



BEARING ENGINEERING CATALOG

- Mounted Roller Bearings
- Sleeveoil Hydrodynamic Bearings
- Plain Bearings
- Journal Bearings
- Take-Up Frames

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REFERENCE GUIDE

ULTRA KLEEN - SS Inserts Ball Bearings Page B1-1

- 440C Stainless steel inserts
- Polymer and stainless housings
- 65° Setscrew
- 3/4" - 2" Bore
- 20-50mm Metric bore
- QuadGuard Seal
- Stainless Balls
- Maxlife Cage
- Snap-in style end covers available from stock
- Nomenclature: P2B-SCEZ-100-PSS
 - PSS = Polymer Housing, Stainless Insert
 - SHSS = Stainless Housing, Stainless insert



E-Z KLEEN Ball Bearings Page B2-1

- Two types: polymer housed units and stainless steel housed units
- Two inserts: corrosion resistant (comparable to 440 stainless steel) and standard steel insert with flingers
- Three locking styles: 65° setscrew angle (SC), concentric clamp collar (GT), and thin wall adapter (GT)
- QuadGuard seal
- Snap-in style end covers available from stock
- Maxlife cage
- Optional—BEV modification for the beverage industry
- Interchangeable mounting dimensions with most competitive products
- Anti-rotation device prevents insert rotation associated with light or rotating loads/high-speed applications
- Plus or minus 2° static misalignment



Polymer-Housed Polymer Sleeve Bearings Page B2-1

- Polymer housing contains additive that prevents bacterial and fungal growth
- All polymer and stainless steel construction
- Solid polymer housing has no cavities and no fillings
- Conforms to FDA /USDA specifications
- Polymer sleeve insert with stainless steel anti-rotation pin
- No lubrication required, self-lubricated polymer sleeve insert for maintenance-free operation
- Offered in a wide variety of housing configurations and all popular bore sizes
- Operates in temperatures from -40°F to 180°F
- 3/4 - 1-15/16 size



Extreme Duty / SCED SCMED Ball Bearings Page B3-1

- Synthetic grease / Mobilith SHC 220 PM
- QuadGuard seal
- Maxlife cage
- Snap-in style end covers available from stock
- 65° Setscrew
- Other shaft attachment methods are available upon request
- Wide inner ring design
- Anti-Rotation Pin to prevent insert from spinning in housing
- Grade 10 balls
- Bore Range
 - SC-3/4" to 2-15/16 " 20mm to 75mm
 - SCM-1" to 3-1/2", 25mm to 85mm



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Bearing Reference Guide

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Setscrew Ball Bearings Page B4-1

- Two types: normal duty SC, medium duty SCM
- DualGuard seal - comprised of single lip seal and rubberized flinger - standard on all SC/SCM ball bearings. LL Lo Torque Labyrinth seals optional.
- Snap in end covers available from stock for most popular cast housings.
- Interchangeable mounting dimensions with most competitive products
- 65° setscrew angle for greater holding power and ease of installation in confined areas
- Anti-rotation device on SC and SCM bearings prevents insert rotation associated with light or rotating loads/ high-speed applications
- Expansion and non-expansion pillow blocks available for popular SC shaft sizes
- High-temperature option available to 400°F on SC and SCM
- Plus or minus 2° static misalignment



D-LOK Ball Bearings Page B6-1

- Two types: normal duty DL and medium duty DLM
- DualGuard seal - comprised of single lip seal and rubberized flinger - standard on all DL/DLM ball bearings. LL Lo Torque Labyrinth seals optional
- Snap in end covers available from stock for most popular cast housings
- Interchangeable mounting dimensions with most competitive products
- Concentric clamp collar locks the bearing to the shaft by tightening a single Allen wrench cap screw. The bearing will not mar the shaft like setscrew and eccentric collar bearings, providing concentricity between the bearing and shaft
- Anti-rotation device prevents insert rotation associated with light or rotating loads/high-speed applications
- Expansion and non-expansion pillow blocks available for popular shaft sizes
- High-temperature option available to 400°F
- Plus or minus 2° static misalignment



GRIP TIGHT Ball Bearings Page B5-1

- Two types: normal duty GT and medium duty GTM
- DualGuard seal - comprised of single lip seal and rubberized flinger - standard on all GT/GTM ball bearings. LL Lo Torque Labyrinth seals optional
- Snap in end covers available from stock for most popular cast housings
- Interchangeable mounting dimensions with most competitive setscrew, eccentric clamp collar products
- Thin Wall Adapter mounting offers 360° full shaft contact and concentricity. No shaft marring or fretting corrosion like setscrew and eccentric collar products. Integral dismount feature easily removes the bearing from the shaft. Turned, ground, and polished shafting is not required.
- Anti-rotation device prevents insert rotation associated with heavy loads, vibration, unbalanced loads, and high-speed applications
- Expansion pillow blocks available for popular shaft sizes
- High-temperature option available to 400°F
- Plus or minus 2° static misalignment



Eccentric Collar Ball Bearings Page B7-1

- Two types: normal duty SXR and SLX
- DualGuard seal - comprised of single lip seal and rubberized flinger - standard on all SXR ball bearings. LL Lo Torque Labyrinth seals optional
- Snap in end covers available from stock for most popular cast housings
- Interchangeable mounting dimensions with most competitive products
- Eccentric collar locks the bearing to the shaft by a quarter turn of the collar in direction of shaft rotation. Collar is secured in place with setscrew
- Anti-rotation device on SXR prevents insert rotation associated with light or rotating loads/high-speed applications
- Expansion and non-expansion pillow blocks available for popular SXR shaft sizes
- High-temperature option available to 400°F on SXR
- Plus or minus 2° static misalignment



Setscrew VSC, SL Ball Bearings Page B8-1

- Intermediate duty
- Wide inner ring
- 65° setscrew
- ProGuard lip seal
- Plus or minus 2° static misalignment



REFERENCE GUIDE

Eccentric SXV Collar, SLX Ball Bearings Page B9-1

- Intermediate duty
- Wide inner ring
- ProGuard lip seal
- Eccentric locking collar
- Plus or minus 2° static misalignment



Air Handling Ball Bearings Page B5-12, B4-16, B6-12

- Thin wall adapter: normal duty GTAH and medium duty GTMAH
- Setscrew: normal duty (SCAH) and medium duty (SCMAH)
Concentric clamp collar: normal duty (DLAH) and medium duty (DLMAH)
- Single-lip contact seal (standard on SCAH and SCMAH), single-lip contact seal with flingers (optional on SCAH and SCMAH, standard on DLAH, DLMAH and GTAH, GTMAH), low-torque labyrinth seal (optional), end covers available from stock
- Interchangeable mounting dimensions with most competitive products
- Anti-rotation device prevents insert rotation associated with light or rotating loads/high-speed applications
- Plus or minus 2° static misalignment
- Expansion and non-expansion pillow blocks available for popular shaft sizes
- High-temperature option available to 400°F



Type E Tapered Roller Bearings (E-XTRA) Page B10-3

- Tapered rolling elements
- Completely assembled, factory adjusted, and properly lubricated—shaft ready
- XTS triple lip seal
- Extra protection—E-TECT™ seal option
- Comparable mounting dimensions with ball bearings
- E-XTRA allows easy upgrade from ball bearings



Type EXL Tapered Roller Bearings Page B10-4

- XTS Triple-Lip Seal
- Up to ± 4° of misalignment capability
- Totally Sealed Inner Unit
- High Strength Ductile Iron Housings
- Available in Expansion and Non-Expansion Housings



Double-Interlock Tapered Roller Bearings Page B10-5

- Tapered roller bearing durability in a variety of styles
- XTS triple lip seal
- Extra protection E-TECT seal option
- Special clearances and greases available
- Self aligning
- Factory assembled, adjusted, and lubricated—shaft ready
- Sealed bearing



Type K Tapered Roller Bearings Page B10-5

- Tapered roller bearing with reduced length through bore
- Single collar design saves space and installation time
- Allows bearing to be closer to the load for reduced shaft design
- Self aligning
- Factory assembled, adjusted, and lubricated—shaft ready
- Same housing as double-interlock
- XTS triple lip seal
- Extra protection - E-TECT™ Seal Option



TAF Tapered Roller Bearings Page B10-6

- Tapered bearing is a cost-saving alternative to SAF spherical bearings
- Shaft ready—mounts six times faster than SAF
- Interchangeable with SAF style pillow blocks
- Self aligning, factory assembled, adjusted, and lubricated
- XTS triple lip seal
- E-TECT seal option available up to 5"
- Optional sensors for speed, vibration, and temperature
- Up to 5° static misalignment



Type C Specialty Tapered Bearings Page B11-5

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



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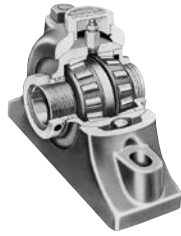
UNISPHERE II

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Special Duty Tapered Roller Bearings Page B11-3

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



S-2000 Spherical Roller Bearings Page B12-1

- High-capacity, double-row spherical rollers
- Permits static or dynamic misalignment up to +/- 1°
- Factory sealed, lubed, and adjusted
- Features springlok® collar that acts as a flinger
- Available with TRIDENT triple lip or labyrinth seal options
- 65° springlok collar mount for increased holding power vs. 90° or 120°
- Setscrew mounted
- S2000, S2000-E, and S2000-HD housing designs



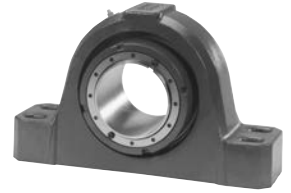
UNISPHERE II Spherical Roller Bearings Page B13-1

- Dimensionally interchangeable with ball bearings in length through bore, base-to-center height, and footprint
- Approximately five times the rating of ball bearings
- Features same rolling elements and installation-ready components as S-2000
- Maintains sealing effectiveness with proven “R” seal
- Tapered seal area maintains seal contact during maximum misalignment
- Springlok collar mount with 65° setscrew spacing for optimum clamping force



Imperial IP Spherical Roller Bearings Page B14-1

- Industry’s only push/pull adapter mount system
- Available in 2-bolt and 4-bolt pillow blocks, flanges, and take-ups
- Accepts commercial tolerance shafting
- Installation and removal in less than 15 minutes
- Full concentric shaft attachment with adaptor sleeve mount
- Virtually eliminates fretting corrosion
- Capable of withstanding static or dynamic misalignment of ± 1°
- Shaft-ready out of the box
- Available with TRIDENT triple lip or labyrinth seal options
- IP, IP-E, IP-HD and ISN housing design



ISAF Spherical Roller Bearings Page B14-10

- Dimensionally interchangeable with SAF style pillow blocks
- Patented Imperial™ adapter mounting system
- Installation and removal in less than 15 minutes
- Easy installation—no feeler gauges needed
- Available with TRIDENT triple lip or labyrinth seal options
- Full 2° misalignment capability
- Virtually eliminates fretting corrosion
- Shaft-ready out of the box, no assembly of components necessary



ISAF HYD Spherical Roller Bearings Page B14-10

- Patented integral hydraulic mounting and dismounting
 - Built in taconite style seals in addition to conventional rubbing seals
 - Four-bolt pillow blocks 5-7/16” through 15”
 - 22232K through 23176K double row spherical bearings
 - Ductile iron housings
- ISNX metric dimensioned housing also available



REFERENCE GUIDE

ISN Spherical Roller Bearings Page B14-1

- Patented ISN “Push/Pull” adapter mounting system
- Eliminates need for feeler gauges
- Easy removal
- Expansion & non-expansion, field convertible
- Triple lip contact seals for wet or dirty applications
- Labyrinth non-contact seals for high speed & high temperature applications



ISNX HYD Spherical Roller Bearings Page B16-20

- Patented integral hydraulic mounting and dismounting
- Built-in taconite style seals in addition to conventional rubbing seals
- Four-bolt plummer blocks for 150mm through 360mm
- 22134K through 23176k double row spherical bearings
- Ductile iron housings



USAF Spherical Roller Bearings Page B15-3

- 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



Split-Spher Spherical Roller Bearings Page B15-5

- Split-race spherical bearing fits USAF 500 housings and replaces bearing and adapter assemblies
- Easy to replace without removing other shaft-mounted components
- Only split-race bearing made to standard SAF pillow block dimensions
- Has same OD dimensions as a standard spherical bearing
- Uses 22200 Series split roller bearings



SNX Spherical Roller Bearings Page B16-25

- Dimensionally interchangeable plummer block with metric SN housing
- General-purpose, high-capacity, double-row, spherical roller bearings
- Adapter and direct mount
- Five different sealing options to match most operating conditions
- Grease or oil lubrication
- SNX30 from 110mm through 170mm



SDX (cast iron), SDXD (ductile iron) Spherical Roller Bearings Page B16-46

- Metric dimensioned plummer block housing
- Accepts 23000K and 23100K bearings
- Sized from 150mm through 320mm
- Direct seal greasing standard

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Bearing Reference Guide

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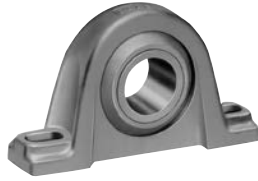
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SOLIDLUBE Sleeve Bearings Page B17-2

- Functions in harsh environments where ball bearing will not
- Self-lubricating, statically self aligning
- Covers a wide range of temperature extremes
 - 700 Series: -40°F to 700°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" to 8"



Babbitted & Bronze Bushed Sleeve Bearings Page B17-3

- Good for slow to medium and shock loads
- Good for slow speeds and shock loads
- Capable of MPTA load ratings
- Cast-iron housings in 2- and 4-bolt pillow blocks
- Babbitted bearing features solid or fully split housing
- Bronze bushed bearing features fully split housing
- Bronze bushing is split and easily replaced



BRONZOIL Sleeve Bearings Page B17-2

- 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



SLEEVOIL R Series Hydrodynamic Pillow Block Bearings Page B18-1

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



SLEEVOIL RTL Series Hydrodynamic Pillow Block Bearings Page B18-1

- Extended life (no metal-to-metal contact during operation)
- Handles high speeds
- Dampens vibration, provides quiet operation
- Fully split for ease of maintenance
- Self aligning
- Three times the thrust load capability of R Series
- External cooling (air, water, or oil) available for hot shafts



SLEEVOIL Oil Level & Filtration System (OLF) Page B18-30

- 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
- Permits easy filter change while bearing is operating



REFERENCE GUIDE

Take-Up Frames

Page B19-1

- 6 take-up frame types available from stock
- Standard take-up frame travel from 1-1/2" to 60"
- Take-up frames allow for the mounting of Dodge ball, 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 belt and chain-type conveyors
- Hydraulic and pneumatic tensioning available



Smart Products

Page B10-67, B14-103, B15-54

- Online monitoring of temperature, vibration, and speed
- Plug and play installation
- Available on TAF, USAF, and ISAF



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| | | | | | | | |
| | | P2B- | TB- | F2B- | LFT- | FB- | LF- / F3B- |
| I N S E R T S | | P2B-GT-B5-8 P2B-GTEZ -PCR-B2-44 -SHCR-B2-26 P2B-GTM-B5-20 | TB-GT-B5-24 TB-GTEZ -PCR-B2-50 | F2B-GT-B5-24 F2B-GTEZ -PCR-B2-54 -SHCR-B2-30 F2B-GTM-B5-30 | | FB-GT-B5-33 FB-GTEZ -PCR-B2-58 | |
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Not Recommended



Made to Order / Modification Required

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Type E-Xtra/DOUBLE-INTERLOCK/Type K/TAF/EXL

These five product lines have many common features and benefits that are shown on this page. Unique features for each product are shown on the following pages.

The common components used by all four lines include:

- Bearings
- Seals
- Locking collars
- Bore range

E-Xtra Tough Sealing

Importance of Sealing:

- 40% of mounted bearing failures in the industry involve liquid or solid contamination or lack of adequate lubrication
- Obstructs contaminant entry
- Retains essential lubrication
- Increased life equals decreased downtime

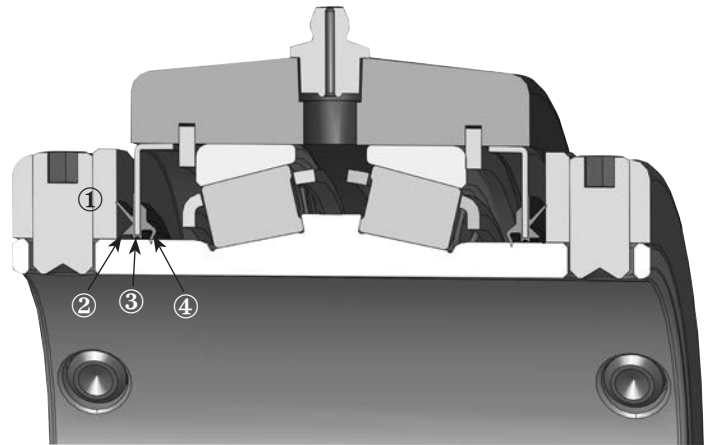
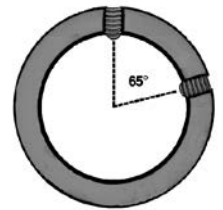
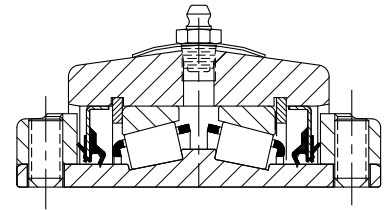
XTS Sealing System

Standard on all Baldor Dodge Type E-Xtra, EXL, TAF, Double Interlock and Type K Bearings

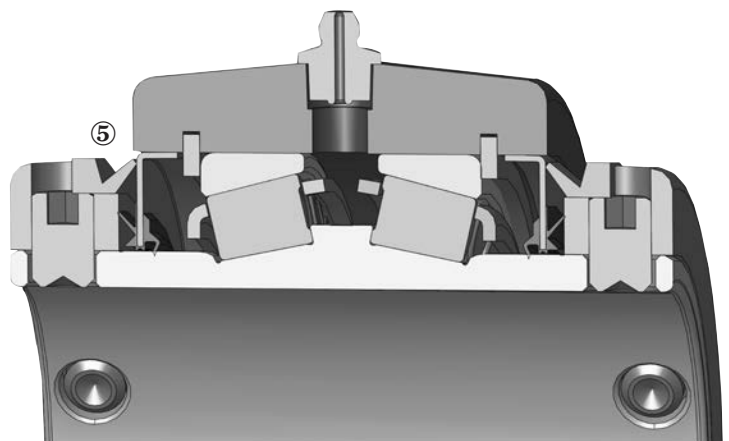
1. Collar-riding seal lip provides the first level of defense against contaminants
2. Trash guard protects inner seals
3. Primary contact seal protects internal components and helps retain grease
4. Contact seal for grease retention and secondary trash guard for increased protection
5. Optional E-Tect seal kit for harsh-duty environments

General Features:

- Factory assembled, adjusted and prelubricated
- Case hardened rollers and races
- Easy installation and maintenance
- 65 degree set screw angle Springlok collar/ flingers - more holding power than 90 to 120 degree
- Triple rubber lip contacting seals



XTS Sealing



XTS Sealing with E-Tect Option

NOTE: Instruction manuals for Dodge bearings are available on www.dodge-pt.com



FEATURES/BENEFITS

Type E-Xtra

DODGE Type E One Bearing, One Seal For Dusty or Damp Environments



- “E” stands for economy
- Type E allows easy upgrade from ball bearings
- Comparable mounting dimensions with ball bearings
- Moderate price premium vs. ball bearings
- Steel housed pillow blocks available in selected sizes

The Original DODGE Type E Bearing, Only Better

- New Dodge manufactured bearings increase load ratings 13-14% depending on size
- New “XTS” seal provides added protection against contamination
- Completely assembled, factory adjusted and properly lubricated - shaft ready
- Stocked in all configurations
- Extra protection - E-TECT seal option
- Steel end covers available up to 3”, 75mm



Top Angle Take-Ups
1-3/4 to 4”
45 - 100mm



Center Pull Frame With
Wide Slot Take-UP
1-3/8 to 3”
35 - 75mm



Pillow Block
1-3/16 to 7”
35 - 180mm



Piloted Flange
1-3/16 to 5”
35 - 125mm



Flange
1-3/16 to 4-1/2”
35 - 115mm



FEATURES/BENEFITS

Type EXL for Extended Life

The Dodge Type EXL offers misalignment and expansion capability by incorporating a totally sealed inner unit into a split housing design with standard Type E mounting dimensions.

Standard Features

- XTS Triple-Lip Seal
- Up to $\pm 4^\circ$ of misalignment capability
- Totally Sealed Inner Unit
- High Strength Ductile Iron Housings
- Available in Expansion and Non-Expansion Housings

Product Offering

2-Bolt Pillow Blocks: 1-3/16" - 3-1/2"

4-Bolt Pillow Blocks: 2-1/4" - 5"



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FEATURES/BENEFITS

Type K and DOUBLE-INTERLOCK

DODGE DOUBLE-INTERLOCK COMBINES DURABILITY WITH MOUNTING FLEXIBILITY

Heavy Duty Housing Construction Has Proven Performance

- Offers tapered roller bearing durability in a variety of mounting styles
- "XTS" triple lip seal standard
- Extra protection E-TECT Seal Option
- Special clearances and greases available
- Self aligning
- Factory assembled, adjusted and lubricated - **shaft ready**
- End covers available up to 5"



Pillow Block
1-3/16 to 7"



Flanges
1-3/16 to 5"



S-1 Unit



B-1 Unit
1-3/16 up to 5"

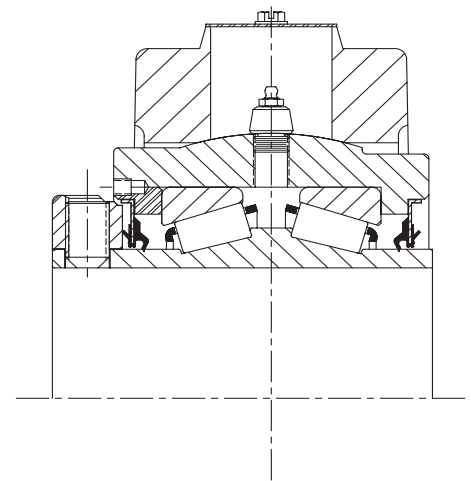


D Unit
1-3/16 up to 5"

DODGE TYPE K FITS WHERE COMPETITORS WON'T

Tapered Roller Bearings With Reduced Length Thru Bore

- Reduces length thru bore design in a variety of mounting styles
- Single collar design saves space and installation time
- Allows bearing to be closer to the load for reduced shaft design
- Self-aligning
- Factory assembled, adjusted and lubricated - shaft ready
- Same housing as DOUBLE-INTERLOCK
- End covers available up to 5"



S-1 & B-1 Units
1-3/16 - 3-15/16"



Pillow Block
Expansion & Non-Expansion
1-3/16 - 3-15/16"



Flange Expansion and
Non-Expansion
1-3/16 - 3-15/16"



Wide Slot Take-Up
Frame
1-3/8 - 3"



Top Angle Take-Ups
1-3/4 - 3-15/16"



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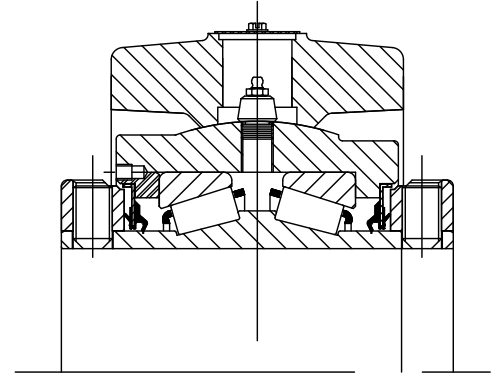
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TAF

TAF IS A COST SAVING ALTERNATIVE TO SAF SPHERICAL BEARINGS

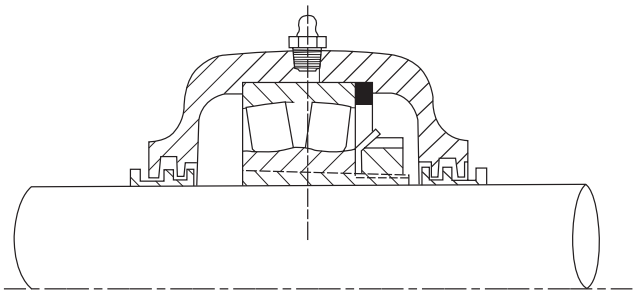
Mounts Fast, Stays Cleaner And Extends Service Life

- Shaft ready - mounts six times faster than SAF
- Interchangeable with SAF style pillow blocks
- Self-aligning, factory assembled, adjusted and lubricated
- Available in 1-7/16" up to 7" shaft diameters
- Equipped with expansion or non-expansion housing
- "XTS" seal standard
- E-TECT seal option available up to 7"
- Optional Smart Housings accommodate speed, vibration and temperature sensor kits



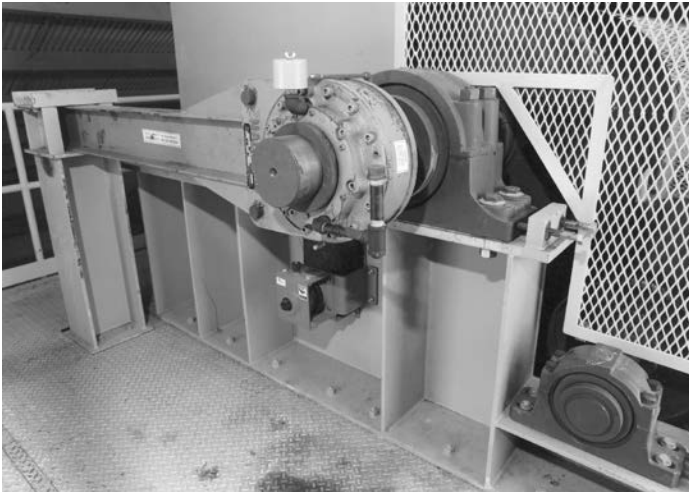
TAF

Self-aligning provided by spherically-machined housing

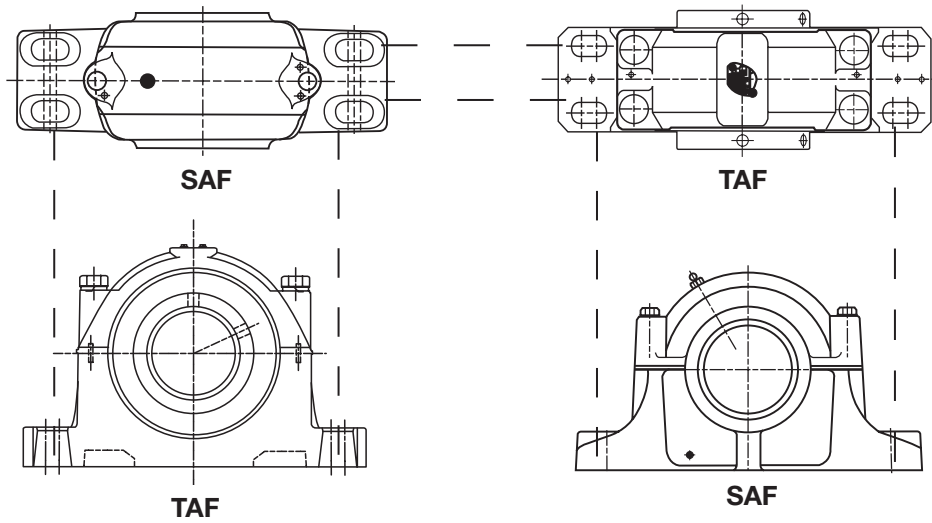


SAF

Self-aligning provided by insert, limited by seal interference



TAF Is Interchangeable With SAF Mounting Dimensions





FEATURES/BENEFITS

Type K/DOUBLE-INTERLOCK/TAF

DODGE BEARINGS SAVE YOU TIME AND MONEY

Compare These DODGE TAF, Type K & DOUBLE-INTERLOCK Bearing Advantages Against Standard SAF Pillow Blocks

Standard SAF

- Four pieces
- Up to six packages
- Open bearing
- Feeler gauge required
- Grease required

DODGE TAF, Type K and DOUBLE-INTERLOCK

- One piece
- Sealed bearing
- Factory adjusted
- Factory lubricated
- Shaft ready



Compare Standard SAF and DODGE Sealing Designs

Standard SAF

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



DODGE TAF, Type K and DOUBLE-INTERLOCK

- Inner unit carries seal
- Up to 5° static misalignment
- Seal and bearing ride together in inner unit
- Seals maintain contact on cones even with misalignment



NOTE: Instruction manuals for Dodge bearings are available on www.dodge-pt.com

SPECIFICATION



Type E-Xtra, Type K, DOUBLE-INTERLOCK/TAF and EXL

Type E-Xtra, Type K, DOUBLE-INTERLOCK, TAF and EXL mounted bearings are all general purpose high capacity tapered roller bearings capable of handling any combination of radial and thrust load within the capacity of the bearing.

All of these bearings are mounted to the shaft by means of set screw collars having 65 degree set screw spacing for optimum clamping force. The Type E-Xtra, DOUBLE-INTERLOCK, TAF and EXL mounted bearings have locking collars at each end of their extended inner races. Type K has a single locking collar. The tapered roller bearings for these mounted bearings all have case carburized inner races (cones), outer races (cups), and rollers.

Bearings are preassembled, prelubricated and factory adjusted. They are normally equipped with land riding contact type seals with a metal deflector guard.

The standard housing material for most of these mounted bearings is ASTM A48 Class 30 Iron having a minimum tensile strength of 30,000 psi. The outer housing for the Type K and DOUBLE-INTERLOCK flange bearings thru 4" bore size and all Type EXL housings utilize housings made of ductile iron (ASTM A536 Grade 65-45-12) with 65,000 psi tensile strength. Type E pillow blocks are also available with cast steel housing having a tensile strength of 70,000 psi for 2-bolt base thru 3-1/2" bore size and 4-bolt base from 3-15/16" thru 5" bore size on an assembled or order basis.

The Type K, DOUBLE-INTERLOCK pillow blocks and flange bearings plus the TAF pillow blocks all have split outer housings used with completely assembled, lubricated and adjusted inner units simplifying replacement of the bearing in the pillow block or flange bearing. All Type E mounted bearings, Type K take up units and all D units, S-1 units, and B-1 units have solid one piece housings.



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HOW TO ORDER

Type E-Xtra, Type K, DOUBLE-INTERLOCK/TAF and EXL

There are two ways to specify DODGE Bearings. Most of the product offering 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 shown on page and add any special instructions to the end of the description for options not covered by the nomenclature.

SPECIAL BEARING REQUIREMENTS AND SPECIAL LUBRICANTS

DODGE Bearings are factory adjusted and pre-lubricated. For applications where extreme ambient temperatures, high speeds or high loads are expected, a variety of specialty lubricants and adjustments are available. Standard grease provided is Mobilgrease XHP222, a lithium complex based grease. High

temperature greases available upon request. Special lubricant options usually involve set-up charges and premiums. To order, specify type of lubricant required at the end of the product name or after the standard part number.

Example:

F4B-E-207 except with Mobil Grease HTS #2 grease and .012 to .015 lateral end play

or

023106 except with Mobil Grease HTS #2 grease and .012 to .015 lateral end play

OTHER SPECIAL REQUIREMENTS NOT LISTED

For applications requiring modifications not listed, we encourage you to contact our Application Engineering Department for Bearings at 864-284-5700.

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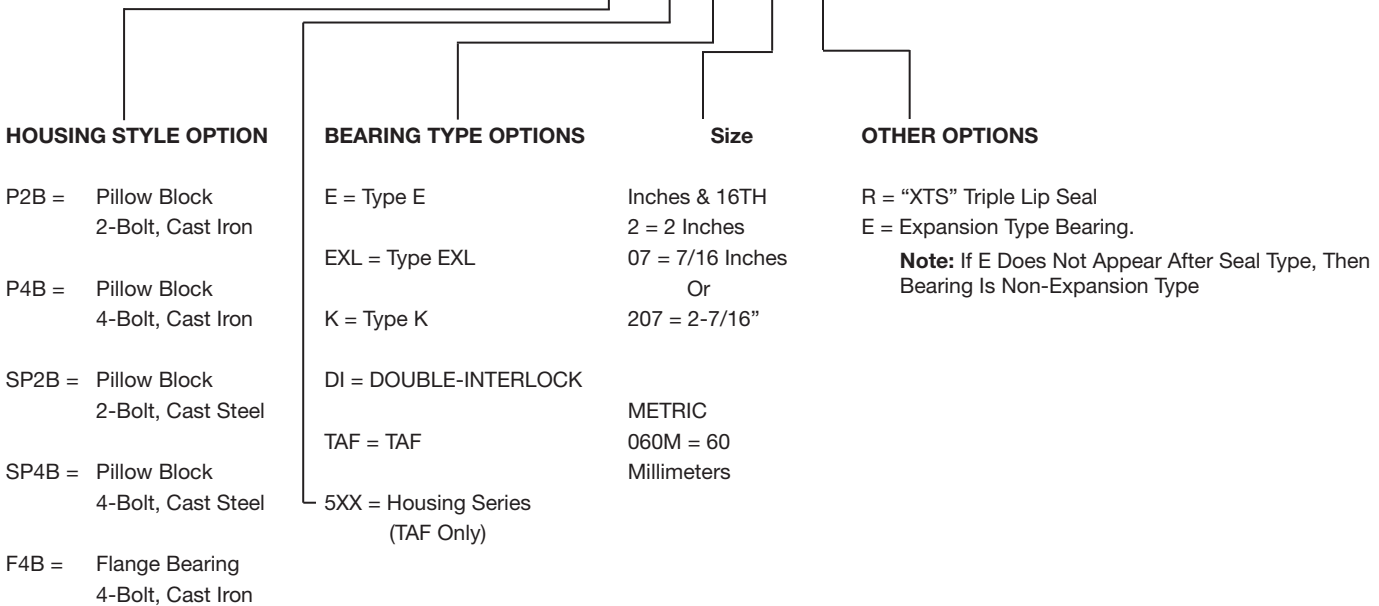
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NOMENCLATURE

Type E-Xtra, Type K, DOUBLE-INTERLOCK, TAF and EXL

P2B - 515-TAF - 207 - RE



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SELECTION

Type E-Xtra, Type K, DOUBLE-INTERLOCK, TAF and EXL Tapered Roller Bearings

DODGE Type E-Xtra, K, DI, TAF and EXL 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 DODGE Application Engineering (864) 284-5700 for applications which exceed the recommendations of this catalog.

L₁₀ Hours Life --- The life which may be expected from at least 90% of a given group of bearings operating under identical conditions.

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

Where: C₉₀ = Dynamic Capacity (Table 1, pg. B10-13), lbs.
P = Equivalent Radial Load, lbs.

GENERAL

Heavy Service --- For heavy shock loads, frequent shock loads, or severe vibrations, add up to 50% (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 L₁₀ life for pillow blocks. The maximum thrust load should not exceed values shown on Table 3. Where substantial radial load is also present, it is advisable to calculate actual L₁₀ life to assure that it meets the requirements. The effectiveness of the shaft attachment to carry thrust load depends on proper tightening of the setscrews, 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.

| RPM Range | 20-200 | 201 - 2000 | Over 2000 |
|--------------------------------|----------------------------------|--------------------|---------------------|
| Recommended Thrust Load | E, DI, TAF 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 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 6, 7, and, pg. B10-19 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 Size | Tolerance, Inches |
|--------------|-------------------|
| UP TO 1-1/2" | + .0000 - .0005" |
| 1-5/8 TO 4" | + .000 - .001" |
| 4-7/16 TO 6" | + .000 - .0015" |
| 6-7/16 - 8" | + .000 - .002" |

NOTE: The L₁₀ life calculated using the above formula is subject to life adjustment factors in accordance with ABMA standards described on page B16-9.

NOTE: Instruction manuals for Dodge bearings are available on www.dodge-pt.com

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Type E-Xtra, Type K, DOUBLE-INTERLOCK, TAF and EXL Tapered Roller Bearings

SELECTING BEARINGS SUPPORTING RADIAL LOADS ONLY

1. Define L_{10} Life Hours desired.
2. Establish bearing radial load, F_R ($F_R = P$ for Pure Radial Load Conditions). The DODGE program BEST™* can be used to find application loads.
3. Establish RPM.

Using the easy selection Table 3, pg B10-15 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: 1. L_{10} Life = 30,000 Hours
 2. Radial load = 4200 lbs.
 3. RPM = 1,200

At the intersection of the 1,200 RPM column and the 30,000 hours L_{10} life row, the equivalent radial load of 4286 lbs. exceeds the 4200 lbs. radial load for shaft sizes 2-11/16 - 3". A bearing with bore ranging from 2-11/16" to 3" may be used for this application.

ALTERNATE METHOD A --- SELECTING A BEARING FOR AN L10 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} , RPM and P.

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

($P = F_R$ for Pure Radial Load Conditions)

Since the L_{10} , RPM, and P are known, solve for C_{90} . Select from the dynamic capacity column on Table 2, pg B10-14. 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 RPM does not exceed the MAX. RPM 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, lbs.

F_R = Radial load, lbs. (see Table 2 for allowable slip fit maximum)

F_A = Thrust (axial) load, lbs.

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, pg. B10-14 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 allowable equivalent radial load ratings for the speed and hours life desired in the easy selection Table 3, pg B10-15.

*The DODGE Bearing Evaluation and Selection Technique (BEST) is a menu driven computer program that calculates bearing loads, fatigue life and operating temperature for a two bearing shaft system based on user supplied input parameters. This interactive program is available at www.ptwizard.com under the Product Selection area.

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SELECTION

Type E-Xtra, Type K, DOUBLE-INTERLOCK, TAF and EXL Tapered Roller Bearings

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, pg. B10-14 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 L10 or it can be compared to the allowable equivalent radial load ratings for the speed and hours life desired in the easy selection Table 3, pg. B10-15.

LUBRICATION

DODGE E, K, DI, EXL, and TAF tapered roller bearings up to 5" bore are lubricated at the factory with Mobilgrease XHP222 grease. This grease will adequately handle low and medium speeds with low and medium loads at normal temperatures as defined on Table 6, pg. B10-18. For very low and high speeds, for heavy loads and for low and high temperatures, special greases must be used. Contact DODGE Application Engineering (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 | | | | | | | |
|-------------------|---------------------------------------|----------------|----------------|-----------------|------------------|------------------|------------------|------------------|
| | 1 to 250 RPM | 251 to 500 RPM | 501 to 750 RPM | 751 to 1000 RPM | 1001 to 1500 RPM | 1501 to 2000 RPM | 2001 to 2500 RPM | 2501 to 3000 RPM |
| 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 --- see "Operating Temperature" below. 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 DODGE K, DI, TAF and EXL Tapered Roller Bearings. K, DI, and TAF bearings are designed to allow as much as 2° to 7° 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 Table

| Shaft Size (Inches) | Set Screws Size | Tightening Torque |
|---------------------|-----------------|-------------------|
| 1-3/16 - 1-11/16 | 5/16 - 18 | 165 in-lbs |
| 1-3/4 - 2-1/2 | 3/8 - 16 | 290 in-lbs |
| 2-11/16 - 3-1/2 | 1/2 - 13 | 620 in-lbs |
| 3-15/16 - 5 | 5/8 - 11 | 1325 in-lbs |
| 5-7/16 - 6 | 3/4 - 10 | 2150 in-lbs |
| 6-7/16 - 7 | 7/8 - 9 | 5130 in-lbs |

| Shaft Size (mm) | Set Screws Size | Tightening Torque |
|-----------------|-----------------|-------------------|
| 35 - 40mm | M8 | 17.8 NM |
| 45 - 65mm | M10 | 35 NM |
| 70 - 75mm | M12 | 57 NM |
| 80 - 90mm | M12 | 57 NM |
| 100 - 125mm | M16 | 126 NM |

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SELECTION

Type E-Xtra, Type K, DOUBLE-INTERLOCK, TAF and EXL

Table 2 - E, K, DI, TAF and EXL Tapered Roller Bearing Radial And Thrust Factors

| Shaft Size | e | F _A /F _R <e | | F _A /F _R >e | | Dynamic Capacity C ₉₀ | Static Capacity C ₀ | Maximum RPM | Maximum RPM | Maximum Allowable Slip Fit Radial Load, F _R **, Lbs | |
|------------------------------------|------|-----------------------------------|------|-----------------------------------|------|----------------------------------|--------------------------------|-------------|-------------|--|--------|
| | | X | Y | X | Y | Lbs. | Lbs. | XTS-SEAL | E-TECT | E, DI, EXL & TAF | K |
| 1-3/16 1-1/4 | 0.49 | 0.87 | 1.77 | 0.70 | 2.14 | 3,450 | 15,760 | 4,490 | 3,100 | 3,100 | 2,100 |
| 1-3/8 1-7/16 | 0.46 | 0.87 | 1.89 | 0.70 | 2.28 | 5,500 | 26,000 | 3,820 | 2,675 | 5,000 | 3,300 |
| 1-1/2 1-5/8 1-11/16 | 0.44 | 0.87 | 1.96 | 0.70 | 2.37 | 7,070 | 33,000 | 3,320 | 2,325 | 6,400 | 4,300 |
| 1-3/4 1-7/8 1-15/16 2 | 0.33 | 0.87 | 2.64 | 0.70 | 3.18 | 9,300 | 43,000 | 3,050 | 2,135 | 8,400 | 5,600 |
| 2-3/16 | 0.36 | 0.87 | 2.38 | 0.70 | 2.87 | 9,850 | 48,200 | 2,730 | 1,900 | 8,900 | 5,900 |
| 2-1/4 2-7/16 2-1/2 | 0.40 | 0.87 | 2.17 | 0.70 | 2.63 | 10,600 | 54,000 | 2,420 | 1,700 | 9,500 | 6,300 |
| 2-11/16 2-3/4 2-15/16 3 | 0.46 | 0.87 | 1.87 | 0.70 | 2.26 | 11,120 | 61,200 | 2,060 | 1,440 | 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 | 17,750 | 108,600 | 1,640 | 1,145 | 16,000 | 10,500 |
| 3-15/16 4 | 0.49 | 0.87 | 1.77 | 0.70 | 2.14 | 24,400 | 154,000 | 1,530 | 1,070 | 22,000 | 14,600 |
| 4-7/16 4-1/2 | 0.53 | 0.87 | 1.63 | 0.70 | 1.97 | 30,000 | 188,400 | 1,360 | 950 | 27,000 | ---- |
| 4-15/16 5 | 0.47 | 0.87 | 1.83 | 0.70 | 2.21 | 41,310 | 266,000 | 1,200 | 840 | 35,000 | ---- |
| 5-7/16 5-15/16 6 | 0.49 | 0.87 | 1.76 | 0.70 | 2.12 | 40,700 | 354,000 | 915 | 640 | 42,400 | ---- |
| 6-7/16 6-1/2 6-15/16 7 | 0.54 | 0.87 | 1.61 | 0.70 | 1.95 | 69,200 | 574,000 | 790 | 550 | 72,000 | ---- |

Comparing Spherical To Taper Roller Bearings: The dynamic capacity C (spherical) and C₉₀ (taper) are not to the same base. To compare basic dynamic capacities, multiply C x .259 and compare to C₉₀.

*C₉₀ - 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.

| | | | |
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Type E-Xtra, Type K, DOUBLE-INTERLOCK, TAF and EXL

Table 3 - Easy Selection for Type E-Xtra, Type K, TAF and EXL

| Shaft Size | L10 hours | Allowable Equivalent Radial Load (Lbs.) at various Revolutions Per Minute | | | | | | | | | | | | | | | | | | | |
|--|-----------|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|------|
| | | 50 | 100 | 150 | 250 | 500 | 790 | 915 | 1200 | 1360 | 1530 | 1640 | 1750 | 2060 | 2420 | 2730 | 3050 | 3320 | 3600 | 3820 | 4490 |
| 1-3/8" 1-1/4" | 10000 | 4797 | 3896 | 3450 | 2960 | 2404 | 2096 | 2005 | 1849 | 1781 | 1719 | 1683 | 1651 | 1572 | 1498 | 1445 | 1398 | 1362 | 1330 | 1306 | 1244 |
| | 30000 | 3450 | 2802 | 2481 | 2129 | 1729 | 1507 | 1442 | 1330 | 1281 | 1236 | 1211 | 1187 | 1131 | 1077 | 1039 | 1005 | 980 | 956 | 939 | 895 |
| | 40000 | 3165 | 2571 | 2276 | 1953 | 1586 | 1383 | 1323 | 1220 | 1175 | 1134 | 1111 | 1089 | 1037 | 988 | 953 | 922 | 899 | 877 | 862 | 821 |
| | 60000 | 2802 | 2276 | 2015 | 1729 | 1404 | 1224 | 1172 | 1080 | 1040 | 1004 | 983 | 964 | 918 | 875 | 844 | 816 | 796 | 777 | 763 | 727 |
| | 100000 | 2404 | 1953 | 1729 | 1483 | 1205 | 1050 | 1005 | 927 | 892 | 861 | 844 | 827 | 788 | 751 | 724 | 700 | 683 | 666 | 655 | 624 |
| 1-3/8" 1-7/16" | 10000 | 7647 | 6211 | 5500 | 4719 | 3833 | 3341 | 3197 | 2947 | 2839 | 2740 | 2684 | 2632 | 2506 | 2388 | 2303 | 2228 | 2172 | 2120 | 2082 | |
| | 30000 | 5500 | 4467 | 3956 | 3394 | 2757 | 2403 | 2299 | 2120 | 2042 | 1971 | 1930 | 1893 | 1803 | 1718 | 1657 | 1602 | 1562 | 1525 | 1498 | |
| | 40000 | 5045 | 4098 | 3629 | 3113 | 2529 | 2204 | 2109 | 1945 | 1873 | 1808 | 1771 | 1736 | 1654 | 1576 | 1520 | 1470 | 1433 | 1399 | 1374 | |
| | 60000 | 4467 | 3629 | 3213 | 2757 | 2239 | 1952 | 1868 | 1722 | 1658 | 1601 | 1568 | 1538 | 1464 | 1395 | 1346 | 1302 | 1269 | 1238 | 1217 | |
| | 100000 | 3833 | 3113 | 2757 | 2365 | 1921 | 1675 | 1602 | 1477 | 1423 | 1373 | 1345 | 1319 | 1256 | 1197 | 1154 | 1117 | 1089 | 1062 | 1044 | |
| 1-1/2" 1-5/8" 1-11/16" | 10000 | 9830 | 7984 | 7070 | 6065 | 4927 | 4295 | 4110 | 3789 | 3649 | 3522 | 3450 | 3383 | 3222 | 3070 | 2961 | 2864 | 2792 | | | |
| | 30000 | 7070 | 5743 | 5085 | 4362 | 3543 | 3089 | 2956 | 2725 | 2625 | 2533 | 2481 | 2433 | 2317 | 2208 | 2129 | 2060 | 2008 | | | |
| | 40000 | 6485 | 5268 | 4664 | 4002 | 3250 | 2834 | 2711 | 2500 | 2408 | 2324 | 2276 | 2232 | 2126 | 2025 | 1953 | 1889 | 1842 | | | |
| | 60000 | 5743 | 4664 | 4130 | 3543 | 2878 | 2509 | 2401 | 2213 | 2132 | 2058 | 2015 | 1976 | 1882 | 1793 | 1730 | 1673 | 1631 | | | |
| | 100000 | 4927 | 4002 | 3543 | 3040 | 2469 | 2153 | 2060 | 1899 | 1829 | 1765 | 1729 | 1696 | 1615 | 1539 | 1484 | 1435 | 1399 | | | |
| 1-3/4" 1-7/8" 1-15/16" 2" | 10000 | 12931 | 10503 | 9300 | 7979 | 6481 | 5650 | 5406 | 4984 | 4800 | 4633 | 4538 | 4450 | 4238 | 4038 | 3895 | 3767 | | | | |
| | 30000 | 9300 | 7554 | 6689 | 5738 | 4661 | 4063 | 3888 | 3584 | 3452 | 3332 | 3264 | 3201 | 3048 | 2904 | 2801 | 2709 | | | | |
| | 40000 | 8531 | 6929 | 6136 | 5264 | 4276 | 3727 | 3567 | 3288 | 3167 | 3057 | 2994 | 2936 | 2796 | 2664 | 2569 | 2485 | | | | |
| | 60000 | 7554 | 6136 | 5433 | 4661 | 3786 | 3300 | 3158 | 2911 | 2804 | 2707 | 2651 | 2600 | 2476 | 2359 | 2275 | 2201 | | | | |
| | 100000 | 6481 | 5264 | 4661 | 3999 | 3248 | 2832 | 2709 | 2498 | 2406 | 2322 | 2274 | 2230 | 2124 | 2024 | 1952 | 1888 | | | | |
| 2-3/16" | 10000 | 13695 | 11124 | 9850 | 8450 | 6864 | 5984 | 5726 | 5278 | 5084 | 4907 | 4806 | 4714 | 4489 | 4277 | 4125 | | | | | |
| | 30000 | 9850 | 8001 | 7084 | 6078 | 4937 | 4304 | 4118 | 3796 | 3656 | 3530 | 3457 | 3390 | 3228 | 3076 | 2967 | | | | | |
| | 40000 | 9036 | 7339 | 6499 | 5575 | 4529 | 3948 | 3778 | 3483 | 3354 | 3238 | 3171 | 3110 | 2961 | 2822 | 2721 | | | | | |
| | 60000 | 8001 | 6499 | 5754 | 4937 | 4010 | 3496 | 3345 | 3084 | 2970 | 2867 | 2808 | 2754 | 2622 | 2498 | 2410 | | | | | |
| | 100000 | 6864 | 5575 | 4937 | 4235 | 3440 | 2999 | 2870 | 2646 | 2548 | 2460 | 2409 | 2362 | 2250 | 2143 | 2067 | | | | | |
| 2-1/4" 2-7/16" 2-1/2" | 10000 | 14738 | 11971 | 10600 | 9094 | 7387 | 6439 | 6162 | 5680 | 5471 | 5281 | 5172 | 5072 | 4830 | 4602 | | | | | | |
| | 30000 | 10600 | 8610 | 7624 | 6541 | 5313 | 4631 | 4432 | 4085 | 3935 | 3798 | 3720 | 3648 | 3474 | 3310 | | | | | | |
| | 40000 | 9724 | 7898 | 6993 | 6000 | 4873 | 4248 | 4065 | 3748 | 3610 | 3484 | 3412 | 3347 | 3187 | 3036 | | | | | | |
| | 60000 | 8610 | 6993 | 6192 | 5313 | 4315 | 3762 | 3600 | 3318 | 3196 | 3085 | 3022 | 2963 | 2822 | 2689 | | | | | | |
| | 100000 | 7387 | 6000 | 5313 | 4558 | 3702 | 3227 | 3088 | 2847 | 2742 | 2647 | 2592 | 2542 | 2421 | 2307 | | | | | | |
| 2-11/16" 2-3/4" 2-15/16" 3" | 10000 | 15461 | 12558 | 11120 | 9540 | 7749 | 6755 | 6464 | 5959 | 5739 | 5540 | 5426 | 5321 | 5067 | | | | | | | |
| | 30000 | 11120 | 9032 | 7998 | 6861 | 5573 | 4859 | 4649 | 4286 | 4128 | 3985 | 3902 | 3827 | 3644 | | | | | | | |
| | 40000 | 10201 | 8285 | 7336 | 6294 | 5112 | 4457 | 4265 | 3932 | 3787 | 3655 | 3580 | 3511 | 3343 | | | | | | | |
| | 60000 | 9032 | 7336 | 6496 | 5573 | 4527 | 3946 | 3776 | 3481 | 3353 | 3237 | 3170 | 3109 | 2960 | | | | | | | |
| | 100000 | 7749 | 6294 | 5573 | 4781 | 3884 | 3386 | 3240 | 2987 | 2877 | 2777 | 2719 | 2667 | 2540 | | | | | | | |
| 3-3/16" 3-1/4" 3-7/16" 3-1/2" | 10000 | 24679 | 20046 | 17750 | 15228 | 12369 | 10783 | 10318 | 9512 | 9161 | 8843 | 8661 | | | | | | | | | |
| | 30000 | 17750 | 14417 | 12766 | 10952 | 8896 | 7755 | 7421 | 6841 | 6589 | 6360 | 6229 | | | | | | | | | |
| | 40000 | 16282 | 13225 | 11711 | 10047 | 8160 | 7114 | 6807 | 6276 | 6044 | 5834 | 5714 | | | | | | | | | |
| | 60000 | 14417 | 11711 | 10369 | 8896 | 7226 | 6299 | 6028 | 5557 | 5352 | 5166 | 5060 | | | | | | | | | |
| | 100000 | 12369 | 10047 | 8896 | 7632 | 6199 | 5404 | 5171 | 4767 | 4592 | 4432 | 4341 | | | | | | | | | |
| 3-15/16" 4" | 10000 | 33925 | 27556 | 24400 | 20933 | 17003 | 14823 | 14184 | 13076 | 12594 | 12157 | | | | | | | | | | |
| | 30000 | 24400 | 19819 | 17549 | 15056 | 12229 | 10661 | 10201 | 9404 | 9058 | 8743 | | | | | | | | | | |
| | 40000 | 22382 | 18180 | 16098 | 13811 | 11218 | 9779 | 9358 | 8627 | 8309 | 8020 | | | | | | | | | | |
| | 60000 | 19819 | 16098 | 14254 | 12229 | 9933 | 8659 | 8286 | 7639 | 7357 | 7102 | | | | | | | | | | |
| | 100000 | 17003 | 13811 | 12229 | 10491 | 8522 | 7429 | 7109 | 6553 | 6312 | 6093 | | | | | | | | | | |

For maximum RPM see Table 2 on page B10-14

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.

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



SELECTION

Type E-Xtra, Type K, DOUBLE-INTERLOCK, TAF and EXL

Table 3 - Easy Selection for Type E-Xtra, Type K, TAF and EXL

| Shaft Size | L10 hours | Allowable Equivalent Radial Load (Lbs.) at various Revolutions Per Minute | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------|-----------|---|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|------|------|--|--|
| | | 50 | 100 | 150 | 250 | 500 | 790 | 915 | 1200 | 1360 | 1530 | 1640 | 1750 | 2060 | 2420 | 2730 | 3050 | 3320 | 3600 | 3820 | 4490 | | |
| 4-7/16" 4-1/2" | 10000 | 41712 | 33880 | 30000 | 25738 | 20905 | 18225 | 17439 | 16077 | 15484 | | | | | | | | | | | | | |
| | 30000 | 30000 | 24368 | 21577 | 18511 | 15036 | 13108 | 12543 | 11563 | 11137 | | | | | | | | | | | | | |
| | 40000 | 27519 | 22353 | 19793 | 16980 | 13792 | 12024 | 11505 | 10607 | 10216 | | | | | | | | | | | | | |
| | 60000 | 24368 | 19793 | 17526 | 15036 | 12213 | 10647 | 10188 | 9392 | 9046 | | | | | | | | | | | | | |
| | 100000 | 20905 | 16980 | 15036 | 12899 | 10477 | 9134 | 8740 | 8057 | 7760 | | | | | | | | | | | | | |
| 4-15/16" 5" | 10000 | 57437 | 46653 | 41310 | 35441 | 28787 | 25095 | 24014 | 22137 | | | | | | | | | | | | | | |
| | 30000 | 41310 | 33554 | 29711 | 25490 | 20704 | 18049 | 17271 | 15922 | | | | | | | | | | | | | | |
| | 40000 | 37894 | 30780 | 27254 | 23382 | 18992 | 16557 | 15843 | 14605 | | | | | | | | | | | | | | |
| | 60000 | 33554 | 27254 | 24133 | 20704 | 16817 | 14661 | 14028 | 12933 | | | | | | | | | | | | | | |
| | 100000 | 28787 | 23382 | 20704 | 17762 | 14428 | 12578 | 12035 | 11095 | | | | | | | | | | | | | | |
| 5-7/16 5-15/16 6 | 10000 | 56589 | 45964 | 40700 | 34917 | 28362 | 24725 | 23659 | | | | | | | | | | | | | | | |
| | 30000 | 40700 | 33059 | 29272 | 25113 | 20398 | 17783 | 17016 | | | | | | | | | | | | | | | |
| | 40000 | 37335 | 30325 | 26852 | 23037 | 18712 | 16312 | 15609 | | | | | | | | | | | | | | | |
| | 60000 | 33059 | 26852 | 23777 | 20398 | 16569 | 14444 | 13821 | | | | | | | | | | | | | | | |
| | 100000 | 28362 | 23037 | 20398 | 17500 | 14214 | 12392 | 11858 | | | | | | | | | | | | | | | |
| 6-7/16 6-1/2 6-15/16 7 | 10000 | 96215 | 78151 | 69200 | 59368 | 48222 | 42038 | | | | | | | | | | | | | | | | |
| | 30000 | 69200 | 56208 | 49770 | 42699 | 34682 | 30235 | | | | | | | | | | | | | | | | |
| | 40000 | 63478 | 51560 | 45655 | 39168 | 31814 | 27735 | | | | | | | | | | | | | | | | |
| | 60000 | 56208 | 45655 | 40426 | 34682 | 28171 | 24558 | | | | | | | | | | | | | | | | |
| | 100000 | 48222 | 39168 | 34682 | 29754 | 24168 | 21069 | | | | | | | | | | | | | | | | |

For maximum RPM see Table 2 on page B10-14

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.



