation and arrangement _____

Shaft speed:
☐ Constant _____ rpm
☐ Variable speed Max. rpm _____ Min. rpm _____
☐ Turning gear _____

	Fixed bearing (non-expansion)	**Free bearing (expansion)**
Shaft size (in)		
Radial load (lb, N)		
Thrust load: (lb, N)		N/A
Cooling wheel:	☐ Yes ☐ No	☐ Yes ☐ No
Bearing type:	☐ RTL ☐ STL	☐ RTL ☐ STL ☐ SSL
Radial load direction:	☐ Base ☐ Cap	☐ Base ☐ Cap

Type of coolant: ☐ Plain (none) ☐ Water ☐ Air ☐ Circulating oil ☐ Water cooled with circulating oil

Preferred lubricant: ☐ ISO 32 ☐ ISO 46 ☐ ISO 68 ☐ ISO 100 ☐ Other: _____

Expected temperatures:

Ambient	Max _____	°F / °C	Min _____	°F / °C
Air inlet	Max _____	°F / °C	Min _____	°F / °C
Water inlet	Max _____	°F / °C	Min _____	°F / °C
Oil Inet	Max _____	°F / °C	Min _____	°F / °C

Air velocity over bearing housing (FPM) _____

Closest part of bearing to heat source: Non-expansion bearing _____ in (mm) Expansion bearing _____ in (mm)

External heat source (fan gas temperature) _____ °F / °C

Please state any unusual conditions, such as: shock loads, changes in thrust loads, low speed requirements, hot shaft start-ups, environmental conditions (dust, chemicals, gasses, etc.)

_____

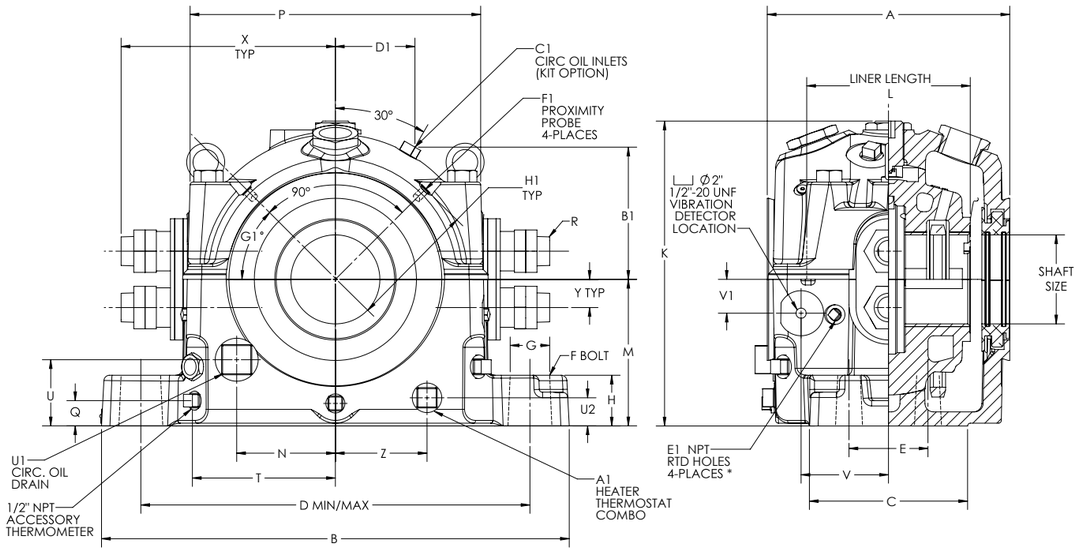
_____

Reference Guide
Type E Family (Tapered)
Specialty Tapered
Safety Mount Family (Spherical)
S-2000 (Spherical)
Unified SAF (Spherical)
Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

Dimensions

Sleevoil RTL-series pillow block – inch

2-15/16 through 12



Shaft size	Expansion pillow blocks		One of each required to make a non-expansion pillow block				Auxiliary seal kits # #		Housing end cap kits **		Heater/thermostat, 120 V *	
			Thrust plate kits		Split thrust collar ⊗⊗							
	Part number	Weight (lb)	Part number	Weight (lb)	Part number	Weight (lb)	Part number	Weight (lb)	Part number	Weight (lb)	Part number	Weight (lb)
2-15/16	132447	190	137101	2.5	132162	2.6	132823	4.9	435217	5.3	434721	1.0
3-7/16	132474	190	137101	2.5	132151	2.6	132811	4.9	435217	5.3	434721	1.0
3-15/16	132475	230	137102	4.3	132152	4.2	432181	6.4	435218	6.1	434725	2.5
4-7/16	132476	300	137103	5.4	132153	5.6	432184	7.0	435336	6.8	434725	2.5
4-15/16	132477	425	137104	6.9	132154	8.7	432187	7.5	435337	7.3	434727	3.0
5-7/16	132383	500	137105	10.2	132155	10.8	133932	12.4	435338	11.6	434727	3.0
6	132384	825	137106	12.7	132156	15.9	133933	14.8	435339	10.6	434727	3.0
7	132385	978	137107	17.6	132157	22.4	133937	19.0	435340	13.5	434729	4.0
8	132386	1310	137108	23.1	132158	34.5	133938	24.9	435341	15.5	434729	4.0
9	132387	1650	137109	42.6	132159	45.9	132814	23.1	435342	15.9	434729	4.0
10	132388	2150	137110	52.7	132160	59.8	132816	24.2	435343	16.4	434729	4.0
12	132389	3500	137111	74.1	132161	96.4	132819	40.0	435344	25.0	434735	7.5

* 220-volt heaters available. See page B26-24.

** 3-7/16-inch and 3-15/16-inch part numbers are specific to RTL spherical housings manufactured in 2014 or later.

⊗⊗ For recessed shaft.

One required per pillow block end, unless end cap is used on outboard end of expansion bearing.

Sleevoil RTL-series pillow block – inch

2-15/16 through 12

Shaft size	Circulating oil inlet kits >		Replacement liner assemblies		A	B	C	D (max.-min.)	E	F bolt dia.	F1*	G	G1	H	H1	K
	Part number	Weight (lb)	Part number	Weight (lb)												
2-15/16	132203	2	132439	47	10	18-3/4	6	16-1/8—14-7/8	3	3/4	3/8—24 UNF	1-1/2	45°	2	5-1/16	12-9/16
3-7/16			132420	47	10	18-3/4	6	16-1/8—14-7/8	3	3/4	3/8—24 UNF	1-1/2	45°	2	5-1/16	12-9/16
3-15/16			132421	65	10-3/4	20-3/4	7	18—16-1/2	3-1/2	7/8	3/8—24 UNF	1-3/4	45°	2-1/4	5-9/16	13-5/8
4-7/16			132422	82	11-3/4	21-3/4	7-1/2	18-7/8—17-1/8	4	1	7/8—14 UNF	2	45°	2-1/2	5-5/8	15-1/4
4-15/16			132423	113	12-3/4	24-1/4	8-1/2	21-3/8—19-5/8	4-1/2	1	7/8—14 UNF	2	45°	2-3/4	6-11/16	17-3/8
5-7/16			132424	144	14	26-3/4	9-1/2	23-1/4—21-1/4	5	1-1/8	7/8—14 UNF	2-1/4	45°	3-1/4	7-1/8	18-7/8
6	132205	2	132425	182	16	29	10-1/2	25-1/8—22-7/8	5-1/2	1-1/4	7/8—14 UNF	2-1/2	45°	3-1/2	7-11/16	20-1/8
7			132426	257	18	33	12-1/2	28-7/8—26-1/8	6-1/2	1-1/2	7/8—14 UNF	3	45°	4	8-9/16	22-3/8
8			132427	412	19-3/4	38	14	33-1/8—29-7/8	7-1/2	1-3/4	7/8—14 UNF	3-1/2	15°	4-1/2	9-15/16	25-13/16
9			132428	623	22-3/4	41-1/2	15-1/2	36-5/8—33-3/8	8	1-3/4	7/8—14 UNF	3-1/2	15°	5	11-3/16	28-1/4
10			132429	955	24-1/2	47-1/2	17	41-7/8—38-1/8	9	2	7/8—14 UNF	4	15°	6	12-3/4	33-7/8
12			132430	1405	29	49	18	43-5/8—41-7/8	10	2	7/8—14 UNF	3	15°	6-1/2	14-1/4	37

Shaft size	L	M	N	P	Q	R	S	T	U	U1	U2
2-15/16	6-3/4	5-7/8	3-5/8	11-5/8	1-1/8	3/4	1-3/8	—	2-3/4	1-1/2	1-1/8
3-7/16	6-3/4	5-7/8	3-5/8	11-5/8	1-1/8	3/4	1-3/8	—	2-3/4	1-1/2	1-1/8
3-15/16	7-1/4	6-1/2	4-3/8	12-7/8	1-1/8	1	1-1/2	—	2-15/16	1-1/2	1-1/4
4-7/16	8	7	4-1/2	13-3/4	1-1/4	1	1-1/2	—	2-15/16	1-1/2	1-3/8
4-15/16	8-7/8	7-3/4	5-1/8	16	1-1/4	1-1/4	1-5/8	—	3-1/4	2	1-1/2
5-7/16	10	8-3/4	5-3/4	17-1/4	1-5/8	1-1/4	2	2-15/16	3-3/4	2	1-7/8
6	10-7/8	9-1/2	6-1/4	18-3/4	1-5/8	1-1/4	2-1/8	3-1/2	4	2	1-7/8
7	12-1/2	10-3/4	6-7/8	21-1/4	2	1-1/4	2-1/4	4	4-1/4	2	2
8	14-1/8	12-1/4	8-1/2	24-1/4	2-1/4	2	2-3/8	5-1/2	4-3/4	2	2-1/4
9	16-1/4	13-1/2	9-3/16	27-1/4	2-1/4	2	3	5-1/2	5-1/16	2	2-1/4
10	17-3/4	16	11	31	2-7/8	2-1/2	3-1/8	8-1/2	5-9/16	2-1/2	2-7/8
12	20-3/4	17-3/4	12-7/16	35-1/2	3-1/8	3	3-1/4	9	6-1/8	2-1/2	3-1/8

Shaft size	V	V1	W +/-3/16	X	Y	Z	A1	B1	C1	D1
2-15/16	3-1/4	3/4	7-5/8	8-3/4	1-1/4	3-9/16	3/4	7-1/4	1/4	4-3/16
3-7/16	3-1/4	3/4	7-5/8	8-3/4	1-1/4	3-9/16	3/4	7-1/4	1/4	4-3/16
3-15/16	3	1-1/2	8-11/16	9-13/16	1-1/4	4-1/16	1	7-11/16	1/4	4-9/16
4-7/16	3-1/4	1-5/8	9-1/8	10-1/4	1-1/4	4-7/16	1	8-1/8	1/4	4-5/8
4-15/16	3-3/4	1-3/4	10-3/4	12-7/16	1-7/8	5-3/8	1-1/4	8-1/2	1/4	4-15/16
5-7/16	4	1-3/4	11-7/16	12-7/8	1-7/8	5-5/8	1-1/4	9-1/16	1/4	5-1/4
6	3-3/4	2	12-3/16	13-1/2	1-7/8	6-1/8	1-1/4	10-7/8	3/8	6- 5/16
7	4-1/2	2	13-3/16	14-5/8	1-7/8	6-7/8	1-1/4	12-1/16	3/8	6-15/16
8	5	2	15-11/16	17-7/8	2-1/4	8-3/8	1-1/4	13-1/8	3/8	7-3/16
9	5-1/2	2	17-1/8	19-1/4	2-1/4	9-1/16	1-1/4	14-3/16	3/8	8-3/16
10	6	2	19-13/16	22-1/2	2-3/4	10-5/8	1-1/4	15-1/8	3/8	8-3/4
12	6-1/2	2	22	24-1/4	3-1/2	12-1/8	1-1/4	19-1/2	3/8	9-9/16

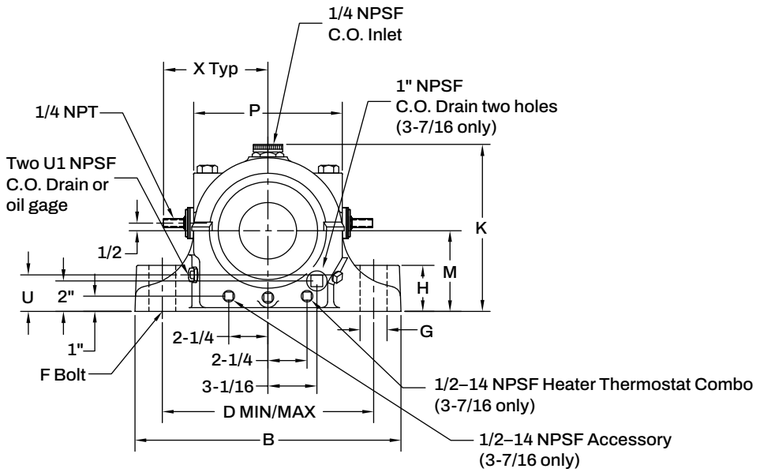
> One required per pillow block.

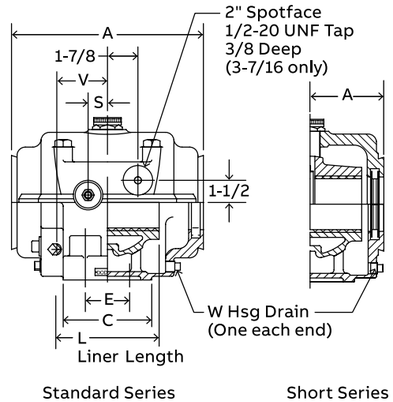
* 7/8-14 UNF holes may be changed to 3/8-24 UNF or 3/4-14 NPSF by means of BNPP Adapter Kit - Part Number 432287. Includes two adapters of each size per kit.

All sizes are pre-machined for accessories: thermocouples, circulating oil, vibration detector, heater and thermostat, proximity probes, auxiliary seal kits, end cap, and isolators.

Sleevoil R-series pillow block – inch

1-7/16 through 3-7/16 Plain or water-cooled (PL-WC) - standard and short series





Standard Series Short Series

Shaft size	Expansion pillow blocks STD (Standard series)		Expansion pillow blocks SSH (Short series expansion only)		Split thrust collars (2) Collars required to make a non-expansion pillow blocks		Neoprene end closure **		Coolant/water hose kit		Replacement PL-WC liner assemblies	
	Part number	Weight (lb)	Part number	Weight (lb)	Part number	Weight (lb)	Part number	Weight (lb)	Part number	Weight (lb)	Part number	Weight (lb)
1-7/16	132983	20.5	—	—	133245	0.7	133980	0.12			133203	3.6
1-11/16	132984	30.7	—	—	133250	1.2	133981	0.12			133583	6.3
1-15/16	132985	31.6	—	—	133255	1.0	133982	0.12			133584	7.0
2-3/16	132986	47.8	—	—	133260	1.8	133983	0.12			133585	12.0
2-7/16	132987	65.5	—	—	133265	2.7	133984	0.12	133344	0.5	133586	11.6
2-11/16	132988 ⊗	97.0	—	—	133270	4.1	133985	0.12			132959 ⊗	27.0
2-15/16	132989 ⊗	92.4	132991 ⊗	90.0	133275	3.8	133986	0.18			132950 ⊗	22.0
	STL (Standard series)		SSL (Short series, expansion only)									
3-7/16	132990 ⊗	144.0	132992 ⊗	138.0	133280	6.2	133987	0.31			132951 ⊗	50

⊗ Pillow block and liner are pre-drilled for thermocouple (2 places).

** Used to close one end of pillow block. One required for sizes 1-7/16 through 2-15/16.Two required for 3-7/16.

STL and SSL are pre-drilled for accessories: thermocouple, circulating oil, vibration detector, heater and thermostat.

Sleevoil R-series pillow block – inch

1-7/16 through 3-7/16 Plain or water-cooled (PL-WC) - standard and short series

Shaft size	A		B		C		D (Min./Max.)						E		F bolt dia.		G	
	STD	SSH	STD	SSH	STD	SSH	STD			SSH			STD	SSH	STD	SSH	STD	SSH
1-7/16	6-1/2	—	9-1/2	—	2-3/4	—	7	—	7-1/2	—	—	—	—	—	5/8	—	1	—
1-11/16	7-3/4	—	10-1/2	—	3	—	7-3/4	—	8-1/4	—	—	—	—	—	5/8	—	1	—
1-15/16	7-3/4	—	10-1/2	—	3	—	7-3/4	—	8-1/4	—	—	—	—	—	5/8	—	1	—
2-3/16	9-1/4	—	12-1/2	—	3-1/2	—	9-1/8	—	9-7/8	—	—	—	—	—	3/4	—	1-1/4	—
2-7/16	10-1/2	—	13-1/2	—	4	—	10-1/8	—	10-7/8	—	—	—	—	—	3/4	—	1-1/4	—
2-11/16	11-1/2	—	15	—	4-1/2	—	11	—	12	—	—	—	—	—	7/8	—	1-1/2	—
2-15/16	11-1/2	8-3/4	15	15	4-1/2	5-3/4	11	—	12	10-7/8	—	12-1/8	—	2-3/4	7/8	3/4	1-1/2	1-1/2
	STL	SSL	STL	SSL	STL	SSL	STL			SSL			STL	SSL	STL	SSL	STL	SSL
3-7/16	13	10	17	17	6	6	12-15/16—14-1/16			12-15/16—14-1/16			3	3	3/4	3/4	1-1/2	1-1/2

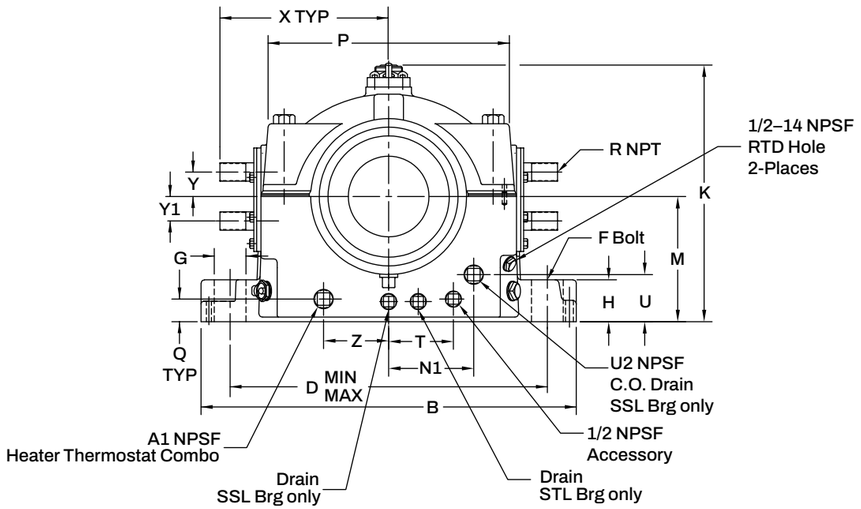
Shaft size	H		K		L		M		P		S		U	
	STD	SSH	STD	SSH	STD	SSH	STD	SSH	STD	SSH	STD	SSH	STD	SSH
1-7/16	1-1/2	—	6	—	3	—	2-3/4	—	4-5/8	—	—	—	1-1/8	—
1-11/16	1-3/4	—	6-3/4	—	3-1/2	—	3-1/8	—	5-3/8	—	7/8	—	1-3/8	—
1-15/16	1-3/4	—	6-3/4	—	4	—	3-1/8	—	5-3/8	—	7/8	—	1-3/8	—
2-3/16	2	—	8	—	4-1/2	—	3-3/4	—	6-3/8	—	7/8	—	1-1/2	—
2-7/16	2-3/8	—	8-3/4	—	5	—	4-1/8	—	7-1/8	—	1-1/16	—	1-5/8	—
2-11/16	2-15/32	—	9-5/8	—	5-1/2	—	4-9/16	—	7-7/8	—	1-1/8	—	1-7/8	—
2-15/16	2-15/32	1-1/2	9-5/8	9-5/8	6	6	4-9/16	4-9/16	7-7/8	7-7/8	1-1/8	1-1/8	1-7/8	1-3/4
	STL	SSL	STL	SSL	STL	SSL	STL	SSL	STL	SSL	STL	SSL	STL	SSL
3-7/16	3	3	11	11	7	7	5-1/4	5-1/4	9-3/8	9-3/8	1-5/16	1-5/16	2	2

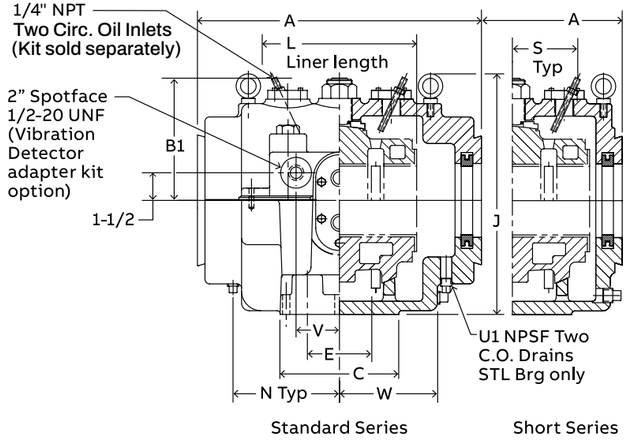
Shaft size	U1		V		W		X
	STD	SSH	STD	SSH	STD	SSH	
1-7/16	1/2	—	2-1/16	—	1/4	—	—
1-11/16	1/2	—	2-1/4	—	1/4	—	3-3/4
1-15/16	1/2	—	2-1/4	—	1/4	—	3-3/4
2-3/16	1/2	—	2-1/2	—	1/4	—	4-3/4
2-7/16	1/2	—	2-15/16	—	1/4	—	4-3/4
2-11/16	1/2	—	3-1/8	—	1/4	—	5-1/8
2-15/16	1/2	1/2	3-1/8	3-9/16	1/4	1/4	5-1/8
	STL	SSL	STL	SSL	STL	SSL	
3-7/16	3/4	1/2	3-7/8	3-7/8	1/2	1/2	5-1/2

For heater and thermostat options, see page B26-24.

Sleevoil R-series pillow block – inch

3-15/16 through 8 Plain or externally cooled (PL-XC) - standard and short series





Shaft size	Expansion pillow blocks STL (Standard series)		Expansion pillow blocks SSL (Short series expansion only)		Split thrust collars 2 Collars required to make a non-expansion STL pillow block		Replacement liner assembllies PL-XC Externally cooled		WC ★ (Discontinued in 2022)	
	Part number	Weight (lb)	Part number	Weight (lb)	Part number	Weight (lb)	Part number	Weight (lb)	Part number	Weight (lb)
3-15/16	134200	201	134207	193	133285	7.2	132952	51	132952	51
4-7/16	134201	271	134208	255	133292	7.9	132953	71	132953	71
4-15/16	134202	362	134209	324	133293	11.3	132954	92	132954	92
5-7/16	134203	470	134210	462	133294	12.3	132955	130	132955	130
6	134204	598	134211	570	133295	15.3	132956	158	132956	158
7	134205	882	134212	845	133296	31.3	132957	230	132957	230
8	134206	1298	134213	1256	133297	48.7	132958	372	132958	372

★ Housings that only accept WC liners were discontinued in 1973. If using old-style WC liners and housings, replace complete Pillow Block with PL-XC style.

Sleevoil R-series pillow block – inch

3-15/16 through 8 Plain or externally cooled (PL-XC) - standard and short series

Shaft Size	Optional accessories: Auxiliary seal kits ## Part number	Auxiliary seal kits ## Weight (lb)	Housing end cap kits Part number	Housing end cap kits Weight (lb)	Heater / Thermostat * 120 Volt Part number	Heater / Thermostat * 120 Volt Weight (lb)	Circulating oil inlet kits > Part number	Circulating oil inlet kits > Weight (lb)	Neoprene end closures ⊗⊗ Part number	Neoprene end closures ⊗⊗ Weight (lb)	Pipe grommet kits > Part number	Pipe grommet kits > Weight (lb)
3-15/16	432181	6.4	432190	6.1	434721	1.0	432153	2	133988	0.3	132192	1.6
4-7/16	432184	7.0	432193	6.8	434721	1.0	430198	2	133989	0.4	132192	1.6
4-15/16	432187	7.5	432196	7.3	434721	1.0	430198	2	133990	0.5	132193	2.4
5-7/16	133932	12.4	132546	11.6	434721	2.0	430155	2	133991	0.6	132193	2.4
6	133933	14.8	132547	10.6	434725	2.5	430155	2	133992	0.8	132198	3.6
7	133937	19.0	132548	13.5	434725	2.5	430155	2	133993	1.2	132198	3.6
8	133938	24.9	132549	15.5	434727	3.0	430155	2	133994	1.3	132198	3.6

Shaft size	A STL	A SSL	B STL and SSL	C STL and SSL	D (Min.-Max.) STL and SSL	E STL and SSL	F bolt dia. STL and SSL	G STL and SSL	H STL	H SSL	J STL	J SSL
3-15/16	15	11	19	7	14-1/4 - 15-3/4	3-1/2	7/8	1-3/4	3	2	12-1/16	12-5/8
4-7/16	16-1/2	12-1/2	20-1/2	7-1/2	15-1/4 - 16-3/4	4	1	2	3-1/2	3-1/2	14-5/8	14-5/8
4-15/16	18-1/4	13-3/4	22-1/2	8-1/2	16-5/8 - 18-7/8	4-1/2	1	**	3-1/8	2-1/2	15-7/8	15-7/8
5-7/16	19-3/4	15-1/4	24-1/2	9-1/2	18-1/4 - 20-1/4	5	1-1/8	2-1/4	3-3/4	2-3/4	17-1/8	17-1/8
6	21-1/4	16-1/4	26	10-1/2	19-5/8 - 21-7/8	5-1/2	1-1/4	2-1/2	4	3	17-5/8	18-1/2
7	24-1/2	18-3/4	29-3/4	12-1/2	22-5/8 - 25-3/8	6-1/2	1-1/2	3	5-1/8	3-1/2	19-7/16	21
8	27-3/4	21	34	14-1/2	25-5/8 - 28-7/8	7-1/2	1-3/4	3-1/2	5-7/8	4	21-5/16	23-1/2

Shaft size	K STL and SSL	L STL and SSL	M STL and SSL	N STL	N1 SSL	P STL and SSL	Q STL and SSL	R Pipe PL-XC	R Pipe WC ★ Rep't	T STL	T SSL	U STL and SSL	U1 STL	U2 SSL
3-15/16	11-15/16	8	5-3/4	5-15/16	2-5/8	10-1/8	1-1/4	1	1/2	2-1/8	2-1/8	2-11/16	3/4	3/4
4-7/16	13-7/8	9	6-1/4	6-3/8	3-3/8	11-1/2	1-3/8	1	1/2	3	2	2-13/16	3/4	1
4-15/16	15-1/16	10	7	7-1/16	3-3/4	12-1/2	1-5/16	1-1/4	1/2	2-7/8	2	3-5/16	1	1-1/4
5-7/16	15-15/16	11	7-1/2	7-5/8	4-3/8	13-3/4	1-9/16	1-1/4	1/2	3-3/8	2-1/2	3	1	1-1/4
6	18	12	8-1/4	8-1/4	4-1/2	14-3/4	1-3/4	1-1/4	3/4	3-7/8	2-3/4	3-1/8	1	1-1/4
7	20-1/4	14	9-1/2	9-9/16	5	17	2	1-1/4	3/4	5	3	3-3/4	1-1/4	1-1/4
8	22-1/2	16	10-3/4	11	5-3/4	19	2	1-1/4	3/4	5-1/4	4	4-9/16	1-1/4	1-1/4

Shaft size	V STL and SSL	W STL and SSL	X STL and SSL	Y PL-XC	Y WC ★ Rep't	Y1 PL-XC	Y1 WC ★ Rep't	Z STL and SSL	A1 STL and SSL	B1 STL and SSL
3-15/16	3	5	8-9/16	1-1/4	1	1-1/4	1	2-1/8	3/4	7-1/16
4-7/16	3-1/2	5-5/8	9-3/16	1-1/4	1	1-1/4	1	3	3/4	7-5/8
4-15/16	3-1/2	6-1/8	10	1-1/2	1	1-3/4	1	2-7/8	3/4	8
5-7/16	3-1/2	6-3/4	10-3/8	1-1/2	1	1-3/4	1	3-3/8	3/4	8-3/4
6	4	7-1/4	11-3/16	1-3/4	1-1/4	2	1-1/4	3-7/8	1	9-7/8
7	4-1/2	8-3/8	12-15/16	1-3/4	1-1/4	2	1-1/4	5	1	10-7/8
8	5	9-5/8	14-13/16	1-3/4	1-1/4	2	1-1/4	5-1/4	1-1/4	12

One required per pillow block end, unless end cap is used on outboard end of expansion bearing.

> One required per pillow block.

* 220 volt heaters available. See Page B26-24.

** 2-1/4 inches on STL; 2 inches on SSL.

★ If a WC liner is in place, the entire pillow block must be replaced with a PL-XC pillow block.

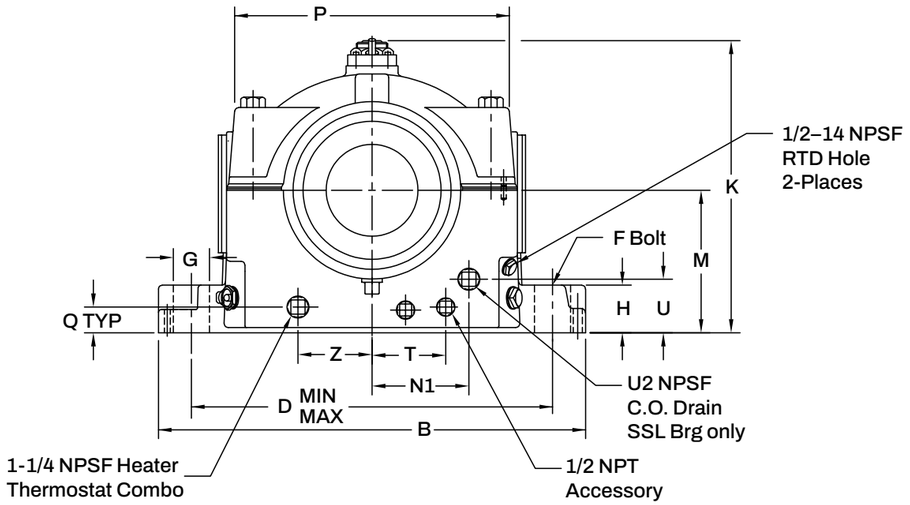
⊗⊗ Two required per 3-15/16 through 4-15/16 sizes; three for 5-7/16 and larger.

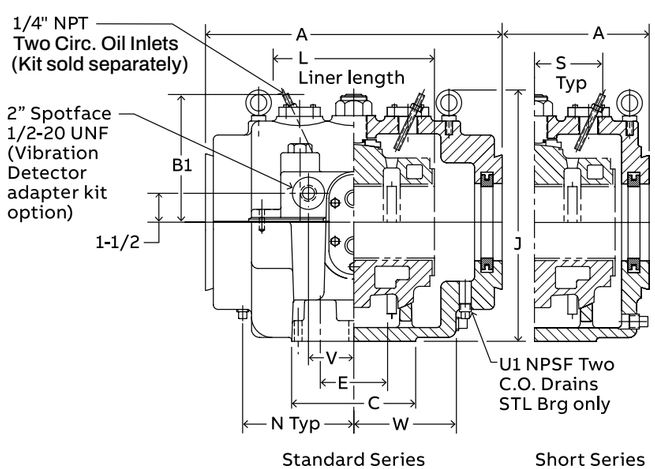
All sizes are pre-machined for accessories: thermocouples, circulating oil, vibration detector, heater and thermostat, auxiliary seal kits, end cap, and isolators.

Reference Guide
Type E Family (Tapered)
Specialty Tapered
Safety Mount Family (Spherical)
S-2000 (Spherical)
Unified SAF (Spherical)
Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

Sleevoil R-series pillow block – inch

9 through 14 Plain - standard and short series





Shaft size	Plain expansion pillow blocks				Split thrust collars	
	STL (Standard series)		SSL (Short series expansion only)		2 collars required to make a non-expansion STL pillow block	
	Part number	Weight (lb)	Part number	Weight (lb)	Part number	Weight (lb)
9	132766	1235	132924	1168	133959	54
10	132767	1240	132925	1105	133960	52
12	132768	2000	132926	1785	133961	68
14	431399	3400	430561	3000	431389	75

Shaft size	Auxiliary seal kits ##		Housing end cap kits		Heater / Thermostat * 120 Volt		Circulating oil inlet kits >		Neoprene end closure##		Replacement plain liner assemblies	
	Part number	Weight (lb)	Part number	Weight (lb)	Part number	Weight (lb)	Part number	Weight (lb)	Part number	Weight (lb)	Part number	Weight (lb)
9	132814	23.1	132564	15.9	434727	3.0	430155	2.0	133996	1.5	133550	327
10	132816	24.2	132565	16.4	434727	3.0	430155	2.0	133995	1.6	133669	450
12	132819	40.0	132566	25.0	434729	4.0	430155	2.0	133997	1.9	133392	650
14	132822	36.0	132567	25.0	434729	4.0	430155	2.0	—	—	430831	1200

Shaft size	A		B	C	D (Min-Max)	E	F-bolt	G	H		J	
	STL	SSL	STL and SSL	STL and SSL	STL and SSL	STL and SSL	STL and SSL	STL and SSL	STL	SSL	STL	SSL
9	27-3/4	21	34	14-1/2	25-5/8 - 28-7/8	7-1/2	1-3/4	3-1/2	5-7/8	4	22-3/8	23-1/2
10	27-3/4	21	34	14-1/2	25-5/8 - 28-7/8	7-1/2	1-3/4	3-1/2	5-7/8	4	22-3/8	23-1/2
12	30	23-1/4	40	17	31-1/4 - 34-3/4	9	2	4	6-3/4	6-3/4	29-5/16	29-5/16
14	34	26-1/4	46-1/8	18	36-1/2 - 40-1/2	10	2	4	7	—	35-1/8	35-1/8

Shaft size	K	L	M	N	N1	P	S	T		U	U1	U2	V	Weight (lb)	
	STL and SSL	STL and SSL	STL and SSL	STL	SSL	STL and SSL	STL and SSL	STL	SSL	SSL	STL	SSL	STL and SSL	STL	SSL
9	22-1/2	16	10-3/4	11	5-1/2	19	3	5-1/4	4	3-3/8	1-1/4	1-1/4	5	1235	1168
10	22-1/2	16	10-3/4	11	5-1/2	19	3	5-1/4	4	3-7/8	1-1/4	1-1/4	5	1240	1105
12	28-1/4	18	13-1/2	12-3/8	7-3/4	23-3/4	3-1/2	7	7	5-3/16	1-1/2	1-1/2	7	2000	1785
14	32-5/8	20	16	—	—	28-3/4	—	—	—	—	—	1-1/2	—	—	—

Shaft size	V1		W	Z	B1
	STL	SSL	STL and SSL	STL and SSL	STL
9	1-1/2	1-1/2	9-5/8	5-1/4	12
10	1-1/2	1-1/2	9-5/8	5-1/4	12
12	2	2	11	7	14-1/2.
14	—	—	12-1/16	—	—

One required per pillow block end.

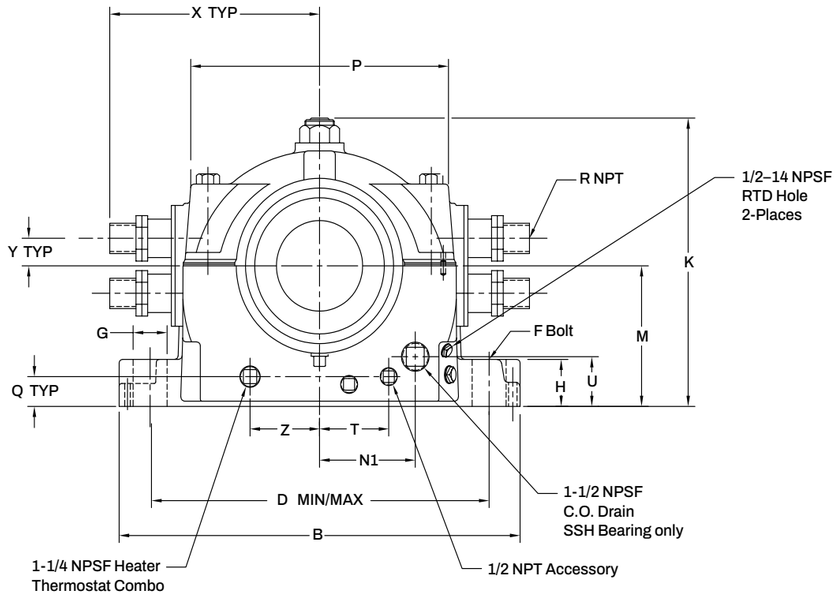
> One required per pillow block.

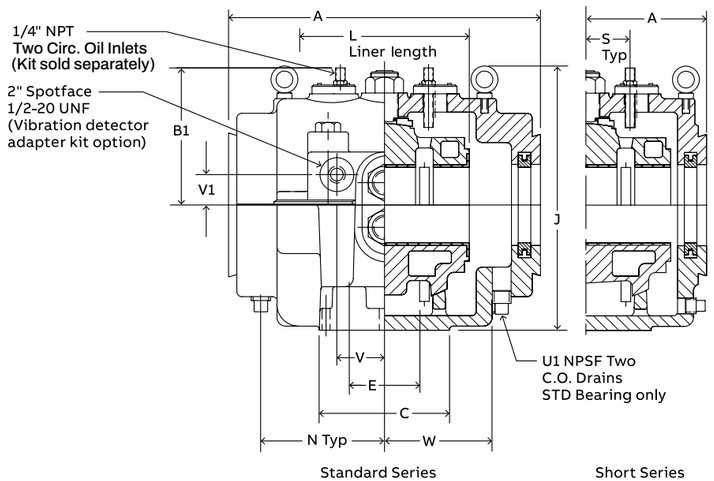
* 220 volt heaters available. See page B26-24.

All housings are pre-machined for accessories; thermocouples, circulating oil vibration detector, heater and thermostat.

Sleevoil R-series pillow block – inch

9 through 12 Externally cooled (XC) - standard and short series





Sleevoil R-series pillow block – inch
9 through 12 Externally cooled (XC) - standard and short series

Shaft size	Expansion pillow blocks XC (Externally cooled)				2 collars required to make a non-expansion STL pillow block	
	STL-XC (Standard Series)		SSL-XC (Short series expansion only)		XC split thrust collars	
	Part number	Weight (lb)	Part number	Weight (lb)	Part number	Weight (lb)
9	132538 ⊗	1600	133565 ⊗	1500	133303	57
10	132539 ⊗	2000	133566 ⊗	1750	133304	74
12	132559 x	3300	—	—	133305	—

Shaft size	Auxiliary seal kits ##		Housing end cap kits		Heater / thermostat * XC 120 volt		Circulating oil inlet kits >		Neoprene end closure		Liner assemblies XC	
	Part number	Weight (lb)	Part number	Weight (lb)	Part number	Weight (lb)	Part number	Weight (lb)	Part number	Weight (lb)	Part number	Weight (lb)
9	132814	23.1	132564	15.9	434729	4.0	430155	2	133996	1.5	132591	300
10	132816	24.2	132565	16.4	434729	4.0	430155	2	133995	1.6	132594	400
12	132819	40.0	132566	25.0	434729	—	—	—	133997	1.9	132597	600

Shaft size	A		B		C		D (Min-Max)		E	
	STL	SSL	STL	SSL	STL	SSL	STL	SSL	STL	SSL
9	29	22-1/4	37	37	15-1/2	15-1/2	28-3/8 - 31-5/8	28-3/8 - 31-5/8	8	8
10	30	23-1/4	40	40	17	17	31-1/4 - 34-3/4	31-1/4 - 34-3/4	9	9
12	34	—	46	—	18	—	36-5/8 - 40-3/8	—	10	—

Shaft size	F-bolt		G		H		J		K		L	M
	STL	SSL	STL	SSL	STL	SSL	STL	SSL	STL	SSL	XC	STL and SSL
9	1-3/4	1-3/4	3-1/2	3-1/2	6	6	26-13/16	26-3/4	25-1/2	25-1/2	17	12
10	2	2	4	4	6-3/4	6-3/4	29-5/16	29-1/4	28-1/4	28-1/4	18	13-1/2
12	2	—	4-1/8	—	7	7	34-3/4	29-5/16	33-1/16	—	20	16

Shaft size	N	N1	P		Q	R Pipe	S	T	U	U1	V	V1
	STL	SSL	STL	SSL	STL and SSL	XC	STL and SSL	STL and SSL	SSL	STL	STL and SSL	STL and SSL
9	11-7/8	5-3/4	21-3/4	21-3/4	2-1/2	1-1/4	3-3/8	6-3/8	5-1/8	1-1/2	5	1-1/2
10	12-3/8	5-1/2	23-3/4	23-3/4	3	1-1/2	3-1/2	7	6-1/8	1-1/2	7	2
12	—	—	28-3/4	—	—	2	—	—	—	—	—	—

Shaft size	W		X	Y	Z	B1	
	STL	SSL	XC	XC	STL and SSL	STL	SSL
9	10-5/8	10-5/8	16-1/4	2-1/4	6-3/8	13-5/8	13-5/8
10	11	11	17-1/2	2-5/8	7	14-1/2	14-1/2
12	12-1/16	—	20-1/4	—	—	—	—

> One required per pillow block.

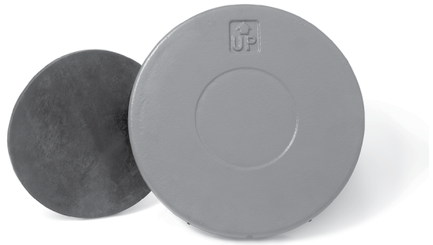
⊗ All housings are pre-machined for accessories; thermocouples, circulating oil vibration detector, heater and thermostat.

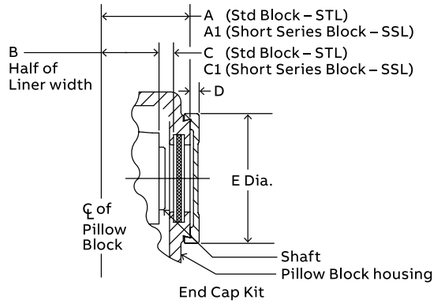
x Assembled-to-order, not "L" version.

* 220 volt heaters available. See page B26-24.

Accessories

Sleevoil end cap kits – inch





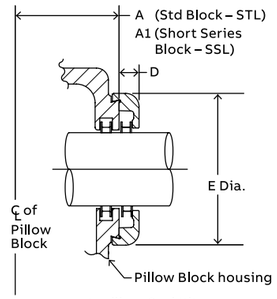
R-series bore size	Pillow block style	End cap kits				A STL	A1 SSL	B #	C # STL	C1 # SSL
		Part number	Weight (lb)	D	E					
3-7/16	Plain/water cooled STL and SSL	132542	5.3	1/2	7-1/8	6-1/2	4-7/8	3-1/2	2-3/32	15/32
3-15/16	PL-XC, STL and SSL	432190	6.1	1/2	8	7-1/2	5-1/2	4	2-5/8	5/8
4-7/16		432193	6.8	1/2	8-3/4	8-1/4	6-1/4	4-1/2	2-23/32	23/32
4-15/16		432196	7.3	1/2	9-1/8	9-1/8	6-7/8	5	3- 3/32	27/32
5-7/16		132546	11.6	1/2	10-1/2	9-7/8	7-5/8	5-1/2	3-3/32	27/32
6		132547	10.6	1/2	11-1/2	10-5/8	8-1/8	6	3-11/32	27/32
7		132548	13.5	1/2	12-9/16	12-1/4	9-3/8	7	3-29/32	1-1/32
8		132549	15.5	1/2	14-1/2	13-7/8	10-1/2	8	4-17/32	1- 5/32
9	STL Plain	132564	15.9	1/2	14-1/2	13-7/8	—	8	4-17/32	—
	XC					14-1/2	—	8-1/2	4-21/32	—
	SSL Plain					—	10-1/2	8	—	1-5/32
	SSL XC					—	11-1/8	8-1/2	—	1-9/32
10	STL Plain	132565	16.4	1/2	14-1/2	13-7/8	—	8	4-17/32	—
	XC					15	—	9	4-21/32	—
	SSL Plain					—	10-1/2	8	—	1-5/32
	SSL XC					—	11-5/8	9	—	1-9/32
12	STL Plain	132566	26	1/2	18-3/4	15	—	9	4-21/32	—
14	STD Plain	132567	26.5	1/2	18-3/4	17	—	10	5-21/32	—

RTL-series bore size	Pillow block style *	End cap kits				A	B #	C #
		Part number	Weight (lb)	D	E			
2-15/16	RTL Spherical (Manufactured 2014 and later)	435217	5.3	1/2	7-1/8	5	3-3/8	27/32
3-7/16		435217	5.3	1/2	7-1/8	5	3-3/8	27/32
3-15/16		435218	6.1	1/2	8	5-3/8	3-5/8	29/32
3-7/16	RTL (pre-2014)	132542	5.3	1/2	7-1/8	5	3-3/8	27/32
3-15/16		432190	6.1	1/2	8	5-3/8	3-5/8	29/32
4-7/16	RTL (all)	435336	6.8	1/2	8-3/4	5-7/8	4	1-1/32
4-15/16		435337	7.3	1/2	9-1/8	6-3/8	4-7/16	1-3/32
5-7/16		435338	11.6	1/2	10-1/2	7	5	1-5/32
6		435339	10.6	1/2	11-1/2	8	5-7/16	1-11/32
7		435340	13.5	1/2	12-9/16	9	6-1/4	1-17/32
8		435341	15.5	1/2	14-1/2	9-7/8	7-1/16	1-19/32
9		435342	15.9	1/2	14-1/2	11-3/8	8-1/8	2-1/32
10		435343	16.4	1/2	14-1/2	12-1/4	8-7/8	2-1/32
12		435344	26	1/2	18-3/4	—	—	—

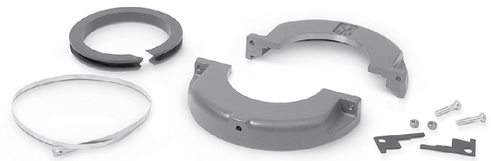
B+C (OR B+C1) = max. shaft penetration from center line of pillow block

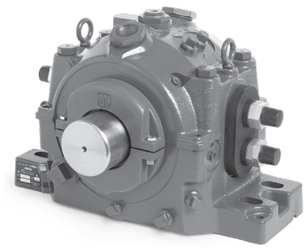
* To determine if you have an RTL Spherical housing or not, see details in the Features and benefits section

Sleevoil auxiliary seal kits – inch



Auxiliary Seal Kit





R-series bore size	Pillow block	Auxiliary seal kits				A STL	A1 SSL
	Style	Part number	Weight (lb)	D	E		
3-7/16	Plain/water cooled STL and SSL	132811	4.9	15/16	7-1/8	6-1/2	4-7/8
3-15/16	PL-XC, STL and SSL	432181	6.4	15/16	8	7-1/2	5-1/2
4-7/16		432184	7.0	1	8-3/4	8-1/4	6-1/4
4-15/16		432187	7.5	1	9-1/8	9-1/8	6-7/8
5-7/16		133932	12.4	1-5/16	10-1/2	9-7/8	7-5/8
6		133933	14.8	1-5/16	11-1/2	10-5/8	8-1/8
7		133937	19.0	1-7/16	12-9/16	12-1/4	9-3/8
8		133938	24.9	1-7/16	14-1/2	13-7/8	10-1/2
9	STL Plain	132814	23.1	1-5/16	14-1/2	13-7/8	—
	XC					14-1/2	—
	SSL Plain				—	—	10-1/2
	SSL XC					11-1/8	8-1/2
10	STL Plain	132816	22	1-5/16	14-1/2	13-7/8	—
	XC					15	—
	SSL Plain					—	10-1/2
	SSL XC					—	11-5/8
12	STL Plain	132819	32	1-5/16	18-3/4	15	—
14	STD Plain	132822	30	1-5/16	18-3/4	17	—

RTL-series bore size	Pillow block	Auxiliary seal kits				A
	Style	Part number	Weight (lb)	D	E	
2-15/16	RTL	132823	4.9	15/16	7-1/8	5
3-7/16		132811				
3-15/16		432181	6.4	15/16	8	5-3/8
4-7/16		432184	7.0	1	3-3/4	5-7/8
4-15/16		432187	7.5	1	9-1/8	6-3/8
5-7/16		133932	12.4	1-5/16	10-1/2	7
6		133933	14.8	1-5/16	11-1/2	8
7		133937	19.0	1-7/16	12-9/16	9
8		133938	24.9	1-7/16	14-1/2	9-7/8
9		132814	23.1	1-5/16	14-1/2	13-7/8
10		132816	—	—	—	12-1/4
12		132819	—	—	—	14-1/2

Sleevoil bearing isolator - inch

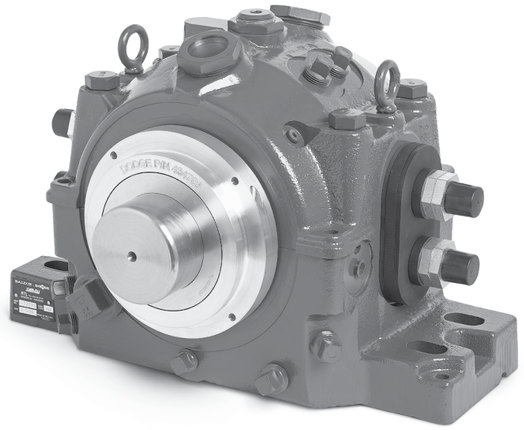
R and RTL series

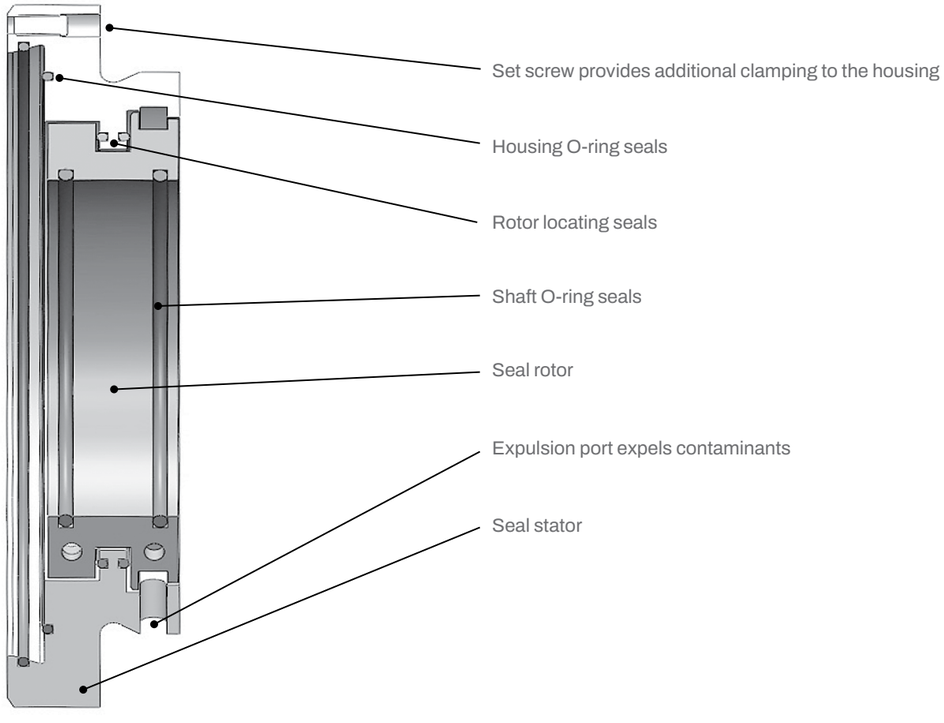
The Sleevoil bearing isolator is a premium fully split, multi-labyrinth contact sealing system. The stator forms a complex labyrinth with the rotor to isolate the bearing from contamination keeps the lubricating oil clean and limits direct penetration of liquid or particulate.