SELECTION

Type E-Xtra, DOUBLE-INTERLOCK, TAF and EXL

Table 4 - Permissible Thrust Load, Lbs.*

| Shaft Size Inches | *E | | *K/DI, TAF, EXL | |
|-------------------|--------|--------|-----------------|--------|
| | 2-Bolt | 4-Bolt | 2-Bolt | 4-Bolt |
| 1-3/16 | 2000 | | 1400 | |
| 1-1/4 | 2000 | | 1400 | |
| 1-3/8 | 2590 | | 2590 | |
| 1-7/16 | 2590 | | 2590 | |
| 1-1/2 | 2590 | | 2590 | |
| 1-5/8 | 2590 | | 2590 | |
| 1-11/16 | 2590 | | 2590 | |
| 1-3/4 | 3454 | | 3454 | |
| 1-7/8 | 3454 | | 3454 | |
| 1-15/16 | 3454 | | 3454 | |
| 2 | 3454 | | 3454 | |
| 2-3/16 | 3454 | | 3454 | |
| 2-1/4 | 3454 | 3454 | 3454 | 3454 |
| 2-7/16 | 3454 | 3454 | 3454 | 3454 |
| 2-1/2 | 3454 | 3454 | 3454 | 3454 |
| 2-11/16 | 5181 | 5181 | 5181 | 5181 |
| 2-3/4 | 5181 | 5181 | 5181 | 5181 |
| 2-15/16 | 5181 | 5181 | 5181 | 5181 |
| 3 | 5181 | 5181 | 5181 | 5181 |
| 3-3/16 | 5181 | 5181 | 4300 | 5181 |
| 3-1/4 | 5181 | 5181 | 4300 | 5181 |
| 3-7/16 | 5181 | 5181 | 4300 | 5181 |
| 3-1/2 | 5181 | 5181 | 4300 | 5181 |
| 3-15/16 | | 6908 | | 6908 |
| 4 | | 6908 | | 6908 |
| 4-7/16 | | 6908 | | 6908 |
| 4-1/2 | | 6908 | | 6908 |
| 4-15/16 | | 6908 | | 6908 |
| 5 | | 6908 | | 6908 |
| 5-7/16 | | 8635 | | 8635 |
| 5-15/16 | | 8635 | | 8635 |
| 6 | | 8635 | | 8635 |
| 6-7/16 | | 12282 | | 12282 |
| 6-1/2 | | 12282 | | 12282 |
| 6-15/16 | | 12282 | | 12282 |
| 7 | | 12282 | | 12282 |

Note: 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 DODGE Engineering for recommendations.

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



SELECTION

Type E-Xtra, Type K, DOUBLE-INTERLOCK, TAF and EXL

Table 5 - K, DI and TAF Maximum Axial Expansion (Inches)

| Bore Size (Inches) | Type K DOUBLE-INTERLOCK | | TAF | EXL |
|--------------------|----------------------------|--------|-------|------|
| | Pillow Block | Flange | | |
| 1-3/16 - 1-1/4 | 0.252 | -- | -- | .280 |
| 1-3/8 - 1-7/16 | 0.188 | 0.187 | 0.188 | .280 |
| 1-1/2 - 1-11/16 | 0.188 | 0.187 | 0.188 | .280 |
| 1-3/4 - 2 | 0.562 | 0.187 | 0.562 | .280 |
| 2-3/16 | 0.562 | 0.187 | 0.562 | .280 |
| 2-1/4 - 2-1/2 | 0.562 | 0.312 | 0.562 | .280 |
| 2-11/16 - 3 | 0.562 | 0.312 | 0.562 | .280 |
| 3-3/16 - 3-1/2 | 0.562 | 0.312 | 0.562 | .280 |
| 3-15/16 - 4 | 0.674 | 0.312 | 0.674 | .280 |
| 4-7/16 - 4-1/2 | 0.674 | 0.812 | 0.674 | .280 |
| 4-15/16 - 5 | 0.674 | 0.812 | 0.674 | .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. RPM (TABLE 1) |
| 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 1) |
| 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 |



Type E-Xtra

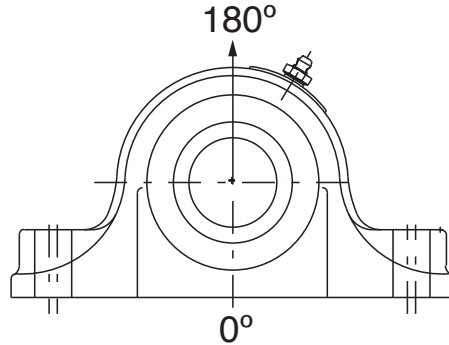


Table 7 - Housing Ratings - Type E-Xtra (Solid Housing)

| Shaft Size (Inches) | Maximum Recommended Housing Cap Loads, Lbs. 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



SELECTION

Type K, DOUBLE-INTERLOCK, TAF and EXL

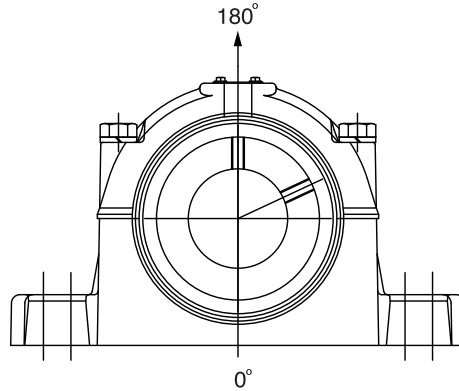


Table 8: Housing Ratings
Type K, DI, and EXL Housing (Split Housing)

| Shaft Size (Inches) | Maximum Recommended Housing Cap Loads, Lbs. 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
TAF (Split Housing)

| Shaft Size (Inches) | Maximum Recommended Housing Cap Loads, Lbs. 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 L₁₀ life of the bearing should be checked for proper selection and life requirements

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

SELECTION/DIMENSIONS



Type E-Xtra, Type K, DOUBLE-INTERLOCK, TAF and EXL



MOUNTED BEARINGS APPLICATION DATA SHEET

Instructions: Complete all applicable information and Fax to DODGE 864-281-2317 or e-mail brgpttechsupport@baldor.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: Summer _____ °F Winter _____ °F
External Heat: Source of Heat _____
Temperature _____ °F Distance from Bearing _____
Air: Clean _____ Contaminated _____ Contamination Type _____
Gas: Clean _____ Contaminated _____ Contamination Type _____
Liquid: Type _____ Concentration _____
Other: (Including washdowns) _____

Experience: (If applicable)

Type of Bearing Currently Used: _____
Life Realized _____ Type of Failure _____

Other Pertinent Data

L-10 Hours Required:

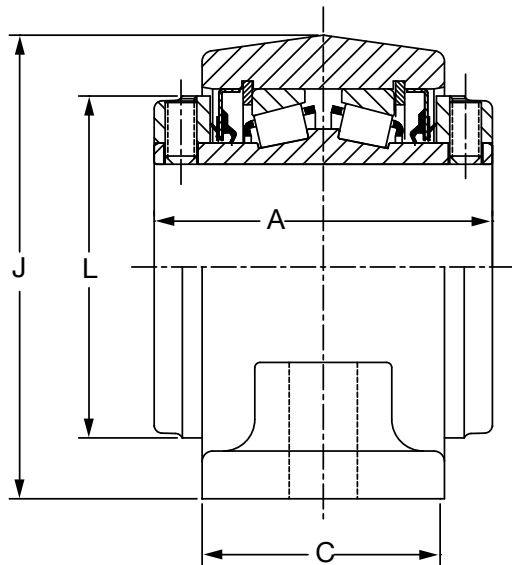
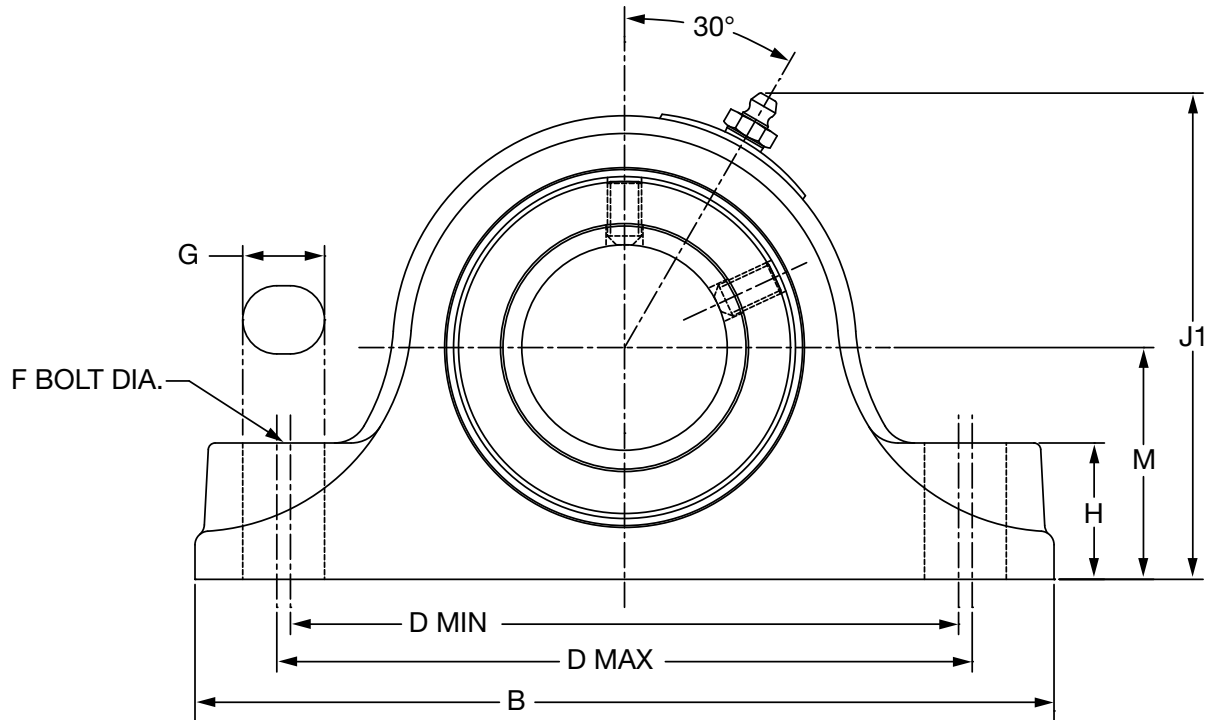
Dimensional Restrictions: Centerline Height _____
Bolt Pattern _____
Other _____

| | | | |
|---------------------------------|---|-------------------------------|----------------------------|
| FEATURES/BENEFITS PAGE B10-2 | HOW TO ORDER/NOMENCLATURE PAGE B10-9 | EASY SELECTION PAGE B10-15 | ACCESSORIES PAGE B10-64 |
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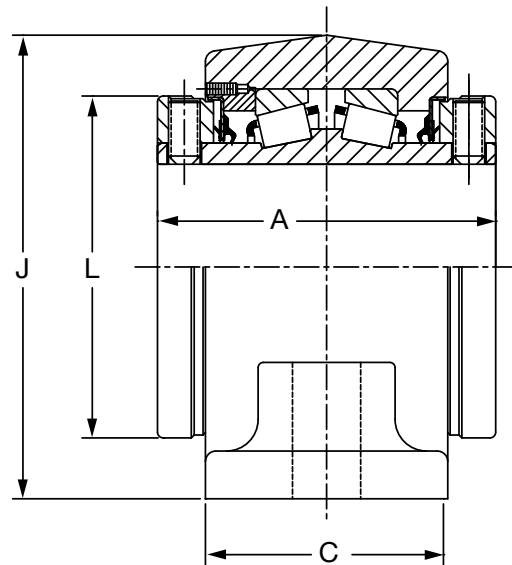
SELECTION/DIMENSIONS



Type E-Xtra Pillow Block - Inch 2-BOLT BASE



1-3/16" THRU 3" CONSTRUCTION



3-3/16" THRU 3-12" CONSTRUCTION

| | | | |
|---------------------------------|---|-------------------------------|----------------------------|
| FEATURES/BENEFITS PAGE B10-2 | HOW TO ORDER/NOMENCLATURE PAGE B10-9 | EASY SELECTION PAGE B10-15 | ACCESSORIES PAGE B10-64 |
|---------------------------------|---|-------------------------------|----------------------------|

SELECTION/DIMENSIONS



Type E-Xtra Pillow Block - Inch 2-BOLT BASE

| Gray Iron | | | | Cast Steel | | | |
|---------------------|---------------|------------|---------------------|---------------------|---------------|-------------|------------|
| Shaft Size Inches # | Part Number | Part Name | Weight Lbs (Approx) | Shaft Size Inches # | Part Number | Part Name | Weight Lbs |
| 1-3/16 | 023000 | P2B-E-103R | 4 | 1-3/16 | 023047 | SP2B-E-103R | 4 |
| 1-1/4 | 023001 | P2B-E-104R | 4 | 1-1/4 | 023048 | SP2B-E-104R | 4 |
| 1-3/8 | 023002 | P2B-E-106R | 7 | 1-3/8 | 023049 | SP2B-E-106R | 7 |
| 1-7/16 | 023003 | P2B-E-107R | 7 | 1-7/16 | 023050 | SP2B-E-107R | 7 |
| 1-1/2 | 023004 | P2B-E-108R | 10 | 1-1/2 | 023051 | SP2B-E-108R | 10 |
| 1-5/8 | 023005 | P2B-E-110R | 10 | 1-5/8 | 023052 | SP2B-E-110R | 10 |
| 1-11/16 | 023006 | P2B-E-111R | 10 | 1-11/16 | 023053 | SP2B-E-111R | 10 |
| 1-3/4 | 023007 | P2B-E-112R | 12 | 1-3/4 | 023054 | SP2B-E-112R | 11 |
| 1-7/8 | 023008 | P2B-E-114R | 12 | 1-7/8 | 023055 | SP2B-E-114R | 11 |
| 1-15/16 | 023009 | P2B-E-115R | 12 | 1-15/16 | 023056 | SP2B-E-115R | 11 |
| 2 | 023010 | P2B-E-200R | 12 | 2 | 023057 | SP2B-E-200R | 11 |
| 2-3/16 | 023011 | P2B-E-203R | 15 | 2-3/16 | 023058 | SP2B-E-203R | 14 |
| 2-1/4 | 023012 | P2B-E-204R | 21 | 2-1/4 | 023059 | SP2B-E-204R | 19 |
| 2-7/16 | 023013 | P2B-E-207R | 20 | 2-7/16 | 023060 | SP2B-E-207R | 19 |
| 2-1/2 | 023014 | P2B-E-208R | 20 | 2-1/2 | 023061 | SP2B-E-208R | 19 |
| 2-11/16 | 023015 | P2B-E-211R | 29 | 2-11/16 | 023062 | SP2B-E-211R | 26 |
| 2-3/4 | 023016 | P2B-E-212R | 28 | 2-3/4 | 023063 | SP2B-E-212R | 26 |
| 2-15/16 | 023017 | P2B-E-215R | 27 | 2-15/16 | 023064 | SP2B-E-215R | 26 |
| 3 | 023018 | P2B-E-300R | 27 | 3 | 023065 | SP2B-E-300R | 26 |
| 3-3/16 | 023019 | P2B-E-303R | 48 | 3-3/16 | 023066 | SP2B-E-303R | 44 |
| 3-1/4 | 023020 | P2B-E-304R | 47 | 3-1/4 | 023067 | SP2B-E-304R | 44 |
| 3-7/16 | 023021 | P2B-E-307R | 46 | 3-7/16 | 023068 | SP2B-E-307R | 44 |
| 3-1/2 | 023022 | P2B-E-308R | 45 | 3-1/2 | 023069 | SP2B-E-308R | 44 |

Consult DODGE For Sizes Not Listed

Consult DODGE For Sizes Not Listed

| Shaft Size (Inches) | 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 2-1/4 | 3.75 | 9.63 | 2.63 | 7.63 | 7.88 | 5/8 | 0.88 | 1.50 | 5.00 | 5.17 | 3.75 | 2.50 |
| 2-7/16 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 |

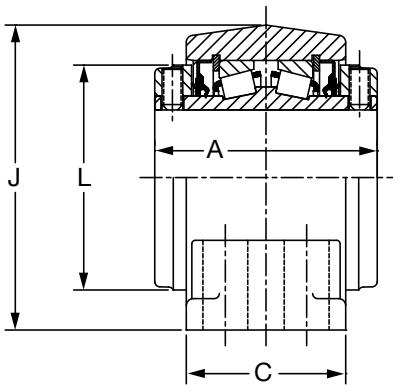
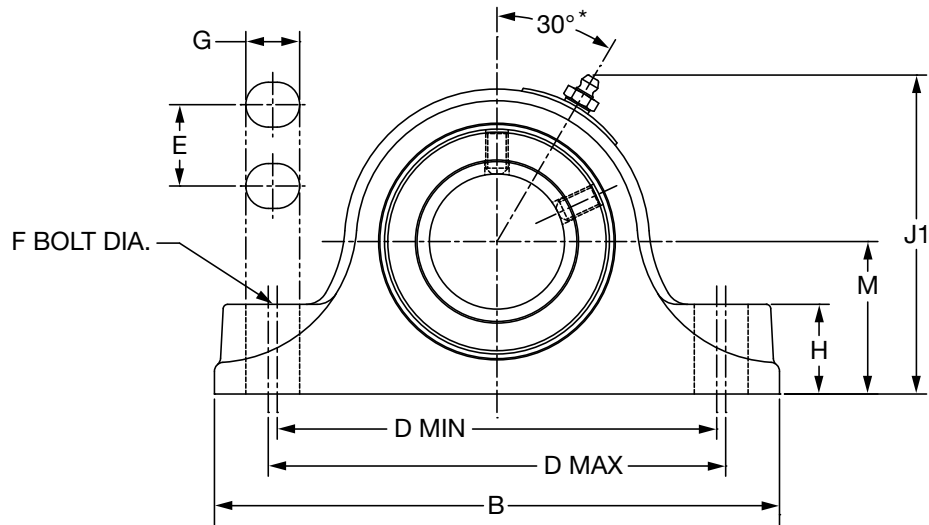
NOTE: All sizes use a 1/8-27 NPT hydraulic grease fitting

| | | | |
|---------------------------------|---|-------------------------------|----------------------------|
| FEATURES/BENEFITS PAGE B10-2 | HOW TO ORDER/NOMENCLATURE PAGE B10-9 | EASY SELECTION PAGE B10-15 | ACCESSORIES PAGE B10-64 |
|---------------------------------|---|-------------------------------|----------------------------|

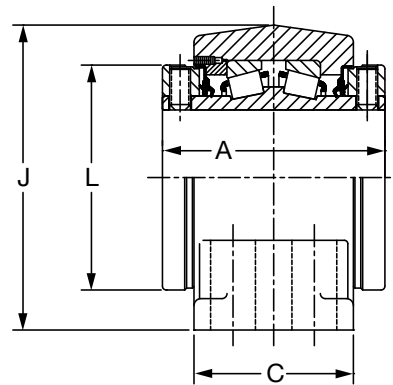
SELECTION/DIMENSIONS



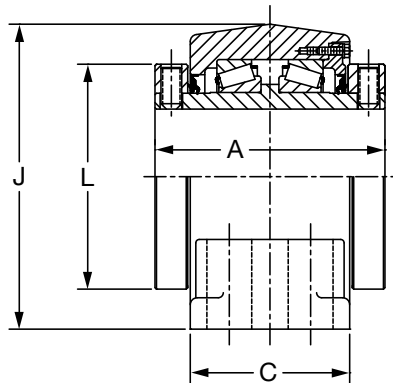
Type E-Xtra Pillow Block - Inch 4-BOLT BASE



2-1/4" THRU 3" CONSTRUCTION



3-3/16" THRU 5" CONSTRUCTION



5-7/16" THRU 7" CONSTRUCTION

| | | | |
|---------------------------------|---|-------------------------------|----------------------------|
| FEATURES/BENEFITS PAGE B10-2 | HOW TO ORDER/NOMENCLATURE PAGE B10-9 | EASY SELECTION PAGE B10-15 | ACCESSORIES PAGE B10-64 |
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SELECTION/DIMENSIONS



Type E-Xtra Pillow Block - Inch 4-BOLT BASE

| Gray Iron | | | | Cast Steel | | | |
|---------------------|---------------|------------|---------------------|---------------------|---------------|-------------|------------|
| Shaft Size Inches # | Part Number | Part Name | Weight Lbs (Approx) | Shaft Size Inches # | Part Number | Part Name | Weight Lbs |
| 2-1/4 | 023023 | P4B-E-204R | 20 | 2-1/4 | ----- | ----- | ----- |
| 2-7/16 | 023024 | P4B-E-207R | 20 | 2-7/16 | ----- | ----- | ----- |
| 2-1/2 | 023025 | P4B-E-208R | 19 | 2-1/2 | ----- | ----- | ----- |
| 2-11/16 | 023026 | P4B-E-211R | 30 | 2-11/16 | ----- | ----- | ----- |
| 2-3/4 | 023027 | P4B-E-212R | 28 | 2-3/4 | ----- | ----- | ----- |
| 2-15/16 | 023028 | P4B-E-215R | 28 | 2-15/16 | ----- | ----- | ----- |
| 3 | 023029 | P4B-E-300R | 28 | 3 | ----- | ----- | ----- |
| 3-3/16 | 023030 | P4B-E-303R | 47 | 3-3/16 | ----- | ----- | ----- |
| 3-1/4 | 023031 | P4B-E-304R | 47 | 3-1/4 | ----- | ----- | ----- |
| 3-7/16 | 023032 | P4B-E-307R | 46 | 3-7/16 | ----- | ----- | ----- |
| 3-1/2 | 023033 | P4B-E-308R | 45 | 3-1/2 | ----- | ----- | ----- |
| 3-15/16 | 023690 | P4B-E-315R | 69 | 3-15/16 | 023070 | SP4B-E-315R | 65 |
| 4 | 023691 | P4B-E-400R | 69 | 4 | 023071 | SP4B-E-400R | 65 |
| 4-7/16 | 023692 | P4B-E-407R | 85 | 4-7/16 | 023072 | SP4B-E-407R | 81 |
| 4-1/2 | 023693 | P4B-E-408R | 85 | 4-1/2 | 023073 | SP4B-E-408R | 81 |
| 4-15/16 | 023694 | P4B-E-415R | 134 | 4-15/16 | 023074 | SP4B-E-415R | 132 |
| 5 | 023695 | P4B-E-500R | 133 | 5 | 023075 | SP4B-E-500R | 132 |
| 5-7/16 | 023040 | P4B-E-507R | 230 | 5-7/16 | ----- | ----- | ----- |
| 5-15/16 | 023041 | P4B-E-515R | 250 | 5-15/16 | ----- | ----- | ----- |
| 6 | 023042 | P4B-E-600R | 245 | 6 | ----- | ----- | ----- |
| 6-7/16 | 023043 | P4B-E-607R | 356 | 6-7/16 | ----- | ----- | ----- |
| 6-1/2 | 023044 | P4B-E-608R | 350 | 6-1/2 | ----- | ----- | ----- |
| 6-15/16 | 023045 | P4B-E-615R | 340 | 6-15/16 | ----- | ----- | ----- |
| 7 | 023046 | P4B-E-700R | 335 | 7 | ----- | ----- | ----- |

Consult DODGE For Sizes Not Listed

Consult DODGE For Sizes Not Listed

| Shaft Size Inches | A | B | C* | D | | E | F Bolt Dia | G | H | J1 | J | L | M |
|-------------------|-------|-------|------|-------|-------|------|------------|------|------|-------|-------|-------|------|
| | | | | Min | Max | | | | | | | | |
| 2-1/4 | 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 |
| 2-7/16 | | | | | | | | | | | | | |
| 2-1/2 | | | | | | | | | | | | | |
| 2-11/16 | 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 |
| 2-3/4 | | | | | | | | | | | | | |
| 2-15/16 | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | |
| 3-3/16 | 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 |
| 3-1/4 | | | | | | | | | | | | | |
| 3-7/16 | | | | | | | | | | | | | |
| 3-1/2 | | | | | | | | | | | | | |
| 3-15/16 | 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 | | | | | | | | | | | | | |
| 4-7/16 | 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 |
| 4-1/2 | | | | | | | | | | | | | |
| 4-15/16 | 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 | | | | | | | | | | | | | |
| 5-7/16 | 9.00 | 22.00 | 6.25 | 17.38 | 19.13 | 3.75 | 1 | 2.00 | 3.25 | 13.19 | ---- | 9.38 | 6.69 |
| 5-15/16 | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | |
| 6-7/16 | 10.50 | 26.00 | 7.13 | 21.25 | 23.25 | 4.63 | 1 | 2.00 | 3.69 | 14.94 | ---- | 11.38 | 7.50 |
| 6-1/2 | | | | | | | | | | | | | |
| 6-15/16 | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | |

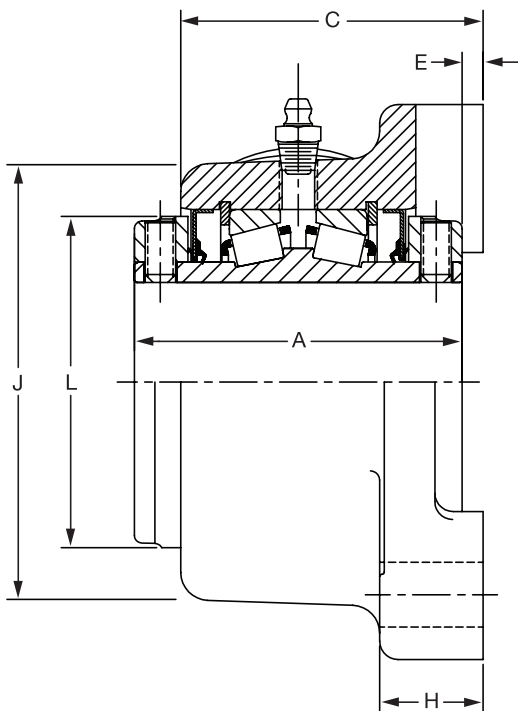
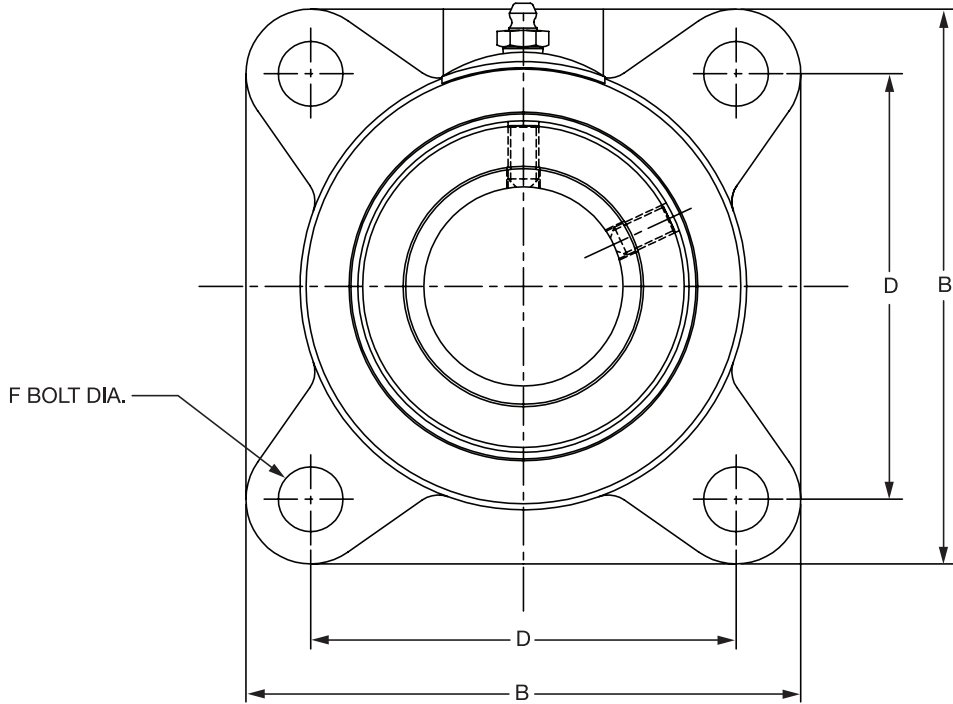
NOTE: All sizes use a 1/8-27 NPT hydraulic grease fitting

| | | | |
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| FEATURES/BENEFITS PAGE B10-2 | HOW TO ORDER/NOMENCLATURE PAGE B10-9 | EASY SELECTION PAGE B10-15 | ACCESSORIES PAGE B10-64 |
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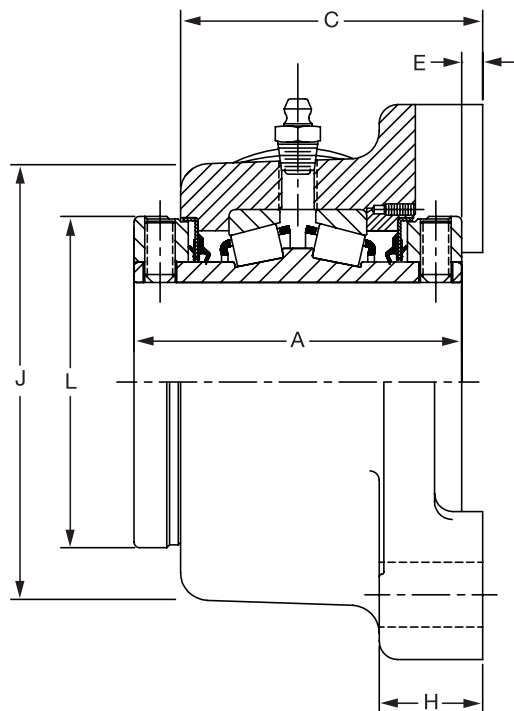
SELECTION/DIMENSIONS



Type E-Xtra Flange Bearing - Inch 4-BOLT BASE



1-3/16" THRU 3" CONSTRUCTION



3-3/16" THRU 4-1/2" CONSTRUCTION

| | | | |
|---|---|---------------------------------------|------------------------------------|
| <p>FEATURES/BENEFITS PAGE B10-2</p> | <p>HOW TO ORDER/NOMENCLATURE PAGE B10-9</p> | <p>EASY SELECTION PAGE B10-15</p> | <p>ACCESSORIES PAGE B10-64</p> |
|---|---|---------------------------------------|------------------------------------|

SELECTION/DIMENSIONS



Type E-Xtra Flange Bearing - Inch 4-BOLT BASE

| Gray Iron | | | |
|---------------------|-------------|------------|---------------------|
| Shaft Size Inches # | Part Number | Part Name | Weight Lbs (Approx) |
| 1-3/16 | 023093 | F4B-E-103R | 4 |
| 1-1/4 | 023094 | F4B-E-104R | 4 |
| 1-3/8 | 023095 | F4B-E-106R | 7 |
| 1-7/16 | 023096 | F4B-E-107R | 7 |
| 1-1/2 | 023097 | F4B-E-108R | 11 |
| 1-5/8 | 023098 | F4B-E-110R | 11 |
| 1-11/16 | 023099 | F4B-E-111R | 11 |
| 1-3/4 | 023100 | F4B-E-112R | 12 |
| 1-7/8 | 023101 | F4B-E-114R | 12 |
| 1-15/16 | 023102 | F4B-E-115R | 12 |
| 2 | 023103 | F4B-E-200R | 12 |
| 2-3/16 | 023104 | F4B-E-203R | 15 |
| 2-1/4 | 023105 | F4B-E-204R | 21 |
| 2-7/16 | 023106 | F4B-E-207R | 20 |
| 2-1/2 | 023107 | F4B-E-208R | 19 |
| 2-11/16 | 023108 | F4B-E-211R | 28 |
| 2-3/4 | 023109 | F4B-E-212R | 28 |
| 2-15/16 | 023110 | F4B-E-215R | 27 |
| 3 | 023111 | F4B-E-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 | 50 |
| 3-1/2 | 023115 | F4B-E-308R | 50 |
| 3-15/16 | 023116 | F4B-E-315R | 75 |
| 4 | 023117 | F4B-E-400R | 75 |
| 4-7/16 | 023118 | F4B-E-407R | 90 |
| 4-1/2 | 023119 | F4B-E-408R | 90 |

Consult DODGE For Sizes Not Listed.

| Shaft Size Inches | A | B | C | D | E | F Bolt Dia. | H | J | L |
|-------------------|------|-------|------|------|------|-------------|------|------|------|
| 1-3/16 | 2.81 | 3.75 | 2.34 | 2.88 | 0.06 | 3/8 | 1.00 | 2.94 | 2.25 |
| 1-1/4 | | | | | | | | | |
| 1-3/8 | 3.06 | 4.63 | 2.59 | 3.50 | 0.06 | 1/2 | 1.06 | 3.50 | 2.75 |
| 1-7/16 | | | | | | | | | |
| 1-1/2 | 3.50 | 5.38 | 2.97 | 4.13 | 0.13 | 1/2 | 1.19 | 4.19 | 3.19 |
| 1-5/8 | | | | | | | | | |
| 1-11/16 | | | | | | | | | |
| 1-3/4 | 3.63 | 5.63 | 3.09 | 4.38 | 0.13 | 1/2 | 1.19 | 4.44 | 3.44 |
| 1-7/8 | | | | | | | | | |
| 1-15/16 | | | | | | | | | |
| 2 | | | | | | | | | |
| 2-3/16 | 3.88 | 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 | 4.19 | 6.88 | 3.56 | 5.38 | 0.19 | 5/8 | 1.50 | 5.31 | 4.06 |
| 2-11/16 | | | | | | | | | |
| 2-3/4 | 4.69 | 7.75 | 3.94 | 6.00 | 0.19 | 3/4 | 1.63 | 6.00 | 4.72 |
| 2-15/16 | | | | | | | | | |
| 3 | | | | | | | | | |
| 3-3/16 | 5.25 | 9.25 | 4.50 | 7.00 | 0.25 | 3/4 | 1.88 | 7.25 | 5.50 |
| 3-1/4 | | | | | | | | | |
| 3-7/16 | | | | | | | | | |
| 3-1/2 | | | | | | | | | |
| 3-15/16 | 6.50 | 10.25 | 5.63 | 7.75 | 0.25 | 7/8 | 2.13 | 8.25 | 6.00 |
| 4 | | | | | | | | | |
| 4-7/16 | 7.09 | 10.88 | 5.94 | 8.75 | 0.34 | 7/8 | 2.44 | 8.75 | 6.45 |
| 4-1/2 | | | | | | | | | |

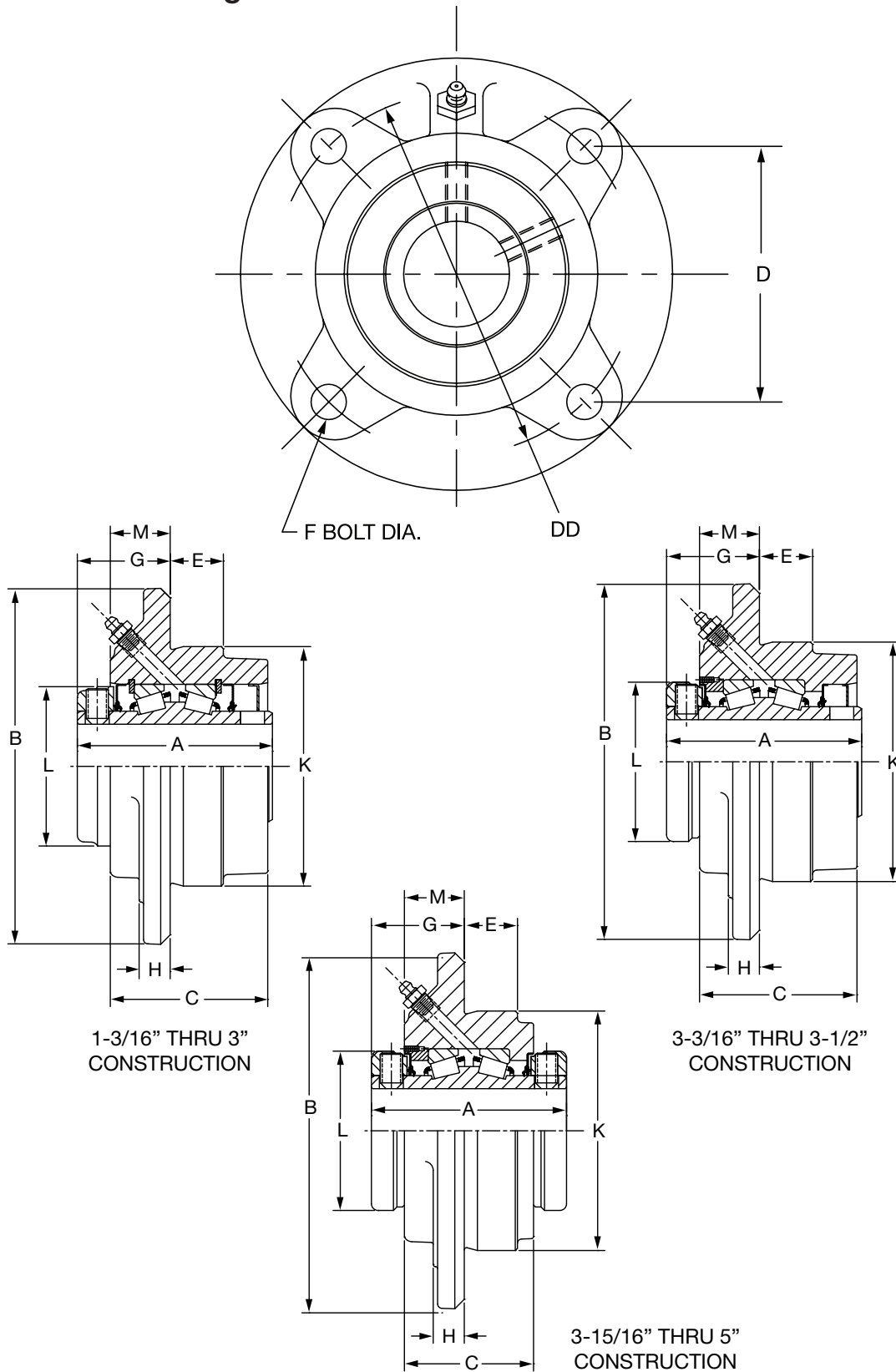
NOTE: All sizes use a 1/8-27 NPT hydraulic grease fitting

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SELECTION/DIMENSIONS



Type E-Xtra Piloted Flange



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

SELECTION/DIMENSIONS



Type E-Xtra Piloted Flange

| Gray Iron | | | |
|---------------------|-------------|-----------|---------------------|
| Shaft Size Inches # | Part Number | Part Name | Weight Lbs (Approx) |
| 1-3/16 | 023120 | FC-E-103R | 5 |
| 1-1/4 | 023121 | FC-E-104R | 5 |
| 1-3/8 | 023122 | FC-E-106R | 7 |
| 1-7/16 | 023123 | FC-E-107R | 6 |
| 1-1/2 | 023124 | FC-E-108R | 10 |
| 1-5/8 | 023125 | FC-E-110R | 9 |
| 1-11/16 | 023126 | FC-E-111R | 9 |
| 1-3/4 | 023127 | FC-E-112R | 11 |
| 1-7/8 | 023128 | FC-E-114R | 10 |
| 1-15/16 | 023129 | FC-E-115R | 10 |
| 2 | 023130 | FC-E-200R | 10 |
| 2-3/16 | 023131 | FC-E-203R | 14 |
| 2-1/4 | 023132 | FC-E-204R | 18 |
| 2-7/16 | 023133 | FC-E-207R | 18 |
| 2-1/2 | 023134 | FC-E-208R | 17 |
| 2-11/16 | 023135 | FC-E-211R | 27 |
| 2-3/4 | 023136 | FC-E-212R | 27 |
| 2-15/16 | 023137 | FC-E-215R | 25 |
| 3 | 023138 | FC-E-300R | 25 |
| 3-3/16 | 023139 | FC-E-303R | 44 |
| 3-1/4 | 023140 | FC-E-304R | 44 |
| 3-7/16 | 023141 | FC-E-307R | 43 |
| 3-1/2 | 023142 | FC-E-308R | 42 |
| 3-15/16 | 023143 | FC-E-315R | 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 | 130 |
| 5 ## | 023148 | FC-E-500R | 130 |

Consult DODGE For Sizes Not Listed.

| Shaft Size Inches | A | B | C | D | ØDD | E | F Bolt# | 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 | 3.38 | 6.13 | 2.39 | 3.62 | 5.13 | 1.06 | 7/16 | 1.56 | 0.50 | 4.25 | 3.19 | 1.03 |
| 1-11/16 | | | | | | | | | | | | |
| 1-3/4 | | | | | | | | | | | | |
| 1-7/8 | 3.50 | 6.38 | 2.91 | 3.80 | 5.38 | 1.19 | 7/16 | 1.56 | 0.56 | 4.50 | 3.44 | 1.03 |
| 1-15/16 | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | |
| 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 | 4.00 | 7.63 | 3.31 | 4.60 | 6.50 | 1.31 | 1/2 | 1.81 | 0.63 | 5.50 | 4.06 | 1.19 |
| 2-1/2 | | | | | | | | | | | | |
| 2-11/16 | | | | | | | | | | | | |
| 2-3/4 | 4.50 | 8.75 | 3.69 | 5.30 | 7.50 | 1.50 | 5/8 | 2.00 | 0.75 | 6.38 | 4.72 | 1.25 |
| 2-15/16 | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | |
| 3-3/16 | | | | | | | | | | | | |
| 3-1/4 | 5.00 | 10.25 | 4.19 | 6.10 | 8.63 | 1.25 | 3/4 | 2.44 | 0.94 | 7.38 | 5.50 | 1.69 |
| 3-7/16 | | | | | | | | | | | | |
| 3-1/2 | | | | | | | | | | | | |
| 3-15/16 | 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 | | | | | | | | | | | | |
| 4-7/16 | 6.75 | 13.50 | 4.63 | ## | 11.75 | 1.50 | 3/4## | 3.00 | 1.00 | 10.25 | 6.45 | 1.94 |
| 4-1/2 | | | | | | | | | | | | |
| 4-15/16 | 7.25 | 14.75 | 5.06 | ## | 12.75 | 1.75 | 7/8## | 2.97 | 1.25 | 11.00 | 7.45 | 1.88 |
| 5 | | | | | | | | | | | | |

* 1-3/16 To 3-1/2 - One Collar
3-15/16 To 5, - Two Collars

(6) BOLTS EQUALLY SPACED
** +.000 -.002

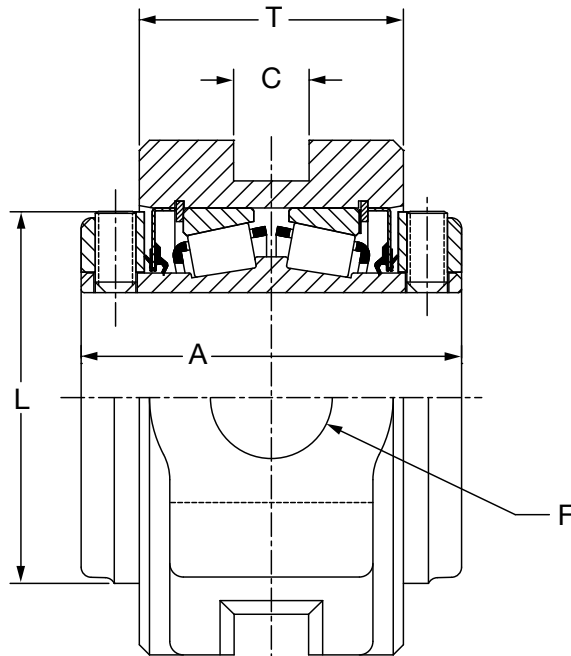
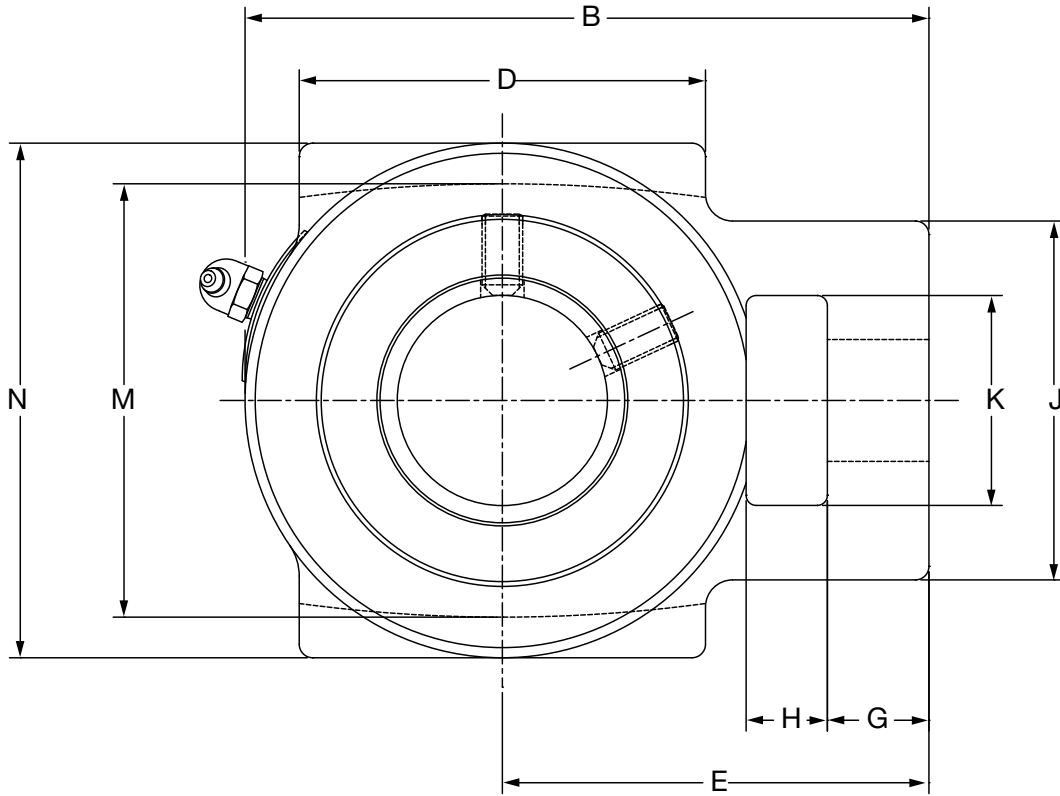
NOTE: All sizes use a 1/8-27 NPT hydraulic grease fitting

| | | | |
|---------------------------------|---|-------------------------------|----------------------------|
| FEATURES/BENEFITS PAGE B10-2 | HOW TO ORDER/NOMENCLATURE PAGE B10-9 | EASY SELECTION PAGE B10-15 | ACCESSORIES PAGE B10-64 |
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SELECTION/DIMENSIONS



Type E-Xtra Wide Slot Take-Up Unit



1-3/8" THRU 3" CONSTRUCTION

| | | | |
|---------------------------------|---|-------------------------------|----------------------------|
| FEATURES/BENEFITS PAGE B10-2 | HOW TO ORDER/NOMENCLATURE PAGE B10-9 | EASY SELECTION PAGE B10-15 | ACCESSORIES PAGE B10-64 |
|---------------------------------|---|-------------------------------|----------------------------|

SELECTION/DIMENSIONS



Type E-Xtra Wide Slot Take-Up Unit

| Gray Iron | | | | |
|------------------------|----------------|--------------|------------------------|------------|
| Shaft Size # Inches | Part Number | Part Name | Weight Lbs (Approx) | Frame Δ |
| 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 | 12 | |
| 2 | 023084 | WSTU-E-200R | 12 | |
| 2-3/16 | 023085 | WSTU-E-203R | 16 | CP408 |
| 2-1/4 | 023086 | WSTU-E-204R | 21 | CP502 |
| 2-7/16 | 023087 | WSTU-E-207R | 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 | 30 | |
| 3 | 023092 | WSTU-E-300R | 30 | |

Consult DODGE For Sizes Not Listed.

Δ See page B15-20 for CP Take-Up Frame

| Shaft Size Inches | A | B | C | D | E | F Screw Dia | G | H | J | K | L | M | N | T |
|------------------------------------|------|------|------|------|------|-------------------|------|------|------|------|------|------|------|------|
| 1-3/8 1-7/16 | 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 |
| 1-1/2 1-5/8 1-11/16 | 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 |
| 1-3/4 1-7/8 1-15/16 2 | 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 |
| 2-3/16 2-1/4 2-7/16 2-1/2 | 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 |
| 2-11/16 2-3/4 2-15/16 3 | 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 |

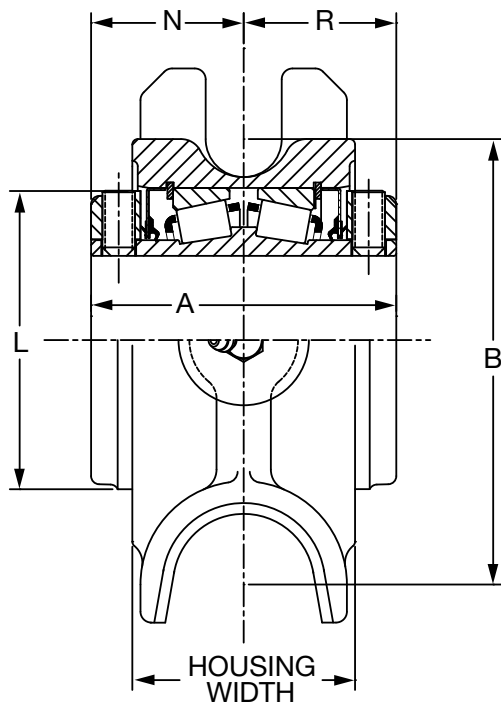
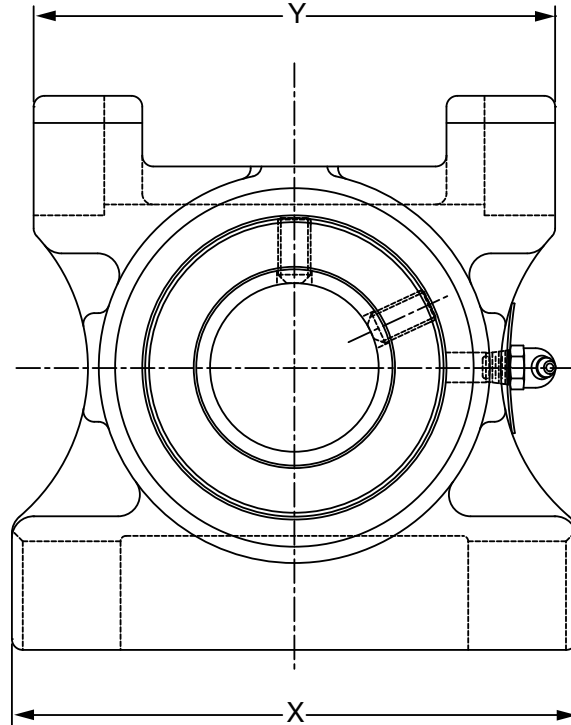
NOTE: All sizes use a 1/8-27 NPT hydraulic grease fitting

| | | | |
|---------------------------------|---|-------------------------------|----------------------------|
| FEATURES/BENEFITS PAGE B10-2 | HOW TO ORDER/NOMENCLATURE PAGE B10-9 | EASY SELECTION PAGE B10-15 | ACCESSORIES PAGE B10-64 |
|---------------------------------|---|-------------------------------|----------------------------|

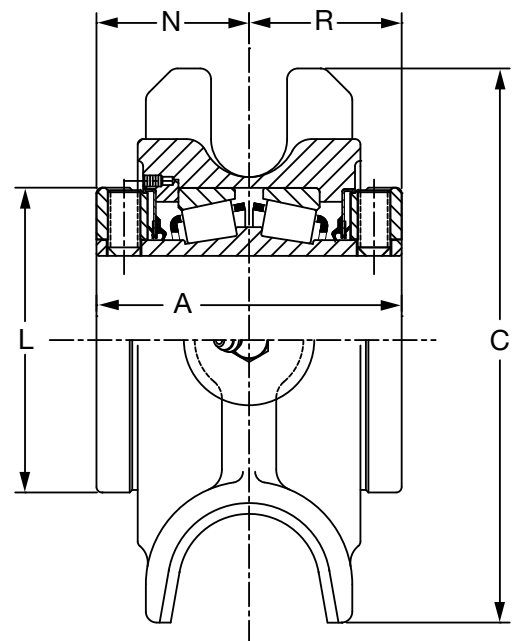
SELECTION/DIMENSIONS



Type E-Xtra TP Take-Up Bearing - Inch



1-3/4" THRU 3" CONSTRUCTION



3-3/16" THRU 4" CONSTRUCTION

| | | | |
|---------------------------------|---|-------------------------------|----------------------------|
| FEATURES/BENEFITS PAGE B10-2 | HOW TO ORDER/NOMENCLATURE PAGE B10-9 | EASY SELECTION PAGE B10-15 | ACCESSORIES PAGE B10-64 |
|---------------------------------|---|-------------------------------|----------------------------|

SELECTION/DIMENSIONS



Type E-Xtra TP Take-Up Bearing - Inch

| Gray Iron | | | | |
|---------------------|---------------|-----------|---------------------|-----------------|
| Shaft Size Inches # | Part Number | Part Name | Weight Lbs (Approx) | 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 | 14 | TP10 |
| 2 | 023152 | TP-E-200R | 14 | TP10 |
| 2-3/16 | 023153 | TP-E-203R | 16 | TP20 |
| 2-1/4 | 023154 | TP-E-204R | 21 | TP30 |
| 2-7/16 | 023155 | TP-E-207R | 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 | 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 | 42 | TP50 |
| 3-1/2 | 023164 | TP-E-308R | 42 | TP50 |
| 3-15/16 | 023165 | TP-E-315R | 62 | TP60 |
| 4 | 023166 | TP-E-400R | 62 | TP60 |

Consult DODGE For Sizes 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 | | | | | | | | |

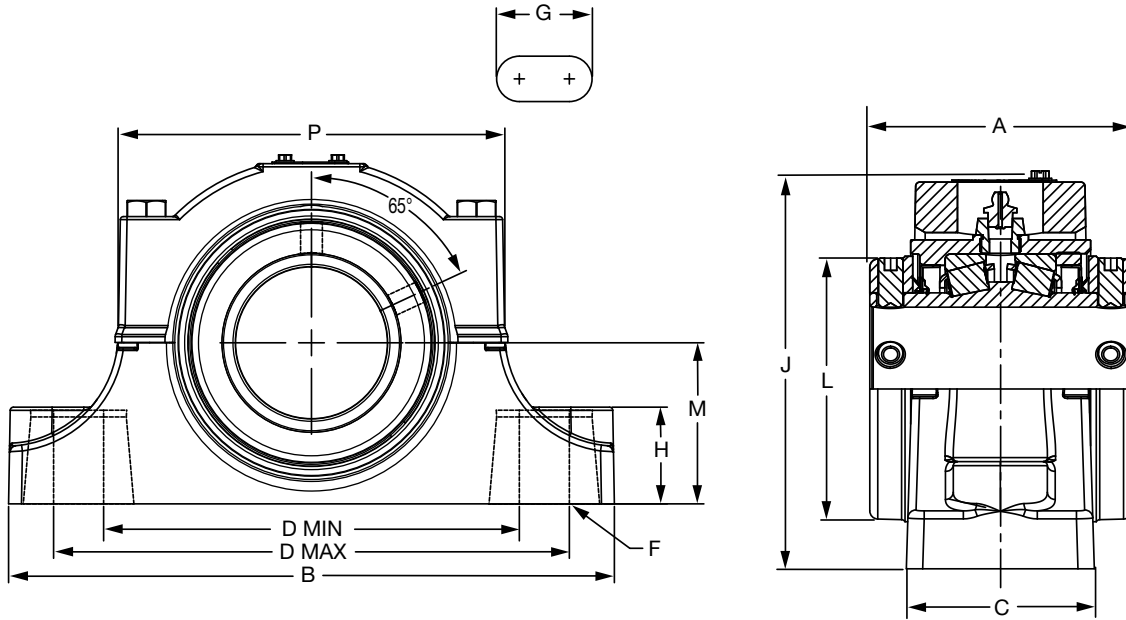
NOTE: All sizes use a 1/8-27 NPT hydraulic grease fitting

| | | | |
|---------------------------------|---|-------------------------------|----------------------------|
| FEATURES/BENEFITS PAGE B10-2 | HOW TO ORDER/NOMENCLATURE PAGE B10-9 | EASY SELECTION PAGE B10-15 | ACCESSORIES PAGE B10-64 |
|---------------------------------|---|-------------------------------|----------------------------|

SELECTION/DIMENSIONS



Type EXL Pillow Block 2-Bolt Base



| Shaft Size | Non-Expansion Part No. | Part Name | Expansion Part No. | Part Name |
|------------|------------------------|--------------|--------------------|---------------|
| 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 |

| | | | |
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| FEATURES/BENEFITS PAGE B10-2 | HOW TO ORDER/NOMENCLATURE PAGE B10-9 | EASY SELECTION PAGE B10-15 | ACCESSORIES PAGE B10-64 |
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SELECTION/DIMENSIONS



Bearing Reference Guide
 E-Family Roller Bearings
 Specialty Tapered Products
 S-2000
 UNISPHERE II
 IMPERIAL
 UNIFIED SAF