The Sleevoil isolator is IP56 rated and all seal components including rotor stator and O-rings are fully split for ease of assembly and disassembly.

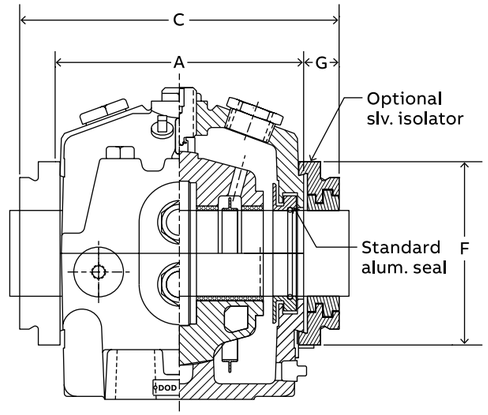
O-rings in the bore of the rotor provide sealing along the shaft and allow for axial shaft expansion as needed.

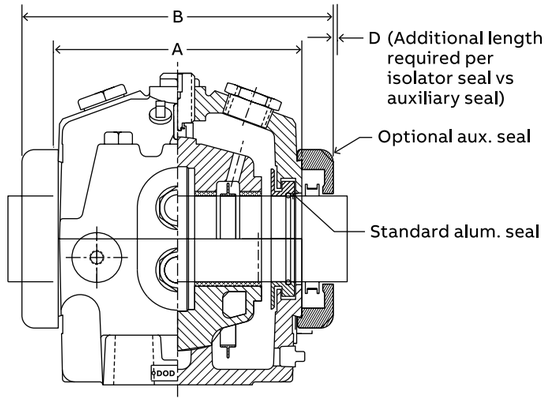
The isolator seal is designed to retrofit an existing Sleevoil housing with dovetail grooves on either end.





Sleevoil bearing isolator – inch





RTL-series housing length through bore with seal offerings

Size	Part number	A	B	C	D	E	F	G
2-15/16*	435230	10	11-7/8	12-5/8	3/8	3/4	7-3/8	1-5/16
3-7/16*	434706	10	11-7/8	12-5/8	3/8	3/4	7-3/8	1-5/16
3-15/16	434707	10-3/4	12-5/8	13-3/8	3/8	3/4	8-1/4	1-5/16
4-7/16	434708	11-3/4	13-3/4	14-3/8	5/16	5/8	9	1-5/16
4-15/16	434709	12-3/4	14-3/4	15-3/8	5/16	5/8	9-1/2	1-5/16
5-7/16	434710	14	16-5/8	16-5/8	0	0	10-3/4	1-5/16
6	434711	16	18-5/8	18-7/8	1/8	1/4	11-5/8	1-7/16
7	434712	18	20-7/8	20-7/8	0	0	12-3/4	1-7/16
8	434713	19-3/4	22-5/8	22-5/8	0	0	14-3/4	1-7/16
9	434714	22-3/4	25-3/8	25-5/8	1/8	1/4	14-3/4	1-7/16
10	434715	24-1/2	27-1/8	27-3/8	1/8	1/4	14-3/4	1-7/16
12	434716	29	31-5/8	31-7/8	1/8	1/4	18-1/2	1-7/16

Notes:
A: Length through housing bore with standard aluminum seal.
B: Length through housing bore with optional auxiliary seals.
C: Length through housing bore with optional isolator seals.
D: Additional length required per isolator seal vs auxiliary seal.
E: Additional shaft length required.
F: Isolator outside diameter.
G: Isolator width from housing end face.
* Isolator can also be used with R-series except 2-15/16 and 3-7/16.

Sleevoil RTL-series replacement part kits – inch

RTL-series seal kit

Shaft size	Part number	Description
2-15/16	435000	2-15/16 SLV RTL seal kit
3-7/16 ♦	435081	3-7/16 SLV RTL seal kit for post-2014 housing
3-15/16 ♦	435082	3-15/16 SLV RTL seal kit for post-2014 housing
4-7/16	435003	4-7/16 SLV RTL seal kit
4-15/16	435004	4-15/16 SLV RTL seal kit
5-7/16	435005	5-7/16 SLV RTL seal kit
6	435006	6 SLV RTL seal kit
7	435007	7 SLV RTL seal kit
8	435008	8 SLV RTL seal kit
9	435009	9 SLV RTL seal kit
10	435010	10 SLV RTL seal kit
12	435011	12 SLV RTL seal kit

Each kit contains:
(2) Split aluminum clamp seals, O-rings and gasket eliminator.
♦ For pre-2014 housings, use part number 435001 for shaft size 3-7/16 inch and part number 435002 for 3-15/16 inch. To determine if you have a housing manufactured post 2014 (RTL Spherical housing) or not, see details in the Features and benefits section.

RTL-series grommet kit

Shaft size	Part number	Description
2-15/16	435027	2-15/16 SLV RTL grommet kit
3-7/16	435027	3-7/16 SLV RTL grommet kit
3-15/16	435028	3-15/16 SLV RTL grommet kit
4-7/16	435028	4-7/16 SLV RTL grommet kit
4-15/16	435029	4-15/16 SLV RTL grommet kit
5-7/16	435029	5-7/16 SLV RTL grommet kit
6	435029	6 SLV RTL grommet kit
7	435029	7 SLV RTL grommet kit
8	435030	8 SLV RTL grommet kit
9	435030	9 SLV RTL grommet kit
10	435031	10 SLV RTL grommet kit
12	435032	12 SLV RTL grommet kit

Each kit contains:
(2) grommets, (4) grommet plates, (4) lock tubes,
(8) lock nuts, (4) coolant pipes, and gasket eliminator.

RTL-series plunger screw kit

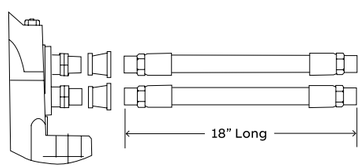
Shaft size	Part number	Description
2-15/16	435012	2-15/16 SLV RTL plunger screw kit
3-7/16	435012	3-7/16 SLV RTL plunger screw kit
3-15/16	435083	3-15/16 SLV RTL plunger screw kit
4-7/16	435013	4-7/16 SLV RTL plunger screw kit
4-15/16	435014	4-15/16 SLV RTL plunger screw kit
5-7/16	435015	5-7/16 SLV RTL plunger screw kit
6	435015	6 SLV RTL plunger screw kit
7	435016	7 SLV RTL plunger Screw kit
8	435017	8 SLV RTL plunger screw kit
9	435018	9 SLV RTL plunger screw kit
10	435019	10 SLV RTL plunger screw kit
12	435019	12 SLV RTL plunger screw kit

Each kit contains plunger screw and plunger screw lock nut.

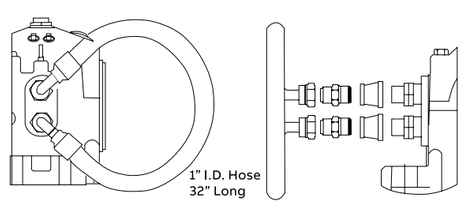
RTL-series coolant hose kit

Shaft size	Part number	Description
2-15/16	434770	3/4 Sleevoil coolant hose kit
3-7/16	434770	3/4 Sleevoil coolant hose kit
3-15/16	434771	1 Sleevoil coolant hose kit
4-7/16	434771	1 Sleevoil coolant hose kit
4-15/16	434772	1-1/4 Sleevoil coolant hose kit
5-7/16	434772	1-1/4 Sleevoil coolant hose kit
6	434772	1-1/4 Sleevoil coolant hose kit
7	434772	1-1/4 Sleevoil coolant hose kit
8	434773	2 Sleevoil coolant hose kit
9	434773	2 Sleevoil coolant hose kit
10	434774	2-1/2 Sleevoil coolant hose kit
12	434775	3 Sleevoil coolant hose kit

Each coolant hose kit contains:
(2) straight (inlet/outlet) hoses, (1) return hose and the required couplers, adapters, and fittings.



RTL-series grommet kit
*** Coolant pipes not shown**



Coolant hose kit illustrated here

Sleevoil R-series replacement part kits – inch

R-series dust seal kits**

Shaft size	Part number	Description
1-7/16	389820	1-7/16 Dust seal kit
1-11/16	389821	1-11/16 Dust seal kit
1-15/16	389822	1-15/16 Dust seal kit
2-3/16	389823	2-3/16 Dust seal kit
2-7/16	389824	2-7/16 Dust seal kit
2-11/16	389825	2-11/16 Dust seal kit
2-15/16	389826	2-15/16 R series dust seal kit
	389839	2-15/16 RTL series dust seal kit for auxiliary seals
3-7/16	389827	3-7/16 Dust seal kit
3-15/16	389828	3-15/16 Dust seal kit
4-7/16	389829	4-7/16 Dust seal kit
4-15/16	389830	4-15/16 Dust seal kit
5-7/16	389831	5-7/16 Dust seal kit
6	389832	6 Dust seal kit
7	389833	7 Dust seal kit
8	389834	8 Dust seal kit
9	389835	9 Dust seal kit
10 *	389836	10 Dust seal kit
12 *	389837	12 Dust seal kit

Each kit contains:
(2) dust seals, (2) seal retainers and gasket eliminator
* kit contains (4) seal retainers.
** R series dust seal kits can be used to replace the standard internal seal in the R series bearing or any auxiliary seal kit accessory.

R-series coolant hose kit

Shaft size	Part number	Description
1-11/16	133344	1/4 Sleevoil flexible water hose kit
1-15/16	133344	1/4 Sleevoil flexible water hose kit
2-3/16	133344	1/4 Sleevoil flexible water hose kit
2-7/16	133344	1/4 Sleevoil flexible water hose kit
2-11/16	133344	1/4 Sleevoil flexible water hose kit
2-15/16	133344	1/4 Sleevoil flexible water hose kit
3-7/16	133344	1/4 Sleevoil flexible water hose kit
3-15/16 XC	434771	1 Sleevoil coolant hose kit
4-7/16 XC	434771	1 Sleevoil coolant hose kit
4-15/16 XC	434772	1-1/4 Sleevoil coolant hose kit
5-7/16 XC	434772	1-1/4 Sleevoil coolant hose kit
6 XC	434772	1-1/4 Sleevoil coolant hose kit
7 XC	434772	1-1/4 Sleevoil coolant hose kit
8 XC	434772	1-1/4 Sleevoil coolant hose kit
9 XC	434772	1-1/4 Sleevoil coolant hose kit
10 XC	434797	1-1/2 Sleevoil coolant hose kit
12 XC	434773	2 Sleevoil coolant hose kit

Each coolant hose kit contains (2) straight (inlet/outlet) hoses, (1) return hose and the required couplers, adapters and fittings.

R-series plunger screw kit

Shaft size	Part number	Description
3-15/16	435012	3-15/16 PL-XC plunger screw kit
4-7/16	435021	4-7/16 PL-XC plunger screw kit
4-15/16	435021	4-15/16 PL-XC plunger screw kit
5-7/16	435013	5-7/16 PL-XC plunger screw kit
6	435015	6 PL-XC plunger screw kit
7	435016	7 PL-XC plunger screw kit
8	435016	8 PL-XC plunger screw kit
9 XC	435018	9 PL-XC plunger screw kit
10 XC	435018	10 PL-XC plunger screw kit
12 XC	435019	12 PL-XC plunger screw kit
9 PL	435016	9 PL-XC plunger screw kit
10 PL	435016	10 PL-XC plunger screw kit
12 PL	435018	12 PL-XC plunger screw kit

Each kit contains plunger screw and plunger screw lock nut.

R-series grommet kit

Shaft size	Part number	Description
3-15/16	435033	3-15/16 PL-XC grommet kit
4-7/16	435033	4-7/16 PL-XC grommet kit
4-15/16	435034	4-15/16 PL-XC grommet kit
5-7/16	435034	5-7/16 PL-XC grommet kit
6	435035	6 PL-XC grommet kit
7	435035	7 PL-XC grommet kit
8	435036	8 PL-XC grommet kit
9 PL	435037	9 PLAIN grommet kit
9 XC	435038	9 XC Pipe grommet kit
10 PL	435037	10 PLAIN grommet kit
10 XC	435039	10 XC Pipe grommet kit
12 XC	435040	12 XC Pipe grommet kit

Each kit contains: (2) Rubber grommets, (2) Grommet plates,
(8) Screws, (4) Coolant pipes – in PL-XC and XC grommet kits only and gasket eliminator.

Dust seal kit components

PL-XC grommets and grommet plates
(screws, coolant pipes, and gasket eliminator not shown)

Sleevoil heater and thermostat – inch

Shaft size	Part number	RTL combination heater/thermostat - 110V
2-15/16	434721	175 W 110V Immersion heater/T-stat combo
3-7/16	434721	175 W 110V Immersion heater/T-stat combo
3-15/16	434725	260 W 110 V Immersion heater/T-stat combo
4-7/16	434725	260 W 110 V Immersion heater/T-stat combo
4-15/16	434727	480 W 110 V Immersion heater/T-stat combo
5-7/16	434727	480 W 110 V Immersion heater/T-stat combo
6	434727	480 W 110 V Immersion heater/T-stat combo
7	434729	740 W 110 V Immersion heater/T-stat combo
8	434729	740 W 110 V Immersion heater/ T-stat combo
9	434729	740 W 110 V Immersion heater/T-stat combo
10	434729	740 W 110 V Immersion heater/T-stat combo
12	434735	1600 W 110 V Immersion heater/ T-stat combo

Single unit - 110V combination heater and thermostat.

Shaft size	Part number	RTL combination heater/thermostat - 220V
2-15/16	434722	175W 220V Immersion heater/T-stat combo
3-7/16	434722	175 W 220V Immersion heater/T-stat combo
3-15/16	434726	260 W 220 V Immersion heater/T-stat combo
4-7/16	434726	260 W 220 V Immersion heater/T-stat combo
4-15/16	434728	480 W 220 V Immersion heater/T-stat combo
5-7/16	434728	480 W 220 V Immersion heater/T-stat combo
6	434728	480 W 220 V Immersion heater/T-stat combo
7	434730	740 W 220 V Immersion heater/T-stat combo
8	434730	740 W 220 V Immersion heater/T-stat combo
9	434730	740 W 220 V Immersion heater/T-stat combo
10	434730	740 W 220 V Immersion heater/T-stat combo
12	434736	1600 W 220 V Immersion heater/T-stat combo

Single unit - 220V combination heater and thermostat.

Shaft size	Part number	R-series combination heater/thermostat - 110V
2-7/16 *	132834	50 W 110V Immersion heater
2-11/16 *	132384	50 W 110V Immersion heater
2-15/16 *	132384	50 W 110V Immersion heater
3-7/16	434719	100 W 110V Immersion heater/T-stat combo
3-15/16	434721	175 W 110 V Immersion heater/T-stat combo
4-7/16	434721	175 W 110 V Immersion heater/T-stat combo
4-15/16	434721	175 W 110 V Immersion heater/T-stat combo
5-7/16	434721	175 W 110 V Immersion heater/T-stat combo
6	434725	260 W 110 V Immersion heater/T-stat combo
7	434725	260 W 110 V Immersion heater/T-stat combo
8	434727	480 W 110 V Immersion heater/T-stat combo
9 XC	434729	740 W 110 V Immersion heater/T-stat combo
9 PL	434727	480 W 110 V Immersion heater/T-stat combo
10 XC	434729	740 W 110 V Immersion heater/T-stat combo
10 PL	434727	480 W 110 V Immersion heater/T-stat combo
12 XC	434729	740 W 110 V Immersion heater/T-stat combo
12 PL	434729	740 W 110 V Immersion heater/T-stat combo
14 PL	434729	740 W 110 V Immersion heater/T-stat combo

Single unit - 110V combination heater and thermostat, except smaller than 3-7/16.
* Requires listed heater part number and thermostat part number 133116.
Heater/thermostat combo includes LED current indicating light and NEMA enclosure 2-7/16 inches, 2-11/16 inches and 2-15/16 inches heater (132834 or 434835) to be used with thermostat part number 133116. Combination heater/thermostat is not available for small bore Sleevoil bearings.

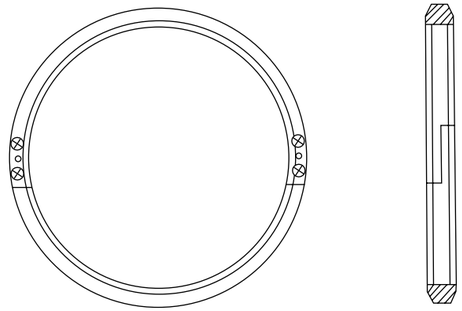
Shaft size	Part number	R-series combination heater/thermostat - 220V
2-7/16	434835 *	50 W 220V Immersion heater
2-11/16	434835 *	50 W 220V Immersion heater
2-15/16	434835 *	50 W 220V Immersion heater
3-7/16	434720	100 W 220V Immersion heater/T-stat combo
3-15/16	434722	175 W 220 V Immersion heater/T-stat combo
4-7/16	434722	175 W 220 V Immersion heater/T-stat combo
4-15/16	434722	175 W 220 V Immersion heater/T-stat combo
5-7/16	434722	175 W 220 V Immersion heater/T-stat combo
6	434726	260 W 220 V Immersion heater/T-stat combo
7	434726	260 W 220 V Immersion heater/T-stat combo
8	434728	480 W 220 V Immersion heater/T-stat combo
9 XC	434730	740 W 220 V Immersion heater/T-stat combo
9 PL	434728	480 W 220 V Immersion heater/T-stat combo
10 XC	434730	740 W 220 V Immersion heater/T-stat combo
10 PL	434728	480 W 220 V Immersion heater/T-stat combo
12 XC	434730	740 W 220 V Immersion heater/T-stat combo
12 PL	434730	740 W 220 V Immersion heater/T-stat combo
14 PL	434730	740 W 220 V Immersion heater/T-stat combo

Single unit - 220V combination heater and thermostat, except smaller than 3-7/16.
* Requires listed heater part number and thermostat part number 133116

Sleevoil trapezoidal oil ring – inch

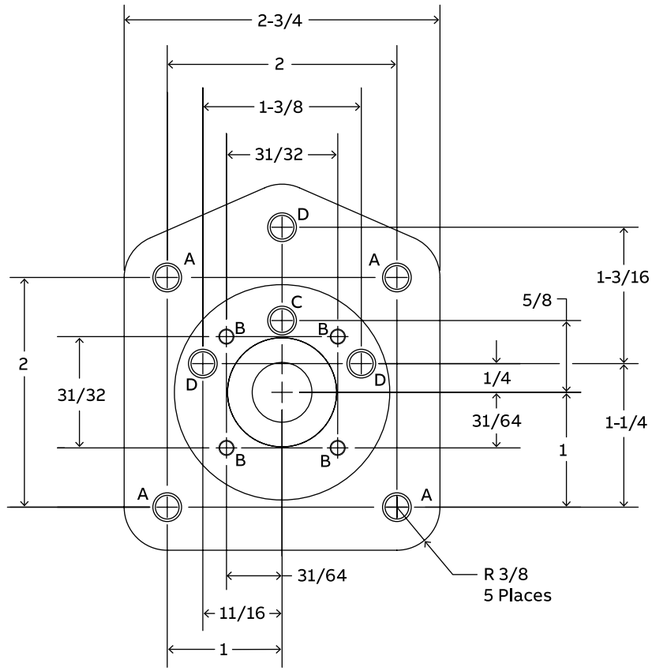
Upgraded trapezoidal oil rings have replaced discontinued "T-section" oil rings:

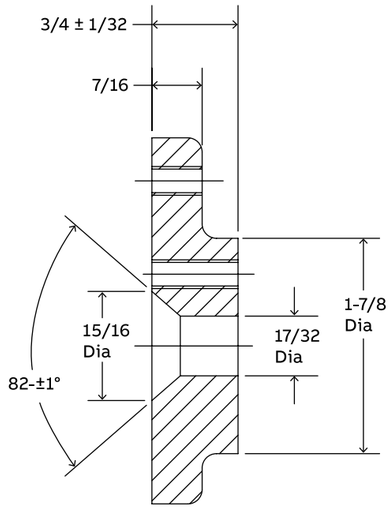
- Lowers operating temperatures
- Designed for existing and new Sleevoil bearings
- Interchangeable with discontinued T-section ring
- Increases oil delivered to the shaft by 3 to 5 times.
- Increases bearing maximum operating speed range
- Increases oil ring life



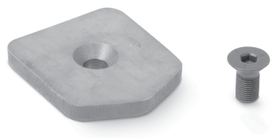
R-series plain	R-series PL-WC, PL-XC, XC	RTL-series	Trapezoidal oil ring part number
1-7/16	—	—	135700
1-11/16	1-11/16	—	135704
1-15/16	1-15/16	—	135708
2-3/16	2-3/16	—	135712
2-7/16	2-7/16	—	135716
2-11/16	2-11/16	—	135720
2-15/16	2-15/16	—	135724
3-7/16	3-7/16	—	135728
—	—	2-15/16	135290
3-15/16	3-15/16	3-7/16	135290
4-7/16	4-7/16	3-15/16	135291
4-15/16	4-15/16	4-7/16	135292
5-7/16	5-7/16	4-15/16	135293
6	6	5-7/16	135294
—	—	6	135295
7	7	—	135136
8	8	7	135296
9, 10	—	8	135297
—	9	—	135137
—	—	9	135298
—	10	—	135138
12	—	—	135732
—	12	10	135299
14	—	—	135736
—	—	12	135135

Sleevoil vibration detector adapter kit – inch





(A) Hole 1/4-20 tap
(B) Hole 6-32 tap
(C) Hole 1/4-28 tap
(D) Hole 1/4-20 tap



Blank vibration pad option part number 433326

Vibration detector adapter kit part number 430153

Sleevoil Oil Level and Filtration System-2 (OLF2)

OLF-2 is a small, compact oil filtering unit that provides clean, filtered oil is supplied to the bore of a Sleevoil bearing—ensuring maximum Sleevoil reliability and performance. One OLF-2 system can deliver oil to two bearings by adding a flow meter kit. Oil inlet connection kits may be required and depend on the bearing size and type listed in the tables below.

Oil level and filtration system

- Two gpm flow rate
- Standard NEMA motor
- Pressure gauge
- Spin on filter
- Return line connection
- Removable tank cover
- Five gallon tank
- Oil Level/temperature gauge
- Mounting bracket
- Filtered breather
- Immersion heater and thermostat option – 1 inch NPT port

Units with heat exchanger are also available. See Dodge Cool Lube-2 system on page B24-121.

Oil level and filtration systems

Description	Part number
Single Phase Motor*, 2.0 gpm pump	077587
Three Phase Motor**, 2.0 gpm pump	077588
Three Phase XP-Motor***, 2.0 gpm pump	077589
Three Phase Motor (575 V) 2.0 gpm pump	077484

*Single Phase Motor 60 Hz, 120 volt.
**Three Phase Motor 50/60 Hz, 230/460 volt.
*** Contact Dodge for full motor classification.

Oil inlet connections

Sleevoil series	Bore sizes (in)	Need circulating oil grommet kit part number
R-series	1-7/16—3-7/16	Not required
	3-15/16	432153
	4-7/16— 4-15/16	430198
	5-7/16—12	430155
RTL-series	2-15/16— 5-7/16	132203
	6—12	132205

R-series oil inlet kit

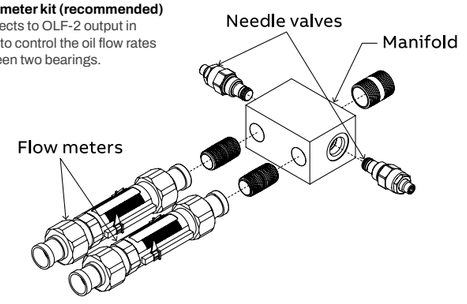
RTL-series oil inlet kit

Optional parts[1]

Description	Part number
Combination heater/thermostat 260 W, 120 V heater	434725
Combination heater/thermostat 260 W, 240 V heater	434726
Flow meter kit (recommended)	079498
Desiccant filter kit (to be installed in series with standard filter)	079754
Replacement oil filter	078202

[1] Not included with OLF2. Order desired part if required.

Flow meter kit (recommended)
Connects to OLF-2 output in order to control the oil flow rates between two bearings.



Sleevoil RTD

Safeguard your Sleevoil bearing and equipment by monitoring the bearing liner temperature in the proper location to prevent downtime. The bearing operating temperature is directly related to proper bearing operation, and monitoring the temperature accurately is vital for protecting your bearing and driven equipment.

RTD Kit

- One RTD kit fits most Sleevoil pillow blocks*
- Designed to be cut to length in the field as needed
- Spring loaded fitting to ensure RTD is in contact with the liner at all times
- Weather proof conduit head with terminal wiring block for protection and quick installation

RTD Specifications:

- 3 Wire
- Platinum sensing element
- 100 Ohms at 32 °F
- Temperature coefficient = 0.00385
- Temperature range: -58 to 400 °F
- 3/4 inch NPT conduit connection and 1/2 inch, 1/4 inch NPT bearing housing connection

Dodge Sleevoil RTD Kit part number for RTL and R-series: Universal part number is - 435147*

* May not fit smaller R-series PL-WC bearings with a shaft size less than 2-11/16 inches, contact Application Engineering for complete fitment details at engineering@dodgeindustrial.com

Notes

Solidlube (plain)

B27-1	**Solidlube (plain)**
B27-2	**Features and benefits**
B27-2	**Specification**
B27-3	**How to order**
B27-3	**Nomenclature**
B27-4	**Selection**
B27-10	**Dimensions**
B27-10	LT pillow block
B27-12	LTB pillow block
B27-14	MM pillow block
B27-15	MM flange
B27-16	LT flange
B27-20	LT narrow-slot take-up
B27-22	LT wide-slot take-up
B27-24	LT top-angle take-up
B27-26	LT insert
B27-28	MM insert
B27-29	LT cylindrical unit
B27-30	LT screw conveyor hanger bearing
B27-31	LT hanger bearing
B27-32	LM800 pillow block
B27-33	LM800 flange
B27-34	Shaft collars

Features and benefits

Solidlube

Designed for the most challenging applications, Solidlube bearings can handle full submersion in water, exposure to corrosive liquids, and high heat. Engineered to work in ovens, heat-treating processes, dampers, and difficult applications across a variety of industries, Solidlube is the solution to keep your operations running smoothly.

Key features

- Self-lubricated for maintenance-free operation
- Durable inner unit is made of cast iron with a corrosion-resistant coating to protect from rust and improve product life
- Statically self-aligning

Ideal for:

- Inaccessible locations
- Corrosive environments
- Applications operating in a vacuum
- High-heat applications for temperatures up to 1,000 °F
- Applications where bearings are subject to dry cycles or where lubrication systems would be too costly
- Submersible applications of some low viscosity liquids
- Slow speeds and limited shaft movement applications

Specification

Specifying Solidlube sleeve bearings

Statically self-aligning, non-galling, solid-film lubricating for temperature extremes.

- 700 series: -40° to 700 °F
- 800 series: -40° to 800 °F
- 1000 series: -200° to -40 °F; 250 °F to 1,000 °F

How to order

Solidlube

There are two ways to specify Dodge bearings—by six-digit part number or by description. Most of the products offered have part numbers with listings shown throughout this catalog. Use of part numbers ensures accurate order processing.

When part numbers are not shown, the product may be specified by description. This method is used when ordering units that include modifications or options. To order by description, use the nomenclature key shown for each product, adding any special instructions to the end of the description for options not covered by the nomenclature.

Special bearing requirements

Depending on the bearing, a wide variety of lubricants, seals, locking devices, finishes, and adjustments are available for a wide range of applications from general purpose to extreme ambient temperatures, high speeds, or high loads.

Special lubricant options usually involve set-up charges, minimum quantities, and price premiums. To order, specify the type of lubricant required at the end of the product name or after the standard part number.

Example:

F4B-XX-207 except with Mobil HTS #2 grease

or

P/N-XXXXXX except with Mobil HTS #2 grease

Other special requirements not listed

For applications requiring modifications not listed, contact Application Engineering for bearings at +1 864 284 5700.

Nomenclature

P2B - LT7 - 108 - SH

Housings

P2B = Pillow block, 2-bolt
P4B = Pillow block, 4-bolt
F2B = Flange, 2-bolt
F4B = Flange, 4-bolt
HNG = Hanger bearing
NSTU = Narrow slot take-up
SCHB = Screw conveyor hanger bearing
WSTU = Wide-slot take-up
TB = Tapped base
FB = Flanged bracket

Style

LT7 = Solidlube LT700 series
LT10 = Solidlube LT1000 series
LTB7 = Solidlube lower backing height on pillow blocks for LT700 series
LTB10 = Solidlube lower backing height on pillow blocks for LT1000 series
LM8 = Solidlube LM800 series
MM7 = Solidlube MM700 series
MM10 = Solidlube MM1000 series

Shaft size

115 = First digit = Number of inches
Second and third digits = Sixteenths of an inch
115 – Indicates 1-15/16

50M = First two digits = Bore in millimeters;
M – Indicates metric dimension

Modifications/features:

SH = Stainless steel housing
(Available with Solidlube LT series only)

Reference Guide
Type E Family (Tapered)
Specialty Tapered
Safety Mount Family (Spherical)
S-2000 (Spherical)
Unified SAF (Spherical)
Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

Selection

Solidlube

Bearing size

Select a bearing from tables for normal loads or loads in limited shaft movement applications having a radial load equal to or greater than the actual load. This simple method is all that is required for the majority of general machine applications using commercial steel shafting and operating in a dry atmosphere. (For more favorable conditions, ratings may be increased somewhat; consult factory). Shaft collars may be used for slight amounts of thrust. Generally the rule of 10 percent of the radial load applies. Dirty environments will reduce bearing life and should be avoided. Losses due to friction can be as high as 30 percent depending on speed, lead, temperature and shaft material.

Shafting

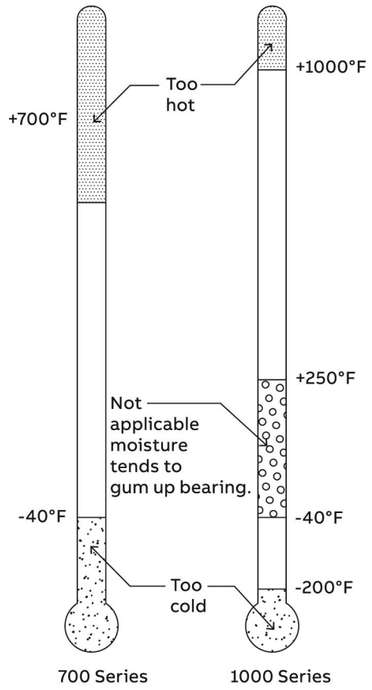
Commercial steel shafting is good in applications where temperatures do not exceed 700 °F. However, for extended bearing life at any temperature, the shaft should be hardened to 35 Rockwell "C" or better. Shaft finish should be 10 to 20 micro-inches. A finish rougher than 20 micro-inches will lessen bearing life. A finish smoother than 10 micro-inches will not allow the optimum lubricant film to develop. Shaft tolerance should be +0.000/-0.002 inches for commercial steel shafting. If using other shaft materials, consult Application Engineering at +1 864 284 5700 for the shaft tolerance and thermal expansion.

When commercial shafting is exposed to a corrosive media, it will oxidize. A rusty shaft will grow in the bearing, thus eliminating clearances. In this case stainless steel shafting may be used and/or provide for regularly scheduled movement of shaft. In elevated temperatures stainless grades such as 17-4, 15-5, or 13-8 are hardenable. Shafts can be spray coated with ceramic or hard chrome for applications up to about 800 °F. Check with your supplier, since these coatings can flake off when the coefficient of thermal expansion of the base material differs greatly from that of the coating.

High grade specialty shafting may be used in excess of 1,000 °F. It may be less expensive to use sleeves of this material on more economical shafting.

Noise or high-pitched squeal

Carbon-graphite bushings can develop a high frequency vibration in resonance with the operating system to cause noise. Dampening or change of resonant frequency of the shaft is required to eliminate noise.



Solidlube operating temperature

Solidlube

Specials

Solidlube bearings or bearings made from alternate bushing materials (e.g., polymers, fibers, bronze, etc.) for unusual operating and load conditions are available on a specially engineered basis by supplying the following:

- Shaft size, material, and speed (rpm)
- Normal load, shock load and frequency
- Direction of load
- Ambient temperature and atmospheric conditions (water, dirt, corrosive, etc.)
- Type of bearing: pillow block, flange bearing, etc.
- Housing material desired
- Quantity

Note: Solidlube bearings are not designed for rotating housing applications.

Solidlube
700, 800, and 1000 series

Solidlube bearing 700 and 1000 Series Radial Load Ratings in pounds (normal loads)

Shaft size (in)	Radial Load Ratings in pounds at various speeds (rpm)											
	Up to 10	25	50	75	100	150	200	250	300	350	400	450
3/4	560	560	560	560	560	380	285	230	190	165	145	125
7/8, 15/16, 1	750	750	750	750	610	405	315	245	205	175	155	130
1-1/8, 1-3/16	1,050	1,050	1,050	908	680	450	340	270	225	190	170	150
1-1/4, 1-3/8, 1-7/16, 1-1/2	1,610	1,610	1,610	1,140	855	570	430	340	280	245	215	190
1-11/16, 1-3/4	1,980	1,980	1,790	1,190	895	595	440	390	295	255	220	200
1-15/16, 2	2,360	2,360	1,860	1,240	930	620	465	370	310	265	235	205
2-3/16	2,870	2,870	2,010	1,340	1,000	670	500	400	335	285	250	225
2-7/16, 2-1/2	3,760	3,760	2,360	1,580	1,180	795	590	475	390	340	295	265
2-15/16, 3	5,970	5,970	3,120	2,070	1,560	1,040	780	625	515	445	390	345
3-7/16, 3-1/2	9,100	8,010	4,000	2,670	2,000	1,340	1,000	800	670	570	500	445
3-15/16, 4	11,800	9,160	4,590	3,060	2,290	1,530	1,150	930	765	665	575	510
4-7/16, 4-1/2	15,200	10,300	5,150	3,440	2,580	1,720	1,290	1,030	860	740	645	—
4-15/16, 5	18,400	11,400	5,710	3,810	2,860	1,910	1,430	1,140	955	815	—	—

Shaft size (in)	500	550	600	700	800	900	1,000	1,100	1,300	1,600	1,900	2,200	2,500
3/4	110	105	96	82	72	64	57	52	44	35	30	26	22
7/8, 15/16, 1	120	110	105	90	80	70	60	54	47	38	32	—	—
1-1/8, 1-3/16	135	125	115	97	85	75	68	62	42	42	—	—	—
1-1/4, 1-3/8, 1-7/16, 1-1/2	170	155	145	120	105	95	86	78	66	—	—	—	—
1-11/16, 1-3/4	180	165	150	130	110	99	89	81	—	—	—	—	—
1-15/16, 2	185	170	155	135	115	105	—	—	—	—	—	—	—
2-3/16	200	180	165	145	125	—	—	—	—	—	—	—	—
2-7/16, 2-1/2	235	215	195	170	—	—	—	—	—	—	—	—	—
2-15/16, 3	345	315	290	—	—	—	—	—	—	—	—	—	—
3-7/16, 3-1/2	400	365	—	—	—	—	—	—	—	—	—	—	—

Note: The above ratings apply to all base loaded pillow blocks, all cylindrical units and flange type bearings (up to 700 °F).
For flange bearings operating at temperatures above 700 °F, cap and side loading of pillow blocks consult Application Engineering.
For operations speeds below heave line, use LT1000 and/or hardened shaft.

Solidlube
700, 800, and 1000 series

Solidlube bearing corrosion (chemical) resistance

Type of chemical	Chemical	Bearing series LM800 700	Bearing series 1000
Acids and acidic solutions	Mineral (non-oxidizing)	★	★
	Mineral (oxidizing)	■	★
	Inorganic Salts (acid forming)	★	★
	Organic (strong)	★	★
	Organic (weak) pH 3-7	★	★
	Organic Salts (acid forming)	★	★
Alkalis (bases and alkaline solutions)	Mineral (non-oxidizing)	★	★
	Mineral (oxidizing)	▲	★
	Inorganic Salts (base forming)	★	★
	Organic (strong)	★	★
	Weak organic bases pH 7-11	★	★
Gases	Acid	★	★
	Alkaline (base)	★	★
	Anhydrous (dew point below -30 °F)	▲	▲
	Cyrogenic (liquefied)	■	▲
	Inert	★	★
	Oxidizing	■	▲
	Reducing	★	★
Salts	Acid salts	▲	▲
	Alkaline sales	▲	▲
	Metals	★	★
	Neutral salts	■	▲
	Neutral salt solutions	★	★
Solvents	Aliphatic	★	★
	Aromatic	★	★
	Chlorinated, fluorinated	★	★
	Oxygenated, sulfides	★	★

★ Good. No known interaction; compatible.
▲ Questionable (depends on conditions).
■ Not recommended.

700 and 1000 series Solidlube bearing radial load rating in pounds (limited shaft movement applications) ▲

Shaft size (in)	Maximum radial load		Maximum thrust
	Base loaded	Cap or side loading	
3/4	1,100	775	56
7/8, 15/16, 1	1,500	795	75
1-1/8, 1-3/16	2,100	820	105
1-1/4, 1-3/8, 1-7/16, 1-1/2	3,200	1,710	161
1-11/16, 1-3/4	4,000	1,905	198
1-15/16, 2	4,700	1,920	236
2-3/16	5,700	1,900	287
2-7/16, 2-1/2	7,500	2,360	376
2-15/16, 3	12,000	4,151	597

▲ Use only when shaft movement is limited to approximately +/-90°. Movement is infrequent as opposed to continuous and maximum bearing temperature is 700 °F.

LM800 radial load ratings

Bearing size (in)	Max. radial base load	Max. radial cap load
3/4	560	560
1	750	600
1-1/4	1,610	600
1-1/2	1,610	600

Note: These load ratings are to be used only when shaft rotation is less than 10 rpm and temperature does not exceed 800 °F.
Maximum allowable thrust load is 50 pounds

Solidlube – metric

Bearing size

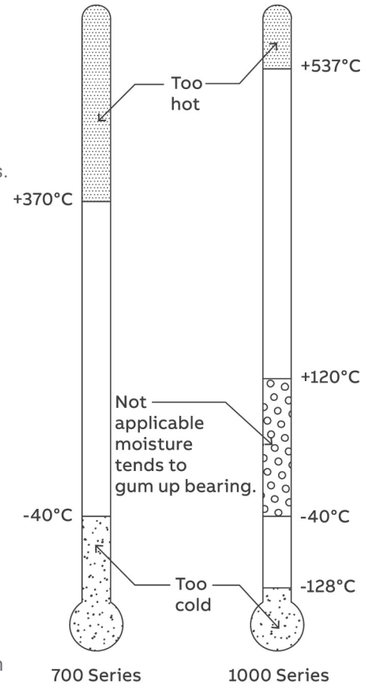
Select a bearing from tables for normal loads or loads in limited shaft movement applications having a radial load equal to or greater than the actual load. This simple method is all that is required for the majority of general machine applications using commercial steel shafting and operating in a dry atmosphere. (For more favorable conditions, ratings may be increased somewhat; consult factory). Shaft collars may be used for slight amounts of thrust. Generally the rule of 10 percent of the radial load applies. Dirty environments will reduce bearing life and should be avoided. Losses due to friction can be as high as 30 percent depending on speed, load, temperature and shaft material.

Shafting

Commercial steel shafting is good in applications where temperatures do not exceed 370 °C. However, for extended bearing life, at any temperature, the shaft should be hardened to 35 Rockwell "C" or better. Shaft finish should be 0.25 to 0.50 micrometers. A finish rougher than 0.50 will lessen bearing life. A finish smoother than Ra. 25 micrometers will not allow the optimum lubricant film to develop. Shaft tolerance should be +0.000/-0.051 millimeters for commercial steel shafting. If using other shaft materials, consult Dodge for the shaft tolerance and thermal expansion.

When commercial shafting is exposed to a corrosive media, it will oxidize. A rusty shaft will grow in the bearing, thus eliminating clearances. In this case stainless steel shafting may be used and/or provide for regularly scheduled movement of shaft. In elevated temperatures stainless grades such as 17-4, 15-5, or 13-8 are hardenable. Shafts can be spray coated with ceramic or hard chrome. This is good up to about 425 °C. Check with your supplier, since these coatings can flake off when the coefficient of thermal expansion of the base material differs greatly from that of the coating.

High grade specialty shafting may be used in excess of 537 °C. It may be less expensive to use sleeves of this material on more economical shafting.



Noise or high pitched squeal

Carbon-graphite bushings can develop a high frequency vibration in resonance with the operating system to cause noise. Dampening or change of resonant frequency of the shaft is required to eliminate noise.

Specials

Solidlube bearings or bearings made from alternate bushing materials such as polymers, fibers, bronze, etc. for unusual operating and load conditions are available on a specially engineered basis by supplying the following:

- Shaft size, material and speed (rpm)
- Normal load, shock load and frequency
- Direction of load
- Ambient temperature and atmospheric conditions (water, dirt, corrosive, etc.)
- Type of bearing: pillow block, flange bearing, etc.
- Housing material desired
- Quantity
- Ball bearing end covers are available

Note: Solidlube bearings are not designed for rotating housing applications

Solidlube – metric

700 and 1000 series

Solidlube bearing 700 and 1000 series radial load ratings in newtons (N) normal loads

Series	Shaft size (mm)	Radial load ratings in newtons at various speeds (rpm)											
		10	25	50	75	100	150	200	250	300	350	400	450
204	20	2,490	2,490	2,490	2,490	2,490	1,690	1,270	1,020	840	730	640	560
205	25	3,340	3,340	3,340	3,340	2,710	1,800	1,400	1,090	910	780	690	580
206	30	4,670	4,670	4,670	4,040	3,020	2,000	1,510	1,200	1,000	840	760	670
207	35	7,160	7,160	7,160	5,070	3,800	2,540	1,910	1,510	1,240	1,090	960	840
209	40, 45	8,800	8,800	7,960	5,290	3,980	2,650	1,960	1,740	1,310	1,130	980	890
210	50	10,500	10,500	8,270	5,520	4,140	2,760	2,070	1,650	1,380	1,180	1,040	910
212	60	16,700	16,700	10,500	7,030	5,250	3,540	2,620	2,110	1,730	1,510	1,310	1,180
215	70, 75	26,500	26,500	13,900	9,200	6,940	4,630	3,470	2,780	2,290	1,980	1,740	1,540

Series	Shaft size (mm)	Radial load ratings in newtons at various speeds (rpm)												
		500	550	600	700	800	900	1,000	1,100	1,300	1,600	1,900	2,200	2,500
204	20	490	470	430	360	320	200	250	230	200	160	130	120	100
205	25	530	490	470	400	360	310	270	240	210	170	140	—	—
206	30	600	560	510	430	380	330	300	280	190	190	—	—	—
207	35	760	690	640	530	470	420	380	350	300	—	—	—	—
209	40, 45	800	730	670	580	490	440	400	360	—	—	—	—	—
210	50	820	760	690	600	510	470	—	—	—	—	—	—	—
212	60	1,040	960	870	760	—	—	—	—	—	—	—	—	—
215	70, 75	1,530	1,400	1,290	—	—	—	—	—	—	—	—	—	—

Note: The above ratings apply to all base loaded pillow blocks, all cylindrical units an flange type bearings (up to 370 °C).
For flange bearings operating at temperatures above 370 °C, cap and side loading of pillow blocks consult Applications Engineering.
For operation speeds below heavy line, use LT1000 and/or hardened shaft.

Solidlube bearing 700 and 1000 series radial load rating in pounds (limited shaft movement applications)▲

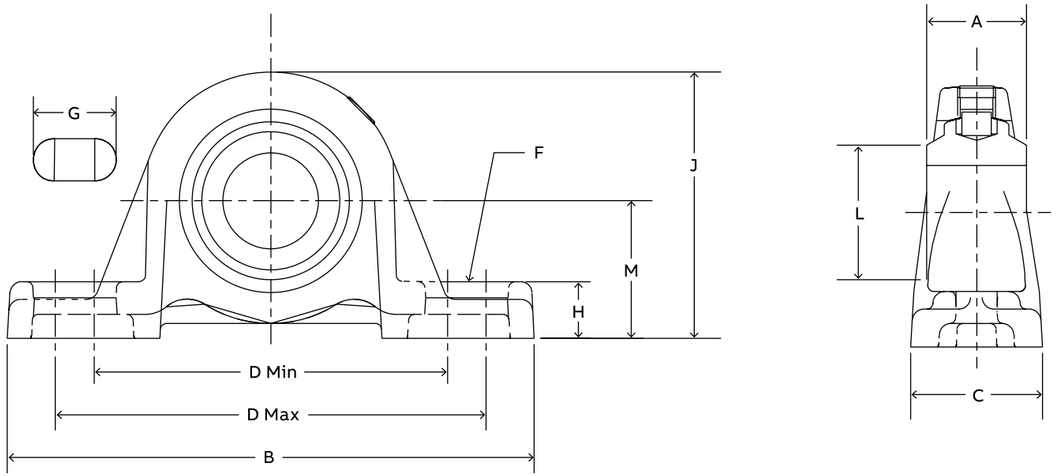
Series	Shaft size (mm)	Maximum radial load		Maximum Thrust
		Base loaded	Cap or side loading	
204	20	4,890	3,450	250
205	25	6,670	3,540	330
206	30	9,340	3,650	470
207	35	14,200	7,600	720
209	40, 45	17,800	8,470	880
210	50	20,900	8,540	1,050
212	60	33,400	10,500	1,670
215	70, 75	53,400	18,500	2,660

▲ Use only when shaft movement is limited to approximately +/-90°.
Movement is infrequent as opposed to continuous and maximum bearing temperature is 700 °F.