Type EXL Pillow Block 2-Bolt Base

| Shaft Size | Weight lbs (Approx) | A | B | C | D | | F Bolt Dia. |
|------------|---------------------|------|-------|------|-------|-------|-------------|
| | | | | | Min | Max | |
| 1-3/16 | 10 | 2.75 | 6.25 | 1.88 | 4.56 | 4.94 | 1/2 |
| 1-1/4 | 10 | | | | | | |
| 1-3/8 | 12 | 3.00 | 7.25 | 2.19 | 5.31 | 5.94 | 1/2 |
| 1-7/16 | 12 | | | | | | |
| 1-1/2 | 12 | 3.38 | 7.75 | 2.37 | 5.56 | 6.44 | 1/2 |
| 1-5/8 | 15 | | | | | | |
| 1-11/16 | 15 | | | | | | |
| 1-3/4 | 15 | | | | | | |
| 1-7/8 | 19 | 3.50 | 8.88 | 2.54 | 6.31 | 7.19 | 5/8 |
| 1-15/16 | 19 | | | | | | |
| 2 | 19 | | | | | | |
| 2-3/16 | 24 | 3.75 | 9.62 | 2.65 | 6.69 | 7.94 | 5/8 |
| 2-1/4 | 24 | | | | | | |
| 2-7/16 | 29 | | | | | | |
| 2-1/2 | 29 | | | | | | |
| 2-11/16 | 42 | 4.50 | 11.75 | 3.32 | 8.06 | 10.00 | 3/4 |
| 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 |
| 3-1/4 | 73 | | | | | | |
| 3-7/16 | 73 | | | | | | |
| 3-1/2 | 73 | | | | | | |

| Shaft Size | Weight lbs (Approx) | G | H | J | L | M | P | EXP * |
|------------|---------------------|------|------|------|------|------|------|-------|
| 1-3/16 | 10 | 0.75 | 0.88 | 3.51 | 2.25 | 1.50 | 4.06 | 0.56 |
| 1-1/4 | 10 | | | | | | | |
| 1-3/8 | 12 | 0.94 | 1.13 | 4.17 | 2.75 | 1.88 | 4.63 | 0.56 |
| 1-7/16 | 12 | | | | | | | |
| 1-1/2 | 12 | 1.07 | 1.25 | 4.69 | 3.19 | 2.13 | 5.13 | 0.56 |
| 1-5/8 | 15 | | | | | | | |
| 1-11/16 | 15 | | | | | | | |
| 1-3/4 | 15 | | | | | | | |
| 1-7/8 | 19 | 1.19 | 1.31 | 4.99 | 3.44 | 2.25 | 5.56 | 0.56 |
| 1-15/16 | 19 | | | | | | | |
| 2 | 19 | | | | | | | |
| 2-3/16 | 24 | 1.38 | 1.50 | 5.42 | 3.75 | 2.50 | 6.00 | 0.56 |
| 2-1/4 | 24 | | | | | | | |
| 2-7/16 | 29 | | | | | | | |
| 2-1/2 | 29 | | | | | | | |
| 2-11/16 | 42 | 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 | 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 | | | | | | | |

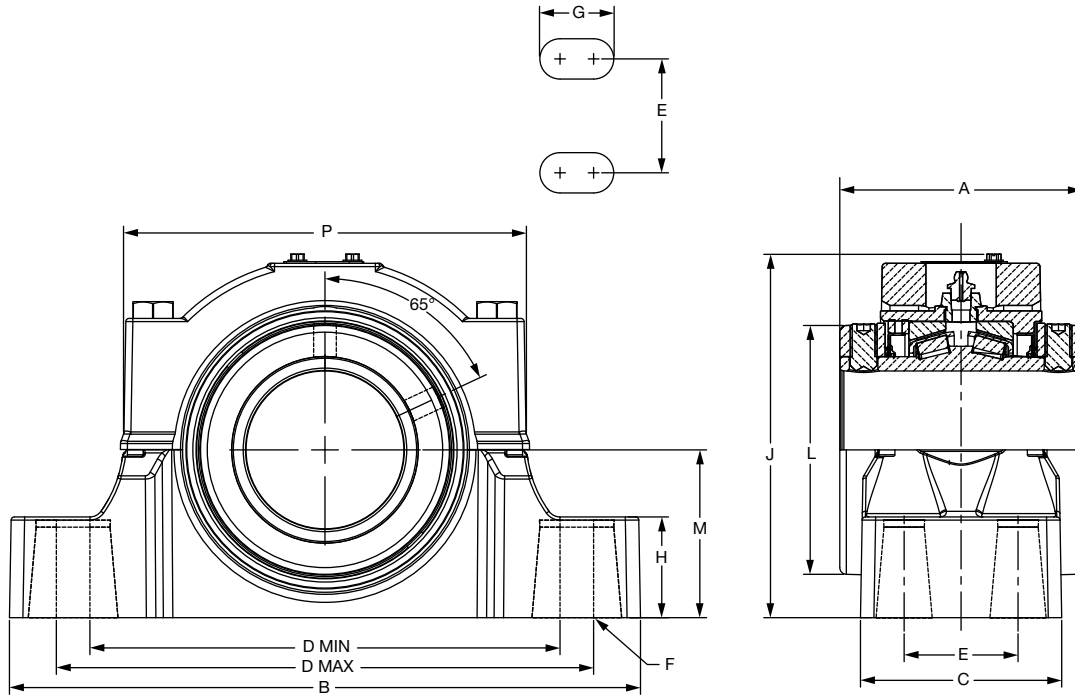
* EXP. Total Expansion Divided Equally On Both Sides Of Bearing (Expansion Bearing Only)

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

SELECTION/DIMENSIONS



Type EXL Pillow Block 4-Bolt Base



| Shaft Size | Non-Expansion Part No. | Part Name | Expansion Part No. | Part Name |
|------------|------------------------|--------------|--------------------|---------------|
| 2-1/4 | 077267 | P4B-EXL-204R | 077284 | P4B-EXL-204RE |
| 2-7/16 | 077268 | P4B-EXL207R | 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 |

| | | | |
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| FEATURES/BENEFITS PAGE B10-2 | HOW TO ORDER/NOMENCLATURE PAGE B10-9 | EASY SELECTION PAGE B10-15 | ACCESSORIES PAGE B10-64 |
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SELECTION/DIMENSIONS



Type EXL Pillow Block 4-Bolt Base

Bearing Reference
Guide

E-Family Roller
Bearings

Specialty Tapered
Products

S-2000

UNISPHERE II

IMPERIAL

UNIFIED SAF

| Shaft Size | Weight lbs (Approx.) | A | B | C | D | | E | F Bolts Dia. |
|------------|----------------------|------|-------|------|-------|-------|------|--------------|
| | | | | | Min | Max | | |
| 2-1/4 | 29 | 4.00 | 10.38 | 3.50 | 7.75 | 8.25 | 1.88 | 5/8 |
| 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 |
| 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 |
| 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 |
| 4 | 109 | | | | | | | |
| 4-7/16 | 154 | 6.75 | 16.50 | 5.08 | 12.00 | 13.88 | 2.50 | 3/4 |
| 4-1/2 | 154 | | | | | | | |
| 4-15/16 | 192 | 7.25 | 18.50 | 5.66 | 13.50 | 15.88 | 2.88 | 3/4 |
| 5 | 192 | | | | | | | |

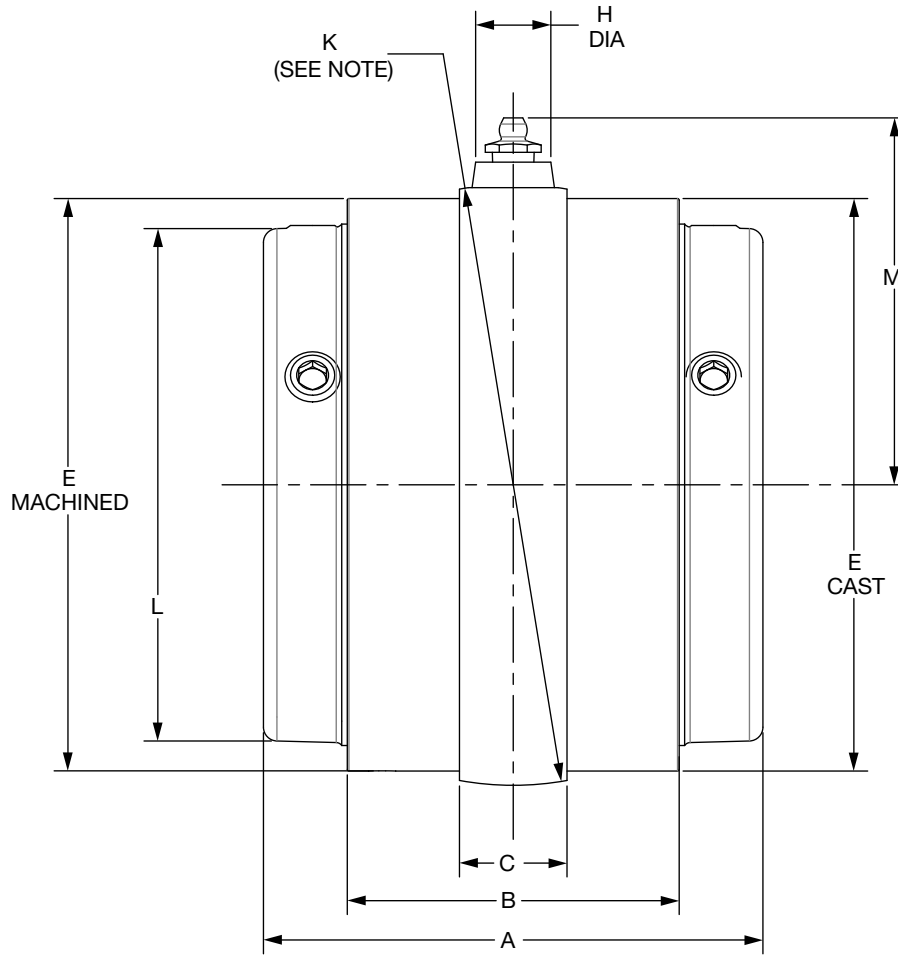
| Shaft Size | Weight lbs (Approx.) | G | H | J | L | M | P | EXP * |
|------------|----------------------|------|------|-------|------|------|-------|-------|
| 2-1/4 | 29 | 1.25 | 1.63 | 6.08 | 4.06 | 2.75 | 6.41 | 0.56 |
| 2-7/16 | 29 | | | | | | | |
| 2-1/2 | 29 | | | | | | | |
| 2-11/16 | 42 | 1.38 | 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 | 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 | 1.88 | 2.44 | 8.81 | 6.00 | 4.25 | 10.08 | 0.56 |
| 4 | 109 | | | | | | | |
| 4-7/16 | 154 | 1.82 | 2.75 | 9.79 | 6.45 | 4.75 | 11.08 | 0.56 |
| 4-1/2 | 154 | | | | | | | |
| 4-15/16 | 192 | 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 Bearings Only)

| | | | |
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Type EXL S-1 UNIT



| | | | |
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SELECTION/DIMENSIONS



Type EXL S-1 UNIT

| Shaft Size | Part Number | Part Name | Weight lbs (Approx.) | A | B | C | E | K * | L | M |
|------------|---------------|--------------|----------------------|------|------|------|------|--------|------|------|
| 1-3/16 | 077192 | S1U-EXL-103R | 3 | | | | | | | |
| 1-1/4 | 077193 | S1U-EXL-104R | 3 | 2.75 | 1.88 | 0.56 | 2.51 | 2.6370 | 2.25 | 1.66 |
| 1-3/8 | 077194 | S1U-EXL-106R | 4 | | | | | | | |
| 1-7/16 | 077195 | S1U-EXL-107R | 4 | 3.00 | 2.06 | 0.62 | 3.03 | 3.2000 | 2.75 | 1.94 |
| 1-1/2 | 077196 | S1U-EXL-108R | 4 | | | | | | | |
| 1-5/8 | 077197 | S1U-EXL-110R | 6 | 3.38 | 2.31 | 0.75 | 3.49 | 3.6920 | 3.19 | 2.19 |
| 1-11/16 | 077198 | S1U-EXL-111R | 6 | | | | | | | |
| 1-3/4 | 077199 | S1U-EXL-112R | 6 | | | | | | | |
| 1-7/8 | 077200 | S1U-EXL-114R | 6 | | | | | | | |
| 1-15/16 | 077201 | S1U-EXL-115R | 7 | 3.50 | 2.44 | 0.82 | 3.75 | 3.9650 | 3.44 | 2.38 |
| 2 | 077202 | S1U-EXL-200R | 7 | | | | | | | |
| 2-3/16 | 077203 | S1U-EXL-203R | 9 | 3.75 | 2.56 | 0.84 | 4.22 | 4.4380 | 3.75 | 2.61 |
| 2-1/4 | 077204 | S1U-EXL-204R | 11 | | | | | | | |
| 2-7/16 | 077205 | S1U-EXL-207R | 11 | 4.00 | 2.75 | 0.85 | 4.56 | 4.7810 | 4.06 | 3.04 |
| 2-1/2 | 077206 | S1U-EXL-208R | 11 | | | | | | | |
| 2-11/16 | 077207 | S1U-EXL-211R | 16 | | | | | | | |
| 2-3/4 | 077208 | S1U-EXL-212R | 16 | 4.50 | 3.00 | 0.98 | 5.17 | 5.4325 | 4.72 | 3.37 |
| 2-15/16 | 077209 | S1U-EXL-215R | 16 | | | | | | | |
| 3 | 077210 | S1U-EXL-300R | 16 | | | | | | | |
| 3-3/16 | 077211 | S1U-EXL-303R | 30 | | | | | | | |
| 3-1/4 | 077212 | S1U-EXL-304R | 30 | 5.00 | 3.50 | 1.12 | 6.30 | 6.5940 | 5.50 | 3.95 |
| 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 | 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 | 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 | 9.2900 | 7.25 | 5.30 |
| 5 | 077220 | S1U-EXL-500R | 81 | | | | | | | |

* ±.0005

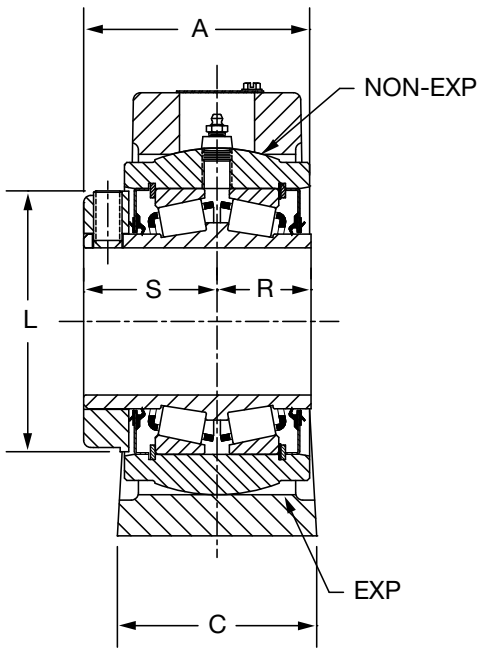
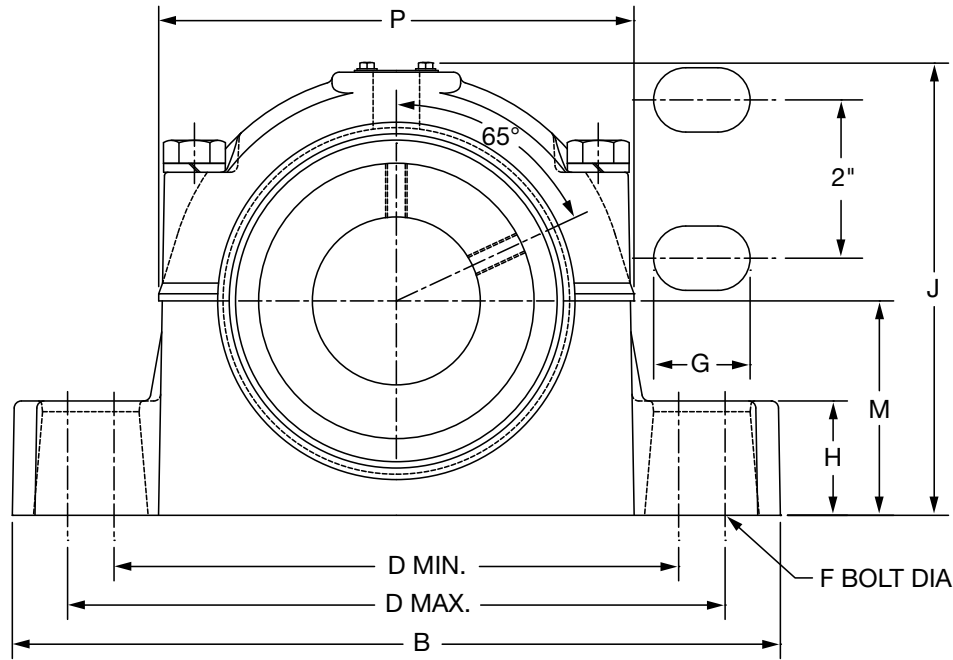
Bearing Reference Guide
 E-Family Roller Bearings
 Specialty Tapered Products
 S-2000
 UNISPHERE II
 IMPERIAL
 UNIFIED SAF

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| FEATURES/BENEFITS PAGE B10-2 | HOW TO ORDER/NOMENCLATURE PAGE B10-9 | EASY SELECTION PAGE B10-15 | ACCESSORIES PAGE B10-64 |
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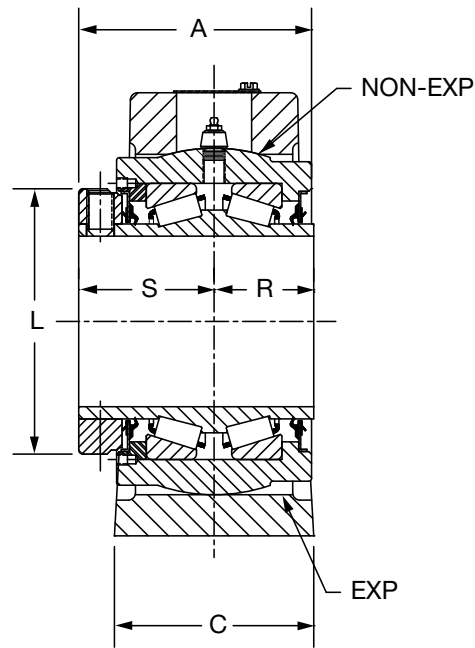
SELECTION/DIMENSIONS



Type K Pillow Block 2 & 4 BOLT BASE - INCH*



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)

| | | | |
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SELECTION/DIMENSIONS

Type K Pillow Block 2 & 4 BOLT BASE - INCH*

| Gray Iron Non-Expansion | | | | Gray Iron Expansion | | | |
|-------------------------|---------------|------------|---------------------|---------------------|---------------|-------------|---------------------|
| Shaft Size Inches # | Part Number | Part Name | Weight Lbs (Approx) | Shaft Size Inches # | Part Number | Part Name | Weight Lbs (Approx) |
| 1-3/16 | 023167 | P2B-K-103R | 9 | 1-3/16 | 023189 | P2B-K-103RE | 9 |
| 1-1/4 | 023168 | P2B-K-104R | 9 | 1-1/4 | 023190 | P2B-K-104RE | 9 |
| 1-7/16 | 023170 | P2B-K-107R | 11 | 1-7/16 | 023192 | P2B-K-107RE | 11 |
| 1-1/2 | 023171 | P2B-K-108R | 15 | 1-1/2 | 023193 | P2B-K-108RE | 15 |
| 1-5/8 | 023172 | P2B-K-110R | 14 | 1-5/8 | 023194 | P2B-K-110RE | 14 |
| 1-11/16 | 023173 | P2B-K-111R | 14 | 1-11/16 | 023195 | P2B-K-111RE | 14 |
| 1-3/4 | 023174 | P2B-K-112R | 20 | 1-3/4 | 023196 | P2B-K-112RE | 20 |
| 1-15/16 | 023175 | P2B-K-115R | 19 | 1-15/16 | 023197 | P2B-K-115RE | 19 |
| 2 | 023176 | P2B-K-200R | 19 | 2 | 023198 | P2B-K-200RE | 19 |
| 2-3/16 | 023177 | P2B-K-203R | 24 | 2-3/16 | 023199 | P2B-K-203RE | 24 |
| 2-1/4 | 023178 | P2B-K-204R | 28 | 2-1/4 | 023200 | P2B-K-204RE | 28 |
| 2-7/16 | 023179 | P2B-K-207R | 28 | 2-7/16 | 023201 | P2B-K-207RE | 28 |
| 2-1/2 | 023180 | P2B-K-208R | 28 | 2-1/2 | 023200 | P2B-K-208RE | 28 |
| 2-11/16 | 023181 | P2B-K-211R | 40 | 2-11/16 | 023203 | P2B-K-211RE | 40 |
| 2-3/4 | 023182 | P2B-K-212R | 40 | 2-3/4 | 023204 | P2B-K-212RE | 40 |
| 2-15/16 | 023183 | P2B-K-215R | 39 | 2-15/16 | 023205 | P2B-K-215RE | 39 |
| 3 | 023184 | P2B-K-300R | 39 | 3 | 023206 | P2B-K-300RE | 39 |
| 3-7/16 | 023186 | P2B-K-307R | 67 | 3-7/16 | 023208 | P2B-K-307RE | 67 |
| 3-1/2 | 023187 | P2B-K-308R | 66 | 3-1/2 | 023209 | P2B-K-308RE | 66 |
| 3-15/16 ▲ | 023188 | P4B-K-315R | 106 | 3-15/16 ▲ | 023210 | P4B-K-315RE | 106 |

Non-Expansion Furnished Unless Otherwise Specified

Consult DODGE For Sizes Not Listed

Consult DODGE For Sizes Not Listed

| Shaft Size Inches | A | B | C | D | | F Bolt Dia | G | H | J | L | M | P | R | S | Exp* |
|------------------------------------|------|-------|------|-------|-------|------------|------|------|-------|------|------|-------|------|------|-------|
| | | | | Min. | Max. | | | | | | | | | | |
| 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 2-1/4 2-7/16 2-1/2 | 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 |
| 2-11/16 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)

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

▲ 4-Bolt Base (See Page For Bolts Spacing)

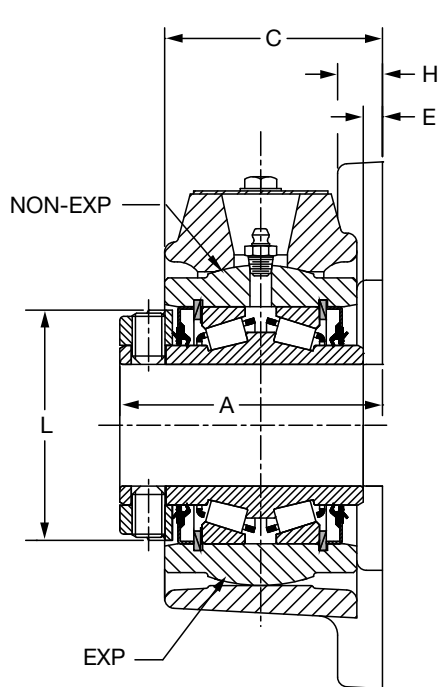
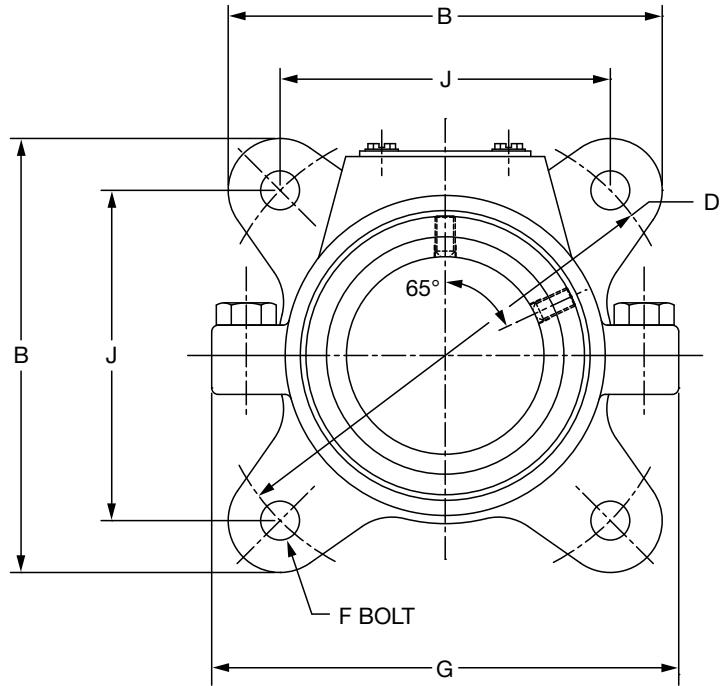
Dowel Hole Locations For Precision Positioning - See Page -

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| FEATURES/BENEFITS PAGE B10-2 | HOW TO ORDER/NOMENCLATURE PAGE B10-9 | EASY SELECTION PAGE B10-15 | ACCESSORIES PAGE B10-64 |
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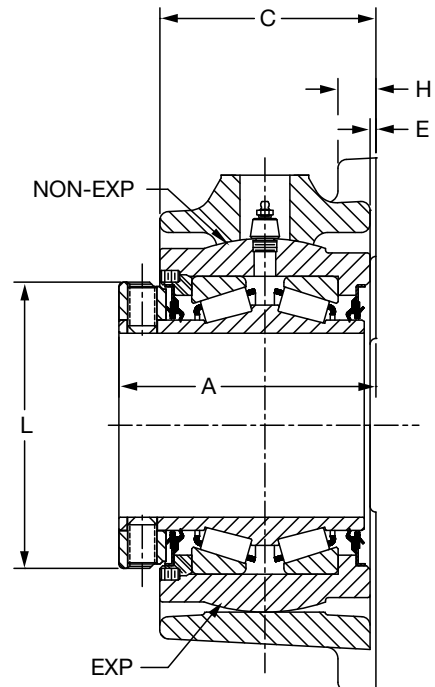
SELECTION/DIMENSIONS



Type K Flange Bearing - Inch



1-3/16" THRU 3" INTERNAL CONSTRUCTION



3-3/16" THRU 3-15/16" INTERNAL CONSTRUCTION

| | | | |
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| FEATURES/BENEFITS PAGE B10-2 | HOW TO ORDER/NOMENCLATURE PAGE B10-9 | EASY SELECTION PAGE B10-15 | ACCESSORIES PAGE B10-64 |
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SELECTION/DIMENSIONS



Type K Flange Bearing - Inch

| DUCTILE Iron - Non-Expansion | | | | DUCTILE Iron - Expansion | | | |
|------------------------------|---------------|------------|---------------------|--------------------------|---------------|-------------|---------------------|
| Shaft Size Inches # | Part Number | Part Name | Weight Lbs (Approx) | Shaft Size Inches # | Part Number | Part Name | Weight Lbs (Approx) |
| 1-1/4 | 023212 | F4B-K-104R | 6 | 1-1/4 | 023234 | F4B-K-104RE | 6 |
| 1-7/16 | 023214 | F4B-K-107R | 7 | 1-7/16 | 023236 | F4B-K-107RE | 7 |
| 1-1/2 | 023215 | F4B-K-108R | 12 | 1-1/2 | 023237 | F4B-K-108RE | 12 |
| 1-15/16 | 023219 | F4B-K-115R | 14 | 1-15/16 | 023241 | F4B-K-115RE | 14 |
| 2 | 023220 | F4B-K-200R | 14 | 2 | 023242 | F4B-K-200RE | 14 |
| 2-3/16 | 023221 | F4B-K-203R | 17 | 2-3/16 | 023243 | F4B-K-203RE | 17 |
| 2-7/16 | 023223 | F4B-K-207R | 20 | 2-7/16 | 023245 | F4B-K-207RE | 20 |
| 2-1/2 | 023224 | F4B-K-208R | 20 | 2-1/2 | 023246 | F4B-K-208RE | 20 |
| 2-15/16 | 023227 | F4B-K-215R | 24 | 2-15/16 | 023249 | F4B-K-215RE | 24 |
| 3 | 023228 | F4B-K-300R | 24 | 3 | 023250 | F4B-K-300RE | 24 |
| 3-7/16 | 023230 | F4B-K-307R | 45 | 3-7/16 | 023252 | F4B-K-307RE | 45 |
| 3-15/16 | 023232 | F4B-K-315R | 72 | 3-15/16 | 023254 | F4B-K-315RE | 72 |

Non-Expansion Furnished Unless Otherwise Specified

Consult DODGE For Sizes Not Listed.

Consult DODGE For Sizes Not Listed.

| Shaft Size Inches | 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 | 4.42 | 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 2-1/4 2-7/16 2-1/2 | 3.31 | 7.19 | 2.72 | 8.00 | 0.16 | 5/8 | 7.81 | 0.56 | 5.66 | 3.75 | 3/16 |
| 2-11/16 2-3/4 2-15/16 3 | 3.56 | 7.63 | 2.92 | 8.50 | 0.25 | 5/8 | 8.56 | .063 | 6.00 | 4.06 | 5/16 |
| 3-3/16 3-7/16 3-1/2 | 4.00 | 8.88 | 3.34 | 9.75 | 0.25 | 3/4 | 9.50 | 0.69 | 6.89 | 4.72 | 5/16 |
| 3-15/16 | 4.50 | 10.25 | 3.72 | 11.50 | 0.25 | 7/8 | 11.38 | 0.75 | 8.13 | 5.50 | 5/16 |
| | 5.50 | 11.44 | 4.63 | 13.00 | 0.13 | 1 | 12.88 | 0.81 | 9.19 | 6.00 | 5/16 |

* ExpTotal Expansion Divided Equally On Both Sides Of Bearing (Expansion Bearings Only)

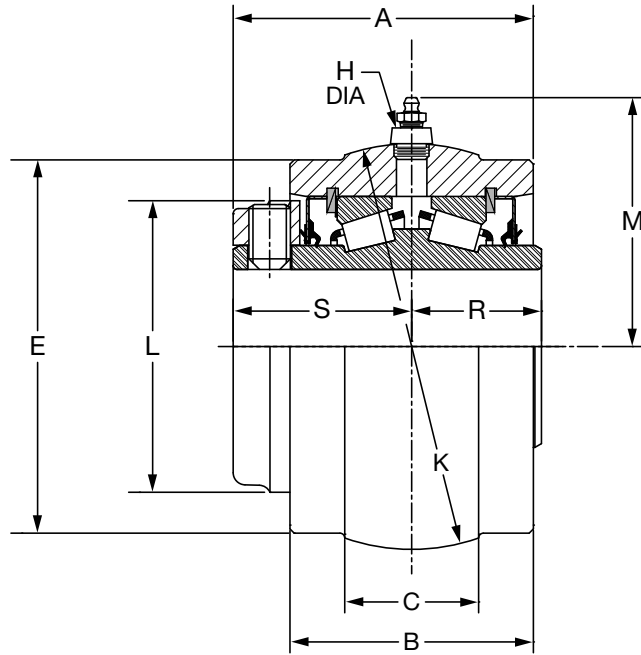
NOTE: All sizes use a 1/8-27 NPT hydraulic grease fitting

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| FEATURES/BENEFITS PAGE B10-2 | HOW TO ORDER/NOMENCLATURE PAGE B10-9 | EASY SELECTION PAGE B10-15 | ACCESSORIES PAGE B10-64 |
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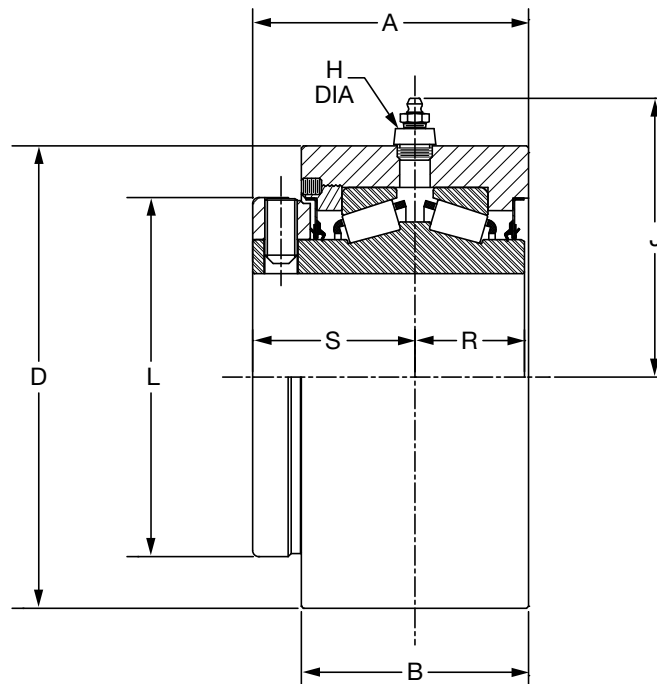
Bearing Reference Guide
 E-Family Roller Bearings
 Specialty Tapered Products
 S-2000
 UNISPHERE II
 IMPERIAL
 UNIFIED SAF



Type K Units - Inch



S-1 UNIT
1-3/16" THRU 3" CONSTRUCTION



B-1 UNIT
3-3/16" THRU 3-15/16" CONSTRUCTION

| | | | |
|---------------------------------|---|-------------------------------|----------------------------|
| FEATURES/BENEFITS PAGE B10-2 | HOW TO ORDER/NOMENCLATURE PAGE B10-9 | EASY SELECTION PAGE B10-15 | ACCESSORIES PAGE B10-64 |
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SELECTION/DIMENSIONS



Type K Units - Inch

| Type S-1 Units -- Gray Iron | | | | Type B-1 Units -- Gray Iron | | | |
|-----------------------------|---------------|------------|---------------------|-----------------------------|---------------|------------|---------------------|
| Shaft Size Inches # | Part Number | Part Name | Weight Lbs (Approx) | Shaft Size Inches # | Part Number | Part Name | Weight Lbs (Approx) |
| 1-3/16 | 023271 | S1U-K-103R | 3 | 1-3/16 | ----- | B1U-K-103R | 3 |
| 1-1/4 | 023272 | S1U-K-104R | 3 | 1-1/4 | ----- | B1U-K-104R | 3 |
| 1-3/8 | 023273 | S1U-K-106R | 4 | 1-3/8 | 023293 | B1U-K-106R | 4 |
| 1-7/16 | 023274 | S1U-K-107R | 4 | 1-7/16 | 023294 | B1U-K-107R | 4 |
| 1-1/2 | 023275 | S1U-K-108R | 5 | 1-1/2 | 023295 | B1U-K-108R | 5 |
| 1-5/8 | 023276 | S1U-K-110R | 5 | 1-5/8 | 023296 | B1U-K-110R | 5 |
| 1-11/16 | 023277 | S1U-K-111R | 5 | 1-11/16 | 023297 | B1U-K-111R | 5 |
| 1-3/4 | 023278 | S1U-K-112R | 7 | 1-3/4 | 023298 | B1U-K-112R | 7 |
| 1-15/16 | 023279 | S1U-K-115R | 7 | 1-15/16 | 023299 | B1U-K-115R | 7 |
| 2 | 023280 | S1U-K-200R | 7 | 2 | 023300 | B1U-K-200R | 7 |
| 2-3/16 | 023281 | S1U-K-203R | 9 | 2-3/16 | 023301 | B1U-K-203R | 9 |
| 2-1/4 | 023282 | S1U-K-204R | 11 | 2-1/4 | 023302 | B1U-K-204R | 11 |
| 2-7/16 | 023283 | S1U-K-207R | 11 | 2-7/16 | 023303 | B1U-K-207R | 11 |
| 2-1/2 | 023284 | S1U-K-208R | 11 | 2-1/2 | 023304 | B1U-K-208R | 11 |
| 2-11/16 | 023285 | S1U-K-211R | 15 | 2-11/16 | 023305 | B1U-K-211R | 15 |
| 2-3/4 | 023286 | S1U-K-212R | 15 | 2-3/4 | 023306 | B1U-K-212R | 15 |
| 2-15/16 | 023287 | S1U-K-215R | 15 | 2-15/16 | 023307 | B1U-K-215R | 15 |
| 3 | 023288 | S1U-K-300R | 15 | 3 | 023308 | B1U-K-300R | 15 |
| 3-3/16 | 023289 | S1U-K-303R | 28 | 3-3/16 | 023309 | B1U-K-303R | 28 |
| 3-7/16 | 023290 | S1U-K-307R | 28 | 3-7/16 | 023310 | B1U-K-307R | 28 |
| 3-1/2 | 023291 | S1U-K-308R | 28 | 3-1/2 | 023311 | B1U-K-308R | 28 |
| 3-15/16 | 023292 | S1U-K-315R | 40 | 3-15/16 | 023312 | B1U-K-315R | 40 |

Consult DODGE For Sizes Not Listed.

Consult DODGE For Sizes Not Listed.

| Shaft Size Inches | A | B | C | D * | E% | | H | J | K ** | L | M | R | S |
|-------------------|------|------|------|-------|--------------|-----------|------|------|-------|------|------|------|------|
| | | | | | Machine Side | Cast Side | | | | | | | |
| 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 | | | | | | | | | | | | | |
| 2-7/16 | | | | | | | | | | | | | |
| 2-1/2 | 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 |
| 2-11/16 | | | | | | | | | | | | | |
| 2-3/4 | | | | | | | | | | | | | |
| 2-15/16 | 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 |
| 3 | | | | | | | | | | | | | |
| 3-3/16 | | | | | | | | | | | | | |
| 3-7/16 | 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 |
| 3-1/2 | | | | | | | | | | | | | |
| 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 |

* +.000 -.002,"

% Machined side of unit is on collar side only.

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

** +.000 -.001 Sizes 1-3/16 THRU 3,"

±.0005, Sizes 3-3/16 THRU 3-15/16,"

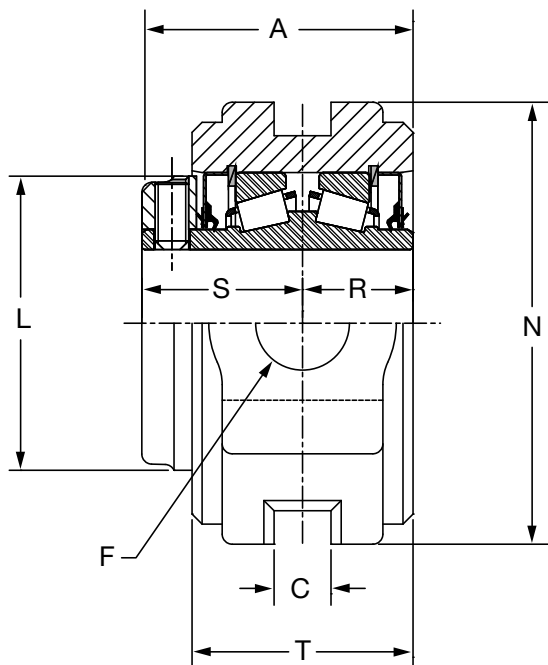
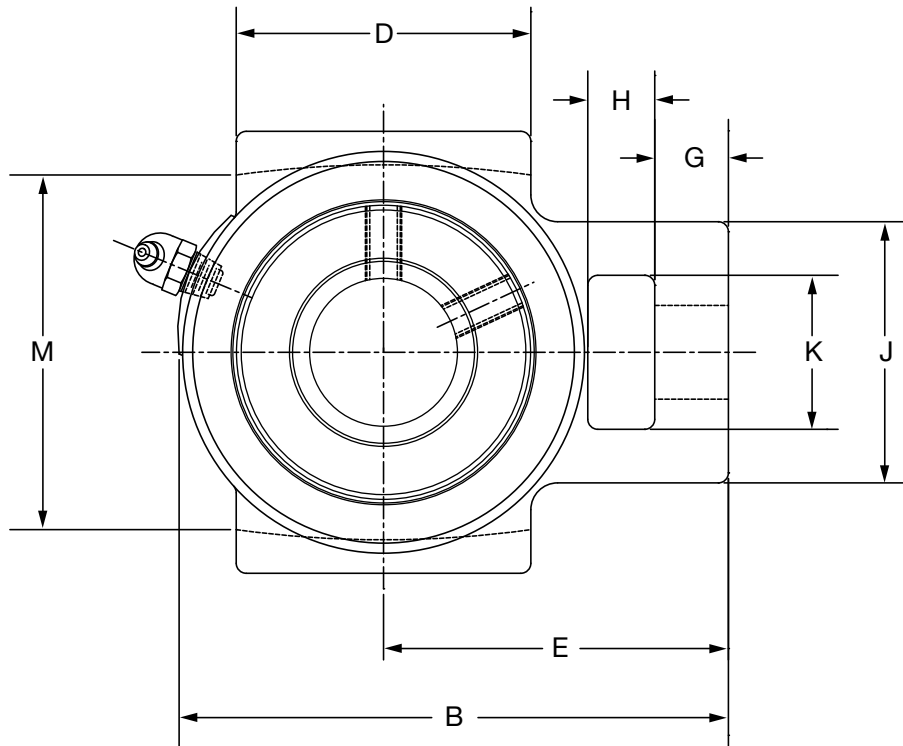
ALL DIMENSIONS SHOWN IN Inches

| | | | |
|---------------------------------|---|-------------------------------|----------------------------|
| FEATURES/BENEFITS PAGE B10-2 | HOW TO ORDER/NOMENCLATURE PAGE B10-9 | EASY SELECTION PAGE B10-15 | ACCESSORIES PAGE B10-64 |
|---------------------------------|---|-------------------------------|----------------------------|

SELECTION/DIMENSIONS



Type K Wide Slot Take-Up Unit - Inch



1-3/8" THRU 3" CONSTRUCTION

| | | | |
|---|---|---------------------------------------|------------------------------------|
| <p>FEATURES/BENEFITS PAGE B10-2</p> | <p>HOW TO ORDER/NOMENCLATURE PAGE B10-9</p> | <p>EASY SELECTION PAGE B10-15</p> | <p>ACCESSORIES PAGE B10-64</p> |
|---|---|---------------------------------------|------------------------------------|

SELECTION/DIMENSIONS



Type K Wide Slot Take-Up Unit - Inch

| Gray Iron | | | | |
|---------------------|---------------|-------------|---------------------|---------------|
| Shaft Size Inches # | Part Number | Part Name | Weight Lbs (Approx) | CP FRAME Size |
| 1-7/16 | 023256 | WSTU-K-107R | 8 | CP308 |
| 1-15/16 | 023261 | WSTU-K-115R | 11 | CP400 |
| 2-3/16 | 023263 | WSTU-K-203R | 15 | CP408 |
| 2-7/16 | 023265 | WSTU-K-207R | 20 | CP502 |
| 2-1/2 | 023266 | WSTU-K-208R | 20 | |
| 2-15/16 | 023269 | WSTU-K-215R | 28 | CP515 |
| 3 | 023270 | WSTU-K-300R | 28 | |

Consult DODGE For Sizes Not Listed.

| Shaft Size Inches | 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 |
| 1-15/16 | 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 |
| 2-3/16 | 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 |
| 2-7/16 | 3.38 | 7.891 | 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 | | | | | | | | | | | | | | | | |
| 2-15/16 3 | 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 |

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

Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

S-2000

UNISPHERE II

IMPERIAL

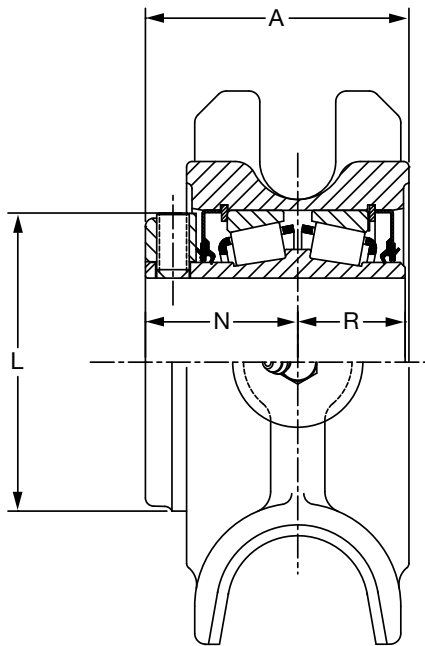
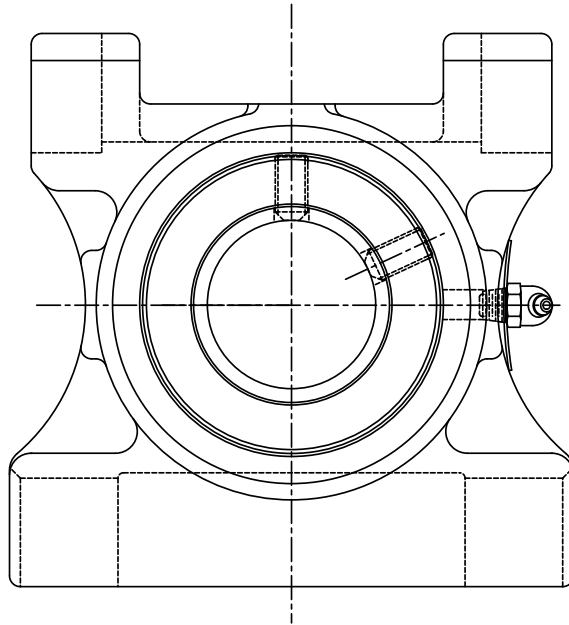
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|---------------------------------|---|-------------------------------|----------------------------|
| FEATURES/BENEFITS PAGE B10-2 | HOW TO ORDER/NOMENCLATURE PAGE B10-9 | EASY SELECTION PAGE B10-15 | ACCESSORIES PAGE B10-64 |
|---------------------------------|---|-------------------------------|----------------------------|

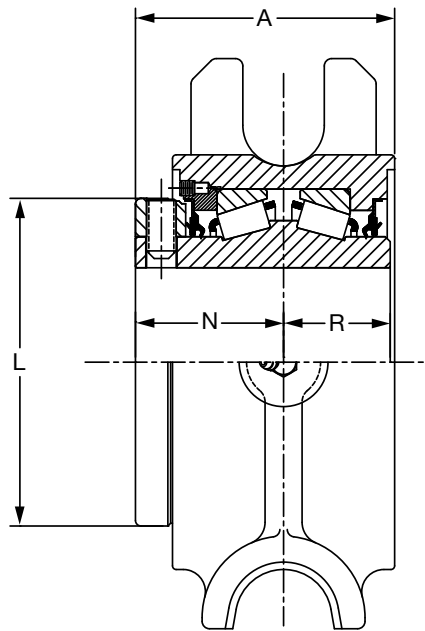
SELECTION/DIMENSIONS



Type K TP Take-Up Bearing - Inch



1-3/16" THRU 3" INTERNAL CONSTRUCTION



3-3/16" THRU 3-15/16" INTERNAL CONSTRUCTION

| | | | |
|---|---|---------------------------------------|------------------------------------|
| <p>FEATURES/BENEFITS PAGE B10-2</p> | <p>HOW TO ORDER/NOMENCLATURE PAGE B10-9</p> | <p>EASY SELECTION PAGE B10-15</p> | <p>ACCESSORIES PAGE B10-64</p> |
|---|---|---------------------------------------|------------------------------------|

SELECTION/DIMENSIONS



Type K TP Take-Up Bearing - Inch

| Gray Iron | | | |
|---------------------|---------------|-----------|---------------------|
| Shaft Size Inches # | Part Number | Part Name | Weight Lbs (Approx) |
| 1-15/16 | 023314 | TP-K-115R | 13 |
| 2-3/16 | 023316 | TP-K-203R | 16 |
| 2-7/16 | 023318 | TP-K-207R | 20 |
| 2-15/16 | 023322 | TP-K-215R | 27 |
| 3-7/16 | 023325 | TP-K-307R | 40 |
| 3-15/16 | 023327 | TP-K-315R | 59 |

Consult DODGE For Sizes Not Listed.

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

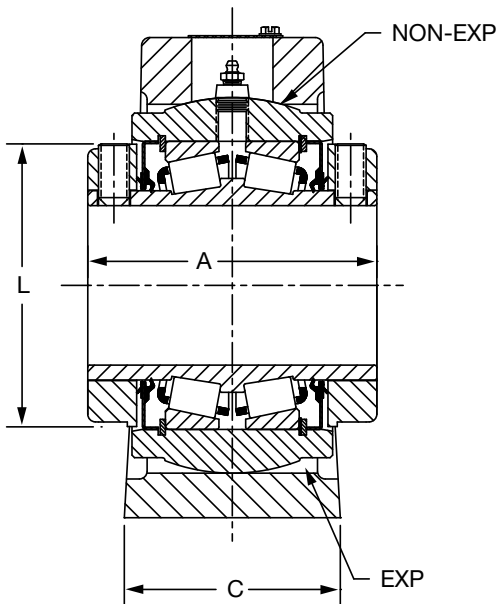
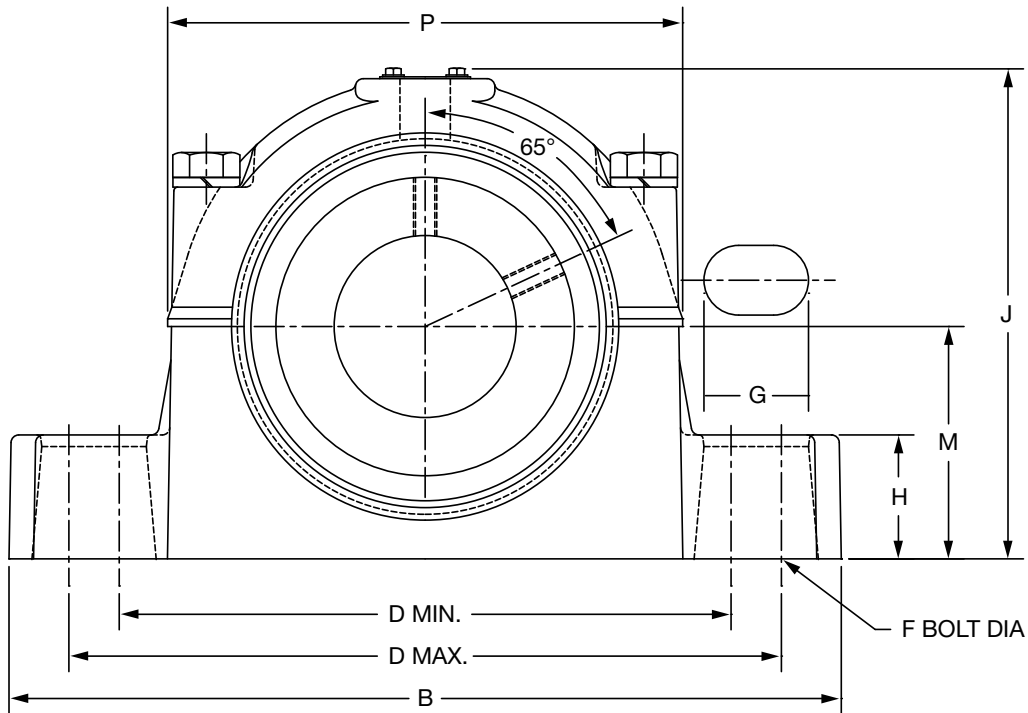
NOTE: All sizes use a 1/8-27 NPT hydraulic grease fitting

| | | | |
|---------------------------------|---|-------------------------------|----------------------------|
| FEATURES/BENEFITS PAGE B10-2 | HOW TO ORDER/NOMENCLATURE PAGE B10-9 | EASY SELECTION PAGE B10-15 | ACCESSORIES PAGE B10-64 |
|---------------------------------|---|-------------------------------|----------------------------|

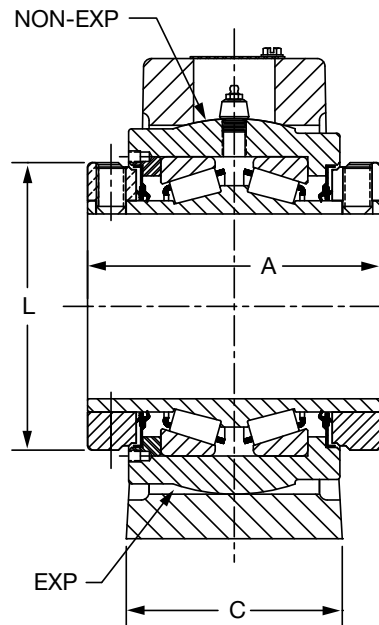
SELECTION/DIMENSIONS



DOUBLE-INTERLOCK Pillow Block - Inch 2-BOLT BASE



1-3/16" THRU 3" CONSTRUCTION



3-3/16" THRU 3-1/2" CONSTRUCTION

| | | | |
|---------------------------------|---|-------------------------------|----------------------------|
| FEATURES/BENEFITS PAGE B10-2 | HOW TO ORDER/NOMENCLATURE PAGE B10-9 | EASY SELECTION PAGE B10-15 | ACCESSORIES PAGE B10-64 |
|---------------------------------|---|-------------------------------|----------------------------|

SELECTION/DIMENSIONS



DOUBLE-INTERLOCK Pillow Block - Inch 2-BOLT BASE

| Gray Iron Non-Expansion | | | | | | Gray Iron Expansion | | | | | |
|-------------------------|-------------------|-------------------|--------------|--------------------|-------------------------|---------------------|-------------------|-------------------|--------------|--------------------|-------------------------|
| Shaft Size Inches# | Shaft Size Symbol | Pillow Block Assy | Housing Only | Bearing Inner Unit | PIL. BLK. Wt., Aprx Lbs | Shaft Size Inches# | Shaft Size Symbol | Pillow Block Assy | Housing Only | Bearing Inner Unit | PIL. BLK. Wt., Aprx Lbs |
| 1-1/4 | 104 | 023329 | 056130 | 023508 | 9 | 1-1/4 | 104 | 023376 | 056100 | 023508 | 9 |
| 1-3/8 | 106 | 023330 | 056132 | 023509 | 11 | 1-3/8 | 106 | 023377 | 056102 | 023509 | 11 |
| 1-7/16 | 107 | 023331 | 056132 | 023510 | 11 | 1-7/16 | 107 | 023378 | 056102 | 023510 | 11 |
| 1-1/2 | 108 | 023332 | 056134 | 023511 | 15 | 1-1/2 | 108 | 023379 | 056104 | 023511 | 15 |
| 1-5/8 | 110 | 023333 | 056134 | 023512 | 15 | 1-5/8 | 110 | 023380 | 056104 | 023512 | 15 |
| 1-11/16 | 111 | 023334 | 056134 | 023513 | 15 | 1-11/16 | 111 | 023381 | 056104 | 023513 | 15 |
| 1-3/4 | 112 | 023335 | 056136 | 023514 | 18 | 1-3/4 | 112 | 023382 | 056106 | 023514 | 18 |
| 1-15/16 | 115 | 023337 | 056136 | 023516 | 17 | 1-15/16 | 115 | 023384 | 056106 | 023516 | 17 |
| 2 | 200 | 023338 | 056136 | 023517 | 17 | 2 | 200 | 023385 | 056106 | 023517 | 17 |
| 2-3/16 | 203 | 023339 | 056138 | 023518 | 25 | 2-3/16 | 203 | 023386 | 056108 | 023518 | 22 |
| 2-1/4 | 204 | 023340 | 056140 | 023519 | 29 | 2-1/4 | 204 | 023387 | 056110 | 023519 | 29 |
| 2-7/16 | 207 | 023341 | 056140 | 023520 | 26 | 2-7/16 | 207 | 023388 | 056110 | 023520 | 26 |
| 2-1/2 | 208 | 023342 | 056140 | 023521 | 26 | 2-1/2 | 208 | 023389 | 056110 | 023521 | 26 |
| 2-11/16 | 211 | 023343 | 056142 | 023522 | 41 | 2-11/16 | 211 | 023390 | 056112 | 023522 | 42 |
| 2-3/4 | 212 | 023344 | 056142 | 023523 | 41 | 2-3/4 | 212 | 023391 | 056112 | 023523 | 42 |
| 2-15/16 | 215 | 023345 | 056142 | 023524 | 40 | 2-15/16 | 215 | 023392 | 056112 | 023524 | 41 |
| 3 | 300 | 023346 | 056142 | 023525 | 40 | 3 | 300 | 023393 | 056112 | 023525 | 41 |
| 3-3/16 | 303 | 023347 | 056144 | 023526 | 67 | 3-3/16 | 303 | 023394 | 056114 | 023526 | 69 |
| 3-7/16 | 307 | 023349 | 056144 | 023528 | 66 | 3-7/16 | 307 | 023396 | 056114 | 023528 | 68 |
| 3-1/2 | 308 | 023350 | 056144 | 023529 | 66 | 3-1/2 | 308 | 023397 | 056114 | 023529 | 68 |

Description = P2B-DI-207R For 2-7/16" Size

Description = P2B-DI-207RE For 2-7/16" Size

Consult DODGE For Sizes Not Listed.

Consult DODGE For Sizes Not Listed.

Non-Expansion Furnished Unless Otherwise Specified

| Shaft Size Inches | A | B | C | D | | F Bolt Dia. | G | H | J | L | M | P | Exp* |
|-------------------|------|-------|------|-------|-------|-------------|------|------|------|------|------|-------|------|
| | | | | Min. | Max. | | | | | | | | |
| 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 | 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 |
| 1-7/16 | | | | | | | | | | | | | |
| 1-1/2 | 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 |
| 1-5/8 | | | | | | | | | | | | | |
| 1-11/16 | | | | | | | | | | | | | |
| 1-3/4 | 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 |
| 1-15/16 | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | |
| 2-3/16 | | | | | | | | | | | | | |
| 2-1/4 | 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 |
| 2-7/16 | | | | | | | | | | | | | |
| 2-1/2 | | | | | | | | | | | | | |
| 2-11/16 | 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 |
| 2-3/4 | | | | | | | | | | | | | |
| 2-15/16 | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | |
| 3-3/16 | 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 |
| 3-7/16 | | | | | | | | | | | | | |
| 3-1/2 | | | | | | | | | | | | | |

* 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

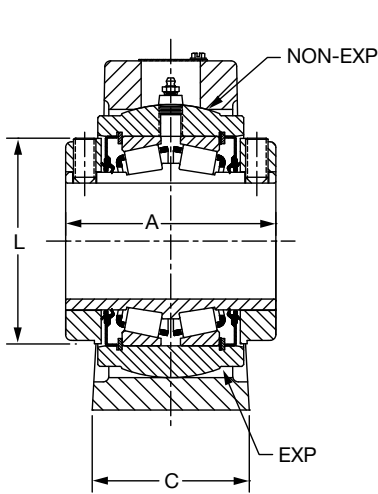
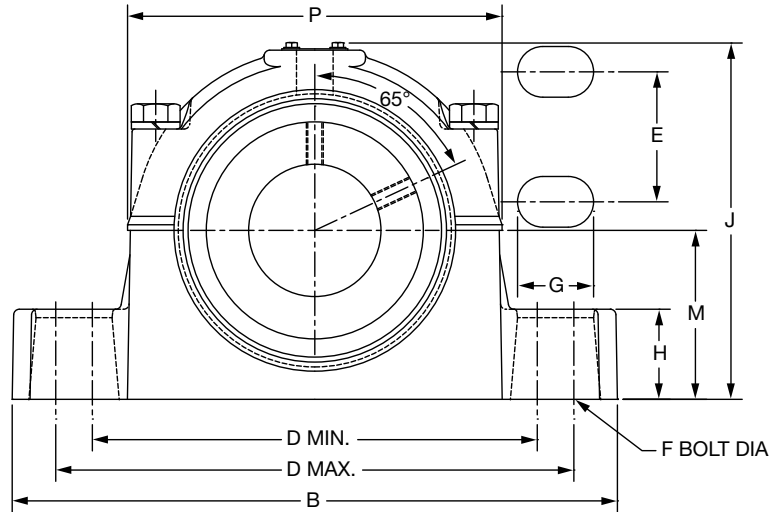
Dowel Hole Locations For Precision Positioning - See Page -

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|---------------------------------|---|-------------------------------|----------------------------|
| FEATURES/BENEFITS PAGE B10-2 | HOW TO ORDER/NOMENCLATURE PAGE B10-9 | EASY SELECTION PAGE B10-15 | ACCESSORIES PAGE B10-64 |
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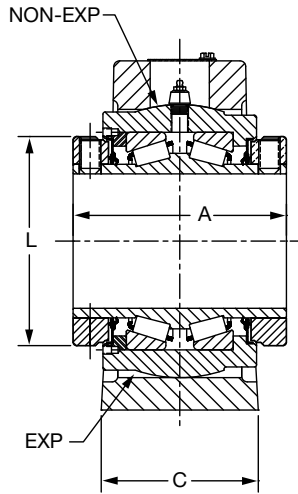
SELECTION/DIMENSIONS



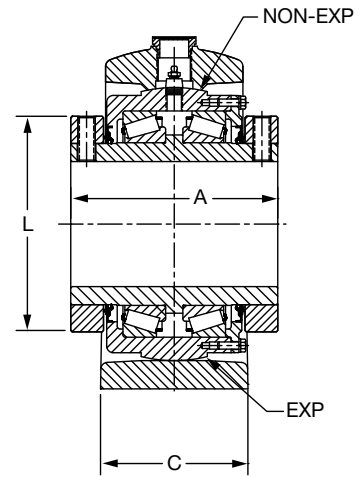
DOUBLE-INTERLOCK Pillow Block - Inch 4-BOLT BASE



2-1/4" THRU 3" CONSTRUCTION



3-3/16" THRU 5" CONSTRUCTION



5-7/16" THRU 7" CONSTRUCTION

| | | | |
|---------------------------------|---|-------------------------------|----------------------------|
| FEATURES/BENEFITS PAGE B10-2 | HOW TO ORDER/NOMENCLATURE PAGE B10-9 | EASY SELECTION PAGE B10-15 | ACCESSORIES PAGE B10-64 |
|---------------------------------|---|-------------------------------|----------------------------|

SELECTION/DIMENSIONS



DOUBLE-INTERLOCK Pillow Block - Inch 4-BOLT BASE

| Gray Iron NON EXPANSION | | | | | | Gray Iron EXPANSION | | | | | |
|-------------------------|-------------------|-------------------|--------------|--------------------|-------------------------|---------------------|-------------------|-------------------|--------------|--------------------|-------------------------|
| Shaft Size Inches# | Shaft Size Symbol | Pillow Block ASSY | Housing Only | Bearing Inner Unit | PIL. BLK. WT., Aprx Lbs | Shaft Size Inches# | Shaft Size Symbol | Pillow Block ASSY | Housing Only | Bearing Inner Unit | PIL. BLK. WT., Aprx Lbs |
| 2-7/16 | 207 | 023352 | 060745 | 023520 | 28 | 2-7/16 | 207 | 023399 | 060746 | 023520 | 28 |
| 2-1/2 | 208 | 023353 | 060745 | 023521 | 28 | 2-1/2 | 208 | 023400 | 060746 | 023521 | 28 |
| 2-11/16 | 211 | 023354 | 060747 | 023522 | 38 | 2-11/16 | 211 | 023401 | 060748 | 023522 | 38 |
| 2-15/16 | 215 | 023356 | 060747 | 023524 | 38 | 2-15/16 | 215 | 023403 | 060748 | 023524 | 38 |
| 3 | 300 | 023357 | 060747 | 023525 | 38 | 3 | 300 | 023404 | 060748 | 023525 | 38 |
| 3-7/16 | 307 | 023360 | 060749 | 023528 | 69 | 3-7/16 | 307 | 023407 | 060750 | 023528 | 69 |
| 3-1/2 | 308 | 023361 | 060749 | 023529 | 69 | 3-1/2 | 308 | 023408 | 060750 | 023529 | 69 |
| 3-15/16 | 315 | 023362 | 060751 | 023530 | 109 | 3-15/16 | 315 | 023409 | 060752 | 023530 | 110 |
| 4 | 400 | 023363 | 060751 | 023531 | 109 | 4 | 400 | 023410 | 060752 | 023531 | 110 |
| 4-7/16 | 407 | 023364 | 060753 | 023532 | 139 | 4-7/16 | 407 | 023411 | 060754 | 023532 | 139 |
| 4-1/2 | 408 | 023365 | 060753 | 023533 | 135 | 4-1/2 | 408 | 023412 | 060754 | 023533 | 135 |
| 4-15/16 | 415 | 023366 | 060755 | 023534 | 183 | 4-15/16 | 415 | 023413 | 060756 | 023534 | 181 |
| 5 | 500 | 023367 | 060755 | 023535 | 181 | 5 | 500 | 023414 | 060756 | 023535 | 179 |
| 5-7/16 | 507 | 023368 | 060579 | 023536 | 310 | 5-7/16 | 507 | 023415 | 060578 | 023536 | 310 |
| 5-15/16 | 515 | 023369 | 060579 | 023537 | 299 | 5-15/16 | 515 | 023416 | 060578 | 023537 | 299 |

Non-Expansion Furnished Unless Otherwise Specified

Consult DODGE For Sizes Not Listed.

| Shaft Size Inches | A | B | C | D | | E | F Bolt Dia | G | H | J | L | M | P | Exp* |
|-------------------------|------|-------|------|-------|-------|------|------------|------|------|-------|------|------|-------|-------|
| | | | | Min. | Max | | | | | | | | | |
| 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 | 4.63 | 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 | 5.13 | 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

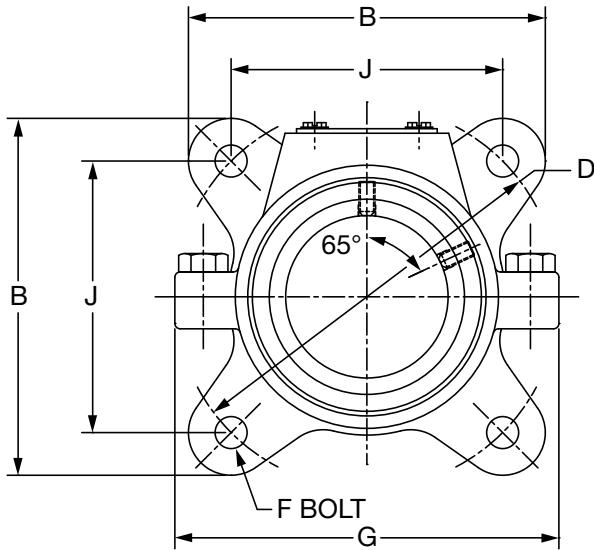
Dowel Hole Locations For Precision Positioning - See Page -

| | | | |
|---------------------------------|---|-------------------------------|----------------------------|
| FEATURES/BENEFITS PAGE B10-2 | HOW TO ORDER/NOMENCLATURE PAGE B10-9 | EASY SELECTION PAGE B10-15 | ACCESSORIES PAGE B10-64 |
|---------------------------------|---|-------------------------------|----------------------------|

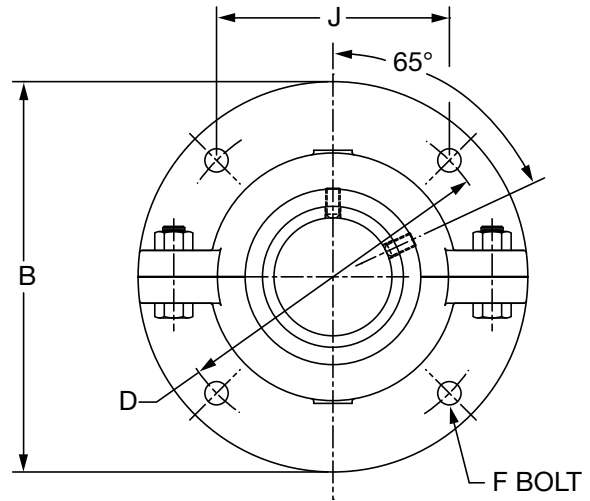
SELECTION/DIMENSIONS



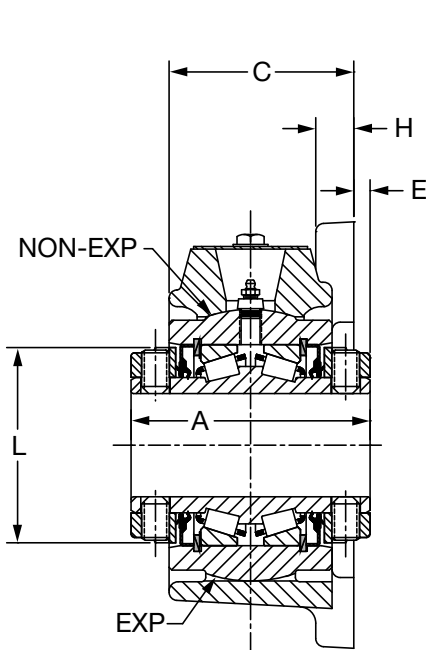
DOUBLE-INTERLOCK Flange Bearing - Inch



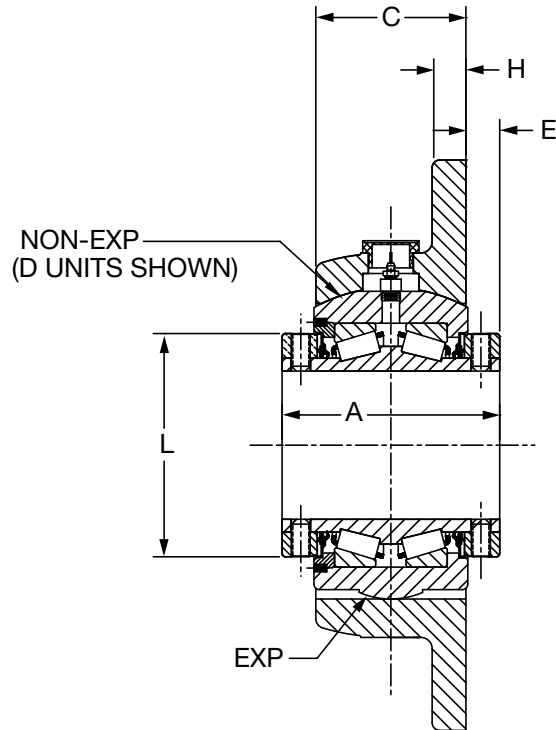
1-3/16" THRU 4" EXTERNAL CONSTRUCTION



4-7/16" THRU 5" EXTERNAL CONSTRUCTION



1-3/16" THRU 3" INTERNAL CONSTRUCTION



3-3/16" THRU 5" INTERNAL CONSTRUCTION

| | | | |
|---|---|---------------------------------------|------------------------------------|
| <p>FEATURES/BENEFITS PAGE B10-2</p> | <p>HOW TO ORDER/NOMENCLATURE PAGE B10-9</p> | <p>EASY SELECTION PAGE B10-15</p> | <p>ACCESSORIES PAGE B10-64</p> |
|---|---|---------------------------------------|------------------------------------|

SELECTION/DIMENSIONS



DOUBLE-INTERLOCK Flange Bearing - Inch

| DUCTILE Iron Non-Expansion | | | | DUCTILE Iron Expansion | | | |
|----------------------------|---------------|-------------|---------------------|------------------------|---------------|--------------|---------------------|
| Shaft Size Inches # | Part Number | Part Name | Weight Lbs (Approx) | Shaft Size Inches # | Part Number | Part Name | Weight Lbs (Approx) |
| 1-7/16 | 023425 | F4B-DI-107R | 9 | 1-7/16 | 023454 | F4B-DI-107RE | 9 |
| 1-15/16 | 023431 | F4B-DI-115R | 15 | 1-15/16 | 023460 | F4B-DI-115RE | 15 |
| 2 | 023432 | F4B-DI-200R | 15 | 2 | 023461 | F4B-DI-200RE | 15 |
| 2-3/16 | 023433 | F4B-DI-203R | 19 | 2-3/16 | 023462 | F4B-DI-203RE | 19 |
| 2-7/16 | 023435 | F4B-DI-207R | 22 | 2-7/16 | 023464 | F4B-DI-207RE | 22 |
| 2-1/2 | 023436 | F4B-DI-208R | 22 | 2-1/2 | 023465 | F4B-DI-208RE | 22 |
| 2-15/16 | 023439 | F4B-DI-215R | 32 | 2-15/16 | 023468 | F4B-DI-215RE | 32 |
| 3 | 023440 | F4B-DI-300R | 31 | 3 | 023469 | F4B-DI-300RE | 31 |
| 3-7/16 | 023443 | F4B-DI-307R | 53 | 3-7/16 | 023472 | F4B-DI-307RE | 53 |
| 3-15/16 | 023445 | F4B-DI-315R | 82 | 3-15/16 | 023474 | F4B-DI-315RE | 82 |
| 4-7/16 ◊ | 023447 | F4B-DI-407R | 158 | 4-7/16 ◊ | 023476 | F4B-DI-407RE | 158 |
| 4-1/2 ◊ | 023448 | F4B-DI-408R | 158 | 4-1/2 ◊ | 023477 | F4B-DI-408RE | 158 |
| 4-15/16 ◊ | 023449 | F4B-DI-415R | 220 | 4-15/16 ◊ | 023478 | F4B-DI-415RE | 220 |

Non-Expansion Furnished Unless Otherwise Specified

Consult DODGE For Sizes Not Listed.

◊ 4-7/16" - 5" Housings Are Made Of Cast Iron

| Shaft Size Inches | A | B | C | D | E | F Bolt Dia. | G | H | J | L |
|-------------------|------|-------|------|-------|------|-------------|-------|------|-------|------|
| 1-7/16 | 3.00 | 5.75 | 2.13 | 6.25 | 0.31 | 1/2 | 5.75 | 0.50 | 4.42 | 2.75 |
| 1-15/16 2 | 3.50 | 6.88 | 2.56 | 7.50 | 0.38 | 5/8 | 7.25 | 0.56 | 5.31 | 3.44 |
| 2-3/16 | 3.75 | 7.19 | 2.72 | 8.00 | 0.44 | 5/8 | 7.81 | 0.56 | 5.66 | 3.75 |
| 2-7/16 2-1/2 | 4.00 | 7.63 | 2.94 | 8.50 | 0.44 | 5/8 | 8.56 | 0.63 | 6.00 | 4.06 |
| 2-15/16 3 | 4.50 | 8.88 | 3.34 | 9.75 | 0.50 | 3/4 | 9.50 | 0.69 | 6.89 | 4.72 |
| 3-7/16 | 5.00 | 10.25 | 3.72 | 11.50 | 0.50 | 7/8 | 11.38 | 0.75 | 8.13 | 5.50 |
| 3-15/16 | 6.25 | 11.44 | 4.63 | 13.00 | 0.75 | 1 | 12.88 | 0.81 | 9.19 | 6.00 |
| 4-7/16 4-1/2 | 6.75 | 17.75 | 4.63 | 15.00 | 1.06 | 1 | --- | 1.00 | 10.61 | 6.45 |
| 4-15/16 | 7.25 | 19.00 | 5.00 | 16.00 | 1.13 | 1-1/8 | --- | 1.13 | 11.31 | 7.45 |

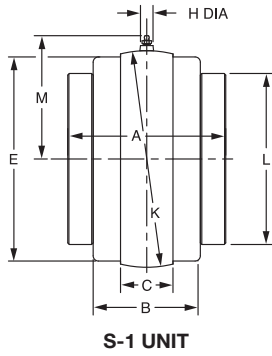
NOTE: All sizes use a 1/8-27 NPT hydraulic grease fitting

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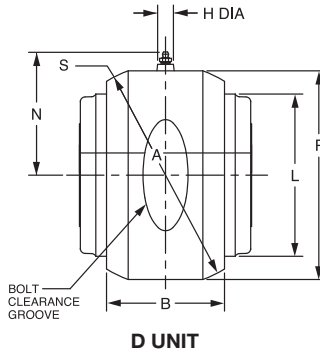
SELECTION/DIMENSIONS



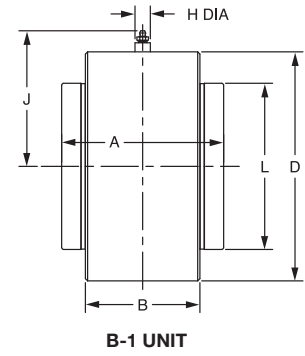
DOUBLE-INTERLOCK Units - Inch



S-1 UNIT



D UNIT



B-1 UNIT

Pillow Block

S-1 units are used in expansion and non-expansion pillow block housings

Flange

S-1 unit is used in expansion flange housings and non-expansion flange housings for 1-3/16 - 4"

Flange

D units are used in non-expansion flange housings

- 4-7/16 - 5" bore size
- Formerly used in DOUBLE-INTERLOCK non-expansion flange bearing and pillow blocks thru 5 bore size prior to '78

B-1 units can only be used in a customer manufactured housing and are often mounted in machines where bored holes can be provided. B-1 units can be used either as non-expansion or expansion bearings by providing a suitable means of locating the unit axially. B-1 units will handle slight misalignment requirements. Shaft must be supported by another unit or bearing. For mounting in rotating wheels the Type C B-1 units is preferred or consult the factory.

| Shaft Size Inches | A | B | C | σ D | E | | H | J | K | L | M | N | P | S |
|-------------------|-------|------|------|--------|-----------|-----------|-------|------|---------|-------|------|------|-------|----------|
| | | | | | Mach Side | Cast Side | | | | | | | | |
| 1-3/16 | 2.75 | 1.88 | 1.03 | 3.000 | 2.81 | 2.28 | ** | 2.42 | 3.125 • | 2.25 | 2.03 | --- | --- | --- |
| 1-1/4 | | | | | | | | | | | | | | |
| 1-3/8 | 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 • |
| 1-7/16 | | | | | | | | | | | | | | |
| 1-1/2 | 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 • |
| 1-5/8 | | | | | | | | | | | | | | |
| 1-11/16 | 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 • |
| 1-3/4 | | | | | | | | | | | | | | |
| 1-7/8 | 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 • |
| 1-15/16 | | | | | | | | | | | | | | |
| 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 • |
| 2-3/16 | | | | | | | | | | | | | | |
| 2-1/4 | 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 • |
| 2-7/16 | | | | | | | | | | | | | | |
| 2-1/2 | 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 ^ |
| 2-11/16 | | | | | | | | | | | | | | |
| 2-3/4 | 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 ^ |
| 2-15/16 | | | | | | | | | | | | | | |
| 3 | 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 ^ |
| 3-3/16 | | | | | | | | | | | | | | |
| 3-1/4 | 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 ^ |
| 3-7/16 | | | | | | | | | | | | | | |
| 3-1/2 | 9.00 | 6.06 | 2.88 | --- | 11.19 | 11.19 | 15/16 | --- | 11.874 | 9.38 | 7.10 | --- | --- | --- |
| 3-15/16 | | | | | | | | | | | | | | |
| 4 | 10.50 | 7.13 | 3.00 | --- | 13.25 | 13.25 | 15/16 | --- | 14.248 | 11.38 | 8.29 | --- | --- | --- |
| 4-7/16 | | | | | | | | | | | | | | |
| 4-1/2 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |
| 4-15/16 | | | | | | | | | | | | | | |
| 5 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |
| 5-7/16 | | | | | | | | | | | | | | |
| 5-15/16 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |
| 6 | | | | | | | | | | | | | | |
| 6-7/16 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |
| 6-1/2 | | | | | | | | | | | | | | |
| 6-15/16 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |
| 7 | | | | | | | | | | | | | | |

* 11/16" DIA ON D Units; 15/16" ON S-1 Units AND 3/4 HEX ON B-1 Units

** 11/16" DIA ON B-1 Units; 7/16" DIA ON S-1 Units

• +.000 TO .001"

±.0005"

σ +.000 TO -.002"

+ .000 TO -.003"

| | | | |
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SELECTION/DIMENSIONS



DOUBLE-INTERLOCK Units - Inch

| "S-1" Units -- Gray Iron 1-3/16" thru 3" | | | |
|---|-------------|-------------|---------------------|
| Shaft Size Inches # | Part Number | Part Name | Weight Lbs (Approx) |
| 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 |

Consult DODGE For Sizes Not Listed.

| "D" Units -- Gray Iron | | | |
|------------------------|-------------|------------|---------------------|
| Shaft Size Inches # | Part Number | Part Name | Weight Lbs (Approx) |
| 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 |

Consult DODGE For Sizes Not Listed.

| "S-1" Units -- Gray Iron 3-3/16" thru 7" | | | |
|---|-------------|-------------|---------------------|
| Shaft Size Inches # | Part Number | Part Name | Weight Lbs (Approx) |
| 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 |

Consult DODGE For Sizes Not Listed.

| "B-1" Units -- Gray Iron | | | |
|--------------------------|-------------|-------------|---------------------|
| Shaft Size Inches # | Part Number | Part Name | Weight Lbs (Approx) |
| 1-3/16 | 023543 | BIU-DI-103R | 3 |
| 1-3/8 | 023545 | BIU-DI-106R | 5 |
| 1-7/16 | 023546 | BIU-DI-107R | 5 |
| 1-1/2 | 023547 | BIU-DI-108R | 6 |
| 1-5/8 | 023548 | BIU-DI-110R | 6 |
| 1-3/4 | 023550 | BIU-DI-112R | 8 |
| 1-15/16 | 023552 | BIU-DI-115R | 8 |
| 2 | 023553 | BIU-DI-200R | 7 |
| 2-3/16 | 023554 | BIU-DI-203R | 9 |
| 2-7/16 | 023556 | BIU-DI-207R | 12 |
| 2-1/2 | 023557 | BIU-DI-208R | 11 |
| 2-11/16 | 023558 | BIU-DI-211R | 17 |
| 2-3/4 | 023559 | BIU-DI-212R | 17 |
| 2-15/16 | 023560 | BIU-DI-215R | 17 |
| 3 | 023561 | BIU-DI-300R | 17 |
| 3-7/16 | 023564 | BIU-DI-307R | 30 |
| 3-1/2 | 023565 | BIU-DI-308R | 30 |
| 3-15/16 | 023566 | BIU-DI-315R | 45 |
| 4 | 023567 | BIU-DI-400R | 44 |
| 4-7/16 | 023568 | BIU-DI-407R | 58 |
| 4 1/2 | 023569 | BIU-DI-408R | 64 |
| 4-15/16 | 023570 | BIU-DI-415R | 87 |
| 5 | 023571 | BIU-DI-500R | 86 |

Consult DODGE For Sizes Not Listed.

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

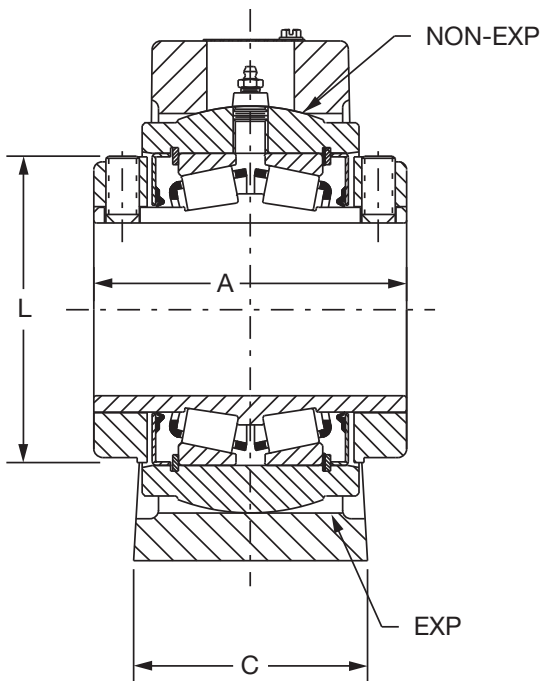
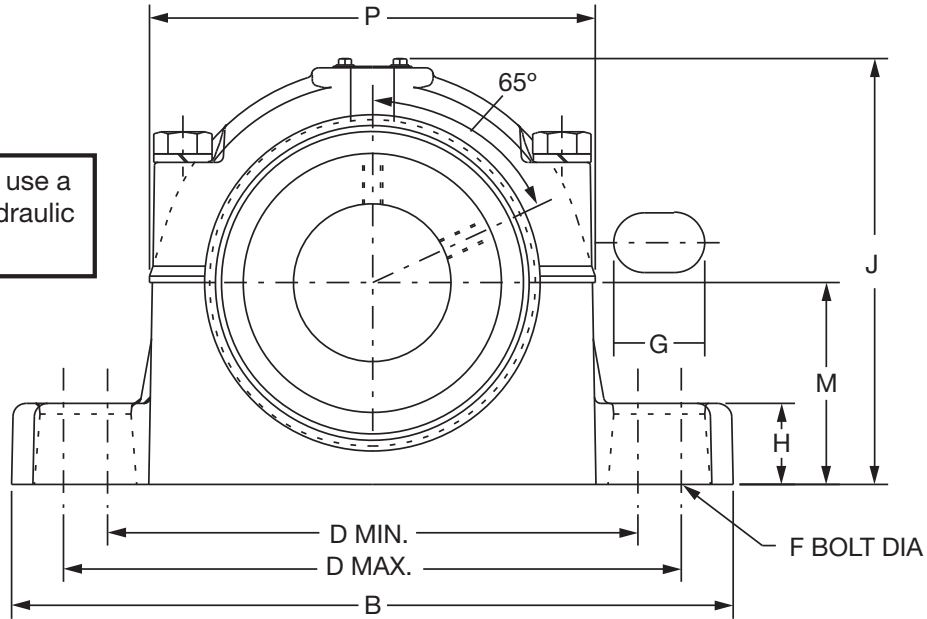
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SELECTION/DIMENSIONS

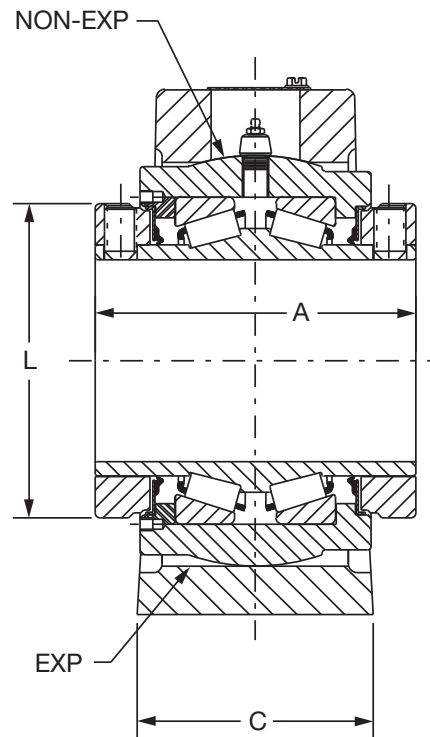


TAF Pillow Block - Inch 2-BOLT BASE

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

SELECTION/DIMENSIONS



TAF Pillow Block - Inch 2-BOLT BASE

| Gray Iron Non-Expansion | | | | | | | Gray Iron Expansion | | | | | | |
|-------------------------|-------------------|--------------------|-------------------|--------------|--------------------|-----------------------|---------------------|-------------------|--------------------|-------------------|--------------|--------------------|-----------------------|
| Shaft Size Inches # | Shaft Size Symbol | Saf Housing Number | Pillow Block Assy | Housing Only | Bearing Inner Unit | Pil. Blk.Wt. Aprx Lbs | Shaft Size Inches # | Shaft Size Symbol | Saf Housing Number | Pillow Block Assy | Housing Only | Bearing Inner Unit | Pil. Blk.Wt. Aprx Lbs |
| 1-7/16 | 107 | 509 | 037580 | 037540 | 037632 | 12 | 1-7/16 | 107 | 509 | 037592 | 037555 | 037632 | 12 |
| 1-11/16 | 111 | 510 | 037581 | 037541 | 037633 | 15 | 1-11/16 | 111 | 510 | 037593 | 037556 | 037633 | 15 |
| 1-15/16 | 115 | 511 | 037582 | 037542 | 037634 | 17 | 1-15/16 | 115 | 511 | 037594 | 037557 | 037634 | 17 |
| 2-3/16 | 203 | 513 | 037583 | 037543 | 037635 | 25 | 2-3/16 | 203 | 513 | 037595 | 037558 | 037635 | 25 |
| 2-7/16 | 207 | 515 | 037584 | 037544 | 037636 | 30 | 2-7/16 | 207 | 515 | 037596 | 037559 | 037636 | 30 |
| 2-1/2 | 208 | | 037585 | 037544 | 037637 | 30 | 2-1/2 | 208 | | 037597 | 037559 | 037637 | 30 |
| 2-11/16 | 211 | 516 | 037586 | 037545 | 037638 | 38 | 2-11/16 | 211 | 516 | 037598 | 037560 | 037638 | 38 |
| 2-3/4 | 212 | | 037587 | 037545 | 037639 | 38 | 2-3/4 | 212 | | 037599 | 037560 | 037639 | 38 |
| 2-15/16 | 215 | 517 | 037588 | 037546 | 037640 | 45 | 2-15/16 | 215 | 517 | 037600 | 037561 | 037640 | 45 |
| 3 | 300 | | 037589 | 037546 | 037641 | 44 | 3 | 300 | | 037601 | 037561 | 037641 | 44 |
| 3-7/16 | 307 | 520 | 037590 | 037547 | 037642 | 71 | 3-7/16 | 307 | 520 | 037602 | 037562 | 037642 | 71 |
| 3-1/2 | 308 | | 037591 | 037547 | 037643 | 70 | 3-1/2 | 308 | | 037603 | 037562 | 037643 | 70 |

Non-Expansion Furnished Unless Otherwise Specified.

Consult DODGE For Sizes Not Shown

| Shaft Size Inches | 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 | 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 |
| 2-1/2 | | | | | | | | | | | | | | |
| 2-11/16 | 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 |
| 2-3/4 | | | | | | | | | | | | | | |
| 2-15/16 | 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 | | | | | | | | | | | | | | |
| 3-7/16 | 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 |
| 3-1/2 | | | | | | | | | | | | | | |

*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

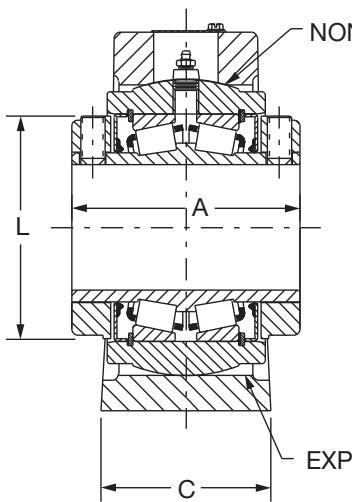
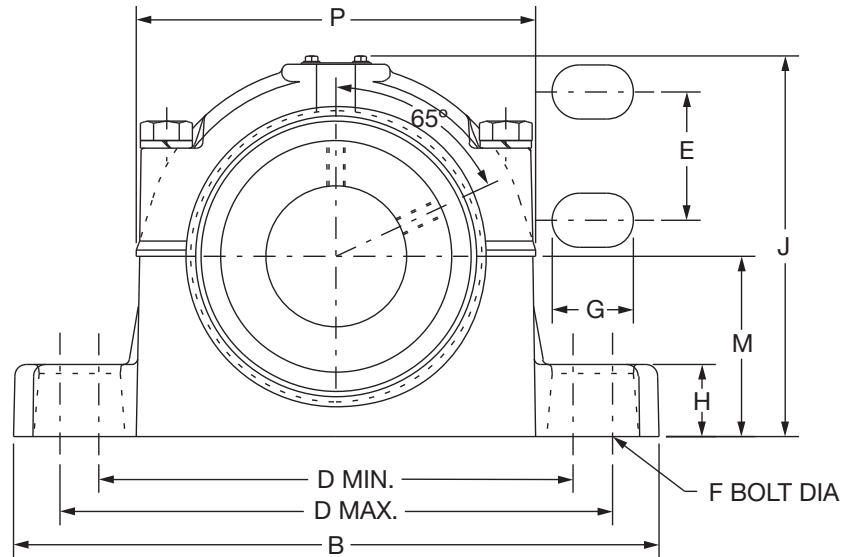
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SELECTION/DIMENSIONS

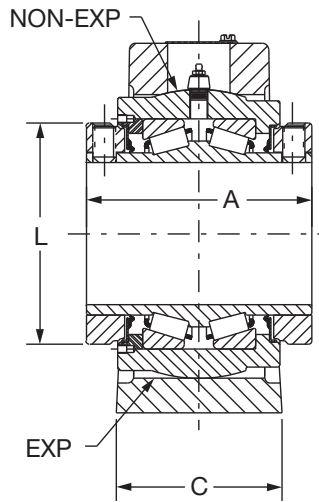


TAF Pillow Block - Inch 4-BOLT BASE

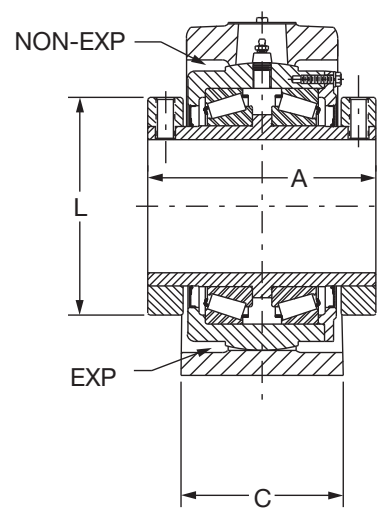
NOTE: All sizes use a 1/8 - 27 NPT hydraulic grease fitting



2-7/16" THRU 3"
CONSTRUCTION



3-7/16" THRU 5"
CONSTRUCTION



5-7/16" THRU 7"
CONSTRUCTION

| | | | |
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SELECTION/DIMENSIONS



TAF Pillow Block - Inch 4-BOLT BASE

| Gray Iron Non-Expansion | | | | | | | Gray Iron Expansion | | | | | | |
|-------------------------|-------------------|--------------------|-------------------|--------------|--------------------|-----------------------|---------------------|-------------------|--------------------|-------------------|--------------|--------------------|-----------------------|
| Shaft Size Inches # | Shaft Size Symbol | SAF Housing Number | Pillow Block Assy | Housing Only | Bearing Inner Unit | Pil. Blk.Wt. Aprx Lbs | Shaft Size Inches # | Shaft Size Symbol | SAF Housing Number | Pillow Block Assy | Housing Only | Bearing Inner Unit | Pil. Blk.Wt. Aprx Lbs |
| 2-7/16 | 207 | 515 | 037604 | 037548 | 037636 | 30 | 2-7/16 | 207 | 515 | 037618 | 037563 | 037636 | 30 |
| 2-1/2 | 208 | 515 | 037605 | 037548 | 037637 | 30 | 2-1/2 | 208 | 515 | 037619 | 037563 | 037637 | 30 |
| 2-11/16 | 211 | 516 | 037606 | 037549 | 037638 | 38 | 2-11/16 | 211 | 516 | 037620 | 037564 | 037638 | 38 |
| 2-3/4 | 212 | 516 | 037607 | 037549 | 037639 | 38 | 2-3/4 | 212 | 516 | 037621 | 037564 | 037639 | 38 |
| 2-15/16 | 215 | 517 | 037608 | 037550 | 037640 | 45 | 2-15/16 | 215 | 517 | 037622 | 037565 | 037640 | 45 |
| 3 | 300 | 517 | 037609 | 037550 | 037641 | 44 | 3 | 300 | 517 | 037623 | 037565 | 037641 | 44 |
| 3-7/16 | 307 | 520 | 037610 | 037551 | 037642 | 71 | 3-7/16 | 307 | 520 | 037624 | 037566 | 037642 | 71 |
| 3-1/2 | 308 | 520 | 037611 | 037551 | 037643 | 70 | 3-1/2 | 308 | 520 | 037625 | 037566 | 037643 | 70 |
| 3-15/16 | 315 | 522 | 037612 | 037552 | 037644 | 110 | 3-15/16 | 315 | 522 | 037626 | 037567 | 037644 | 110 |
| 4 | 400 | 522 | 037613 | 037552 | 037645 | 110 | 4 | 400 | 522 | 037627 | 037567 | 037645 | 110 |
| 4-7/16 | 407 | 526 | 037614 | 037553 | 037646 | 140 | 4-7/16 | 407 | 526 | 037628 | 037568 | 037646 | 140 |
| 4-1/2 | 408 | 526 | 037615 | 037553 | 037647 | 140 | 4-1/2 | 408 | 526 | 037629 | 037568 | 037647 | 140 |
| 4-15/16 | 415 | 528 | 037616 | 037554 | 037648 | 180 | 4-15/16 | 415 | 528 | 037630 | 037569 | 037648 | 180 |
| 5 | 500 | 528 | 037617 | 037554 | 037649 | 180 | 5 | 500 | 528 | 037631 | 037569 | 037649 | 180 |
| 5-7/16 | 507 | 532 | 023584 | 042628 | 023610 | 300 | 5-7/16 | 507 | 532 | 023603* | 042627* | 023610 | 300 |
| 5-15/16 | 515 | 534 | 023585 | 042630 | 023611 | 300 | 5-15/16 | 515 | 534 | 023604* | 042629* | 023611 | 300 |
| 6 | 600 | 534 | 023586 | 042630 | 023612 | 300 | 6 | 600 | 534 | 023605* | 042629* | 023612 | 300 |
| 6-7/16 | 607 | 536 | 023587 | 042632 | 023613 | 510 | 6-7/16 | 607 | 536 | 023606* | 042631* | 023613 | 510 |
| 6-1/2 | 608 | 536 | 023588 | 042632 | 023614 | 510 | 6-1/2 | 608 | 536 | 023607* | 042631* | 023614 | 510 |
| 6-15/16 | 615 | 538 | 023589 | 042634 | 023615 | 52 | 6-15/16 | 615 | 538 | 023608* | 042633* | 023615 | 520 |
| 7 | 700 | 538 | 023590 | 042634 | 023616 | 0520 | 7 | 700 | 538 | 023609* | 042633* | 023616 | 520 |

Non-Expansion Furnished Unless Otherwise Specified
Consult DODGE For Sizes Not Shown

| Shaft Size | SAF Series | A | B | C | D | | E | F Bolt Dia | G | H | J | L | M | P | Exp* |
|------------|------------|-------|-------|------|-------|-------|------|------------|------|------|-------|-------|------|-------|-------|
| | | | | | min. | max. | | | | | | | | | |
| 2-7/16 | 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 |
| 2-1/2 | | | | | | | | | | | | | | | |
| 2-11/16 | 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 |
| 2-3/4 | | | | | | | | | | | | | | | |
| 2-15/16 | 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 | | | | | | | | | | | | | | | |
| 3-7/16 | 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 |
| 3-1/2 | | | | | | | | | | | | | | | |
| 3-15/16 | 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 | | | | | | | | | | | | | | | |
| 4-7/16 | 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 |
| 4-1/2 | | | | | | | | | | | | | | | |
| 4-15/16 | 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 | | | | | | | | | | | | | | | |
| 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 | | | | | | | | | | | | | | | |
| 6-7/16 | 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 |
| 6-1/2 | | | | | | | | | | | | | | | |
| 6-15/16 | 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 |
| 7 | | | | | | | | | | | | | | | |

*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

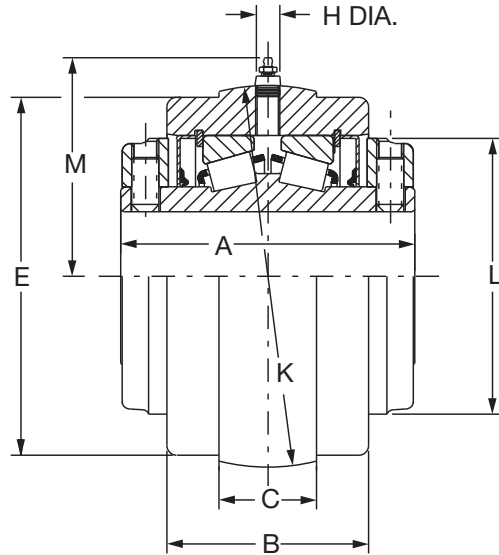
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Bearing Reference Guide
 E-Family Roller Bearings
 Specialty Tapered Products
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 IMPERIAL
 UNIFIED SAF

SELECTION/DIMENSIONS



TAF Units - Inch

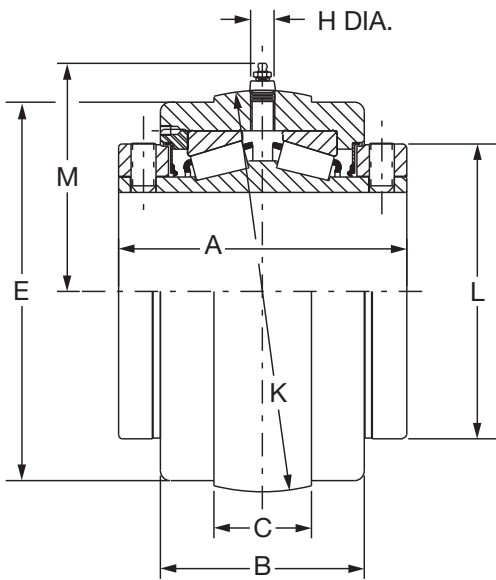


NOTE: All sizes use a 1/8 - 27 NPT hydraulic grease fitting

TAF S1 Unit Is Used In All Expansion And Non-Expansion TAF Housings

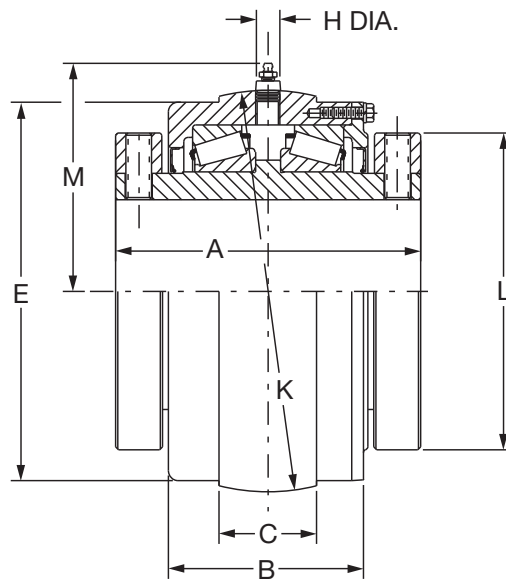
S-1 UNIT

1-7/16" THRU 3" CONSTRUCTION



S-1 UNIT

3-3/16" THRU 5" CONSTRUCTION



S-1 UNIT

5-7/16" THRU 7" CONSTRUCTION

| | | | |
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SELECTION/DIMENSIONS



TAF Units - Inch

| "S-1" Units - Gray Iron | | | |
|-------------------------|---------------|----------------|---------------------|
| Shaft Size # Inches | Part Number | Part Name | Weight Lbs (Approx) |
| 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-307 | 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 | S1U-TAF-507R | 155 |
| 5-15/16 | 023611 | S1U-TAF-515R | 143 |
| 6 | 023612 | S1U-TAF-600R | 138 |
| 6-7/16 | 023613 | S1U-TAF-607R | 187 |
| 6-1/2 | 023614 | S1U-TAF-608R | 182 |
| 6-15/16 | 023615 | S1U-TAF-615R | 180 |
| 7 | 023616 | S1U-TAF-700R | 178 |

NOTE: TAF inserts below 5-7/16" are not interchangeable with TAF-XT housings, with shafts of 5" or less, order DOUBLE-INTERLOCK S-1 units on Page B10-50

| Shaft Size Inches | A | B | C | E | | H | K | L | M |
|-------------------|-------|------|------|------------|-----------|------|----------|-------|------|
| | | | | Mach. Side | Cast Side | | | | |
| 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 | 4.00 | 2.75 | 1.44 | 4.81 | 4.87 | 0.75 | 5.156 • | 4.06 | 3.38 |
| 2- 1/2 | | | | | | | | | |
| 2-11/16 | 4.50 | 3.00 | 1.88 | 5.56 | 5.63 | 0.75 | 6.001 | 4.72 | 3.88 |
| 2-3/4 | | | | | | | | | |
| 2-15/16 | 4.50 | 3.00 | 1.88 | 5.56 | 5.63 | 0.75 | 6.001 • | 4.72 | 3.88 |
| 3 | | | | | | | | | |
| 3-7/16 | 5.00 | 3.50 | 2.19 | 6.81 | 6.88 | 0.75 | 7.313 * | 5.50 | 4.50 |
| 3-1/2 | | | | | | | | | |
| 3-15/16 | 6.25 | 4.50 | 2.59 | 7.44 | 7.40 | 0.94 | 7.937 * | 6.00 | 5.13 |
| 4 | | | | | | | | | |
| 4-7/16 | 6.75 | 4.63 | 2.56 | 8.31 | 8.32 | 0.94 | 8.812 * | 6.45 | 5.50 |
| 4-1/2 | | | | | | | | | |
| 4-15/16 | 7.25 | 5.13 | 3.13 | 9.56 | 9.54 | 0.94 | 10.124 * | 7.45 | 6.19 |
| 5 | | | | | | | | | |
| 5-7/16 | 9.00 | 5.88 | 2.56 | 11.19 | 11.19 | 0.94 | 11.563 ^ | 9.38 | 6.91 |
| 5-15/16 | | | | | | | | | |
| 6 | 10.50 | 7.13 | 3.00 | 13.25 | 13.25 | 0.94 | 13.748 ^ | 11.38 | 8.00 |
| 6-7/16 | | | | | | | | | |
| 6-1/2 | | | | | | | | | |
| 6-15/16 | | | | | | | | | |
| 7 | | | | | | | | | |

• +.000,-.001"

^ .000,-.003"

* +.0005

Consult DODGE For Sizes Not Listed

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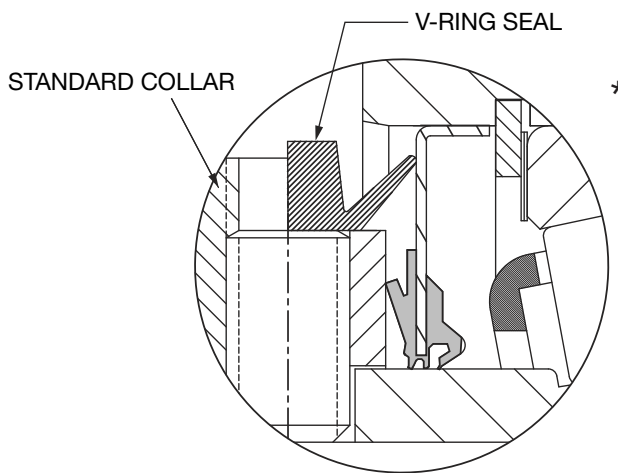


Type E-Xtra / Type K / DOUBLE-INTERLOCK /TAF E-TECT SEAL KITS

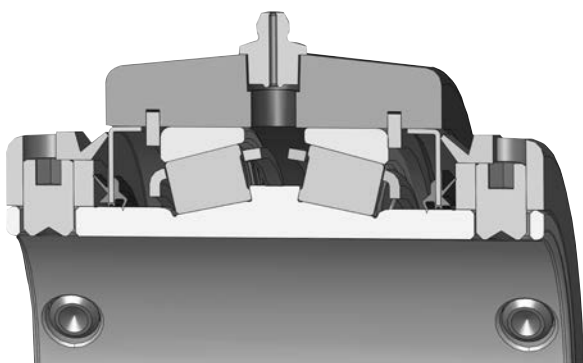
| Shaft Size Inches | Kit Part Number |
|-------------------|-----------------|
| 1-3/16 TO 1-1/4 | 037650* |
| 1-3/8 TO 1-7/16 | 037651* |
| 1-1/2 TO 1-11/16 | 037652* |
| 1-3/4 TO 2 | 037653* |
| 2-3/16 | 037654* |
| 2-1/4 TO 2-1/2 | 037655* |
| 2-11/16 TO 3 | 037656* |
| 3-3/16 TO 3-1/2 | 037657* |
| 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

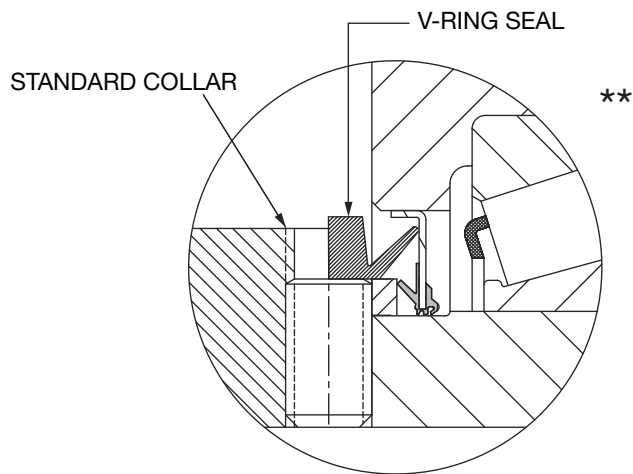
** Kit for 5-7/16" consists of a modified v-ring seal. This seal can only be used with bearings produced after September 1995



**SMALL E-TECT SEAL
1-3/16 THRU 5"**



XTS Sealing with E-Tect Option

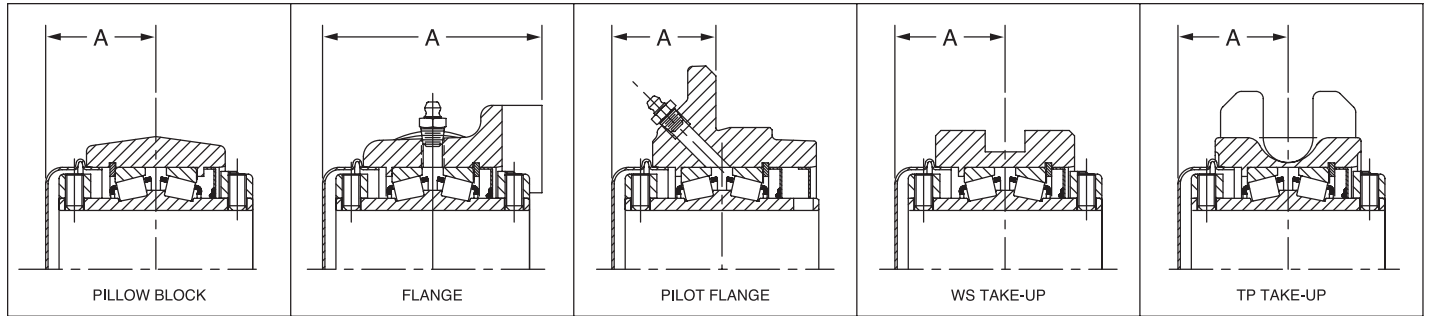


**LARGE E-TECT SEAL
5-7/16 THRU 7"**



Type E-Xtra

Type E-Xtra END CLOSURE KITS - INCH



** Seal must be removed before installing the end cover

| Shaft Size Δ Inches | Kit* Part No. | "A" Dimension (Inch) | | | | |
|---------------------|---------------|----------------------|--------|--------------|------------|------------|
| | | 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 |

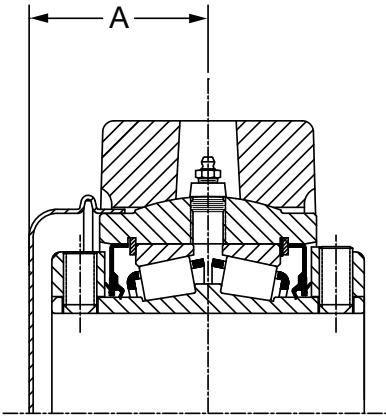
Δ - Consult DODGE For Sizes Not Listed.

* - Kit Includes End Closure And Special Collar.

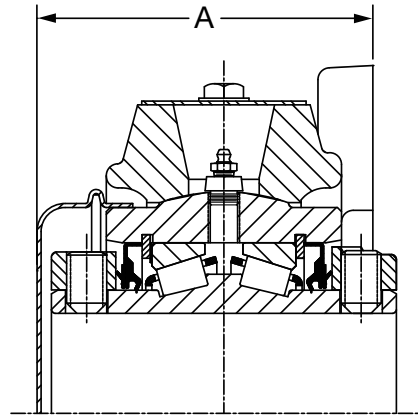
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Type K, DOUBLE-INTERLOCK and TAF End Covers



DOUBLE-INTERLOCK SHOWN
K, DI, & TAF



DOUBLE-INTERLOCK SHOWN
K & DI

| Shaft Size Inches | 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 |
| 3-5/16 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 |

END CLOSURE MOUNTS ON MACHINED OD SIDE OF S-1 UNIT



SELECTION

TAF - Smart Stock Selections HOW TO ORDER

Step 1: The Housing Choices Standard Or Drilled

When speed only will be monitored, select the standard housing.

When vibration, and / or temperature will be monitored, select the drilled housing

All housing part numbers shown are 4-bolt base, non-expansion



| Shaft Size | Series | Standard Housing Part Numbers If you are monitoring speed only Part # | Drilled Housing Part Number For temperature and/or vibration Part # |
|------------|--------|---|---|
| 207 | 515 | 037548 | 053067 |
| 215 | 517 | 037550 | 053628 |
| 307 | 520 | 037551 | 067350 |
| 315 | 522 | 037552 | 054960 |
| 407 | 526 | 037553 | 067352 |
| 415 | 528 | 037554 | 067353 |
| 507 | 532 | 042628 | 067354 |
| 515 | 534 | 042630 | 067357 |
| 615 | 538 | 042634 | 067234 |

Step 2: Pick An S1 Unit

Smart S-1 units feature

Embedded thermocouple drilled and tapped holes for prox covers

Special locking collar with prox targets



| Shaft Size | S1 Unit |
|------------|---------|
| 207 | 055805 |
| 215 | 055806 |
| 307 | 055807 |
| 315 | 049235 |
| 407 | 055915 |
| 415 | 055840 |
| 507 | 067355 |
| 515 | 067356 |
| 615 | 067323 |

Step 3: The Sensor Choices

For speed monitoring, use AC prox and prox cover or DC prox and prox cover.

For temperature monitoring, use thermocouple transmitter.

| Prox Covers | | |
|-------------|---------|-------------|
| Shaft | Housing | Part Number |
| 207 | 515 | 067340 |
| 215 | 517 | 067342 |
| 307 | 520 | 067343 |
| 315 | 522 | 067344 |
| 407 | 526 | 067345 |
| 415 | 528 | 067346 |
| 507 | 532 | 067347 |
| 515 | 534 | 067347 |
| 615 | 538 | 067348 |

| TAF Sensor kits | Part Number |
|--|-------------|
| AC Prox | 055943 |
| Thermocouple Transmitter | 055931 |
| Cable Connector Kit | 063694 |
| 4-20 ma Accelerometer and Thermocouple | 067576 |

* For additional details on DODGE Smart Bearings, see brochure DMR-2026-6

| | | | |
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SELECTION

Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

S-2000

UNISPHERE II

IMPERIAL

UNIFIED SAF

Type E-Xtra - Metric

SELECTION

METRIC TYPE E-XTRA TAPERED ROLLER BEARINGS

DODGE Type E-Xtra 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. DODGE Unitized Type E-Xtra Roller Bearings have been applied successfully even when these limits have been exceeded under controlled operating conditions. Contact DODGE Application Engineering (864-284-5700) for applications which exceed the recommendations of this catalog.

L₁₀ Life, Hours -- The fatigue life which may be expected from at least 90% of a given group of bearings operating under identical conditions.

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

Where: C_{90} = Dynamic Capacity (Table 9), kN

P = Equivalent Radial Load, kN

GENERAL

Heavy Service -- For heavy shock loads, frequent shock loads, or severe vibrations, increase the Equivalent Radial Load up to 50% (according to severity of conditions) to obtain a Modified Equivalent Radial Load. Consult Application Engineering at 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 L₁₀ life. With substantial radial loads also present, it is advisable to calculate actual L₁₀ life to assure the bearing meets requirements.

| RPM RANGE | 20 - 200 | 201 - 2000 | Over 2000 |
|-------------------------|------------|------------|-------------|
| 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 | Tolerance |
| Up to 35mm | + .000 - .013mm |
| 40 to 100mm | + .000 - .025mm |
| 100 - 150mm | + .000 - .038mm |
| 160 - 180mm | + .000 - .051mm |

Type E-Xtra - Metric

SELECTING BEARINGS SUPPORTING RADIAL LOADS ONLY

1. Define the desired L₁₀ Life, in Hours
2. Establish bearing radial load, F_R, kN
3. Establish RPM.

F_R = P for Pure Radial Load Conditions.

P = Equivalent radial load, kN

(The Dodge program BEST• can be used to find application loads.)

Using the easy selection Table 1, Page B10-14 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: L₁₀ Life = 30,000 Hours
Radial load = 17.5 kN
RPM = 1000

At the intersection of the 1000 RPM column and at the 30,000 hours L₁₀ life row, the equivalent radial load of 18 kN exceeds the 17.5kN application radial load for shaft size 55mm. Therefore, an 55mm E bearing can be used to meet the application bearing conditions of the above example:

ALTERNATE METHOD A --SELECTING A BEARING FOR AN L₁₀ LIFE VALUE NOT SHOWN IN THE EASY SELECTION CHART.

The L₁₀ life equation can be rearranged so that the bearing dynamic capacity C₉₀ is identified in terms of L₁₀, RPM and P.

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

(P = F_R for Pure Radial Load Conditions)

Since the L₁₀, RPM, and P are known, solve for C₉₀. Select from the dynamic capacity column on Table 10 the C₉₀ value equal to or greater than the C₉₀ value just calculated. The bore size on the far left represents the minimum shaft size selection. Check that the application RPM does not exceed the MAX. RPM on Table 10. When selecting a L₁₀ life of less than 30,000 hours particular attention must be paid to shaft deflection and proper lubricant selection.