Dimensions

Solidlube LT pillow block – inch

2-bolt



Series	Shaft size	700 series			1000 series			Used on frame
		Part number	Description	Weight	Part number	Description	Weight	
204	3/4	033667	P2B-LT7-012	1.70	033977	P2B-LT10-012	1.70	LD-10
	20 mm	034225	P2B-LT7-20M	0.77	034234	P2B-LT10-20M	0.77	LD-10
205	7/8	033668	P2B-LT7-014	1.60	033978	P2B-LT10-014	1.60	
	15/16	033669	P2B-LT7-015	1.50	033979	P2B-LT10-015	1.50	LD-10
	1	033670	P2B-LT7-100	1.40	033980	P2B-LT10-100	1.40	
	25 mm	034226	P2B-LT7-25M	0.64	034235	P2B-LT10-25M	0.64	LD-10
206	1-1/8	033672	P2B-LT7-102	2.80	033982	P2B-LT10-102	2.80	LD-20
	1-3/16	033673	P2B-LT7-103	2.70	033983	P2B-LT10-103	2.70	
	30 mm	034227	P2B-LT7-30M	1.22	034236	P2B-LT10-30M	1.22	LD-20
207	1-1/4	033674	P2B-LT7-104	4.20	033984	P2B-LT10-104	4.20	
	1-3/8	033676	P2B-LT7-106	3.90	033986	P2B-LT10-106	3.90	LD-20
	1-7/16	033677	P2B-LT7-107	3.80	033987	P2B-LT10-107	3.80	
	1-1/2	033678	P2B-LT7-108	3.70	033988	P2B-LT10-108	3.70	
	35 mm	034228	P2B-LT7-35M	1.77	034237	P2B-LT10-35M	1.77	LD-20
209	1-11/16	033680	P2B-LT7-111	6.00	033990	P2B-LT10-111	6.00	LD-20
	1-3/4	033681	P2B-LT7-112	5.80	033991	P2B-LT10-112	5.80	
	40 mm	034229	P2B-LT7-40M	2.72	034238	P2B-LT10-40M	2.72	LD-20
	45 mm	034230	P2B-LT7-45M	2.63	034239	P2B-LT10-45M	2.63	
210	1-15/16	033682	P2B-LT7-115	6.80	033992	P2B-LT10-115	6.80	LD-30
	2	033683	P2B-LT7-200	6.60	033993	P2B-LT10-200	6.60	
	50 mm	034231	P2B-LT7-50M	3.08	034240	P2B-LT10-50M	3.08	LD-30
211	2-3/16	033684	P2B-LT7-203	8.00	033994	P2B-LT10-203	8.00	LD-40
212	2-7/16	033686	P2B-LT7-207	10.10	033996	P2B-LT10-207	10.10	LD-40
	2-1/2	033687	P2B-LT7-208	9.80	033997	P2B-LT10-208	9.80	
	60 mm	034221	P2B-LT7-60M	4.58	034241	P2B-LT10-60M	4.58	LD-40
215	2-15/16	033688	P2B-LT7-215	21.20	033998	P2B-LT10-215	21.20	LD-45
	3	033077	P2B-LT7-300	20.90	033974	P2B-LT10-300	20.90	
	70 mm	034232	P2B-LT7-70M	9.98	034242	P2B-LT10-70M	9.98	LD-45
	75 mm	034233	P2B-LT7-75M	9.62	034243	P2B-LT10-75M	9.62	

Weight is in pounds (lb) for inch bores and kilograms (kg) for metric bores

Solidlube LT pillow block – inch

2-bolt

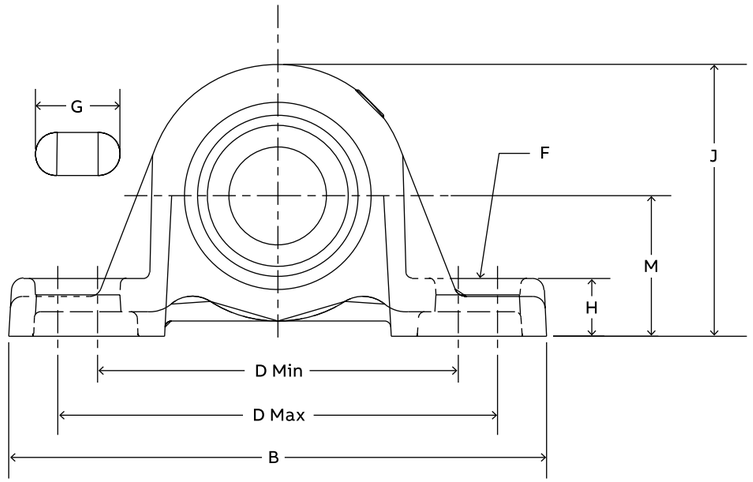
Series	Shaft size	A	B	C	D		F	G	H	J	L	M
					Min.	Max.	bolt dia.					
204	3/4	1	5-1/4	1-11/32	3-3/8	4-3/16	3/8	27/32	17/32	2-9/16	1-3/8	1-5/16
	20 mm	25.4	133.4	34.1	85.7	106.4	10	21.4	13.5	65.1	34.9	33.3
205	7/8 15/16 1	1-1/16	5-1/2	1-13/32	3-11/16	4-1/2	3/8	27/32	19/32	2-25/32	1-9/16	1-7/16
	25 mm	27.0	139.7	35.7	93.7	114.3	10	21.4	15.1	70.6	39.7	36.5
206	1-1/8 1-3/16	1-3/16	6-1/4	1-3/4	4-1/4	5	1/2	15/16	11/16	3-1/4	1-13/16	1-5/8
	30 mm	30.2	158.8	44.5	108.0	127.0	12	23.8	17.5	82.6	46.0	41.3
207	1-1/4 1-3/8 1-7/16 1-1/2	1-5/16	6-1/2	1-3/4	4-11/16	5-7/16	1/2	15/16	23/32	3-3/4	2-1/8	1-7/8
	35 mm	33.3	165.1	44.5	119.1	138.1	12	23.8	18.3	95.3	54.0	47.6
209	1-11/16 1-3/4	1-9/16	7-7/16	2	5-1/2	6-3/16	1/2	29/32	3/4	4-9/32	2-9/16	2-1/8
	40 mm 45 mm	39.7	188.9	50.8	139.7	157.2	12	23.0	19.1	108.7	65.1	54.0
210	1-15/16 2	1-5/8	8-1/8	2-1/4	6	6-11/16	5/8	1-1/32	3/4	4-17/32	2-13/16	2-1/4
	50 mm	41.3	206.4	57.1	152.4	170.0	16	26.2	19.1	115.1	71.4	57.2
211	2-3/16	1-3/4	8-7/8	2-5/16	6-3/8	7-7/16	5/8	1-7/32	7/8	4-31/32	3-1/8	2-1/2
212	2-7/16 2-1/2	1-13/16	9-1/2	2-3/8	6-7/8	7-15/16	5/8	1-7/32	7/8	5-13/32	3-1/2	2-3/4
	60 mm	46.0	241.3	60.3	174.6	201.6	16	31.0	22.2	137.3	88.9	69.9
215	2-15/16 3	2-23/32	11-3/4	2-7/8	8-1/2	9-1/2	7/8	1-7/16	1	6-3/4	3-15/16	3-1/2
	70 mm 75 mm	69.1	298.5	73.0	215.9	241.3	22	36.5	25.4	171.5	100.0	88.9

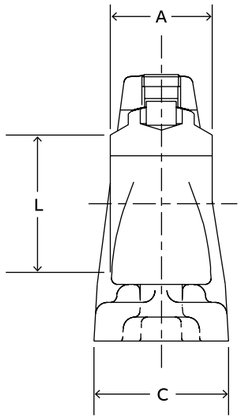
All dimensions are in inches (millimeters are noted with units above).

The LT and LTB pillow blocks are identical except the LTB pillow blocks have lower backing dimensions.

Solidlube LTB pillow block – inch

2-bolt





Series	Shaft size	700 series			1000 series			Used on frame
		Part number	Description	Weight	Part number	Description	Weight	
204	3/4	032940	P2B-LTB7-012	1.6	032970	P2B-LTB10-012	1.6	LD-10
	20 mm	034244	P2B-LTB7-20M	0.73	034252	P2B-LTB10-20M	0.73	LD-10
205	7/8	032941	P2B-LTB7-014	1.5	032971	P2B-LTB10-014	1.5	LD-10
	15/16	032942	P2B-LTB7-015	1.4	032972	P2B-LTB10-015	1.4	
	1	032943	P2B-LTB7-100	1.3	032973	P2B-LTB10-100	1.3	
	25 mm	034245	P2B-LTB7-25M	0.59	034253	P2B-LTB10-25M	0.59	
206	1-1/8	032945	P2B-LTB7-102	2.7	032975	P2B-LTB10-102	2.7	LD-20
	1-3/16	032946	P2B-LTB7-103	2.6	032976	P2B-LTB10-103	2.6	
	30 mm	034246	P2B-LTB7-30M	1.18	034254	P2B-LTB10-30M	1.18	LD-20
207	1-1/4	032947	P2B-LTB7-104	4	032977	P2B-LTB10-104	4	LD-20
	1-3/8	032949	P2B-LTB7-106	3.8	032979	P2B-LTB10-106	3.8	
	1-7/16	032950	P2B-LTB7-107	3.7	032980	P2B-LTB10-107	3.7	
	1-1/2	032951	P2B-LTB7-108	3.6	032981	P2B-LTB10-108	3.6	
	35 mm	034247	P2B-LTB7-35M	1.72	034255	P2B-LTB10-35M	1.72	LD-20
209	1-11/16	032953	P2B-LTB7-111	5	032983	P2B-LTB10-111	5	LD-20
	1-3/4	032954	P2B-LTB7-112	4.8	032984	P2B-LTB10-112	4.8	
	40 mm	034248	P2B-LTB7-40M	2.27	034256	P2B-LTB10-40M	2.27	LD-20
	45 mm	034249	P2B-LTB7-45M	2.18	034257	P2B-LTB10-45M	2.18	
210	1-15/16	032955	P2B-LT87-115	6	032985	P2B-LTB10-115	6	LD-30
	2	032956	P2B-LTB7-200	5.8	032986	P2B-LTB10-200	5.8	
	50 mm	034250	P2B-LTB7-50M	2.72	034258	P2B-LTB10-50M	2.72	LD-30
211	2-3/16	032957	P2B-LTB7-203	6.5	032987	P2B-LTB10-203	6.5	LD-40
212	2-7/16	032959	P2B-LTB7-207	8.1	032989	P2B-LTB10-207	8.1	LD-40
	2-1/2	032960	P2B-LTB7-208	7.8	032990	P2B-LTB10-208	7.8	
	60 mm	034251	P2B-LTB7-60M	3.67	034259	P2B-LTB10-60M	3.67	LD-40
215	2-15/16	034596	P2B-LTB7-215	18.7	034598	P2B-LTB10-215	18.7	LD-45
	3	034597	P2B-LTB7-300	18.4	034599	P2B-LTB10-300	18.4	
	70 mm	—	—	—	—	—	—	LD-45
	75 mm	—	—	—	—	—	—	

Weight is in pounds (lb) for inch bores and kilograms (kg) for metric bores

Reference Guide
Type E Family (Tapered)
Specialty Tapered
Safety Mount Family (Spherical)
S-2000 (Spherical)
Unified SAF (Spherical)
Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

Solidlube LTB pillow block – inch

2-bolt

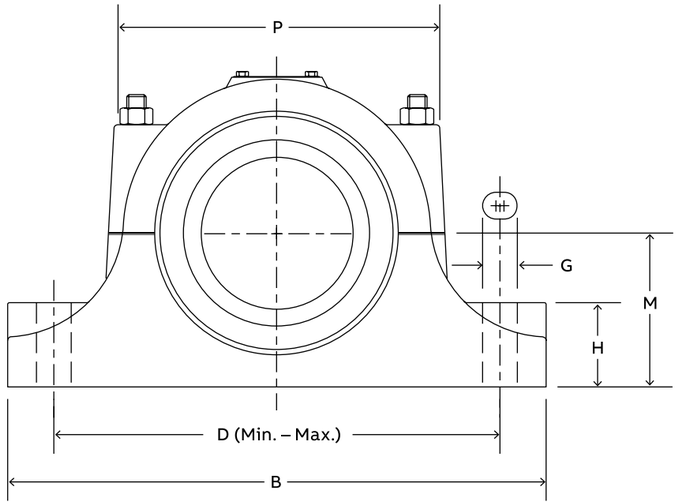
Series	Shaft size	A	B	C	D		F	G	H	J	L	M
					Min.	Max.	bolt dia.					
204	3/4	1	5-1/4	1-11/32	3-3/8	4-3/16	3/8	27/32	15/32	2-1/2	1-3/8	1-1/4
	20 mm	25.4	133.4	34.1	85.7	106.4	10	21.4	11.9	63.5	34.9	31.8
205	7/8 15/16 1	1-1/16	5-1/2	1-13/32	3-11/16	4-1/2	3/8	27/32	15/32	2-21/32	1-9/16	1-5/16
	25 mm	27.0	139.7	35.7	93.7	114.3	10	21.4	11.9	67.5	39.7	33.3
206	1-1/8 1-3/16	1-3/16	6-1/4	1-3/4	4-1/4	5	1/2	15/16	5/8	3-3/16	1-13/16	1-9/16
	30 mm	30.2	158.8	44.5	108.0	127.0	12	23.8	15.9	81.0	46.0	39.7
207	1-1/4 1-3/8 1-7/16 1-1/2	1-5/16	6-1/2	1-3/4	4-11/16	5-7/16	1/2	15/16	21/32	3-11/16	2-1/8	1-13/16
	35 mm	33.3	165.1	44.5	119.1	138.1	12	23.8	16.7	93.7	54.0	46.0
209	1-11/16 1-3/4	1-9/16	7-7/16	2	5-1/2	6-3/16	1/2	29/32	11/16	4-7/32	2-9/16	2-1/16
	40 mm 45 mm	39.7	188.9	50.8	139.7	157.2	12	23.0	17.5	107.2	65.1	52.4
210	1-15/16 2	1-5/8	8-1/8	2-1/4	6	6-11/16	5/8	1-1/32	11/16	4-15/32	2-13/16	2-3/16
	50 mm	41.3	206.4	57.1	152.4	170.0	16	26.2	17.5	113.5	71.4	55.6
211	2-3/16	1-3/4	8-7/8	2-5/16	6-3/8	7-7/16	5/8	1-7/32	13/16	4-29/32	3-1/8	2-7/16
212	2-7/16 2-1/2	1-13/16	9-1/2	2-3/8	6-7/8	7-15/16	5/8	1-7/32	13/16	5-11/32	3-1/2	2-11/16
	60 mm	46.0	241.3	60.3	174.6	201.6	16	31.0	20.6	135.7	88.9	68.3
215	2-15/16 3	2-23/32	11-3/4	2-7/8	8-1/2	9-1/2	7/8	1-7/16	1-1/16	6-9/16	3-15/16	3-5/16
	70 mm 75 mm	69.1	298.5	73.0	215.9	241.3	22	36.5	—	—	100.0	—

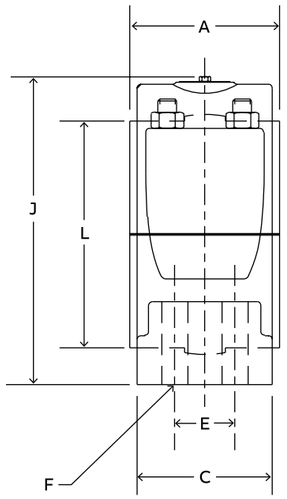
All dimensions are in inches (millimeters are noted with units above).

The LT and LTB pillow blocks are identical except the LTB pillow blocks have lower backing dimensions.

Solidlube MM pillow block – inch

2-bolt





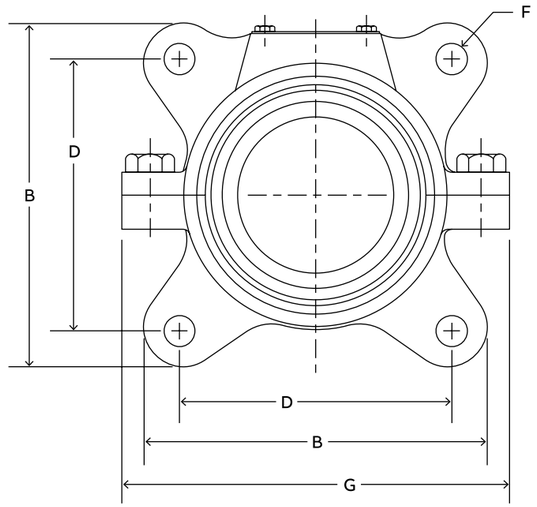
Shaft size	700 series		1000 series		Weight	Used on frame	A	B	C
	Part number	Description	Part number	Description					
3-7/16	033247	P2B-MM7-307	033347	P2B-MM10-307	23.00	HD-250	3-1/2	12	2-13/16
3-1/2	033251	P2B-MM7-308	033351	P2B-MM10-308	22.80				
3-15/16	033475	P2B-MM7-315	033480	P2B-MM10-315	36.00	HD-300	4	13-7/16	3-3/16
4	033485	P2B-MM7-400	033490	P2B-MM10-400	35.80				
4-7/16	033500	P2B-MM7-407	033505	P2B-MM10-407	60.00	HD-350	4-1/2	16	3-7/16
4-1/2	033510	P2B-MM7-408	033515	P2B-MM10-408	59.70				
4-15/16	033525	P4B-MM7-415	033530	P4B-MM10-415	92.00	HD-400	5	17-7/16	4-3/4
5	033535	P4B-MM7-500	033540	P4B-MM10-500	91.50				

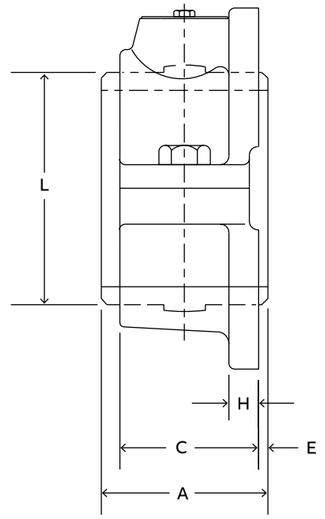
Shaft size	D		2-bolt base	4-bolt base		G	H	J	L	M	P
	Min.	Max.	F bolt dia.	E	F bolt dia.						
3-7/16	9-1/4	10-1/4	5/8	—	—	1-1/4	1-3/4	7	4-7/8	3-1/4	7- 1/4
3-1/2											
3-15/16	9-7/8	11-1/2	3/4	—	—	1-11/16	2	7-15/16	5-5/8	3-3/4	8-3/16
4											
4-7/16	12-13/16	13-13/16	7/8	—	—	1-1/2	2-1/4	9-7/16	6-15/16	4-1/2	10
4-1/2											
4-15/16	13-1/8	14-3/4	—	2	3/4	1-11/16	2-3/4	10-1/2	7-9/16	5	10-5/8
5											

Note: No published metric dimensions for this product.

Solidlube MM flange – inch

4-bolt





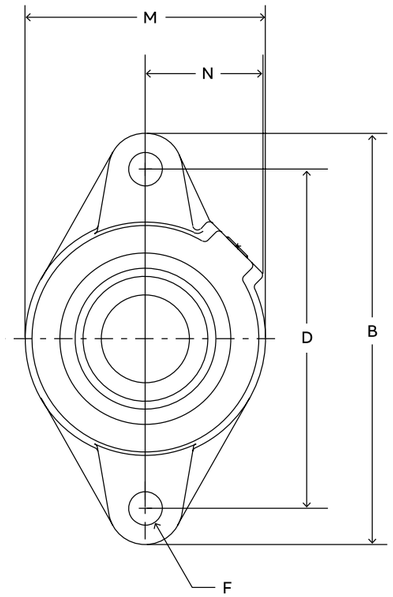
Shaft size	700 series		1000 series		Weight
	Part number	Description	Part number	Description	
3-7/16	033323	F4B-MM7-307	033868	F4B-MM10-307	17.00
3-1/2	033321	F4B-MM7-308	033931	F4B-MM10-308	18.00
3-15/16	032923	F4B-MM7-315	033899	F4B-MM10-315	26.00
4	032937	F4B-MM7-400	033932	F4B-MM10-400	
4-7/16	033862	F4B-MM7-407	033933	F4B-MM10-407	42.00
4-1/2	033863	F4B-MM7-408	033934	F4B-MM10-408	
4-15/16	033929	F4B-MM7-415	033869	F4B-MM10-415	62.00
5	033930	F4B-MM7-500	033867	F4B-MM10-500	

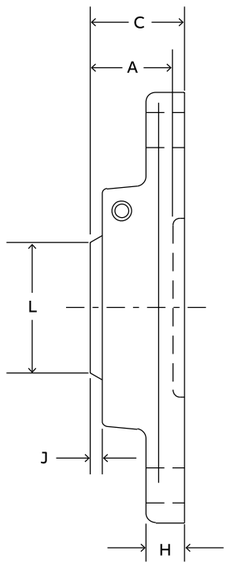
Shaft size	A	B	C	D	E	F	G	H	L
3-7/16	3-1/2	7-5/8	2-59/64	6	3/16	5/8	8-9/16	5/8	4- 7/8
3-1/2									
3-15/16	4	8-7/8	3-11/32	6-7/8	1/4	3/4	9-1/2	11/16	5- 5/8
4									
4-7/16	4-1/2	10-1/4	3-23/32	8-1/8	1/4	7/8	11-3/8	3/4	6-15/16
4-1/2									
4-15/16	5	11-7/16	4- 5/8	9-3/16	1/8	1	12-7/8	13/16	7- 9/16
5									

Note: No published metric dimensions for this product.

Solidlube LT flange – inch

2-bolt





Series	Shaft Size	700 series			1000 series		
		Part number	Description	Weight	Part number	Description	Weight
204	3/4	033085	F2B-LT7-012	1.2	033185	F2B-LT10-012	1.2
	20 mm	034260	F2B-LT7-20M	0.54	034266	F2B-LT10-20M	0.54
205	7/8	033086	F2B-LT7-014	1.7	033186	F2B-LT10-014	1.7
	15/16	033087	F2B-LT7-015	1.6	033187	F2B-LT10-015	1.6
	1	033088	F2B-LT7-100	1.5	033188	F2B-LT10-100	1.5
	25 mm	034261	F2B-LT7-25M	0.68	034267	F2B-LT10-25M	0.68
206	1-1/8	033089	F2B-LT7-102	2.2	033189	F2B-LT10-102	2.2
	1-3/16	033090	F2B-LT7-103	2.1	033190	F2B-LT10-103	2.1
	30 mm	034262	F2B-LT7-30M	0.95	034268	F2B-LT10-30M	0.95
207	1-1/4	033091	F2B-LT7-104	3.6	033191	F2B-LT10-104	3.6
	1-3/8	033092	F2B-LT7-106	3.3	033192	F2B-LT10-106	3.3
	1-7/16	033093	F2B-LT7-107	3.2	033193	F2B-LT10-107	3.2
	1-1/2	033094	F2B-LT7-108	3.1	033194	F2B-LTI0-108	3.1
	35 mm	034263	F2B-LT7-35M	1.5	034269	F2B-LT10-35M	1.5
209	1-11/16	033095	F2B-LT7-111	4.9	033195	F2B-LT10-111	4.9
	1-3/4	033096	F2B-LT7-112	4.7	033196	F2B-LT10-112	4.7
	40 mm	034218	F2B-LT7-40M	2.22	034270	F2B-LT10-40M	2.22
	45 mm	034264	F2B-LT7-45M	2.13	034271	F2B-LT10-45M	2.13
210	1-15/16	033097	F2B-LT7-115	5.4	033197	F2B-LT10-115	5.4
	2	033098	F2B-LT7-200	5.2	033198	F2B-LT10-200	5.2
	50 mm	034265	F2B-LT7-50M	2.36	034272	F2B-LT10-50M	2.36

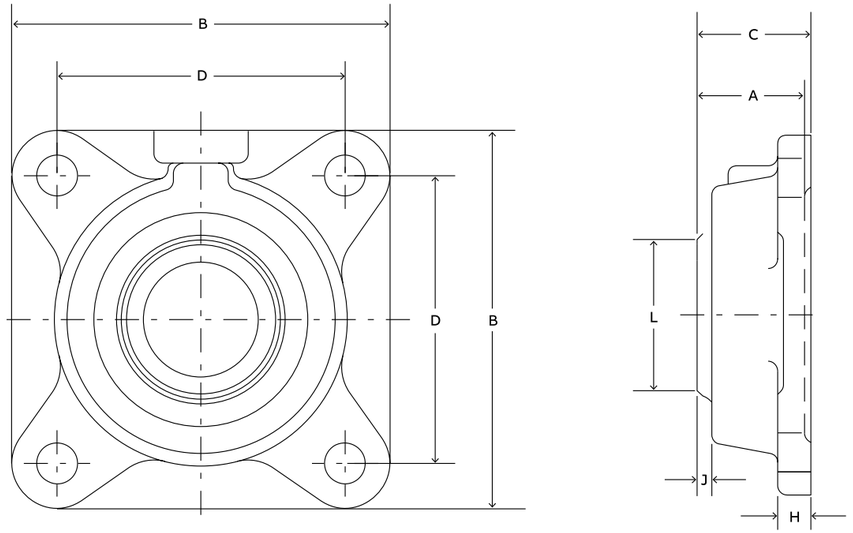
Weight is in pounds (lb) for inch bores and kilograms (kg) for metric bores

Solidlube LT flange – inch
2-bolt

Series	Shaft size	A	B	C	D	F bolt dia	H	J	L	M	N
204	3/4	29/32	4-13/16	1-1/8	3-17/32	3/8	1/2	5/32	1-3/8	2-3/8	1-1/2
	20 mm	23.0	122.2	28.6	89.7	3/8	12.7	4.0	34.9	60.3	38.1
205	7/8	63/64	4-7/8	1-1/8	3-57/64	7/16	1/2	5/32	1-9/16	2-3/4	1-7/16
	15/16										
	1										
	25 mm	25.4	123.8	28.6	98.8	7/16	12.7	4.0	39.7	69.9	36.5
206	1-1/8	1-7/64	5-9/16	1-7/32	4-19/32	7/16	1/2	5/32	1-13/16	3-1/8	1-9/16
	1-3/16										
	30 mm	28.2	141.3	31.0	116.7	7/16	12.7	4.0	46.0	79.4	39.7
207	1-1/4	1-7/32	6-1/8	1-3/8	5-1/8	1/2	9/16	5/32	2-1/8	3-3/4	1-27/32
	1-3/8										
	1-7/16										
	1-1/2										
	35 mm	31.0	155.6	34.9	130.2	1/2	14.3	4.0	54.0	95.3	46.8
209	1-11/16	1-21/64	7-1/I6	1-19/32	5-27/32	1/2	5/8	3/16	2-9/16	4-3/8	1-29/32
	1-3/4										
	40 mm	33.7	179.4	40.5	148.4	1/2	15.9	4.8	65.1	111.1	48.4
	45 mm										
210	1-15/16	1-13/32	7-7/16	1-21/32	6-3/16	1/2	5/8	3/16	2-13/16	4-9/32	2-1/32
	2										
	50 mm	35.7	188.9	42.1	157.2	1/2	15.9	4.8	71.4	108.7	51.6

Solidlube LT flange – inch

4-bolt



Series	Shaft size	700 series			1000 series		
		Part number	Description	Weight	Part number	Description	Weight
204	3/4	033260	F4B-LT7-012	1.5	033200	F4B-LT10-012	1.5
	20 mm	034273	F4B-LT7-20M	0.68	034283	F4B-LT10-20M	0.6
205	7/8	033261	F4B-LT7-014	2.2	033201	F4B-LT10-014	2.2
	15/16	033262	F4B-LT7-015	2.1	033202	F4B-LT10-015	2.1
	1	033263	F4B-LT7-100	2.0	033203	F4B-LT10-100	2.0
	25 mm	034274	F4B-LT7-25M	0.91	034284	F4B-LT10-25M	0.91
206	1-1/8	033264	F4B-LT7-102	2.9	033204	F4B-LT10-102	2.9
	1-3/16	033265	F4B-LT7-103	2.8	033205	F4B-LT10-103	2.8
	30 mm	034275	F4B-LT7-30M	1.27	034285	F4B-LT10-30M	1.27
207	1-1/4	033266	F4B-LT7-104	4.3	033206	F4B-LT10-104	4.3
	1-3/8	033267	F4B-LT7-106	4.0	033207	F4B-LT10-106	4.0
	1-7/16	033268	F4B-LT7-107	3.9	033208	F4B-LT10-107	3.9
	1-1/2	033269	F4B-LT7-108	3.8	033209	F4B-LT10-108	3.8
	35 mm	034276	F4B-LT7-35M	1.81	034286	F4B-LT10-35M	1.81
209	1-11/16	033270	F4B-LT7-111	5.8	033210	F4B-LT10-111	5.8
	1-3/4	033271	F4B-LT7-112	5.6	033211	F4B-LT10-112	5.6
	40 mm	034277	F4B-LT7-40M	2.63	034287	F4B-LT10-40M	2.63
	45 mm	034278	F4B-LT7-45M	2.54	034288	F4B-LT10-45M	2.54
210	1-15/16	033272	F4B-LT7-115	6.8	033212	F4B-LT10-115	6.8
	2	033273	F4B-LT7-200	6.6	033213	F4B-LT10-200	6.6
	50 mm	034279	F4B-LT7-50M	3.0	034289	F4B-LT10-50M	3.0
211	2-3/16	033274	F4B-LT7-203	8.5	033214	F4B-LT10-203	8.5
212	2-7/16	033275	F4B-LT7-207	11.0	033215	F4B-LT10-207	11.0
	2-1/2	033276	F4B-LT7-208	10.8	033216	F4B-LT10-208	10.8
	60 mm	034280	F4B-LT7-60M	5.0	034290	F4B-LT10-60M	5.0
215	2-15/16	033277	F4B-LT7-215	18.0	033217	F4B-LT10-215	18.0
	3	033278	F4B-LT7-300	17.7	033218	F4B-LT10-300	17.7
	70 mm	034281	F4B-LT7-70M	8.16	034291	F4B-LT10-70M	8.16
	75 mm	034282	F4B-LT7-75M	8.03	034292	F4B-LT10-75M	8.03

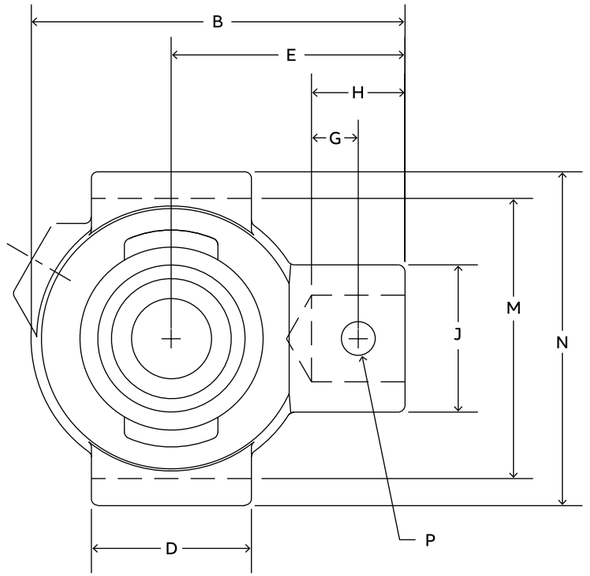
Weight is in pounds (lb) for inch bores and kilograms (kg) for metric bores

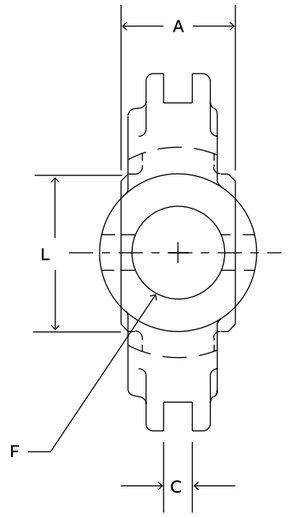
Solidlube LT flange – inch
4-bolt

Series	Shaft size	A	B	C	D	F bolt dia	H	J	L
204	3/4	29/32	3-3/8	1-1/8	2-1/2	3/8	7/16	5/32	1-3/8
	20 mm	23.0	85.7	28.6	63.5	10.0	11.1	3.2	34.9
205	7/8	63/64	3-3/4	1-1/8	2-3/4	7/16	1/2	3/16	1-9/16
	15/16								
	1								
	25 mm	25.4	95.2	28.6	69.9	10.0	12.7	4.8	39.7
206	1-1/8	31/32	4-1/4	1-7/32	3-1/4	7/16	1/2	5/32	1-13/16
	1-3/16								
	30 mm	28.2	108.0	31.0	82.6	10.0	12.7	4.0	46.0
207	1-1/4	1-7/32	4-3/4	1-3/8	3-5/8	1/2	9/16	5/32	2-1/8
	1-3/8								
	1-7/16								
	1-1/2								
	35 mm	31.0	120.7	34.9	92.1	12.0	14.3	4.0	54.0
209	1-11/16	1-11/32	5-3/8	1-19/32	4-1/8	1/2	5/8	13/64	2-9/16
	1-3/4								
	40 mm	33.7	136.5	40.5	104.8	12.0	15.9	4.8	65.1
	45 mm								
210	1-15/16	1-13/32	5-5/8	1-21/32	4-3/8	1/2	5/8	7/32	2-13/16
	2								
	50 mm	35.7	142.9	42.1	111.1	12.0	15.9	4.8	71.4
211	2-3/16	1-17/32	6-1/2	1-25/32	5-1/8	5/8	11/16	7/32	3-1/8
212	2-7/16	1-15/32	7	1-31/32	5-5/8	5/8	11/16	11/64	3-1/2
	2-1/2	1-15/32	7	1-31/32	5-5/8	5/8	11/16	11/64	3-1/2
	60 mm	41.3	177.8	47.6	142.9	16.0	17.5	4.0	88.9
215	2-15/16	2-23/32	7-3/4	2-3/4	6	3/4	1	17/32	3-15/16
	3	2-23/32	7-3/4	2-34	6	3/4	1	17/32	3-15/16
	70 mm	61.1	196.9	70.6	152.4	18.0	25.4	13.5	100.0
	75 mm	61.1	196.9	70.6	152.4	18.0	25.4	13.5	100.0

Solidlube LT take-up – inch

Narrow-slot (NS)





Series	Shaft size	LT700 Part number	LT700 Description	LT700 Weight	LT1000 Part number	LT1000 Description	LT1000 Weight	Used on frame
204	3/4	033810	NSTU-LT7-012	1.7	033840	NSTU-LT10-012	1.7	NS-210
	20 mm	034293	NSTU-LT7-20M	0.77	034303	NSTU-LT10-20M	0.77	NS-210
205	7/8	033811	NSTU-LT7-014	1.9	033841	NSTU-LT10-014	1.9	NS-210
	15/16	033812	NSTU-LT7-015	1.8	033842	NSTU-LT10-015	1.8	
	1	033813	NSTU-LT7-100	1.7	033843	NSTU-LT10-100	1.7	
	25 mm	034294	NSTU-LT7-25M	0.77	034304	NSTU-LT10-25M	0.77	NS-210
206	1-1/8	033814	NSTU-LT7-102	2.8	033844	NSTU-LT10-102	2.8	NS-308
	1-3/16	033815	NSTU-LT7-103	2.7	033845	NSTU-LT10-103	2.7	
	30 mm	034295	NSTU-LT7-30M	1.22	034305	NSTU-LT10-30M	1.22	NS-308
207	1-1/4	033816	NSTU-LT7-104	3.2	033846	NSTU-LT10-104	3.2	NS-308
	1-3/8	033817	NSTU-LT7-106	3.0	033847	NSTU-LT10-106	3.0	
	1-7/16	033818	NSTU-LT7-107	2.9	033848	NSTU-LT10-107	2.9	
	1-1/2	033819	NSTU-LT7-108	2.8	033849	NSTU-LT10-108	2.8	
	35 mm	034296	NSTU-LT7-35M	1.36	034306	NSTU-LT10-35M	1.36	NS-308
209	1-11/16	033820	NSTU-LT7-111	4.9	033850	NSTU-LT10-111	4.9	NS-400
	1- 3/4	033821	NSTU-LT7-112	4.8	033851	NSTU-LT10-112	4.8	
	40 mm	034297	NSTU-LT7-40M	2.22	034307	NSTU-LT10-40M	2.22	NS-400
	45 mm	034298	NSTU-LT7-45M	2.18	034308	NSTU-LT10-45M	2.18	
210	1-15/16	033822	NSTU-LT7-115	5.5	033852	NSTU-LT10-115	5.5	NS-400
	2	033823	NSTU-LT7-200	5.3	033853	NSTU-LT10-200	5.3	
	50 mm	034299	NSTU-LT7-50M	2.4	034309	NSTU-LT10-50M	2.4	NS-400
211	2-3/16	033824	NSTU-LT7-203	6.7	033854	NSTU-LT10-203	6.7	NS-407
212	2-7/16	033825	NSTU-LT7-207	7.4	033855	NSTU-LT10-207	7.4	NS-415
	2-1/2	033826	NSTU-LT7-208	7.0	033856	NSTU-LT10-208	7.0	
	60 mm	034300	NSTU-LT7-60M	3.18	034310	NSTU-LT10-60M	3.18	NS-415

Weight is in pounds (lb) for inch bores and kilograms (kg) for metric bores

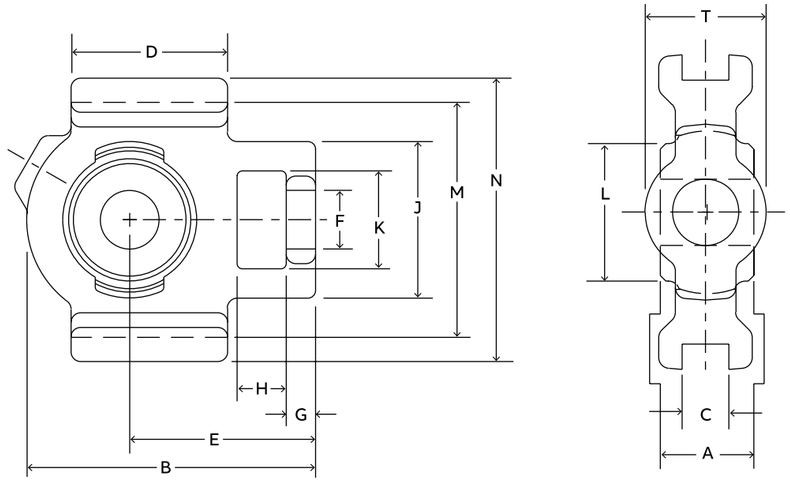
Solidlube LT take-up – inch
Narrow-slot (NS)

Series	Shaft size	A	B	C	D	E	F Screw dia.	G
204	3/4	1	3-1/2	1/4	1-1/2	2-3/16	3/4	7/16
	20 mm	25.4	88.9	6.4	38.1	55.6	3/4	11.1
205	7/8, 15/16, 1	1-1/16	3-9/16	1/4	1-1/2	2-3/16	3/4	7/16
	25 mm	27	90.5	6.4	38.1	55.6	3/4	11.1
206	1-1/8	1-3/16	4-5/16	1/4	2-1/2	2-11/16	3/4	7/16
	1-3/16							
	30 mm	30.2	109.5	6.4	63.5	68.3	3/4	11.1
207	1-1/4, 1-3/8,	1-5/16	4-1/2	1/4	2-1/2	2-11/16	3/4	7/16
	1-7/16, 1-1/2							
	35 mm	33.3	114.3	6.4	63.5	68.3	3/4	11.1
209	1-11/16, 1-3/4	1- 9/16	5- 7/16	5/16	3	3-1/4	7/8	1/2
	40 mm	39.7	138.1	7.9	76.2	82.6	7/8	12.7
	45 mm							
210	1-15/16, 2	1- 5/8	5- 1/2	5/16	3	3-1/4	7/8	1/2
	50 mm	41.3	139.7	7.9	76.2	82.6	7/8	12.7
211	2-3/16	1- 3/4	6- 1/8	5/16	3-1/2	3-5/8	1	19/32
212	2-7/16, 2-1/2	1-13/16	6-11/16	5/16	3-3/4	3-7/8	1	19/32
	60 mm	46	169.9	7.9	95.3	95.3	1	15.1

Series	Shaft size	H	J	L	M	N	P Pin dia.
204	3/4	7/8	1-3/8	1-3/8	2-5/8	3-1/8	5/16
	20 mm	22.2	34.9	34.9	66.7	79.4	5/16
205	7/8, 15/16, 1	7/8	1-3/8	1-9/16	2-5/8	3-1/8	5/16
	25 mm	22.2	34.9	39.7	66.7	79.4	5/16
206	1-1/8	15/16	1-3/8	1-13/16	3-1/2	4-1/8	5/16
	1-3/16						
	30 mm	23.8	34.9	46.0	88.9	104.8	5/16
207	1-1/4, 1-3/8,	15/16	1-3/8	2-1/8	3-1/2	4-1/8	5/16
	1-7/16, 1-1/2						
	35 mm	23.8	34.9	54.0	88.9	104.8	5/16
209	1-11/16, 1-3/4	1-7/32	1-5/8	2-9/16	4	4-3/4	3/8
	40 mm	31.0	41.3	65.1	101.6	120.7	3/8
	45 mm						
210	1-15/16, 2	1-3/32	1-5/8	2-13/16	4	4-3/4	3/8
	50 mm	27.8	41.3	71.4	101.6	120.7	3/8
211	2-3/16	1-9/32	1-5/8	3- 1/2	4-15/16	5-3/4	7/16
212	2-7/16, 2-1/2	1-9/32	1-3/4	3-1/8	4-7/16	5-3/8	7/16
	60 mm	32.5	41.3	88.9	125.4	146.1	7/16

Solidlube LT take-up – inch

Wide-slot (WS)



Series	Shaft size	LT700			LT1000			Used on frame
		Part number	Description	Weight	Part number	Description	Weight	
204	3/4	033870	WSTU-LT7-012	2.4	033910	WSTU-LT10-012	2.4	WS-300
	20 mm	034313	WSTU-LT7-20M	1.09	034323	WSTU-LT10-20M	1.09	WS-300
205	7/8	033871	WSTU-LT7-014	2.6	033911	WSTU-LT10-014	2.6	WS-300
	15/16	033872	WSTU-LT7-015	2.5	033912	WSTU-LT10-015	2.5	
	1	033873	WSTU-LT7-100	2.4	033913	WSTU-LT10-100	2.4	
	25 mm	034314	WSTU-LT7-25M	1.09	034324	WSTU-LT10-25M	1.09	WS-300
206	1-1/8	033874	WSTU-LT7-102	3.2	033914	WSTU-LT10-102	3.2	WS-308
	1-3/16	033875	WSTU-LT7-103	3.1	033915	WSTU-LT10-103	3.1	
	30 mm	034315	WSTU-LT7-30M	1.41	034325	WSTU-LT10-30M	1.41	WS-308
207	1-1/4	033876	WSTU-LT7-104	4.2	033916	WSTU-LT10-104	4.2	WS-308
	1-3/8	033877	WSTU-LT7-106	3.9	033917	WSTU-LT10-106	3.9	
	1-7/16	033878	WSTU-LT7-107	3.8	033918	WSTU-LT10-107	3.8	
	1-1/2	033879	WSTU-LT7-108	3.7	033919	WSTU-LT10-108	3.7	
	35 mm	034316	WSTU-LT7-35M	1.77	034326	WSTU-LT10-35M	1.77	WS-308
209	1-11/16	033880	WSTU-LT7-111	6.1	033920	WSTU-LT10-111	6.1	WS-400
	1- 3/4	033881	WSTU-LT7-112	6	033921	WSTU-LT10-112	6	
	40 mm	034317	WSTU-LT7-40M	2.77	034327	WSTU-LT10-40M	2.77	WS-400
	45 mm	034318	WSTU-LT7-45M	2.72	034328	WSTU-LT10-45M	2.72	
210	1-15/16	033882	WSTU-LT7-115	6.7	033922	WSTU-LT10-115	6.7	WS-400
	2	033883	WSTU-LT7-200	6.5	033923	WSTU-LT10-200	6.5	
	50 mm	034319	WSTU-LT7-50M	2.95	034329	WSTU-LT10-50M	2.95	WS-400
211	2-3/16	033884	WSTU-LT7-203	9.8	033924	WSTU-LT10-203	9.8	WS-502
212	2-7/16	033885	WSTU-LT7-207	10.1	033925	WSTU-LT10-207	10.1	WS-502
	2-1/2	033886	WSTU-LT7-208	9.8	033926	WSTU-LT10-208	9.8	
	60 mm	034320	WSTU-LT7-60M	4.58	034330	WSTU-LT10-60M	4.58	WS-502
215	2-15/16	033887	WSTU-LT7-215	13	033927	WSTU-LT10-215	13	WS-515
	3	033888	WSTU-LT7-300	12.5	033928	WSTU-LT10-300	12.5	
	70 mm	034321	WSTU-LT7-70M	5.9	034331	WSTU-LT10-70M	5.9	WS-515
	75 mm	034322	WSTU-LT7-75M	5.67	034332	WSTU-LT10-75M	5.67	

Weight is in pounds (lb) for inch bores and kilograms (kg) for metric bores

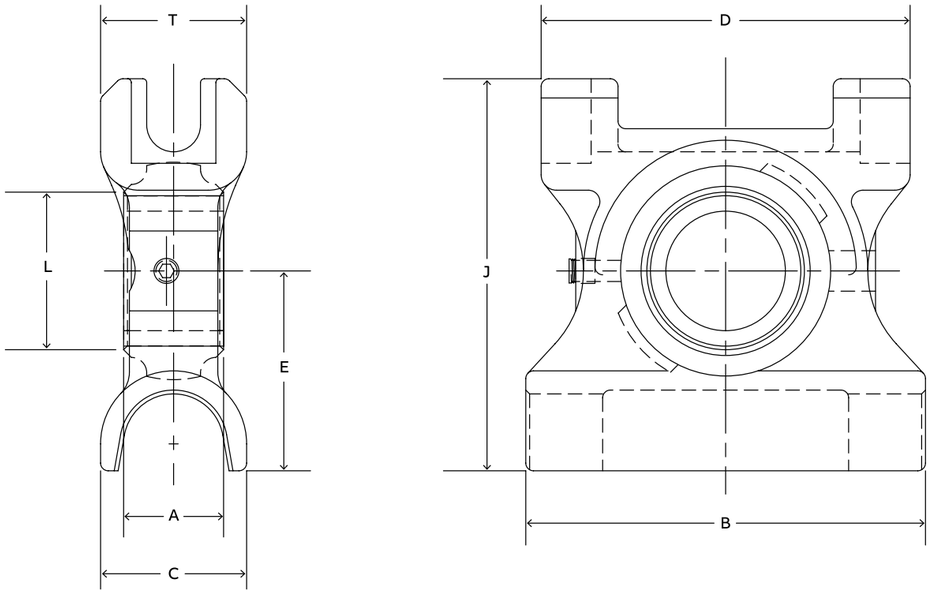
Solidlube LT take-up – inch
Wide-slot (WS)

Series	Shaft size	A	B	C	D	E	F dia.	G
204	3/4	1	3-11/16	17/32	2	2-3/8	3/4	3/8
	20 mm	25.4	93.7	13.5	50.8	60.3	3/4	9.5
205	7/8, 15/16, 1	1-1/16	3-13/16	17/32	2	2-7/16	13/16	3/8
	25 mm	27.0	96.8	13.5	50.8	61.9	13/16	9.5
206	1-1/8, 1-3/16	1- 3/16	4- 3/8	17/32	2-1/4	2-3/4	7/8	3/8
	30 mm	30.2	111.1	13.5	57.2	69.9	7/8	9.5
207	1-1/4, 1-3/8	1- 5/16	4- 7/8	17/32	2-1/2	3-1/16	7/8	1/2
	1-7/16, 1-1/2							
	35 mm	33.3	123.8	13.5	63.5	77.8	7/8	23.7
209	1-11/16, 1-3/4	1- 9/16	5- 5/8	11/16	3-1/4	3-7/16	1-1/8	5/8
	40 mm, 45 mm	39.7	142.9	17.5	82.6	87.3	1-1/8	15.9
210	1-15/16, 2	1-5/8	5-13/16	11/16	3-3/8	3-9/16	1-1/8	5/8
	50 mm	41.3	147.6	17.5	85.7	90.5	1-1/8	15.9
211	2-3/16	1-3/4	6-11/16	1-1/16	3-3/4	4-3/16	1-3/8	3/4
212	2-7/16, 2-1/2	1-13/16	7-1/2	1-1/16	4	4-11/16	1-3/8	3/4
	60 mm	46.0	190.5	27.0	101.6	119.1	1-3/8	19.1
215	2-15/16, 3	2-23/32	9-1/8	1-1/16	4-3/4	5-1/2	1-9/16	13/16
	70 mm, 75 mm	69.1	231.8	27.0	120.7	139.7	1-9/16	20.6