- The DODGE Bearing Evaluation and Selection Technique (BEST) is a menu driven computer program that calculates bearing loads, fatigue life, and operating temperature for a two bearing shaft system based on user supplied input parameters. This interactive program is available at www.ptwizard.com under the Product Selection area.

| | | | |
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Type E-Xtra - 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 9 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 $P = XF_R + YF_A$ (Equation 1)

Where:

- P = Equivalent radial load, kN
- F_R = Radial load, kN
- F_A = Thrust (axial) load, kN
- e = Thrust load to radial load factor (Table 1)
- X = Radial load factor (Table 1)
- Y = Thrust load factor (Table 1)

Calculate FA/FR and compare to e for the selected bore size. Determine X and Y from Table 1 depending on whether FA/FR is equal to or less than e, or FA/FR 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 L₁₀ life in hours or compared to the allowable equivalent radial load ratings for the speed and hours life desired in the easy selection table.

SELECTING BEARINGS SUPPORTING ONLY THRUST LOADS

Type E-Xtra 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-Xtra Tapered Roller Bearings (Metric)

| Shaft Size (MM) | e | F _A /F _R ≤ e | | F _A /F _R > e | | Dynamic Capacity C ₉₀ * K Newtons | Maximum RPM | Maximum Slip Fit Radial Load, (Fr)K N** |
|-----------------|------|------------------------------------|------|------------------------------------|------|---|-------------|---|
| | | X | Y | X | Y | | | |
| 35 | 0.46 | .87 | 1.89 | .70 | 2.28 | 24.5 | 3,820 | 22.2 |
| 40 | 0.44 | .87 | 1.96 | .70 | 2.37 | 31.4 | 3,320 | 28.5 |
| 45, 50 | 0.33 | .87 | 2.64 | .70 | 3.18 | 41.4 | 3,050 | 37.4 |
| 55 | 0.35 | .87 | 2.38 | .70 | 2.87 | 43.8 | 2,730 | 39.6 |
| 60, 65 | 0.40 | .87 | 2.17 | .70 | 2.63 | 47.2 | 2,420 | 42.2 |
| 70, 75 | 0.45 | .87 | 1.87 | .70 | 2.26 | 49.5 | 2,060 | 44.5 |
| 80, 85, 90 | 0.50 | .87 | 1.71 | .70 | 2.07 | 79.0 | 1,640 | 71.2 |
| 100 | 0.49 | .87 | 1.77 | .70 | 2.14 | 108.5 | 1,530 | 98.0 |
| 110, 115 | 0.53 | .87 | 1.63 | .70 | 1.97 | 133.4 | 1,360 | 120.0 |
| 125 | 0.47 | .87 | 1.83 | .70 | 2.21 | 183.8 | 1,200 | 164.6 |
| 135, 140, 150 | 0.49 | .87 | 1.76 | .70 | 2.12 | 181.1 | 915 | 188.6 |
| 160, 170, 180 | 0.54 | .87 | 1.61 | .70 | 1.95 | 307.9 | 790 | 320.2 |

COMPARING SPHERICAL TO TAPER ROLLER BEARING

The dynamic capacity C (spherical) and C₉₀ (taper) are not to the same base. To compare basic dynamic capacities, multiply C x .259 and compare to C₉₀.

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

* C₉₀---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 loads up to maximum slip fit radial load may be applied if recommended shaft tolerances are used.



SELECTION

Type E-Xtra - Metric

Table 11 - Easy Selection for Type E-Xtra Metric

| Shaft Size | L10 Hours | Allowable Equivalent Radial Load Rating (kN) At Various Revolutions Per Minute | | | | | | | | | | | | | | |
|----------------------|-----------|--|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|
| | | 50 | 100 | 150 | 250 | 500 | 750 | 1000 | 1250 | 1500 | 1750 | 2000 | 2500 | 2700 | 3000 | 3500 |
| 35mm | 10000 | 34 | 28 | 24 | 21 | 17 | 15 | 14 | 13 | 12 | 12 | 11 | 11 | 10 | 10 | 10 |
| | 30000 | 24 | 20 | 18 | 15 | 12 | 11 | 10 | 9 | 9 | 8 | 8 | 8 | 7 | 7 | 7 |
| | 40000 | 22 | 18 | 16 | 14 | 11 | 10 | 9 | 9 | 8 | 8 | 7 | 7 | 7 | 7 | 6 |
| | 60000 | 20 | 16 | 14 | 12 | 10 | 9 | 8 | 8 | 7 | 7 | 6 | 6 | 6 | 6 | 6 |
| | 100000 | 17 | 14 | 12 | 11 | 9 | 8 | 7 | 6 | 6 | 6 | 5 | 5 | 5 | 5 | 5 |
| 40mm | 10000 | 44 | 36 | 31 | 27 | 22 | 19 | 18 | 17 | 16 | 15 | 14 | 14 | 13 | 13 | 12 |
| | 30000 | 31 | 26 | 23 | 19 | 16 | 14 | 13 | 12 | 11 | 11 | 10 | 10 | 10 | 9 | 9 |
| | 40000 | 29 | 23 | 21 | 18 | 14 | 13 | 12 | 11 | 10 | 10 | 9 | 9 | 8 | 8 | 8 |
| | 60000 | 26 | 21 | 18 | 16 | 13 | 11 | 10 | 10 | 9 | 9 | 8 | 8 | 8 | 7 | 7 |
| | 100000 | 22 | 18 | 16 | 14 | 11 | 10 | 9 | 8 | 8 | 8 | 7 | 7 | 7 | 6 | 6 |
| 45mm 50mm | 10000 | 58 | 47 | 41 | 35 | 29 | 26 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | 17 | |
| | 30000 | 41 | 34 | 30 | 26 | 21 | 18 | 17 | 16 | 15 | 14 | 14 | 13 | 13 | 12 | |
| | 40000 | 38 | 31 | 27 | 23 | 19 | 17 | 15 | 14 | 14 | 13 | 13 | 12 | 11 | 11 | |
| | 60000 | 34 | 27 | 24 | 21 | 17 | 15 | 14 | 13 | 12 | 12 | 11 | 10 | 10 | 10 | |
| | 100000 | 29 | 23 | 21 | 18 | 14 | 13 | 12 | 11 | 10 | 10 | 9 | 9 | 9 | 8 | |
| 55mm | 10000 | 61 | 49 | 44 | 38 | 31 | 27 | 25 | 23 | 22 | 21 | 20 | 19 | 18 | 18 | |
| | 30000 | 44 | 36 | 32 | 27 | 22 | 19 | 18 | 17 | 16 | 15 | 14 | 14 | 13 | 13 | |
| | 40000 | 40 | 33 | 29 | 25 | 20 | 18 | 16 | 15 | 14 | 14 | 13 | 12 | 12 | 12 | |
| | 60000 | 36 | 29 | 26 | 22 | 18 | 16 | 14 | 14 | 13 | 12 | 12 | 11 | 11 | 10 | |
| | 100000 | 31 | 25 | 22 | 19 | 15 | 14 | 12 | 12 | 11 | 11 | 10 | 9 | 9 | 9 | |
| 60mm 65mm | 10000 | 66 | 53 | 47 | 40 | 33 | 29 | 27 | 25 | 24 | 23 | 22 | 20 | | | |
| | 30000 | 47 | 38 | 34 | 29 | 24 | 21 | 19 | 18 | 17 | 16 | 16 | 15 | | | |
| | 40000 | 43 | 35 | 31 | 27 | 22 | 19 | 18 | 16 | 16 | 15 | 14 | 13 | | | |
| | 60000 | 38 | 31 | 28 | 24 | 19 | 17 | 16 | 15 | 14 | 13 | 13 | 12 | | | |
| | 100000 | 33 | 27 | 24 | 20 | 16 | 15 | 13 | 13 | 12 | 11 | 11 | 10 | | | |
| 70mm 75mm | 10000 | 69 | 56 | 49 | 42 | 34 | 31 | 28 | 26 | 25 | 24 | 23 | | | | |
| | 30000 | 49 | 40 | 36 | 31 | 25 | 22 | 20 | 19 | 18 | 17 | 16 | | | | |
| | 40000 | 45 | 37 | 33 | 28 | 23 | 20 | 18 | 17 | 16 | 16 | 15 | | | | |
| | 60000 | 40 | 33 | 29 | 25 | 20 | 18 | 16 | 15 | 14 | 14 | 13 | | | | |
| | 100000 | 34 | 28 | 25 | 21 | 17 | 15 | 14 | 13 | 12 | 12 | 11 | | | | |
| 80mm 85mm 90mm | 10000 | 110 | 89 | 79 | 68 | 55 | 49 | 45 | 42 | 40 | 38 | | | | | |
| | 30000 | 79 | 64 | 57 | 49 | 40 | 35 | 32 | 30 | 28 | 27 | | | | | |
| | 40000 | 72 | 59 | 52 | 45 | 36 | 32 | 29 | 28 | 26 | 25 | | | | | |
| | 60000 | 64 | 52 | 46 | 40 | 32 | 28 | 26 | 24 | 23 | 22 | | | | | |
| | 100000 | 55 | 45 | 40 | 34 | 28 | 24 | 22 | 21 | 20 | 19 | | | | | |
| 100mm | 10000 | 151 | 123 | 109 | 93 | 76 | 67 | 61 | 57 | 54 | | | | | | |
| | 30000 | 109 | 88 | 78 | 67 | 54 | 48 | 44 | 41 | 39 | | | | | | |
| | 40000 | 100 | 81 | 72 | 61 | 50 | 44 | 41 | 38 | 36 | | | | | | |
| | 60000 | 88 | 72 | 63 | 54 | 44 | 39 | 36 | 34 | 32 | | | | | | |
| | 100000 | 76 | 61 | 54 | 47 | 38 | 34 | 31 | 29 | 27 | | | | | | |

For Maximum RPM See Table 1 on Page B10-14

In the Shaded Area E, DI & TAF Mounted Unites Required Line-To-Line Press Fit to Shaft:

| | | | |
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SELECTION

Type E-Xtra - Metric

Table 11 - Easy Selection for Type E-Xtra Metric

| Shaft Size | L10 Hours | Allowable Equivalent Radial Load Rating (kN) At Various Revolutions Per Minute | | | | | | | | | | | | | | |
|-------------------------|-----------|--|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|
| | | 50 | 100 | 150 | 250 | 500 | 750 | 1000 | 1250 | 1500 | 1750 | 2000 | 2500 | 2700 | 3000 | 3500 |
| 110mm 115mm | 10000 | 186 | 151 | 133 | 114 | 93 | 82 | 76 | 71 | | | | | | | |
| | 30000 | 133 | 108 | 96 | 82 | 67 | 59 | 54 | 51 | | | | | | | |
| | 40000 | 122 | 99 | 88 | 76 | 61 | 54 | 50 | 47 | | | | | | | |
| | 60000 | 108 | 88 | 78 | 67 | 54 | 48 | 44 | 41 | | | | | | | |
| | 100000 | 93 | 76 | 67 | 57 | 47 | 41 | 38 | 35 | | | | | | | |
| 125mm | 10000 | 255 | 208 | 184 | 158 | 128 | 113 | 104 | 97 | | | | | | | |
| | 30000 | 184 | 149 | 132 | 113 | 92 | 82 | 75 | 70 | | | | | | | |
| | 40000 | 169 | 137 | 121 | 104 | 84 | 75 | 69 | 64 | | | | | | | |
| | 60000 | 149 | 121 | 107 | 92 | 75 | 66 | 61 | 57 | | | | | | | |
| | 100000 | 128 | 104 | 92 | 79 | 64 | 57 | 52 | 49 | | | | | | | |
| 135mm 140mm 150mm | 10000 | 250 | 205 | 180 | 155 | 125 | 110 | 100 | | | | | | | | |
| | 30000 | 180 | 145 | 130 | 110 | 90 | 80 | 75 | | | | | | | | |
| | 40000 | 165 | 135 | 120 | 100 | 85 | 75 | 65 | | | | | | | | |
| | 60000 | 145 | 120 | 105 | 90 | 75 | 65 | 60 | | | | | | | | |
| | 100000 | 125 | 100 | 90 | 75 | 65 | 55 | 50 | | | | | | | | |
| 160mm 170mm 180mm | 10000 | 430 | 345 | 305 | 265 | 215 | 190 | | | | | | | | | |
| | 30000 | 305 | 250 | 220 | 190 | 155 | 135 | | | | | | | | | |
| | 40000 | 280 | 230 | 205 | 175 | 140 | 125 | | | | | | | | | |
| | 60000 | 250 | 205 | 180 | 155 | 125 | 110 | | | | | | | | | |
| | 100000 | 215 | 175 | 155 | 130 | 105 | 95 | | | | | | | | | |

For Maximum RPM See Table 1 on Page B10-14

In the Shaded Area E, DI & TAF Mounted Unites Required Line-To-Line Press Fit to Shaft:

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SELECTION

Type E-Xtra

LUBRICATION

DODGE Type E-Xtra Metric Tapered Roller Bearings are lubricated at the factory with Mobil 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 15. For very low and high speeds, for heavy loads and for low and high temperatures, special greases must be used. Contact DODGE Application Engineering (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.

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 | | | | | | | |
|-------------------|---------------------------------------|----------------|----------------|-----------------|------------------|------------------|------------------|------------------|
| | 1 To 250 RPM | 251 To 500 RPM | 501 To 750 RPM | 751 To 1000 RPM | 1001 To 1500 RPM | 1501 To 2000 RPM | 2001 To 2500 RPM | 2501 To 3000 RPM |
| 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 |

| | | | |
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Type E-Xtra - Metric

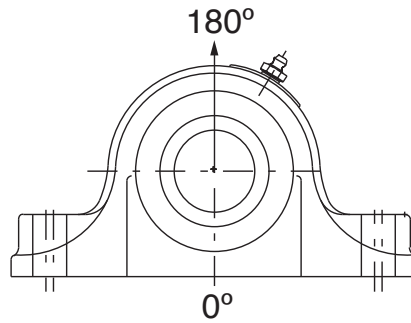


Table 13 - Type Housing Ratings, Gray Iron

| Bore Size MM | Maximum Housing Cap Loads, 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 |

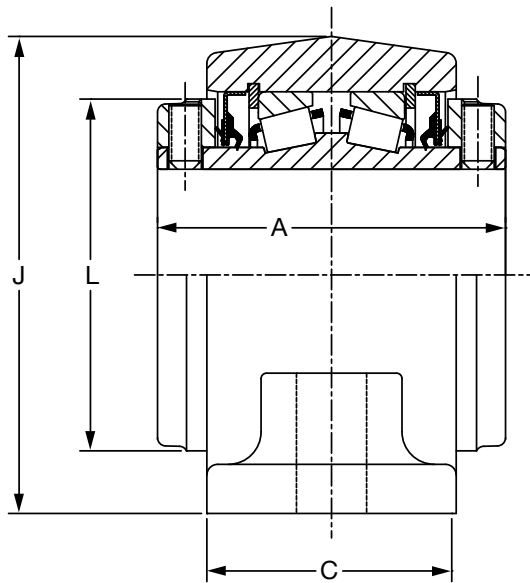
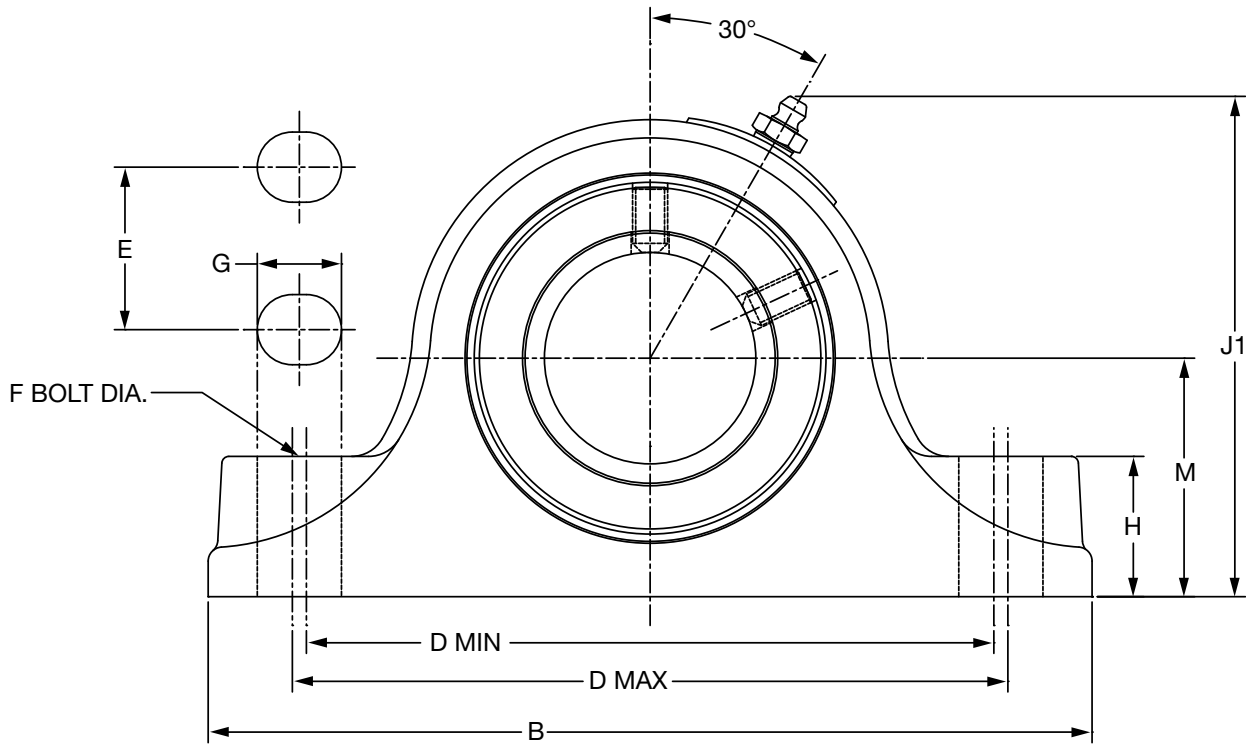
Table 14 - Definition Of Operating Conditions For Tapered Roller Bearings

| | |
|-----------------------|--|
| LOW SPEED | UP TO 20% OF MAX. RPM (TABLE 9) |
| 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 9) |
| 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 |

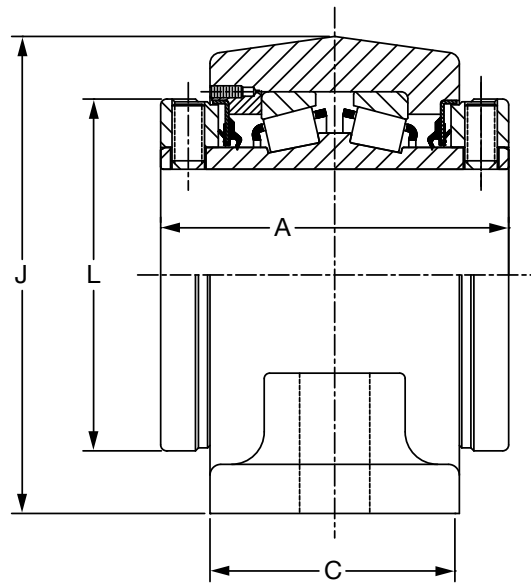
SELECTION/DIMENSIONS



Type E-Xtra - Plummer Block - Metric 2 & 4 BOLT BASE



35mm THRU 75mm CONSTRUCTION



80 mm THRU 125 mm CONSTRUCTION

| | | | |
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Type E-Xtra - Plummer Block - Metric

Type E-Xtra Plummer Blocks, 2-Bolt

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

Type E-Xtra Plummer Blocks, 4-Bolt

| Shaft Size (mm) | Part Number | Part Name | Weight Lbs. (Approx.) |
|-----------------|---------------|-------------|-----------------------|
| 100mm | 023632 | P4B-E-100MR | 69 |
| 110mm | 023633 | P4B-E-110MR | 85 |
| 115mm | 023634 | P4B-E-115MR | 91 |
| 125mm | 023635 | P4B-E-125MR | 136 |
| 135mm | 023636 | P4B-E-135MR | 245 |
| 140mm | 023637 | P4B-E-140MR | 240 |
| 150mm | 023638 | P4B-E-150MR | 235 |
| 160mm | 023639 | P4B-E-160MR | 355 |
| 170mm | 023640 | P4B-E-170MR | 345 |
| 180mm | 023641 | P4B-E-180MR | 345 |

Type E-Xtra Plummer Blocks, 2-Bolt Base

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

Type E-Xtra Plummer Blocks, 4-Bolt Base

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

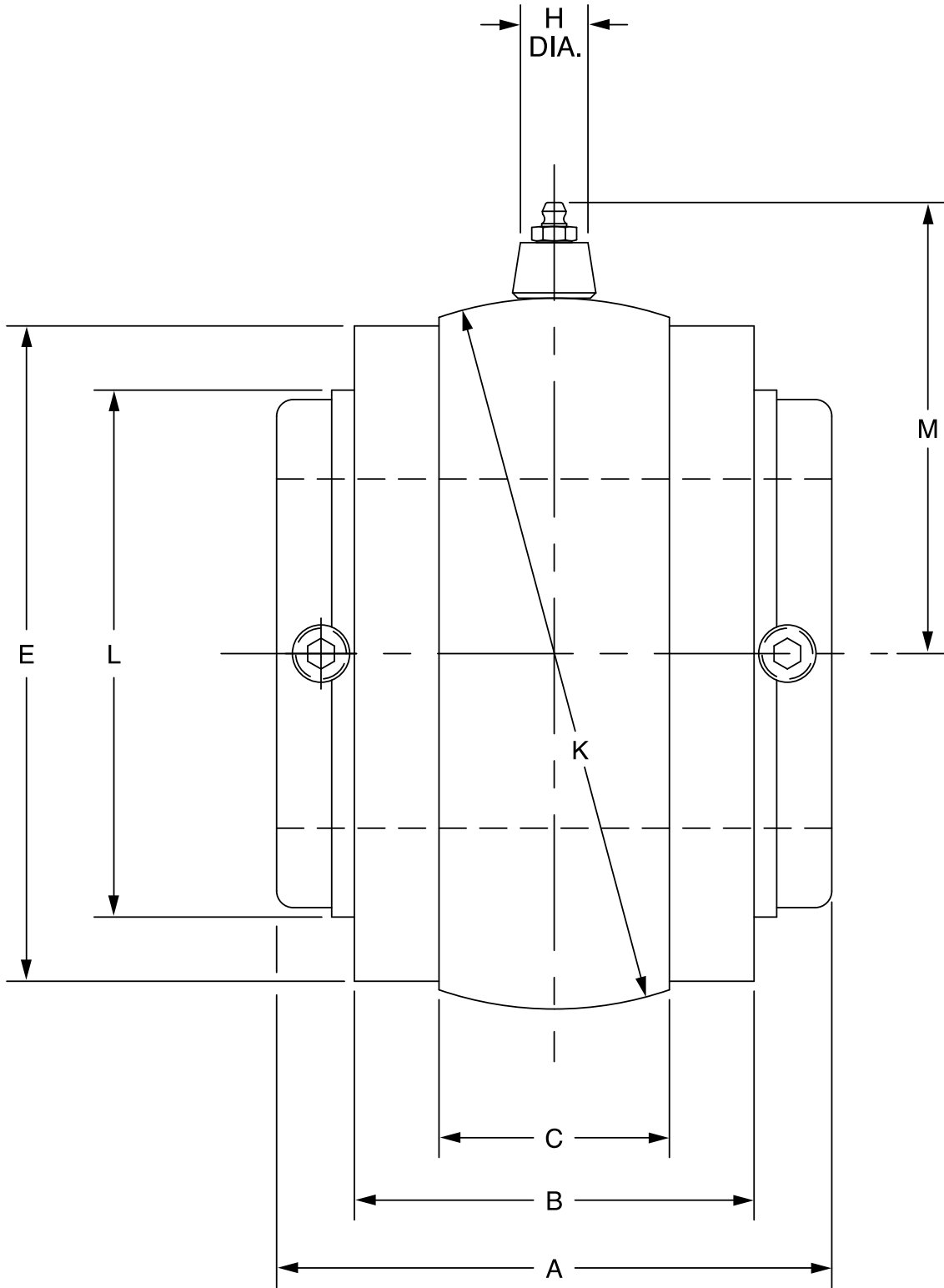
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SELECTION/DIMENSIONS



DOUBLE-INTERLOCK - Metric



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SELECTION/DIMENSIONS



DOUBLE-INTERLOCK - Metric

| Metric Double Interlock "S-1" Units - Fray Iron | | | |
|---|-------------|-------------|---------------------|
| Shaft Size # | Part Number | Part Name | Weight Lbs (Approx) |
| 35mm | 023700 | S1U-DI-035M | 5 |
| 40mm | 023701 | S1U-DI-040M | 6 |
| 45mm | 023702 | S1U-DI-045M | 8 |
| 50mm | 023703 | S1U-DI-050M | 8 |
| 55mm | 023704 | S1U-DI-055M | 10 |
| 60mm | 023705 | S1U-DI-060M | 11 |
| 65mm | 023706 | S1U-DI-065M | 10 |
| 70mm | 023707 | S1U-D9-070M | 17 |
| 75mm | 023708 | S1U-DI-075M | 17 |
| 80mm | 023709 | S1U-DI-080M | 33 |
| 85mm | 023710 | S1U-DI-085M | 32 |
| 90mm | 023711 | S1U-DI-090M | 31 |
| 100mm | 023712 | S1U-DI-100M | 42 |
| 110mm | 023713 | S1U-D1-110M | 55 |
| 115mm | 023714 | S1U-DI-115M | 71 |
| 125mm | 023715 | S1U-DI-125M | 85 |

For housing references see the following pages: Pillow Blocks (B10-22 - B10-25) Flange Bearings (B10-26 - B10-29)

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

* +.000 to -.001"

+/- .0005"

| | | | |
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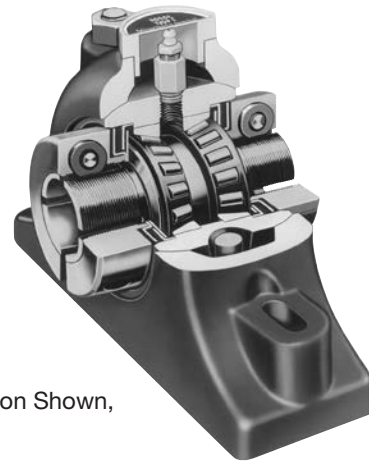


FEATURES/BENEFITS

Specialty Tapered Products

TYPE C

- Positive Concentric Clamp Sleeve Mounting
- Steel Multiple Labyrinth Seals
- 2 Quality Single Row
- Tapered Roller Assemblies
- Rugged Two-Piece Housing
- Elongated Bolt Holes

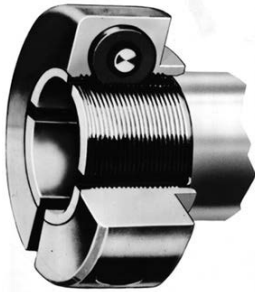


2-1/2" to 5" NE Construction Shown,
Expansion also Available



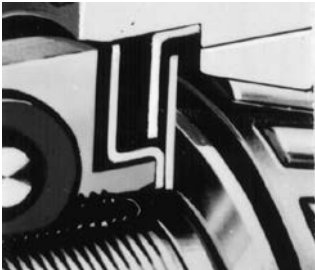
CLAMP SLEEVE MOUNTING -

- 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" and larger sizes
- Single piece split collars, used on smaller sizes
- Performs flinger like function keeping many materials away from seal



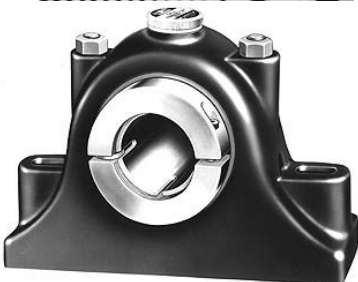
STEEL MULTIPLE LABYRINTH SEALS

- Combine with collars offering excellent resistance to keep contaminants out of the bearing
- Seal bearing both on and off the shaft before, during and after installation
- Especially well suited on 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



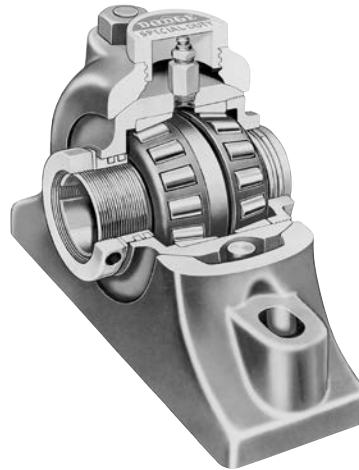
NOTE: Instruction manuals for Dodge bearings are available on www.dodge-pt.com



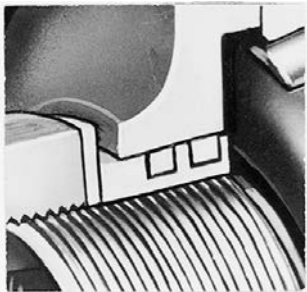
FEATURES/BENEFITS

Specialty Tapered Products SPECIAL DUTY

- Quality Duplex Tapered Roller Bearing
- Tapered Adapter Sleeve Mounting
- Effective Piston Ring Seals
- Rugged Two-Piece Housing
- Elongated Bolt Holes



1-3/8" to 3-1/2" NE Type Construction Shown



SPECIAL DUTY PILLOW BLOCKS DUAL PISTON RING SEALS -

- Contained within self aligning inner unit, to be unaffected by misalignment
- Seal bearing both on and off the shaft before, during and after installation
- Extremely close clearances to exclude most materials from entering bearings



TAPERED ADAPTER SLEEVE MOUNTING

- A split tapered adapter sleeve extending thru 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" 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 resulting in unsurpassed load handling capability and longer useful bearing life
- Handles any combination of radial and thrust load from 100% radial load to 100% 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



FEATURES/BENEFITS

Specialty Tapered Products ALL STEEL

- Quality Duplex Tapered Roller Bearing
- Tapered Adapter Sleeve Mounting
- Dual Piston Ring Seals
- Solid One-Piece Cast Steel Housing



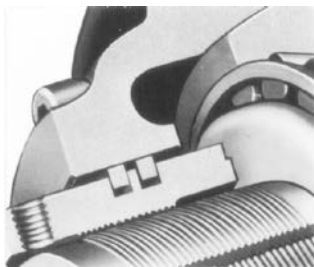
DUPLEX TAPERED ROLLER BEARING

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



TAPERED ADAPTER SLEEVE MOUNTING

- A split tapered adapter sleeve extending thru the entire length of the pillow block is used to securely fasten the bearing to the shaft tighter than shorter adapter sleeves
- Two ductile iron adapter nuts are used with the All Steel pillow blocks. The adapter nut at the small end of the taper is used to tighten the bearing to the shaft with the adapter nut at the large end of the taper used to remove the bearing from the shaft.



DUAL PISTON RING SEALS

- Dual piston ring seals are housed in accurately machined grooves in the adapter nuts resulting efficient labyrinth sealing action throughout the full range of misalignment.
- Seal bearing both on and off the shaft before, during and after installation



RUGGED TWO PIECE OUTER HOUSING

- Vertically split housing of heavy duty cast steel ribbed construction houses duplex tapered roller bearing.
- Elongated bolt holes provide lateral adjustment for ease of installing pillow blocks



Type C

The standard housing material for Type C mounted bearings is ASTM A48 Class 30 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, S-1 and B-1 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 all 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 thru 2-1/2", with larger sizes using collars of two piece construction. The bearing rating for the type C is determined by the sleeve resulting in a L₁₀ life at maximum speed of at least 100,000 hours.

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

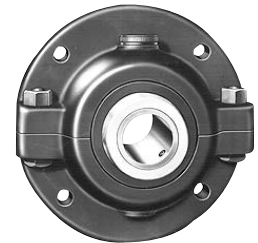
TYPE C AVAILABLE IN

| | |
|--|--------------------|
| PILLOW BLOCKS, 2 BOLT BASE | 1-3/16" TO 3-7/16" |
| PILLOW BLOCKS, 4 BOLT | 2-3/8" TO 4-15/16" |
| FLANGE BEARINGS 4 BOLT | 1-3/16" TO 3-7/16" |
| ALL IN EITHER EXPANSION OR NON-EXPANSION | |



HANGER BEARINGS
TAKE-UP BEARINGS

1-15/16" TO 3-7/16"
1-3/16" TO 2-15/16"



D, S-1 OR B-1 UNITS 1-3/16" TO 4-15/16"

| | | | |
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HOW TO ORDER/NOMENCLATURE

Bearing Reference Guide

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HOW TO ORDER Type C

There are two ways to specify DODGE Bearings. Most of the product offering 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 shown below and add any special instructions to the end of the description for options not covered by the nomenclature.

Special Bearing Requirements And Special Lubricants

DODGE Type C Bearings are factory adjusted and pre-lubricated. For applications where extreme ambient temperatures, high speeds or high loads are expected, a variety of specialty lubricants and adjustments are available. Standard

grease provided is Mobil Grease XHP222. Special lubricant options usually involve set-up charges and premiums. To order, specify type of lubricant required at the end of the product name or after the standard part number.

Example:

065294 except with Mobil Grease HTS #2 grease

or

P2B-C-207 except with Mobil Grease HTS #2 grease

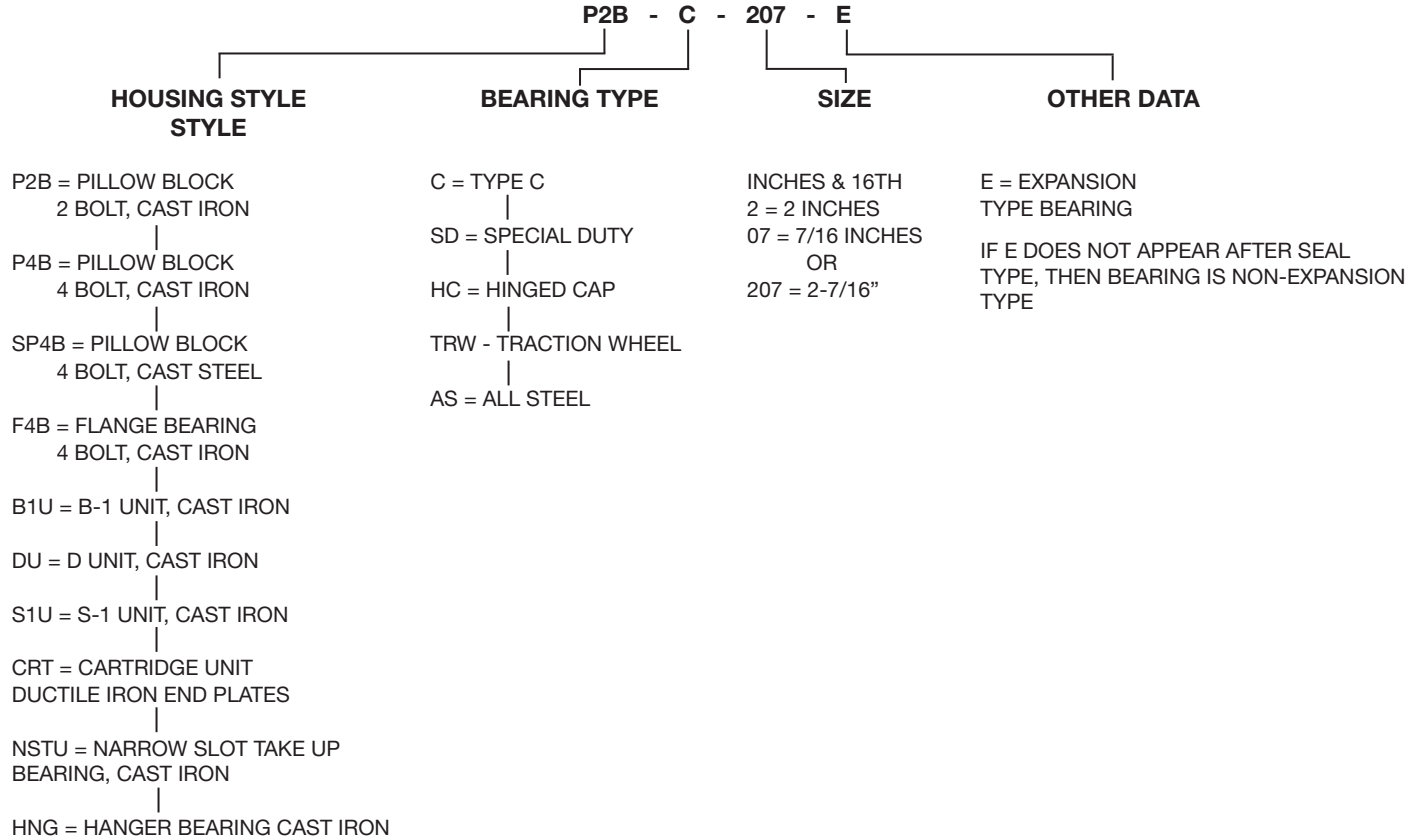
Other Special Requirements Not Listed

For applications requiring modifications not listed, we encourage you to contact our Customer Order Engineering Department for Bearings at 864-284-5700.

NOMENCLATURE

Specialty Tapered Products

Type C, Special Duty and All Steel



| | | | |
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SELECTION

Type C

Type C Bearing

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 from Table 18 on page B20-14.

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 Inches | Radial Load Rating (Lbs.) * | Max. RPM | Shaft Size Inches | Radial Load Rating (Lbs.) * | Max. RPM |
|-------------------|-----------------------------|----------|-------------------|-----------------------------|----------|
| 1-3/16 - 1-7/16 | 725 | 3000 | 2-1/2 - 2-15/16 | 3000 | 1750 |
| 1-1/2 - 1-3/4 | 1000 | 3000 | 3 - 3-7/16 | 4000 | 1500 |
| 1-15/16 | 1350 | 2500 | 3-1/2 - 4 | 5500 | 1250 |
| 2 - 2-1/4 | 1700 | 2500 | 4-7/16 - 4-1/2 | 6500 | 1000 |
| 2-3/8 - 2-7/16 | 2100 | 2000 | 4-15/16 - 5 | 7500 | 750 |

* More than 100,000 L₁₀ hours life at Max. RPM listed.

Table 2: Type C Expansion Capability, Inches

| Shaft Size, Inches | 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, Inches | Thrust loads, lbs | | Shaft Size, Inches | Thrust loads, lbs | |
|--------------------|-------------------|--------|--------------------|-------------------|--------|
| | 2-Bolt | 4-Bolt | | 2-Bolt | 4-Bolt |
| 1-3/16 - 1-7/16 | 3000 | -- | 2-1/2 - 2-15/16 | 6900 | 9300 |
| 1-1/2 - 1-3/4 | 3150 | -- | 3 - 3-7/16 | 5700 | 12000 |
| 1-15/16 | 5000 | -- | 3-1/2 - 4 | -- | 12000 |
| 2 - 2-3/16 | 5000 | -- | 4-7/16 - 4-1/2 | -- | 12000 |
| 2-3/8 - 2-7/16 | 7300 | 10000 | 4-15/16 - 5 | -- | 16500 |

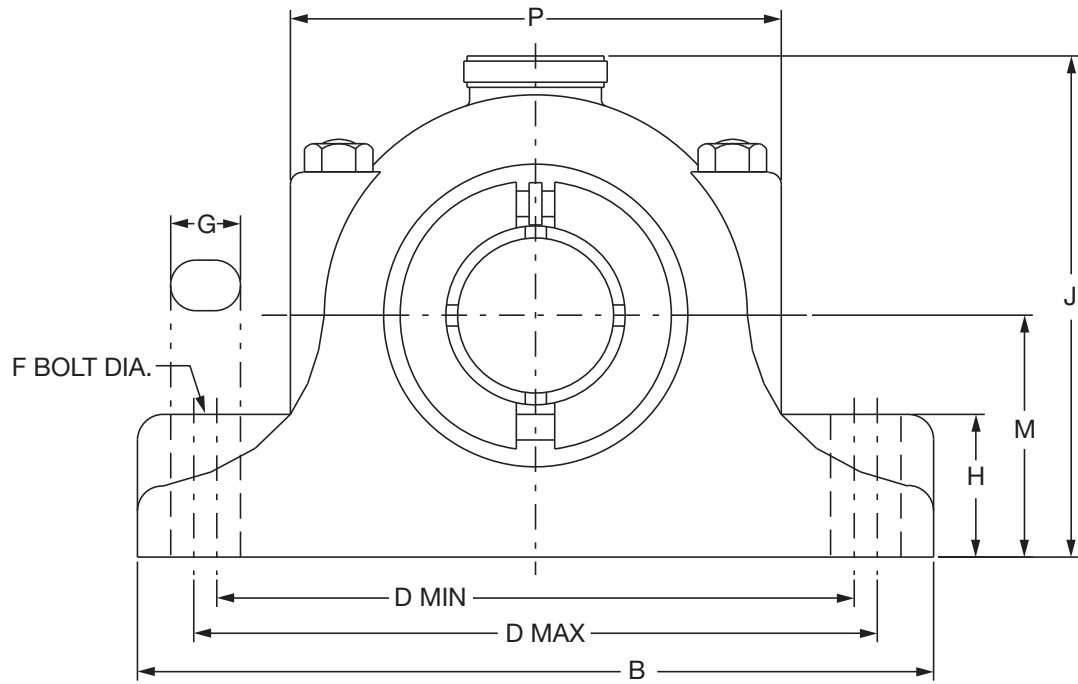
* The limits in above apply to pillow blocks. For thrust loads larger than listed or heavy thrust loading on other style housings, contact DODGE Engineering for recommendation.

| | | | |
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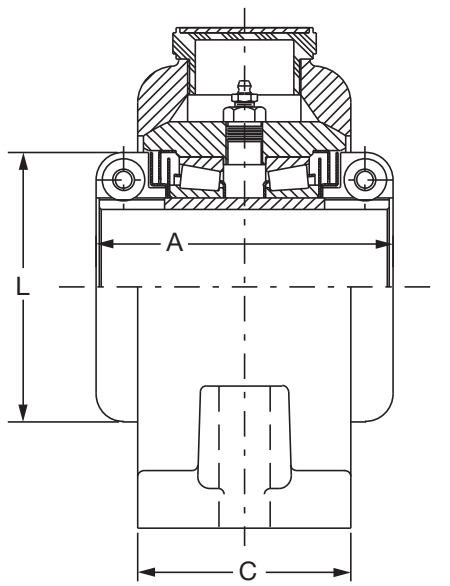
SELECTION/DIMENSIONS



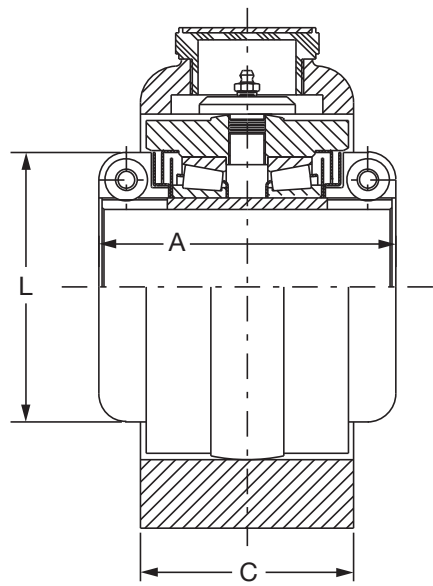
Type C Pillow Block - Inch 2-BOLT BASE



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



NON-EXPANSION CONSTRUCTION



EXPANSION CONSTRUCTION

| | | | |
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SELECTION/DIMENSIONS



Type C Pillow Block - Inch 2-BOLT BASE

| Gray Iron Non-Expansion* | | | | Gray Iron Expansion | | | |
|--------------------------|---------------|-----------|---------------------|---------------------|---------------|------------|---------------------|
| Shaft Size Inches# | Part Number | Part Name | Weight Lbs (Approx) | Shaft Size Inches# | Part Number | Part Name | Weight Lbs (Approx) |
| 1-3/16 | 065289 | P2B-C-103 | 21 | 1-3/16 | 087262 | P2B-C-103E | 22 |
| 1-1/4 | 065311 | P2B-C-104 | 20 | 1-1/4 | 087263 | P2B-C-104E | 22 |
| 1-7/16 | 065290 | P2B-C-107 | 20 | 1-7/16 | 087180 | P2B-C-107E | 20 |
| 1-1/2 | 065312 | P2B-C-108 | 28 | 1-1/2 | 087264 | P2B-C-108E | 28 |
| 1-11/16 | 065291 | P2B-C-111 | 28 | 1-11/16 | 087181 | P2B-C-111E | 28 |
| 1-3/4 | 065238 | P2B-C-112 | 26 | 1-3/4 | 087172 | P2B-C-112E | 28 |
| 1-15/16 | 065292 | P2B-C-115 | 29 | 1-15/16 | 087182 | P2B-C-115E | 29 |
| 2 | 065313 | P2B-C-200 | 47 | 2 | 087265 | P2B-C-200E | 49 |
| 2-3/16 | 065293 | P2B-C-203 | 47 | 2-3/16 | 087183 | P2B-C-203E | 49 |
| 2-1/4 | 065314 | P2B-C-204 | 47 | 2-1/4 | 087266 | P2B-C-204E | 49 |
| 2-7/16 | 065294 | P2B-C-207 | 57 | 2-7/16 | 087184 | P2B-C-207E | 57 |
| 2-1/2 | 065315 | P2B-C-208 | 83 | 2-1/2 | 087267 | P2B-C-208E | 90 |
| 2-11/16 | 065295 | P2B-C-211 | 83 | 2-11/16 | 087185 | P2B-C-211E | 90 |
| 2-7/8 | 065244 | P2B-C-214 | 83 | 2-7/8 | 087178 | P2B-C-214E | 90 |
| 2-15/16 | 065296 | P2B-C-215 | 83 | 2-15/16 | 087186 | P2B-C-215E | 90 |
| 3 | 065316 | P2B-C-300 | 132 | 3 | 087268 | P2B-C-300E | 135 |
| 3-3/16 | 065317 | P2B-C-303 | 132 | 3-3/16 | 087269 | P2B-C-303E | 135 |
| 3-7/16 | 065297 | P2B-C-307 | 128 | 3-7/16 | 087187 | P2B-C-307E | 131 |

* Furnished Unless Otherwise Specified

Consult Dodge For Sizes Not Listed.

Consult Dodge For Sizes Not Listed.

| Shaft Size Inches | A | B* | C* | D | | F Bolt Dia. | G* | H* | J | L Δ | M | P* | EXP** |
|-------------------|------|-------|------|-------|-------|-------------|------|------|-------|------|------|-------|-------|
| | | | | Min. | Max. | | | | | | | | |
| 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 Thru 2-7/16 Sizes. Larger Sizes Use A Two-piece Collar.

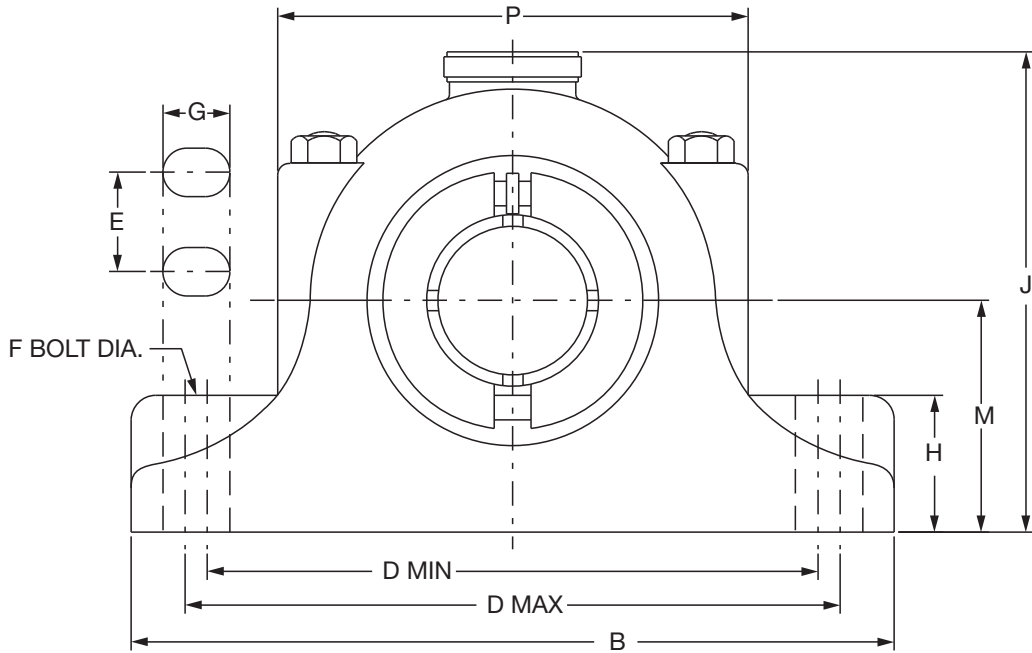
** EXP - Total Expansion For Expansion Bearing Only

| | | | |
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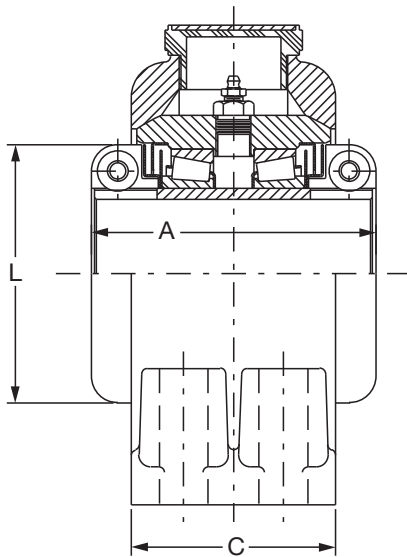
SELECTION/DIMENSIONS



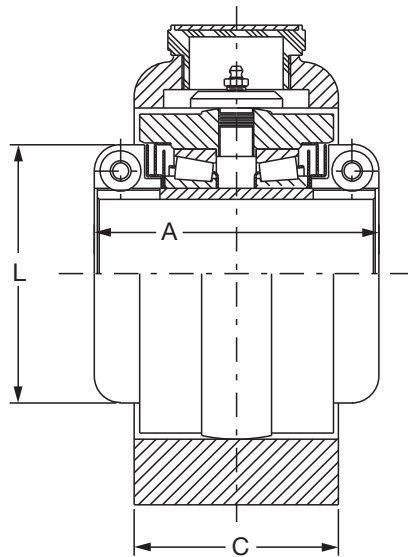
Type C Pillow Block - Inch 4-BOLT BASE



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



NON-EXPANSION CONSTRUCTION



EXPANSION CONSTRUCTION

| | | | |
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SELECTION/DIMENSIONS



Type C Pillow Block - Inch 4-BOLT BASE

| Gray Iron Non-Expansion* | | | | Gray Iron Expansion | | | |
|--------------------------|---------------|-----------|---------------------|---------------------|---------------|------------|---------------------|
| Shaft Size Inches# | Part Number | Part Name | Weight Lbs (Approx) | Shaft Size Inches# | Part Number | Part Name | Weight Lbs (Approx) |
| 2-7/16 | 065310 | P4B-C-207 | 59 | 2-7/16 | 087191 | P4B-C-207E | 59 |
| 2-15/16 | 065302 | P4B-C-215 | 85 | 2-15/16 | 087192 | P4B-C-215E | 85 |
| 3-7/16 | 065303 | P4B-C-307 | 130 | 3-7/16 | 087193 | P4B-C-307E | 135 |
| 3-15/16 | 065298 | P4B-C-315 | 230 | 3-15/16 | 087188 | P4B-C-315E | 230 |
| 4-7/16 | 065299 | P4B-C-407 | 280 | 4-7/16 | 087189 | P4B-C-407E | 290 |
| 4-15/16 | 065300 | P4B-C-415 | 370 | 4-15/16 | 087190 | P4B-C-415E | 380 |

* Furnished Unless Otherwise Specified

Consult Dodge For Sizes Not Listed.

Consult Dodge For Sizes Not Listed.

| Shaft Size Inches | 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

Δ A One-piece Collar Furnished Up Thru 2-7/16 Sizes. Larger Sizes Use A Two-piece Collar.

* These Are As Cast Surfaces. Dimensions May Fluctuate Due To Draft Angles And Pattern Shifts

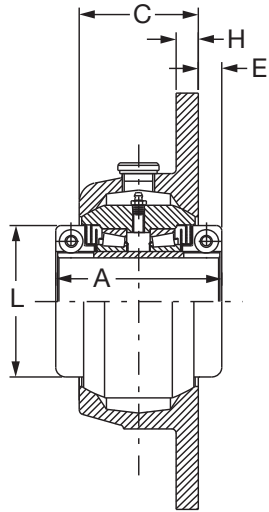
** EXP - Total Expansion For Expansion Bearing Only

| | | | |
|---------------------------------|------------------------------|---|-------------------------|
| FEATURES/BENEFITS PAGE B11-2 | SPECIFICATIONS PAGE B11-5 | HOW TO ORDER/NOMENCLATURE PAGE B11-6 | SELECTION PAGE B11-7 |
|---------------------------------|------------------------------|---|-------------------------|

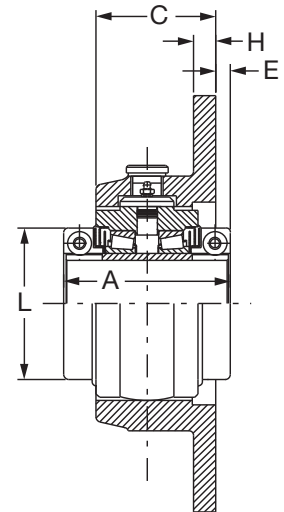
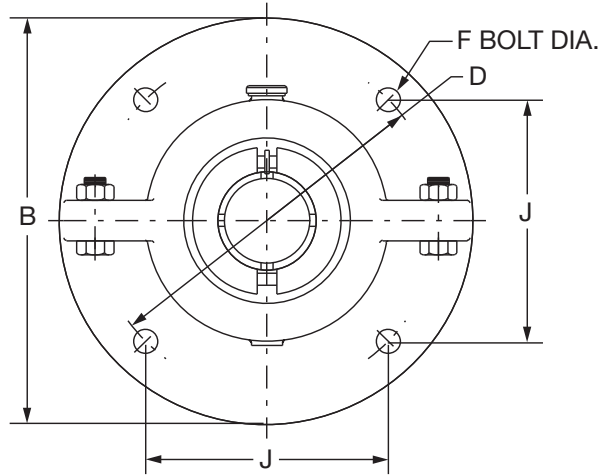
SELECTION/DIMENSIONS



Type C Flange Bearing - Inch



NON-EXPANSION CONSTRUCTION



EXPANSION CONSTRUCTION

| | | | |
|---|--------------------------------------|---|---------------------------------|
| <p>FEATURES/BENEFITS PAGE B11-2</p> | <p>SPECIFICATIONS PAGE B11-5</p> | <p>HOW TO ORDER/NOMENCLATURE PAGE B11-6</p> | <p>SELECTION PAGE B11-7</p> |
|---|--------------------------------------|---|---------------------------------|

SELECTION/DIMENSIONS



Type C Flange Bearing - Inch

| Gray Iron Non-Expansion* | | | | Gray Iron Expansion | | | |
|--------------------------|-------------|-----------|---------------------|---------------------|-------------|------------|---------------------|
| Shaft Size Inches# | Part Number | Part Name | Weight Lbs (Approx) | Shaft Size Inches# | Part Number | Part Name | Weight Lbs (Approx) |
| 1-7/16 | 104040 | F4B-C-107 | 21 | 1-7/16 | 104050 | F4B-C-107E | 21 |
| 1-11/16 | 104041 | F4B-C-111 | 31 | 1-11/16 | 104051 | F4B-C-111E | 31 |
| 1-3/4 | 104106 | F4B-C-112 | 31 | 1-3/4 | 104078 | F4B-C-112E | 31 |
| 1-15/16 | 104042 | F4B-C-115 | 37 | 1-15/16 | 104052 | F4B-C-115E | 38 |
| 2-3/16 | 104043 | F4B-C-203 | 49 | 2-3/16 | 104053 | F4B-C-203E | 49 |
| 2-7/16 | 104044 | F4B-C-207 | 63 | 2-7/16 | 104054 | F4B-C-207E | 63 |
| 2-15/16 | 104045 | F4B-C-215 | 98 | 2-15/16 | 104055 | F4B-C-215E | 98 |
| 3 | 104119 | F4B-C-300 | 140 | 3 | 104090 | F4B-C-300E | 140 |
| 3-7/16 | 104046 | F4B-C-307 | 140 | 3-7/16 | 104056 | F4B-C-307E | 140 |

* Furnished Unless Otherwise Specified

Consult Dodge For Sizes Not Listed.

Consult Dodge For Sizes Not Listed.

| Shaft Size Inches | 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 | 4.88 | 9.00 | 3.38 | 7.63 | 0.75 | 1/2 | 0.69 | 5.39 | 3.50 | 1/4 |
| 1-3/4 | 5.25 | 10.00 | 3.50 | 8.38 | 0.88 | 5/8 | 0.75 | 5.92 | 3.88 | 1/4 |
| 1-15/16 | 5.75 | 10.75 | 4.00 | 9.13 | 0.88 | 5/8 | 0.81 | 6.45 | 4.38 | 1/4 |
| 2-3/16 | 6.00 | 12.00 | 4.25 | 10.25 | 0.88 | 3/4 | 0.88 | 7.25 | 4.66 | 1/4 |
| 2-7/16 | 6.50 | 13.00 | 4.63 | 11.25 | 0.94 | 3/4 | 1.00 | 7.96 | 5.44 | 5/8 |
| 2-15/16 | 7 | 14.50 | 5.375 | 12.5 | 0.81 | 7/8 | 1.13 | 8.839 | 5.94 | 1/4 |
| 3 | | | | | | | | | | |
| 3-7/16 | | | | | | | | | | |

Δ A One-Piece Collar Furnished Up Thru 2-7/16 Sizes.

Larger Sizes Use A Two-Piece Collar.

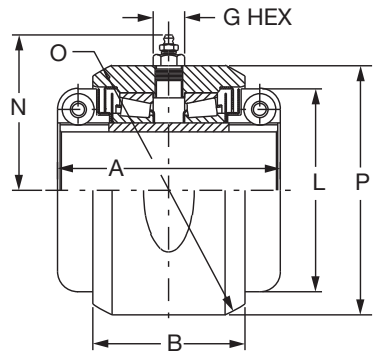
* EXP - Total Expansion For Expansion Bearing Only.

| | | | |
|---------------------------------|------------------------------|---|-------------------------|
| FEATURES/BENEFITS PAGE B11-2 | SPECIFICATIONS PAGE B11-5 | HOW TO ORDER/NOMENCLATURE PAGE B11-6 | SELECTION PAGE B11-7 |
|---------------------------------|------------------------------|---|-------------------------|

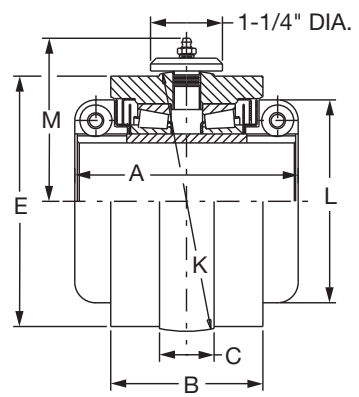
SELECTION/DIMENSIONS



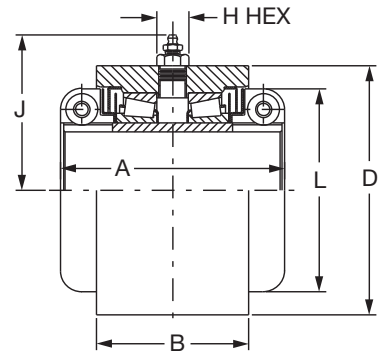
Type C Units - Inch



D UNIT
USED IN NON-EXPANSION HOUSINGS



S-1 UNIT
USED IN EXPANSION HOUSINGS



B-1 UNIT
USED IN CUSTOMER MANUFACTURED HOUSINGS

Type C Units - Inches

| Shaft Size Inches # | D Units | | S-1 Units | | B-1 Units | | Weight Lbs (Approx) |
|---------------------|-------------|-----------|-------------|-----------|-------------|-----------|---------------------|
| | Part Number | Part Name | Part Number | Part Name | Part Number | Part Name | |
| 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.

| | | | |
|---------------------------------|------------------------------|---|-------------------------|
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SELECTION/DIMENSIONS



Type C Units - Inch

Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

S-2000

UNISPHERE II

IMPERIAL

UNIFIED SAF

| Shaft Size Inches | 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 | 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 |
| 1-3/4 | | | | | | | | | | | | | | |
| 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 | 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 |
| 2-1/4 | | | | | | | | | | | | | | |
| 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 | 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 |
| 2-7/8 | | | | | | | | | | | | | | |
| 2-15/16 | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | |
| 3-3/16 | 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 |
| 3-1/4 | | | | | | | | | | | | | | |
| 3-7/16 | | | | | | | | | | | | | | |
| 3-1/2 | | | | | | | | | | | | | | |
| 3-11/16 | 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 |
| 3-15/16 | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | |
| 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 Thru 2-7/16 Sizes. Larger Sizes Use A Two-Piece Collar

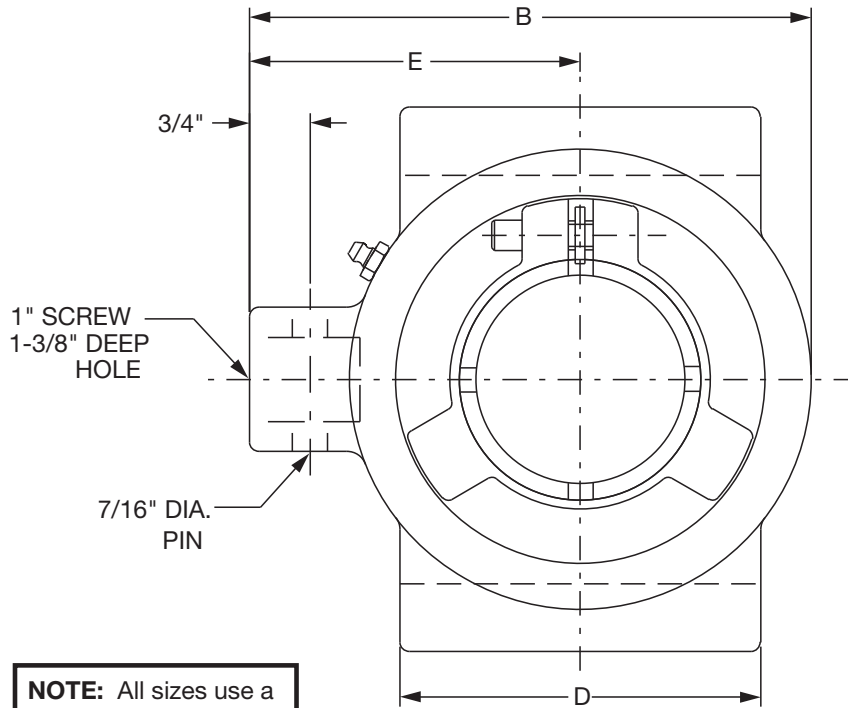
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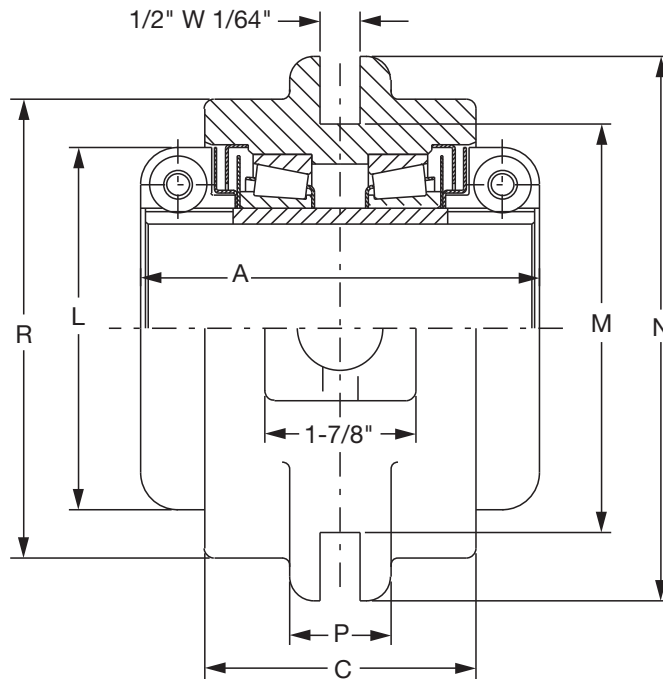


SELECTION/DIMENSIONS

Type C Take-Up Bearing



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



| | | | |
|---------------------------------|------------------------------|---|-------------------------|
| FEATURES/BENEFITS PAGE B11-2 | SPECIFICATIONS PAGE B11-5 | HOW TO ORDER/NOMENCLATURE PAGE B11-6 | SELECTION PAGE B11-7 |
|---------------------------------|------------------------------|---|-------------------------|

SELECTION/DIMENSIONS



Type C Take-Up Bearing

| Gray Iron | | | |
|---------------------|-------------|------------|---------------------|
| Shaft Size Inches # | Part Number | Part Name | Weight Lbs (Approx) |
| 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 |

Consult Dodge For Sizes Not Listed.

| Shaft Size Inches | 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

Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

S-2000

UNISPHERE II

IMPERIAL

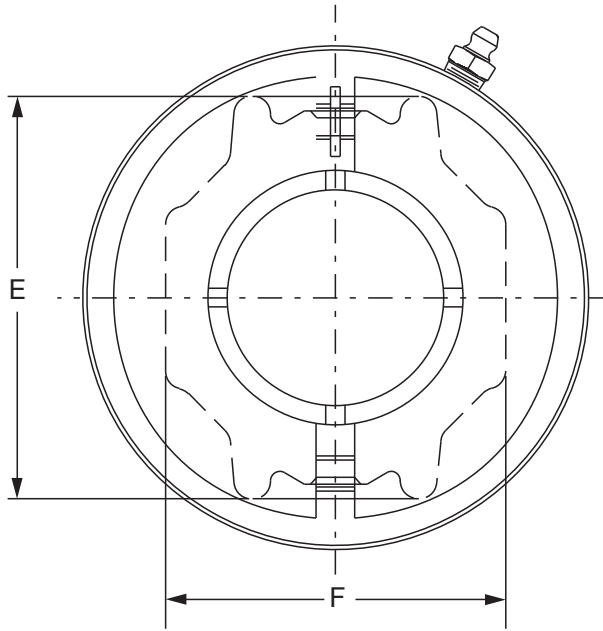
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| FEATURES/BENEFITS PAGE B11-2 | SPECIFICATIONS PAGE B11-5 | HOW TO ORDER/NOMENCLATURE PAGE B11-6 | SELECTION PAGE B11-7 |
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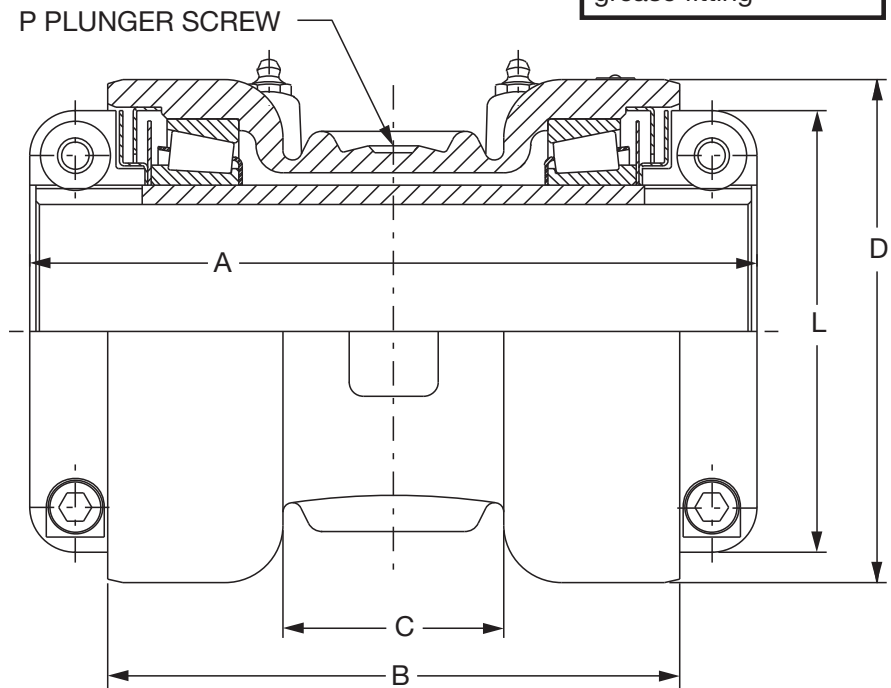
SELECTION/DIMENSIONS



Type C Hanger Bearing



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



| | | | |
|---|--------------------------------------|---|---------------------------------|
| <p>FEATURES/BENEFITS PAGE B11-2</p> | <p>SPECIFICATIONS PAGE B11-5</p> | <p>HOW TO ORDER/NOMENCLATURE PAGE B11-6</p> | <p>SELECTION PAGE B11-7</p> |
|---|--------------------------------------|---|---------------------------------|



Type C Hanger Bearing

| Gray Iron | | | |
|---------------------|---------------|-----------|---------------------|
| Shaft Size Inches # | Part Number | Part Name | Weight Lbs (Approx) |
| 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 |

Consult Dodge For Sizes Not Listed.

| Shaft Size Inches | 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

| | | | |
|---------------------------------|------------------------------|---|-------------------------|
| FEATURES/BENEFITS PAGE B11-2 | SPECIFICATIONS PAGE B11-5 | HOW TO ORDER/NOMENCLATURE PAGE B11-6 | SELECTION PAGE B11-7 |
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SPECIFICATION

Special Duty

The standard housing material for Special Duty mounted bearings is ASTM A48 Class 30 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 D, S-1 and B-1 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 mounted to the shaft with a tapered adaptor sleeve extending thru 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 adaptor nut is used on sizes thru 3-1/2" with two adaptor 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 thru 3-1/2" use a grooved seal ring carrier at one end and grooved adaptor at the opposite end for carrying the piston ring seals. Larger sizes have grooved adaptor nuts to carry the piston ring seals.

SPECIAL DUTY (Hinged Cap Type)

The standard housing material for Special Duty hinged cap bearings is ASTM A48 Class 30 Iron having a minimum tensile strength of 30,000 psi. The housing is equipped with a brass hand wheel for ease of removal of the S-1 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 thru 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. Besides the features specified above the hinged cap pillow blocks have many other features in common with the special duty mounted bearings.

TRACTION WHEEL

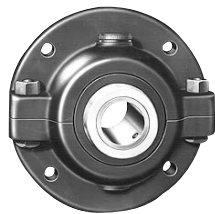
The traction wheel is to be equipped with a ductile iron (ASTM 536 grade 65-45-10) hub, having indirect mounted tapered roller bearings mounted to ASTI 1018 shafting secured in a support and having drops of 7-3/16", 8" and 10". Combination labyrinth and dynaface seals shall be used.

SPECIAL DUTY AVAILABLE IN



Pillow Blocks,
2-Bolt Base
1-3/8" To 3-1/2"

Pillow Blocks,
4-Bolt Base
2-1/4" To 12"



Flange
Bearings
4-Bolt
1-3/16" To 6"



All In Either Expansion Or Non-Expansion D, S1 & B1 Units 1-3/8" To 12"



Hinged Cap Pillow Blocks Available In Pillow Blocks,
2-Bolt Base
1-3/8" To 2-15/16"
All In Either Expansion Or Non-Expansion

Hinged Cap S-1 Units
1-3/8" To 2-15/16"



Traction Wheel

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



HOW TO ORDER

Special Duty

There are two ways to specify DODGE Bearings. Most of the product offering 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 shown on the next page and add any special instructions to the end of the description for options not covered by the nomenclature.

SPECIAL BEARING REQUIREMENTS AND LUBRICANTS

DODGE Bearings are factory adjusted and pre-lubricated with lithium based NLGI Grade 2 grease. For applications where extreme ambient temperatures, high speeds or high loads are

expected, a variety of specialty lubricants and adjustments are available. Special lubricant options usually involve set-up charges and premiums. To order, specify type of lubricant required at the end of the product name or after the standard part number.

Example:

066231 except with Mobilith SHC 460 grease and .012-.015 Lateral End Play

or

P4B-SD-215 except with Mobilith SHC 460 grease and .012-.015 Lateral End Play

OTHER SPECIAL REQUIREMENTS NOT LISTED

For applications requiring modifications not listed, we encourage you to contact our Customer Order Engineering Department for Bearings at 864-284-5700.

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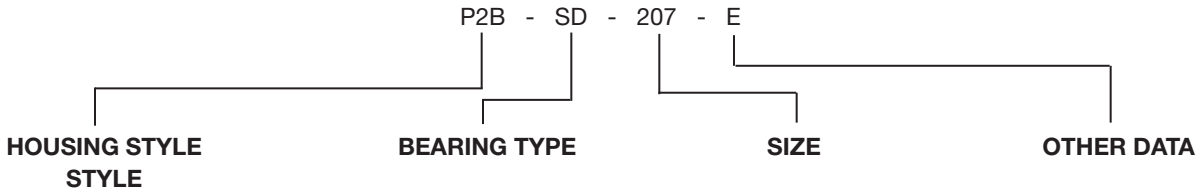
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NOMENCLATURE

Specialty Tapered Products



P2B = PILLOW BLOCK
2 BOLT, CAST IRON

P4B = PILLOW BLOCK
4 BOLT, CAST IRON

SP4B = PILLOW BLOCK
4 BOLT, CAST STEEL

F4B = FLANGE BEARING
4 BOLT, CAST IRON

B1U = B-1 UNIT, CAST IRON

DU = D UNIT, CAST IRON

S1U = S-1 UNIT, CAST IRON

CRT = CARTRIDGE UNIT
DUCTILE IRON END PLATES

NSTU = NARROW SLOT TAKE UP
BEARING, CAST IRON

HNG = HANGER BEARING CAST IRON

C = TYPE C

SD = SPECIAL DUTY

HC = HINGED CAP

TRW - TRACTION WHEEL

AS = ALL STEEL

INCHES & 16TH

2 = 2 INCHES

07 = 7/16 INCHES

OR

207 = 2-7/16"

E = EXPANSION
TYPE BEARING

IF E DOES NOT APPEAR
AFTER SEAL TYPE, THEN
BEARING IS NON-EXPANSION
TYPE

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SELECTION

Special Duty

SPECIAL DUTY-DOUBLE ROW TAPERED ROLLER BEARINGS

DODGE Special Duty Double Row 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. DODGE Special Duty Tapered Roller Bearings have been applied successfully even when these limits have been exceeded under controlled operating conditions. Contact DODGE Application Engineering (864) 284-5700 for applications which exceed the recommendations of this catalog.

L₁₀ Hours Life* --- The life which may be expected from at least 90% of a given group of bearings operating under identical conditions.

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

Where:

C₉₀ = Dynamic Capacity (Table 4, pg. B11-25), lbs

P = Equivalent Radial Load, lbs.

GENERAL

Heavy Service --- For heavy shock loads, frequent shock loads, or severe vibrations, add up to 50% (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 L₁₀ 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 L₁₀ 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.

| RPM RANGE | 20-200 | 201-2000 | Over 2000 |
|-------------------------|--------------------|--------------------|---------------------|
| 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, pg. B11-29 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 Size | Tolerance, Inches |
|------------------|-------------------|
| Up To 1-1/2" | +0.000-.002" |
| 1-9/16 To 2-1/2" | +0.000-.003" |
| 2-1/2 To 4" | +0.000-.004" |
| 4-3/16 To 6" | +0.000-.005" |
| 6-7/16 To 8" | +0.000-.006" |

L₁₀ Life Adjustment - The calculated L₁₀ Life obtained from this procedure is subject to life adjustment factors in accordance with ABMA standards described on page B16-9. Consult Application Engineering for assistance.

SELECTING BEARINGS SUPPORTING RADIAL LOADS ONLY

1. Define L₁₀ Life Hours desired.
2. Establish bearing radial load, F_R (F_R = P for Pure Radial Load Conditions). The DODGE program BEST can be used to find application loads.
3. Establish RPM.

Using the easy selection Table 5, pg. B11-26 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:

1. L₁₀ Life = 30,000 Hours
2. Radial load = 3800 lbs.
3. RPM = 1,000

At the intersection of the 1,000 RPM column and the 30,000 hours L₁₀ life row, the equivalent radial load of 4362 lbs. Exceeds the 3800 lbs. Radial load for shaft sizes 2-1/8" to 2-1/4". A bearing with bore ranging from 2-1/8" to 2-1/4" may be used for this application.



SELECTION

Special Duty

ALTERNATE METHOD A - SELECTING A BEARING FOR AN L₁₀ LIFE VALUE NOT SHOWN IN THE EASY SELECTION CHART.

The L₁₀ life equation can be rearranged so that the bearing dynamic capacity C is identified in terms of L₁₀, RPM and P.

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

(P = F_R for Pure Radial Load Conditions)

Since the L₁₀, RPM, and P are known, solve for C₉₀. Select from the dynamic capacity column on Table 4, pg. B11-25 the C₉₀ value equal to or greater than the C₉₀ value just calculated. The bore size on the far left represents the bore size selection. Check that the application RPM does not exceed the MAX. RPM on Table 4. When selecting an L₁₀ 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, lbs.
- FR = Radial load, lbs.
- FA = Thrust (axial) load, lbs.
- 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 FA/FR and compare to e for the selected bore size. Determine X and Y from Table 4, pg. B11-25

depending on whether FA/FR is equal to or less than e, or FA/FR 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 L₁₀, or it can be compared to the allowable equivalent radial load ratings for the speed and hours life desired in the easy selection Table 5, pg. B11-26 & B11-27.

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, pg. B11-25 for FA/FR > e. Substitute Y and F_A into the equivalent load equation. P (equivalent radial load) can be used in the life formula to determine L₁₀ or it can be compared to the allowable equivalent radial load ratings for the speed and hours life desired in the easy selection Table 5, pg. B11-26 & B11-27.

LUBRICATION

DODGE 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, pg. B11-29 For very low and high speeds, for heavy loads and for low and high temperatures, special greases must be used. Contact DODGE Application Engineering (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 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 Special Duty Tapered Roller Bearings. Special Duty bearings are designed to allow as

The DODGE Bearing Evaluation and Selection Technique (BEST) is a menu driven computer program that calculates bearing loads, fatigue life and operating temperature for a two bearing shaft system based on user supplied input parameters. This interactive program is available at www.ptwizd.com under the Product Selection area.

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much as 2° to 5° of static misalignment up to 8" bore size. 1° to 1.5° for bore sizes greater than 8". 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 4: Special Duty Roller Bearings Radial/Thrust Factors

| Bore Size | e | $F_A/F_R \leq e$ | | $F_A/F_R \geq e$ | | Dynamic Capacity C_{90} (TS) | | Maximum RPM |
|-----------------|------|------------------|------|------------------|------|--------------------------------|---------|-------------|
| | | X | Y | X | Y | LBS. | NEWTONS | |
| 1-3/8 to 1-11/2 | 0.31 | 1 | 0 | 0.40 | 1.97 | 7,717 | 34,337 | 3250 |
| 1-9/16 to 1-3/4 | 0.43 | 1 | 0 | 0.40 | 1.39 | 8,177 | 36,373 | 2900 |
| 1-7/8 to 2 | 0.46 | 1 | 0 | 0.40 | 1.31 | 8,266 | 36,769 | 2700 |
| 2-1/8 to 2-1/4 | 0.49 | 1 | 0 | 0.40 | 1.23 | 10,716 | 47,681 | 2300 |
| 2-3/8 to 2-1/2 | 0.51 | 1 | 0 | 0.40 | 1.18 | 11,010 | 48,990 | 2180 |
| 2-5/8 to 3 | 0.27 | 1 | 0 | 0.40 | 2.23 | 21,331 | 94,912 | 1830 |
| 3-3/16 to 3-1/2 | 0.43 | 1 | 0 | 0.40 | 1.39 | 23,553 | 104,800 | 1510 |
| 3-11/16 to 4 | 0.43 | 1 | 0 | 0.40 | 1.41 | 35,145 | 156,380 | 1330 |
| 4-7/16 to 4-1/2 | 0.49 | 1 | 0 | 0.40 | 1.23 | 35,145 | 156,380 | 1120 |
| 4-15/16 to 5 | 0.46 | 1 | 0 | 0.40 | 1.31 | 43,550 | 214,339 | 1040 |
| 5-7/16 to 6 | 0.48 | 0.87 | 1.80 | 0.70 | 2.18 | 62,000 | 275,873 | 860 |
| 6-1/2 to 7 | 0.54 | 0.87 | 1.61 | 0.70 | 1.95 | 68,700 | 305,685 | 760 |
| 7-15/16 to 8 | 0.34 | 0.87 | 2.55 | 0.70 | 3.08 | 79,200 | 352,406 | 700 |
| 8-1/2 to 10 | 0.45 | 0.87 | 1.90 | 0.70 | 2.30 | 76,500 | 340,392 | 550 |
| 11 to 12 | 0.34 | 0.87 | 2.53 | 0.70 | 3.06 | 124,000 | 551,746 | 490 |

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 .259 and compare to C_{90} .

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Table 5: Dodge Special Duty Tapered Roller Bearings

| Bore Size | Hours Life | Allowable Equivalent Radial Load Rating (Lbs.) At Various Revolutions Per Minute | | | | | | | | | | | | |
|-------------|---------------|--|--------------|--------------|--------------|--------------|--------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | | 50 | 100 | 250 | 500 | 750 | 1000 | 1250 | 1500 | 1750 | 2000 | 2500 | 3000 | 3500 |
| 1-3/8 | 5,000 | 13210 | 10730 | 8151 | 6621 | 5862 | 5378 | 5029 | 4762 | 4546 | 4368 | 4085 | 3868 | 3693 |
| | 10,000 | 10730 | 8715 | 6621 | 5378 | 4762 | 4368 | 4085 | 3868 | 3693 | 3548 | 3318 | 3142 | 3000 |
| | 30,000 | 7717 | 6268 | 4762 | 3868 | 3425 | 3142 | 2938 | 2782 | 2656 | 2552 | 2386 | 2259 | 2157 |
| | 50,000 | 6621 | 5378 | 4085 | 3318 | 2938 | 2695 | 2521 | 2386 | 2279 | 2189 | 2047 | 1938 | 1851 |
| 1-7/16 | 5,000 | 13997 | 11369 | 8637 | 7015 | 6212 | 5698 | 5329 | 5045 | 4817 | 4628 | 4329 | 4098 | |
| | 10,000 | 11369 | 9235 | 7015 | 5698 | 5045 | 4628 | 4329 | 4098 | 3913 | 3759 | 3516 | 3329 | |
| | 30,000 | 8177 | 6642 | 5045 | 4098 | 3629 | 3329 | 3113 | 2948 | 2814 | 2704 | 2529 | 2394 | |
| | 50,000 | 7015 | 5698 | 4329 | 3516 | 3113 | 2856 | 2671 | 2529 | 2414 | 2320 | 2169 | 2054 | |
| 1-11/16 | 5,000 | 14149 | 11493 | 8731 | 7092 | 6279 | 5760 | 5387 | 5100 | 4870 | 4679 | 4376 | | |
| | 10,000 | 11493 | 9335 | 7092 | 5760 | 5100 | 4679 | 4376 | 4143 | 3956 | 3800 | 3554 | | |
| | 30,000 | 8266 | 6714 | 5100 | 4143 | 3668 | 3365 | 3147 | 2980 | 2845 | 2733 | 2556 | | |
| | 50,000 | 7092 | 5760 | 4376 | 3554 | 3147 | 2887 | 2700 | 2556 | 2441 | 2345 | 2193 | | |
| 2 | 5,000 | 18343 | 14899 | 11318 | 9193 | 8140 | 7467 | 6984 | 6612 | 6313 | 6065 | | | |
| | 10,000 | 14899 | 12102 | 9193 | 7467 | 6612 | 6065 | 5673 | 5371 | 5128 | 4927 | | | |
| | 30,000 | 10716 | 8704 | 6612 | 5371 | 4756 | 4362 | 4080 | 3863 | 3688 | 3543 | | | |
| | 50,000 | 9193 | 7467 | 5673 | 4608 | 4080 | 3743 | 3500 | 3314 | 3164 | 3040 | | | |
| 2-1/8 | 5,000 | 18847 | 15308 | 11629 | 9446 | 8364 | 7672 | 7175 | 6794 | 6487 | 6232 | | | |
| | 10,000 | 15308 | 12434 | 9446 | 7672 | 6794 | 6232 | 5828 | 5518 | 5269 | 5062 | | | |
| | 30,000 | 11010 | 8943 | 6794 | 5518 | 4886 | 4482 | 4192 | 3969 | 3789 | 3641 | | | |
| | 50,000 | 9446 | 7672 | 5828 | 4734 | 4192 | 3845 | 3596 | 3405 | 3251 | 3123 | | | |
| 2-1/2 | 5,000 | 36514 | 29658 | 22530 | 18300 | 16204 | 14864 | 13902 | 13162 | 12567 | | | | |
| | 10,000 | 29658 | 24090 | 18300 | 14864 | 13162 | 12074 | 11292 | 10691 | 10208 | | | | |
| | 30,000 | 21331 | 17326 | 13162 | 10691 | 9466 | 8684 | 8121 | 7689 | 7342 | | | | |
| | 50,000 | 18300 | 14864 | 11292 | 9172 | 8121 | 7450 | 6967 | 6597 | 6298 | | | | |
| 3 | 5,000 | 40317 | 32748 | 24877 | 20207 | 17892 | 16413 | 15350 | 14533 | | | | | |
| | 10,000 | 32748 | 26600 | 20207 | 16413 | 14533 | 13331 | 12468 | 11804 | | | | | |
| | 30,000 | 23553 | 19131 | 14533 | 11804 | 10452 | 9588 | 8967 | 8490 | | | | | |
| | 50,000 | 20207 | 16413 | 12468 | 10127 | 8967 | 8226 | 7693 | 7284 | | | | | |
| 3-1/2 | 5,000 | 60160 | 48865 | 37121 | 30152 | 26698 | 24491 | 22905 | | | | | | |
| | 10,000 | 48865 | 39691 | 30152 | 24491 | 21686 | 19893 | 18604 | | | | | | |
| | 30,000 | 35145 | 28547 | 21686 | 17614 | 15597 | 14307 | 13381 | | | | | | |
| | 50,000 | 30152 | 24491 | 18604 | 15112 | 13381 | 12274 | 11480 | | | | | | |
| 4 | 5,000 | 60160 | 48865 | 37121 | 30152 | 26698 | 24491 | | | | | | | |
| | 10,000 | 48865 | 39691 | 30152 | 24491 | 21686 | 19893 | | | | | | | |
| | 30,000 | 35145 | 28547 | 21686 | 17614 | 15597 | 14307 | | | | | | | |
| | 50,000 | 30152 | 24491 | 18604 | 15112 | 13381 | 12274 | 11480 | | | | | | |
| 4-1/2 | 5,000 | 74548 | 60551 | 45998 | 37362 | 33083 | 30348 | | | | | | | |
| | 10,000 | 60551 | 49183 | 37362 | 30348 | 26872 | 24650 | | | | | | | |
| | 30,000 | 43550 | 35374 | 26872 | 21827 | 19327 | 17729 | | | | | | | |
| | 50,000 | 37362 | 30348 | 23054 | 18726 | 16581 | 15210 | | | | | | | |
| 5 | 5,000 | 74548 | 60551 | 45998 | 37362 | 33083 | 30348 | | | | | | | |
| | 10,000 | 60551 | 49183 | 37362 | 30348 | 26872 | 24650 | | | | | | | |
| | 30,000 | 43550 | 35374 | 26872 | 21827 | 19327 | 17729 | | | | | | | |
| | 50,000 | 37362 | 30348 | 23054 | 18726 | 16581 | 15210 | | | | | | | |
| UNIFIED SAF | 5,000 | 74548 | 60551 | 45998 | 37362 | 33083 | 30348 | | | | | | | |
| | 10,000 | 60551 | 49183 | 37362 | 30348 | 26872 | 24650 | | | | | | | |
| | 30,000 | 43550 | 35374 | 26872 | 21827 | 19327 | 17729 | | | | | | | |
| | 50,000 | 37362 | 30348 | 23054 | 18726 | 16581 | 15210 | | | | | | | |

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Table 5: Dodge Special Duty Tapered Roller Bearings

| Bore Size | Hours Life | Allowable Equivalent Radial Load Rating (Lbs.) At Various Revolutions Per Minute | | | | | | | | | | | | |
|---------------------------|---------------|--|---------------|--------------|--------------|--------------|------|------|------|------|------|------|------|------|
| | | 50 | 100 | 250 | 500 | 750 | 1000 | 1250 | 1500 | 1750 | 2000 | 2500 | 3000 | 3500 |
| 5-7/16 5-15/16 6 | 5,000 | 106130 | 86205 | 65485 | 53190 | 47100 | | | | | | | | |
| | 10,000 | 86205 | 70020 | 53190 | 43205 | 38255 | | | | | | | | |
| | 30,000 | 62000 | 50360 | 38255 | 31075 | 27515 | | | | | | | | |
| | 50,000 | 53190 | 43205 | 32820 | 26660 | 23605 | | | | | | | | |
| 100,000 | 43205 | 35090 | 26660 | 21655 | 19175 | | | | | | | | | |
| 6-1/2 6-15/16 7 | 5,000 | 117600 | 95520 | 72560 | 58940 | 52190 | | | | | | | | |
| | 10,000 | 95520 | 77585 | 58940 | 47575 | 42390 | | | | | | | | |
| | 30,000 | 68700 | 55800 | 42390 | 34430 | 30490 | | | | | | | | |
| | 50,000 | 58940 | 47875 | 36365 | 29540 | 26155 | | | | | | | | |
| 100,000 | 47875 | 38885 | 29540 | 23995 | 21245 | | | | | | | | | |
| 7-15/16 8 | 5,000 | 135570 | 110120 | 83650 | 67945 | 60165 | | | | | | | | |
| | 10,000 | 110120 | 89445 | 67945 | 55190 | 48870 | | | | | | | | |
| | 30,000 | 79200 | 64330 | 48870 | 39695 | 35145 | | | | | | | | |
| | 50,000 | 67945 | 55190 | 41925 | 34055 | 30155 | | | | | | | | |
| 100,000 | 55190 | 44830 | 34055 | 27660 | 24490 | | | | | | | | | |
| 8-1/2 9 9-1/2 10 | 5,000 | 130950 | 106365 | 80800 | 65630 | | | | | | | | | |
| | 10,000 | 106365 | 86395 | 65630 | 53310 | | | | | | | | | |
| | 30,000 | 76500 | 62135 | 47250 | 38340 | | | | | | | | | |
| | 50,000 | 65630 | 53310 | 40495 | 32895 | | | | | | | | | |
| 100,000 | 53310 | 43300 | 32895 | 26715 | | | | | | | | | | |
| 11 12 | 5,000 | 212260 | 172410 | 130970 | 106380 | | | | | | | | | |
| | 10,000 | 172410 | 140040 | 106380 | 86410 | | | | | | | | | |
| | 30,000 | 124000 | 100720 | 76510 | 62145 | | | | | | | | | |
| | 50,000 | 106380 | 86410 | 65640 | 53315 | | | | | | | | | |
| 100,000 | 86410 | 70185 | 53315 | 43305 | | | | | | | | | | |

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Special Duty

Table 6: Special Duty Pillow Blocks Housing Permissible Thrust Load, Lbs. *

| Shaft Size, Inches | 2-Bolt | 4-Bolt | Shaft Size, Inches | 2-Bolt | 4-Bolt |
|--------------------|--------|--------|--------------------|--------|--------|
| 1-3/8 | 1521 | --- | 3-11/16 | --- | 8250 |
| 1-7/16 | | | 3-3/4 | | |
| 1-1/2 | | | 3-7/8 | | |
| 1-9/16 | 1772 | --- | 3-15/16 | --- | 10538 |
| 1-5/8 | | | 4 | | |
| 1-11/16 | | | 4-7/16 | | |
| 1-3/4 | 1964 | --- | 4-1/2 | --- | 12190 |
| 1-7/8 | | | 4-15/16 | | |
| 1-15/16 | | | 5 | | |
| 2 | 2325 | --- | 5-7/16 | --- | 17957 |
| 2-1/8 | | | 5-15/16 | | |
| 2-3/16 | | | 6 | | |
| 2-1/4 | 3122 | 3122 | 6-1/2 | --- | 24115 |
| 2-3/8 | | | 6-15/16 | | |
| 2-7/16 | | | 7 | | |
| 2-1/2 | 4375 | 4375 | 7-15/16 | --- | 27260 |
| 2-5/8 | | | 8 | | |
| 2-11/16 | | | 8-1/2 | | |
| 2-3/4 | 4375 | 4375 | 9 | --- | 38138 |
| 2-13/16 | | | 9-1/2 | | |
| 2-7/8 | | | 10 | | |
| 2-15/16 | 6118 | 6118 | 11 | --- | 50655 |
| 3 | | | 12 | | |
| 3-3/16 | | | | | |
| 3-1/4 | | | | | |
| 3-3/8 | | | | | |
| 3-7/16 | | | | | |
| 3-1/2 | | | | | |

* 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

| Shaft Size - Inches | Special Duty | | |
|---------------------|--------------|-------------|------|
| | 2-Blt. P.B. | 4-Blt. P.B. | Fig. |
| 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 |
| 6-1/2 - 7 | - | 1-1/2 | - |
| 7-15/16 - 8 | - | 1-1/2 | - |
| 8-1/2 - 10 | - | 1-1/2 | - |
| 11 - 12 | - | 1-1/2 | - |



Special Duty

Table 8: Definition of Operating Conditions For Tapered Roller Bearings

| | |
|-----------------------|--|
| LOW SPEED | UP TO 20% OF MAX. RPM (TABLE 4) |
| 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 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 |

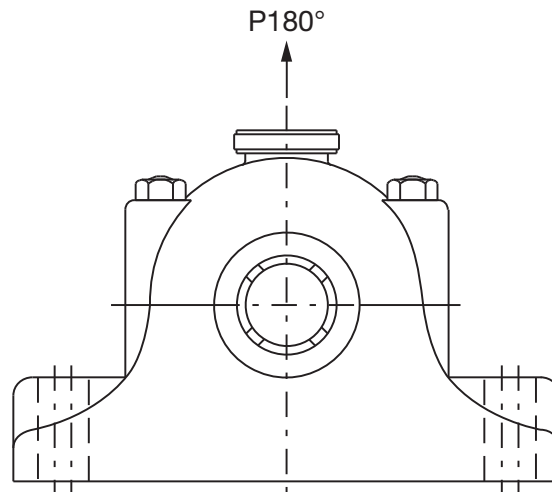


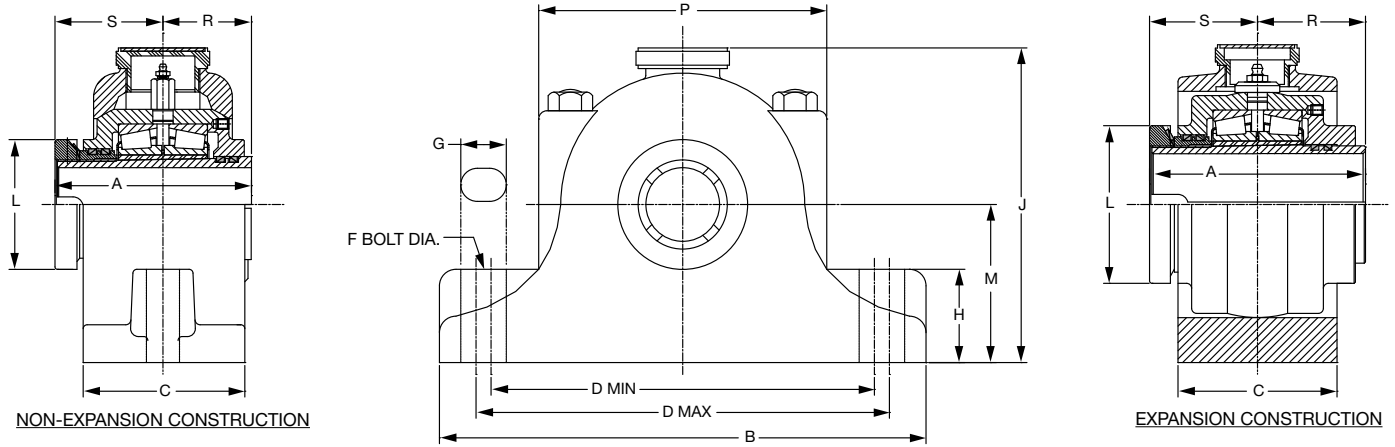
Table 9: Pillow Block Housing Ratings, Special Duty

| Shaft Size (Inches) | Housing Strength Lbs. 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 |
| 3-11/16 - 4 | 21,600 |
| 4-7/16 - 4-1/2 | 25,800 |
| 4-15/16 - 5 | 22,900 |
| 5-7/16 - 6 | 41,500 |
| 6-1/2 - 7 | 82,000 |
| 7-15/16 - 8 | 104,000 |



SELECTION/DIMENSIONS

Special Duty Pillow Block - Inch 2-BOLT BASE



| Gray Iron Non-Expansion* | | | | Gray Iron Expansion † | | | |
|--------------------------|---------------|------------|---------------------|-----------------------|---------------|--------------|---------------------|
| Shaft Size Inches # | Part Number | Part Name | Weight Lbs (Approx) | Shaft Size Inches # | Part Number | Part Name | Weight Lbs (Approx) |
| 1-3/8 | 066213 | P2B-SD-106 | 20 | 1-3/8 | 066249 | P2B-SD-106E | 22 |
| 1-7/16 | 066214 | P2B-SD-107 | 20 | 1-7/16 | 066250 | P2B-SD-107E | 22 |
| 1-1/2 | 066300 | P2B-SD-108 | 20 | 1-1/2 | 066306 | P2B-SD-108E | 22 |
| 1-9/16 | 066212 | P2B-SD-109 | 27 | 1-9/16 | 066248 | P2B-SD-109E | 28 |
| 1-5/8 | 066228 | P2B-SD-110 | 27 | 1-5/8 | 066243 | P2B-SD-110E | 28 |
| 1-11/16 | 066216 | P2B-SD-111 | 27 | 1-11/16 | 066252 | P2B-SD-111E | 28 |
| 1-3/4 | 066301 | P2B-SD-112 | 27 | 1-3/4 | 066307 | P2B-SD-112E | 28 |
| 1-7/8 | 066217 | P2B-SD-114 | 33 | 1-7/8 | 066253 | P2B-SD-114E | 33 |
| 1-15/16 | 066218 | P2B-SD-115 | 32 | 1-15/16 | 066254 | P2B-SD-115E | 32 |
| 2 | 066302 | P2B-SD-200 | 32 | 2 | 066308 | P2B-SD-200E | 32 |
| 2-1/8 | 066215 | P2B-SD-202 | 48 | 2-1/8 | 066257 | P2B-SD-202EE | 50 |
| 2-3/16 | 066220 | P2B-SD-203 | 47 | 2-3/16 | 066256 | P2B-SD-203E | 49 |
| 2-1/4 | 066303 | P2B-SD-204 | 47 | 2-1/4 | 066309 | P2B-SD-204 | 49 |
| 2-7/16 | 066222 | P2B-SD-207 | 56 | 2-7/16 | 066258 | P2B-SD-207E | 60 |
| 2-1/2 | 066246 | P2B-SD-208 | 56 | 2-1/2 | 066247 | P2B-SD-208E | 60 |
| 2-5/8 | 066223 | P2B-SD-210 | 84 | 2-5/8 | 066262 | P2B-SD-210E | 80 |
| 2-11/16 | 066304 | P2B-SD-211 | 84 | 2-11/16 | 066310 | P2B-SD-211E | 80 |
| 2-3/4 | 066226 | P2B-SD-212 | 84 | 2-3/4 | 066263 | P2B-SD-212E | 80 |
| 2-15/16 | 066230 | P2B-SD-215 | 82 | 2-15/16 | 066266 | P2B-SD-215E | 78 |
| 3 | 066305 | P2B-SD-300 | 82 | 3 | 066311 | P2B-SD-300E | 78 |
| 3-3/16 | 066232 | P2B-SD-303 | 120 | 3-3/16 | 066269 | P2B-SD-303E | 120 |
| 3-3/8 | 066237 | P2B-SD-306 | 119 | 3-3/8 | 066271 | P2B-SD-306E | 119 |
| 3-7/16 | 066234 | P2B-SD-307 | 118 | 3-7/16 | 066270 | P2B-SD-307E | 118 |
| 3-1/2 | 066236 | P2B-SD-308 | 118 | 3-1/2 | 066273 | P2B-SD-308E | 118 |

* Furnished Unless Otherwise Specified

Consult DODGE For Sizes Not Listed

Consult DODGE For Sizes Not Listed

† 4-Bolt Caps

| | | | |
|---------------------------------|-------------------------|------------------------|--------------------------|
| FEATURES/BENEFITS PAGE B11-3 | SPECIFICATION B11-20 | HOW TO ORDER B11-21 | SELECTION PAGE B11-23 |
|---------------------------------|-------------------------|------------------------|--------------------------|



SELECTION/DIMENSIONS

Special Duty Pillow Block - Inch 2-BOLT BASE

| Shaft Size Inches | A | B | C | D | | F Bolt Dia. | G | H | J | L | M | P | R | S | Exp* |
|-------------------------|------|-------|------|-------|-------|-------------------|------|------|-------|------|------|-------|------|------|------|
| | | | | Min. | Max. | | | | | | | | | | |
| 1-3/8 | 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 |
| 1-7/16 | | | | | | | | | | | | | | | |
| 1-1/2 | | | | | | | | | | | | | | | |
| 1-9/16 | 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 |
| 1-5/8 | | | | | | | | | | | | | | | |
| 1-11/16 | | | | | | | | | | | | | | | |
| 1-3/4 | | | | | | | | | | | | | | | |
| 1-7/8 | 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 |
| 1-15/16 | | | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | |
| 2-1/8 | 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 |
| 2-3/16 | | | | | | | | | | | | | | | |
| 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 | 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 |
| 2-11/16 | | | | | | | | | | | | | | | |
| 2-3/4 | | | | | | | | | | | | | | | |
| 2-15/16 | | | | | | | | | | | | | | | |
| 3 | 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 |
| 3-3/16 | | | | | | | | | | | | | | | |
| 3-3/8 | | | | | | | | | | | | | | | |
| 3-7/16 | | | | | | | | | | | | | | | |
| 3-1/2 | | | | | | | | | | | | | | | |

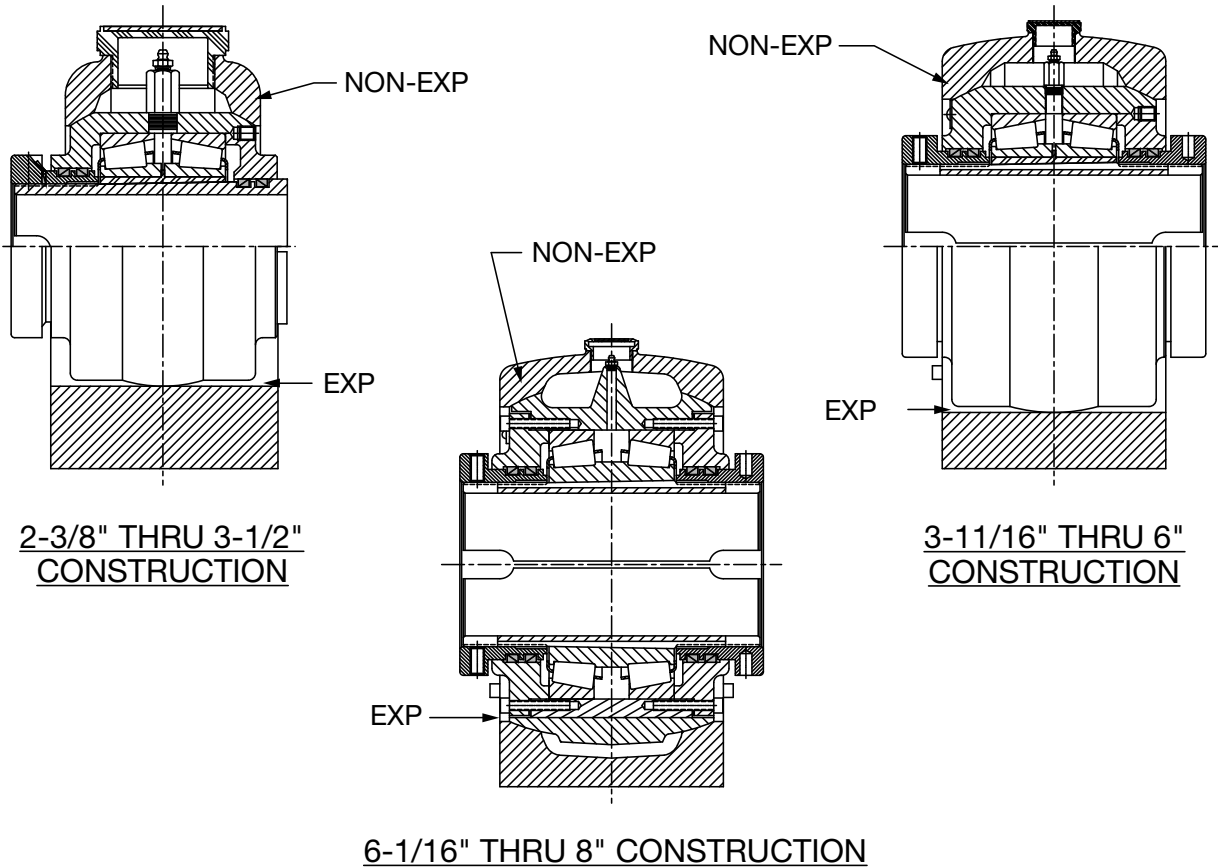
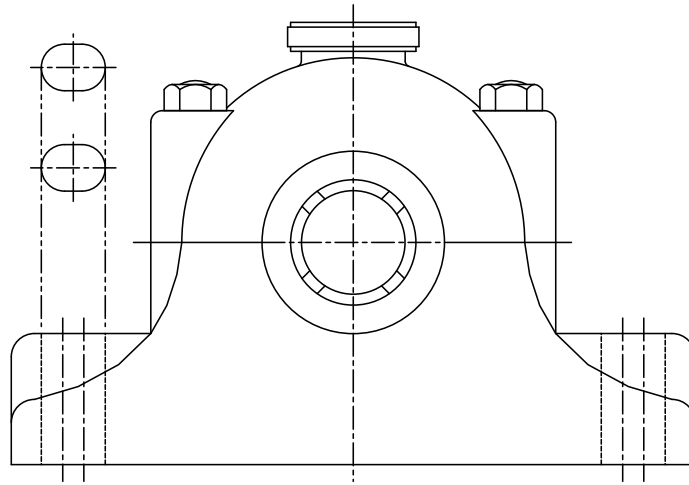
* Total Expansion For Expansion Bearing Only

| | | | |
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SELECTION/DIMENSIONS

**Special Duty Pillow Block - Inch
4-BOLT BASE**



2-3/8" THRU 3-1/2"
CONSTRUCTION

3-11/16" THRU 6"
CONSTRUCTION

6-1/16" THRU 8" CONSTRUCTION

| | | | |
|---------------------------------|-------------------------|------------------------|--------------------------|
| FEATURES/BENEFITS PAGE B11-3 | SPECIFICATION B11-20 | HOW TO ORDER B11-21 | SELECTION PAGE B11-23 |
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SELECTION/DIMENSIONS

Special Duty Pillow Block - Inch 4-BOLT BASE

| Gray Iron Non-Expansion * | | | | Gray Iron Expansion | | | |
|---------------------------|---------------|------------|---------------------|---------------------|---------------|-------------|---------------------|
| Shaft Size Inches # | Part Number | Part Name | Weight Lbs (Approx) | Shaft Size Inches # | Part Number | Part Name | Weight Lbs (Approx) |
| 2-3/8 | 066360 | P4B-SD-206 | 60 | 2-3/8 | 066400 | P4B-SD-206E | 60 |
| 2-7/16 | 066224 | P4B-SD-207 | 60 | 2-7/16 | 066260 | P4B-SD-207E | 60 |
| 2-1/2 | 066244 | P4B-SD-208 | 60 | 2-1/2 | 066245 | P4B-SD-208E | 60 |
| 2-11/16 | 066225 | P4B-SD-211 | 82 | 2-11/16 | 066261 | P4B-SD-211E | 82 |
| 2-3/4 | 066363 | P4B-SD-212 | 82 | 2-3/4 | 066403 | P4B-SD-212E | 82 |
| 2-7/8 | 066365 | P4B-SD-214 | 81 | 2-7/8 | 066405 | P4B-SD-214E | 81 |
| 2-15/16 | 066231 | P4B-SD-215 | 80 | 2-15/16 | 066268 | P4B-SD-215E | 80 |
| 3 | 066366 | P4B-SD-300 | 80 | 3 | 066406 | P4B-SD-300E | 80 |
| 3-3/16 | 066367 | P4B-SD-303 | 124 | 3-3/16 | 066407 | P4B-SD-303E | 124 |
| 3-3/8 | 066370 | P4B-SD-306 | 122 | 3-3/8 | 066410 | P4B-SD-306E | 122 |
| 3-7/16 | 066235 | P4B-SD-307 | 120 | 3-7/16 | 066272 | P4B-SD-307E | 120 |
| 3-1/2 | 066371 | P4B-SD-308 | 120 | 3-1/2 | 066411 | P4B-SD-308E | 120 |
| 3-11/16 | 066372 | P4B-SD-311 | 215 | 3-11/16 | 066412 | P4B-SD-311E | 230 |
| 3-3/4 | 066373 | P4B-SD-312 | 215 | 3-3/4 | 066413 | P4B-SD-312E | 230 |
| 3-7/8 | 066374 | P4B-SD-314 | 215 | 3-7/8 | 066414 | P4B-SD-314E | 230 |
| 3-15/16 | 066238 | P4B-SD-315 | 215 | 3-15/16 | 066274 | P4B-SD-315E | 230 |
| 4 | 066375 | P4B-SD-400 | 215 | 4 | 066415 | P4B-SD-400E | 230 |
| 4-7/16 | 066240 | P4B-SD-407 | 296 | 4-7/16 | 066276 | P4B-SD-407E | 296 |
| 4-1/2 | 066377 | P4B-SD-408 | 296 | 4-1/2 | 066417 | P4B-SD-408E | 296 |
| 4-15/16 | 066242 | P4B-SD-415 | 380 | 4-15/16 | 066278 | P4B-SD-415E | 380 |
| 5 | 066378 | P4B-SD-500 | 380 | 5 | 066418 | P4B-SD-500E | 380 |
| 5-7/16 | 066379 | P4B-SD-507 | 585 | 5-7/16 | 066419 | P4B-SD-507E | 585 |
| 5-15/16 | 066381 | P4B-SD-515 | 585 | 5-15/16 | 066421 | P4B-SD-515E | 585 |
| 6 | 066382 | P4B-SD-600 | 585 | 6 | 066422 | P4B-SD-600E | 585 |
| 6-1/2 | 066384 | P4B-SD-608 | 1050 | 6-1/2 | 066424 | P4B-SD-608E | 1050 |
| 6-15/16 | 066385 | P4B-SD-615 | 1050 | 6-15/16 | 066425 | P4B-SD-615E | 1050 |
| 7 | 066386 | P4B-SD-700 | 1050 | 7 | 066426 | P4B-SD-700E | 1050 |
| 7-15/16 | 066388 | P4B-SD-715 | 1550 | 7-15/16 | 066428 | P4B-SD-715E | 1550 |
| 8 | 066389 | P4B-SD-800 | 1550 | 8 | 066429 | P4B-SD-800E | 1550 |

* Furnished Unless Otherwise Specified

Consult DODGE For Sizes Not Listed

Consult DODGE For Sizes Not Listed

Note: When ordering sizes larger than 5", specify RPM

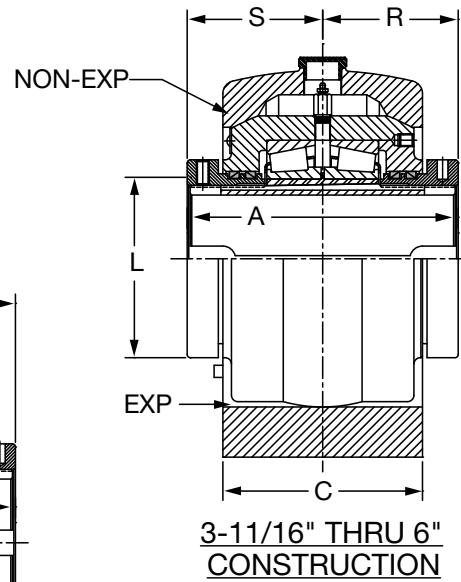
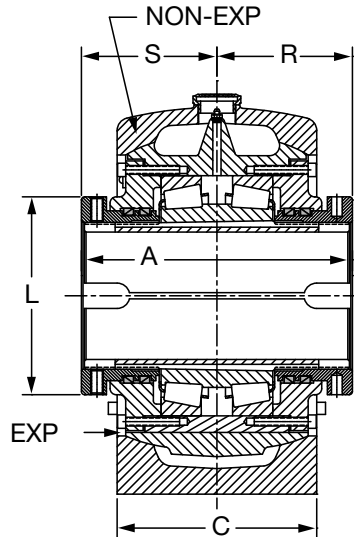
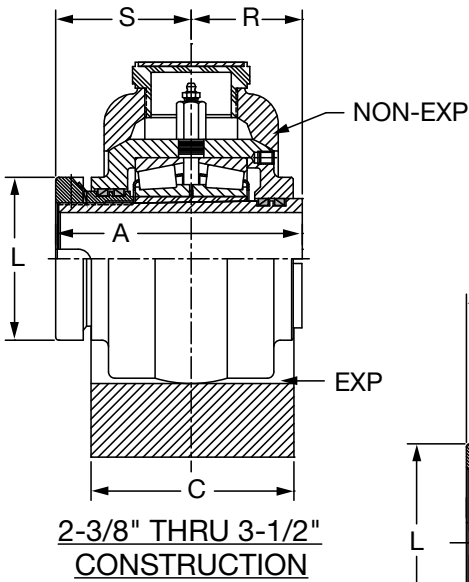
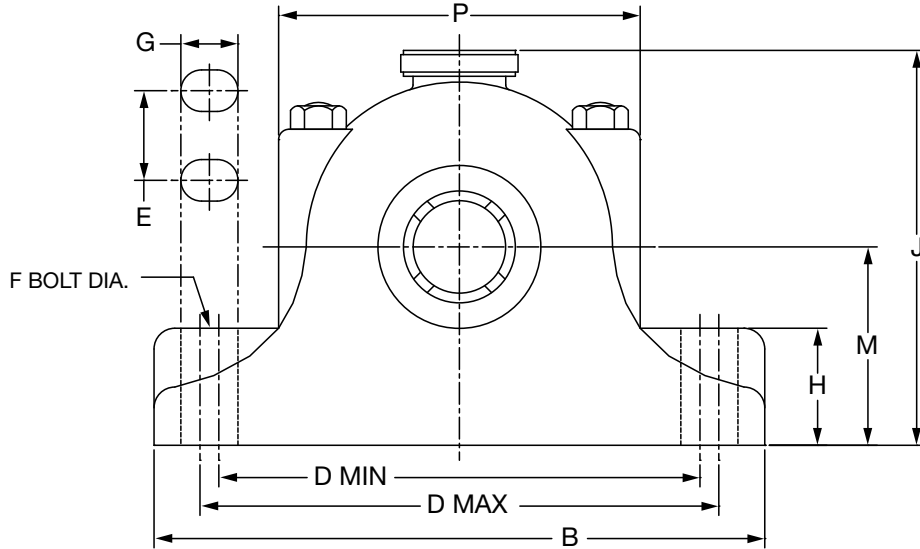
Note: All sizes use a 1/8 - 27 NPT hydraulic grease fitting

| | | | |
|---------------------------------|-------------------------|------------------------|--------------------------|
| FEATURES/BENEFITS PAGE B11-3 | SPECIFICATION B11-20 | HOW TO ORDER B11-21 | SELECTION PAGE B11-23 |
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SELECTION/DIMENSIONS