Series	Shaft size	H	J	K	L	M	N	T
204	3/4	5/8	2	1-1/4	1-3/8	3	3-5/8	1-3/8
	20 mm	15.9	50.8	31.8	34.9	76.2	92.1	34.9
205	7/8, 15/16, 1	5/8	2	1-5/16	1-9/16	3	3-5/8	1-3/8
	25 mm	15.9	50.8	33.3	39.7	76.2	92.1	34.9
206	1-1/8, 1-3/16	5/8	2-3/16	1-7/16	1-13/16	3-1/2	4-1/8	1-5/8
	30 mm	15.9	55.6	36.5	46.0	88.9	104.8	41.3
207	1-1/4, 1-3/8	5/8	2-1/2	1-7/16	2-1/8	3-1/2	4-1/8	1-5/8
	1-7/16, 1-1/2							
	35 mm	15.9	63.5	36.5	54.0	88.9	104.8	41.3
209	1-11/16, 1-3/4	3/4	3-1/4	1-15/16	2-9/16	4	4-3/4	1-15/16
	40 mm, 45 mm	19.1	82.6	49.2	65.1	101.6	120.7	49.2
210	1-15/16, 2	3/4	3-1/4	1-15/16	2-13/16	4	4-3/4	1-15/16
	50 mm	19.1	82.6	49.2	71.4	101.6	120.7	49.2
211	2-3/16	1	4	2-1/2	3-1/8	5-1/8	5-7/8	2-1/2
212	2-7/16, 2-1/2	1-1/4	4	2-1/2	3-1/2	5-1/8	5-7/8	2-1/2
	60 mm	31.8	101.6	63.5	88.9	130.2	149.2	63.5
215	2-15/16, 3	1-1/4	4-3/8	2-3/4	3-15/16	5-15/16	6-11/16	2-3/4
	70 mm, 75 mm	31.8	111.1	69.9	100.0	150.8	169.9	69.9

Solidlube LT take-up – inch

Top-angle (TP)



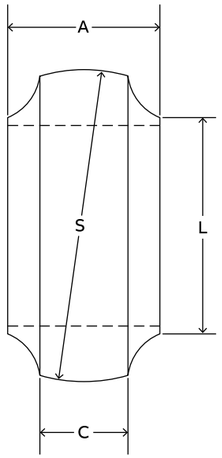
Solidlube LT take-up – inch

Top-angle (TP)

Shaft size	700 Series		1000 Series		Weight	Frame size
	Part number	Description	Part number	Description		
1-15/16	033739	TP-GLT7-115	033750	TP-GLT10-115	10.1	TP10
2	033740	TP-GLT7-200	033751	TP-GLT10-200		
2-3/16	033741	TP-GLT7-203	033752	TP-GLT10-203	11.8	TP20
2-7/16	033742	TP-GLT7-207	033753	TP-GLT10-207	14.1	TP30
2-1/2	033743	TP-GLT7-208	033754	TP-GLT10-208		
2-15/16	033744	TP-GLT7-215	033755	TP-GLT10-215	17.0	TP40
3	033745	TP-GLT7-300	033756	TP-GLT10-300		

Shaft size	A	B	C	D	E	J	L	T
1-15/16	1-5/8	6-1/2	2-3/8	6	3-1/4	6-3/8	2-13/16	2-3/8
2								
2-3/16	1-3/4	7	2-1/2	6-3/4	3-3/8	6-7/8	3-1/8	2-3/8
2-7/16	1-13/16	7-1/2	2-3/4	7	3-1/2	7-7/16	3-1/2	2-3/4
2-1/2								
2-15/16	2-23/32	8-1/2	2-1/2	8	4	8-5/16	3-15/16	2-3/4
3								

Solidlube LT bearing insert – inch



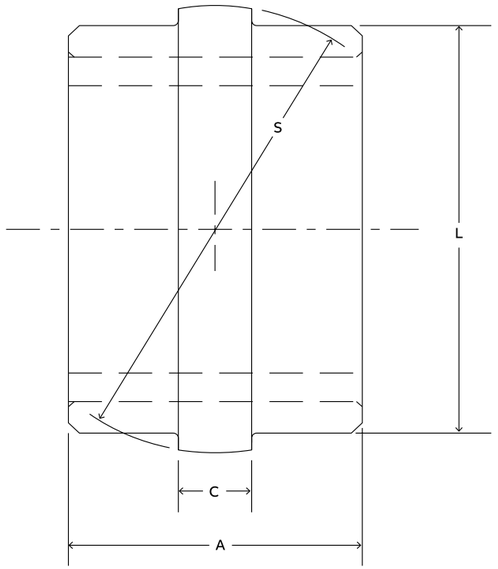
Series	Shaft size	700 series			1000 series		
		Part number	LT700 Series description	Weight	Part number	LT1000 Series description	Weight
204	3/4	033585	INS-LT7-012	0.30	033610	INS-LT10-012	0.30
	20 mm	034454	INS-LT7-20M	0.14	034455	INS-LT10-20M	0.14
205	7/8	033586	INS-LT7-014	0.50	033611	INS-LT10-014	0.50
	15/16	033587	INS-LT7-015	0.40	033612	INS-LT10-015	0.40
	1	033588	INS-LT7-100	0.30	033613	INS-LT10-100	0.30
	25 mm	034456	INS-LT7-25M	0.14	034457	INS-LT10-25M	0.14
206	1-1/8	033589	INS-LT7-102	0.70	033614	INS-LT10-102	0.70
	1-3/16	033590	INS-LT7-103	0.60	033615	INS-LT10-103	0.60
	30 mm	034458	INS-LT7-30M	0.32	034459	INS-LT10-30M	0.32
207	1-1/4	033591	INS-LT7-104	1.20	033616	INS-LT10-104	1.20
	1-3/8	033592	INS-LT7-106	1.00	033617	INS-LT10-106	1.00
	1-7/16	033593	INS-LT7-107	0.90	033618	INS-LT10-107	0.90
	1-1/2	033594	INS-LT7-108	0.80	033619	INS-LT10-108	0.80
	35 mm	034460	INS-LT7-35M	0.45	034461	INS-LT10-35M	0.45
209	1-11/16	033595	INS-LT7-111	1.60	033620	INS-LT10-111	1.60
	1-3/4	033596	INS-LT7-112	1.40	033621	INS-LT10-112	1.40
	40 mm	034462	INS-LT7-40M	0.73	034463	INS-LT10-40M	0.73
	45 mm	034464	INS-LT7-45M	0.64	034465	INS-LT10-45M	0.64
210	1-15/16	033597	INS-LT7-115	1.80	033622	INS-LT10-115	1.80
	2	033598	INS-LT7-200	1.60	033623	INS-LT10-200	1.60
	50 mm	034466	INS-LT7-50M	0.73	034467	INS-LT10-50M	0.73
211	2-3/16	033599	INS-LT7-203	2.30	033624	INS-LT10-203	2.30
212	2-7/16	033600	INS-LT7-207	3.20	033625	INS-LT10-207	3.20
	2-1/2	033601	INS-LT7-208	3.00	033626	INS-LT10-208	3.00
	60 mm	034468	INS-LT7-60M	1.45	034469	INS-LT10-60M	1.45
215	2-15/16	033602	INS-LT7-215	5.80	033627	INS-LT10-215	5.80
	3	034117	INS-LT7-300	5.50	034525	INS-LT10-300	5.50
	70 mm	034470	INS-LT7-70M	2.50	034471	INS-LT10-70M	2.50
	75 mm	034472	INS-LT7-75M		034473	INS-LT10-75M	

Weight is in pounds (lb) for inch bores and kilograms (kg) for metric bores

Solidlube LT bearing insert – inch

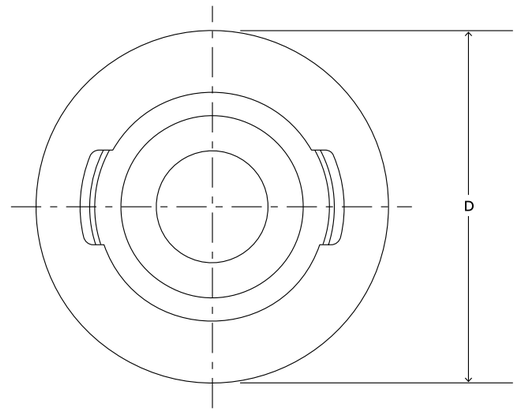
Series	Shaft size	A	C	L	S
204	3/4	1	5/8	1-3/8	1.8445/1.8425
	20 mm	25.4	15.9	34.9	46.850 / 46.800
205	7/8	1-1/16	5/8	1-9/16	2.0415/2.0395
	15/16				
	1				
	25 mm	27.0	15.9	39.7	51.854 / 51.803
206	1-1/8	1-3/16	11/16	1-13/16	2.435/2.433
	1-3/16				
	30 mm	30.2	17.5	46.0	61.849 / 61.798
207	1-1/4	1-5/16	13/16	2-1/8	2.829/2.827
	1-3/8				
	1-7/16				
	1-1/2				
	35 mm	33.3	20.6	54.0	71.857 / 71.806
209	1-11/16	1-9/16	13/16	2-9/16	3.3415/3.3395
	1-3/4				
	40 mm	39.7	20.6	65.1	84.874 / 84.823
	45 mm				
210	1-15/16	1-5/8	7/8	2-13/16	3.5375/3.5355
	2				
	50 mm	41.3	22.2	71.4	89.853 / 89.802
211	2-3/16	1-3/4	15/16	3-1/8	3.932/3.930
212	2-7/16	1-13/16	1-1/16	3-1/2	4.326/4.324
	2-1/2				
	60 mm	46.0	27.0	88.9	109.880 / 109.830
215	2-15/16	2-23/32	1-3/16	3-15/16	5.1135/5.1115
	3				
	70 mm	69.1	30.2	100.0	129.883 / 129.832
	75 mm				

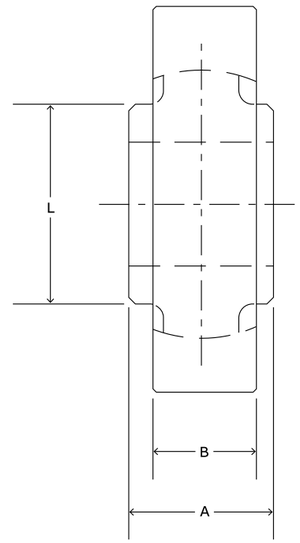
Solidlube MM bearing insert – inch



Shaft size	700 series		1000 series		Weight	A	C	L	S
	Part number	Description	Part number	Description				dia.	spherical dia.
3-7/16	034438	INS-MM7-307	034439	INS-MM10-307	6.4	3-1/2	7/8	4-7/8	5.182/5.180
3-1/2	034440	INS-MM7-308	034441	INS-MM10-308	6.2				
3-15/16	034442	INS-MM7-315	034443	INS-MM10-315	10.0	4	1-1/8	5-5/8	6.057/6.055
4	034444	INS-MM7-400	034445	INS-MM10-400	9.8				
4-7/16	034446	INS-MM7-407	034447	INS-MM10-407	20.0	4-1/2	1-1/4	6-15/16	7.370/7.367
4-1/2	034448	INS-MM7-408	034449	INS-MM10-408	19.7				
4-15/16	034450	INS-MM7-415	034451	INS-MM10-415	27.0	5	1-3/8	7-9/16	7.995/7.992
5	034452	INS-MM7-500	034453	INS-MM10-500	26.5				

Solidlube LT cylindrical units – inch

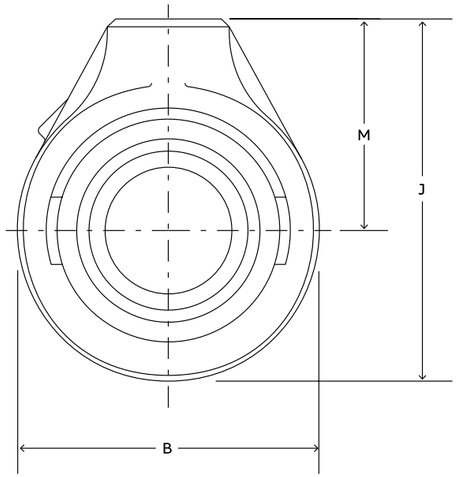


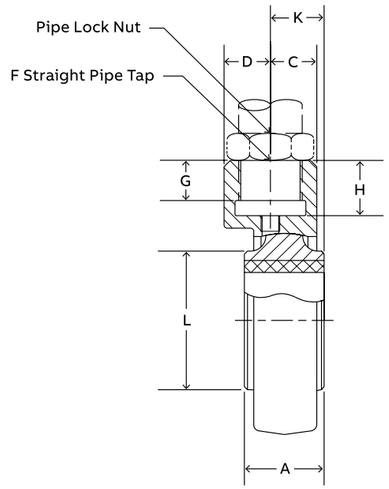


Shaft size	LT700			LT1000			A	B	D dia.	L
	Part number	Description	Weight	Part number	Description	Weight			+000 -0.002	
7/8	033961	CYL-LT7-014	1.5	422596	CYL-LT10-014	1.5	1-1/16	27/32	3-1/8	1- 9/16
15/16	033960	CYL-LT7-015		422595	CYL-LT10-015					
1	033962	CYL-LT7-100		422597	CYL-LT10-100					
1-1/8	033963	CYL-LT7-102	29.0	492598	CYL-LT10-102	2.9	1-3/16	15/16	3-1/2	1-13/16
1-3/16	033964	CYL-LT7-103		422599	CYL-LT10-103					
1-1/4	033965	CYL-LT7-104	3.0	422600	CYL-LT10-104	3.0	1- 5/16	1-1/16	3-7/8	2-1/8
1-3/8	033966	CYL-LT7-106		422601	CYL-LT10-106					
1-7/16	033967	CYL-LT7-107		422602	CYL-LT10-107					
1-1/2	033968	CYL-LT7-108		422603	CYL-LT10-108					

Note: No published metric dimensions for this product.

Solidlube LT screw conveyor hanger bearing – inch



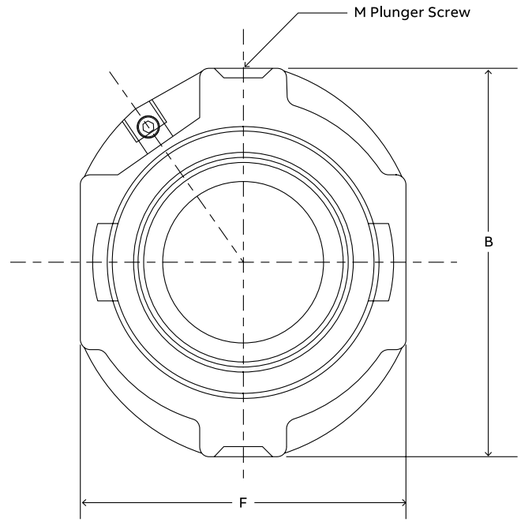


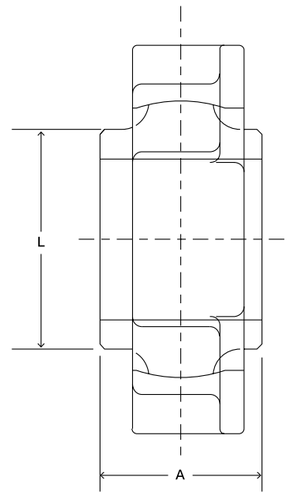
Series	Shaft size	LT700 series			LT1000 series		
		Part number	Description	Weight	Part number	Description	Weight
210	1-15/16	033937	SCHB-LT7-115	5.8	033952	SCHB-LT10-115	1.9
	2	033938	SCHB-LT7-200	5.7	033953	SCHB-LT10-200	2.0
212	2-7/16	033939	SCHB-LT7-207	7.1	033954	SCHB-LT10-207	5.0
	2-1/2	033940	SCHB-LT7-208	7.0	033955	SCHB-LT10-208	4.8

Series	Shaft size	A	B	C	D	F#	G	H	J	K	L	M
210	1-15/16	1-5/8	4-5//8	7/8	15/16	1	13/16	1-1/8	5-9/16	1-3/32	2-13/16	3-1/4
	2											
212	2-7/16	1-13/16	5-1/2	1-5/32	1-5/32	1-1/4	1-1/8	1-7/16	6-3/4	1-1/4	3-1/2	4
	2-1/2											

Note: No published metric dimensions for this product.

Solidlube LT hanger bearing – inch



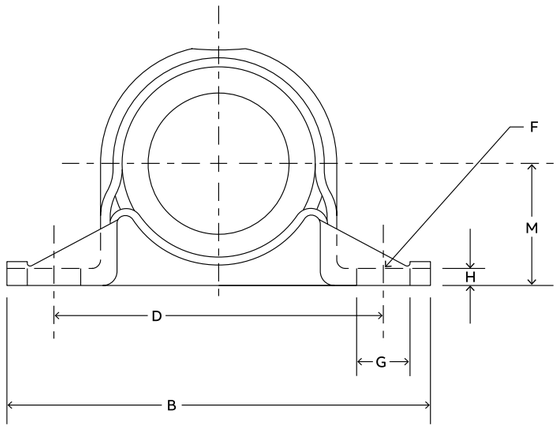


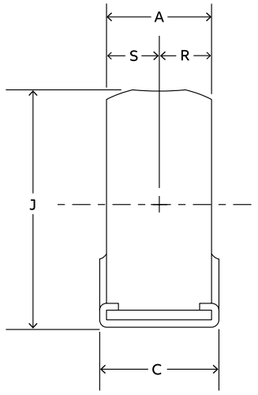
Shaft size	LT700		LT1000		Weight	A	B	F	L	M
	Part number	Description	Part number	Description						
1-1/8	033890	HNG-LT7-102	033900	HNG-LT10-102	1.9	1-3/16	3-5/8	3	1-13/16	1/2
1-3/16	033891	HNG-LT7-103	033901	HNG-LT10-103	2.0					
1-1/4	033892	HNG-LT7-104	033902	HNG-LT10-104	3.1	1-5/16	4-1/4	3-1/2	2-1/8	1/2
1-3/8	033893	HNG-LT7-106	033903	HNG-LT10-106	3.0					
1-7/16	033894	HNG-LT7-107	033904	HNG-LT10-107	2.9					
1-1/2	033895	HNG-LT7-108	033905	HNG-LT10-108	2.8					
1-15/16	033896	HNG-LT7-115	033906	HNG-LT10-115	5.0	1-5/8	5	4-3/16	2-13/16	5/8
2	033897	HNG-LT7-200	033907	HNG-LT10-200	4.8					

Note: No published metric dimensions for this product.

Solidlube LM800 pillow block – inch

2-bolt



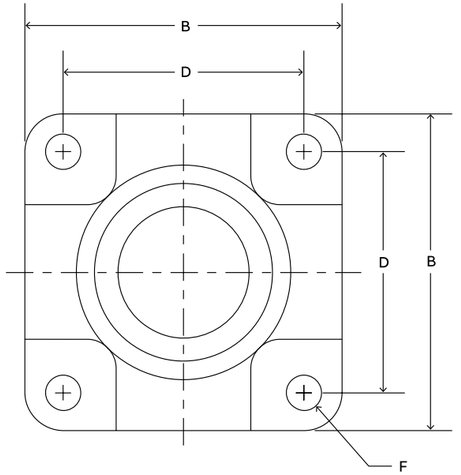


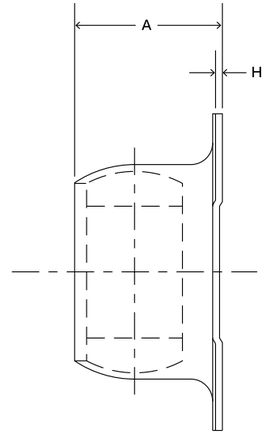
Shaft size	Part number	Description	Weight	A	B	C	D	F bolt dia.	G	H	J	M	R	S
3/4	033692	P2B-LM8-012	0.70	1	4	1-7/32	3	3/8	9/16	5/32	2-1/16	1-1/16	1/2	1/2
1	033693	P2B-LM8-100	0.22											
1-1/4	033694	P2B-LM8-104	0.70	1-1/8	4-1/2	1-11/32	3-1/2	3/8	9/16	5/32	2-9/16	1-5/16	9/16	9/16
1-1/2	033695	P2B-LM8-108	0.50											

Note: No published metric dimensions for this product.

Solidlube LM800 flange – inch

4-bolt

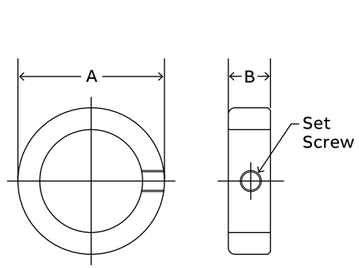


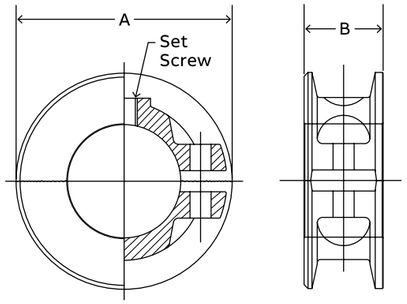


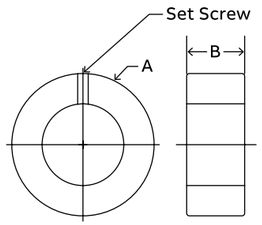
Shaft size	Part number	Description	Weight	A	B	D	F bolt dia.	H
3/4	033696	F4B-LM8-012	0.50	1-9/32	3-1/8	2-1/4	3/8	1/16
1	033697	F4B-LM8-100	0.36					
1-1/4	033698	F4B-LM8-104	0.50	1-11/16	3-5/8	2-3/4	3/8	1/16
1-1/2	033699	F4B-LM8-108	0.50					

Note: No published metric dimensions for this product.

Solidlube shaft collars – inch







Solid Steel

Shaft size	Part number *		Dimensions			
	Steel	Stainless	OD (A)	Width (B)	Screw	Wt.
1/8	—	456225	0.36	0.25	#6	0.01
3/16	040001	456226	0.44	0.25	#8	0.01
1/4	040002	456227	0.50	0.28	#10	0.01
5/16	040003	456228	0.63	0.34	#10	0.01
3/8	040004	456229	0.75	0.38	1/4	0.01
7/16	040005	—	0.88	0.44	1/4	0.05
1/2	040006	456230	1.00	0.44	1/4	0.1
9/16	040007	—	1.00	0.44	1/4	0.1
5/8	040008	456231	1.13	0.50	5/16	0.1
11/16	040009	—	1.25	0.56	5/16	0.1
3/4	040010	456232	1.25	0.56	5/16	0.1
13/16	040011	—	1.31	0.56	5/16	0.1
7/8	040012	456234	1.50	0.56	5/16	0.2
15/16	040013	—	1.63	0.56	5/16	0.2
1	040014	456234	1.63	0.63	5/16	0.2
1-1/16	040015	—	1.75	0.63	5/16	0.2
1-1/8	040016	456235	1.75	0.63	5/16	0.2
1-3/16	040017	—	2.00	0.69	3/8	0.4
1-1/4	040018	456236	2.00	0.69	3/8	0.4
1-5/16	040019	—	2.13	0.69	3/8	0.4
1-3/8	040020	—	2.13	0.75	3/8	0.4
1-7/16	040021	—	2.25	0.75	3/8	0.5
1-1/2	040022	456237	2.25	0.75	3/8	0.5
1-9/16	040023	—	2.50	0.81	3/8	0.7
1-5/8	040024	—	2.50	0.81	3/8	0.6
1-11/16	040025	—	2.50	0.81	3/8	0.6
1-3/4	040026	456238	2.75	0.88	1/2	0.8
1-7/8	040027	—	2.75	0.88	1/2	0.8
1-15/16	040028	—	3.00	0.88	1/2	1.0
2	040029	456239	3.00	0.88	1/2	1.0
2-3/16	040030	—	3.25	0.94	1/2	1.2
2-1/4	040031	—	3.25	0.94	1/2	1.2
2-7/16	040032	—	3.50	1.00	1/2	1.4
2-1/2	040033	—	3.50	1.00	1/2	1.3
2-15/16	040034	—	4.25	1.13	1/2	2.2

Note: Steel is mild carbon steel.
Stainless is 300-series stainless.
All sizes are fitted with one set screw.

Solid Iron

Shaft size	Part number	Dimensions		
		OD (A)	Width (B)	Wt.
1-15/16	010020	3.38	1.38	2.5
2	010021	3.38	1.38	2.5
2-3/16	010024	3.75	1.38	3.0
2-7/16	010028	4.25	1.50	4.3
2-1/2	010029	4.25	1.50	4.3
2-11/16	010032	4.75	1.50	5.0
2-15/16	010036	5.00	1.63	5.6
3-3/16	010039	5.50	1.63	7.0
3-7/16	010043	5.75	1.75	7.6
3-15/16	010048	6.50	1.88	10.0
4-7/16	010051	7.25	2.00	12.0
4-15/16	010054	8.00	2.13	16.3
5-7/16	010055	8.75	2.13	18.5
5-15/16	010056	9.25	2.25	23.0
6	010057	9.25	2.25	23.0
6-1/2	010058	10.00	2.25	25.0
7	010059	10.50	3.38	32.0
7-1/2	010060	11.38	2.50	35.0
8	010061	12.13	2.88	45.0

Note: Solid and split iron collars have one set screw through 3-1/4-inch bore size. 3-3/16-inch and larger bores have two set screws.

Split Iron

Shaft size	Part number	Dimensions		
		OD (A)	Width (B)	Wt.
1-1/8	010075	3.13	1.25	1.3
1-3/16	010076	3.13	1.25	1.3
1-1/4	010077	3.13	1.25	1.3
1-5/16	010078	3.38	1.44	1.8
1-7/16	010080	3.38	1.44	1.8
1-1/2	010081	3.38	1.44	1.8
1-11/16	010084	3.75	1.56	2.4
1-3/4	010085	3.75	1.56	2.4
1-15/16	010088	4.06	1.75	2.6
2	010089	4.06	1.75	2.6
2-3/16	010092	4.50	1.88	3.4
2-1/4	010093	4.50	1.88	3.4
2-7/16	010096	4.44	1.88	3.8
2-1/2	010097	4.88	2.00	4.3
2-11/16	010100	5.31	2.06	5.4
2-15/16	010104	5.50	1.88	4.6
3	010105	5.50	1.88	4.4
3-3/16	010107	6.06	2.38	8.0
3-7/16	010110	6.06	2.38	6.0
3-11/16	010112	6.81	2.63	10.6
3-15/16	010114	7.00	2.75	9.0
4-7/16	010117	8.13	3.31	17.0
4-15/16	010120	8.50	3.25	20.8
5-7/16	010123	9.00	3.25	23.0
5-15/16	010126	9.50	3.25	23.7
6	010127	10.13	4.06	35.0
6-1/2	010128	11.00	4.25	41.0
7	010129	12.00	4.50	46.0
7-1/2	010130	12.94	4.69	56.0
8	010131	13.50	4.88	71.0

Notes

Sleeve (plain)

B28-1	**Sleeve (plain)**
B28-2	**Features and benefits**
B28-3	**How to order**
B28-3	**Nomenclature**
B28-4	**Selection**
B28-10	**Dimensions**
B28-10	Babbitted
B28-10	Solid
B28-12	Split
B28-14	Rigid
B28-16	Angle
B28-18	Flange
B28-20	Bronze-Bushed
B28-20	Split
B28-21	Rigid
B28-22	Angle
B28-23	Bronzoil
B28-23	Pillow block
B28-24	Flange
B28-25	Shaft collar

Features and benefits

Babbitted, Bronze-Bushed, and Bronzoil

Babbitted

- MPTA load ratings
- Cast-iron housings
- 2- and 4-bolt housings
- Solid or fully split housing
- Babbitted bearing surface

Bronzed-Bushed

- Fully split housing
- Replaceable split bronze bushings
- Brass locking spool for easy bushing replacement

Bronzoil

- Self oiling bushing feeds oil to shaft
- Split pressed steel housing
- Statically self-aligning
- Bushing shoulder provides self-lubricating bearing thrust surface
- Slotted bolt holes
- Oil resistant rubber grommets available for sound isolation and static electricity protection

How to order

Babbitted, Bronze-Bushed, and Bronzoil

There are two ways to specify Dodge bearings—by six-digit part number or by description. Most of the products offered have part numbers with listings shown throughout this catalog. Use of part numbers ensures accurate order processing.

When part numbers are not shown, the product may be specified by description. This method is used when ordering units that include modifications or options. To order by description, use the nomenclature key shown for each product, adding any special instructions to the end of the description for options not covered by the nomenclature.

Babbitted

Grease lubricated for moderate speeds and loads, ambient temperature to 130 °F. Babbitt accurately bored to insure even load distribution for conveyor shafts, heavy gear, and chain drives use.

Bronze-Bushed

Grease lubricated for moderate speeds, ambient temperature to 300 °F and heavy loads or shock loads make the advantage of a precision replaceable bronze bushing desirable. Other bushing material is available on a special order basis, such as bronze with graphite plugs, or phenolic resin on nylon.

Bronzoil

Economical, statically self-aligning, and self-lubricating pillow blocks and four-bolt flange units for fans, light machinery, and other general use; ambient temperature to 180 °F.

Nomenclature

P2B - BASO - 108

Housings

P2B = Pillow block, 2-bolt

P4B = Pillow block, 4-bolt

F4B = Flange, 4-bolt

Shaft size

115 = First digit = Number of inches
Second and third digits = Sixteenths of an inch
115 – Indicates 1-15/16

50M = First two digits = Bore in millimeters;
M – Indicates metric dimension

Style

BASO = Babbitted solid journal bearing

BASP = Babbitted split journal bearing

BAR = Babbitted rigid split journal bearing

BAA = Babbitted angled split journal bearing

BAP = Babbitted plate (flanged) solid journal bearing

BO = Bronzoil journal bearing

BZSP = Bronze-Bushed split journal bearing

BZR = Bronze-Bushed rigid split journal bearing

BZA = Bronze-Bushed angled split journal bearing

Reference Guide
Type E Family (Tapered)
Specialty Tapered
Safety Mount Family (Spherical)
S-2000 (Spherical)
Unified SAF (Spherical)
Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

Selection

Babbitted

Scope – For stock Babbitted bearings and pillow blocks of the rigid, grease lubricated type.

Important – Referring to Table 1: Table 1 ratings apply to the following Dodge Babbitted sleeve bearings:

- Solid babbitted journals
- Split Babbitted journals
- Rigid Babbitted pillow blocks
- Angle Babbitted pillow blocks
- Plate-type flange bearings

Babbitted bearings do not include grease fittings.

Reference – Flush type reducer bushings to be used with part number 405015 1/8 NPT grease fitting:

To order 1/8 NPT grease fitting, confirm pipe tap dimension on bearing dimension page. If the pipe tap is 1/8, a flush type reducer bushing is not required. If the pipe tap is 1/4, 3/8 or 1/2; order the appropriate size flush type reducer bushing in addition to part number 405015.

Part number	Description
430081	1/2 x 1/8
430086	3/8 x 1/8
430087	1/4 x 1/8

Selection – Select a bearing from rating tables having a radial load equal to or greater than the actual radial load, provided that operating conditions numbered 1 through 7 are met.

If these conditions cannot be met, select a bearing for an equivalent radial load to be obtained by multiplying the actual radial load by a service factor depending on the specific application. Use a factor of up to 2.0 for areas in the rating table to the left of the zigzag line. Use a factor of up to 3.0 for areas to the right of the zigzag line.

Load ratings are based on industry standard ratings established by the mechanical power transmission association MPTA (Standard No. 401).

Operating conditions

1. Maintain adequate grease lubrication.

2. Maintain proper bearing alignment for uniform distribution of load under all operating conditions.

3. Normal running loads must not exceed ratings shown in the load tables. Starting and occasional peak loads should not exceed ratings by more than 100 percent.

4. Direction of load should not be closer than 30 degrees to grease groove or closer than 30 degrees to the joint between cap and base. If direction of load falls within this area which is not recommended, decrease maximum load by 50 percent.

5. The shaft journal surface finish must be equal to that of commercial steel shafting (about 32 micro inches) and the diameter within the tolerances of commercial steel shafting (+0.000 / -0.002)

6. Ambient temperature should not exceed 130 °F for babbitted limits and 300 °F for Bronze-Bushed bearings. If the shaft transmits heat from a source such as an oven, the shaft temperature at the bearing should not exceed these ambient temperatures.

7. Bearings should be protected against adverse operating conditions.

Babbitted

Table 1: MPTA radial load ratings for Babbitted sleeve bearings

Shaft size (in)	Radial load rating (lb) at various speeds (rpm)															
	10	50	100	150	200	250	300	350	400	450	500	600	700	800	900	1,000
1/2	100	100	100	95	95	95	95	95	90	90	90	85	85	85	80	80
5/8	150	150	145	145	140	140	135	135	135	130	130	125	120	115	110	110
3/4	180	175	175	170	170	165	160	160	155	155	150	145	140	130	125	120
7/8	260	255	250	245	240	235	230	225	220	215	210	200	190	180	150	—
15/16	280	275	265	260	255	250	245	240	235	225	220	210	200	185	105	—
1	295	290	285	280	270	265	260	250	245	240	230	220	205	—	—	—
1-1/8	415	410	400	390	380	370	355	345	335	325	315	295	245	—	—	—
1-3/16, 1-1/4	440	430	420	410	395	385	375	360	350	340	325	305	190	—	—	—
1-5/16, 1-3/8	585	570	555	535	520	505	485	470	455	435	420	345	—	—	—	—
1-7/16, 1-1/2	640	625	605	585	565	545	525	500	480	460	440	205	—	—	—	—
1-11/16, 1-3/4	875	850	820	785	755	720	690	655	625	590	340	—	—	—	—	—
1-15/16, 2	1,150	1,110	1,060	1,010	965	915	865	815	730	335	—	—	—	—	—	—
2-3/16, 2-1/4	1,460	1,400	1,330	1,260	1,190	1,120	1,050	975	410	—	—	—	—	—	—	—
2-7/16, 2-1/2	1,800	1,730	1,630	1,530	1,430	1,340	1,240	645	—	—	—	—	—	—	—	—
2-11/16, 2-3/4	2,190	2,080	1,950	1,820	1,690	1,560	1,150	110	—	—	—	—	—	—	—	—
2-15/16, 3	2,600	2,470	2,300	2,130	1,960	1,790	675	—	—	—	—	—	—	—	—	—
3-7/16, 3-1/2	3,550	3,330	3,060	2,790	2,520	1,200	—	—	—	—	—	—	—	—	—	—
3-15/16, 4	4,640	4,310	3,910	3,500	2,760	—	—	—	—	—	—	—	—	—	—	—
4-7/16, 4-1/2	5,870	5,410	4,830	4,250	1,410	—	—	—	—	—	—	—	—	—	—	—
4-15/16, 5	7,240	6,600	5,810	5,010	—	—	—	—	—	—	—	—	—	—	—	—
5-7/16, 5-12	8,750	7,900	6,840	4,360												
5-15/16, 6	10,410	9,300	7,910	2,390												
6-7/16, 6-1/2	12,200	10,790	9,020	—												
6-15/16, 7	14,120	12,360	10,150	—												
7-7/16, 7-1/2	17,270	14,950	12,050	—												
7-15/16, 8	18,390	15,750	10,710	—												
9	20,750	17,360	4,140													
10	22,950	18,760	—													
12	30,700	23,190	—													

For speeds lower than 10 rpm consult Application Engineering.

Bronze-Bushed

Scope – For stock Bronze-Bushed bearings and pillow blocks of the rigid, grease lubricated type.

Important – Referring to Table 2: Table 2 ratings apply to Dodge Bronze-Bushed pillow blocks:

- Split Bronze-Bushed journals
- Rigid Bronze-Bushed pillow blocks
- Angle Bronze-Bushed pillow blocks

Note: Ratings do not apply to Bronzoil, or Solidlube pillow blocks.

Bronze-Bushed journal bearings do not include grease fittings.

Reference – Flush type reducer bushings to be used with part number 405015 1/8 NPT grease fitting:

To order 1/8 NPT grease fitting, confirm pipe tap dimension on bearing dimension page. If the pipe tap is 1/8, a flush type reducer bushing is not required. If the pipe tap is 1/4, 3/8 or 1/2; order the appropriate size flush type reducer bushing in addition to part number 405015.

Part number	Description
430081	1/2 x 1/8
430086	3/8 x 1/8
430087	1/4 x 1/8

Selection – Select a bearing from rating tables having a radial load equal to or greater than the actual radial load, provided that operating conditions numbered 1 through 7 are met.

If these conditions cannot be met, select a bearing for an equivalent radial load to be obtained by multiplying the actual radial load by a service factor depending on the specific application. Use a factor of up to 2.0 for areas in the rating table to the left of the zigzag line. Use a factor of up to 3.0 for areas to the right of the zigzag line.

Load ratings are based on industry standard ratings established by the MPTA (Standard No. 401).

Operating conditions

1. Maintain adequate grease lubrication.

2. Maintain proper bearing alignment for uniform distribution of load under all operating conditions.

3. Normal running loads must not exceed ratings shown in the load tables. Starting and occasional peak loads should not exceed ratings by more than 100 percent.

4. Direction of load should not be closer than 30 degrees to grease groove or closer than 30 degrees to the joint between cap and base. If direction of load falls within this area which is not recommended, decrease maximum load by 50 percent.

5. The shaft journal surface finish must be equal to that of commercial steel shafting (about 32 micro inches) and the diameter within the tolerances of commercial steel shafting (+0.000 / -0.002).

6. Ambient temperature should not exceed 130 °F for babbitted limits and 300 °F for Bronze-Bushed bearings. If the shaft transmits heat from a source such as an oven, the shaft temperature at the bearing should not exceed these ambient temperatures.

7. Bearings should be protected against adverse operating conditions.

Bronze-Bushed

Table 2: MPTA radial load ratings for Bronze-Bushed sleeve bearings

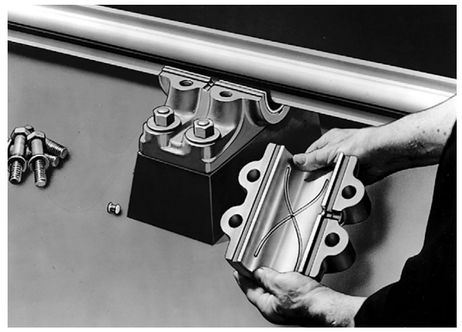
Shaft size (in)	Radial load rating (lb) at various speeds (rpm)															
	10	50	100	150	200	250	300	350	400	450	500	600	700	800	900	1,000
1/2	170	170	165	165	165	165	165	160	160	160	160	155	155	150	150	145
5/8	250	250	245	245	245	240	240	235	235	235	230	225	220	220	215	210
3/4	300	300	295	295	290	285	285	280	280	275	270	265	260	255	250	240
7/8	435	430	425	420	415	410	405	400	395	390	385	375	365	355	325	245
15/16	465	460	455	450	445	435	430	425	420	415	410	395	385	375	295	200
1	495	490	485	480	470	465	460	450	445	440	430	420	405	360	255	150
1-1/8	700	690	680	670	660	650	640	630	620	605	595	575	525	360	195	—
1-3/16, 1-1/4	735	730	715	705	695	680	670	660	645	635	625	600	485	300	115	—
1-5/16, 1-3/8	980	965	950	930	915	895	880	865	845	830	815	735	465	195	—	—
1-7/16, 1-1/2	1,070	1,050	1,030	1,010	995	975	955	935	915	895	875	635	315	—	—	—
1-11/16, 1-3/4	1,470	1,440	1,410	1,370	1,340	1,310	1,280	1,240	1,210	1,180	930	410	—	—	—	—
1-15/16, 2	1,920	1,880	1,830	1,790	1,740	1,690	1,640	1,590	1,500	1,110	715	—	—	—	—	—
2-3/16, 2-1/4	2,440	2,390	2,320	2,240	2,170	2,100	2,030	1,960	1,390	830	265	—	—	—	—	—
2-7/16, 2-1/2	3,020	2,940	2,850	2,750	2,650	2,560	2,460	1,860	1,090	—	—	—	—	—	—	—
2-11/16, 2-3/4	3,660	3,560	3,430	3,300	3,170	3,040	2,620	1,580	545	—	—	—	—	—	—	—
2-15/16, 3	4,370	4,230	4,060	3,890	3,720	3,550	2,440	—	—	—	—	—	—	—	—	—
3-7/16, 3-1/2	5,960	5,740	5,470	5,200	4,930	3,610	1,440	—	—	—	—	—	—	—	—	—
3-15/16, 4	7,790	7,460	7,060	6,650	5,910	—	—	—	—	—	—	—	—	—	—	—
4-7/16, 4-1/2	9,860	9,400	8,820	8,240	5,400	—	—	—	—	—	—	—	—	—	—	—
4-15/16, 5	12,180	11,540	10,740	9,950	4,090	—	—	—	—	—	—	—	—	—	—	—
5-7/16, 5-1/2	14,740	13,880	12,820	10,340	1,820											
5-15/16, 6	17,530	16,420	15,040	9,520	—											
6-7/16, 6-1/2	20,560	19,150	17,390	7,900	—											
6-15/16, 7	23,840	22,070	19,870	5,350	—											
7-7/16, 7-1/2	29,170	26,850	23,950	1,880	—	For speeds lower than 10 rpm consult Application Engineering.										
7-15/16, 8	31,090	28,450	23,410	—	—											
9	35,150	31,760	18,540													
10	38,950	34,760	2,220													
12	52,300	45,520	—													

Bronze-Bushed

Replacement bushings

U.S. Patent No. 3.071.419

Lower half of new bushing is installed by relieving shaft pressure, prying out old bushing and rolling in new one.



New bushing upper half is easily dropped into bearing cap. Grease grooves in the top of bore offer adequate lubrication.

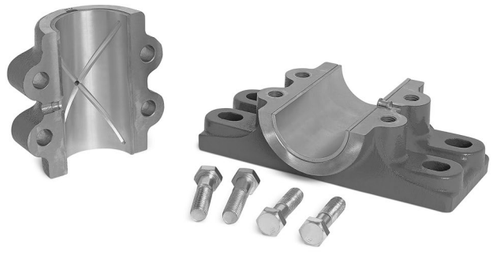
- For split Bronze-Bushed journal bearings
- For rigid Bronze-Bushed pillow blocks
- For angle Bronze-Bushed pillow blocks

These precision bushings are machined from quality cast cylinders of high grade leaded bronze. They are furnished in matched halves and sold in complete sets only. Grease grooves are provided in the top half for proper lubrication. Bushings are designed to be installed in the bearings listed above without removing the shaft or bearing base. A brass locking spool positions the bushing preventing lateral movement or rotation. This simple method minimizes down time and labor costs. They are particularly suited for heavy loads, elevated temperatures and corrosive conditions.

Bronze bushing sets ♦

Shaft size (in)	Bushing sets†		Locking spools*
	Part number	Weight	Part number
1-15/16	005055	1.70	005050
2-3/16	005056	2.10	
2-7/16	005057	2.50	
2-11/16	005058	3.10	
2-15/16	005059	3.60	
3-7/16	005060	4.90	
3-15/16	005061	9.70	005051
4-7/16	005062	14.00	
4-15/16	005063	15.00	
5-7/16	005064	18.00	005052
5-15/16	005065	21.00	
6-1/2	005066	28.00	005053
7	005067	33.00	
7-1/2	005117	37.00	
8	005068	42.00	

♦ For other bushing material consult Dodge Application Engineering.
† Part number is for one bushing set which includes upper and lower half.
* Order separately if desired.



Bronzoil

Select a bearing from the rating tables having a radial load equal to or greater than the actual load providing normal operating conditions are met. If these conditions cannot be met, select a bearing for an equivalent radial load to be obtained by multiplying the actual radial load by a 2.0 to 4.0 service factor—depending on specific application.

Normal operating conditions:

1. Adequate oil supply.
2. Proper bearing alignment for uniform distribution of load at all operating conditions.
3. No shock loading.
4. No adversely high operating conditions.
5. No moist, corrosive, or abrasive atmosphere.
6. Shaft surface finish must be equal to that of commercial steel shafting (about 32 micro inches).
7. Shaft diameter tolerance within +0.000/ -0.002.
8. Maximum operating temperature 180 °F.

Radial load ratings for Bronzoil sleeve bearings

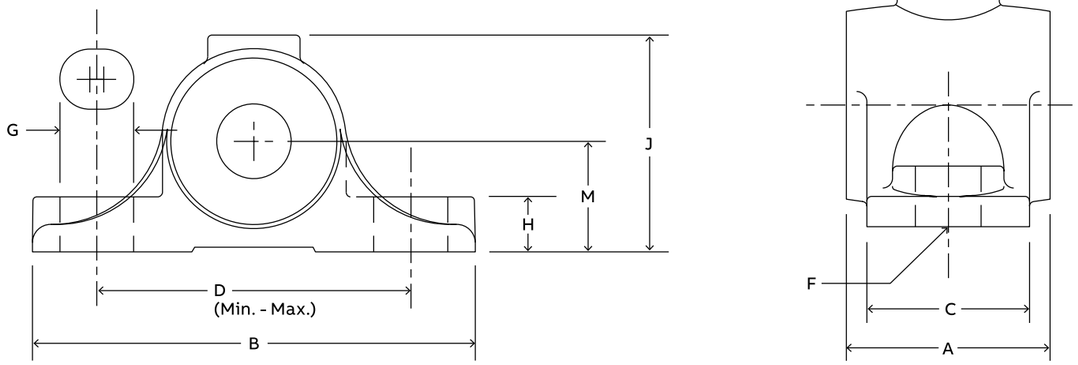
Shaft sizes (in)	Radial load rating (lb) at various speeds (rpm)					
	50	100	200	500	1,000	1,500
1/2	230	225	220	175	120	110
5/8	250	240	230	180	125	105
3/4	260	250	240	185	130	100
7/8	280	270	260	190	145	95
15/16	380	360	290	200	150	90
1	420	400	300	210	160	85
1-3/16	500	475	395	250	135	115
1-1/4	525	500	415	260	140	120

Shaft sizes (in)	Radial load rating (lb) at various speeds (rpm)				
	2,000	2,500	3,000	3,500	4,000
1/2	90	80	60	50	45
5/8	80	65	55	45	35
3/4	70	55	50	35	—
7/8	60	50	45	—	—
15/16	55	45	40	—	—
1	50	40	—	—	—
1-3/16	60	—	—	—	—
1-1/4	63	—	—	—	—

Dimensions

Babbitted pillow block – inch

2-bolt, solid



Shaft size	Part number	Description	Weight	Frame	A	B	C	D	
								Min.	Max.
1/2	006102	P2B-BASO-008	0.6	LD-10	1-1/4	3	1	2-1/32	2-7/32
5/8	006104	P2B-BASO-010	1.0	LD-10	1-1/2	3-1/2	1-1/8	2-13/32	2-19/32
3/4	006107	P2B-BASO-012	0.9						
7/8	006109	P2B-BASO-014	1.7	LD-10	1-7/8	4	1-1/2	2-7/8	3-1/8
15/16	006110	P2B-BASO-015	1.6						
1	006111	P2B-BASO-100	1.5						
1-1/8	006113	P2B-BASO-102	2.7	LD-10	2-3/8	4-3/4	1-3/4	3-3/8	3-5/8
1-3/16	006114	P2B-BASO-103	2.6						
1-1/4	006115	P2B-BASO-104	2.5						
1-5/16	006117	P2B-BASO-105	4.4	—	2-7/8	5-1/2	2	3-7/8	4-1/8
1-3/8	006118	P2B-BASO-106	4.2						
1-7/16	006119	P2B-BASO-107	4.0						
1-1/2	006120	P2B-BASO-108	3.8						
1-11/16	006124	P2B-BASO-111	6.0	LD-20	3-3/8	6-1/4	2-1/4	4-11/32	4-21/32
1-3/4	006125	P2B-BASO-112	5.8						
1-15/16	006128	P2B-BASO-115	8.2	—	3-7/8	7	2-1/2	5-1/8	5-3/8
2	006129	P2B-BASO-200	8.0						
2-3/16	006132	P2B-BASO-203	12	—	4-3/8	7-3/4	2-3/4	5-1/2	6
2-7/16	006136	P2B-BASO-207	15	—	4-7/8	8-1/2	3	6	6-1/2
2-11/16	006140	P2B-BASO-211	19	—	5-3/8	9-1/4	3-1/4	6-1/2	7
2-15/16	006144	P2B-BASO-215	25	LD-45	5-7/8	10	3-1/2	7-9/32	7-23/32
3-3/16	006148	P2B-BASO-303	33	—	6-7/8	10-3/4	4	7-5/8	8-3/8
3-7/16	006152	P2B-BASO-307	30						

Note: No published metric dimensions for this product.

Babbitted pillow block – inch

2-bolt, solid

Shaft size	F bolt	G	H	J	M	Grease cups #		
						Pipe tap	Number required	Size
1/2	5/16	1/2	3/8	1-15/32	3/4	1/8	1	0
5/8	5/16	1/2	1/2	1-23/32	7/8	1/8	1	0
3/4								
7/8	3/8	9/16	5/8	2	1	1/8	1	0
15/16								
1								
1-1/8	7/16	21/32	11/16	2-7/16	1-1/4	1/8	1	0
1-3/16								
1-1/4								
1-5/16	1/2	11/16	7/8	2-3/4	1-3/8	1/4	1	0
1-3/8								
1-7/16								
1-1/2								
1-11/16	9/16	13/16	1	3-1/16	1-1/2	1/4	1	0
1-3/4								
1-15/16	5/8	13/16	1-1/8	3-1/2	1-3/4	1/4	1	0
2								
2-3/16	11/16	1-1/32	1-1/4	3-13/16	1-7/8	3/8	1	2
2-7/16	3/4	1-1/8	1-3/8	4-1/4	2-1/8	3/8	1	2
2-11/16	13/16	1-5/32	1-1/2	4-9/16	2-1/4	3/8	1	2
2-15/16	7/8	1-5/32	1-11/16	5	2-1/2	3/8	1	2
3-3/16	1	1-7/16	1-7/8	5-7/16	2-3/4	3/8	1	2
3-7/16								

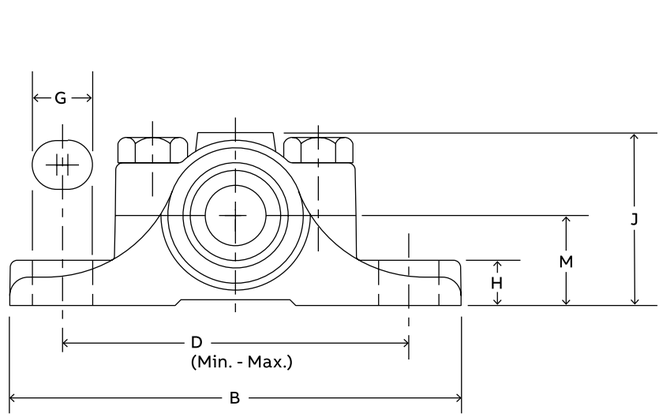
Grease cups or pressure fittings may be obtained through our distributors; one required per bearing.

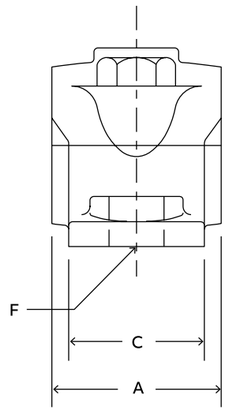
Note: All blocks have two base bolts and are one piece solid housings.

No published metric dimensions for this product.

Babbitted pillow block – inch

2-bolt, split





Shaft size	Part number	Description	Weight	A	B	C	D	
							Min.	Max.
1/2	006001	P2B-BASP-008	0.8	1-1/4	3-3/4	1	2-3/4	3
5/8	006004	P2B-BASP-010	1.1	1-1/2	4-1/4	1-1/8	3-1/8	3-3/8
3/4	006007	P2B-BASP-012	1.0					
7/8	006010	P2B-BASP-014	1.9					
15/16	006013	P2B-BASP-015	1.8	2	4-3/4	1-1/2	3-1/2	3-3/4
1	006016	P2B-BASP-100	1.7					
1-1/16	006019	P2B-BASP-101	3.3	2-1/2	5-1/4	1-3/4	4	4-1/4
1-1/8	006022	P2B-BASP-102	3.2					
1-3/16	006025	P2B-BASP-103	3.1					
1-1/4	006028	P2B-BASP-104	3.0					
1-5/16	006031	P2B-BASP-105	5.0	3	6-1/4	2	4-13/16	4-15/16
1-3/8	006034	P2B-BASP-106	4.8					
1-7/16	006037	P2B-BASP-107	1.6					
1-1/2	006040	P2B-BASP-108	4.4					
1-5/8	006043	P2B-BASP-110	6.6	3-3/8	6-3/4	2-1/4	5-1/8	5-3/8
1-11/16	006046	P2B-BASP-111	6.4					
1-3/4	006049	P2B-BASP-112	6.2					
1-15/16	006052	P2B-BASP-115	8.6	4	7-1/2	2-1/2	5-15/16	6-1/16
2	006055	P2B-BASP-200	8.3					
2-3/16	006058	P2B-BASP-203	12.2	4-1/2	8-1/2	2-3/4	6-1/4	6-3/4
2-1/4	006061	P2B-BASP-204	11.9					
2-7/16	006064	P2B-BASP-207	15.6	5	9-1/4	3	6-7/8	7-3/8
2-1/2	006067	P2B-BASP-208	15.1					
2-11/16	006070	P2B-BASP-211	20.0	5-3/8	10	3-5/16	7-1/2	8
2-15/16	006073	P2B-BASP-215	24.2	6	10-3/4	3-1/2	8-1/4	8-3/4
3	006076	P2B-BASP-300	23.7					
3-7/16	006079	P2B-BASP-307	40	6-7/8	12	4	8-7/8	9-5/8
3-15/16	006082	P2B-BASP-315	53	7-7/8	13-1/2	4-1/2	10-3/32	10-29/32

Note: No published metric dimensions for this product.

Reference Guide
Type E Family (Tapered)
Specialty Tapered
Safety Mount Family (Spherical)
S-2000 (Spherical)
Unified SAF (Spherical)
Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

Babbitted pillow block – inch

2-bolt, split

Shaft size	F bolt	G	H	J	M	Grease cups #		
						Pipe tap	Number required	Size
1/2	5/16	1/2	23/64	1-15/32	3/4	1/8	1	0
5/8	5/16	1/2	1/2	1-23/32	7/8	1/8	1	0
3/4								
7/8	3/8	9/16	9/16	2	1	1/8	1	0
15/16								
1								
1-1/16	7/16	5/8	5/8	2-7/16	1-1/4	1/8	1	0
1-1/8								
1-3/16								
1-1/4								
1-5/16	9/16	11/16	3/4	2-3/4	1-3/8	1/4	1	0
1-3/8								
1-7/16								
1-1/2								
1-5/8	9/16	25/32	13/16	3-1/16	1-1/2	1/4	1	0
1-11/16								
1-3/4								
1-15/16	11/16	13/16	15/16	3-1/2	1-3/4	1/4	1	0
2								
2-3/16	11/16	1	1	3-13/16	1-7/8	3/8	1	2
2-1/4								
2-7/16	11/16	1	1-1/8	4-1/4	2-1/8	3/8	1	2
2-1/2								
2-11/16	13/16	1-1/8	1-3/16	4-9/16	2-1/4	3/8	1	2
2-15/16	13/16	1-1/8	1-5/16	5	2-1/2	3/8	1	2
3								
3-7/16	15/16	1-3/8	1-1/2	5-3/4	2-7/8	1/2	1	3
3-15/16	1	1-1/2	1-5/8	6-7/16	3-1/8	1/2	1	3

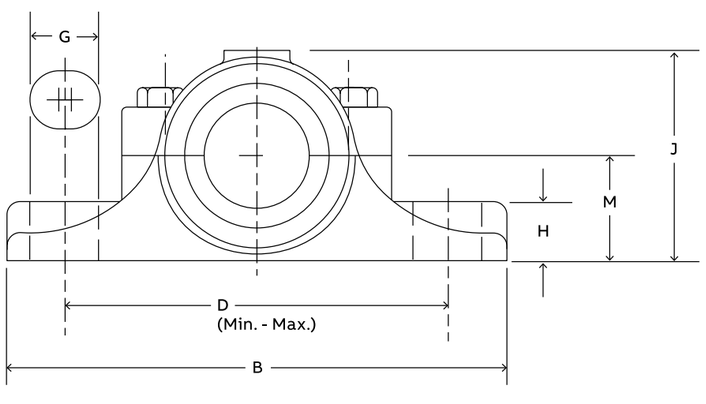
Grease cups or pressure fittings may be obtained through our distributors; one required per bearing.

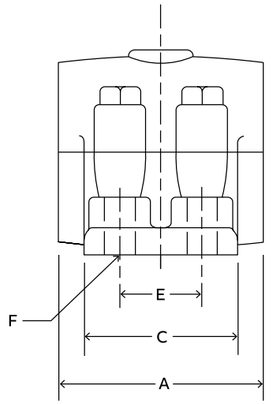
Note: All blocks have 2 base bolts and 2 cap bolts. Housings are split.

No published metric dimensions for this product.

Babbitted pillow block – inch

4-bolt, rigid, split





Shaft size	Part number	Description	Weight	A	B	C	D	
							Min.	Max.
1-15/16	004060	P4B-BAR-115	10.6	4	8-1/4	3-1/2	6-3/8	6-5/8
2	004063	P4B-BAR-200						
2-3/16	004066	P4B-BAR-203	13.2	4-1/2	8-1/2	3-1/2	6-5/8	6-7/8
2-1/4	004069	P4B-BAR-204						
2-7/16	004072	P4B-BAR-207	18.4	5	10-1/4	4	7-3/4	8-1/4
2-1/2	004075	P4B-BAR-208						
2-11/16	004078	P4B-BAR-211	22.4	5-1/2	10-1/2	4-1/4	8	8-1/2
2-15/16	004081	P4B-BAR-215	30.6	6	11	4-1/2	8-1/2	9
3	004084	P4B-BAR-300						
3-3/16	004087	P4B-BAR-303	50.2	7	13	5	10-1/8	10-7/8
3-7/16	004090	P4B-BAR-307						
3-1/2	004093	P4B-BAR-308						
3-15/16	004096	P4B-BAR-315	64	8	14-3/4	5-1/2	11-1/2	12-1/2
4-7/16	004099	P4B-BAR-407	88	9	16-1/2	6-1/4	13	14
4-15/16	004102	P4B-BAR-415	113	10	18	7	14-3/8	15-5/8
5-7/16	004105	P4B-BAR-507	147	11	19-1/4	7-3/4	15-1/8	16-3/8
5-15/16	004108	P4B-BAR-515	184	12	20-1/2	8-1/2	15-7/8	17-1/8
6-1/2	004113	P4B-BAR-608	255	13	22	9-1/2	17-3/8	18-5/8
7	004114	P4B-BAR-700	310	14	23	10	18-3/8	19-5/8
7-1/2	004115	P4B-BAR-708	370	15	24-1/2	10-1/2	19-3/8	20-5/8
8	004116	P4B-BAR-800	430	16	26	11	20-3/4	22-1/4

Note: No published metric dimensions for this product.

Reference Guide
Type E Family (Tapered)
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S-2000 (Spherical)
Unified SAF (Spherical)
Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

Babbitted pillow block – inch

4-bolt, rigid, split

Shaft size	E	F bolt	G	H	J	M	Grease cups #		
							Pipe tap	Number required	Size
1-15/16	1-3/4	1/2	3/4	7/8	3-1/2	1-3/4	1/4	1	1
2									
2-3/16	1-3/4	1/2	3/4	1	3-13/16	1-7/8	3/8	1	2
2-1/4									
2-7/16	2	5/8	1	1-1/8	4-1/4	2-1/8	3/8	1	2
2-1/2									
2-11/16	2-1/4	5/8	1	1-1/4	4-9/16	2-1/4	3/8	1	2
2-15/16	2-1/2	5/8	1	1-3/8	5	2-1/2	3/8	1	2
3									
3-3/16	2-3/4	3/4	1-1/4	1-1/2	5-29/32	3-1/4	1/2	1	3
3-7/16									
3-1/2									
3-15/16	3	3/4	1-3/8	1-5/8	6-17/32	3-1/2	1/2	1	4
4-7/16	3-1/2	7/8	1-1/2	1-3/4	7-17/32	4-1/8	1/2	1	4
4-15/16	4	7/8	1-5/8	1-7/8	8-7/32	4-1/2	1/2	1	4
5-7/16	4-1/2	1	1-3/4	2	9-1/32	5	1/2	2	3
5-15/16	5	1-1/8	1-7/8	2-1/8	9-7/8	5-1/2	1/2	2	3
6-1/2	5-1/2	1-1/8	1-7/8	2-1/4	10-23/32	6	1/2	2	4
7	6	1-1/4	2	2-3/8	11-1/2	6-1/2	1/2	2	4
7-1/2	6-1/4	1-3/8	2-1/8	2-1/2	12-5/32	6-3/4	1/2	2	4
8	6-3/4	1-3/8	2-1/4	2-1/2	12-3/4	7	1/2	2	4

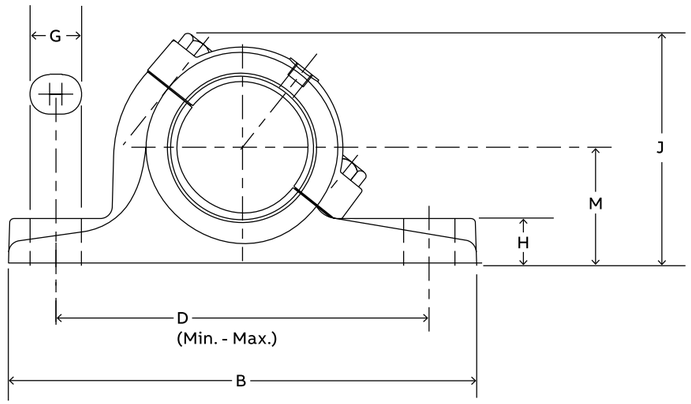
Grease cups or pressure fittings may be obtained through our distributors; one required per bearing up through 4-15/16 inches sizes and two required for balance of sizes.

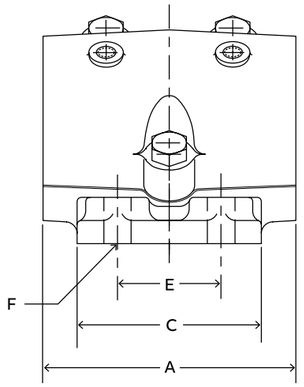
Note: 1-15/16—3 inches sizes have 2 cap bolts. 3-3/16-inch and larger sizes have 4 cap bolts (shown in diagram). Housings are split.

No published metric dimensions for this product.

Babbitted pillow block – inch

4-bolt, angle





Shaft size	Part number	Description	Weight	Used on frame	A	B	C	D	
								Min.	Max.
1-15/16	230050	P4B-BAA-115	11	HD-200	4	8-1/4	3-1/2	6-5/16	6-11/16
2-3/16	230053	P4B-BAA-203	14	HD-200	4-1/2	8-1/2	3-1/2	6-9/16	6-15/16
2-7/16	230056	P4B-BAA-207	20	HD-200	5	10-1/4	4	7-11/16	8-5/16
2-11/16	230059	P4B-BAA-211	24	HD-250	5-1/2	10-1/2	4-1/4	7-15/16	8-9/16
2-15/16	230062	P4B-BAA-215	28	HD-250	6	11	4-1/2	8-7/16	9-1/16
3-7/16	230065	P4B-BAA-307	47	HD-300	7	13	5	10-1/16	10-15/16
3-15/16	230068	P4B-BAA-315	61	HD-350	8	14-3/4	5-1/2	11-7/16	12-9/16
4-7/16	230071	P4B-BAA-407	84	HD-400	9	16-9/16	6-5/16	12-15/16	14-1/16
4-15/16	230074	P4B-BAA-415	112	HD-400	10	18	7	14-5/16	15-11/16
5-7/16	230077	P4B-BAA-507	154	HD-500	11	19-3/4	8	15-1/16	16-7/16
5-15/16	230080	P4B-BAA-515	184	HD-500	12	20-1/2	8-1/2	15-13/16	17-3/16
6-1/2	230134	P4B-BAA-608	220	—	13	22	9-5/8	17-3/16	18-13/16
7	230137	P4B-BAA-700	275	—	14	23	10	18-1/4	19-3/4
8	230140	P4B-BAA-800	400	—	16	26	11	20-11/16	22-5/16

Note: No published metric dimensions for this product.

Babbitted pillow block – inch
4-bolt, angle

Shaft size	E	F bolt	G	H	J	M	Grease cups #		
							Pipe tap	Number required	Size
1-15/16	1-3/4	1/2	3/4	7/8	4-11/16	2-1/4	1/4	1	1
2-3/16	1-3/4	1/2	3/4	1	5-1/8	2-1/2	3/8	1	2
2-7/16	2	5/8	1	1-1/8	5-9/16	2-3/4	3/8	1	2
2-11/16	2-1/4	5/8	1	1-1/4	5-7/8	3	3/8	1	2
2-15/16	2-1/2	5/8	1	1-3/8	6-3/8	3-1/4	3/8	1	2
3-7/16	2-3/4	3/4	1-1/4	1-1/2	7-1/8	3-1/2	1/2	1	3
3-15/16	3	3/4	1-3/8	1-21/32	7-1/2	3-3/4	1/2	1	4
4-7/16	3-1/2	7/8	1-1/2	1-3/4	8-1/2	4-1/8	1/2	1	4
4-15/16	4	7/8	1-5/8	1-7/8	9-3/16	4-1/2	1/2	1	4
5-7/16	4-1/2	1-1/8	1-7/8	2	10-1/4	5	1/2	2	3
5-15/16	5	1-1/8	1-7/8	2-1/8	11-1/16	5-1/2	1/2	2	3
6-1/2	5-1/2	1-1/8	2	2-1/4	12-1/8	6	1/2	2	4
7	6	1-1/8	2	2-3/8	13	6-1/2	1/2	2	4
8	6-3/4	1-3/8	2-1/4	2-1/2	14-1/16	7	1/2	2	4

Grease cups or pressure fittings may be obtained through our distributors; one required per bearing up through 4-15/16 inches sizes and two required for balance of sizes.

Note: 1-15/16—3-7/16 inches sizes have 2 cap bolts.

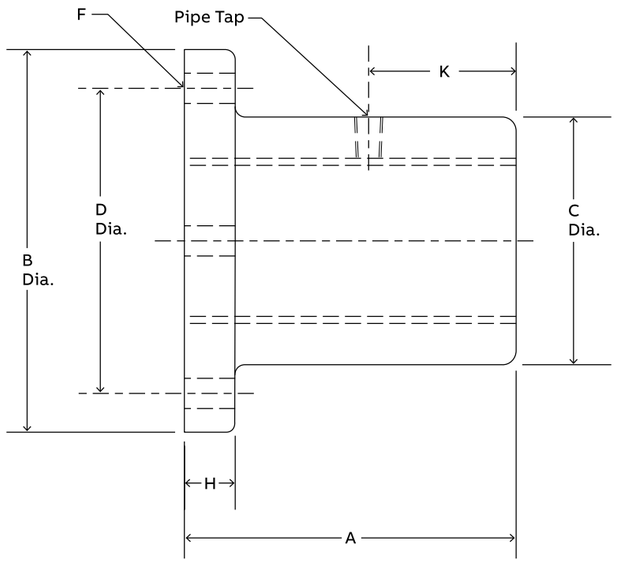
3-7/16—5-15/16 inches have 3 cap bolts (shown in diagram).

6-1/2-inch and larger sizes have 4 cap bolts.

No published metric dimensions for this product.

Babbitted flange – inch

Plate-type



Shaft size	Part number	Description	Weight	A	B dia.	C dia.	D dia.
15/16	037001	F4B-BAP-015	2	2	4	2	3
1	037010	F4B-BAP-100					
1-3/16	037002	F4B-BAP-103	3.6	2-1/2	4-1/2	2-1/2	3-1/2
1-1/4	037011	F4B-BAP-104					
1-7/16	037003	F4B-BAP-107	5.3	3	5-1/4	2-3/4	4
1-1/2	037012	F4B-BAP-108					
1-11/16	037004	F4B-BAP-111	8.6	3-1/2	6	3-1/4	4-3/4
1-15/16	037005	F4B-BAP-115	12	4	6-1/2	3-3/4	5-1/4
2	037013	F4B-BAP-200					
2-3/16	037006	F4B-BAP-203	17	4-1/2	7-1/2	4	5-3/4
2-7/16	037007	F4B-BAP-207	22	5	8	4-1/2	6-1/4
2-11/16	037017	F4B-BAP-211	32	5-1/2	9	5	7
2-15/16	037009	F4B-BAP-215	35	6	9-1/2	5-1/4	7-1/2
3-7/16	037020	F4B-BAP-307	53	7	10-3/8	6-1/4	8-1/2
3-15/16	037022	F4B-BAP-315	70	8	11-1/8	6-7/8	9-1/4
4-7/16	037024	F4B-BAP-407	103	9	12-5/8	7-3/4	10-1/2
4-15/16	037026	F4B-BAP-415	140	10	14	8-1/2	11-1/2

Note: No published metric dimensions for this product.

Reference Guide
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Specialty Tapered
Safety Mount Family (Spherical)
S-2000 (Spherical)
Unified SAF (Spherical)
Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

Babbitted flange – inch

Plate-type

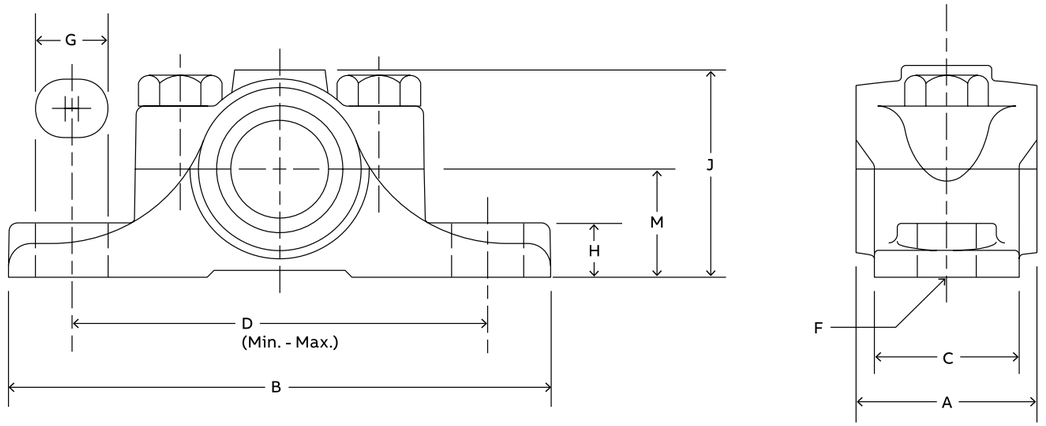
Shaft size	F bolt		H	K	Grease cups #	
	No.	Size			Pipe tap	Size
15/16	4	3/8	3/8	3/4	1/8	0
1						
1-3/16	4	3/8	7/16	1	1/8	0
1-1/4						
1-7/16	4	1/2	1/2	1-1/4	1/4	0
1-1/2						
1-11/16	4	1/2	5/8	1-1/2	1/4	0
1-15/16	4	1/2	11/16	1-5/8	1/4	1
2						
2-3/16	4	5/8	3/4	1-7/8	3/8	2
2-7/16	4	5/8	7/8	2-1/8	3/8	2
2-11/16	4	3/4	1	1-3/4	3/8	2
2-15/16	4	3/4	1	2-1/4	3/8	2
3-7/16	6	3/4	1	2-3/4	1/2	3
3-15/16	6	3/4	1-1/8	3-1/4	1/2	4
4-7/16	6	7/8	1-1/4	3-3/4	1/2	4
4-15/16	6	1	1-3/8	4-1/4	1/2	4

Grease cups or pressure fittings may be obtained through our distributors; one required per bearing.

Note: No published metric dimensions for this product.

Bronze-Bushed pillow block – inch

2-bolt, split



Shaft size	Part number	Description	Weight	A	B	C	D	
							Min.	Max.
1-15/16	005070	P2B-BZSP-115	9	3-7/8	7-1/2	2-1/2	5-15/16	6-1/16
2-3/16	005073	P2B-BZSP-203	12	4-3/8	8-1/2	2-3/4	6-1/4	6-3/4
2-7/16	005076	P2B-BZSP-207	15	4-7/8	9-1/4	3	6-7/8	7-3/8
2-11/16	005079	P2B-BZSP-211	20	5-3/8	10	3-1/4	7-1/2	8
2-15/16	005082	P2B-BZSP-215	24	6	10-3/4	3-1/2	8-1/4	8-3/4

Shaft size	F bolt	G	H	J	M	Grease cups #		
						Pipe tap	Number required	Size
1-15/16	5/8	13/16	15/16	3-1/2	1-3/4	1/4	1	0
2-3/16	5/8	1	1	3-7/8	1-7/8	3/8	1	2
2-7/16	5/8	1	1-1/8	4-1/4	2-1/8	3/8	1	2
2-11/16	3/4	1-1/8	1-3/16	4-9/16	2-1/4	3/8	1	2
2-15/16	3/4	1-1/8	1-5/16	5	2-1/2	3/8	1	2

Grease cups or pressure fittings may be obtained through our distributors; one required per bearing.

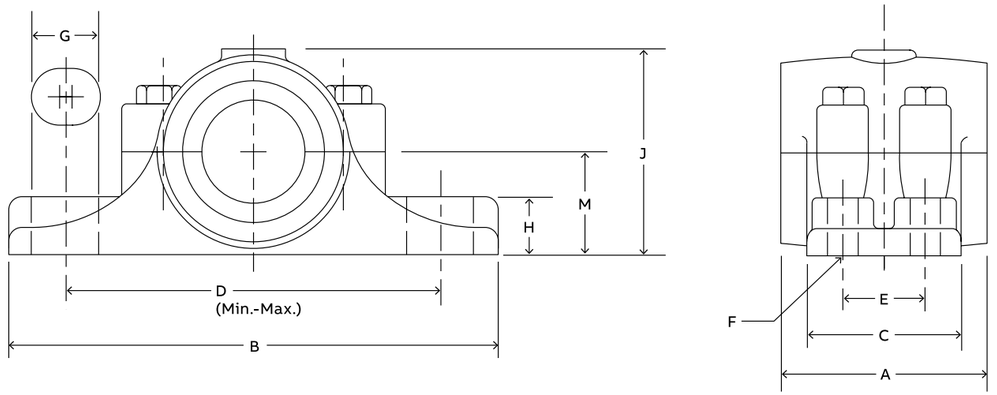
See page B28-6 for grease fitting and reducer bushing part numbers.

Note: All sizes have 2-bolt base and 2 cap bolts. Housings are split.

No published metric dimensions for this product.

Bronze-Bushed pillow block – inch

4-bolt, rigid



Shaft size	Part number	Description	Weight	A	B	C	D	
							Min.	Max.
3-7/16	005085	P4B-BZR-307	47	7	13	5	10-1/8	10-7/8
3-15/16	005088	P4B-BZR-315	64	8	14-3/4	5-1/2	11-1/2	12-1/2
4-7/16	005091	P4B-BZR-407	89	9	16-1/2	6-1/4	13	14
4-15/16	005094	P4B-BZR-415	115	10	18	7	14-3/8	15-5/8
5-7/16	005097	P4B-BZR-507	137	11	19-1/4	7-3/4	15-1/8	16-3/8
5-15/16	005100	P4B-BZR-515	180	12	20-1/2	8-1/2	15-7/8	17-1/8
6-1/2	005195	P4B-BZR-608	255	13	22	9-1/2	17-3/8	18-5/8
7	005198	P4B-BZR-700	310	14	23	10	18-3/8	19-5/8
7-1/2	005199	P4B-BZR-708	370	15	24-1/2	10-1/2	19-3/8	20-5/8
8	005201	P4B-BZR-800	430	16	26	11	20-3/4	22-1/4

Shaft size	E	F bolt	G	H	J	M	Grease cups #		
							Pipe tap	Number required	Size
3-7/16	2-3/4	3/4	1-1/4	1-1/2	6-1/32	3-1/4	1/2	1	3
3-15/16	3	3/4	1-3/8	1-5/8	6-1/2	3-1/2	1/2	1	4
4-7/16	3-1/2	7/8	1-1/2	1-3/4	7-15/32	4-1/8	1/2	1	4
4-15/16	4	7/8	1-5/8	1-7/8	8-1/32	4-1/2	1/2	1	4
5-7/16	4-1/2	1	1-3/4	2	8-15/16	5	1/2	2	3
5-15/16	5	1-1/8	1-7/8	2-1/8	9-13/16	5-1/2	1/2	2	3
6-1/2	5-1/2	1-1/8	1-7/8	2-1/4	10-11/16	6	1/2	2	4
7	6	1-1/4	2	2-3/8	11-7/16	6-1/2	1/2	2	4
7-1/2	6-1/4	1-3/8	2-1/8	2-1/2	12-1/8	6-3/4	1/2	2	4
8	6-3/4	1-3/8	2-1/4	2-1/2	12-11/16	7	1/2	2	4

Grease cups or pressure fittings may be obtained through our distributors; one required per pillow block through 4-15/16 inches sizes and two required for balance of sizes.

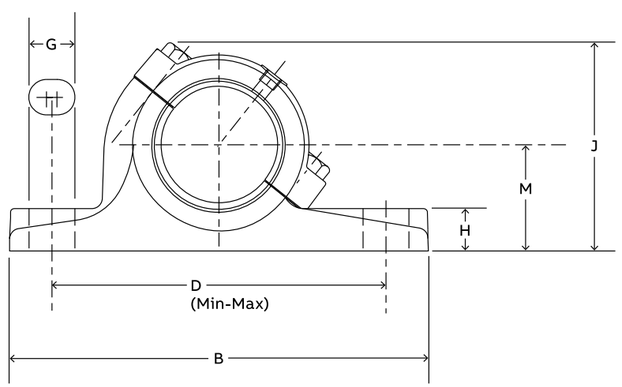
See page B28-6 for grease fitting and reducer bushing part number.

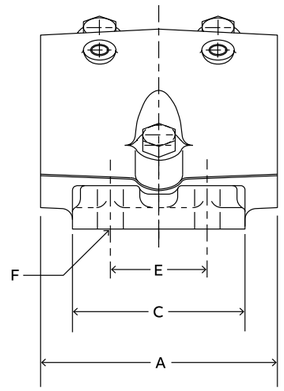
Note: All sizes have 4 base bolts. 3-7/16-inch and larger sizes have 4 cap bolts. Housings are split.

No published metric dimensions for this product.

Bronze-Bushed pillow block – inch

4-bolt, angle





Shaft size	Part number	Description	Weight	Used on frame	A	B	C	D	
								Min.	Max.
1-15/16	231063	P4B-BZA-115	10	HD-200	4	8-1/4	3-1/2	6-5/16	6-11/16
2-3/16	231069	P4B-BZA-203	14	HD-200	4-1/2	8-1/2	3-1/2	6-9/16	6-15/16
2-7/16	231075	P4B-BZA-207	20	HD-200	5	10-1/4	4	7-11/16	8-5/16
2-11/16	231081	P4B-BZA-211	22	HD-250	5-1/2	10-1/2	4-1/4	7-15/16	8-9/16
2-15/16	231087	P4B-BZA-215	28	HD-250	6	11	4-1/2	8-7/16	9-1/16
3-7/16	231096	P4B-BZA-307	46	HD-300	7	13	5	10-1/16	10-15/16
3-15/16	231102	P4B-BZA-315	62	HD-350	8	14-3/4	5-1/2	11-7/16	12-9/16
4-7/16	231108	P4B-BZA-407	85	HD-400	9	16-9/16	6-5/16	12-15/16	14-1/16
4-15/16	231114	P4B-BZA-415	109	HD-400	10	18	7	14-5/16	15-11/16
5-7/16	231120	P4B-BZA-507	142	HD-500	11	19-3/4	8	15-1/16	16-7/16
5-15/16	231126	P4B-BZA-515	180	HD-500	12	20-1/2	8-1/2	15-13/16	17-3/16
6-1/2	231135	P4B-BZA-608	220	—	13	22	9-5/8	17-3/16	18-13/16
7	231141	P4B-BZA-700	275	—	14	23	10	18-1/4	19-3/4
8	231150	P4B-BZA-800	400	—	16	26	11	20-11/16	22-5/16

Note: No published metric dimensions for this product.

Shaft size	E	F bolt	G	H	J	M	Cap bolts quantity	Grease cups #		
								Pipe tap	Quantity	Size
1-15/16	1-3/4	1/2	3/4	7/8	4-11/16	2-1/4	2	1/4	1	1
2-3/16	1-3/4	1/2	3/4	1	5-1/8	2-1/2	2	3/8	1	2
2-7/16	2	5/8	1	1-1/8	5-9/16	2-3/4	2	3/8	1	2
2-11/16	2-1/4	5/8	1	1-1/4	5-7/8	3	2	3/8	1	2
2-15/16	2-1/2	5/8	1	1-3/8	6-3/8	3-1/4	2	3/8	1	2
3-7/16	2-3/4	3/4	1-1/4	1-1/2	7-1/8	3-1/2	2	1/2	1	3
3-15/16	3	3/4	1-3/8	1-5/8	7-1/2	3-3/4	3	1/2	1	4
4-7/16	3-1/2	7/8	1-1/2	1-3/4	8-1/2	4-1/8	3	1/2	1	4
4-15/16	4	7/8	1-5/8	1-7/8	9-3/16	4-1/2	3	1/2	1	4
5-7/16	4-1/2	1	1-7/8	2	10-1/4	5	3	1/2	2	3
5-15/16	5	1-1/8	1-7/8	2-3/16	11-1/16	5-1/2	3	1/2	2	3
6-1/2	5-1/2	1-1/8	2	2-1/4	12-1/8	6	4	1/2	2	4
7	6	1-1/4	2	2-3/8	13	6-1/2	4	1/2	2	4
8	6-3/4	1-3/8	2-1/4	2-1/2	14-1/16	7	4	1/2	2	4

Grease cups or pressure fittings may be obtained through our distributors; one required per pillow block up through 4-15/16 inches sizes and two required for balance of sizes.
See page B28-6 for grease fitting and reducer bushing part number.

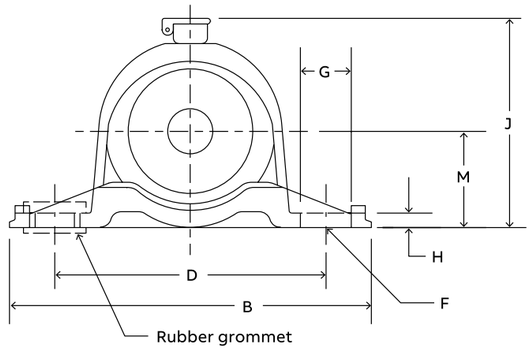
Note: 1-15/16—3-7/16 inches sizes have 2 cap bolts

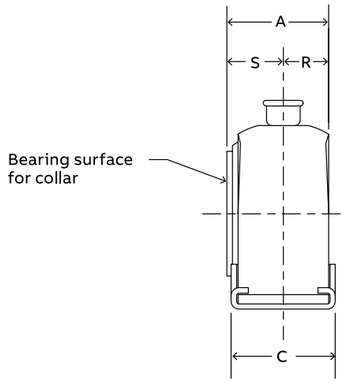
3-15/16—5-15/16 inches sizes have 3 cap bolt (shown in diagram)

6-1/2-inch and larger have 4 cap bolts.

Bronzoil pillow block – inch

2-bolt





Shaft size	Part number	Description	Weight	A	B	C	D	F	G	H	J	M	R	S
								Min.						
1/2	035025	P2B-BO-008												
5/8	035026	P2B-BO-010	0.6	1-1/8	4	1-3/16	3	3/8	9/16	5/32	2- 5/16	1-1/16	1/2	5/8
3/4	035027	P2B-BO-012												
7/8	035028	P2B-BO-014												
15/16	035029	P2B-BO-015	0.5	1-1/8	4	1-3/16	3	3/8	9/16	5/32	2-5/16	1-1/16	1/2	5/8
1	035030	P2B-BO-100												
1-3/16	035107	P2B-BO-103	1.3	1-3/4	4-1/2	1-1/4	3-1/2	3/8	9/16	5/32	2-13/16	1-5/16	7/8	7/8
1-1/4	035108	P2B-BO-104	1.2	1-3/4	4-1/2	1-1/4	3-1/2	3/8	9/16	5/32	2-13/16	1-5/16	27/32	29/32

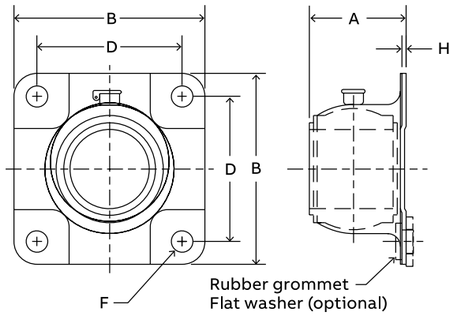
Note: No published metric dimensions for this product.

Grommets are optional and furnished on order only. Order (2) grommet long nipples (part number 035082) for each pillow block.

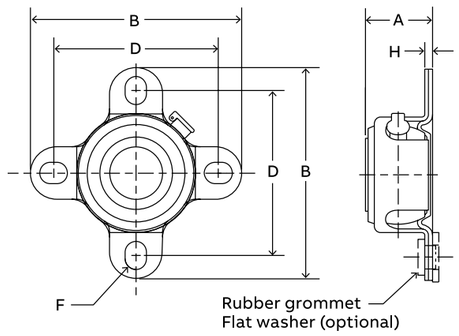
When grommets are used, the J and M dimensions increase by 1/16 inch, and the H dimension by 1/8 inch.
A 5/16-inch bolt and a washer must be used with each grommet. Washer part number 035084.

Bronzoil flange – inch

4-bolt



Style A



Style B

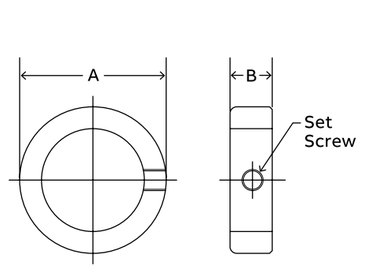
Shaft size	Part number	Description	Weight	A	B	D	F bolt	H	Style
1/2	035031	F4B-BO-008							
5/8	035032	F4B-BO-010	0.60	1-1/4	4	3-1/8	3/8	5/32	B
3/4	035033	F4B-BO-012							
7/8	035034	F4B-BO-014							
15/16	035035	F4B-BO-013	0.50	1-1/4	4	3-1/8	3/8	5/32	B
1	035036	F4B-BO-100							
1-3/16	035116	F4B-BO-103	1.30	1-7/8	3-5/8	2-3/4	3/8	1/16	A
1-1/4	035117	F4B-BO-104	1.20	1-29/32	3-5/8	2-3/4	3/8	1/16	A

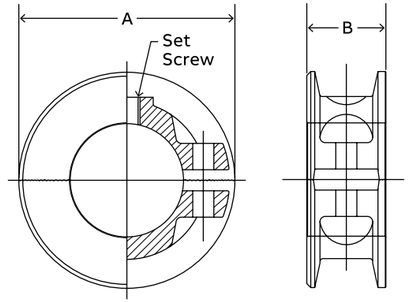
Note: No published metric dimensions for this product.

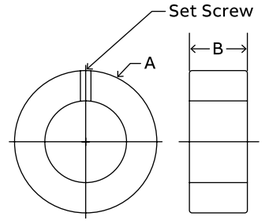
Grommets are optional and furnished on order only. Order (4) grommet short nipples (part number 035083) for each flange bearing.

When grommets are used, the A dimension increases by 1/16 inch and the H dimension by 1/8 inch.
A 5/16-inch bolt and a washer must be used with each grommet. Washer part number 035084.

Plain bearing shaft collars – inch







Solid steel

Shaft size	Part number *		Dimensions			
	Steel	Stainless	OD (A)	Width (B)	Screw	Wt.
1/8	—	456225	0.36	0.25	#6	0.01
3/16	040001	456226	0.44	0.25	#8	0.01
1/4	040002	456227	0.50	0.28	#10	0.01
5/16	040003	456228	0.63	0.34	#10	0.01
3/8	040004	456229	0.75	0.38	1/4	0.01
7/16	040005	—	0.88	0.44	1/4	0.05
1/2	040006	456230	1.00	0.44	1/4	0.1
9/16	040007	—	1.00	0.44	1/4	0.1
5/8	040008	456231	1.13	0.50	5/16	0.1
11/16	040009	—	1.25	0.56	5/16	0.1
3/4	040010	456232	1.25	0.56	5/16	0.1
13/16	040011	—	1.31	0.56	5/16	0.1
7/8	040012	456234	1.50	0.56	5/16	0.2
15/16	040013	—	1.63	0.56	5/16	0.2
1	040014	456234	1.63	0.63	5/16	0.2
1-1/16	040015	—	1.75	0.63	5/16	0.2
1-1/8	040016	456235	1.75	0.63	5/16	0.2
1-3/16	040017	—	2.00	0.69	3/8	0.4
1-1/4	040018	456236	2.00	0.69	3/8	0.4
1-5/16	040019	—	2.13	0.69	3/8	0.4
1-3/8	040020	—	2.13	0.75	3/8	0.4
1-7/16	040021	—	2.25	0.75	3/8	0.5
1-1/2	040022	456237	2.25	0.75	3/8	0.5
1-9/16	040023	—	2.50	0.81	3/8	0.7
1-5/8	040024	—	2.50	0.81	3/8	0.6
1-11/16	040025	—	2.50	0.81	3/8	0.6
1-3/4	040026	456238	2.75	0.88	1/2	0.8
1-7/8	040027	—	2.75	0.88	1/2	0.8
1-15/16	040028	—	3.00	0.88	1/2	1.0
2	040029	456239	3.00	0.88	1/2	1.0
2-3/16	040030	—	3.25	0.94	1/2	1.2
2-1/4	040031	—	3.25	0.94	1/2	1.2
2-7/16	040032	—	3.50	1.00	1/2	1.4
2-1/2	040033	—	3.50	1.00	1/2	1.3
2-15/16	040034	—	4.25	1.13	1/2	2.2

Note: Steel is mild carbon steel.
Stainless is 300-series stainless.
All sizes are fitted with one set screw.

Solid iron

Shaft size	Part number	Dimensions		
		OD (A)	Width (B)	Wt.
1-15/16	010020	3.38	1.38	2.5
2	010021	3.38	1.38	2.5
2-3/16	010024	3.75	1.38	3.0
2-7/16	010028	4.25	1.50	4.3
2-1/2	010029	4.25	1.50	4.3
2-11/16	010032	4.75	1.50	5.0
2-15/16	010036	5.00	1.63	5.6
3-3/16	010039	5.50	1.63	7.0
3-7/16	010043	5.75	1.75	7.6
3-15/16	010048	6.50	1.88	10.0
4-7/16	010051	7.25	2.00	12.0
4-15/16	010054	8.00	2.13	16.3
5-7/16	010055	8.75	2.13	18.5
5-15/16	010056	9.25	2.25	23.0
6	010057	9.25	2.25	23.0
6-1/2	010058	10.00	2.25	25.0
7	010059	10.50	3.38	32.0
7-1/2	010060	11.38	2.50	35.0
8	010061	12.13	2.88	45.0

Note: Solid and split iron collars have one set screw through 3-1/4-inch bore sizes. 3-3/16-inch and larger bores have two set screws

Split iron

Shaft size	Part number	Dimensions		
		OD (A)	Width (B)	Wt.
1-1/8	010075	3.13	1.25	1.3
1-3/16	010076	3.13	1.25	1.3
1-1/4	010077	3.13	1.25	1.3
1-5/16	010078	3.38	1.44	1.8
1-7/16	010080	3.38	1.44	1.8
1-1/2	010081	3.38	1.44	1.8
1-11/16	010084	3.75	1.56	2.4
1-3/4	010085	3.75	1.56	2.4
1-15/16	010088	4.06	1.75	2.6
2	010089	4.06	1.75	2.6
2-3/16	010092	4.50	1.88	3.4
2-1/4	010093	4.50	1.88	3.4
2-7/16	010096	4.44	1.88	3.8
2-1/2	010097	4.88	2.00	4.3
2-11/16	010100	5.31	2.06	5.4
2-15/16	010104	5.50	1.88	4.6
3	010105	5.50	1.88	4.4
3-3/16	010107	6.06	2.38	8.0
3-7/16	010110	6.06	2.38	6.0
3-11/16	010112	6.81	2.63	10.6
3-15/16	010114	7.00	2.75	9.0
4-7/16	010117	8.13	3.31	17.0
4-15/16	010120	8.50	3.25	20.8
5-7/16	010123	9.00	3.25	23.0
5-15/16	010126	9.50	3.25	23.7
6	010127	10.13	4.06	35.0
6-1/2	010128	11.00	4.25	41.0
7	010129	12.00	4.50	46.0
7-1/2	010130	12.94	4.69	56.0
8	010131	13.50	4.88	71.0

Notes

Accessories

B29-1 **Accessories**
B29-2 **Features and benefits**
B29-6 **How to order**
B29-7 **Nomenclature**
B29-8 **Dimensions**
B29-8 Light-duty (LD)
B29-12 Heavy-duty (HD)
B29-18 Top-angle (TP)
B29-20 Top-angle heavy-duty universal (TPHU)
B29-22 Center-pull (CP)
B29-26 Telescoping (TS)
B29-29 Bronzoil (BOTU)
B29-30 **IIoT technologies**

Features and benefits

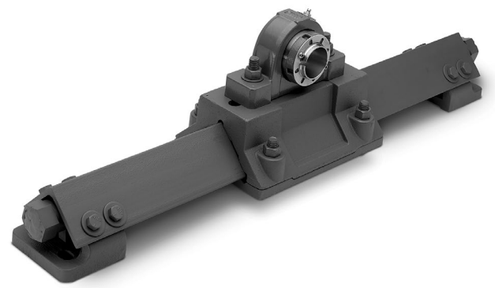
Take-up frame overview

Light-duty (LD) take-up frame

Six sizes of LD protected screw take-up frames - forty-five (45) take-up frames with 6 to 48 inches travel for:

- SC/SCB (ball bearing) pillow blocks from 1/2 through 2-15/16-inch bore size
- SXR/SXRB and SXV/SXVB (ball bearing) pillow blocks from 1/2 through 2-7/16-inch bore size
- DL/DLB (ball bearing) pillow blocks from 3/4 through 2-15/16-inch bore size
- SCM (ball bearing) pillow blocks from 1-7/16 through 3-1/2-inch bore size
- DLM (ball bearing) pillow blocks from 1 through 3-7/16-inch bore size
- Babbitted (sleeve) solid journal bearing from 1/2 through 2-15/16-inch bore size
- Solidlube (sleeve) LT700 and LT1000 series pillow blocks from 3/4 through 3-inch bore size
- Solidlube (sleeve) LTB700 and LTB1000 series pillow blocks from 3/4 through 2-1/2-inch bore size
- Unisphere (spherical roller) two (2) bolt base pillow block from 1-7/16 through 3-1/2-inch bore sizes
- Safety Mount (spherical roller) two (2) bolt base pillow block from 1-7/16 through 3-15/16-inch bore size
- GT/GTB (ball bearing) pillow blocks from 1/2 through 2-15/16-inch bore size
- GTM (ball bearing) pillow blocks from 1 through 3-7/16-inch bore size

Take-up frame overview

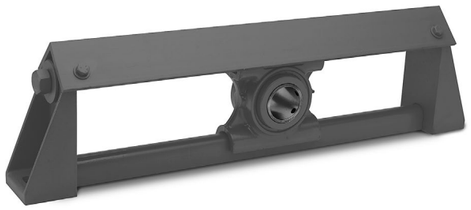


Heavy-duty (HD) take-up frame

Eight sizes of HD protected screw take-up frames – forty-one (41) take-up frames with travels from 12 to 60 inches for:

- Angle babbitted (sleeve) pillow blocks from 1-15/16 through 5-15/16-inch bore size
- Angle bronze-bushed (sleeve) pillow blocks from 1-15/16 through 5-15/16-inch bore size
- Type E (tapered roller) pillow blocks from 1-1/2 through 6-inch bore size
- Type K (tapered roller) pillow blocks from 1-1/2 through 3-15/16-inch bore size
- K/DI (tapered roller) pillow blocks from 1-1/2 through 5-inch bore size
- Type C (tapered roller) pillow blocks from 1-11/16 through 5-inch bore size
- Special duty (tapered roller) pillow blocks from 2-11/16 through 6-inch bore size
- Solidlube (sleeve) MM700 and MM1000 series pillow blocks from 3-7/16 through 5-inch bore size
- SAF-XT, TAF, ISAF, etc. (spherical and tapered roller) pillow blocks from 1-15/16 through 5-1/2-inch bore size and larger
- USAF, SAFS (spherical) pillow blocks, 2-bolt and 4-bolt, from 2-7/16 through 5-1/2-inch bore size
- S-2000 (spherical) pillow blocks, 2-bolt and 4-bolt, from 1-7/8 through 5-inch bore size
- Unisphere (spherical roller) 2-bolt base pillow blocks from 1-15/16 through 4-inch bore sizes
- Safety Mount (spherical roller) 2-bolt and 4-bolt pillow blocks from 1-15/16 through 4-15/16-inch bore size
- For larger bore bearings, use HD600 or HD650, consult Dodge Application Engineering

Take-up frame overview



Top-angle (TP) take-up frame

Six sizes of Top-angle take-up frames – thirty-six (36) take-up frames with travels of 12 to 48 inches for:

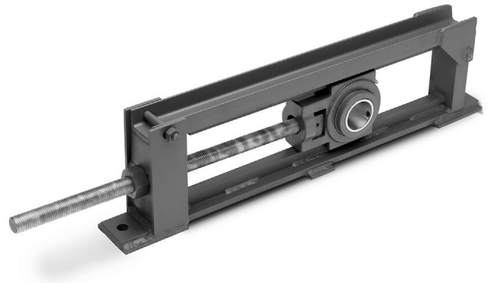
- GLT-700 and GLT-1000 Series (Solidlube sleeve) take-up bearings from 1-15/16 through 3-inch shaft size
- Type H (babbitted sleeve) take-up bearings from 1-15/16 through 3-15/16-inch shaft size
- Type G (SC ball bearing) take-up bearings from 1-15/16 through 2-15/16-inch shaft size
- Type GXR (SXR ball bearing) take-up bearings from 1-15/16 through 2-7/16-inch shaft size
- Type GM (SCM ball bearing) take-up bearings from 1-11/16 through 3-1/2-inch shaft size
- Type E (tapered roller) take-up bearings from 1-3/4 through 4-inch shaft size
- Type K (tapered roller) take-up bearings from 1-3/4 through 3-15/16-inch shaft size
- TPHU S-2000 (spherical roller) take-up bearings from 1-15/16 through 3-15/16-inch shaft size

Top-angle heavy-duty universal (TPHU) take-up frame

Six sizes of Top-angle heavy-duty universal take-up frames – twenty-four (24) take-up frames with travels of 12 to 36 inches for:

- Safety Mount IP (spherical roller) TPHU take-up bearings from 2-3/16 through 4-15/16-inch shaft size
- TPHU S-2000 (spherical roller) take-up bearings from 1-15/16 through 4-15/16-inch shaft size

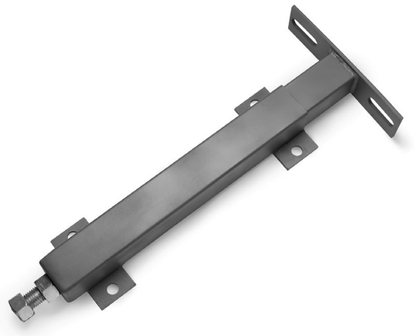
Take-up frame overview



Center-pull (CP) take-up frame

Nine sizes of center-pull wide-slot take-up frames – forty-five (45) take-up frames with travels of 12 to 36 inches for:

- Type E tapered wide-slot bearing from 1-3/8 to 3-inch bore size
- Type K tapered wide-slot bearing from 1-3/8 to 3-inch bore size
- S-2000 spherical wide-slot bearing from 1-1/8 to 5-inch bore size
- Safety Mount spherical wide-slot bearing from 1-7/16 to 4-inch bore size



Telescoping (TS) take-up frame

- Space saving telescoping take-up frame quickly mounts to the side of a conveyor
- Use any standard ball or roller bearing 2-bolt pillow block
- Factory lubricated adjustment screw
- Internal take-up frame screw is protected from the surrounding environment
- Bearing mounting plate is standard on all Dodge telescoping take-up frames.