**Special Duty Pillow Block - Inch
4-BOLT BASE**



| | | | |
|---------------------------------|-------------------------|------------------------|--------------------------|
| FEATURES/BENEFITS PAGE B11-3 | SPECIFICATION B11-20 | HOW TO ORDER B11-21 | SELECTION PAGE B11-23 |
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SELECTION/DIMENSIONS

Special Duty Pillow Block - Inch 4-BOLT BASE

Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

S-2000

UNISPHERE II

IMPERIAL

UNIFIED SAF

| Shaft Size Inches | A | B* | C* | D | | E | F Bolt Dia. | G* | H* | J | L | M | P* | R | S | Exp** |
|-------------------|-------|-------|-------|-------|-------|------|-------------|------|------|-------|-------|-------|-------|------|------|-------|
| | | | | Min. | Max. | | | | | | | | | | | |
| 2-3/8 | 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 |
| 2-7/16 | | | | | | | | | | | | | | | | |
| 2-1/2 | | | | | | | | | | | | | | | | |
| 2-11/16 | 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 |
| 2-3/4 | | | | | | | | | | | | | | | | |
| 2-7/8 | | | | | | | | | | | | | | | | |
| 2-15/16 | | | | | | | | | | | | | | | | |
| 3 | 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 |
| 3-3/16 | | | | | | | | | | | | | | | | |
| 3-3/8 | | | | | | | | | | | | | | | | |
| 3-7/16 | | | | | | | | | | | | | | | | |
| 3-1/2 | | | | | | | | | | | | | | | | |
| 3-11/16 | 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 |
| 3-3/4 | | | | | | | | | | | | | | | | |
| 3-7/8 | | | | | | | | | | | | | | | | |
| 3-15/16 | | | | | | | | | | | | | | | | |
| 4 | 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 |
| 4-7/16 | | | | | | | | | | | | | | | | |
| 4-1/2 | 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 |
| 4-15/16 | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | |
| 5-7/16 | 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 |
| 5-15/16 | | | | | | | | | | | | | | | | |
| 6 | 13.50 | 34.38 | 10.25 | 27.50 | 30.50 | 5.50 | 1-1/2 | 3.00 | 6.00 | 23.00 | 11.00 | 11.25 | 22.75 | 6.75 | 6.75 | 1-1/2 |
| 6-1/2 | | | | | | | | | | | | | | | | |
| 6-15/16 | | | | | | | | | | | | | | | | |
| 7 | 14.50 | 38.75 | 11.25 | 30.50 | 34.00 | 6.00 | 1-3/4 | 3.50 | 7.00 | 26.00 | 12.50 | 12.50 | 25.13 | 7.25 | 7.25 | 1-1/2 |
| 7-15/16 | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | |

* 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)

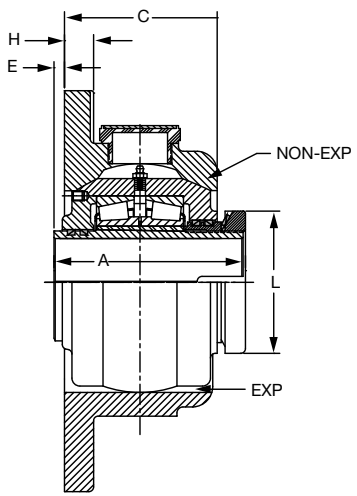
Note: All sizes use a 1/8 - 27 NPT hydraulic grease fitting

| | | | |
|---------------------------------|-------------------------|------------------------|--------------------------|
| FEATURES/BENEFITS PAGE B11-3 | SPECIFICATION B11-20 | HOW TO ORDER B11-21 | SELECTION PAGE B11-23 |
|---------------------------------|-------------------------|------------------------|--------------------------|

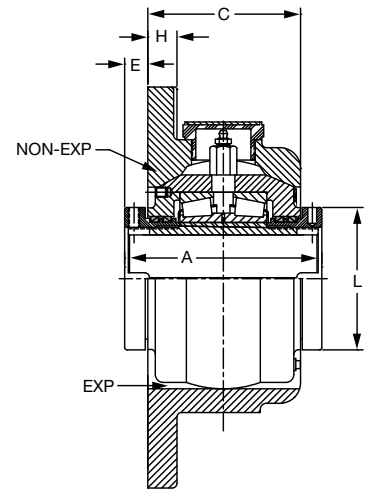
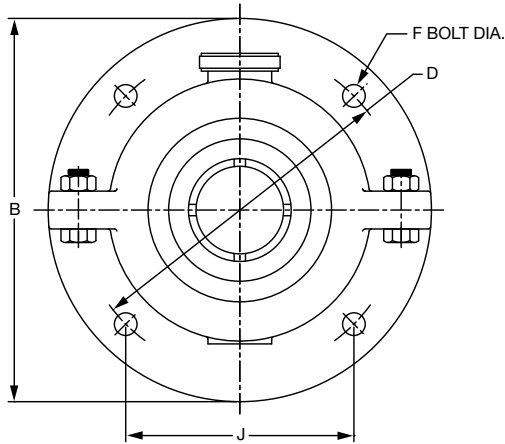


SELECTION/DIMENSIONS

Special Duty Flange Bearing - Inch



1-3/8" THRU 3-1/2" CONSTRUCTION



3-11/16" THRU 6" CONSTRUCTION

| Gray Iron Non-Expansion* | | | | Gray Iron Expansion | | | |
|--------------------------|-------------|------------|---------------------|---------------------|-------------|-------------|---------------------|
| Shaft Size Inches # | Part Number | Part Name | Weight Lbs (Approx) | Shaft Size Inches # | Part Number | Part Name | Weight Lbs (Approx) |
| 1-3/8 | 104160 | F4B-SD-106 | 21 | 1-3/8 | 104195 | F4B-SD-106E | 22 |
| 1-7/16 | 104020 | F4B-SD-107 | 21 | 1-7/16 | 104030 | F4B-SD-107E | 22 |
| 1-1/2 | 104161 | F4B-SD-108 | 21 | 1-1/2 | 104196 | F4B-SD-108E | 22 |
| 1-11/16 | 104021 | F4B-SD-111 | 30 | 1-11/16 | 104031 | F4B-SD-111E | 30 |
| 1-3/4 | 104162 | F4B-SD-112 | 30 | 1-3/4 | 104197 | F4B-SD-112E | 30 |
| 1-15/16 | 104022 | F4B-SD-115 | 37 | 1-15/16 | 104032 | F4B-SD-115E | 37 |
| 2 | 104164 | F4B-SD-200 | 37 | 2 | 104199 | F4B-SD-200E | 37 |
| 2-3/16 | 104023 | F4B-SD-203 | 46 | 2-3/16 | 104033 | F4B-SD-203E | 49 |
| 2-3/8 | 104169 | F4B-SD-206 | 62 | 2-3/8 | 104204 | F4B-SD-206E | 64 |
| 2-7/16 | 104024 | F4B-SD-207 | 62 | 2-7/16 | 104034 | F4B-SD-207E | 64 |
| 2-1/2 | 104170 | F4B-SD-208 | 62 | 2-1/2 | 104205 | F4B-SD-208E | 64 |
| 2-11/16 | 104172 | F4B-SD-211 | 85 | 2-11/16 | 104207 | F4B-SD-211E | 88 |
| 2-3/4 | 104173 | F4B-SD-212 | 83 | 2-3/4 | 104208 | F4B-SD-212E | 86 |
| 2-15/16 | 104025 | F4B-SD-215 | 81 | 2-15/16 | 104035 | F4B-SD-215E | 85 |
| 3 | 104176 | F4B-SD-300 | 81 | 3 | 104211 | F4B-SD-300E | 84 |
| 3-3/16 | 104177 | F4B-SD-303 | 141 | 3-3/16 | 104212 | F4B-SD-303E | 145 |
| 3-7/16 | 104026 | F4B-SD-307 | 139 | 3-7/16 | 104036 | F4B-SD-307E | 144 |
| 3-1/2 | 104181 | F4B-SD-308 | 138 | 3-1/2 | 104216 | F4B-SD-308E | 143 |
| 3-15/16 | 104027 | F4B-SD-315 | 230 | 3-15/16 | 104037 | F4B-SD-315E | 234 |
| 4 | 104010 | F4B-SD-400 | 229 | 4 | 104003 | F4B-SD-400E | 234 |
| 4-7/16 | 104028 | F4B-SD-407 | 325 | 4-7/16 | 104038 | F4B-SD-407E | 325 |
| 4-15/16 | 104029 | F4B-SD-415 | 430 | 4-15/16 | 104039 | F4B-SD-415E | 430 |
| 5 | 104013 | F4B-SD-500 | 428 | 5 | 104006 | F4B-SD-500E | 428 |
| 5-15/16 | 104016 | F4B-SD-515 | 560 | 5-15/16 | 104017 | F4B-SD-515E | 560 |
| 6 | 104018 | F4B-SD-600 | 560 | 6 | 104019 | F4B-SD-600E | 560 |

* Furnished Unless Otherwise Specified

Consult DODGE For Sizes Not Listed

Note: when ordering sizes larger than 5", specify RPM

| | | | |
|---------------------------------|-------------------------|------------------------|--------------------------|
| FEATURES/BENEFITS PAGE B11-3 | SPECIFICATION B11-20 | HOW TO ORDER B11-21 | SELECTION PAGE B11-23 |
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SELECTION/DIMENSIONS



Special Duty Flange Bearing - Inch

Bearing Reference Guide
 E-Family Roller Bearings
 Specialty Tapered Products
 S-2000
 UNISPHERE II
 IMPERIAL
 UNIFIED SAF

| Shaft Size Inches | 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 |

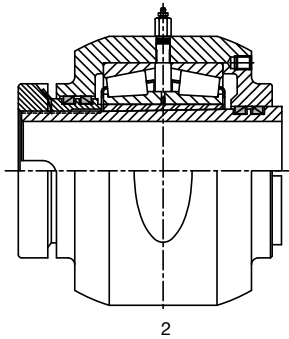
* Exp-Total Expansion For Expansion Bearing Only

| | | | |
|---------------------------------|-------------------------|------------------------|--------------------------|
| FEATURES/BENEFITS PAGE B11-3 | SPECIFICATION B11-20 | HOW TO ORDER B11-21 | SELECTION PAGE B11-23 |
|---------------------------------|-------------------------|------------------------|--------------------------|



SELECTION/DIMENSIONS

Special Duty Units - Inch



2

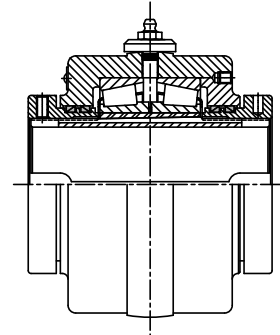
D UNIT

1-3/8" THRU 3-1/2" CONSTRUCTION

NON-EXPANSION

3-11/16" THRU 12" NOT SHOWN

CONSULT DODGE FOR DETAIL



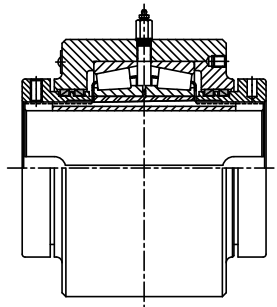
S-1 UNIT

3-11/16" THRU 6" CONSTRUCTION

EXPANSION

1-3/8" THRU 3-1/2" AND 6" THRU 12" NOT SHOWN

CONSULT DODGE FOR DETAIL



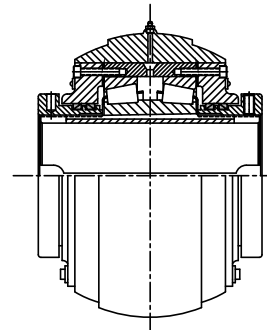
B-1 UNIT

3-11/16" THRU 6" CONSTRUCTION

CUSTOMER SUPPLIED HOUSING ONLY

1-3/8" THRU 3-1/2" AND 6-1/2" THRU 12" NOT SHOWN

CONSULT DODGE FOR DETAIL



S-1 UNIT

6-1/16" THRU 8" CONSTRUCTION

EXPANSION

1-3/8" THRU 6" AND 8-1/2" THRU 12" NOT SHOWN

CONSULT DODGE FOR DETAIL

SELECTION/DIMENSIONS



Special Duty Units - Inch

| Shaft Size Inches # | D Units - Non-Expansion | | S-1 Units - Expansion | | B-1 Units - Customer Supplied Housing | | Weight Lbs (Approx) |
|---------------------|-------------------------|------------|-----------------------|-------------|---------------------------------------|-------------|---------------------|
| | Part Number | Part Name | Part Number | Part Name | Part Number | Part Name | |
| 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 | ---- | ----- | 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 |
| 6-1/2 | 066478 | DU-SD-608 | 066533 | S1U-SD-608 | 066596 | B1U-SD-608 | 560 |
| 6-15/16 | 066479 | DU-SD-615 | 066534 | S1U-SD-615 | 066598 | B1U-SD-615 | 560 |
| 7 | 066480 | DU-SD-700 | 066535 | S1U-SD-700 | 066607 | B1U-SD-700 | 560 |
| 7-15/16 | 066482 | DU-SD-715 | 066537 | S1U-SD-715 | 066600 | B1U-SD-715 | 800 |
| 8 | 066483 | DU-SD-800 | 066538 | S1U-SD-800 | 066601 | B1U-SD-800 | 800 |
| 8-1/2 | 066484 | DU-SD-808 | 066539 | S1U-SD-808 | 066602 | B1U-SD-808 | 1380 |
| 9 | 066485 | DU-SD-900 | 066540 | S1U-SD-900 | 066603 | B1U-SD-900 | 1380 |
| 9-1/2 | 066486 | DU-SD-908 | 066541 | S1U-SD-908 | ---- | ----- | 1380 |
| 10 | 066487 | DU-SD-1000 | 066542 | S1U-SD-1000 | 066604 | B1U SD 1000 | 1380 |
| 11 | 066488 | DU-SD-1100 | 066543 | S1U-SD-1100 | 066605 | B1U-SD-1100 | 1890 |
| 12 | 066489 | DU-SD-1200 | 066544 | S1U-SD-1200 | 066606 | B1U-SD-1200 | 1890 |

Consult DODGE For Sizes Not Listed

Note: When ordering sizes larger than 5", specify RPM

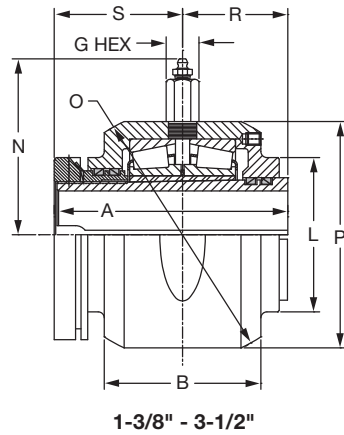
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| FEATURES/BENEFITS PAGE B11-3 | SPECIFICATION B11-20 | HOW TO ORDER B11-21 | SELECTION PAGE B11-23 |
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Bearing Reference Guide
 E-Family Roller Bearings
 Specialty Tapered Products
 S-2000
 UNISPHERE II
 IMPERIAL
 UNIFIED SAF

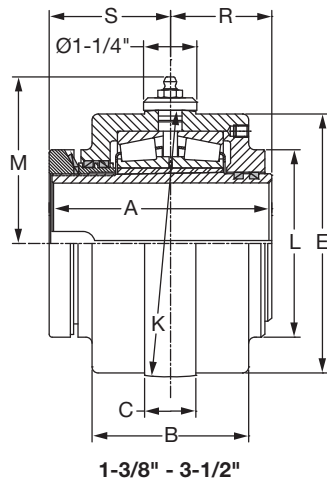
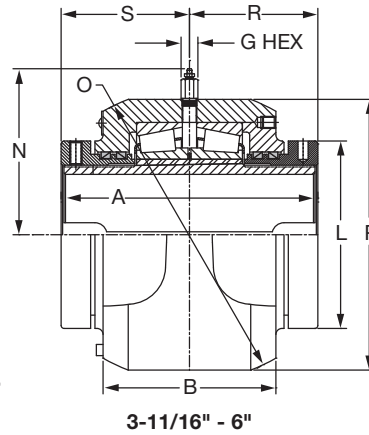
SELECTION/DIMENSIONS



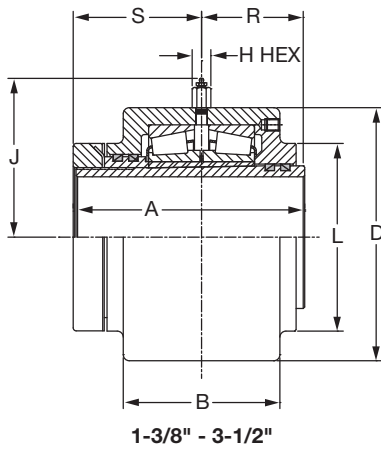
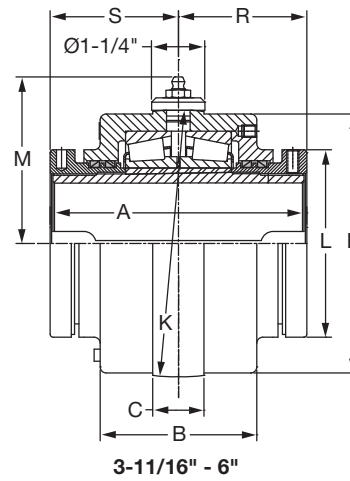
Special Duty Units - Inch



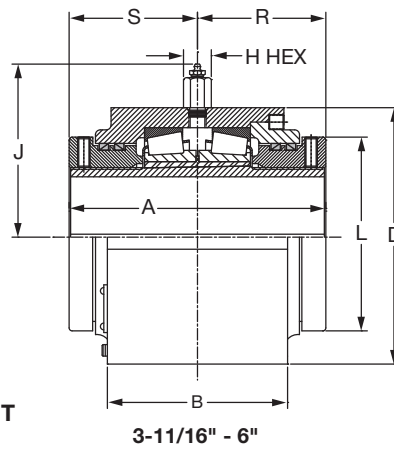
D-UNIT



S1-UNIT



B1-UNIT



| | | | |
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| FEATURES/BENEFITS PAGE B11-3 | SPECIFICATION B11-20 | HOW TO ORDER B11-21 | SELECTION PAGE B11-23 |
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SELECTION/DIMENSIONS

Special Duty Units - Inch

| Shaft Size Inches | 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 |
| 6-1/2 6-15/16 7 | 13.50 | 9.31 | ---- | 14.750 ★ | ---- | 9.81 | 1 | 1 | 8.88 | ---- | 11.00 | ---- | 10.88 | 18.000 * | 17.00 | 6.75 | 6.75 |
| 7-15/16 8 | 14.50 | 9.94 | ---- | 16.250 ★ | ---- | 10.06 | 1 | 1 | 9.63 | ---- | 12.50 | ---- | 12.50 | 20.125 * | 19.13 | 7.25 | 7.25 |
| 8-1/2 9 9-1/2 10 | 17.00 | 11.50 | ---- | 19.500 ★ | ---- | 11.75 | 1 | 1 | 11.25 | ---- | 14.63 | ---- | 14.50 | 24.000 * | 23.50 | 8.50 | 8.50 |
| 11 12 | 18.50 | 12.75 | ---- | 23.000 ★ | ---- | 13.25 | 1 | 1 | 13.00 | ---- | 17.00 | ---- | 17.63 | 28.500 * | 28.00 | 9.25 | 9.25 |

★ +.000 -.002"

♥ -.000 -.004"

♦ +.000 -.003"

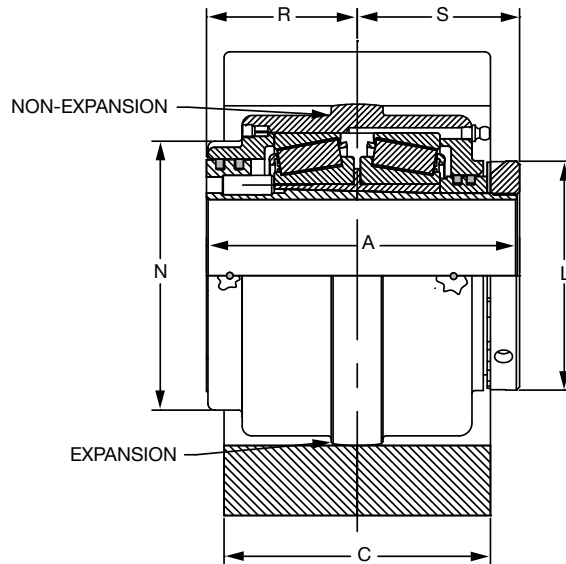
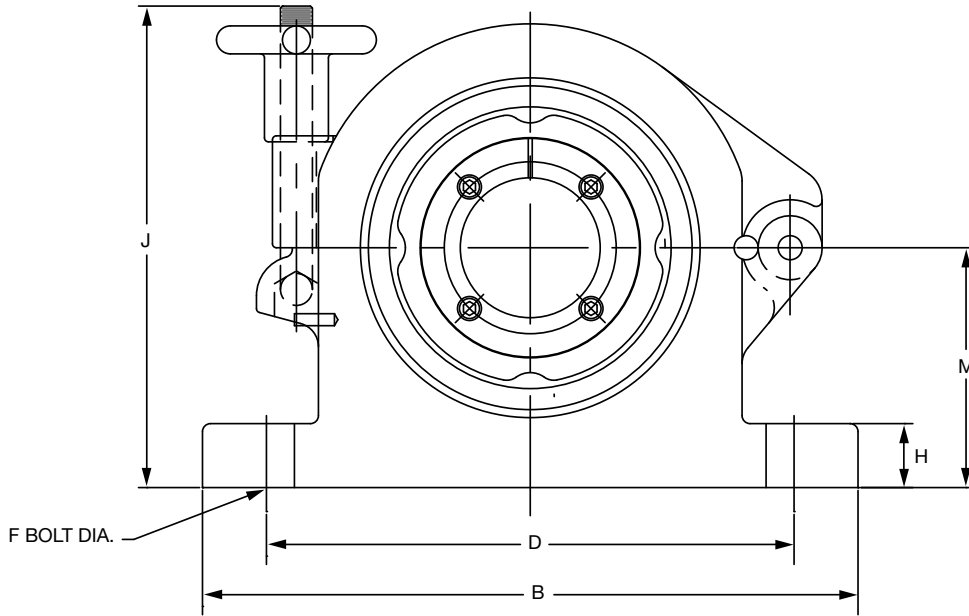
* +.000 -.004"

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SELECTION/DIMENSIONS

Special Duty Hinged Cap Pillow Block - Inch



| | | | |
|---|---------------------------------|--------------------------------|----------------------------------|
| <p>FEATURES/BENEFITS PAGE B11-3</p> | <p>SPECIFICATION B11-20</p> | <p>HOW TO ORDER B11-21</p> | <p>SELECTION PAGE B11-23</p> |
|---|---------------------------------|--------------------------------|----------------------------------|



SELECTION/DIMENSIONS

Special Duty Hinged Cap Pillow Block - Inch

| Pillow Block Assembly - Non-Expansion* | | | | Pillow Block Assembly - Expansion | | | |
|--|---------------|------------|---------------------|-----------------------------------|---------------|-------------|---------------------|
| Shaft Size Inches # | Part Number | Part Name | Weight Lbs (Approx) | Shaft Size Inches # | Part Number | Part Name | Weight Lbs (Approx) |
| 1-3/8 | 067054 | P2B-HC-106 | 20 | 1-3/8 | 067055 | P2B-HC-106E | 20 |
| 1-7/16 | 067050 | P2B-HC-107 | 20 | 1-7/16 | 067051 | P2B-HC-107E | 20 |
| 1-1/2 | 067056 | P2B-HC-108 | 20 | 1-1/2 | 067057 | P2B-HC-108E | 20 |
| 1-11/16 | 067048 | P2B-HC-111 | 27 | 1-11/16 | 067049 | P2B-HC-111E | 27 |
| 1-3/4 | 067042 | P2B-HC-112 | 27 | 1-3/4 | 067043 | P2B-HC-112E | 27 |
| 1-15/16 | 067052 | P2B-HC-115 | 36 | 1-15/16 | 067053 | P2B-HC-115E | 36 |
| 2 | 067060 | P2B-HC-200 | 36 | 2 | 067061 | P2B-HC-200E | 36 |
| 2-3/16 | 067046 | P2B-HC-203 | 47 | 2-3/16 | 067047 | P2B-HC-203E | 47 |
| 2-7/16 | 067044 | P2B-HC-207 | 60 | 2-7/16 | 067045 | P2B-HC-207E | 60 |
| 2-15/16 | 067072 | P2B-HC-215 | 60 | 2-15/16 | 067073 | P2B-HC-215E | 60 |

* Furnished Unless Otherwise Specified

Consult DODGE For Sizes Not Listed.

| Pillow Block Housing Only Non-Expansion | | | | Pillow Block Housing Only Expansion | | | |
|--|----------------|------------|---------------------|--|---------------|-------------|---------------------|
| Shaft Size Range Symbol# | Part Number | Part Name | Weight Lbs (Approx) | Shaft Size Range Symbol# | Part Number | Part Name | Weight Lbs (Approx) |
| 106 TO 108 | 067007* | HS2-HC-406 | 13 | 106 TO 108 | 067016 | HS2-HC-406E | 13 |
| 111 TO 112 | 067100* | HS2-HC-444 | 16 | 111 TO 112 | 067103 | HS2-HC-444E | 16 |
| 115 TO 200 | 067031* | HS2-HC-481 | 23 | 115 TO 200 | 067034 | HS2-HC-481E | 23 |
| 203 | 067120* | HS2-HC-538 | 26 | 203 | 067123 | HS2-HC-538E | 26 |
| 207 | 067135* | HS2-HC-569 | 40 | 207 | 067138 | HS2-HC-569E | 40 |
| 215 | 067078* | HS2-HC-656 | 52 | 215 | 067075 | HS2-HC-656E | 52 |

* Furnished Unless Otherwise Specified

Consult DODGE For Sizes Not Listed.

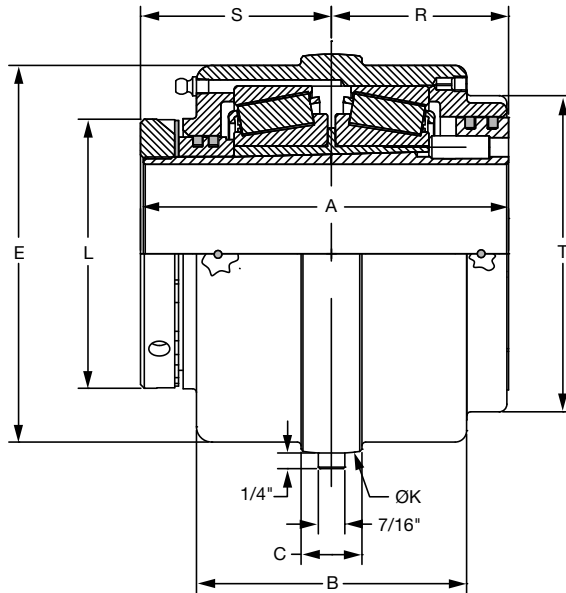
| Shaft Size Inches | A | B | C | D | F Dia Bolt | H | J | L | M | N | R | S |
|-------------------|------|-------|------|------|------------|------|-------|------|------|------|------|------|
| 1-3/8 | | | | | | | | | | | | |
| 1-7/16 | 4.13 | 7.25 | 3.00 | 5.88 | 1/2 | .75 | 6.88 | 2.44 | 2.88 | 3.25 | 1.94 | 2.19 |
| 1-1/2 | | | | | | | | | | | | |
| 1-11/16 | 4.25 | 8.25 | 3.25 | 6.88 | 1/2 | .75 | 6.88 | 2.81 | 3.13 | 3.53 | 2.00 | 2.25 |
| 1-3/4 | | | | | | | | | | | | |
| 1-15/16 | 4.44 | 9.25 | 3.50 | 7.69 | 5/8 | .88 | 7.63 | 3.06 | 3.25 | 3.81 | 2.13 | 2.31 |
| 2 | | | | | | | | | | | | |
| 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 | 6.06 | 11.13 | 4.75 | 9.13 | 3/4 | 1.25 | 10.13 | 4.44 | 5.00 | 5.25 | 2.94 | 3.13 |

| | | | |
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SELECTION/DIMENSIONS

Special Duty Hinged Cap S-1 Units - Inch



| Hinged Cap Pillow Block S-1 Units | | | |
|-----------------------------------|---------------|---------------|-------------------|
| Shaft Size # | Part Number | Part Name | Weight Lbs Approx |
| 1-3/8 | 067149 | S1U406-HC-106 | 8 |
| 1-7/16 | 067151 | S1U406-HC-107 | 8 |
| 1-1/2 | 067152 | S1U406-HC-108 | 8 |
| 1-11/16 | 067153 | S1U444-HC-111 | 10 |
| 1-3/4 | 067154 | S1U444-HC-112 | 10 |
| 1-15/16 | 067155 | S1U481-HC-115 | 11 |
| 2 | 067156 | S1U481-HC-200 | 11 |
| 2-3/16 | 067157 | S1U538-HC-203 | 16 |
| 2-7/16 | 067159 | S1U569-HC-207 | 19 |
| 2-15/16 | 067164 | S1U656-HC-215 | 30 |

Consult DODGE For Sizes Not Listed

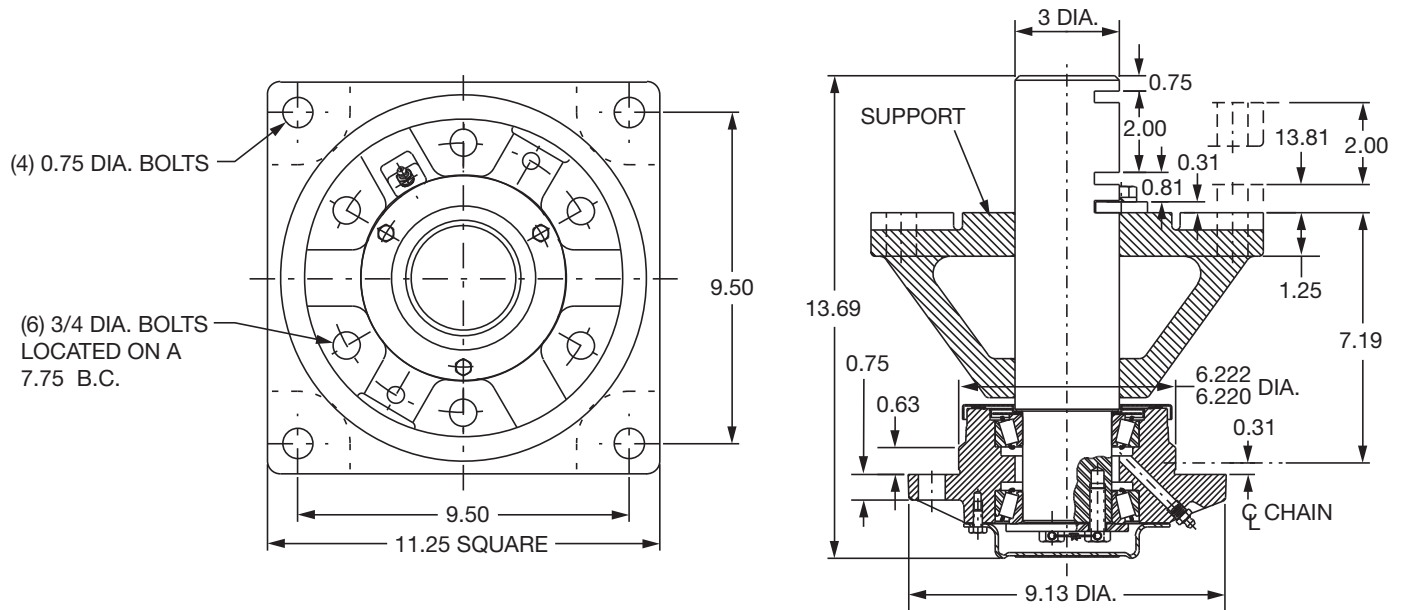
| Hinged Caps S-1 Units | | | | | | | | | |
|-----------------------|------|------|------|------|------|------|------|------|------|
| Shaft Size Inches | A | B | C | E | K | L | R | S | T |
| 1-3/8 | | | | | | | | | |
| 1-7/16 | 4.13 | 2.69 | 0.75 | 3.75 | 4.06 | 2.44 | 1.94 | 2.19 | 3.25 |
| 1-1/2 | | | | | | | | | |
| 1-11/16 | 4.25 | 3.13 | 0.75 | 4.13 | 4.44 | 2.81 | 2.00 | 2.25 | 3.53 |
| 1-3/4 | | | | | | | | | |
| 1-15/16 | 4.44 | 3.25 | 0.88 | 4.50 | 4.81 | 3.06 | 2.13 | 2.31 | 3.81 |
| 2 | | | | | | | | | |
| 2-3/16 | 4.75 | 3.50 | 0.88 | 5.06 | 5.38 | 3.44 | 2.25 | 2.50 | 4.22 |
| 2-7/16 | 5.31 | 4.00 | 1.00 | 5.31 | 5.69 | 3.81 | 2.56 | 2.75 | 4.63 |
| 2-15/16 | 6.06 | 4.44 | 1.00 | 6.19 | 6.56 | 4.44 | 2.94 | 3.13 | 5.25 |

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SELECTION/DIMENSIONS

Special Duty Traction Wheel Hub Assemblies - 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.

A high temperature (700°F) unit using sleeve bearings is available. See part number 062070

| Traction Wheel Hub Assemblies | | | |
|-------------------------------|-------------|-----------|---------------------|
| Size # | Part Number | Part Name | Weight Lbs (Approx) |
| #70 | 062040 | TRW-70 | 100 |
| #70LS* | 422604 | TRW-70LS | 80 |
| 75HT | 062070 | TRW-75HT | 100 |

| Recommended For Conveyors With Chain Nos. | Operating Characteristics | | |
|---|---------------------------|----------------------------|----------------------------|
| | RPM | Max. Resultant Load (Lbs)▲ | L ₁₀ Hours Life |
| 348 | 10 | 3600 | ★ |
| 458 | 10 | 8000 | |
| 678 | 10 | 8000 | |

Consult DODGE For Sizes Not Listed.

▲ Based on 180- Chain Wrap

★ More Than 100,000 Hrs. Life

* (LS) Less Support - Support For Mounting To Structure Not Included With This Part

(HT) High Temperature Sleeve Bearing

| | | | |
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SPECIFICATION

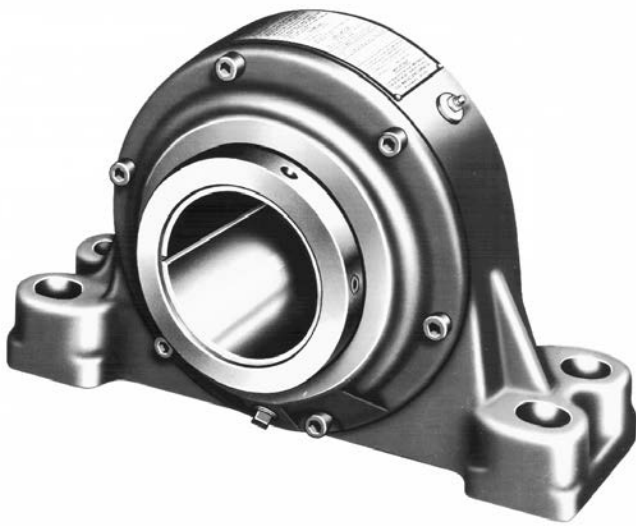
All Steel

The standard housing material for All steel mounted bearings is cast steel having a minimum tensile strength of 70,000 psi. The housing is vertically split to enable servicing of the bearing internal components. All Steel pillow blocks are available in both expansion and non expansion types.

All Steel mounted bearings have duplex tapered roller mounted to the shaft with a tapered adaptor sleeve extending thru the

complete length of the pillow block. The tapered roller bearings used in the All Steel mounted bearings all have case carburized inner races (cones), outer race (cup) and rollers.

All Steel mounted bearings have two piston ring seals running in grooves in the adapter nuts at each end of the pillow block to seal the bearings both on and off the shaft.



ALL STEEL PILLOW BLOCKS AVAILABLE IN 4-BOLT BASE 2-11/16" TO 5"

ALL STEEL CARTRIDGE UNITS AVAILABLE IN 2-11/16" TO 4-7/16"



HOW TO ORDER

All Steel

There are two ways to specify DODGE Bearings. Most of the product offering 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 shown on the next page and add any special instructions to the end of the description for options not covered by the nomenclature.

SPECIAL BEARING REQUIREMENTS AND SPECIAL LUBRICANTS

DODGE All Steel Bearings are factory assembled and pre-lubricated. For applications where extreme ambient temperatures, high speeds or high loads are expected, a variety

of specialty lubricants and adjustments are available. Standard grease provided is Mobilgrease XHP222. Special lubricant options usually involve set-up charges and premiums. To order, specify type of lubricant required at the end of the product name or after the standard part number.

Example:

063360 except with Mobil Grease HTS #2 grease
and or
P4B-AS-215 except with Mobil Grease HTS #2 grease

OTHER SPECIAL BEARING REQUIREMENTS NOT LISTED

For applications requiring modifications not listed, we encourage you to contact our Customer Order Engineering Department for Bearings at 864-284-5700.

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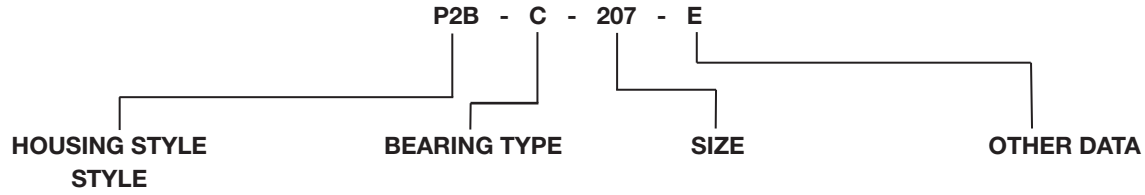
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NOMENCLATURE

Specialty Tapered Products



- P2B = PILLOW BLOCK**
2 BOLT, CAST IRON
- P4B = PILLOW BLOCK**
4 BOLT, CAST IRON
- SP4B = PILLOW BLOCK**
4 BOLT, CAST STEEL
- F4B = FLANGE BEARING**
4 BOLT, CAST IRON
- B1U = B-1 UNIT, CAST IRON**
- DU = D UNIT, CAST IRON**
- S1U = S-1 UNIT, CAST IRON**
- CRT = CARTRIDGE UNIT**
DUCTILE IRON END PLATES
- NSTU = NARROW SLOT TAKE UP BEARING, CAST IRON**
- HNG = HANGER BEARING CAST IRON**

- C = TYPE C**
- SD = SPECIAL DUTY**
- HC = HINGED CAP**
- TRW - TRACTION WHEEL**
- AS = ALL STEEL**

- INCHES & 16TH**
2 = 2 INCHES
07 = 7/16 INCHES
OR
207 = 2-7/16"

- E = EXPANSION TYPE BEARING**
IF E DOES NOT APPEAR AFTER SEAL TYPE, THEN BEARING IS NON-EXPANSION TYPE

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SELECTION

All Steel

DODGE ALL-STEEL DOUBLE ROW TAPERED

ROLLER BEARINGS DODGE All-Steel 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 DODGE Application Engineering (864) 284-5700 for applications which exceed the recommendations of this catalog. **L₁₀ Hours Life** - The life which may be expected from at least 90% of a given group of bearings operating under identical conditions.

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

Where:

C₉₀ = Dynamic Capacity (Table 10, pg. B11-52), lbs.

P = Equivalent Radial Load, lbs.

GENERAL

Heavy Service - For heavy shock loads, frequent shock loads, or severe vibrations, add up to 50% (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 L₁₀ life for pillow blocks. The maximum thrust load should not exceed values shown on Table 12. Where substantial radial load is also present, it is advisable

to calculate actual L₁₀ 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.

| RPM Range | 20 - 200 | 201 - 2000 |
|-------------------------|--------------------|--------------------|
| RECOMMENDED THRUST LOAD | C ₉₀ /4 | C ₉₀ /8 |

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 15, pg. B11-53 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 Size | Tolerance, Inches |
|-------------|-------------------|
| 2-11/16 - 4 | +.000 To -.004" |
| 4-7/16 - 5 | +.000 To -.005" |

| | | | |
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SELECTION

All Steel

SELECTING BEARINGS SUPPORTING RADIAL LOADS ONLY

1. Define L_{10} Life Hours desired.
2. Establish bearing radial load, F_R ($FR = P$ for Pure Radial Load Conditions).
The DODGE program BEST™* can be used to find application loads.
3. Establish RPM.

Using the easy selection Table 11, pg. B11-52 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:
1. L_{10} Life = 30,000 Hours
 2. Radial load = 3800 lbs.
 3. RPM = 1,000

At the intersection of the 1,000 RPM column and the 30,000 hours L_{10} life row, the equivalent radial load of 4478 lbs. Exceeds the 3800 lbs. Radial load for shaft sizes 2-11/16 -3". A bearing with bore ranging from 2-11/16 to 3" 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} , RPM and P .

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

($P = FR$ for Pure Radial Load Conditions)

The DODGE Bearing Evaluation and Selection Technique (BEST) is a menu driven computer program that calculates bearing loads, fatigue life and operating temperature for a two bearing shaft system based on user supplied input parameters. This interactive program is available at www.ptwizard.com under the Product Selection area.

Since the L_{10} , RPM, and P are known, solve for C_{90} . Select from the dynamic capacity column on Table 10, pg. B11-52 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 RPM does not exceed the MAX. RPM on Table 10. 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 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.

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All Steel

The equivalent radial load $P = XF_R + YF_A$

Where:

- P = Equivalent radial load, lbs.
- F_R = Radial load, lbs. (see Table 10 for allowable slip fit maximum)
- F_A = Thrust (axial) load, lbs.
- e = Thrust load to 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 allowable equivalent radial load ratings for the speed and hours life desired in the easy selection Table 11, pg. B11-52.

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 1, pg. 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 allowable equivalent radial load ratings for the speed and hours life desired in the easy selection Table 11, pg. B11-52.

LUBRICATION

DODGE All Steel Double Row Tapered roller bearings are lubricated at the factory with a superior industrial grease that uses a lithium hydroxystearate 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 14, pg. B11-53. For very low and high speeds, for heavy loads and for low and high temperatures, special greases must be used. Contact DODGE Application Engineering (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 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 All Steel Double Row Tapered Roller Bearings. All Steel bearings are designed to allow as much as 1° to 2° 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. Shimming may be required to minimize misalignment.

| | | | |
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SELECTION

All Steel

Table 10: All Steel Double Row Tapered Roller Bearings Radial and Thrust Factors

| Shaft Size | e | Fa/Fr ≤ e | | Fa/Fr > e | | Dynamic Capacity C ₉₀ * | | Maximum RPM |
|----------------|------|-----------|------|-----------|------|------------------------------------|---------|-------------|
| | | X | Y | X | Y | Lbs. | Newtons | |
| 2-11/16 - 3 | 0.43 | 0.87 | 2.02 | 0.70 | 2.44 | 11,000 | 48,945 | 1,880 |
| 3-1/4 - 3-1/2 | 0.49 | 0.87 | 1.77 | 0.70 | 2.14 | 21,000 | 93,441 | 1,520 |
| 3-15/16 - 4 | 0.34 | 0.87 | 2.53 | 0.70 | 3.06 | 23,000 | 102,340 | 1,340 |
| 4-7/16 - 4-1/2 | 0.36 | 0.87 | 2.45 | 0.70 | 2.96 | 34,500 | 153,510 | 1,210 |
| 4-15/16 - 5 | 0.34 | 0.87 | 2.53 | 0.70 | 3.06 | 35,400 | 157,515 | 1,070 |

COMPARING SPHERICAL TO TAPER ROLLER BEARING

The dynamic capacity C (spherical) and C₉₀ (taper) are not to the same base. To compare basic dynamic capacities, multiply C x .259 and compare to C₉₀.

★ C₉₀- Dynamic capacity based on a rated life of 90 million revolutions or 3000 hours at 500 RPM

Table 11: Easy Selection Table Dodge All-steel Double Row Tapered Roller Bearings

| Shaft Size | Hours Life | Allowable Equivalent Radial Load Rating (Lbs.) at Various Revolutions Per Minute * | | | | | | | | | | | | | | | |
|------------|---------------|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | | 50 | 100 | 250 | 500 | 750 | 1000 | 1070 | 1210 | 1340 | 1520 | 1880 | 2180 | 2300 | 2700 | 2900 | 3250 |
| 2-11/16 | 5,000 | 18,829 | 15,294 | 11,618 | 9,437 | 8,356 | 7,665 | 7,511 | 7,239 | 7,021 | 6,760 | 6,343 | 6,067 | 5,971 | 5,690 | 5,569 | 5,382 |
| | 10,000 | 15,294 | 12,423 | 9,437 | 7,665 | 6,787 | 6,226 | 6,101 | 5,880 | 5,703 | 5,491 | 5,152 | 4,928 | 4,850 | 4,622 | 4,524 | 4,372 |
| | 30,000 | 11,000 | 8,935 | 6,787 | 5,513 | 4,882 | 4,478 | 4,388 | 4,229 | 4,102 | 3,949 | 3,705 | 3,544 | 3,488 | 3,324 | 3,254 | 3,144 |
| | 50,000 | 9,437 | 7,665 | 5,823 | 4,730 | 4,188 | 3,842 | 3,765 | 3,628 | 3,519 | 3,388 | 3,179 | 3,041 | 2,992 | 2,852 | 2,791 | 2,698 |
| | 100,000 | 7,665 | 6,226 | 4,730 | 3,842 | 3,402 | 3,120 | 3,058 | 2,947 | 2,858 | 2,752 | 2,582 | 2,470 | 2,431 | 2,316 | 2,267 | 2,191 |
| 3-1/4 | 5,000 | 35,947 | 29,198 | 22,181 | 18,016 | 15,953 | 14,634 | 14,340 | 13,820 | 13,404 | 12,906 | 12,109 | 11,583 | 11,398 | 10,863 | 10,633 | 10,275 |
| | 10,000 | 29,198 | 23,716 | 18,016 | 14,634 | 12,958 | 11,886 | 11,647 | 11,226 | 10,887 | 10,483 | 9,836 | 9,408 | 9,258 | 8,823 | 8,636 | 8,346 |
| | 30,000 | 21,000 | 17,057 | 12,958 | 10,525 | 9,319 | 8,549 | 8,377 | 8,074 | 7,830 | 7,540 | 7,074 | 6,767 | 6,659 | 6,346 | 6,211 | 6,003 |
| | 50,000 | 18,016 | 14,634 | 11,117 | 9,030 | 7,995 | 7,334 | 7,187 | 6,927 | 6,718 | 6,468 | 6,069 | 5,805 | 5,713 | 5,444 | 5,329 | 5,150 |
| | 100,000 | 14,634 | 11,886 | 9,030 | 7,334 | 6,494 | 5,957 | 5,838 | 5,626 | 5,457 | 5,254 | 4,929 | 4,715 | 4,640 | 4,422 | 4,328 | 4,183 |
| 3-15/16 | 5,000 | 39,371 | 31,979 | 24,293 | 19,732 | 17,472 | 16,027 | 15,705 | 15,137 | 14,680 | 14,135 | 13,262 | 12,686 | 12,484 | 11,897 | 11,645 | 11,254 |
| | 10,000 | 31,979 | 25,975 | 19,732 | 16,027 | 14,192 | 13,018 | 12,757 | 12,295 | 11,924 | 11,482 | 10,772 | 10,304 | 10,140 | 9,664 | 9,459 | 9,141 |
| | 30,000 | 23,000 | 18,682 | 14,192 | 11,527 | 10,207 | 9,363 | 9,175 | 8,843 | 8,576 | 8,258 | 7,748 | 7,411 | 7,293 | 6,950 | 6,803 | 6,574 |
| | 50,000 | 19,732 | 16,027 | 12,175 | 9,889 | 8,757 | 8,033 | 7,871 | 7,586 | 7,358 | 7,085 | 6,647 | 6,358 | 6,257 | 5,963 | 5,836 | 5,640 |
| | 100,000 | 16,027 | 13,018 | 9,889 | 8,033 | 7,113 | 6,525 | 6,394 | 6,162 | 5,976 | 5,754 | 5,399 | 5,164 | 5,082 | 4,843 | 4,741 | 4,581 |
| 4-7/16 | 5,000 | 59,056 | 47,968 | 36,440 | 29,598 | 26,208 | 24,041 | 23,558 | 22,705 | 22,020 | 21,203 | 19,893 | 19,029 | 18,726 | 17,846 | 17,468 | 16,881 |
| | 10,000 | 47,968 | 38,962 | 29,598 | 24,041 | 21,288 | 19,527 | 19,135 | 18,442 | 17,886 | 17,222 | 16,158 | 15,456 | 15,210 | 14,496 | 14,188 | 13,711 |
| | 30,000 | 34,500 | 28,023 | 21,288 | 17,291 | 15,311 | 14,045 | 13,762 | 13,264 | 12,864 | 12,387 | 11,622 | 11,117 | 10,939 | 10,426 | 10,204 | 9,862 |
| | 50,000 | 29,598 | 24,041 | 18,263 | 14,834 | 13,135 | 12,049 | 11,807 | 11,379 | 11,036 | 10,627 | 9,970 | 9,537 | 9,385 | 8,944 | 8,755 | 8,460 |
| | 100,000 | 24,041 | 19,527 | 14,834 | 12,049 | 10,669 | 9,787 | 9,590 | 9,243 | 8,964 | 8,632 | 8,098 | 7,747 | 7,623 | 7,265 | 7,111 | 6,872 |
| 4-15/16 | 5,000 | 60,597 | 49,220 | 37,390 | 30,370 | 26,892 | 24,668 | 24,173 | 23,297 | 22,595 | 21,756 | 20,412 | 19,526 | 19,214 | 18,312 | 17,923 | 17,321 |
| | 10,000 | 49,220 | 39,979 | 30,370 | 24,668 | 21,843 | 20,037 | 19,634 | 18,923 | 18,353 | 17,672 | 16,580 | 15,860 | 15,607 | 14,874 | 14,558 | 14,069 |
| | 30,000 | 35,400 | 28,754 | 21,843 | 17,742 | 15,710 | 14,411 | 14,121 | 13,610 | 13,200 | 12,710 | 11,925 | 11,407 | 11,225 | 10,698 | 10,471 | 10,119 |
| | 50,000 | 30,370 | 24,668 | 18,739 | 15,221 | 13,478 | 12,363 | 12,115 | 11,676 | 11,324 | 10,904 | 10,230 | 9,786 | 9,630 | 9,178 | 8,983 | 8,681 |
| | 100,000 | 24,668 | 20,037 | 15,221 | 12,363 | 10,947 | 10,042 | 9,840 | 9,484 | 9,198 | 8,857 | 8,310 | 7,949 | 7,822 | 7,455 | 7,296 | 7,051 |

| | | | |
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All Steel

Table 12: All-steel Pillow Block Housing Permissible Thrust Load, Lbs.

| Bore Size, Inches | Max. Thrust (Lbs.) |
|-------------------|--------------------|
| 2-11/16 - 3 | 9300 |
| 3-1/4 - 3-1/2 | 13800 |
| 3-15/16 - 4 | 13300 |
| 4-7/16 - 4-1/2 | 10400 |
| 4-15/16 - 5 | 14000 |

Table 13: All-steel Pillow Block And Cartridge Total Expansion Capability

| Bore Size, Inches | Expansion (Inches) |
|-------------------|--------------------|
| 2-11/16 - 3 | 3/8 |
| 3-1/4 - 3-1/2 | 3/8 |
| 3-15/16 - 4 | 3/8 |
| 4-7/16 - 4-1/2 | 3/8 |
| 4-15/16 - 5 | 25/64 |

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 | -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 |

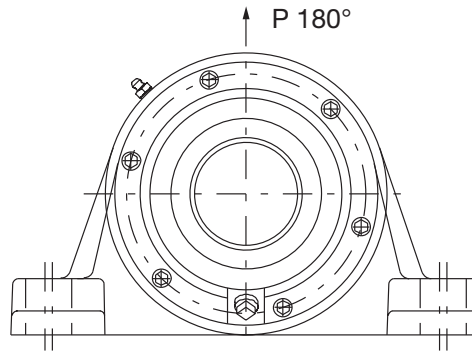


Table 15: Housing Ratings All-steel Pillow Block

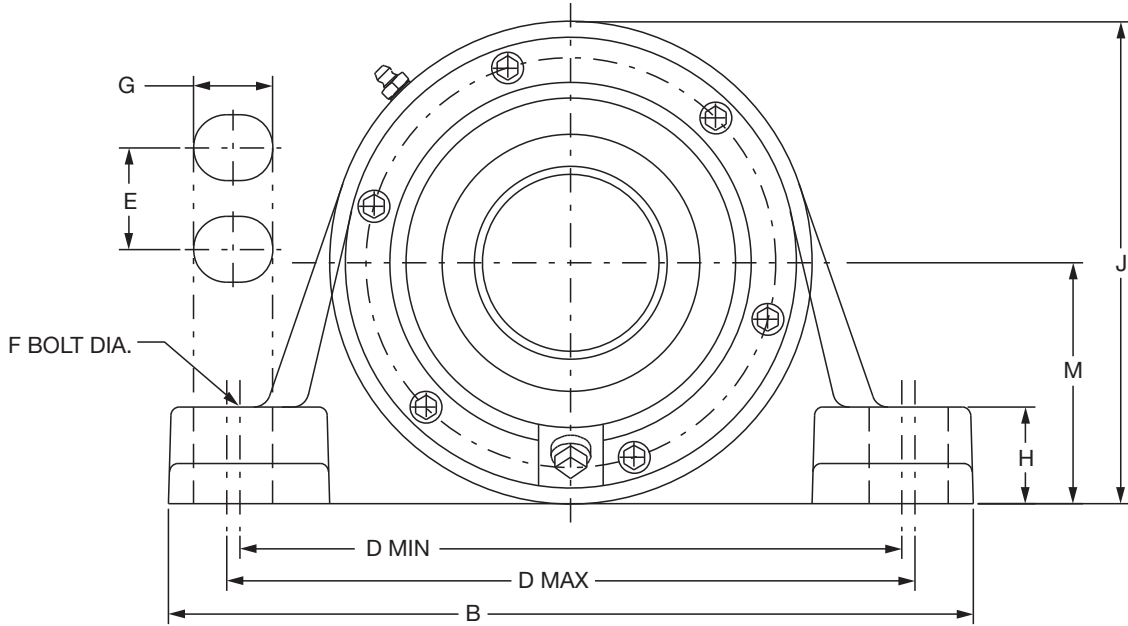
| SHAFT SIZE, (INCHES) | HOUSING STRENGTH, LBS. |
|----------------------|------------------------|
| | 180° |
| 2-11/16 - 3 | 30000 |
| 3-1/4 - 3-1/2 | 32000 |
| 3-15/16 - 4 | 34000 |
| 4-7/16 - 4-1/2 | 39000 |
| 4-15/16 - 5 | 39000 |

| | | | |
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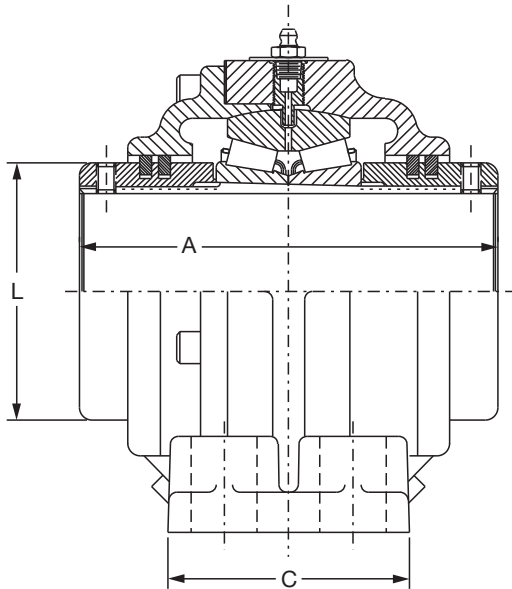
SELECTION/DIMENSIONS



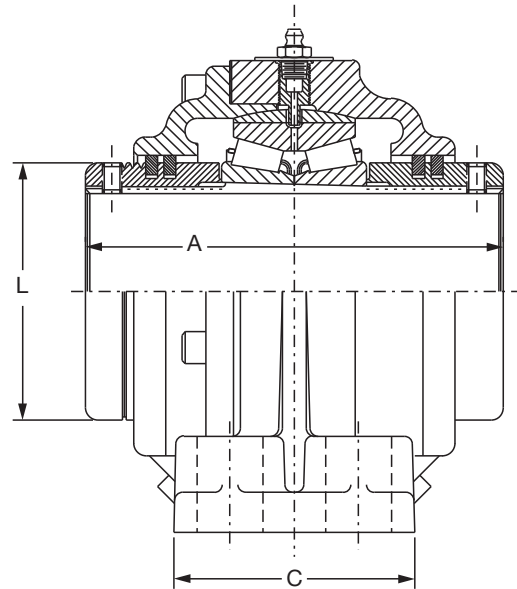
All Steel Pillow Block - Inch 4-BOLT BASE



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



NON-EXPANSION CONSTRUCTION



EXPANSION CONSTRUCTION

| | | | |
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SELECTION

All Steel Pillow Block - Inch 4-BOLT BASE

| Cast Steel Non-Expansion* | | | | Cast Steel Expansion | | | |
|---------------------------|---------------|-------------|-------------------|----------------------|---------------|--------------|-------------------|
| Shaft Size Inches # | Part Number | Part Name | Weight Lbs Approx | Shaft Size Inches # | Part Number | Part Name | Weight Lbs Approx |
| 2-11/16 | 063359 | SP4B-AS-211 | 45 | 2-11/16 | 063389 | SP4B-AS-211E | 45 |
| 2-15/16 | 063360 | SP4B-AS-215 | 42 | 2-15/16 | 063390 | SP4B-AS-215E | 42 |
| 3 | 063361 | SP4B-AS-300 | 41 | 3 | 063411 | SP4B-AS-300E | 41 |
| 3-7/16 | 063362 | SP4B-AS-307 | 77 | 3-7/16 | 063392 | SP4B-AS-307E | 77 |
| 3-1/2 | 063363 | SP4B-AS-308 | 77 | 3-1/2 | 063393 | SP4B-AS-308E | 77 |
| 4-7/16 | 063366 | SP4B-AS-407 | 149 | 4-7/16 | 063396 | SP4B-AS-407E | 149 |

* Furnished Unless Otherwise Specified

Consult DODGE For Sizes Not Listed.