Available options

- Four bolt mounting plate (4B)
- Tapped base mounting plate (TB)
- Weld-on frame, without mounting feet (WF)
- Stainless steel (SS)
- Grease fitting (GF)

Bronzoil take-up (BOTU) frame

One size of Bronzoil sleeve bearing take-up frames – the Bronzoil take-up is recommended for light-to-medium loads and for use at moderate speeds; such as package conveyors, light material handling installations, or other similar applications.

- There are 6 take-ups from 1/2 through 1-inch shaft size with 4-inch travel

How to order

Take-up frame

There are two ways to specify Dodge take-up frames. Most of the product offerings have part numbers with listings shown throughout this catalog. Use of part numbers ensures accurate order processing.

When part numbers are not shown, the product may be specified by description or part name. This method is used when ordering units that include modifications or options. To order by description, use the nomenclature key and add any special instructions to the end of the description for options not covered by the nomenclature.

Note: All take-up frames, except Bronzoil take-ups, are without the take-up bearings. Thus, for a complete take-up, order a take-up frame and take-up bearing.

The HD protected screw take-up frames

HD 200 through HD 350 take-up frames will accommodate pillow blocks on saddles which are slotted for 2-bolt pillow blocks and may be ordered by part numbers. When using 4-bolt pillow blocks, or on HD frames 400 and larger, please supply:

1. Bore size of pillow block
2. Type of block (Type E, Double Interlock, SAF-XT, etc.)
3. Whether pillow block is 2-or 4-bolt style
4. Frame travel

Modifications

Certain modifications are available upon request, such as stainless-steel screws and non-standard travel lengths. For OEM special take-up frames, consult Application Engineering at +1 864 284 5700.

Nomenclature

Take-up frame

HD - 400 X 12 - TUFR

Style
LD = Light-duty
HD = Heavy-duty
TP = Top-angle
TPHU = Top-angle heavy-duty universal
CP = Center-pull
BOTU = Bronzoil
TS = Telescoping
SSS = Stainless-steel screw

Size
Frame size designation

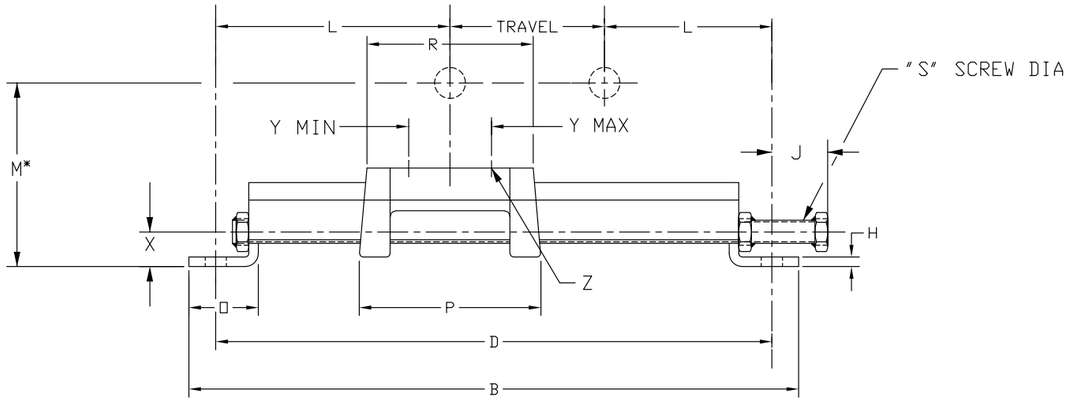
Travel
Inches of travel

Product
Take-up frame

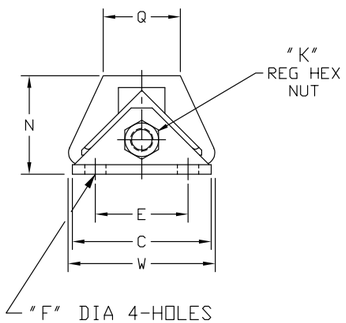
Dimensions

Take-up frame – inch

Light-duty (LD)



M* = N + Pillow block base to center height



Take-up frame – inch

Light-duty (LD)

Frame size x travel	Part number	Weight (lb)	B	C	D	E	F bolt dia.	H	J	K	L	N	O
LD-10x6	039005	10	19-1/2	3-3/4	18	2-1/2	3/8	1/4	9/16	9/16	6	2-3/4	2-1/8
LD-10x9	039006	11	22		20-1/2						5-3/4		
LD-10x12	038910	13	25		23-1/2						5-3/4		
LD-10x18	038911	14	31		29-1/2						5-3/4		
LD-10x30	038912	16	43		41-1/2						5-3/4		
LD-10x36	038913	18	49		47-1/2						5-3/4		
LD-10x42	038914	20	55		53-1/2						5-3/4		
LD-10x48	038915	22	61		59-1/2						5-3/4		
LD-20x6	039007	12	19-1/2	3-3/4	18	2-1/2	1/2	1/4	1-3/4	9/16	6	2-19/32	2-1/8
LD-20x9	039008	13	22		20-1/22						5-3/4		
LD-20x12	039009	14	25		23-1/2						5-3/4		
LD-20x18	039010	17	33-1/2		32						7		
LD-20x24	039003	18	39-1/2		38						7		
LD-20x30	039002	20	45-1/2		44						7		
LD-20x36	039043	22	51-1/2		50						7		
LD-20x42	038916	24	57-1/2		56						7		
LD-20x48	039044	26	63-1/2		62						7		
LD-30x12	039011	18	28-1/4	4-3/4	26-3/4	3	5/8	5/16	1-3/4	9/16	7-3/8	3-3/16	2-1/4
LD-30x18	039012	21	34-1/4		32-3/4						7-3/8		
LD-30x24	039084	24	40-1/4		38-3/4						7-3/8		
LD-30x30	038917	27	46-1/4	3-3/4	44-3/4	2-1/2	1/2	1/4	1-3/4	9/16	7-3/8	2-11/16	2-1/8
LD-30x36	038918	30	52-1/4		50-3/4						7-3/8		
LD-30x42	038919	33	58-1/4		56-3/4						7-3/8		
LD-30x48	038920	35	64-1/4		62-3/4						7-3/8		
LD-40x12	039013	25	28-1/4	4-3/4	26-1/2	3	5/8	5/16	1-3/4	9/16	7-1/4	3-3/16	2-1/4
LD-40x18	039014	28	34-1/4		32-1/2						7-1/4		
LD-40x24	039073	31	40-1/4		38-1/2						7-1/4		
LD-40x30	038921	34	46-1/4		44-1/2						7-1/4		
LD-40x36	038922	37	52-1/4		50-1/2						7-1/4		
LD-40x42	038923	40	58-1/4		56-1/2						7-1/4		
LD-40x48	038924	43	64-1/4		62-1/2						7-1/4		
LD-45x12	039018	50	33	4-3/4	31-1/4	3	3/4	5/16	1-9/16	11/16	9-3/4	4-1/8	2-1/2
LD-45x18	039019	55	39-1/4		37-1/2						9-3/4		
LD-45x24	039097	58	45-1/4		43-1/2						9-3/4		
LD-45x30	038925	65	51-1/4	5	49-1/2						9-3/4		
LD-45x36	038926	70	57-1/4		55-1/2						9-3/4		
LD-45x42	038927	75	63-1/4		61-1/2						9-3/4		
LD-45x48	038928	80	69-1/4		67-1/2						9-3/4		
LD-50x6	039004	49	27	4-3/4	25-1/4	3	3/4	5/16	1-9/16	11/16	9-5/8	4-1/8	2-1/2
LD-50x12	039015	54	33		31-1/4						9-3/4		
LD-50x18	039016	60	39-1/4		37-1/2						9-3/4		
LD-50x24	039017	65	45-1/4		43-1/2						9-3/4		
LD-50x30	038929	71	51-1/4		49-1/2						9-3/4		
LD-50x36	038930	77	57-1/4		55-1/2						9-3/4		
LD-50x48	038932	90	69-1/4		67-1/2						9-3/4		

Take-up frame – inch

Light-duty (LD)

Frame size x travel	Part number	Weight (lb)	P	Q	R	S Screw dia.	W	X	Y bolt centers Max.	Y bolt centers Min.	Z bolt dia.	Angle
LD-10x6	039005	10	5-7/8	1-1/2	5-3/8	3/4	3-1/4	15/16	4-3/8	2-7/8	3/8 x 1-1/2 †	2 x 2 x 1/4
LD-10x9	039006	11										
LD-10x12	038910	13										
LD-10x18	038911	14										
LD-10x30	038912	16										
LD-10x36	038913	18										
LD-10x42	038914	20										
LD-10x48	038915	22										
LD-20x6	039007	12	7-3/4	2-1/8	7-1/4	3/4	3-3/4	15/16	6-1/4	4-7/16	1/2 x 2-1/2 ▲	2 x 2 x 1/4
LD-20x9	039008	13										
LD-20x12	039009	14										
LD-20x18	039010	17										
LD-20x24	039003	18										
LD-20x30	039002	20										
LD-20x36	039043	22										
LD-20x42	038916	24										
LD-20x48	039044	26										
LD-30x12	039011	18	8-1/2	2-1/4	8	3/4	3-3/4	15/16	7	5-3/4	5/8 x 2-1/2 ▲	2 x 2 x 5/16
LD-30x18	039012	21										
LD-30x24	039084	24										
LD-30x30	038917	27										
LD-30x36	038918	30										
LD-30x42	038919	33										
LD-30x48	038920	35										
LD-40x12	039013	25	9-3/4	2-1/2	9-1/4	3/4	4-3/4	1-1/16	7-7/8	6-3/8	5/8 x 3 ▲	2-1/2 x 2-1/2 x 5/16
LD-40x18	039014	28										
LD-40x24	039073	31										
LD-40x30	038921	34										
LD-40x36	038922	37										
LD-40x42	038923	40										
LD-40x48	038924	43										
LD-45x12	039018	50	13-1/2	3-1/2	13	1	5-7/8	1-1/4	11-1/4	7-1/4	3/4 x 3-1/2 ▲	3 x 3 x 1/2
LD-45x18	039019	55										
LD-45x24	039097	58										
LD-45x30	038925	65										
LD-45x36	038926	70										
LD-45x42	038927	75										
LD-45x48	038928	80										
LD-50x6	039004	49	13-1/2	3-1/2	13	1	5-7/8	1-1/4	11-1/8	7-5/8	7/8 x 4 ▲	3 x 3 x 1/2
LD-50x12	039015	54										
LD-50x18	039016	60										
LD-50x24	039017	65										
LD-50x30	038929	71										
LD-50x36	038930	77										
LD-50x48	038932	90										

† Square neck carriage bolt

▲ #3 head plow bolt

Take-up frame bearings – inch

Light-duty (LD) spherical roller and plain bearings

Safety Mount IP

Shaft size	Frame size
1-1/8 1-3/16 1-1/4 1-3/8 1-7/16 1-1/2	LD-20
1-5/8 1 11/16 1-3/4	LD-20
1-7/8 1 15/16 2	LD-30
2-3/16 2-1/4	LD-40
2-3/8 2-7/16 2-1/2	LD-40
2-11/16 2-3/4 2-15/16 3	LD-45
3-3/16 3-1/4 3-7/16 3-1/2	LD-50

* LD frames are drilled for two bolt pillow blocks.

S-2000

Shaft size	Frame size
1-3/8 1-7/16 1-1/2	LD-20
1-11/16 1-3/4	LD-20
1-15/16 2	LD-30
2-3/16	LD-40
2-7/16	LD-40
2-11/16 2-15/16 3	LD-45
3-7/16	LD-50

Unisphere II

Shaft size	Frame size
1-7/16 1-1/2 1-11/16 1-3/4	LD-20
1-15/16 2	LD-30
2-3/16 2-7/16 2-1/2	LD-40
2-11/16 2-3/14 2-15/16 3	LD-45
3-7/16 3-1/2	LD-50

Solidlube – LT-700 and LT-1000 series

Series	Shaft size	Frame size
204	3/4 (20 mm)	LD-10
205	7/8 15/16 1 (25 mm)	LD-10
206	1-1/8 1-3/16 (30 mm)	LD-20
207	1-1/4 1-3/8 1-7/16 1-1/2 (35 mm)	LD-20
209	1-11/16 1-3/4 (40 mm) (45 mm)	LD-20
210	1-15/16 2 (50 mm)	LD-30
211	2-3/16 2-1/4 (55 mm)	LD-40
212	2-7/16 2-1/2 (60 mm)	LD-40
215	2-15/16 3 (70 mm) (75 mm)	LD-50

Babbitted

Shaft size	Frame size
1/2 to 1-1/4	LD-10
1-11/16 1-3/4	LD-20
2-15/16	LD-45

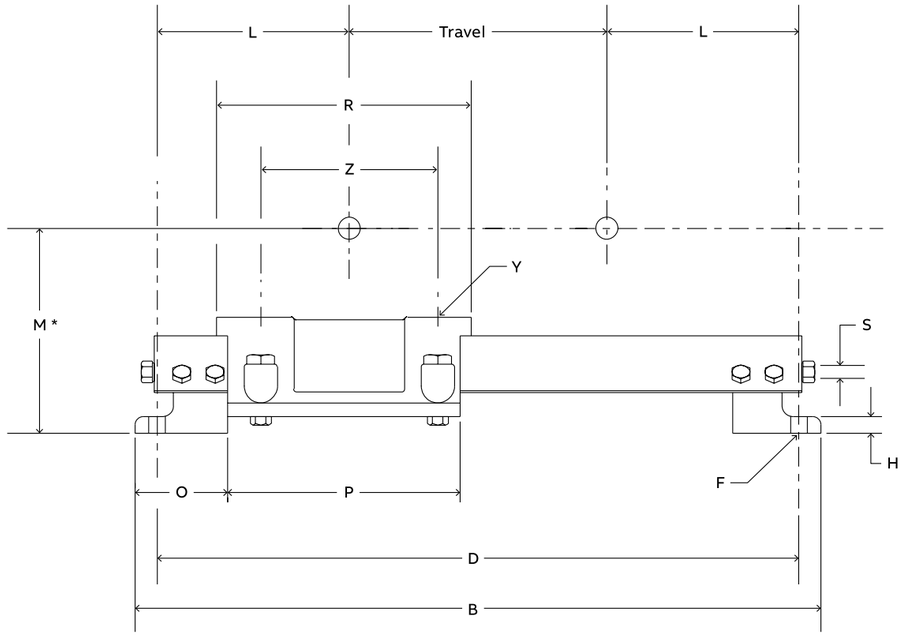
Max recommended housing cap load (90° load angle)*

Frame size	Housing cap load (lb)
LD-10	2100
LD-20	3900
LD-30	6200
LD-40	6200
LD-45	9100
LD-50	12500

* Consult Application Engineering for loads greater than listed. In all cases, when loads are heavy, the L_{10} life of the bearing should be checked for proper selection and life requirements.

Take-up frame – inch

Heavy-duty (HD)

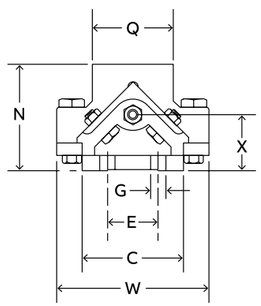


*M = N + Pillow block base to center dimemsion

The HD protected screw take-up frames

HD 200 through HD 350 take-up frames will accommodate pillow blocks on saddles which are slotted for 2-bolt pillow blocks and may be ordered by part numbers. When using 4-bolt pillow blocks, or on HD frames 400 and larger, please supply:

1. Bore size of pillow block
2. Type of block (Type E, Double Interlock, SAF-XT, etc.)
3. Whether pillow block is 2-or 4-bolt style
4. Frame travel



Take-up frame – inch
Heavy-duty (HD)

Frame size	Travel	Part number ** ◆	Frame weight (lb)	B	C	D
HD-200*	12	089020	79	31	5	29
	18	089021	82	37		35
	24	089022	90	43		41
	30	089023	95	47		47
	36	089024	100	55		53
	48	089150	110	67		65
HD-250*	12	089151	115	35-1/4	6	32-3/4
	18	089025	125	41-1/4		38-3/4
	24	089026	135	47-1/4		44-3/4
	30	089027	137	53-1/4		50-3/4
	36	089028	143	59-1/4		56-3/4
	48	089152	153	71-1/4		68-3/4
	60	089600	163	83-1/4		80-3/4
HD-300*	12	089153	175	38-1/4	6-1/2	35-1/2
	18	089029	184	44-1/4		41-1/2
	24	089030	194	50-1/4		47-1/2
	30	089031	206	56-1/4		53-1/2
	36	089032	214	62-1/4		59-1/2
	48	089033	240	74-1/4		71-1/2
	60	089601	266	86-1/4		83-1/2
HD-350*	12	089154	195	40	6-1/2	37-1/4
	18	089034	204	46		43-1/4
	24	089035	212	52		49-1/4
	30	089036	220	58		55-1/4
	36	089037	234	64		61-1/4
	48	089038	250	76		73-1/4
	60	089602	276	88		85-1/4
HD-400**	12	089155	340	44	6-1/2	41-1/4
	18	089039	350	50		47-1/4
	24	089040	360	56		53-1/4
	30	089041	370	62		59-1/4
	36	089042	380	68		65-1/4
	48	089043	400	80		77-1/4
	60	089603	420	92		89-1/4
HD-500**	12	089156	420	49-1/2	7	47
	18	089044	440	55-1/2		53
	24	089045	460	61-1/2		59
	30	089046	480	67-1/2		65
	36	089047	500	73-1/2		71
	48	089048	530	85-1/2		83
	60	089604	560	97-1/2		95
HD-600 or H-650**	12	—	420	53-1/4	7	50-3/4
	18	—	440	59-1/4		56-3/4
	24	—	461	65-1/4		62-3/4
	30	—	—	71-1/4		68-3/4
	36	—	575	77-1/4		74-3/4
	48	—	530	89-1/4		86-3/4
	60	—	—	101-1/4		98-3/4

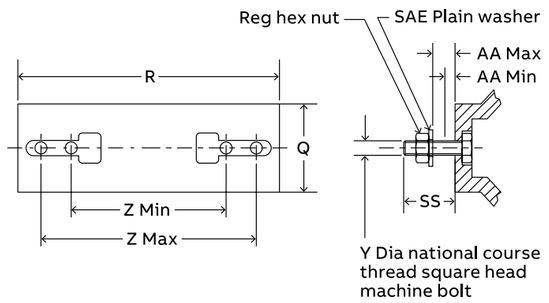
Frame size	E	F bolt dia.	G dia.	H	L	N	O	P	Saddle * dimensions Q	Saddle * dimensions R	S Screw dia.	W	X	Y bolt dia.	Z Max.	Z Min.
HD-200	2-1/2	5/8	3/4	3/4	8-1/2	5-1/4	4	11	4	11	1	7-1/2	2-9/16	5/8	9-1/16	5-15/16
HD-250	3	5/8	3/4	3/4	10-3/8	6-1/4	5	13-1/4	4-1/2	13	1	8-1/4	3-1/4	3/4	10-7/8	7-5/8
HD-300	3	3/4	7/8	7/8	11-3/4	7	6	14-1/4	5	14	1-1/4	10	3-1/2	3/4	11-5/8	9-1/4
HD-350	3	3/4	7/8	7/8	12-5/8	7	6	16	6	17	1-1/4	10	3-1/2	7/8	13-11/16	10-3/4
HD-400	3	3/4	7/8	7/8	14-5/8	7	6	20	7-1/4	20	1-1/4	10	3-1/2	◆	◆	◆
HD-500	4	7/8	1	1	17-1/2	7-3/4	6-3/4	23-1/2	8-1/2	23-1/2	1-1/2	12-1/2	3-21/32	◆	◆	◆
HD-600 HD-650	4	7/8	1	1	—	19-3/8	7-3/4	6-3/4	27-1/4	9-1/2	27-1/4	1-1/2	12-1/2	◆	◆	◆

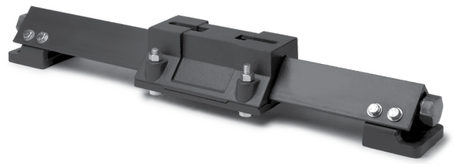
◆ Solid saddle must be drilled and tapped per order (HD-400 and larger frames)
* Saddle is slotted to receive 2-bolt blocks.
** For 4-bolt pillow blocks, all HD frames must be drilled and tapped per order.

Take-up frame – inch

Heavy-duty (HD)

Heavy-duty (HD) take-up frames for use with non-Dodge bearings





Slotted saddle type HD frames (200 through 350 sizes) may be used with 2-bolt pillow blocks other than Dodge pillow blocks. The dimensions shown below are listed to determine whether frame is applicable to this type of application.

Frame size	AA		Saddle dimensions	
	Min.	Max.	Q	R
HD-200	2	3-1/64	4	11
HD-250	2-5/8	3-13/16	4-1/2	13
HD-300	2-31/32	4-5/32	5	14
HD-350	2-27/32	4-11/16	6	17
HD-400	—	—	7-1/4	20
HD-500	—	—	8-1/2	23-1/2

Frame size	Y Bearing hold down bolts			SS	Z bolt centers	
	Diameter	Part number	Length under head		Max.	Min.
HD-200	5/8-11	416173	4	3-5/8	9-7/16	5-15/16
HD-250	3/4-10	416229	5	4-17/32	10-7/8	7-5/8
HD-300	3/4-10	416231	5-1/2	4-7/8	11-5/8	9-1/4
HD-350	7/8-9	416275	5-1/2	5	13-11/16	10-3/4

Note: The pillow blocks must use the bolt shown and have the capability of mounting between the Z bolt centers.
The height off the mounting bolt pad must be within the AA dimensions.
HD-400 and larger are drilled and tapped per order. Specify bearing type when ordering. Y, SS, and 2 dimensions are specified based on order.

Max recommended housing cap load (90° load angle)*

Frame size	Housing cap load (lb)
HD-200	2800
HD-250	4200
HD-300	4200
HD-350	3500
HD-400	—
HD-500	—

* Consult Application Engineering for loads greater than listed. In all cases, when loads are heavy, the L_{10} life of the bearing should be checked for proper selection and life requirements.

Take-up frame bearings – inch

Heavy-duty (HD) tapered roller bearings

Type E

Shaft size	Frame size
1-1/2 to 2-1/2	HD-200*
2-11/16 to 3	HD-250*
3-3/16 to 3-1/2	HD-350*
3-15/16 to 5	HD-400**
5-7/16 to 6	HD-500**
6-7/16 6-1/2 6-15/16 7	HD-600 or HD-650**

TAF

Shaft size	Frame size
2-7/16 to 2-1/2	HD-200*
2-15/16 to 3	HD-250*
3-7/16 to 4	HD-350*
4-7/16 to 5	HD-400**
5-7/16	HD-500**
5-15/16 to 6	HD-600 or HD-650**
6-7/16 to 6-1/2	

Double Interlock, Type K

Shaft size	Frame size
1-1/2 to 2-3/16	HD-200*
2-1/4 to 2-1/2	HD-250*
2-11/16 to 3	HD-300*
3-3/16 to 3-1/2	HD-350*
3-15/16 to 4-1/2	HD-400**
4-15/16 to 5	HD-500**
5-7/16 to 5-15/16	HD-600 or HD-650**

* HD-200, HD-250, HD-300 and HD 350 frames are drilled for 2-bolt pillow blocks. For 4-bolt pillow blocks, refer to note on page B29-12.
** HD-400 and larger are drilled and tapped per order. Specify bearing type when ordering. Refer to note on page B29-12.

Reference Guide
Type E Family (Tapered)
Specialty Tapered
Safety Mount Family (Spherical)
S-2000 (Spherical)
Unified SAF (Spherical)
Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

Take-up frame bearings – inch

Heavy-duty (HD) specialty tapered roller and plain bearings

Special Duty

Shaft size	Frame size
1-3/8 to 2	HD-200*
2-1/8 to 2-1/2	HD-250*
2-3/8 to 3	HD-300*
3-3/16 to 3-1/2	HD-350*
3-11/16 to 4	HD-400**
4-7/16 to 5	HD-500**
5-7/16 5-15/16 6	HD-600 or HD-650**

Type C

Shaft size	Frame size
1-3/8 to 1-15/16	HD-200*
2 to 2-7/16	HD-250*
2-3/8 to 2-15/16	HD-300*
3 to 3-7/16	HD-350*
3-1/2 to 4	HD-400**
4-7/16 to 5	HD-500**

Solidlube – MM-700 and MM-1000 series

Shaft size	Frame size
3-7/16 3-1/2	HD-250*
3-15/16 4	HD-300*
4-7/16 4-1/2	HD-350*
4-15/16 5	HD-400**

Angle babbitt, bronze babbitt

Shaft size	Frame size
1-15/16 2-3/16 2-7/16	HD-200*
2-11/16 2-15/16	HD-250*
3-7/16	HD-300*
3-15/16	HD-350*
4-7/16 4-15/16	HD-400**
5-7/16 5-15/16	HD-500**
6-1/2	HD-600 or HD-650**
7	
7-1/2	
8	

* HD-200, HD-250, HD-300 and HD 350 frames are drilled for 2-bolt pillow blocks. For 4-bolt pillow blocks, refer to note on page B29-12.
** HD-400 and larger are drilled and tapped per order. Specify bearing type when ordering. Refer to note on page B29-12.

Take-up frames bearings – inch

Heavy-duty (HD) spherical roller bearings

Safety Mount – IP

Shaft size	Frame size
1-1/8 to 2-1/2	HD-200*
2-11/16 2-3/4 2-15/16 3	HD-250*
3-3/16 3-1/4 3-7/16 3-1/2	HD-300*
3-11/16 3-15/16 4 4-7/16 4-1/2	HD-350*
4-15/16 5	HD-400**
5-7/16 5-1/2	HD-600 or HD-650**
5-15/16 6	
6-7/16 6-1/2 6-15/16 7	

S-2000

Shaft size	Frame size
1-3/8 1-7/16 1-1/2 1-11/16 1-3/4 1-15/16 2 2-3/16 2-7/16 2-11/16	HD-200*
2-15/16 3	HD-250*
3-7/16	HD-300*
3-15/16 4-7/16	HD-350*
4-15/16	HD-400**

Unisphere II

Shaft size	Frame size
1-15/16 2 2-3/16 2-7/16 2-1/2	HD-200 *
2-11/16 2-3/4 2-15/16 3	HD-250 *
3-7/16 3-1/2	HD-300 *
3-15/16 4	HD-350 *

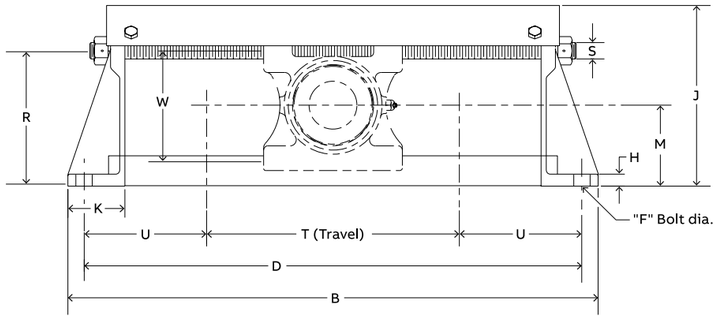
Safety Mount ISAF, USAF 500, SAF-XT, SAFS

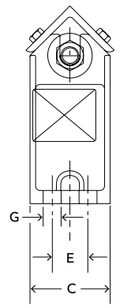
Shaft size	Frame size
1-15/16 to 2-3/16	HD-200*
2-7/16 to 3	HD-250*
3-3/16	HD-300*
3-7/16 to 3-1/2	HD-350*
3-15/16 to 4-1/2	HD-400**
4-15/16 to 5-1/2	HD-500**
5-15/16 to 6	HD-600 or HD-650**
6-7/16 to 6-1/2	

* HD-200, HD-250, HD-300 and HD 350 frames are drilled for 2-bolt pillow blocks. For 4-bolt pillow blocks, refer to note on page B29-12.
** HD-400 and larger are drilled and tapped per order. Specify bearing type when ordering. Refer to note on page B29-12.

Take-up frame – inch

Top-angle (TP)





Frame size	Nominal travel	Part number	Weight (lb)	B	C	D	E	F bolt dia.	G	H	J	K	M	R	S screw dia.	T	U	W
TP10	12	036350	32	28-1/2	3-1/2	26-1/2	—	5/8	1	3/4	8-1/2	3	3-15/16	6-11/32	3/4	14-1/2	6	5-5/32
	18	036351	36	34-1/2		32-1/2										20-1/2		
	24	036352	41	40-1/2		38-1/2										26-1/2		
	30	036400	47	46-1/2		44-1/2										32-1/2		
	36	036348	52	52-1/2		50-1/2										38-1/2		
	48	036401	62	64-1/2		62-1/2										50-1/2		
TP20	12	036353	34	29-1/2	3-1/2	27-1/2	—	5/8	1	3/4	9-1/8	3	4-3/16	6-31/32	3/4	15	6-1/4	5-25/32
	18	036354	39	35-1/2		33-1/2										21		
	24	036355	43	41-1/2		39-1/2										27		
	30	036349	10	47-1/2		45-1/2										33		
	36	036346	55	53-1/2		51-1/2										39		
	48	036402	65	65-1/2		63-1/2										51		
TP30	12	036356	47	30-1/2	4	28-1/2	—	3/4	1-5/16	3/4	10-1/8	3-1/2	4-3/8	7-3/8	1	14-1/2	7	6-3/16
	18	036357	54	36-1/2		34-1/2										20-1/2		
	24	036358	60	42-1/2		40-1/2										26-1/2		
	30	036403	70	48-1/2		46-1/2										32-1/2		
	36	036347	77	54-1/2		52-1/2										38-1/2		
	48	036404	92	66-1/2		64-1/2										50-1/2		
TP40	09	064368	52	29-1/2	4-1/2	27-1/2	2	5/8	1	3/4	11-1/16	3-1/2	4-15/16	8-3/8	1	12-1/2	7-1/2	7-3/16
	12	036359	52	32-1/2		30-1/2										15-1/2		
	18	036360	60	38-1/2		36-1/2										21-1/2		
	24	036361	66	44-1/2		42-1/2										27-1/2		
	30	036390	72	50-1/2		48-1/2										33-1/2		
	36	036371	78	56-1/2		54-1/2										39-1/2		
	48	036405	90	68-1/2		66-1/2										51-1/2		
	60	057862	120	80-1/2		78-1/2										63-1/2		
TP50	12	036362	63	34-1/2	4-1/2	32	2	3/4	1	3/4	12-1/2	4	5-7/16	9-13/32	1-1/4	15	8-1/2	8-7/32
	18	036363	70	40-1/2		38										21		
	24	036364	79	46-1/2		44										27		
	30	036384	89	52-1/2		50										33		
	36	036377	98	58-1/2		56										39		
	48	036406	118	70-1/2		68										51		
	60	054406	120	82-1/2		80										63		
TP60	12	036365	84	38-1/2	5-1/2	36	2-1/2	3/4	1	3/4	14-1/4	4-1/2	7	11-11/32	1-1/4	16-1/2	9-5/8	8-29/32
	18	036366	92	44-1/2		42										22-1/2		
	24	036367	102	50-1/2		48										28-1/2		
	30	036385	120	56-1/2		54										34-1/2		
	36	036368	130	62-1/2		60										40-1/2		
	42	067614	140	68-1/2		66										46-1/2		
	48	036378	150	74-1/2		72										52-1/2		

Take-up frame bearings – inch

Top-angle (TP) tapered, spherical, and sleeve bearings

Type E

Shaft size	Frame size
1-3/4 1-7/8 1-15/16 2	TP-10
2-3/16	TP-20
2-1/4 2-7/16 2-1/2	TP-30
2-11/16 2-3/4 2-15/16 3	TP-40
3-3/16 3-1/4 3-7/16 3-1/2	TP-50
3-15/16 4	TP-60

Type K

Shaft size	Frame size
1-3/4 1-15/16 2	TP-10
2-3/16	TP-20
2-1/4 2-7/16 2-1/2	TP-30
2-11/16 2-3/4 2-15/16 3	TP-40
3-3/16 3-7/16 3-1/2	TP-50
3-15/16	TP-60

S-2000

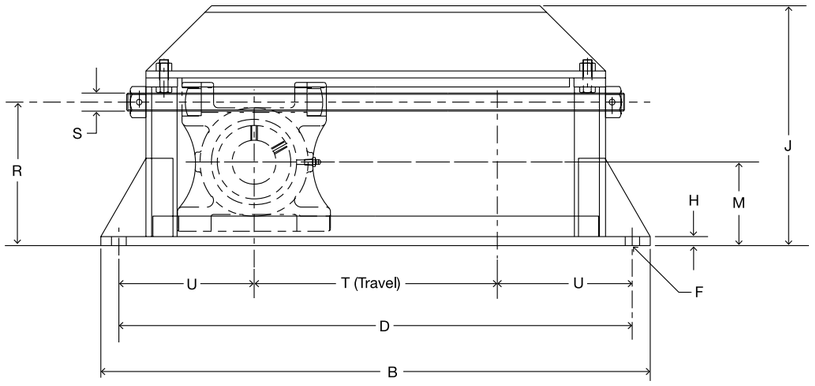
Shaft size	Frame size
1-15/16 2	TP-10
2-3/16	TP-30
2-7/16	TP-40
2-11/16 2-15/16 3	TP-40
3-7/16	TP-50
3-15/16	TP-60

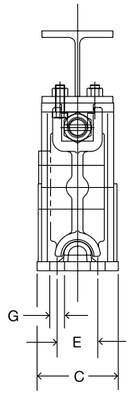
Solidlube – LT-700 and LT-1000 series

Shaft size	Frame size
1-15/16 2	TP-10
2-3/16	TP-20
2-7/16 2-1/2	TP-30
2-15/16 3	TP-40

Take-up frame – inch

Top-angle heavy-duty universal (TPHU)





Shaft size	Frame size	Nominal travel	Part number	Weight (lb)	B	C	D	E	F bolt dia.	G	H	J
1-7/8 1-15/16 2	TPHU110	12	013497	58	29-1/2	3-1/2	27-1/2	—	5/8	11/16	1/2	10-5/8
		18	013498	70	35-1/2		33-1/2					
		24	013499	82	41-1/2		39-1/2					
2-3/16 2-1/4	TPHU120	12	013900	71	29-1/2	4-1/2	27-1/2	—	5/8	11/16	1/2	11-1/4
		18	013901	85	35-1/2		33-1/2					
		24	013902	99	41-1/2		39-1/2					
2-3/8 2-7/16 2-1/2	TPHU130	12	013903	73	30-1/2	4-1/2	28-1/2	—	3/4	13/16	1/2	11-3/4
		18	013904	86	36-1/2		34-1/2					
		24	013905	99	42-1/2		40-1/2					
2-11/16 2-3/4 2-15/16 3	TPHU140	12	013906	80	32-1/2	4-1/2	30-1/2	2	5/8	11/16	3/4	12-5/16
		18	013907	93	38-1/2		36-1/2					
		24	013908	106	44-1/2		42-1/2					
		30	013909	119	50-1/2		48-1/2					
		36	013910	132	56-1/2		54-1/2					
3-3/16 3-1/4 3-7/16 3-1/2	TPHU150	12	013511	91	34-1/4	4-1/2	32	2	3/4	13/16	3/4	13-27/32
		18	013512	105	40-1/4		38					
		24	013513	119	46-1/4		44					
		30	013514	133	52-1/4		50					
		36	013515	147	58-1/4		56					
3-11/16 3-15/16 4	TPHU160	12	013916	132	38-1/2	5-1/2	36	2-1/2	3/4	13/16	1	17
		18	013917	150	44-1/2		42					
		24	013918	168	50-1/2		48					
		30	013519	186	56-1/2		54					
		36	013520	204	62-1/2		60					
4-7/16 4-1/2	TPHU170	12	075420	140	38-1/2	5-1/2	36	2-1/2	3/4	13/16	1	17-15/16
		18	013521	150	44-1/2		42					
		24	013522	200	50-1/2		48					
		30	013523	250	56-1/2		54					
		36	013524	250	62-1/2		60					
4-15/16 5	TPHU180	18	013525	200	50-1/2	5-1/2	47	3	7/8	15/16	1-1/2	21-1/2
		24	013526	200	56-1/2		53					
		30	013527	200	62-1/2		59					
		36	013528	150	68-1/2		65					

Take-up frame and bearings – inch

Top-angle heavy-duty universal (TPHU)

Shaft size	Frame size	Nominal travel	Part number	M	R	S Screw dia.	T Max. travel	U
1-7/8 1-15/16 2	TPHU110	12	013497	3-15/16	6-5/16	3/4	13-1/2	7-3/4
		18	013498				19-1/2	
		24	013499				25-1/2	
2-3/16 2-1/4	TPHU120	12	013900	4-7/16	7-7/16	1	13-1/2	7
		18	013901				19-1/2	
		24	013902				25-1/2	
2-3/8 2-7/16 2-1/2	TPHU130	12	013903	4-5/8	7-61/64	1	13-1/2	7-1/2
		18	013904				19-1/2	
		24	013905				25-1/2	
2-11/16 2-3/4 2-15/16 3	TPHU140	12	013906	5-1/8	8-1/2	1	15-1/2	7-1/2
		18	013907				21-1/2	
		24	013908				27-1/2	
		30	013909				33-1/2	
		36	013910				39-1/2	
3-3/16 3-1/4 3-7/16 3-1/2	TPHU150	12	013511	5-5/8	9-23/32	1-1/4	15-1/2	8-1/4
		18	013512				21-1/2	
		24	013513				27-1/2	
		30	013514				33-1/2	
		36	013515				39-1/2	
3-11/16 3-15/16 4	TPHU160	12	013916	7	11-5/8	1-1/4	16-1/2	9-3/4
		18	013917				22-1/2	
		24	013918				28-1/2	
		30	013519				34-1/2	
		36	013520				40-1/2	
4-7/16 4-1/2	TPHU170	12	075420	7-1/2	12-1/2	1-1/4	16-1/2	9-3/4
		18	013521				22-1/2	
		24	013522				28-1/2	
		30	013523				34-1/2	
		36	013524				40-1/2	
4-15/16 5	TPHU180	18	013525	10	16-1/16	1-1/4	22-1/2	12-1/4
		24	013526				28-1/2	
		30	013527				34-1/2	
		36	013528				40-1/2	

S-2000

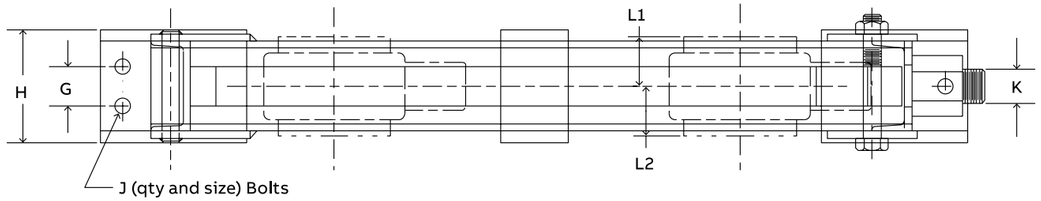
Shaft size	Frame size
1-7/8 1-15/16 2	TPHU-110
2-3/16 2-1/4	TPHU-120
2-3/8 2-7/16 2-1/2	TPHU-130
2-11/16 2-3/4 2-15/16 3	TPHU-140
3-3/16 3-1/4 3-7/16 3-1/2	TPHU-150
3-11/16 3-15/16 4	TPHU-160
4-7/16 4-1/2	TPHU-170
4-15/16 5	TPHU-180

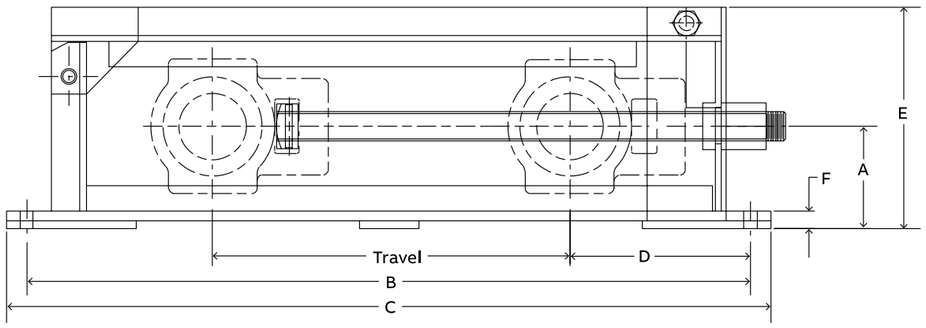
Safety Mount – IP

Shaft size	Frame size
1-7/8 1-15/16 2	TPHU-110
2-3/16 2-1/4	TPHU-120
2-3/8 2-7/16 2-1/2	TPHU-130
2-11/16 2-3/4 2-15/16 3	TPHU-140
3-3/16 3-1/4 3-7/16 3-1/2	TPHU-150
3-11/16 3-15/16 4	TPHU-160
4-7/16 4-1/2	TPHU-170
4-15/16 5	TPHU-180

Take-up frame – inch

Center-pull (CP)





Take-up frame – inch
Center-pull (CP)

Frame size	Travel	Frame part number	Frame weight (lb)	Travel Maximum S-2000 Safety Mount IP	Travel Maximum Type E Type K	A	B	C	D S-2000 Safety Mount IP	D Type E Type K	E	F	G	H	J Qty	J Size dia.	K	L1 and L2
	12	019200	30	15-15/32	15-15/32		26	28										
	18	019201	34	21-15/32	21-15/32		32	64										
CP308	24	019202	38	27-15/32	27-15/32	3-7/16	38	40	6	6	7	11/16	—	3	2	1/2	3/4-10NC	
	30	019203	42	33-15/32	33-15/32		44	46										
	36	019204	46	39-15/32	39-15/32		50	52										
	12	019210	55	14-27/32	14-23/32		27-1/2	29-1/2										
	18	019211	65	20-27/32	20-23/32		33-1/2	35-1/2										
CP400	24	019212	75	26-27/32	26-23/32	3-15/16	39-1/2	41-1/2	7-1/4	7-1/4	8-5/8	13/16	—	4	2	5/8	1-8NC	
	30	019213	85	32-27/32	32-23/32		45-1/2	47-1/2										
	36	019214	95	38-27/32	38-23/32		51-1/2	53-1/2										
	12	019220	61	14-5/32	14-3/32		27-1/2	29-1/2										
	18	019221	71	20-5/32	20-3/32		33-1/2	35-1/2										
CP408	24	019222	81	26-5/32	26-3/32	4-7/16	39-1/2	41-1/2	7-3/4	7-3/4	9-1/4	11/16	—	4	2	5/8	1-1/8-7NC	
	30	019223	85	32-5/32	32-3/32		45-1/2	47-1/2										
	36	019224	95	38-5/32	38-3/32		51-1/2	53-1/2										
	12	019230	65	14-13/32	12-31/32		28-1/2	30-1/2										
	18	019231	75	20-13/32	18-31/32		34-1/2	36-1/2										
CP502	24	019232	85	26-13/32	24-31/32	4-3/8	40-1/2	42-1/2	8-1/4	9-9/16	9-1/2	13/16	—	4	2	3/4	1-1/4-7NC	
	30	019233	95	32-13/32	30-31/32		46-1/2	48-1/2										
	36	019234	105	38-13/32	36-31/32		52-1/2	54-1/2										
	8	067750	108	10-23/32	10-15/32		26-1/2	28-1/2										
	12	019240	105	14-23/32	14-15/32		30-1/2	32-1/2										
CP515	18	019241	120	20-23/32	20-15/32	5-1/8	36-1/2	38-1/2	9-1/4	9-3/8	11-5/32	7/8	2	5	4	5/8	1-1/2-6NC	See page B29-24
	24	019242	135	26-23/32	26-15/32		42-1/2	44-1/2										
	30	019243	150	32-23/32	32-15/32		48-1/2	50-1/2										
	36	019244	165	38-23/32	38-15/32		54-1/2	56-1/2										
	12	019250	115	15-1/32			32	34-1/4										
	18	019251	135	21-1/32			38	40-1/4										
CP613	24	019252	155	27-1/32	—	5-5/8	44	46-1/4	9-7/8	—	12-1/16	15/16	2	5	4	3/4	1-3/4-5NC	
	30	019253	175	33-1/32			50	52-1/4										
	36	019254	195	39-1/32			56	58-1/4										
	12	019260	185	16-9/32			36	38-1/2										
	18	019261	210	22-9/32			42	44-1/2										
CP810	24	019262	235	28-9/32	—	7	48	50-1/2	12	—	14-3/4	1-3/16	2-1/2	6	4	3/4	2-4-1/2-NC	
	30	019263	260	34-9/32			54	56-1/2										
	36	019264	285	40-9/32			60	62-1/2										
	12	019270	280	17-31/32			40-3/4	45-3/4										
	18	019271	310	23-31/32			46-3/4	51-3/4										
CP908	24	019272	340	29-31/32	—	7-1/2	52-3/4	57-3/4	13-1/2	—	16-1/16	1-1/4	5	10	4	1-1/8	2-4-1/2-NC	
	30	019273	370	35-31/32			58-3/4	63-3/4										
	36	019274	400	41-31/32			64-3/4	69-3/4										
	12	019280	370	18-29/32			44-1/2	49-1/2										
	18	019281	400	24-29/32			50-1/2	55-1/2										
CP1004	24	019282	430	30-29/32	—	8-1/8	56-1/2	61-1/2	15-3/8	—	17-5/16	1-1/2	5-1/2	10	4	1-1/8	2-1/4-4-1/2-NC	
	30	019283	460	36-29/32			62-1/2	67-1/2										
	36	019284	490	42-29/32			68-1/2	73-1/2										

Take-up frame – inch

Center-pull (CP)

Frame size	Travel	Frame part number	Frame Weight (lb)	Travel		Safety Mount IP		S-2000		Type K		Type E	
				Maximum									
				S2 and IP	Type E and K	L1	L2	L1	L2	L1	L2	L1	L2
CP308	12	019200	30	15-15/32	15-15/32	57/64	1-47/64	53/64	1-45/64	1-1/32	1-1/2	1-1/2	1-1/2
	18	019201	34	21-15/32	21-15/32								
	24	019202	38	27-15/32	27-15/32								
	30	019203	42	33-15/32	33-15/32								
	36	019204	46	39-15/32	39-15/32								
CP400	12	019210	55	14-27/32	14-23/32	53/64	1-63/64	55/64	1-13/16	1-7/32	1-3/4	1-3/4	1-3/4
	18	019211	65	20-27/32	20-23/32								
	24	019212	75	26-27/32	26-23/32								
	30	019213	85	32-27/32	32-23/32								
	36	019214	95	38-27/32	38-23/32								
CP408	12	019220	61	14-5/32	14-3/32	59/64	2-7/64	29/32	1-63/64	1-9/32	1-7/8	1-7/8	1-7/8
	18	019221	71	20-5/32	20-3/32								
	24	019222	81	26-5/32	26-3/32								
	30	019223	85	32-5/32	32-3/32								
	36	019224	95	38-5/32	38-3/32								
CP502	12	019230	65	14-13/32	12-31/32	1-13/64	2-7/32	1-13/64	2	1-5/8	2	2	2
	18	019231	75	20-13/32	18-31/32								
	24	019232	85	26-13/32	24-31/32								
	30	019233	95	32-13/32	30-31/32								
	36	019234	105	38-13/32	36-31/32								
CP515	8	067750	108	10-23/32	10-15/32	1-7/32	2-9/32	1-3/16	2-13/32	1-5/8	2-1/4	2-1/4	2-1/4
	12	019240	105	14-23/32	14-15/32								
	18	019241	120	20-23/32	20-15/32								
	24	019242	135	26-23/32	26-15/32								
	30	019243	150	32-23/32	32-15/32								
	36	019244	165	38-23/32	38-15/32								
CP613	12	019250	115	15-1/32		1-15/32	2-11/16	1-31/64	2-33/64	—	—	—	—
	18	019251	135	21-1/32									
	24	019252	155	27-1/32	—								
	30	019253	175	33-1/32									
	36	019254	195	39-1/32									
CP810	12	019260	185	16-9/32		1-21/32	3-3/64	1-39/64	2-55/64	—	—	—	—
	18	019261	210	22-9/32									
	24	019262	235	28-9/32	—								
	30	019263	260	34-9/32									
	36	019264	285	40-9/32									
CP908	12	019270	280	17-31/32		—	—	3-1/16	3-15/32	—	—	—	—
	18	019271	310	23-31/32									
	24	019272	340	29-31/32	—								
	30	019273	370	35-31/32									
	36	019274	400	41-31/32									
CP1004	12	019280	370	18-29/32		—	—	3-17/64	3-41/64	—	—	—	—
	18	019281	400	24-29/32									
	24	019282	430	30-29/32	—								
	30	019283	460	36-29/32									
	36	019284	490	42-29/32									

Take-up frame bearings – inch

Center-pull (CP) tapered and spherical roller bearings

Type E

Shaft size	Frame size
1-3/8 1-7/16	CP-308
1-1/2 1-5/8 1-11/16	CP-400
1-3/4 1-7/8 1-15/16 2	CP-400
2-3/16	CP-408
2-1/4 2-7/16 2-1/2	CP-502
2-11/16 2-3/4 2-15/16 3	CP-515

Type K

Shaft size	Frame size
1-7/16	CP-308
1-15/16	CP-400
2-3/16	CP-408
2-7/16 2-1/2	CP-502
2-15/16 3	CP-515

S-2000

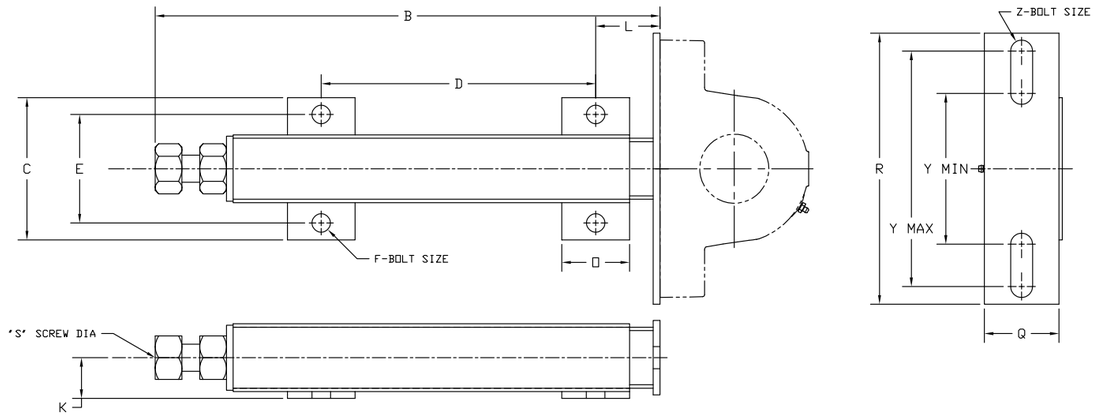
Shaft size	Frame size
1-3/8 1-7/16	CP-308
1-1/2	
1-11/16 1-3/4	CP-400
1-15/16 2	CP-400
2-3/16	CP-408
2-7/16	CP-502
2-11/16 2-15/16 3	CP-515
3-7/16	CP-613
3-15/16	CP-810
4-7/16	CP-908
4-15/16	CP-1004

Safety Mount IP

Shaft size	Frame size
1-1/8 1-3/16 1-1/4 1-3/8 1-7/16 1-1/2	CP-308
1-5/8 1-11/16 1-3/4	CP-400
1-7/8 1-15/16 2	CP-400
2-3/16 2-1/4	CP-408
2-3/8 2-7/16 2-1/2	CP-502
2-11/16 2-3/4 2-15/16 3	CP-515
3-3/16 3-1/4 3-7/16 3-1/2	CP-613
3-11/16 3-15/16 4	CP-810

Take-up frame – inch

Telescoping (TS)



Frame size	Travel	Part number	Weight (lb)	B	C	D Min	D Max	E	F bolt dia.	K	L	O	Q	R	S scr. dia	Y Min	Y Max	Z bolt dia.
TS100	3	089782	3	7.94	3.69	3.56	—	2.63	1/2	0.88	1.50	1.50	1.50	6.38	5/8	2.94	5.44	1/2
	6	089783	4	11.44		7.06												
	9	089784	5	15.44		11.06												
TS-250	3	089785	5	9.75	4.00	4.38	—	3.00	1/2	1.13	1.88	2.00	2.00	7.00	3/4	3.81	5.69	5/8
	6	089786	7	12.75		7.38												
	9	089787	8	15.75		10.38												
	12	089788	9	18.75		13.38												
TS-300	6	089789	16	15.63	5.25	6.13	—	4.00	5/8	1.50	2.38	2.50	2.75	10.00	1	5.56	8.69	3/4
	9	089790	18	18.63		10.13												
	12	089791	21	21.63		14.13												
	18	089792	26	27.63		21.13												
TS-350	9	089793	24	19.56	5.75	12.63	13.00	4.50	5/8	1.75	2.50	2.50	3.00	12.00	1	5.56	9.75	3/4
	12	089794	28	22.56		15.63	16.00											
	18	089795	35	28.56		21.63	22.00											
	24	089796	43	34.56		27.63	28.00											
TS-400	12	089797	50	29.75	7.50	20.00	—	5.50	3/4	2.13	3.50	3.50	3.50	14.00	1-1/2	8.50	11.75	7/8
	18	089798	60	35.75		26.00												
	24	089799	70	41.75		32.00												
	36	089800	90	53.75		44.00												
	48	089801	110	65.75		56.00												
TS-500	18	089802	210	43.88	11.50	31.00	—	9.00	1	3.50	3.88	5.00	7.00	20.00	2	Drilled to order	Drilled to order	Drilled to order
	24	089803	240	49.88		37.00												
	36	089804	290	61.88		49.00												

Take-up frame bearings – inch

Telescoping (TS) tapered roller bearings

Type E*

Shaft size	Frame size
1-3/16 to 1-1/4	TS-250
1-3/8 to 2-3/16	TS-300
1-1/2 to 2-3/16	TS-300
2-1/4 to 2-1/2	TS-350
2-11/16 to 3	TS-400
3-3/16 to 3-1/2	TS-400
3-15/16 to 5	TS-500

TAF*

Shaft size	Frame size
2-7/16 to 2-1/2	TS-400
2-15/16 to 3	TS-400
3-7/16 to 4	TS-500
4-7/16 to 5	TS-500

Double Interlock*, Type K*

Shaft size	Frame size
1-1/2 to 2-3/16	TS-300
2-1/4 to 2-1/2	TS-350
2-11/16 to 3	TS-400
3-3/16 to 3-1/2	TS-500
3-15/16 to 4-1/2	TS-500
4-15/16 to 5	TS-500

* For 4-bolt pillow blocks, all TS frames must be drilled and tapped per order.

Take-up frame bearings – inch

Telescoping (TS) spherical roller bearings

S-2000

Shaft size	Frame size
1-3/8 1-7/16 1-1/2	TS-250
1-11/16 1-3/4 1-15/16 2 2-3/16	TS-300
2-7/16	TS-350
2-11/16	TS-400
2-15/16 3	TS-400
3-7/16	TS-400
3-15/16 4-7/16	TS-500
4-15/16	TS-500

Safety Mount – IP

Shaft size	Frame size
1-1/8 to 1-1/2	TS-250
1-5/8 to 2-1/4	TS-300
2-3/8 to 2-1/2	TS-350
2-11/16 2-3/4 2-15/16 3	TS-400
3-3/16 3-1/4 3-7/16 3-1/2	TS-400
3-11/16 3-15/16 4 4-7/16 4-1/2	TS-500
4-15/16 5	TS-500

Unisphere II

Shaft size	Frame size
1-7/16 1-1/2 1-11/16 1-3/4	TS-250
1-15/16 2 2-3/16 2-7/16 2-1/2	TS-300
2-11/16 2-3/4 2-15/16 3	TS-350
3-7/16 3-1/2	TS-400
3-15/16 4	TS-400 or TS-500

S-2000 and Safety Mount - E-dimensioned

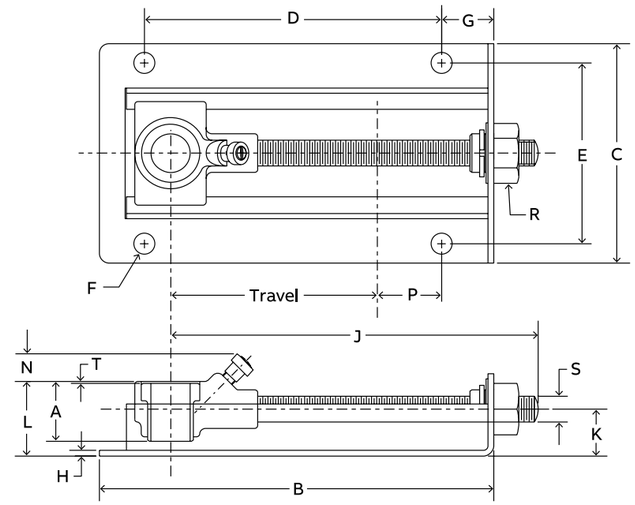
Shaft size	Frame size
1-3/16 to 1-1/4	TS-250
1-3/8 to 2-3/16	TS-300
2-1/4 to 2-1/2	TS-350
2-11/16 to 3	TS-400
3-3/16 to 3-1/2	TS-400
3-15/16 to 5	TS-500

Safety Mount ISAF, USAF 500, SAF-XT, SAFS

Shaft size	Frame size
1-15/16	TS-300 or TS-350
2-3/16	TS-400
2-7/16 to 3	TS-400
3-3/16	TS-500
3-7/16 to 3-1/2	TS-500
3-15/16 to 4-1/2	TS-500
4-15/16	TS-500

Take-up frame – inch

Bronzoil (BOTU)

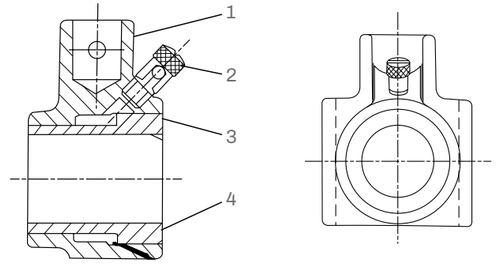


Shaft size X travel	Part number	Description	Weight (lb)	A	B	C	D	E
1/2 x 4	034020	BOTU-008X4	1.9					
5/8 x 4	034021	BOTU-010X4	1.8	1-3/16	7-5/8	4-1/4	5-3/4	3-1/2
3/4 x 4	034022	BOTU-012X4	1.7					
7/8 x 4	034023	BOTU-014X4	2.1					
15/16 x 4	034024	BOTU-015X4	2.0	1-9/16	7-5/8	4-1/4	5-3/4	3-1/2
1 x 4	034025	BOTU-100X4	1.9					

Shaft size X travel	F bolt dia.	G	H	J	K	L	N	P	R hex. size	S	T
1/2 x 4											
5/8 x 4	3/8	1	7/64	7-1/8	29/32	1-7/16	1/2	1-1/4	1	1/2	1/16
3/4 x 4											
7/8 x 4											
15/16 x 4	3/8	1	7/64	7-1/8	29/32	1-5/8	5/16	1-1/4	1	1/2	1/16
1 x 4											

Bronzoil take-up bearing assembly

Size	(TUBO- - -) Assy. no.	1	2	3	4
1/2	034030	034001	405046	034013	444010
5/8	034031	034001	405046	034014	444010
3/4	034032	034001	405046	034015	444010
7/8	034033	034002	405046	034016	444010
15/18	034034	034002	405046	034017	444010
1	034035	034002	405046	034018	444010



1 – Bronzoil housing
2 – Bronzoil take-up oil cup
3 – Bronzoil bushing
4 – Bronzoil permawick

IIoT technologies

OPTIFY solutions for complete powertrain condition monitoring

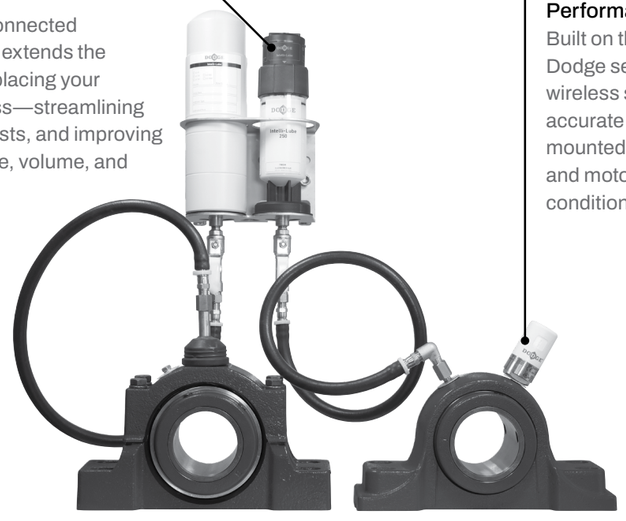
OPTIFY, our portfolio of Industrial Internet of Things (IIoT) solutions, allows you to easily monitor the overall health of your power transmission equipment and gain powerful insights—letting you know when maintenance is needed before it's too late.

Platform

Take the guesswork out of work with the free OPTIFY condition monitoring platform that empowers you with overall health indicators of your assets anytime, anywhere through its web portal or mobile app—providing you with a continuous flow of data for safe, hands-free gathering of measurements.

Intelli-Lube

The premier automatic, connected lubricator that effortlessly extends the life of your bearings by replacing your manual lubrication process—streamlining maintenance, lowering costs, and improving safety with the right grease, volume, and interval every single time.



Performance Sensor

Built on the proven success of Dodge sensors, the specialized wireless sensor remotely captures accurate measurements in your mounted bearings, gear reducers, and motors for complete powertrain condition monitoring.

Notes

Reference Guide
Type E Family (Tapered)
Specialty Tapered
Safety Mount Family (Spherical)
S-2000 (Spherical)
Unified SAF (Spherical)
Specialty Spherical
Sleevoil (Hydrodynamic)
Solidlube (Plain)
Sleeve (Plain)
Accessories

Part number index

Part number	Page	Part number	Page	Part number	Page	Part number	Page
004060	B28-14	006043	B28-12	010097	B27-34, B28-25	019253	B29-23
004063	B28-14	006046	B28-12	010100	B27-34, B28-25	019254	B29-23
004066	B28-14	006049	B28-12	010104	B27-34, B28-25	019260	B29-23
004069	B28-14	006052	B28-12	010105	B27-34, B28-25	019261	B29-23
004072	B28-14	006055	B28-12	010107	B27-34, B28-25	019262	B29-23
004075	B28-14	006058	B28-12	010110	B27-34, B28-25	019263	B29-23
004078	B28-14	006061	B28-12	010112	B27-34, B28-25	019264	B29-23
004081	B28-14	006064	B28-12	010114	B27-34, B28-25	019270	B29-23
004084	B28-14	006067	B28-12	010117	B27-34, B28-25	019271	B29-23
004087	B28-14	006070	B28-12	010120	B27-34, B28-25	019272	B29-23
004090	B28-14	006073	B28-12	010123	B27-34, B28-25	019273	B29-23
004093	B28-14	006076	B28-12	010126	B27-34, B28-25	019274	B29-23
004096	B28-14	006079	B28-12	010127	B27-34, B28-25	019280	B29-23
004099	B28-14	006082	B28-12	010128	B27-34, B28-25	019281	B29-23
004102	B28-14	006102	B28-10	010129	B27-34, B28-25	019282	B29-23
004105	B28-14	006104	B28-10	010130	B27-34, B28-25	019283	B29-23
004108	B28-14	006107	B28-10	010131	B27-34, B28-25	019284	B29-23
004113	B28-14	006109	B28-10	013497	B29-20, B29-21	023000	B20-23
004114	B28-14	006110	B28-10	013498	B29-20, B29-21	023001	B20-23
004115	B28-14	006111	B28-10	013499	B29-20, B29-21	023002	B20-23
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005057	B28-8	006124	B28-10	013900	B29-20, B29-21	023010	B20-23
005058	B28-8	006125	B28-10	013901	B29-20, B29-21	023011	B20-23
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005061	B28-8	006132	B28-10	013904	B29-20, B29-21	023014	B20-23
005062	B28-8	006136	B28-10	013905	B29-20, B29-21	023015	B20-23
005063	B28-8	006140	B28-10	013906	B29-20, B29-21	023016	B20-23
005064	B28-8	006144	B28-10	013907	B29-20, B29-21	023017	B20-23
005065	B28-8	006148	B28-10	013908	B29-20, B29-21	023018	B20-23
005066	B28-8	006152	B28-10	013909	B29-20, B29-21	023019	B20-23
005067	B28-8	010020	B27-34, B28-25	013910	B29-20, B29-21	023020	B20-23
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005070	B28-20	010024	B27-34, B28-25	013917	B29-20, B29-21	023022	B20-23
005073	B28-20	010028	B27-34, B28-25	013918	B29-20, B29-21	023023	B20-25
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005201	B28-21	010060	B27-34, B28-25	019223	B29-23	023043	B20-25
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006010	B28-12	010077	B27-34, B28-25	019232	B29-23	023076	B20-31
006013	B28-12	010078	B27-34, B28-25	019233	B29-23	023077	B20-31
006016	B28-12	010080	B27-34, B28-25	019234	B29-23	023078	B20-31
006019	B28-12	010081	B27-34, B28-25	019240	B29-23	023079	B20-31
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006034	B28-12	010092	B27-34, B28-25	019250	B29-23	023084	B20-31
006037	B28-12	010093	B27-34, B28-25	019251	B29-23	023085	B20-31
006040	B28-12	010096	B27-34, B28-25	019252	B29-23	023086	B20-31

Part number	Page	Part number	Page	Part number	Page	Part number	Page
023087	B20-31	023160	B20-33	023263	B20-65	023353	B20-53
023088	B20-31	023161	B20-33	023265	B20-65	023354	B20-53
023089	B20-31	023162	B20-33	023266	B20-65	023356	B20-53
023090	B20-31	023163	B20-33	023269	B20-65	023357	B20-53
023091	B20-31	023164	B20-33	023270	B20-65	023360	B20-53
023092	B20-31	023165	B20-33	023271	B20-63	023361	B20-53
023093	B20-27	023166	B20-33	023272	B20-63	023362	B20-53
023094	B20-27	023167	B20-59	023273	B20-63	023363	B20-53
023095	B20-27	023168	B20-59	023274	B20-63	023364	B20-53
023096	B20-27	023170	B20-59	023275	B20-63	023365	B20-53
023097	B20-27	023171	B20-59	023276	B20-63	023366	B20-53
023098	B20-27	023172	B20-59	023277	B20-63	023367	B20-53
023099	B20-27	023173	B20-59	023278	B20-63	023368	B20-53
023100	B20-27	023174	B20-59	023279	B20-63	023369	B20-53
023101	B20-27	023175	B20-59	023280	B20-63	023376	B20-51
023102	B20-27	023176	B20-59	023281	B20-63	023377	B20-51
023103	B20-27	023177	B20-59	023282	B20-63	023378	B20-51
023104	B20-27	023178	B20-59	023283	B20-63	023379	B20-51
023105	B20-27	023179	B20-59	023284	B20-63	023380	B20-51
023106	B20-27	023180	B20-59	023285	B20-63	023381	B20-51
023107	B20-27	023181	B20-59	023286	B20-63	023382	B20-51
023108	B20-27	023182	B20-59	023287	B20-63	023384	B20-51
023109	B20-27	023183	B20-59	023288	B20-63	023385	B20-51
023110	B20-27	023184	B20-59	023289	B20-63	023386	B20-51
023111	B20-27	023186	B20-59	023290	B20-63	023387	B20-51
023112	B20-27	023187	B20-59	023291	B20-63	023388	B20-51
023113	B20-27	023188	B20-59	023292	B20-63	023389	B20-51
023114	B20-27	023211	B20-61	023293	B20-63	023390	B20-51
023115	B20-27	023212	B20-61	023294	B20-63	023391	B20-51
023116	B20-27	023213	B20-61	023295	B20-63	023392	B20-51
023117	B20-27	023214	B20-61	023296	B20-63	023393	B20-51
023118	B20-27	023215	B20-61	023297	B20-63	023394	B20-51
023119	B20-27	023216	B20-61	023298	B20-63	023396	B20-51
023120	B20-29	023217	B20-61	023299	B20-63	023397	B20-51
023121	B20-29	023218	B20-61	023300	B20-63	023399	B20-53
023122	B20-29	023219	B20-61	023301	B20-63	023400	B20-53
023123	B20-29	023220	B20-61	023302	B20-63	023401	B20-53
023124	B20-29	023221	B20-61	023303	B20-63	023403	B20-53
023125	B20-29	023222	B20-61	023304	B20-63	023404	B20-53
023126	B20-29	023223	B20-61	023305	B20-63	023407	B20-53
023127	B20-29	023224	B20-61	023306	B20-63	023408	B20-53
023128	B20-29	023225	B20-61	023307	B20-63	023409	B20-53
023129	B20-29	023226	B20-61	023308	B20-63	023410	B20-53
023130	B20-29	023227	B20-61	023309	B20-63	023411	B20-53
023131	B20-29	023228	B20-61	023310	B20-63	023412	B20-53
023132	B20-29	023229	B20-61	023311	B20-63	023413	B20-53
023133	B20-29	023230	B20-61	023312	B20-63	023414	B20-53
023134	B20-29	023231	B20-61	023314	B20-67	023415	B20-53
023135	B20-29	023232	B20-61	023316	B20-67	023416	B20-53
023136	B20-29	023233	B20-61	023318	B20-67	023422	B20-55
023137	B20-29	023234	B20-61	023325	B20-67	023423	B20-55
023138	B20-29	023235	B20-61	023327	B20-67	023424	B20-55
023139	B20-29	023236	B20-61	023329	B20-51	023425	B20-55
023140	B20-29	023237	B20-61	023330	B20-51	023426	B20-55
023141	B20-29	023238	B20-61	023331	B20-51	023427	B20-55
023142	B20-29	023239	B20-61	023332	B20-51	023428	B20-55
023143	B20-29	023240	B20-61	023333	B20-51	023429	B20-55
023144	B20-29	023241	B20-61	023334	B20-51	023430	B20-55
023145	B20-29	023242	B20-61	023335	B20-51	023431	B20-55
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023153	B20-33	023250	B20-61	023344	B20-51	023439	B20-55
023154	B20-33	023251	B20-61	023345	B20-51	023440	B20-55
023155	B20-33	023252	B20-61	023346	B20-51	023441	B20-55
023156	B20-33	023253	B20-61	023347	B20-51	023442	B20-55
023157	B20-33	023254	B20-61	023349	B20-51	023443	B20-55
023158	B20-33	023256	B20-65	023350	B20-51	023444	B20-55
023159	B20-33	023261	B20-65	023352	B20-53	023445	B20-55
023446	B20-55	023559	B20-57	023713	B20-77	033592	B27-26
023447	B20-55	023560	B20-57	023714	B20-77	033593	B27-26
023448	B20-55	023561	B20-57	023715	B20-77	033594	B27-26
023449	B20-55	023564	B20-57	023795	B20-79	033595	B27-26
023450	B20-55	023565	B20-57	023796	B20-79	033596	B27-26
023451	B20-55	023566	B20-57	023797	B20-79	033597	B27-26
023452	B20-55	023567	B20-57	023798	B20-79	033598	B27-26
023453	B20-55	023568	B20-57	023799	B20-79	033599	B27-26
023454	B20-55	023569	B20-57	023800	B20-79	033600	B27-26
023455	B20-55	023570	B20-57	023801	B20-79	033601	B27-26
023456	B20-55	023571	B20-57	032923	B27-15	033602	B27-26
023457	B20-55	023584	B20-45	032937	B27-15	033610	B27-26
023458	B20-55	023585	B20-45	032940	B27-12	033611	B27-26
023459	B20-55	023586	B20-45	032941	B27-12	033612	B27-26
023460	B20-55	023587	B20-45	032942	B27-12	033613	B27-26
023461	B20-55	023588	B20-45	032943	B27-12	033614	B27-26
023462	B20-55	023589	B20-45	032945	B27-12	033615	B27-26
023463	B20-55	023590	B20-45	032946	B27-12	033616	B27-26
023464	B20-55	023603	B20-45	032947	B27-12	033617	B27-26
023465	B20-55	023604	B20-45	032949	B27-12	033618	B27-26
023466	B20-55	023605	B20-45	032950	B27-12	033619	B27-26
023467	B20-55	023606	B20-45	032951	B27-12	033620	B27-26
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023471	B20-55	023610	B20-45	032956	B27-12	033624	B27-26
023472	B20-55	023611	B20-45	032957	B27-12	033625	B27-26
023473	B20-55	023612	B20-45	032959	B27-12	033626	B27-26
023474	B20-55	023613	B20-45	032960	B27-12	033627	B27-26
023475	B20-55	023614	B20-45	032970	B27-12	033667	B27-10
023476	B20-55	023615	B20-45	032971	B27-12	033668	B27-10
023477	B20-55	023616	B20-45	032972	B27-12	033669	B27-10
023478	B20-55	023620	B20-75	032973	B27-12	033670	B27-10
023479	B20-55	023621	B20-75	032975	B27-12	033672	B27-10
023480	B20-57	023622	B20-75	032976	B27-12	033673	B27-10
023481	B20-57	023623	B20-75	032977	B27-12	033674	B27-10
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023489	B20-57	023631	B20-75	032987	B27-12	033684	B27-10
023490	B20-57	023632	B20-75	032989	B27-12	033686	B27-10
023491	B20-57	023633	B20-75	032990	B27-12	033687	B27-10
023492	B20-57	023634	B20-75	033077	B27-10	033688	B27-10
023493	B20-57	023635	B20-75	033085	B27-18	033692	B27-32
023494	B20-57	023636	B20-75	033247	B27-14	033693	B27-32
023495	B20-57	023637	B20-75	033251	B27-14	033694	B27-32
023496	B20-57	023638	B20-75	033321	B27-15	033695	B27-32
023497	B20-57	023639	B20-75	033323	B27-15	033696	B27-33
023498	B20-57	023640	B20-75	033347	B27-14	033697	B27-33
023499	B20-57	023641	B20-75	033351	B27-14	033698	B27-33
023500	B20-57	023690	B20-25	033475	B27-14	033699	B27-33
023501	B20-57	023691	B20-25	033480	B27-14	033739	B27-25
023502	B20-57	023692	B20-25	033485	B27-14	033740	B27-25
023503	B20-57	023693	B20-25	033490	B27-14	033741	B27-25
023504	B20-57	023694	B20-25	033500	B27-14	033742	B27-25
023505	B20-57	023695	B20-25	033505	B27-14	033743	B27-25
023506	B20-57	023700	B20-77	033510	B27-14	033744	B27-25
023543	B20-57	023701	B20-77	033515	B27-14	033745	B27-25
023545	B20-57	023702	B20-77	033525	B27-14	033750	B27-25
023546	B20-57	023703	B20-77	033530	B27-14	033751	B27-25
023547	B20-57	023704	B20-77	033535	B27-14	033752	B27-25
023548	B20-57	023705	B20-77	033540	B27-14	033753	B27-25
023550	B20-57	023706	B20-77	033585	B27-26	033754	B27-25
023552	B20-57	023707	B20-77	033586	B27-26	033755	B27-25
023553	B20-57	023708	B20-77	033587	B27-26	033756	B27-25
023554	B20-57	023709	B20-77	033588	B27-26	033810	B27-20
023556	B20-57	023710	B20-77	033589	B27-26	033811	B27-20
023557	B20-57	023711	B20-77	033590	B27-26	033812	B27-20
023558	B20-57	023712	B20-77	033591	B27-26	033813	B27-20

Part number	Page
033814	B27-20
033815	B27-20
033816	B27-20
033817	B27-20
033818	B27-20
033819	B27-20
033820	B27-20
033821	B27-20
033822	B27-20
033823	B27-20
033824	B27-20
033825	B27-20
033826	B27-20
033840	B27-20
033841	B27-20
033842	B27-20
033843	B27-20
033844	B27-20
033845	B27-20
033846	B27-20
033847	B27-20
033848	B27-20
033849	B27-20
033850	B27-20
033851	B27-20
033852	B27-20
033853	B27-20
033854	B27-20
033855	B27-20
033856	B27-20
033862	B27-15
033863	B27-15
033867	B27-15
033868	B27-15
033869	B27-15
033870	B27-22
033871	B27-22
033872	B27-22
033873	B27-22
033874	B27-22
033875	B27-22
033876	B27-22
033877	B27-22
033878	B27-22
033879	B27-22
033880	B27-22
033881	B27-22
033882	B27-22
033883	B27-22
033884	B27-22
033885	B27-22
033886	B27-22
033887	B27-22
033888	B27-22
033890	B27-31
033891	B27-31
033892	B27-31
033893	B27-31
033894	B27-31
033895	B27-31
033896	B27-31
033897	B27-31
033899	B27-15
033900	B27-31
033901	B27-31
033902	B27-31
033903	B27-31
033904	B27-31
033905	B27-31
033906	B27-31
033907	B27-31
033910	B27-22
033911	B27-22
033912	B27-22
033913	B27-22
033914	B27-22
033915	B27-22
033916	B27-22
033917	B27-22
033918	B27-22
033919	B27-22
033920	B27-22
033921	B27-22
033922	B27-22
033923	B27-22
033924	B27-22
033925	B27-22
033926	B27-22
033927	B27-22
033928	B27-22
033929	B27-15
033930	B27-15
033931	B27-15
033932	B27-15
033933	B27-15
033934	B27-15
033937	B27-30
033938	B27-30
033939	B27-30
033940	B27-30
033952	B27-30
033953	B27-30
033954	B27-30
033955	B27-30
033960	B27-29
033961	B27-29
033962	B27-29
033963	B27-29
033964	B27-29
033965	B27-29
033966	B27-29
033967	B27-29
033968	B27-29
033974	B27-10
033977	B27-10
033978	B27-10
033979	B27-10
033980	B27-10
033982	B27-10
033983	B27-10
033984	B27-10
033986	B27-10
033987	B27-10
033988	B27-10
033990	B27-10
033991	B27-10
033992	B27-10
033993	B27-10
033994	B27-10
033996	B27-10
033997	B27-10
033998	B27-10
034020	B29-29
034021	B29-29
034022	B29-29
034023	B29-29
034024	B29-29
034025	B29-29
034030	B29-29
034031	B29-29
034032	B29-29
034033	B29-29
034034	B29-29
034035	B29-29
034117	B27-26
034221	B27-10
034225	B27-10
034226	B27-10
034227	B27-10
034228	B27-10
034229	B27-10
034230	B27-10
034231	B27-10
034232	B27-10
034233	B27-10
034234	B27-10
034235	B27-10
034236	B27-10
034237	B27-10
034238	B27-10
034239	B27-10
034240	B27-10
034241	B27-10
034242	B27-10
034243	B27-10
034244	B27-12
034245	B27-12
034246	B27-12
034247	B27-12
034248	B27-12
034249	B27-12
034250	B27-12
034251	B27-12
034252	B27-12
034253	B27-12
034254	B27-12
034255	B27-12
034256	B27-12
034257	B27-12
034258	B27-12
034259	B27-12
034293	B27-20
034294	B27-20
034295	B27-20
034296	B27-20
034297	B27-20
034298	B27-20
034299	B27-20
034300	B27-20
034303	B27-20
034304	B27-20
034305	B27-20
034306	B27-20
034307	B27-20
034308	B27-20
034309	B27-20
034310	B27-20
034313	B27-22
034314	B27-22
034315	B27-22
034316	B27-22
034317	B27-22
034318	B27-22
034319	B27-22
034320	B27-22
034321	B27-22
034322	B27-22
034323	B27-22
034324	B27-22
034325	B27-22
034326	B27-22
034327	B27-22
034328	B27-22
034329	B27-22
034330	B27-22
034331	B27-22
034332	B27-22
034438	B27-28
034439	B27-28
034440	B27-28
034441	B27-28
034442	B27-28
034443	B27-28
034444	B27-28
034445	B27-28
034446	B27-28
034447	B27-28
034448	B27-28
034449	B27-28
034450	B27-28
034451	B27-28
034452	B27-28
034453	B27-28
034454	B27-26
034455	B27-26
034456	B27-26
034457	B27-26
034458	B27-26
034459	B27-26
034460	B27-26
034461	B27-26
034462	B27-26
034463	B27-26
034464	B27-26
034465	B27-26
034466	B27-26
034467	B27-26
034468	B27-26
034469	B27-26
034470	B27-26
034471	B27-26
034472	B27-26
034473	B27-26
034525	B27-26
034596	B27-12
034597	B27-12
034598	B27-12
034599	B27-12
035025	B28-23
035026	B28-23
035027	B28-23
035028	B28-23
035029	B28-23
035030	B28-23
035031	B28-24
035032	B28-24
035033	B28-24
035034	B28-24
035035	B28-24
035036	B28-24
035082	B28-23
035083	B28-24
035084	B28-23, B28-24
035107	B28-23
035108	B28-23
035116	B28-24
035117	B28-24
035183	B24-83
035185	B24-83
035417	B24-83
035418	B24-83
035431	B24-75
035432	B24-75
035433	B24-75
035437	B24-102
035438	B24-102
035439	B24-102
035744	B24-103, B24-109
035745	B24-103, B24-109
035747	B24-103, B24-109
035748	B24-103, B24-109
035749	B24-103, B24-109
035750	B24-103, B24-109
035751	B24-103, B24-109
035752	B24-103, B24-109
035915	B24-102
035916	B24-102
035917	B24-102
035929	B24-75
035930	B24-75
035931	B24-75
035943	B24-83
035944	B24-83
036054	B21-27
036116	B21-27
036118	B21-27
036119	B21-27
036120	B21-27
036121	B21-27
036350	B29-18
036351	B29-18
036352	B29-18
036353	B29-18
036354	B29-18
036355	B29-18
036356	B29-18
036357	B29-18
036358	B29-18
036359	B29-18
036360	B29-18
036361	B29-18
036362	B29-18
036363	B29-18
036364	B29-18
036365	B29-18
036366	B29-18
036367	B29-18
037001	B28-18
037002	B28-18
037003	B28-18
037004	B28-18
037005	B28-18
037006	B28-18
037007	B28-18
037009	B28-18
037010	B28-18
037011	B28-18
037012	B28-18
037013	B28-18
037017	B28-18
037020	B28-18
037022	B28-18
037024	B28-18
037026	B28-18
037426	B24-82
037427	B24-82
037428	B24-82, B24-83
037429	B24-83
037430	B24-83
037431	B24-83
037580	B20-43
037604	B20-45
037605	B20-45
037606	B20-45
037607	B20-45
037608	B20-45
037609	B20-45
037610	B20-45
037611	B20-45
037612	B20-45
037613	B20-45
037614	B20-45
037615	B20-45
037616	B20-45
037617	B20-45
037618	B20-45
037619	B20-45
037620	B20-45
037621	B20-45
037622	B20-45
037623	B20-45
037624	B20-45
037625	B20-45
037626	B20-45
037627	B20-45
037628	B20-45
037629	B20-45
037630	B20-45
037631	B20-45
037632	B20-49
037633	B20-49
037634	B20-49
037635	B20-49
037636	B20-45, B20-49
037637	B20-45, B20-49
037638	B20-45, B20-49
037639	B20-45, B20-49
037640	B20-45, B20-49
037641	B20-45, B20-49
037642	B20-45, B20-49
037643	B20-45, B20-49
037644	B20-45, B20-49
037645	B20-45, B20-49
037646	B20-45, B20-49
037647	B20-45, B20-49
037648	B20-45, B20-49
037649	B20-45, B20-49
037650	B20-78
037651	B20-78
037652	B20-78
037653	B20-78
037654	B20-78
037655	B20-78
037656	B20-78
037657	B20-78
037658	B20-78
037659	B20-78
037660	B20-78
037673	B20-78
037674	B20-78
037681	B20-80
037682	B20-80
037683	B20-80
037684	B20-80
037685	B20-80
037686	B20-80
037687	B20-80
037688	B20-80
037689	B20-80
037690	B20-80
038910	B29-9, B29-10
038911	B29-9, B29-10
038912	B29-9, B29-10
038913	B29-9, B29-10
038914	B29-9, B29-10
038915	B29-9, B29-10
038916	B29-9, B29-10
038917	B29-9, B29-10
038918	B29-9, B29-10
038919	B29-9, B29-10
038920	B29-9, B29-10
038921	B29-9, B29-10
038922	B29-9, B29-10
038923	B29-9, B29-10
038924	B29-9, B29-10
038925	B29-9, B29-10
038926	B29-9, B29-10
038927	B29-9, B29-10
038928	B29-9, B29-10
038929	B29-9, B29-10
038930	B29-9, B29-10
038932	B29-9, B29-10
039002	B29-9, B29-10
039003	B29-9, B29-10
039004	B29-9, B29-10
039005	B29-9, B29-10
039006	B29-9, B29-10
039007	B29-9, B29-10
039008	B29-9, B29-10
039009	B29-9, B29-10
039010	B29-9, B29-10
039011	B29-9, B29-10
039012	B29-9, B29-10
039013	B29-9, B29-10
039014	B29-9, B29-10
039015	B29-9, B29-10
039016	B29-9, B29-10
039017	B29-9, B29-10
039018	B29-9, B29-10
039019	B29-9, B29-10
039043	B29-9, B29-10
039044	B29-9, B29-10
039073	B29-9, B29-10
039084	B29-9, B29-10
039097	B29-9, B29-10
039138	B24-45
039141	B24-45
039142	B24-45
039147	B24-45
039148	B24-45
039151	B24-45
039152	B24-45
039155	B24-45
039156	B24-45
039159	B24-45
039160	B24-45
039163	B24-45
039164	B24-46
039165	B24-46
039166	B24-46
039167	B24-46
039168	B24-46
039169	B24-46
039170	B24-46
039171	B24-46
039172	B24-46
039173	B24-46
039174	B24-46
039175	B24-91
039177	B24-91
039179	B24-91
039181	B24-91
039183	B24-91
039185	B24-91
039187	B24-91
039189	B24-91
039191	B24-91
039193	B24-91
039195	B24-91
039197	B24-91
039199	B24-91
039201	B24-91
039203	B24-91
039205	B24-91
039207	B24-91
039209	B24-91
039211	B24-91
039213	B24-91
039215	B24-91
039217	B24-45, B24-47
039218	B24-45, B24-47
039219	B24-45, B24-47
039220	B24-45, B24-47
039221	B24-45, B24-47
039222	B24-45, B24-47
039223	B24-45, B24-47
039224	B24-45, B24-46, B24-47
039225	B24-46, B24-47
039226	B24-46, B24-47
039227	B24-46, B24-47
039228	B24-46, B24-47
039289	B24-93, B24-96, B24-103, B24-109
039290	B24-109
039291	B24-93, B24-96, B24-103, B24-109
039292	B24-93, B24-96, B24-103, B24-109
039297	B24-93, B24-96, B24-105, B24-109
039355	B24-102
039356	B24-102
039357	B24-102
039358	B24-102
039359	B24-102
039360	B24-102
039361	B24-102
039362	B24-102
039371	B24-102
039372	B24-102
039373	B24-102
039374	B24-102
039375	B24-102
039376	B24-102
039377	B24-104
039378	B24-104
039380	B24-104
039381	B24-104
039382	B24-104
039383	B24-104
039384	B24-104
039385	B24-104
039386	B24-104
039404	B24-75
039405	B24-75
039406	B24-75
039407	B24-75
039413	B24-75
039414	B24-75
039415	B24-75
039416	B24-75
039417	B24-75
039419	B24-75
039420	B24-75
039421	B24-75
039422	B24-75
039423	B24-75
039424	B24-75
039425	B24-75
039426	B24-75
039427	B24-75
039508	B24-44, B24-47
039509	B24-44, B24-47
039515	B24-93, B24-96, B24-103, B24-109
039530	B24-39, B24-44, B24-53, B24-75
039538	B24-39, B24-44, B24-53, B24-75
039544	B24-44, B24-47
039545	B24-44, B24-47
039553	B24-75
039568	B24-93, B24-96, B24-103
039575	B24-44

Part number	Page
039576	B24-44
039577	B24-44
039578	B24-44
039579	B24-38
039580	B24-44
039581	B24-44
039582	B24-44, B24-75
039583	B24-44, B24-75
039584	B24-44
039585	B24-44
039586	B24-44
039587	B24-44
039588	B24-44
039589	B24-44
039590	B24-44
039591	B24-44
039592	B24-44
039593	B24-44
039594	B24-44
039595	B24-44
039596	B24-44
039597	B24-45
039598	B24-45
039599	B24-45
039600	B24-45
039601	B24-45
039602	B24-45
039603	B24-45
039604	B24-45
039605	B24-45
039606	B24-40
039665	B24-44, B24-47
039666	B24-44, B24-47
039667	B24-44, B24-47
039668	B24-44, B24-47
039669	B24-33, B24-38, B24-47, B24-60
039670	B24-44, B24-47
039671	B24-44, B24-47
039672	B24-44, B24-47
039673	B24-44, B24-47
039674	B24-44, B24-47
039675	B24-44, B24-45, B24-47
039676	B24-44, B24-45, B24-47
039677	B24-45, B24-47
039678	B24-45, B24-47
039679	B24-45, B24-47
039680	B24-45, B24-47
039681	B24-40, B24-47
039682	B24-91
039684	B24-91
039686	B24-91
039688	B24-91
039690	B24-91
039692	B24-91
039694	B24-91
039696	B24-91
039698	B24-91
039700	B24-91
039702	B24-91
039704	B24-91
039706	B24-91
039708	B24-91
039710	B24-91
039711	B24-91
039712	B24-91
039713	B24-91
039714	B24-91
039715	B24-91
039716	B24-91
039717	B24-102
039719	B24-102
039721	B24-102
039723	B24-102
039725	B24-102
039727	B24-102
039729	B24-102
039731	B24-102
039733	B24-102
039735	B24-102
039737	B24-102
039739	B24-102
039741	B24-102
039743	B24-102
039745	B24-104
039747	B24-104
039749	B24-104
039750	B24-104
039751	B24-104
039752	B24-104
039753	B24-104
039754	B24-104
039755	B24-104
039760	B24-75
039762	B24-47, B24-75
039764	B24-75
039766	B24-75
039768	B24-75
039770	B24-75
039772	B24-75
039774	B24-75
039776	B24-75
039780	B24-75
039781	B24-75
039782	B24-75
039783	B24-75
039784	B24-75
039785	B24-75
039852	B24-39, B24-44, B24-53
039853	B24-39, B24-44, B24-53
039854	B24-39, B24-44, B24-53
039855	B24-39, B24-44, B24-53, B24-75
039856	B24-39, B24-44, B24-53
039857	B24-39, B24-44, B24-53, B24-93, B24-96, B24-103, B24-109
039858	B24-39, B24-44, B24-53
039859	B24-41, B24-44, B24-53, B24-75
039860	B24-41, B24-45, B24-53
039861	B24-41, B24-45, B24-53
039862	B24-41, B24-45, B24-53
039863	B24-41, B24-45, B24-53, B24-75, B24-93, B24-96, B24-105, B24-109
039864	B24-41, B24-45, B24-53, B24-75
039865	B24-41, B24-45, B24-53
039866	B24-41, B24-45, B24-53, B24-75
039867	B24-41, B24-45, B24-53
040001	B27-34, B28-25
040002	B27-34, B28-25
040003	B27-34, B28-25
040004	B27-34, B28-25
040005	B27-34, B28-25
040006	B27-34, B28-25
040007	B27-34, B28-25
040008	B27-34, B28-25
040009	B27-34, B28-25
040010	B27-34, B28-25
040011	B27-34, B28-25
040012	B27-34, B28-25
040013	B27-34, B28-25
040014	B27-34, B28-25
040015	B27-34, B28-25
040016	B27-34, B28-25
040017	B27-34, B28-25
040018	B27-34, B28-25
040019	B27-34, B28-25
040020	B27-34, B28-25
040021	B27-34, B28-25
040022	B27-34, B28-25
040023	B27-34, B28-25
040024	B27-34, B28-25
040025	B27-34, B28-25
040026	B27-34, B28-25
040027	B27-34, B28-25
040028	B27-34, B28-25
040029	B27-34, B28-25
040030	B27-34, B28-25
040031	B27-34, B28-25
040032	B27-34, B28-25
040033	B27-34, B28-25
040034	B27-34, B28-25
040681	B24-41, B24-53, B24-71, B24-75, B24-93, B24-96, B24-105, B24-109
040682	B24-41, B24-53, B24-71, B24-93, B24-96, B24-105, B24-109
040683	B24-41, B24-53, B24-71, B24-75, B24-93, B24-96
040684	B24-41, B24-53, B24-71, B24-93, B24-96
040685	B24-41, B24-43, B24-53, B24-71
040687	B24-96
040689	B24-43
040690	B24-41, B24-45, B24-53, B24-71
040691	B24-53, B24-71, B24-93, B24-105
040700	B24-39, B24-103, B24-109
040701	B24-39, B24-53, B24-75, B24-103, B24-109
040702	B24-39, B24-53, B24-71, B24-75, B24-103, B24-109
040703	B24-39, B24-53, B24-71, B24-75, B24-103, B24-109
040704	B24-39, B24-53, B24-71, B24-75
040705	B24-39, B24-53, B24-71, B24-75, B24-93, B24-96, B24-103, B24-109
040706	B24-39, B24-53, B24-71, B24-75, B24-93, B24-96, B24-103, B24-109
040707	B24-39, B24-53, B24-71
040708	B24-41, B24-53, B24-71, B24-75
040709	B24-41, B24-53, B24-71, B24-93, B24-96, B24-105, B24-109
040710	B24-41, B24-53, B24-71, B24-75, B24-93, B24-96, B24-105, B24-109
040711	B24-41, B24-53, B24-71, B24-75, B24-93, B24-96, B24-105, B24-109
040712	B24-41, B24-53, B24-71, B24-75, B24-93, B24-96, B24-105, B24-109
040713	B24-41, B24-53, B24-71, B24-75, B24-93, B24-96, B24-105, B24-109
040714	B24-41, B24-53, B24-71, B24-75
040830	B24-83, B24-89
040838	B24-91, B24-101
040890	B24-39, B24-44, B24-53, B24-71
040891	B24-39, B24-44, B24-53, B24-71
040892	B24-39, B24-44, B24-53, B24-71
040893	B24-41, B24-45, B24-53, B24-71
040894	B24-41, B24-45, B24-53, B24-71
040895	B24-41, B24-45, B24-53, B24-71
040896	B24-41, B24-45, B24-53, B24-71
040897	B24-43, B24-46, B24-53, B24-71
040898	B24-43, B24-46, B24-53, B24-71
040899	B24-53, B24-71
040900	B24-43, B24-46, B24-53, B24-71
040901	B24-43, B24-46, B24-53, B24-71
040918	B24-39, B24-44, B24-53, B24-71
040919	B24-41, B24-45, B24-53, B24-71
040995	B24-43, B24-46, B24-53, B24-71
041064	B24-91, B24-101, B24-104, B24-114
041065	B24-91, B24-101, B24-104, B24-114
041066	B24-91, B24-101, B24-104, B24-114
041067	B24-91, B24-101, B24-104, B24-114
041068	B24-91, B24-101, B24-104, B24-114
041069	B24-91, B24-101
041070	B24-91, B24-101
041071	B24-91, B24-101, B24-104, B24-114
041072	B24-91, B24-101, B24-104, B24-114
041082	B24-43, B24-46, B24-53, B24-71
041161	B24-57, B24-115
041172	B24-57, B24-115
041173	B24-57, B24-115
041174	B24-57, B24-115
041175	B24-57, B24-115
041176	B24-57, B24-115
041177	B24-57, B24-115
041178	B24-57, B24-115
041179	B24-57, B24-115
041180	B24-57, B24-115
041181	B24-57, B24-115
041182	B24-57, B24-115
041183	B24-57, B24-115
041184	B24-57, B24-115
041185	B24-57, B24-115
041186	B24-57, B24-115
041213	B24-57, B24-115
041628	B24-42
041646	B24-41, B24-45, B24-53, B24-71
041687	B24-39, B24-44, B24-53, B24-71
041688	B24-39, B24-44, B24-53, B24-71
041860	B24-38
041861	B24-38
041862	B24-38
041863	B24-38
041864	B24-38
041865	B24-38
041866	B24-38
041867	B24-38
041868	B24-40
041869	B24-40
041870	B24-40
041871	B24-40
041872	B24-40
041873	B24-40
041874	B24-40
041875	B24-40
041876	B24-40
041877	B24-40
041878	B24-40
041879	B24-40
041880	B24-40
041881	B24-40
041882	B24-40
041883	B24-40
041884	B24-40
041885	B24-40
041886	B24-40
041887	B24-42
041987	B24-57, B24-115
042001	B24-62
042002	B24-62
042003	B24-62
042004	B24-62
042005	B24-62
042006	B24-62
042007	B24-62
042008	B24-62
042009	B24-62
042010	B24-62
042011	B24-62
042015	B24-63
042016	B24-63
042017	B24-63
042019	B24-63
042020	B24-63
042021	B24-63
042022	B24-63
042023	B24-63
042024	B24-63
042025	B24-63
042028	B24-93, B24-96
042029	B24-93, B24-96
042030	B24-63
042031	B24-93, B24-96, B24-105, B24-109
042032	B24-93, B24-96, B24-105, B24-109
042036	B24-43, B24-46, B24-53, B24-71
042037	B24-82, B24-87
042038	B24-82, B24-87
042039	B24-82, B24-87
042040	B24-82, B24-87
042049	B24-93, B24-96, B24-105, B24-109
042085	B24-93, B24-96, B24-105, B24-109
042088	B24-93, B24-96, B24-103, B24-109
042089	B24-93, B24-96, B24-103, B24-109
042090	B24-83, B24-87
042091	B24-83, B24-87
042092	B24-83, B24-87
042093	B24-83, B24-87
042094	B24-83, B24-87
042095	B24-83, B24-87
042098	B24-93, B24-96, B24-105, B24-109
042100	B24-65
042103	B24-65
042106	B24-65
042109	B24-65
042111	B24-65
042114	B24-65
042116	B24-65
042119	B24-65
042121	B24-65
042124	B24-65
042126	B24-65
042129	B24-65
042131	B24-65
042134	B24-65
042137	B24-65
042140	B24-65
042143	B24-65
042146	B24-65
042149	B24-65
042152	B24-65
042155	B24-65
042158	B24-65
042161	B24-65
042164	B24-65
042167	B24-65
042193	B24-39, B24-44, B24-53, B24-60, B24-103, B24-109
042199	B24-39, B24-44, B24-53, B24-60, B24-75, B24-103, B24-109
042220	B24-93, B24-96
042221	B24-93, B24-96
042248	B24-93, B24-96, B24-105, B24-109
042249	B24-93, B24-96, B24-105, B24-109
042270	B24-63
042271	B24-63
042272	B24-63
042273	B24-63
042274	B24-63
042282	B24-63
042283	B24-63
042284	B24-63
042303	B24-63
042304	B24-63
042305	B24-63
042306	B24-63
042307	B24-63
042308	B24-63
042309	B24-63
042315	B24-57, B24-115
042316	B24-57, B24-60, B24-115
042335	B24-57, B24-115
042368	B24-43, B24-53, B24-71
042369	B24-43, B24-53, B24-71
042370	B24-63
042371	B24-63
042372	B24-63
042373	B24-63
042374	B24-63
042375	B24-63
042376	B24-63
042377	B24-63
042378	B24-63
042379	B24-63
042380	B24-39, B24-44, B24-53, B24-71
042381	B24-39, B24-44, B24-53, B24-71
042382	B24-39, B24-44, B24-53, B24-71
042383	B24-41, B24-44, B24-53, B24-71
042384	B24-41, B24-45, B24-53, B24-71
042385	B24-41, B24-45, B24-53, B24-71
042386	B24-41, B24-45, B24-53, B24-71
042387	B24-41, B24-45, B24-53, B24-71
042388	B24-41, B24-53, B24-71
042389	B24-41, B24-45, B24-53, B24-71
042390	B24-41, B24-45, B24-53, B24-71
042391	B24-41, B24-45, B24-53, B24-71
042392	B24-41, B24-45, B24-53, B24-71
042393	B24-41, B24-45, B24-53, B24-71
042394	B24-43, B24-46, B24-53, B24-71
042395	B24-43, B24-46, B24-53, B24-71
042396	B24-43, B24-46, B24-53, B24-71
042397	B24-71
042400	B24-67
042401	B24-67
042402	B24-67
042403	B24-67
042404	B24-67
042405	B24-67
042406	B24-38
042407	B24-67
042408	B24-67
042409	B24-38
042410	B24-67
042411	B24-67
042412	B24-67
042413	B24-67
042414	B24-67
042415	B24-67
042416	B24-67
042417	B24-67
042420	B24-67
042421	B24-67
042422	B24-38
042423	B24-38
042424	B24-67
042425	B24-67
042428	B24-67
042430	B24-67
042431	B24-40
042432	B24-67
042433	B24-67
042436	B24-67
042438	B24-40
042439	B24-67
042440	B24-67
042443	B24-67
042445	B24-40
042446	B24-67
042447	B24-42
042448	B24-42
042449	B24-42
042450	B24-67
042453	B24-42
042454	B24-42
042455	B24-67
042458	B24-42
042460	B24-67
042463	B24-42
042464	B24-42
042465	B24-67
042468	B24-67
042469	B24-67
042472	B24-67
042477	B24-67
042510	B24-43, B24-46, B24-53, B24-71
042511	B24-43, B24-46, B24-53, B24-71
042512	B24-39, B24-44, B24-53, B24-60, B24-71, B24-75, B24-103, B24-109
042513	B24-39, B24-44, B24-53, B24-60, B24-71, B24-75
042514	B24-39, B24-44, B24-53, B24-60, B24-71, B24-75
042515	B24-39, B24-44, B24-53, B24-71
042516	B24-39, B24-44, B24-53, B24-60, B24-71, B24-75
042517	B24-39, B24-44, B24-53, B24-71
042518	B24-39, B24-44, B24-53, B24-60, B24-71, B24-75
042519	B24-39, B24-44, B24-53, B24-71, B24-93, B24-96, B24-103, B24-109
042520	B24-39, B24-44, B24-53, B24-60, B24-71
042521	B24-41, B24-44, B24-53, B24-60, B24-71, B24-75
042522	B24-41, B24-45, B24-53, B24-71
042523	B24-41, B24-45, B24-53, B24-60, B24-71
042524	B24-41, B24-45, B24-53, B24-71
042525	B24-41, B24-45, B24-53, B24-71, B24-75, B24-93, B24-96, B24-105, B24-109
042526	B24-41, B24-45, B24-53, B24-71, B24-75
042527	B24-41, B24-45, B24-53, B24-71, B24-93, B24-96, B24-105, B24-109
042528	B24-41, B24-45, B24-53, B24-71, B24-75, B24-93, B24-96, B24-105, B24-109
042529	B24-41, B24-45, B24-53, B24-71
042530	B24-41, B24-45, B24-53, B24-71, B24-75
042531	B24-41, B24-45, B24-53, B24-71, B24-75
042532	B24-41, B24-45, B24-53, B24-71
042533	B24-41, B24-45, B24-53, B24-71, B24-75
042534	B24-41, B24-45, B24-53, B24-71, B24-75
042535	B24-41, B24-45, B24-53, B24-71, B24-93, B24-96, B24-105, B24-109
042536	B24-41, B24-45, B24-53, B24-71

Part number	Page
042537	B24-41, B24-45, B24-53, B24-71, B24-75
042538	B24-41, B24-45, B24-53, B24-71, B24-75, B24-93, B24-96, B24-105, B24-109
042539	B24-41, B24-45, B24-53, B24-71
042540	B24-41, B24-45, B24-53, B24-71
042541	B24-43, B24-46, B24-53, B24-71
042542	B24-43, B24-46, B24-53, B24-71
042543	B24-43, B24-46, B24-53, B24-71
042544	B24-43, B24-46, B24-53, B24-71
042545	B24-43, B24-46, B24-53, B24-71
042547	B24-103
042562	B24-45
042568	B24-67
042569	B24-67
042570	B24-67
042571	B24-67
042572	B24-67
042573	B24-67
042574	B24-67
042575	B24-67
042576	B24-67
042577	B24-67
042578	B24-67
042579	B24-67
042580	B24-67
042581	B24-67
042594	B24-46, B24-71
043015	B24-38
043048	B24-38
043109	B24-41, B24-45, B24-53, B24-71
043248	B24-38
043249	B24-38
043386	B24-41, B24-45, B24-53, B24-71
043393	B24-33, B24-37
043400	B24-33, B24-37
043401	B24-33, B24-37
043402	B24-33, B24-37
043403	B24-33, B24-37
043404	B24-33, B24-37
043405	B24-33, B24-37
043406	B24-33, B24-37
043407	B24-33, B24-37
043408	B24-33, B24-37
043410	B24-33, B24-37
043411	B24-33, B24-37
043412	B24-33, B24-37
043421	B24-33
043501	B24-33, B24-36
043502	B24-33, B24-36
043504	B24-33, B24-36
043506	B24-33, B24-36
043508	B24-33, B24-36
043509	B24-33, B24-36
043511	B24-33, B24-36
043512	B24-33, B24-36
043513	B24-33, B24-36
043514	B24-33, B24-36
043516	B24-33, B24-36
043519	B24-33, B24-36
043520	B24-33, B24-36
043521	B24-33, B24-36
043522	B24-36
043538	B24-43, B24-46, B24-53, B24-71
043540	B24-39, B24-44, B24-53, B24-71, B24-75, B24-103, B24-109
043541	B24-39, B24-44, B24-53, B24-71, B24-75
043542	B24-39, B24-44, B24-53, B24-71, B24-75
043543	B24-39, B24-44, B24-53, B24-71
043544	B24-39, B24-44, B24-53, B24-71, B24-75
043545	B24-39, B24-44, B24-53, B24-71
043546	B24-39, B24-44, B24-53, B24-71, B24-75
043547	B24-39, B24-44, B24-53, B24-71, B24-93, B24-96, B24-109
043548	B24-39, B24-44, B24-53, B24-71
043549	B24-41, B24-44, B24-53, B24-71, B24-75
043550	B24-41, B24-45, B24-53, B24-71
043551	B24-41, B24-45, B24-53, B24-71
043552	B24-41, B24-45, B24-53, B24-71
043553	B24-41, B24-45, B24-53, B24-71, B24-75, B24-93, B24-96, B24-105, B24-109
043554	B24-41, B24-45, B24-53, B24-71, B24-75
043555	B24-41, B24-45, B24-53, B24-71, B24-75, B24-93, B24-96, B24-105, B24-109
043556	B24-41, B24-45, B24-53, B24-71, B24-75, B24-93, B24-96, B24-105, B24-109
043557	B24-41, B24-45, B24-53, B24-71
043558	B24-41, B24-45, B24-53, B24-71, B24-75
043559	B24-41, B24-45, B24-53, B24-71, B24-75
043560	B24-41, B24-45, B24-53, B24-71, B24-75
043561	B24-41, B24-45, B24-53, B24-71, B24-75
043562	B24-41, B24-53, B24-71, B24-93, B24-96, B24-105, B24-109
043563	B24-41, B24-45, B24-53, B24-71
043564	B24-41, B24-45, B24-53, B24-71, B24-75
043565	B24-41, B24-45, B24-53, B24-71, B24-75, B24-93, B24-96, B24-105, B24-109
043566	B24-41, B24-45, B24-53, B24-71
043567	B24-41, B24-45, B24-53, B24-71
043568	B24-43, B24-46, B24-53, B24-71
043569	B24-43, B24-46, B24-53, B24-71
043570	B24-43, B24-46, B24-53, B24-71
043571	B24-43, B24-46, B24-53, B24-71
043572	B24-43, B24-46, B24-53, B24-71
043573	B24-43, B24-46, B24-53, B24-71
043574	B24-41, B24-45, B24-53, B24-71, B24-75
043575	B24-43, B24-46, B24-53, B24-71
043578	B24-39, B24-44, B24-53, B24-79, B24-103, B24-109
043579	B24-39, B24-44, B24-53, B24-75, B24-103, B24-109
043580	B24-43, B24-46, B24-56, B24-73
043581	B24-82, B24-89
043582	B24-82, B24-89
043583	B24-82, B24-89
043584	B24-82, B24-89
043585	B24-43, B24-46, B24-56, B24-73
043586	B24-43, B24-46, B24-56, B24-73
043618	B24-41, B24-45, B24-56, B24-73
043619	B24-41, B24-45, B24-56, B24-73
043620	B24-41, B24-45, B24-56, B24-73
043621	B24-41, B24-45, B24-56, B24-73
043622	B24-41, B24-45, B24-56, B24-73
043623	B24-41, B24-45, B24-56, B24-73
043624	B24-41, B24-45, B24-56, B24-73
043625	B24-41, B24-45, B24-56, B24-73
043626	B24-41, B24-45, B24-56, B24-73
043627	B24-41, B24-45, B24-56, B24-73
043628	B24-43, B24-46, B24-56, B24-73
043629	B24-43, B24-46, B24-56, B24-73
043630	B24-43, B24-46, B24-56, B24-73
043631	B24-43, B24-46, B24-56, B24-73
043632	B24-43, B24-46, B24-56, B24-73
043633	B24-43, B24-46, B24-56, B24-73
043634	B24-41, B24-45, B24-56, B24-73
043635	B24-83, B24-89
043636	B24-83, B24-89
043637	B24-83, B24-89
043638	B24-83, B24-89
043639	B24-83, B24-89
043640	B24-83, B24-89
043958	B24-33
043959	B24-33
043960	B24-33
043961	B24-33
043962	B24-33
043963	B24-33
043965	B24-33
043966	B24-33
043967	B24-33
043968	B24-33
043969	B24-33
043970	B24-33
043971	B24-33
043972	B24-33
043974	B24-33
043976	B24-33
043977	B24-33
043978	B24-33
043995	B24-38, B24-47, B24-60
043996	B24-38, B24-47, B24-60
043997	B24-38, B24-47, B24-60
043998	B24-33, B24-38, B24-47, B24-60
044000	B24-33, B24-38, B24-47, B24-60
044003	B24-38, B24-47, B24-60
044007	B24-33, B24-38, B24-47, B24-60
044010	B24-33, B24-38, B24-47, B24-60
044013	B24-33, B24-38, B24-47, B24-60
044015	B24-38
044020	B24-33, B24-40, B24-47, B24-60
044023	B24-33, B24-40, B24-47, B24-60
044025	B24-33, B24-40, B24-47, B24-60
044031	B24-33, B24-40, B24-47
044034	B24-33, B24-40, B24-47
044040	B24-33, B24-40, B24-47
044043	B24-33, B24-40, B24-47
044046	B24-40, B24-47
044049	B24-40, B24-47
044054	B24-40, B24-47
044055	B24-40, B24-42, B24-47
044114	B24-33, B24-38, B24-47, B24-60
044115	B24-38
044164	B24-83
044165	B24-83
044166	B24-83
044198	B24-33, B24-38, B24-47, B24-60
044199	B24-33, B24-38, B24-47, B24-60
044200	B24-42, B24-47
044201	B24-42, B24-47
044202	B24-33, B24-40, B24-47
044203	B24-40, B24-47
044231	B24-67
044232	B24-67
044233	B24-67
044234	B24-67
044235	B24-67
044236	B24-67
044360	B24-41, B24-45, B24-53, B24-71
044440	B24-82, B24-87
045781	B24-82, B24-87
045784	B24-82, B24-87
045787	B24-82, B24-87
045790	B24-82, B24-87
045793	B24-83, B24-87
045796	B24-83, B24-87
045799	B24-83, B24-87
045802	B24-83, B24-87
045805	B24-83, B24-87
045808	B24-83, B24-87
045927	B24-93, B24-96, B24-103, B24-109
045928	B24-93, B24-96, B24-103, B24-109
045931	B24-93, B24-96, B24-103, B24-109
045934	B24-93, B24-96
045936	B24-93, B24-96
045939	B24-93, B24-96, B24-105, B24-109
045943	B24-93, B24-96, B24-105, B24-109
045949	B24-93, B24-96, B24-105, B24-109
045951	B24-93, B24-96, B24-105, B24-109
045953	B24-93, B24-96, B24-105, B24-109
045955	B24-93, B24-96
045956	B24-93, B24-96
046110	B24-33
046166	B24-103, B24-109
046167	B24-103, B24-109
046168	B24-103, B24-109
046175	B24-103, B24-109
046176	B24-103, B24-109
046177	B24-103, B24-109
046323	B24-65
046324	B24-65
046325	B24-65
046326	B24-65
046350	B24-39, B24-44, B24-56, B24-60
046351	B24-39, B24-44, B24-56, B24-60
046352	B24-39, B24-44, B24-56, B24-60, B24-73
046353	B24-39, B24-44, B24-56, B24-60, B24-73
046354	B24-39, B24-44, B24-56, B24-60, B24-73
046355	B24-39, B24-44, B24-56, B24-73
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046361	B24-41, B24-44, B24-56, B24-60, B24-73
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046363	B24-41, B24-45, B24-56, B24-60, B24-73
046364	B24-41, B24-45, B24-56, B24-73
046400	B24-93, B24-96, B24-103, B24-109
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046402	B24-93, B24-96, B24-103, B24-109
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046406	B24-93, B24-96
046407	B24-93, B24-96, B24-105, B24-109
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046421	B24-41, B24-45, B24-53, B24-71
046422	B24-93, B24-96
046423	B24-93, B24-96
046424	B24-93, B24-96
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046463	B24-103, B24-109
046464	B24-103, B24-109
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046498	B24-83, B24-87
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046545	B24-41, B24-45, B24-56, B24-73
046550	B24-81
046551	B24-75, B24-81
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046563	B24-75, B24-81
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046566	B24-83, B24-87
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046568	B24-83, B24-87
046569	B24-83, B24-87
046570	B24-83, B24-87
046572	B24-83, B24-87
046632	B24-57, B24-115
046634	B24-57, B24-115
046635	B24-57, B24-115
046637	B24-57, B24-115
046638	B24-57, B24-115
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046642	B24-57, B24-115
046643	B24-57, B24-115
046680	B24-75, B24-81
046682	B24-75, B24-81
046751	B24-113
046752	B24-113
046753	B24-113
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046760	B24-99, B24-113
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046764	B24-99, B24-113
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046872	B24-59
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046988	B24-59
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047815	B24-59
047816	B24-59
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047827	B24-59
047828	B24-59
047829	B24-59
047830	B24-59
047831	B24-59
047940	B24-43, B24-46, B24-53, B24-71
047941	B24-43, B24-46, B24-53, B24-71
047942	B24-82, B24-87
047943	B24-82, B24-87
047944	B24-82, B24-87
047945	B24-82, B24-87
047946	B24-82, B24-87
047947	B24-83, B24-87
047948	B24-83, B24-87
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047954	B24-83, B24-87
047955	B24-83, B24-87
047956	B24-83, B24-87
047957	B24-83, B24-87
048000	B25-11
048001	B25-11
048002	B25-11
048003	B25-11
048004	B25-11
048005	B25-11
048006	B25-11
048007	B25-11
048008	B25-11

Part number	Page
048009	B25-11
048010	B25-11
048011	B25-11
048012	B25-11
048013	B25-11
048014	B25-11
048015	B25-11
048016	B25-11
048017	B25-11
048018	B25-11
048019	B25-11
048020	B25-11
048021	B25-11
048022	B25-11
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048063	B25-13
048064	B25-13
048065	B25-13
048066	B25-13
048067	B25-13
049438	B22-69
049439	B22-69
050474	B24-83, B24-87
051841	B24-60
052570	B24-60
052637	B24-60
052638	B24-60
052639	B24-60
052640	B24-60
052641	B24-60
052642	B24-60
052643	B24-60
052644	B24-60
057260	B24-93
058699	B24-60
058902	B24-60
058903	B24-60
058904	B24-60
058905	B24-60
058906	B24-60
058907	B24-60
058908	B24-60
058909	B24-60
060905	B24-104
060906	B24-104
061082	B21-29
061083	B21-29
061084	B21-29
061085	B21-29
061086	B21-29
061087	B21-29
062224	B22-69
062603	B22-69
063485	B24-121
063486	B24-121
063487	B24-121
063488	B24-121
065238	B21-19
065244	B21-19
065258	B21-24
065260	B21-24
065262	B21-24
065265	B21-24
065268	B21-24
065270	B21-24
065271	B21-24
065274	B21-24
065282	B21-24
065283	B21-24
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065286	B21-24
065287	B21-24
065288	B21-24
065289	B21-19
065290	B21-19
065291	B21-19
065292	B21-19
065293	B21-19
065294	B21-19
065295	B21-19
065296	B21-19
065297	B21-19
065298	B21-21
065299	B21-21
065300	B21-21
065302	B21-21
065303	B21-21
065304	B21-24
065305	B21-24
065306	B21-24
065310	B21-21
065311	B21-19
065312	B21-19
065313	B21-19
065314	B21-19
065315	B21-19
065316	B21-19
065317	B21-19
066224	B21-33
066225	B21-33
066231	B21-33
066235	B21-33
066238	B21-33
066240	B21-33
066242	B21-33
066243	B21-31
066244	B21-33
066245	B21-33
066247	B21-31
066248	B21-31
066249	B21-31
066250	B21-31
066252	B21-31
066253	B21-31
066254	B21-31
066256	B21-31
066257	B21-31
066258	B21-31
066260	B21-33
066261	B21-33
066262	B21-31
066263	B21-31
066266	B21-31
066268	B21-33
066269	B21-31
066270	B21-31
066271	B21-31
066272	B21-33
066273	B21-31
066274	B21-33
066276	B21-33
066278	B21-33
066279	B21-39
066280	B21-39
066281	B21-39
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066286	B21-39
066287	B21-39
066288	B21-39
066289	B21-39
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066293	B21-39
066294	B21-39
066295	B21-39
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066297	B21-39
066298	B21-39
066299	B21-39
066306	B21-31
066307	B21-31
066308	B21-31
066309	B21-31
066310	B21-31
066311	B21-31
066312	B21-39
066314	B21-39
066315	B21-39
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066317	B21-39
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066319	B21-39
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066321	B21-39
066322	B21-39
066324	B21-39
066325	B21-39
066326	B21-39
066360	B21-33
066363	B21-33
066365	B21-33
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066367	B21-33
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066371	B21-33
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066593	B21-39
066594	B21-39
066629	B22-80
066630	B22-80
066631	B22-80
066632	B22-80
066633	B22-80
066634	B22-80
066635	B22-80
067007	B21-43
067016	B21-43
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067034	B21-43
067042	B21-43
067043	B21-43
067044	B21-43
067045	B21-43
067046	B21-43
067047	B21-43
067048	B21-43
067049	B21-43
067050	B21-43
067051	B21-43
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067053	B21-43
067054	B21-43
067055	B21-43
067056	B21-43
067057	B21-43
067060	B21-43
067061	B21-43
067072	B21-43
067073	B21-43
067075	B21-43
067078	B21-43
067100	B21-43
067103	B21-43
067120	B21-43
067123	B21-43
067135	B21-43
067138	B21-43
067149	B21-44
067151	B21-44
067152	B21-44
067153	B21-44
067154	B21-44
067155	B21-44
067156	B21-44
067157	B21-44
067159	B21-44
067164	B21-44
068160	B22-69
068161	B22-69
068162	B22-69
068163	B22-69
068164	B22-69
068231	B22-69
069034	B21-24
069039	B21-24
069045	B21-24
069046	B21-24
069060	B21-24
069061	B21-24
069062	B21-24
069063	B21-24
069064	B21-24
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069561	B22-33
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Part number	Page
069648	B22-41
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070055	B22-73
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070574	B23-35

Part number	Page
070576	B23-35
070577	B23-35
070578	B23-35
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071426	B23-19

Part number	Page	Part number	Page	Part number	Page	Part number	Page
071427	B23-19	071504	B23-37	071640	B22-35	071721	B22-37
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071902	B22-31	071975	B23-29	072241	B22-51	072315	B22-59
071903	B22-31	071976	B23-29	072242	B22-51	072316	B22-59
071904	B22-31	071977	B23-29	072243	B22-51	072317	B22-59
071905	B22-31	072170	B22-49	072244	B22-51	072318	B22-59
071906	B22-39	072171	B22-49	072245	B22-51	072319	B22-59
071907	B22-39	072172	B22-49	072246	B22-51	072320	B22-59
071908	B22-39	072173	B22-49	072247	B22-51	072321	B22-59
071909	B22-39	072174	B22-49	072248	B22-51	072322	B22-59
071910	B22-39	072175	B22-49	072249	B22-51	072323	B22-59
071911	B22-39	072176	B22-49	072250	B22-51	072324	B22-59
071912	B22-39	072177	B22-49	072251	B22-51	072325	B22-59
071913	B22-39	072178	B22-49	072252	B22-51	072326	B22-59
071914	B22-39	072179	B22-49	072253	B22-51	072327	B22-59
071915	B22-39	072180	B22-49	072254	B22-51	072328	B22-59
071916	B22-39	072181	B22-49	072255	B22-51	072329	B22-59
071917	B22-39	072182	B22-49	072256	B22-51	072330	B22-59
071918	B22-39	072183	B22-49	072257	B22-51	072331	B22-59
071919	B22-39	072184	B22-49	072258	B22-51	072332	B22-59
071920	B22-39	072185	B22-49	072259	B22-51	072333	B22-59
071921	B22-39	072186	B22-49	072260	B22-51	072334	B22-59
071922	B22-39	072187	B22-49	072262	B22-51	072335	B22-59
071923	B22-39	072188	B22-49	072263	B22-51	072336	B22-59
071924	B22-39	072189	B22-49	072264	B22-51	072337	B22-59
071925	B22-39	072190	B22-49	072265	B22-51	072338	B22-63
071926	B22-39	072191	B22-49	072266	B22-51	072339	B22-63
071927	B22-39	072192	B22-49	072267	B22-51	072340	B22-63
071928	B22-39	072193	B22-49	072268	B22-51	072341	B22-63
071929	B22-39	072194	B22-49	072269	B22-51	072342	B22-63
071930	B22-39	072195	B22-49	072270	B22-51	072343	B22-63
071931	B22-39	072196	B22-49	072271	B22-51	072344	B22-63
071932	B22-39	072197	B22-49	072272	B22-51	072345	B22-63
071933	B22-39	072198	B22-49	072273	B22-51	072346	B22-63
071934	B22-39	072199	B22-49	072274	B22-51	072347	B22-63
071935	B22-39	072200	B22-49	072275	B22-51	072348	B22-63
071936	B22-39	072201	B22-49	072276	B22-59	072349	B22-63
071937	B22-39	072202	B22-49	072277	B22-59	072350	B22-63
071938	B22-39	072203	B22-49	072278	B22-59	072351	B22-63
071939	B22-39	072204	B22-49	072279	B22-59	072352	B22-63
071940	B23-27	072205	B22-49	072280	B22-59	072353	B22-63
071941	B23-27	072206	B22-49	072281	B22-59	072354	B22-63
071942	B23-27	072207	B22-49	072282	B22-59	072355	B22-63
071943	B23-27	072208	B22-49	072283	B22-59	072356	B22-63
071944	B23-27	072209	B22-49	072284	B22-59	072358	B22-63

Part number	Page
072359	B22-63
072360	B22-63
072361	B22-63
072362	B22-63
072363	B22-63
072364	B22-63
072365	B22-63
072366	B22-63
072367	B22-63
072368	B22-63
072369	B22-63
072370	B22-63
072371	B22-63
072372	B22-63
072373	B22-63
072374	B22-63
072375	B22-63
072376	B22-63
072377	B22-63
072378	B22-63
072379	B22-63
072380	B22-63
072382	B22-63
072383	B22-63
072384	B22-63
072385	B22-63
072386	B23-39
072387	B23-39
072388	B23-39
072389	B23-39
072390	B23-39
072391	B23-39
072392	B23-39
072393	B23-39
072394	B23-39
072395	B23-39
072396	B23-39
072397	B23-39
072398	B23-39
072399	B23-39
072400	B23-39
072401	B23-39
072402	B23-39
072403	B23-39
072404	B23-39
072405	B23-39
072406	B23-39
072407	B23-39
072408	B23-39
072409	B23-39
072410	B23-39
072411	B23-39
072412	B23-39
072413	B23-39
072500	B22-82
072501	B22-82
072502	B22-82
072503	B22-82, B23-52
072504	B22-82, B23-52
072505	B22-82, B23-52
072506	B22-82, B23-52
072507	B22-82
072508	B22-82, B23-52
072509	B22-82, B23-52
072510	B22-82, B23-52
072511	B22-82
072512	B22-82, B23-52
072513	B22-82, B23-52
072514	B22-82, B23-52
072515	B22-82
072516	B22-82
072517	B22-82
072518	B22-82, B23-52
072519	B22-82
072520	B22-82, B23-52
072521	B22-82
072522	B22-82, B23-52
072523	B22-82, B23-52
072524	B22-82
072525	B22-82
072526	B22-82, B23-52
072527	B22-82
072528	B22-82
072529	B22-82, B23-52
072530	B22-82
072531	B22-82
072532	B23-52
072533	B22-82
072534	B22-82
072535	B23-52
072536	B22-82
077192	B20-41
077193	B20-41
077194	B20-41
077195	B20-41
077196	B20-41
077197	B20-41
077198	B20-41
077199	B20-41
077200	B20-41
077201	B20-41
077202	B20-41
077203	B20-41
077204	B20-41
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077211	B20-41
077212	B20-41
077213	B20-41
077214	B20-41
077215	B20-41
077216	B20-41
077217	B20-41
077218	B20-41
077219	B20-41
077220	B20-41
077221	B20-35
077222	B20-35
077223	B20-35
077224	B20-35
077225	B20-35
077226	B20-35
077227	B20-35
077228	B20-35
077229	B20-35
077230	B20-35
077231	B20-35
077232	B20-35
077233	B20-35
077234	B20-35
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077236	B20-35
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077238	B20-35
077239	B20-35
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077247	B20-35
077248	B20-35
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077250	B20-35
077251	B20-35
077252	B20-35
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077254	B20-35
077255	B20-35
077256	B20-35
077257	B20-35
077258	B20-35
077259	B20-35
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077261	B20-35
077262	B20-35
077263	B20-35
077264	B20-35
077265	B20-35
077266	B20-35
077267	B20-37
077268	B20-37
077269	B20-37
077270	B20-37
077271	B20-37
077272	B20-37
077273	B20-37
077274	B20-37
077275	B20-37
077276	B20-37
077277	B20-37
077278	B20-37
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077280	B20-37
077281	B20-37
077282	B20-37
077283	B20-37
077284	B20-37
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077286	B20-37
077287	B20-37
077288	B20-37
077289	B20-37
077290	B20-37
077291	B20-37
077292	B20-37
077293	B20-37
077294	B20-37
077295	B20-37
077296	B20-37
077297	B20-37
077298	B20-37
077299	B20-37
077300	B20-37
077484	B26-27
077587	B26-27
077588	B26-27
077589	B26-27
078289	B24-121
078290	B24-121
078327	B24-121
078328	B24-121
078358	B24-121
079242	B22-69
079425	B22-69
079498	B26-27
079754	B26-27
079991	B22-79
079992	B22-79
079993	B22-79
087172	B21-19
087178	B21-19
087180	B21-19
087181	B21-19
087182	B21-19
087183	B21-19
087184	B21-19
087185	B21-19
087186	B21-19
087187	B21-19
087188	B21-21
087189	B21-21
087190	B21-21
087191	B21-21
087192	B21-21
087193	B21-21
087194	B21-24
087195	B21-24
087196	B21-24
087197	B21-24
087198	B21-24
087199	B21-24
087200	B21-24
087205	B21-24
087207	B21-24
087209	B21-24
087210	B21-24
087211	B21-24
087212	B21-24
087215	B21-24
087218	B21-24
087220	B21-24
087221	B21-24
087222	B21-24
087224	B21-24
087225	B21-24
087262	B21-19
087263	B21-19
087264	B21-19
087265	B21-19
087266	B21-19
087267	B21-19
087268	B21-19
087269	B21-19
104003	B21-36
104006	B21-36
104010	B21-36
104013	B21-36
104016	B21-36
104017	B21-36
104018	B21-36
104019	B21-36
104020	B21-36
104021	B21-36
104022	B21-36
104023	B21-36
104024	B21-36
104025	B21-36
104026	B21-36
104027	B21-36
104028	B21-36
104029	B21-36
104030	B21-36
104031	B21-36
104032	B21-36
104033	B21-36
104034	B21-36
104035	B21-36
104036	B21-36
104037	B21-36
104038	B21-36
104039	B21-36
104040	B21-23
104041	B21-23
104042	B21-23
104043	B21-23
104044	B21-23
104045	B21-23
104046	B21-23
104050	B21-23
104051	B21-23
104052	B21-23
104053	B21-23
104054	B21-23
104055	B21-23
104056	B21-23
104078	B21-23
104090	B21-23
104106	B21-23
104119	B21-23
104161	B21-36
104162	B21-36
104164	B21-36
104169	B21-36
104170	B21-36
104172	B21-36
104173	B21-36
104176	B21-36
104177	B21-36
104181	B21-36
104196	B21-36
104197	B21-36
104199	B21-36
104204	B21-36
104205	B21-36
104207	B21-36
104208	B21-36
104211	B21-36
104212	B21-36
104216	B21-36
132151	B26-8
132152	B26-8
132153	B26-8
132154	B26-8
132155	B26-8
132156	B26-8
132157	B26-8
132158	B26-8
132159	B26-8
132160	B26-8
132161	B26-8
132192	B26-13
132193	B26-13
132198	B26-13
132203	B26-27
132205	B26-27
132383	B26-8
132384	B26-8, B26-24
132385	B26-8
132386	B26-8
132387	B26-8
132388	B26-8
132389	B26-8
132420	B26-9
132421	B26-9
132422	B26-9
132423	B26-9
132424	B26-9
132425	B26-9
132426	B26-9
132427	B26-9
132428	B26-9
132429	B26-9
132430	B26-9
132447	B26-8
132474	B26-8
132475	B26-8
132476	B26-8
132477	B26-8
132538	B26-17
132539	B26-17
132542	B26-8, B26-18
132546	B26-13, B26-18
132547	B26-13, B26-18
132548	B26-13, B26-18
132549	B26-13, B26-18
132559	B26-17
132564	B26-15, B26-17, B26-18
132565	B26-15, B26-17, B26-18
132566	B26-15, B26-17, B26-18
132567	B26-15, B26-18
132591	B26-17
132594	B26-17
132597	B26-17
132766	B26-15
132767	B26-15
132768	B26-15
132811	B26-8, B26-19
132814	B26-8, B26-17, B26-19
132816	B26-8, B26-17, B26-19
132819	B26-8, B26-17, B26-19
132822	B26-19
132823	B26-8
132834	B26-24
132924	B26-15
132925	B26-15
132926	B26-15
132950	B26-10
132951	B26-10
132952	B26-12
132953	B26-12
132954	B26-12
132955	B26-12
132956	B26-12
132957	B26-12
132958	B26-12
132959	B26-10
132983	B26-10
132984	B26-10
132985	B26-10
132986	B26-10
132987	B26-10
132988	B26-10
132989	B26-10
132990	B26-10
132992	B26-10
133116	B26-24
133203	B26-10
133245	B26-10
133250	B26-10
133255	B26-10
133260	B26-10
133265	B26-10
133270	B26-10
133275	B26-10
133280	B26-10
133285	B26-12
133292	B26-12
133293	B26-12
133294	B26-12
133295	B26-12
133296	B26-12
133297	B26-12
133303	B26-17
133304	B26-17
133305	B26-17
133344	B26-10, B26-23
133392	B26-15
133550	B26-15
133565	B26-17
133566	B26-17
133583	B26-10
133584	B26-10
133585	B26-10
133586	B26-10
133669	B26-15
133932	B26-8, B26-13, B26-19
133933	B26-8, B26-13, B26-19
133937	B26-8, B26-13, B26-19
133938	B26-8, B26-13, B26-19
133959	B26-15
133960	B26-15
133961	B26-15
133980	B26-10
133981	B26-10
133982	B26-10
133983	B26-10
133984	B26-10
133985	B26-10
133986	B26-10
133987	B26-10
133988	B26-13
133989	B26-13
133990	B26-13
133991	B26-13
133992	B26-13
133993	B26-13
133994	B26-13
133995	B26-15, B26-17
133996	B26-15, B26-17
133997	B26-15, B26-17
134200	B26-12
134201	B26-12
134202	B26-12
134203	B26-12
134204	B26-12
134205	B26-12
134206	B26-12
134207	B26-12
134208	B26-12
134209	B26-12
134210	B26-12
134211	B26-12
134212	B26-12
134213	B26-12
135135	B26-25
135136	B26-25
135137	B26-25
135138	B26-25
135290	B26-25
135291	B26-25
135292	B26-25
135293	B26-25
135294	B26-25
135295	B26-25
135296	B26-25
135297	B26-25
135298	B26-25
135299	B26-25
135700	B26-25
135704	B26-25
135708	B26-25
135712	B26-25
135716	B26-25
135720	B26-25
135724	B26-25
135728	B26-25
135732	B26-25
135736	B26-25
137101	B26-8
137102	B26-8
137103	B26-8
137104	B26-8
137105	B26-8
137106	B26-8
137107	B26-8
137108	B26-8
137109	B26-8
137110	B26-8
137111	B26-8
139092	B22-43
139093	B22-43
139094	B22-43
139095	B22-43
139096	B22-43
139097	B22-43
140497	B22-69
140687	B24-121
141513	B22-69
230050	B28-16
230053	B28-16
230056	B28-16
230059	B28-16
230062	B28-16
230065	B28-16
230068	B28-16
230071	B28-16
230074	B28-16
230077	B28-16
230080	B28-16
230134	B28-16
230137	B28-16
230140	B28-16
231063	B28-22
231069	B28-22
231075	B28-22
231081	B28-22
231087	B28-22
231096	B28-22
231102	B28-22
231108	B28-22
231114	B28-22
231120	B28-22
231126	B28-22
231135	B28-22
231141	B28-22
231150	B28-22
389820	B26-23
389821	B26-23
389822	B26-23
389823	B26-23
389824	B26-23
389825	B26-23
389826	B26-23
389827	B26-23
389828	B26-23
389829	B26-23
389830	B26-23
389831	B26-23
389832	B26-23
389833	B26-23
389834	B26-23
389835	B26-23
389836	B26-23
389837	B26-23
405015	B28-4
407036	B24-102
407302	B24-102, B24-114
407305	B24-102, B24-114
407306	B24-114
416173	B29-14
416229	B29-14
416231	B29-14
416275	B29-14
419008	B24-103, B24-114
419150	B24-93, B24-101, B24-103, B24-114
419151	B24-103, B24-114

Part number	Page
419152	B24-93, B24-101, B24-103, B24-114
419153	B24-103, B24-114
419154	B24-93, B24-101, B24-103, B24-114
419156	B24-93, B24-101
419158	B24-93, B24-101, B24-105, B24-114
419160	B24-93, B24-101, B24-105, B24-114
419162	B24-93, B24-101, B24-105, B24-114
419164	B24-93, B24-101, B24-105, B24-114
419166	B24-93, B24-101, B24-105, B24-114
419168	B24-93, B24-101, B24-105, B24-114
419170	B24-93, B24-101, B24-105, B24-114
419171	B24-93, B24-101
419172	B24-93, B24-101, B24-105, B24-114
419174	B24-93, B24-101
419176	B24-93, B24-101, B24-105, B24-114
419178	B24-93, B24-101
419180	B24-103, B24-114
419181	B24-103, B24-114
419182	B24-103, B24-114
419183	B24-103, B24-114
419184	B24-102, B24-114
419185	B24-102, B24-114
419187	B24-102, B24-114
419188	B24-102, B24-114
421243	B25-15
421244	B25-15
421245	B25-15
421246	B25-15
421247	B25-15
421248	B25-15
421249	B25-15
421250	B25-15
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421253	B25-15
421254	B25-15
421255	B25-15
421256	B25-15
421257	B25-15
421258	B25-15
421259	B25-15
421265	B24-91, B24-97
421266	B24-91, B24-97
421267	B24-91, B24-97
421268	B24-91, B24-97
421269	B24-91, B24-97
421270	B24-91, B24-97
421271	B24-91, B24-97
421272	B24-91, B24-97
421273	B24-91, B24-97
421274	B24-91, B24-97
421275	B24-91, B24-97
421276	B24-91, B24-97
421277	B24-91, B24-97
421278	B24-91, B24-97
421279	B24-91, B24-97
421280	B24-91, B24-97
421282	B24-83, B24-88
421283	B24-83, B24-88
421284	B24-83, B24-88
422001	B24-38, B24-44, B24-55, B24-72
422003	B24-38, B24-44, B24-55, B24-72
422005	B24-38, B24-44, B24-55, B24-72
422007	B24-38, B24-44, B24-55, B24-72
422009	B24-40, B24-44, B24-45, B24-55, B24-72
422011	B24-40, B24-45, B24-55, B24-72
422013	B24-40, B24-45, B24-55, B24-72
422015	B24-40, B24-45, B24-55, B24-72
422017	B24-40, B24-45, B24-55, B24-72
422019	B24-40, B24-45, B24-55, B24-72
422021	B24-40, B24-45, B24-55, B24-72
422023	B24-40, B24-45, B24-55, B24-72
422025	B24-40, B24-45, B24-55, B24-72
422027	B24-40, B24-45, B24-55, B24-72
422029	B24-40, B24-42, B24-45, B24-46, B24-55, B24-72
422030	B24-42, B24-46, B24-55, B24-72
422031	B24-42, B24-46, B24-55, B24-72
422035	B24-75, B24-80
422036	B24-83, B24-88
422054	B24-83, B24-88
422064	B24-40, B24-45, B24-55, B24-72
422123	B24-38, B24-44, B24-55, B24-72
422124	B24-38, B24-44, B24-55, B24-72
422134	B24-38, B24-44, B24-55
422137	B24-38, B24-44, B24-55
422140	B24-75, B24-80
422502	B24-82
422525	B24-83, B24-89
422529	B24-82, B24-83
422531	B24-82, B24-83, B24-88
422535	B24-83, B24-87
422538	B24-43, B24-46, B24-56, B24-73
422542	B24-42, B24-47
422543	B24-42, B24-46, B24-55, B24-72
422544	B24-42
422545	B24-43, B24-46, B24-53
422554	B24-57, B24-115
422555	B24-65
422556	B24-63
422560	B24-42, B24-47
422567	B24-43, B24-46, B24-56, B24-73
422571	B24-65
422572	B24-63
422573	B24-43, B24-46, B24-53, B24-71
422576	B24-82, B24-89
422580	B24-82
422582	B24-82, B24-88
422588	B24-82, B24-87
422594	B24-43, B24-53, B24-71
422595	B27-29
422596	B27-29
422597	B27-29
422599	B27-29
422600	B27-29
422601	B27-29
422602	B27-29
422603	B27-29
422606	B24-43, B24-53, B24-71
423100	B24-80
423102	B24-75, B24-80
423104	B24-75, B24-80
423106	B24-75, B24-80
423108	B24-75, B24-80
423110	B24-75, B24-80
423112	B24-80
423114	B24-75, B24-80
423116	B24-75, B24-80
423118	B24-75, B24-80
423120	B24-75, B24-80
423122	B24-75, B24-80
423124	B24-102, B24-111
423125	B24-102, B24-111
423126	B24-102, B24-111
423127	B24-102, B24-111
423128	B24-102, B24-111
423129	B24-102, B24-111
423130	B24-102, B24-111
423131	B24-102, B24-111
423132	B24-104, B24-111
423133	B24-104, B24-111
423134	B24-104, B24-111
423135	B24-104, B24-111
423136	B24-104, B24-111
423137	B24-104, B24-111
423138	B24-104, B24-111
423139	B24-104, B24-111
423140	B24-104, B24-111
423143	B24-102, B24-111
423144	B24-102, B24-111
423372	B24-75, B24-80
423373	B24-75, B24-80
430081	B28-4, B28-6
430086	B28-4, B28-6
430087	B28-4, B28-6
430153	B26-26
430155	B26-13, B26-15, B26-17, B26-27
430198	B26-13, B26-27
430561	B26-15
430831	B26-15
431389	B26-15
431399	B26-15
432153	B26-13, B26-27
432181	B26-8, B26-13, B26-19
432184	B26-8, B26-13, B26-19
432187	B26-8, B26-13, B26-19
432190	B26-13, B26-18
432193	B26-13, B26-18
432196	B26-13, B26-18
433326	B26-26
434706	B26-21
434707	B26-21
434708	B26-21
434709	B26-21
434710	B26-21
434711	B26-21
434712	B26-21
434713	B26-21
434714	B26-21
434715	B26-21
434716	B26-21
434719	B26-24
434720	B26-24
434721	B26-8, B26-13, B26-24
434722	B26-24
434725	B26-8, B26-13, B26-24, B26-27
434726	B24-121, B26-24, B26-27
434727	B26-8, B26-13, B26-15, B26-24
434728	B26-24
434729	B26-8, B26-15, B26-17, B26-24
434730	B26-24
434735	B26-8, B26-24
434736	B26-24
434770	B26-22
434771	B26-22, B26-23
434772	B26-22, B26-23
434773	B26-22, B26-23
434774	B26-22
434775	B26-22
434797	B26-23
434835	B26-24
434941	B24-121
435001	B26-22
435002	B26-22
435003	B26-22
435004	B26-22
435005	B26-22
435006	B26-22
435007	B26-22
435008	B26-22
435009	B26-22
435010	B26-22
435011	B26-22
435012	B26-22, B26-23
435013	B26-22, B26-23
435014	B26-22
435015	B26-22, B26-23
435016	B26-22, B26-23
435017	B26-22
435018	B26-22, B26-23
435019	B26-22, B26-23
435021	B26-23
435027	B26-22
435028	B26-22
435029	B26-22
435030	B26-22
435031	B26-22
435032	B26-22
435033	B26-23
435034	B26-23
435035	B26-23
435036	B26-23
435037	B26-23
435038	B26-23
435039	B26-23
435040	B26-23
435217	B26-8, B26-18
435218	B26-8, B26-18
435230	B26-21
435336	B26-8, B26-18
435337	B26-8, B26-18
435338	B26-8, B26-18
435339	B26-8, B26-18
435340	B26-8, B26-18
435341	B26-8, B26-18
435342	B26-8, B26-18
435343	B26-8, B26-18
435344	B26-8, B26-18
456225	B27-34, B28-25
456226	B27-34, B28-25
456227	B27-34, B28-25
456228	B27-34, B28-25
456229	B27-34, B28-25
456230	B27-34, B28-25
456231	B27-34, B28-25
456232	B27-34, B28-25
456234	B27-34, B28-25
456235	B27-34, B28-25
456236	B27-34, B28-25
456237	B27-34, B28-25
456238	B27-34, B28-25
456239	B27-34, B28-25
460901	B24-91, B24-101, B24-102, B24-114
460902	B24-91, B24-101, B24-102, B24-114
460903	B24-91, B24-101, B24-102, B24-114
460904	B24-91, B24-101
460905	B24-91, B24-101, B24-114
460906	B24-91, B24-101, B24-114
492598	B27-29

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