Consult DODGE For Sizes Not Listed.

| Shaft Size Inches | A | B | C | D | | E | F Bolt Dia. | G | H | J | L | M | Exp* |
|-------------------|------|-------|------|-------|-------|------|-------------|------|------|-------|------|------|------|
| | | | | Min. | Max. | | | | | | | | |
| 2-11/16 | 6.50 | 12.50 | 3.75 | 10.31 | 10.69 | 2.00 | 5/8 | 0.94 | 1.63 | 7.50 | 4.00 | 3.75 | 3/8 |
| 2-15/16 | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | |
| 3-7/16 | 7.75 | 14.50 | 4.50 | 11.88 | 12.63 | 2.38 | 3/4 | 1.13 | 1.88 | 9.00 | 4.69 | 4.50 | 3/8 |
| 3-1/2 | | | | | | | | | | | | | |
| 4-7/16 | | | | | | | | | | | | | |
| 4-7/16 | 9.75 | 18.75 | 5.25 | 14.81 | 15.69 | 3.25 | 7/8 | 1.31 | 2.25 | 11.38 | 6.00 | 5.75 | 3/8 |

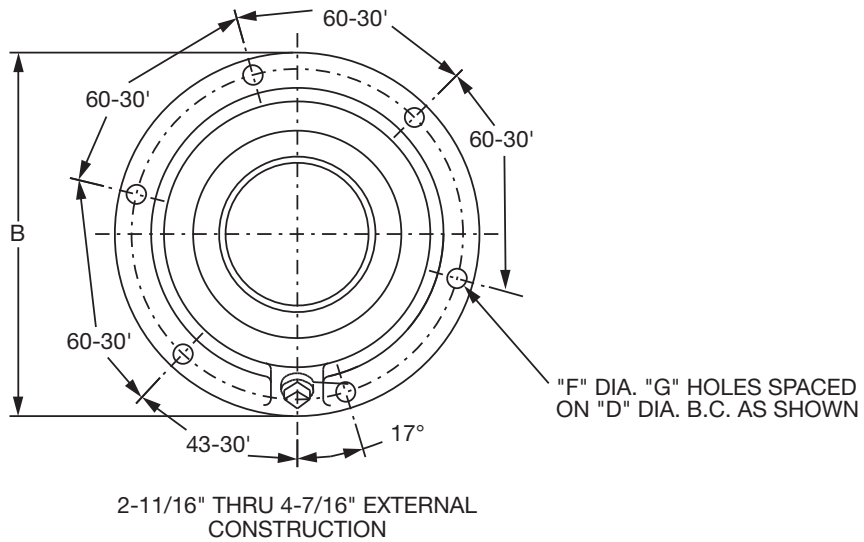
* Total Expansion for Expansion Bearing Only

| | | | |
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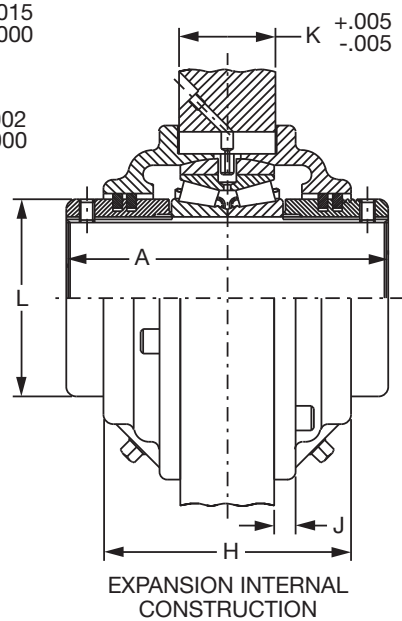
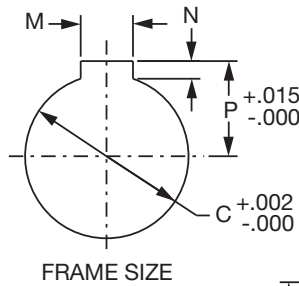
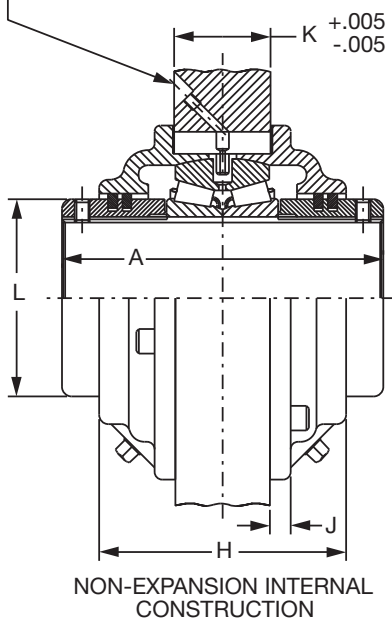
SELECTION/DIMENSIONS



All Steel Cartridge Units - Inch



ANY LUBRICATION ARRANGEMENT WHICH CONNECTS WITH HOLE IN KEY MAY BE USED



| | | | |
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SELECTION/DIMENSIONS



All Steel Cartridge Units - Inch

| Cast Steel Non-Expansion* | | | | Cast Steel Expansion | | | |
|---------------------------|---------------|------------|-------------------|----------------------|---------------|-------------|-------------------|
| Shaft Size Inches # | Part Number | Part Name | Weight Lbs Approx | Shaft Size Inches # | Part Number | Part Name | Weight Lbs Approx |
| 2-11/16 | 063420 | CRT-AS-211 | 30 | 2-11/16 | 063450 | CRT-AS-211E | 30 |
| 2-15/16 | 063421 | CRT-AS-215 | 30 | 2-15/16 | 063451 | CRT-AS-215E | 30 |
| 3 | 063422 | CRT-AS-300 | 30 | 3 | 063452 | CRT-AS-300E | 30 |
| 3-7/16 | 063424 | CRT-AS-307 | 55 | 3-7/16 | 063454 | CRT-AS-307E | 55 |
| 3-15/16 | 063426 | CRT-AS-315 | 65 | 3-15/16 | 063456 | CRT-AS-315E | 65 |
| 4-7/16 | 063429 | CRT-AS-407 | 110 | 4-7/16 | 063459 | CRT-AS-407E | 110 |

* Furnished Unless Otherwise Specified

Consult DODGE For Sizes Not Listed.

Consult DODGE For Sizes Not Listed.

| Shaft Size Inches | A | B | C | D | F Bolt Dia. | G | H | J | K | L | M | N | P | Exp* |
|-------------------|------|-------|------|------|-------------|------|------|------|------|------|------|-----|------|------|
| 2-11/16 | | | | | | | | | | | | | | 3/8 |
| 2-15/16 | 6.50 | 7.13 | 5.70 | 6.38 | 3/8 | 6.00 | 4.88 | 0.38 | 2.19 | 4.00 | 1.00 | 5/8 | 3.43 | |
| 3 | | | | | | | | | | | | | | |
| 3-7/16 | 7.75 | 8.75 | 7.20 | 7.13 | 7/16 | 6.00 | 6.03 | 0.84 | 2.75 | 4.69 | 1.00 | 5/8 | 4.19 | |
| 3-15/16 | 8.00 | 9.50 | 7.89 | 8.53 | 7/16 | 6.00 | 5.97 | 0.84 | 3.13 | 5.44 | 1.00 | 5/8 | 4.54 | |
| 4-7/16 | 9.25 | 10.84 | 9.07 | 9.88 | 1/2 | 6.00 | 7.00 | 0.50 | 3.50 | 6.06 | 1.00 | 5/8 | 5.13 | |

* Total Expansion for Expansion Bearing Only

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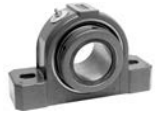
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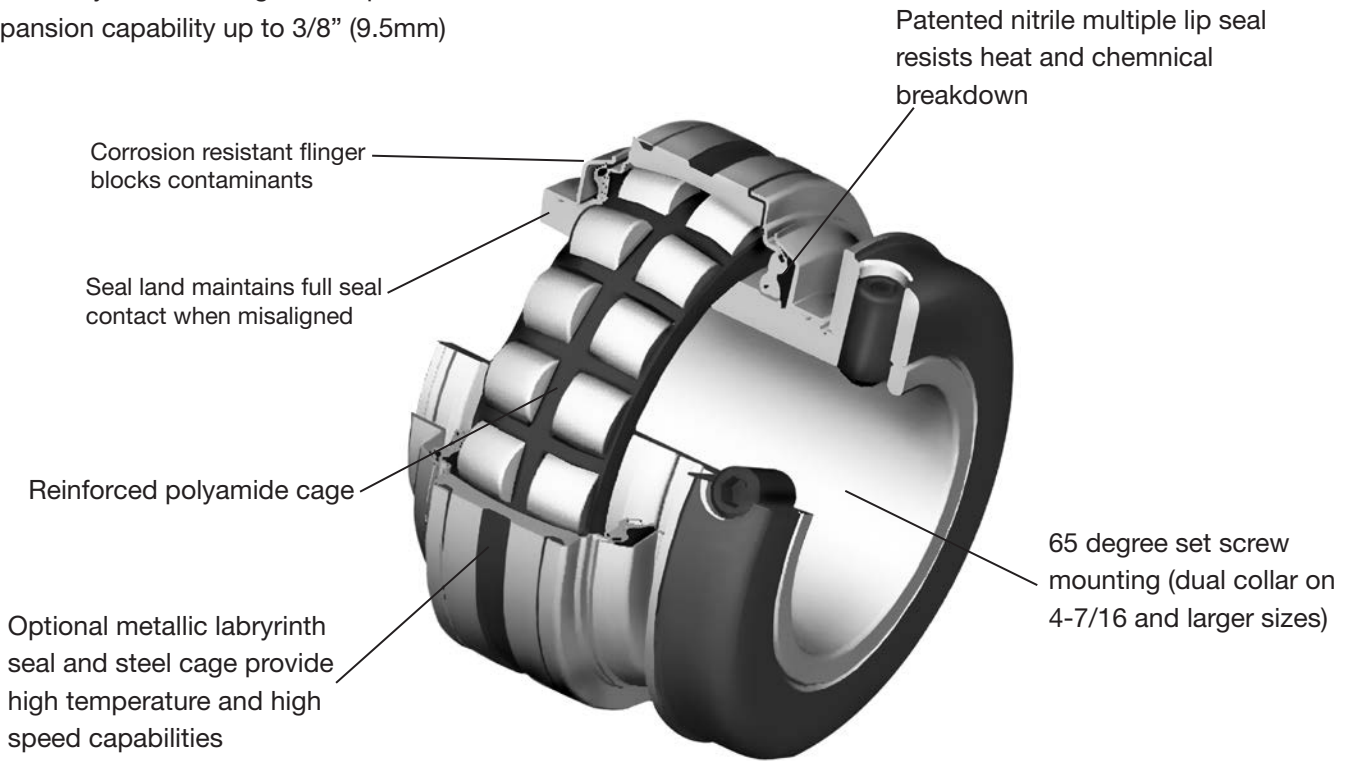
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S-2000

Longer Bearing Life By Design . . .

High capacity double row spherical rollers offer up to 250% more L₁₀ life than competitive brands

- Larger rollers
- More contact area
- Case-carburized inner rings resist cracking
- Static or dynamic misalignment up to ± 1°
- Expansion capability up to 3/8" (9.5mm)



Installation Savings . . .

- Factory lubed, sealed and adjusted, ready to slip onto the shaft
- 65° Springlok collar mount for increased holding power versus 90° or 120°
- Field convertible from non-expansion to expansion and expansion to non-expansion
- Elongated pillow block bolt holes to facilitate mounting



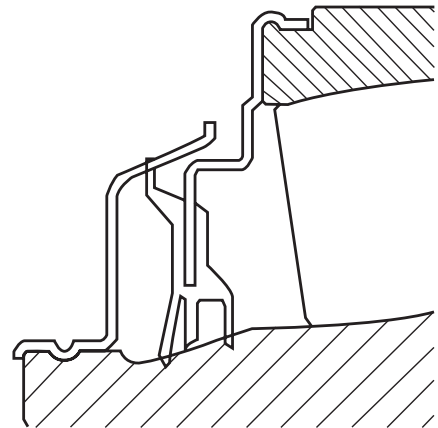
FEATURES/BENEFITS

S-2000

S-2000 Bearings Offer Patented Seal Options To Maximize Bearing Life . . .

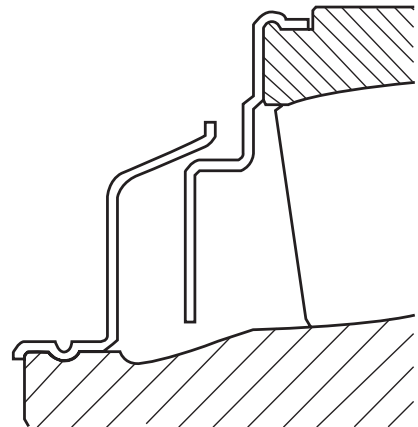
TRIDENT™ Seals for low to medium speed

- Face rubbing triple lip seal
- Flinger to shield seal and bearing from contamination/damage
- Seal/land positive contact up to $\pm 1^\circ$ degree of misalignment
- Patented design



Labyrinth seals for higher speeds

- High speed for relatively clean environments
- Flinger shields seal and bearing from contamination/damage
- Seal operates with up to $\pm 1^\circ$ degree of misalignment
- Patented design



NOTE: Instruction manuals for Dodge bearings are available on www.dodge-pt.com



SPECIFICATION

S-2000

INCH

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

ASTM A48 Class 30 cast iron is the standard material used in S-2000 housings. A-27 Grade 70-36 Class 1 Steel is the standard material used in Steel S2000-HD

housings. Housing designs are available for survival in extreme harsh environments, through the use of special finishes and stainless hardware.

Housings are available in a variety of standard configurations, including pillow blocks, flanges, piloted flanges and take-up bearings. TRIDENT triple lip contact seal and Labyrinth seals are available on S-2000 bearings.



HOW TO ORDER

There are two ways to specify DODGE Bearings. 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 shown on page B12-5 and add any special instructions to the end of the description for options not covered by the nomenclature.

DODGE Spherical Bearings are factory adjusted and pre-lubricated. For applications where extreme ambient temperatures, high speeds, or high loads are expected, a variety of specialty lubricants is available. Standard grease provided is lithium complex base Mobilgrease XHP222. High temperature

greases available include Mobil HTS #2. Other special lubricants are available upon request. Special lubricant options usually involve set-up charges, minimum quantities and list price premiums. To order, specify type of lubricant required at the end of the product name or after the standard part number.

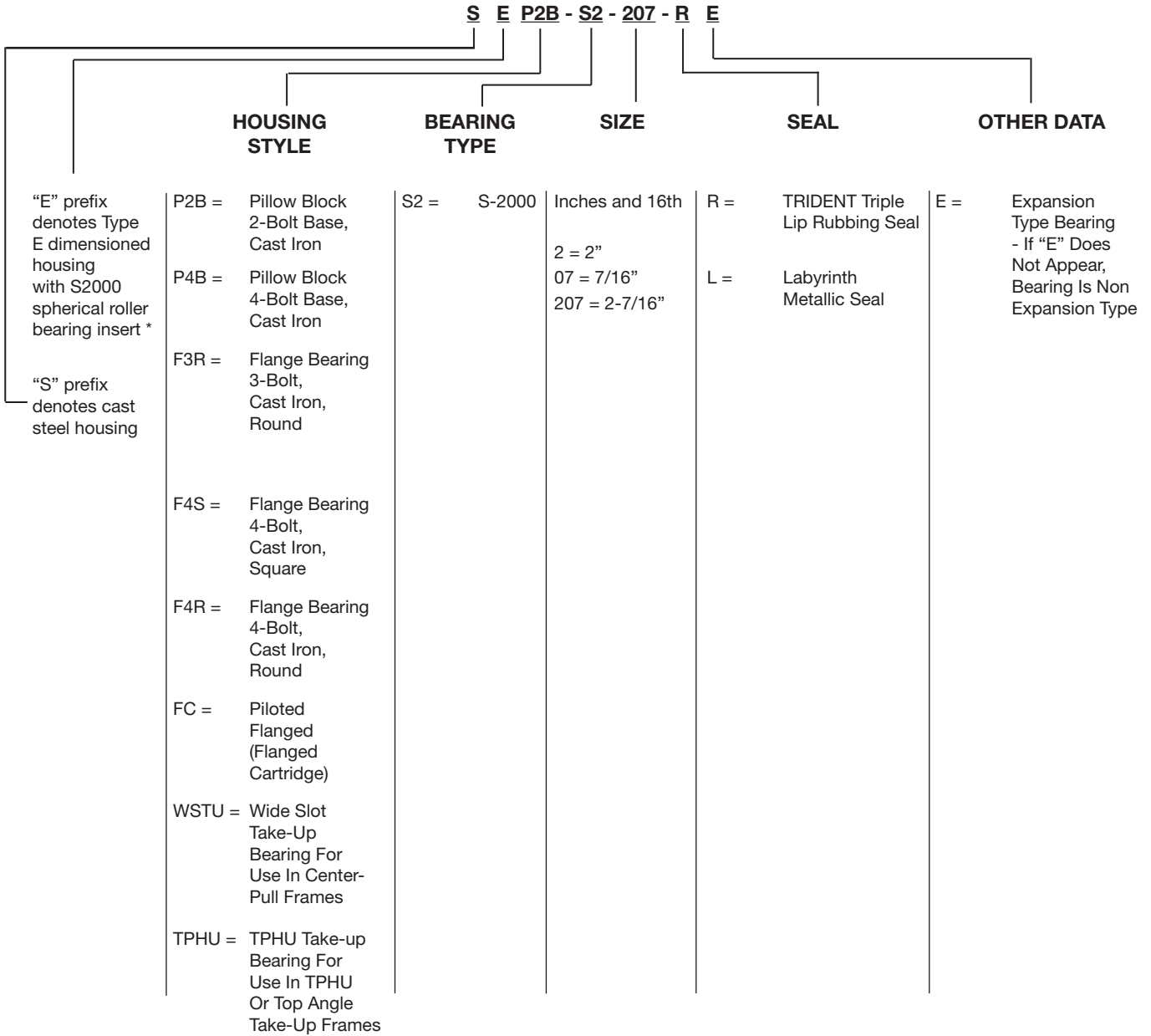
Example: 070320 except with Mobil HTS #2 grease
or
P2BS2108L except with Mobil HTS #2 grease

For applications requiring modifications not listed, we encourage you to contact our Application Engineering Department for Bearings at 864-284-5700.

NOMENCLATURE



S-2000



* Available in two or four bolt pillow blocks, four bolt square flanges and piloted flanges

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



FEATURES/BENEFITS

S-2000-E



- Interchangeable with Type E style pillow blocks and flanges
- Same proven DODGE S-2000 double row spherical insert
- 65° springlock collar mounting
- Up to $\pm 1^\circ$ misalignment capability
- Seal land on OD of inner ring maintains full contact pressure even when misaligned
- High capacity double row spherical bearing

- 2-bolt pillow blocks in sizes 1-3/8 to 3-7/16"
- 4-bolt pillow blocks in sizes 2-7/16 to 4-15/16"
- Flange bearings in sizes 1-3/8 to 4-7/16"
- Piloted flange bearings in sizes 1-3/8 to 4-15/16"

S-2000-HD



Dodge S2000-HD mounted bearings feature proven S2000 technology deployed in steel housings designed specifically for harsh applications that demand superior housing strength. Major features include set screw mounting systems, high capacity cast steel housings with industry common dimensions, as well as high capacity, double row spherical inserts that are protected with either one of two effective sealing systems plus both closed & shaft-through end covers.

In addition, S2000-HD feature single piece, sealed inserts that can be easily replaced in the field, without the time & trouble of a bearing tear down & rebuild. Field conversion between Non-Expansion & Expansion (fixed & float) can also be accomplished with the repositioning of a single snap ring.

Housing configurations include two and four bolt base pillow blocks, and four bolt flanges.



SELECTION

S-2000 SPHERICAL ROLLER BEARINGS

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 DODGE Application Engineering (864-284-5700) for applications which exceed the recommendations of this catalog.

L₁₀ Hours Life - The life which may be expected from at least 90% of a given group of bearings operating under identical conditions.

$$L_{10} \text{ Life, Hours} = \left(\frac{C}{P} \right)^{10/3} \times \left(\frac{16667}{\text{RPM}} \right)$$

Where: C = Dynamic Capacity
(Table 1 on page B12-9) lbs.

P = Equivalent Radial Load, lbs.

GENERAL

Heavy Service - For heavy shock loads, frequent shock loads, or severe vibrations, add up to 50% (according to severity of conditions) to the Equivalent Radial Load 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 L₁₀ 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 L₁₀ 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.

| RPM | 20-200 | 201 - 2000 | Over 2000 |
|-------------------------|--------|------------|-----------|
| 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 on page B12-9). 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 6, 7 and 8 on pages B12-12 and B12-13 and 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 | S-2000 |
| UP TO 1-1/2" | +.0000 -.0005" |
| 1-9/16 TO 4" | +.000 -.001" |
| 4-7/16 TO 5" | +.000 -.0015" |

BEARING SUPPORTING RADIAL LOADS ONLY

1. Define L₁₀ Life Hours desired.

2. Establish bearing radial load, F_R

(F_R = P for Pure Radial Load Conditions). The DODGE program BEST™* can be used to find application loads.

3. Establish RPM.

Using the easy selection Table 4 on page B12-10, 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: 1. L₁₀ Life = 30,000 Hours
2. Radial load = 4000 lbs.
3. RPM = 1,020

At the intersection of the 1,020 RPM column and the 30,000 hours L₁₀ life row, the equivalent radial load of 4092 lbs. exceeds the 4000 lbs. radial load for shaft size 2-7/16". A bearing with bore 2-7/16", or larger, may be used for this application.

* The DODGE Bearing Evaluation and Selection Technique (BEST) is a menu driven computer program that calculates bearing loads, fatigue life and operating temperature for a two bearing shaft system based on user supplied input parameters. This interactive program is available at www.ptwizard.com under the Product Selection area.

| | | | |
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ALTERNATE METHOD A - SELECTING A BEARING FOR AN L₁₀ LIFE VALUE NOT SHOWN IN THE EASY SELECTION CHART.

The L₁₀ life equation can be rearranged so that the bearing dynamic capacity **C** is identified in terms of L₁₀, RPM and P

$$C = \left(\frac{L_{10} \times \text{RPM}}{16667} \right)^{0.3} \times P$$

(P = F_R for Pure Radial Load Conditions)

Since the L₁₀, RPM and P are known, solve for C. Select from the dynamic capacity column on Table 1 on page B12-9 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 RPM does not exceed the MAX. RPM on Table 1. Also check that the radial load does not exceed the Maximum Allowable Slip Fit Radial Load shown on Table 1 on page B12-9. If it does, a line-to-line to light press fit of shaft is required. When selecting an L₁₀ 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, lbs.

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

F_A = Thrust (axial) load, lbs.

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 on page B12-9 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 L₁₀, or it can be compared to the allowable equivalent radial load ratings for the speed and hours life desired in the easy selection Table 4 on page B12-10.

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 DODGE Application Engineering (864-284-5700).

SELECTING LUBRICATION

DODGE S2000 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 5 on page B12-11. For very low and high speeds, for heavy loads and for low and high temperatures, special greases must be used. Contact DODGE Application Engineering (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 Unitized roller 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 DODGE Unitized Spherical Roller Bearings. S2000 bearings are designed to allow a maximum of ±1° 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.

| | | | |
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Table 1: S2000-HD Spherical Roller Bearings

| Shaft Size Inches | Basic Bearing Description | e | F _A /F _R < e | | F _A /F _R > e | | Max. Allowable Slip Fit Radial Load F _R * lbs. | Dynamic Capacity (C) lbs. | Static Capacity Co lbs. | Maximum Speed ** | |
|--------------------------|---------------------------|------|------------------------------------|-----|------------------------------------|-----|---|---------------------------|-------------------------|------------------|------------------------|
| | | | X | Y | X | Y | | | | Labyrinth RPM | TRIDENT Triple Lip RPM |
| 1-3/8 1-7/16 1-1/2 | 22208 | 0.28 | 1.0 | 2.4 | 0.67 | 3.6 | 3,750 | 20,800 | 21,000 | 3,600 | 2,900 |
| 1-11/16 1-3/4 | 22209 | 0.26 | 1.0 | 2.6 | 0.67 | 3.9 | 3,750 | 20,800 | 22,000 | 3,360 | 2,460 |
| 1-15/16 2 | 22210 | 0.24 | 1.0 | 2.8 | 0.67 | 4.2 | 4,000 | 22,000 | 24,000 | 3,180 | 2,200 |
| 2-3/16 | 22211 | 0.23 | 1.0 | 2.9 | 0.67 | 4.3 | 4,860 | 27,000 | 29,000 | 2,700 | 1,950 |
| 2-7/16 | 22213 | 0.24 | 1.0 | 2.8 | 0.67 | 4.2 | 6,840 | 39,000 | 47,500 | 2,250 | 1,740 |
| 2-11/16 2-15/16 3 | 22215 | 0.22 | 1.0 | 3.1 | 0.67 | 4.6 | 7,500 | 41,500 | 53,000 | 2,040 | 1,490 |
| 3-7/16 | 22218 | 0.23 | 1.0 | 2.9 | 0.67 | 4.3 | 11,500 | 65,500 | 81,500 | 1,560 | 1,280 |
| 3-15/16 | 22220 | 0.24 | 1.0 | 2.8 | 0.67 | 4.2 | 14,400 | 83,000 | 104,000 | 1,320 | 1,075 |
| 4-7/16 | 22222 | 0.25 | 1.0 | 2.7 | 0.67 | 4.1 | 18,400 | 104,000 | 132,000 | 1,200 | 990 |
| 4-15/16 | 22226 | 0.26 | 1.0 | 2.6 | 0.67 | 3.9 | 25,700 | 146,000 | 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 DODGE Engineering.

After final alignment of the shaft and installation of the housings, tighten both setscrews hand tight, then the setscrews should be tightened alternately and in small increments to the torque specified in Table 2. After 24 hours operation, the setscrews should be retightened to the torque in Table 2 to assure full locking of the inner race to the shaft. Care should be taken that the socket key or driver is in good condition with no rounded corners and the key is fully engaged in the setscrew and held square with the setscrew to prevent rounding out of the setscrew socket when applying maximum torque.

Table 2: Set Screw Torque Values

| Set Screw Torque Table | | |
|------------------------|-----------------------|-------------------|
| Shaft Size | Socket Set Screw Size | Tightening Torque |
| 1-3/8 - 1-3/4 in. | 5/16 in. | 165 Inch Pounds |
| 1-15/16 - 2-7/16 in. | 3/8 in. | 290 Inch Pounds |
| 2-11/16 - 3-7/16 in. | 1/2 in. | 620 Inch Pounds |
| 3-15/16 - 4-15/16 in. | 5/8 in. | 1325 Inch Pounds |

Table 3: Lubrication Intervals

| Lubrication Guide (In Weeks) | | | | | | | | |
|--|--------------|----------------|----------------|-----------------|------------------|------------------|------------------|------------------|
| Read Preceding Paragraphs Before Establishing Lubrication Schedule | | | | | | | | |
| Hours Run per Day | 1 to 250 RPM | 251 to 500 RPM | 501 to 750 RPM | 751 to 1000 RPM | 1001 to 1500 RPM | 1501 to 2000 RPM | 2001 to 2500 RPM | 2501 to 3000 RPM |
| 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 |



SELECTION

S-2000

Table 4: Easy Selection Table for S-2000 Double Row Spherical Roller Bearings

| Shaft Size Inches | L ₁₀ Life Hours | Allowable Equivalent Radial Load Rating (lbs.) at Various Revolutions per Minute | | | | | | | | | | | | | | | | |
|-------------------|----------------------------|--|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | 50 | 100 | 150 | 250 | 500 | 870 | 1,020 | 1,200 | 1,320 | 1,560 | 1,750 | 2,040 | 2,250 | 2,700 | 3180 | 3360 | 3600 |
| 1-3/8 to 1-1/2 | 10,000 | 7,498 | 6,090 | 5,393 | 4,626 | 3,758 | 3,182 | 3,034 | 2,890 | 2,808 | 2,671 | 2,581 | 2,465 | 2,393 | 1,495 | 2,157 | 2,122 | 2,078 |
| | 30,000 | 5,393 | 4,380 | 3,878 | 3,327 | 2,703 | 2,289 | 2,182 | 2,078 | 2,020 | 1,921 | 1,856 | 1,773 | 1,721 | 1,495 | 1,552 | 1,526 | 1,495 |
| | 40,000 | 4,947 | 4,018 | 3,558 | 3,052 | 2,479 | 2,100 | 2,002 | 1,907 | 1,853 | 1,762 | 1,703 | 1,626 | 1,579 | 1,495 | 1,423 | 1,400 | 1,371 |
| | 60,000 | 4,380 | 3,558 | 3,150 | 2,703 | 2,195 | 1,859 | 1,773 | 1,688 | 1,641 | 1,560 | 1,508 | 1,440 | 1,398 | 1,324 | 1,260 | 1,240 | 1,214 |
| | 100,000 | 3,758 | 3,052 | 2,703 | 2,319 | 1,883 | 1,595 | 1,521 | 1,448 | 1,407 | 1,339 | 1,293 | 1,235 | 1,199 | 1,136 | 1,081 | 1,063 | 1,042 |
| 1-11/16 to 1-3/4 | 10,000 | 7,498 | 6,090 | 5,393 | 4,626 | 3,758 | 3,182 | 3,034 | 2,890 | 2,808 | 2,671 | 2,581 | 2,465 | 1,579 | 2,266 | 2,157 | 2,122 | |
| | 30,000 | 5,393 | 4,380 | 3,878 | 3,327 | 2,703 | 2,289 | 2,182 | 2,078 | 2,020 | 1,921 | 1,856 | 1,773 | 1,579 | 1,630 | 1,552 | 1,526 | |
| | 40,000 | 4,947 | 4,018 | 3,558 | 3,052 | 2,479 | 2,100 | 2,002 | 1,907 | 1,853 | 1,762 | 1,703 | 1,626 | 1,579 | 1,495 | 1,423 | 1,400 | |
| | 60,000 | 4,380 | 3,558 | 3,150 | 2,703 | 2,195 | 1,859 | 1,773 | 1,688 | 1,641 | 1,560 | 1,508 | 1,440 | 1,398 | 1,324 | 1,260 | 1,240 | |
| | 100,000 | 3,758 | 3,052 | 2,703 | 2,319 | 1,883 | 1,595 | 1,521 | 1,448 | 1,407 | 1,339 | 1,293 | 1,235 | 1,199 | 1,136 | 1,081 | 1,063 | |
| 1-15/16 to 2 | 10,000 | 7,930 | 6,441 | 5,704 | 4,893 | 3,975 | 3,366 | 3,209 | 3,057 | 2,970 | 2,825 | 2,729 | 1,720 | 2,531 | 2,396 | 2,282 | | |
| | 30,000 | 5,704 | 4,633 | 4,102 | 3,519 | 2,859 | 2,421 | 2,308 | 2,198 | 2,136 | 2,032 | 1,963 | 1,720 | 1,820 | 1,724 | 1,641 | | |
| | 40,000 | 5,232 | 4,250 | 3,763 | 3,228 | 2,622 | 2,221 | 2,117 | 2,017 | 1,960 | 1,864 | 1,801 | 1,720 | 1,670 | 1,581 | 1,505 | | |
| | 60,000 | 4,633 | 3,763 | 3,332 | 2,859 | 2,322 | 1,966 | 1,875 | 1,786 | 1,735 | 1,650 | 1,594 | 1,523 | 1,479 | 1,400 | 1,333 | | |
| | 100,000 | 3,975 | 3,228 | 2,859 | 2,452 | 1,992 | 1,687 | 1,608 | 1,532 | 1,489 | 1,416 | 1,368 | 1,306 | 1,269 | 1,201 | 1,144 | | |
| 2-3/16 | 10,000 | 9,733 | 7,905 | 7,000 | 6,005 | 4,878 | 4,131 | 3,939 | 3,751 | 3,645 | 3,467 | 2,210 | 3,199 | 3,106 | 2,941 | | | |
| | 30,000 | 7,000 | 5,686 | 5,035 | 4,319 | 3,508 | 2,971 | 2,833 | 2,698 | 2,622 | 2,494 | 2,210 | 2,301 | 2,234 | 2,115 | | | |
| | 40,000 | 6,421 | 5,216 | 4,618 | 3,962 | 3,218 | 2,726 | 2,599 | 2,475 | 2,405 | 2,288 | 2,210 | 2,111 | 2,050 | 1,940 | | | |
| | 60,000 | 5,686 | 4,618 | 4,089 | 3,508 | 2,850 | 2,413 | 2,301 | 2,191 | 2,130 | 2,026 | 1,957 | 1,869 | 1,815 | 1,718 | | | |
| | 100,000 | 4,878 | 3,962 | 3,508 | 3,010 | 2,445 | 2,070 | 1,974 | 1,880 | 1,827 | 1,738 | 1,679 | 1,603 | 1,557 | 1,474 | | | |
| 2-7/16 | 10,000 | 14,058 | 11,419 | 10,111 | 8,674 | 7,046 | 5,967 | 5,689 | 5,418 | 5,266 | 5,008 | 4,838 | 4,621 | 4,487 | | | | |
| | 30,000 | 10,111 | 8,213 | 7,272 | 6,239 | 5,068 | 4,292 | 4,092 | 3,897 | 3,787 | 3,602 | 3,480 | 3,324 | 3,227 | | | | |
| | 40,000 | 9,275 | 7,534 | 6,671 | 5,723 | 4,649 | 3,937 | 3,753 | 3,575 | 3,474 | 3,304 | 3,192 | 3,049 | 2,960 | | | | |
| | 60,000 | 8,213 | 6,671 | 5,907 | 5,068 | 4,116 | 3,486 | 3,324 | 3,165 | 3,076 | 2,926 | 2,827 | 2,700 | 2,621 | | | | |
| | 100,000 | 7,046 | 5,723 | 5,068 | 4,348 | 3,531 | 2,991 | 2,851 | 2,716 | 2,639 | 2,510 | 2,425 | 2,316 | 2,249 | | | | |
| 2-11/16 to 3 | 10,000 | 14,959 | 12,151 | 10,759 | 9,230 | 7,497 | 6,350 | 6,054 | 5,766 | 5,666 | 5,329 | 5,149 | 4,917 | | | | | |
| | 30,000 | 10,759 | 8,739 | 7,738 | 6,639 | 5,392 | 4,567 | 4,354 | 4,147 | 3,697 | 3,833 | 3,703 | 3,537 | | | | | |
| | 40,000 | 9,870 | 8,017 | 7,098 | 6,090 | 4,946 | 4,189 | 3,994 | 3,804 | 3,697 | 3,516 | 3,397 | 3,244 | | | | | |
| | 60,000 | 8,739 | 7,098 | 6,285 | 5,392 | 4,380 | 3,709 | 3,537 | 3,368 | 3,273 | 3,113 | 3,008 | 2,873 | | | | | |
| | 100,000 | 7,497 | 6,090 | 5,392 | 4,626 | 3,758 | 3,182 | 3,034 | 2,890 | 2,808 | 2,671 | 2,580 | 2,464 | | | | | |
| 3-7/16 | 10,000 | 23,611 | 19,178 | 16,981 | 14,569 | 11,833 | 10,022 | 9,555 | 9,004 | 8,844 | 8,411 | | | | | | | |
| | 30,000 | 16,981 | 13,793 | 12,213 | 10,478 | 8,511 | 7,208 | 6,872 | 6,004 | 6,360 | 6,050 | | | | | | | |
| | 40,000 | 15,577 | 12,653 | 11,203 | 9,612 | 7,807 | 6,612 | 6,304 | 6,004 | 5,835 | 5,549 | | | | | | | |
| | 60,000 | 13,793 | 11,203 | 9,920 | 8,511 | 6,913 | 5,855 | 5,582 | 5,316 | 5,166 | 4,914 | | | | | | | |
| | 100,000 | 11,833 | 9,612 | 8,511 | 7,302 | 5,931 | 5,023 | 4,789 | 4,561 | 4,432 | 4,216 | | | | | | | |

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.

For applications in the dark shaded area, the maximum load for the specific speed is shown. The load does not correspond to the 10 shown at the left.

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

SELECTION



S-2000

Table 4: Easy Selection Table for S-2000 Double Row Spherical Roller Bearings (continued)

| Shaft Size Inches | L ₁₀ Life Hours | Allowable Equivalent Radial Load Rating (Lbs.) At Various Revolutions Per Minute | | | | | | | | | | | | | | | | | | |
|-------------------|----------------------------|--|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|------|------|------|--|--|
| | | 50 | 100 | 150 | 250 | 500 | 870 | 1,020 | 1,200 | 1,320 | 1,560 | 1,750 | 2,040 | 2,250 | 2,700 | 3180 | 3360 | 3600 | | |
| 3-15/16 | 10,000 | 29,919 | 24,302 | 21,518 | 18,461 | 14,995 | 12,699 | 7,988 | 11,531 | 11,206 | | | | | | | | | | |
| | 30,000 | 21,518 | 17,478 | 15,476 | 13,278 | 10,785 | 9,134 | 7,988 | 8,294 | 8,060 | | | | | | | | | | |
| | 40,000 | 19,739 | 16,033 | 14,197 | 12,180 | 9,893 | 8,378 | 7,988 | 7,608 | 7,393 | | | | | | | | | | |
| | 60,000 | 17,478 | 14,197 | 12,571 | 10,785 | 8,760 | 7,419 | 7,073 | 6,737 | 6,547 | | | | | | | | | | |
| | 100,000 | 14,995 | 12,180 | 10,785 | 9,252 | 7,515 | 6,365 | 6,068 | 5,779 | 5,616 | | | | | | | | | | |
| 4-7/16 | 10,000 | 37,489 | 30,450 | 26,963 | 23,132 | 18,789 | 10,498 | 15,171 | 14,449 | | | | | | | | | | | |
| | 30,000 | 26,963 | 21,901 | 19,392 | 16,637 | 13,513 | 10,498 | 10,911 | 10,392 | | | | | | | | | | | |
| | 40,000 | 24,733 | 20,090 | 17,789 | 15,261 | 12,396 | 10,498 | 10,009 | 9,533 | | | | | | | | | | | |
| | 60,000 | 21,901 | 17,789 | 15,751 | 13,513 | 10,976 | 9,296 | 8,863 | 8,441 | | | | | | | | | | | |
| | 100,000 | 18,789 | 15,261 | 13,513 | 11,593 | 9,417 | 7,975 | 7,603 | 7,242 | | | | | | | | | | | |
| 4-15/16 | 10,000 | 52,628 | 42,747 | 37,851 | 32,473 | 26,377 | 14,738 | 21,298 | | | | | | | | | | | | |
| | 30,000 | 37,851 | 30,745 | 27,224 | 23,356 | 18,971 | 14,738 | 15,318 | | | | | | | | | | | | |
| | 40,000 | 34,722 | 28,203 | 24,973 | 21,424 | 17,402 | 14,738 | 14,051 | | | | | | | | | | | | |
| | 60,000 | 30,745 | 24,973 | 22,112 | 18,971 | 15,409 | 13,050 | 12,442 | | | | | | | | | | | | |
| | 100,000 | 26,377 | 21,424 | 18,971 | 16,275 | 13,220 | 11,196 | 10,674 | | | | | | | | | | | | |

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.

For applications in the dark shaded area, the maximum load for the specific speed is shown. The load does not correspond to the L₁₀ shown at the left.

Table 5: Definition Of Operating Conditions For Unitized Spherical Roller Bearings

| | |
|--------------------|---------------------------------|
| LOW SPEED | UP TO 20% OF MAX. RPM (TABLE 1) |
| MEDIUM SPEED | OVER 20% TO 80% OF MAX. RPM |
| HIGH SPEED | MOVER 80% OF MAX. 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 TO -100°F |
| MEDIUM TEMPERATURE | OVER 20°F TO 200°F |
| HIGH TEMPERATURE | OVER 200°F TO 250°F |

| | | | |
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Bearing Reference Guide
E-Family Roller Bearings
Specialty Tapered Products
S-2000
UNISPHERE II
IMPERIAL
UNIFIED SAF



SELECTION

S-2000

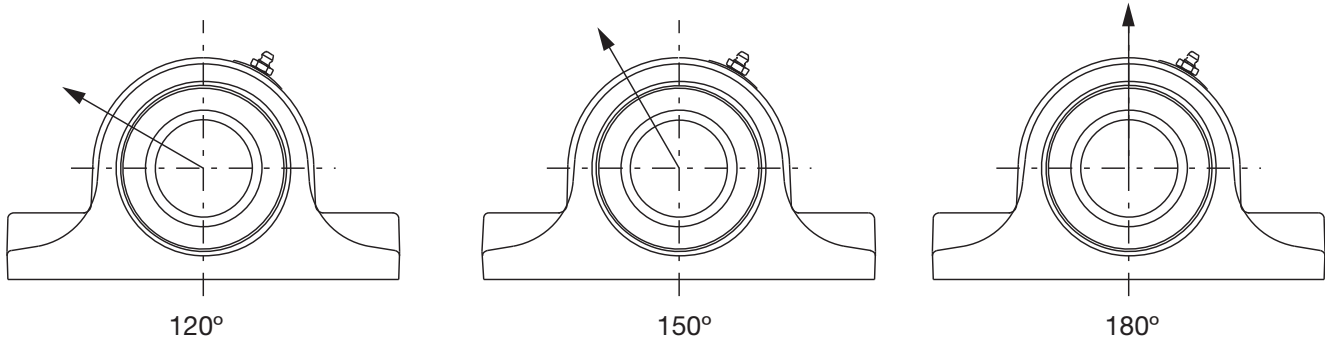


Table 6: S-2000 Housing Rating, 2-Bolt, Cast Iron*

| Bore Size | Maximum Recommended Housing Cap Loads, lb | | |
|------------------|---|------|-------|
| | 120° | 150° | 180° |
| 1-3/8 to 1-1/2 | 2110 | 2640 | 3100 |
| 1-5/8 to 1-3/4 | 2380 | 2980 | 3500 |
| 1-15/16 to 2 | 3130 | 3910 | 4600 |
| 2-3/16 | 3330 | 4160 | 4900 |
| 2-7/16 | 3330 | 4160 | 4900 |
| 2-11/16 to 3 | 4420 | 5520 | 6500 |
| 3-3/16 to 3-7/16 | 4620 | 5780 | 6800 |
| 3-15/16 | 7500 | 9350 | 11000 |

Table 7: S-2000 Housing Rating, 4-Bolt, Cast Iron*

| Bore Size | Maximum Recommended Housing Cap Loads, lb | | |
|--------------|---|-------|-------|
| | 120° | 150° | 180° |
| 1-15/16 - 2 | 3200 | 4000 | 4700 |
| 2-3/16 | 3300 | 4100 | 4800 |
| 2-7/16 | 3810 | 4760 | 5600 |
| 2-11/16 to 3 | 4620 | 5780 | 6800 |
| 3-7/16 | 4700 | 5870 | 6900 |
| 3-15/16 | 7500 | 9350 | 11000 |
| 4-7/16 | 9900 | 12330 | 14500 |
| 4-15/16 | 13400 | 16750 | 19700 |

- * 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 L₁₀ life of the bearing should be checked for proper selection and life requirements.

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



S2000-HD

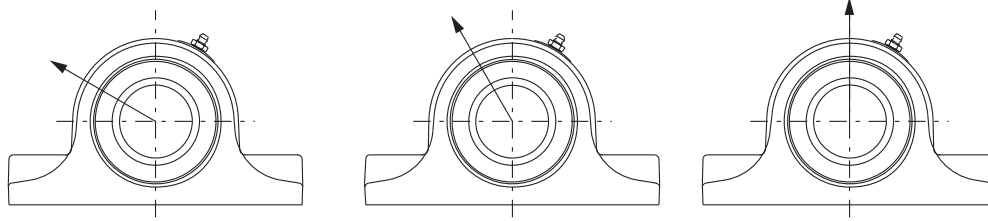


Table 8: Steel Housed S2000 - Housing Ratings*

| Shaft Sizes | Basic Bearing Description | Maximum Recommended Housing Loads, lb | |
|--------------------------|---------------------------|---------------------------------------|------------------|
| | | P2B | P4B |
| 1-3/8 1-7/16 1-1/2 | 22208 | 24400 | |
| 1-11/16 1-3/4 | 22209 | 26400 | |
| 1-15/16 2 | 22210 | 30200 | |
| 2-3/16 2-7/16 | 22211 22213 | 35400 51300 | 52800 |
| 2-11/16 2-15/16 3 | 22215 | 59700 | 60000 |
| 3-7/16 3-15/16 | 22218 22220 | 90700 | 115000 |
| 4-7/16 4-15/16 | 22222 22226 | | 152100 188200 |

* 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:

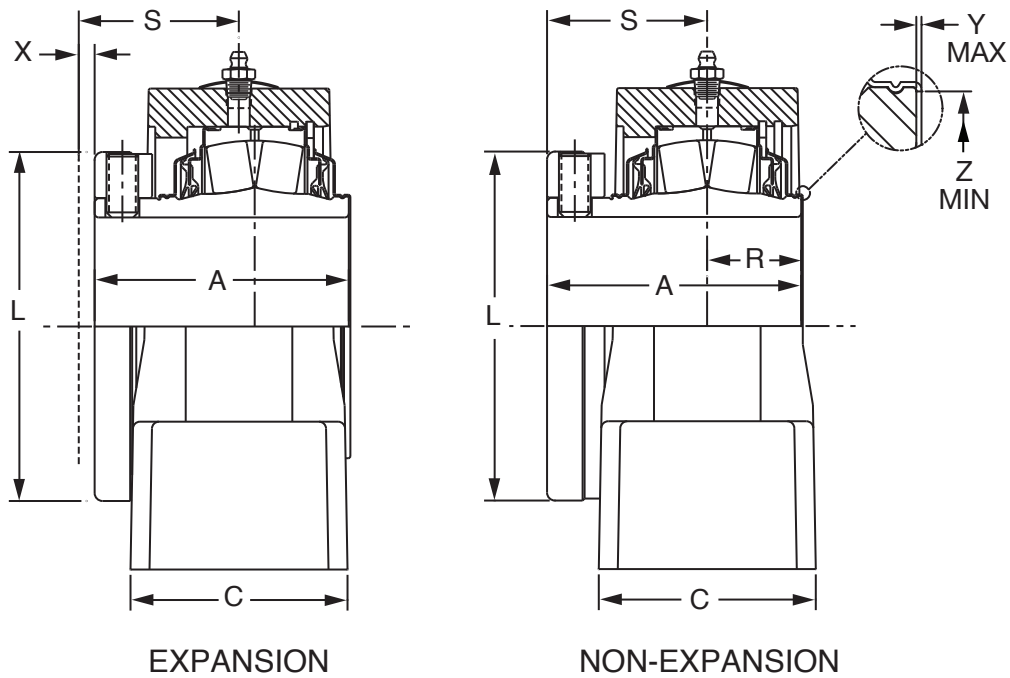
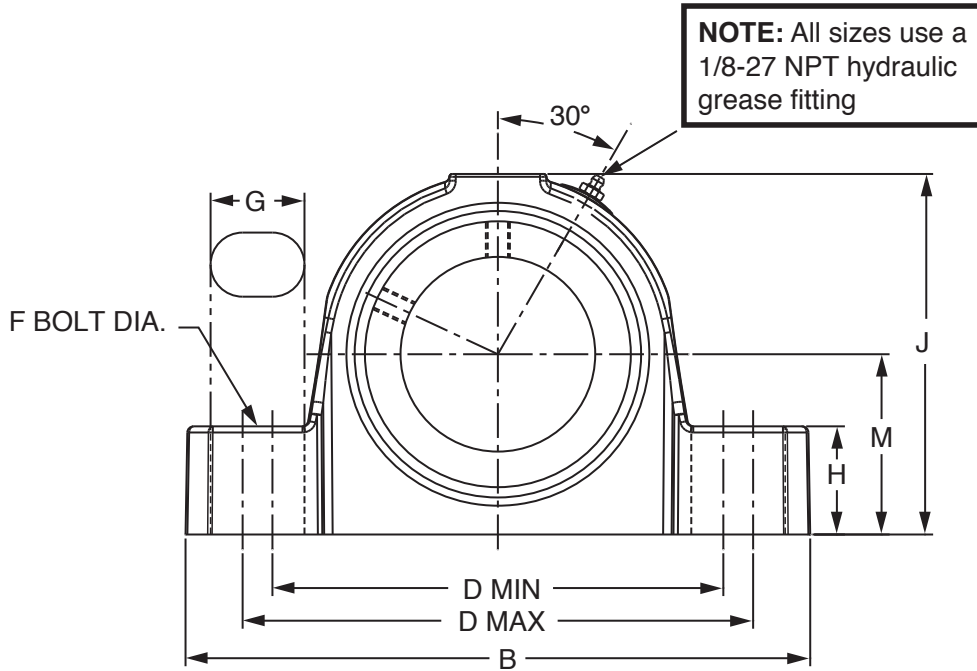
- (1) The pillow block base bolts must be of high strength (Grade 8) bolts and properly tightened to mounting structure.
- (2) Stop bars (shear strips) should be used against the plummer block where side loads are encountered.
- (3) In all cases where loads are heavy, the L₁₀ life of the bearing should be checked for proper selection and life requirements.

| | | | |
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DIMENSIONS

**S-2000 Pillow Block
2-BOLT BASE - INCH**





DIMENSIONS

S-2000 Pillow Block 2-BOLT BASE - INCH

Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

S-2000

UNISPHERE II

IMPERIAL

UNIFIED SAF

| Bearing | Shaft Size Inch | TRIDENT Seal | | | | Labyrinth Seal | | | |
|---------|-----------------|---------------|-------------|---------------|--------------|----------------|-------------|---------------|--------------|
| | | Non-Expansion | | Expansion | | Non-Expansion | | Expansion | |
| | | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name |
| 22208 | 1-3/8 | 070272 | P2B-S2-106R | 070295 | P2B-S2-106RE | 070318 | P2B-S2-106L | 070341 | P2B-S2-106LE |
| | 1-7/16 | 070273 | P2B-S2-107R | 070296 | P2B-S2-107RE | 070319 | P2B-S2-107L | 070342 | P2B-S2-107LE |
| | 1-1/2 | 070274 | P2B-S2-108R | 070297 | P2B-S2-108RE | 070320 | P2B-S2-108L | 070343 | P2B-S2-108LE |
| 22209 | 1-11/16 | 070276 | P2B-S2-111R | 070299 | P2B-S2-111RE | 070322 | P2B-S2-111L | 070345 | P2B-S2-111LE |
| | 1-3/4 | 070277 | P2B-S2-112R | 070300 | P2B-S2-112RE | 070323 | P2B-S2-112L | 070346 | P2B-S2-112LE |
| 22210 | 1-15/16 | 070278 | P2B-S2-115R | 070301 | P2B-S2-115RE | 070324 | P2B-S2-115L | 070347 | P2B-S2-115LE |
| | 2 | 070279 | P2B-S2-200R | 070302 | P2B-S2-200RE | 070325 | P2B-S2-200L | 070348 | P2B-S2-200LE |
| 22211 | 2-3/16 | 070280 | P2B-S2-203R | 070303 | P2B-S2-203RE | 070326 | P2B-S2-203L | 070349 | P2B-S2-203LE |
| 22213 | 2-7/16 | 070282 | P2B-S2-207R | 070305 | P2B-S2-207RE | 070328 | P2B-S2-207L | 070351 | P2B-S2-207LE |
| 22215 | 2-11/16 | 070284 | P2B-S2-211R | 070307 | P2B-S2-211RE | 070330 | P2B-S2-211L | 070353 | P2B-S2-211LE |
| | 2-15/16 | 070285 | P2B-S2-215R | 070308 | P2B-S2-215RE | 070331 | P2B-S2-215L | 070354 | P2B-S2-215LE |
| | 3 | 070286 | P2B-S2-300R | 070309 | P2B-S2-300RE | 070332 | P2B-S2-300L | 070355 | P2B-S2-300LE |
| 22218 | 3-7/16 | 070288 | P2B-S2-307R | 070311 | P2B-S2-307RE | 070334 | P2B-S2-307L | 070357 | P2B-S2-307LE |
| 22220 | 3-15/16 | 070290 | P2B-S2-315R | 070313 | P2B-S2-315RE | 070336 | P2B-S2-315L | 070359 | P2B-S2-315LE |

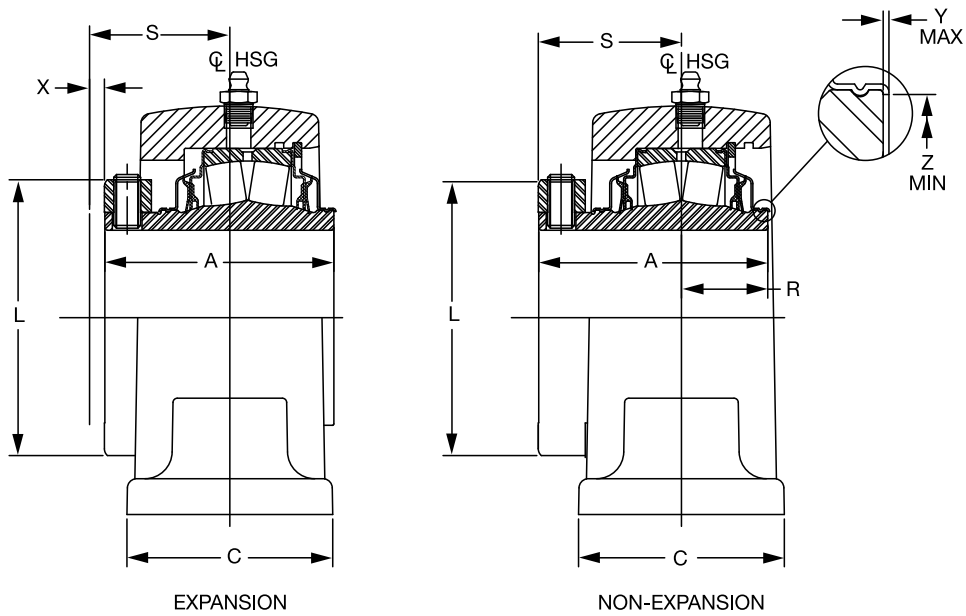
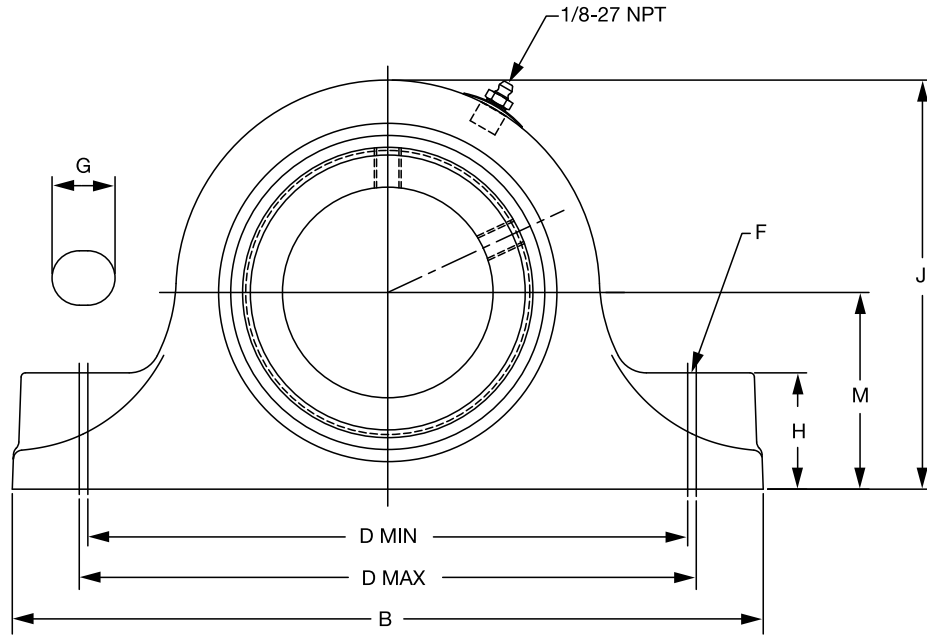
| Shaft Size | A | B | C | D | | F Bolt Dia. | G | H | J | L | M | R | S | X Total Exp. | Y | Z |
|------------|------|-------|------|-------|-------|-------------|------|------|------|------|------|------|------|--------------|-------|------|
| | | | | Min | Max | | | | | | | | | | | |
| 1-3/8 | | | | | | | | | | | | | | | | |
| 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 |

| | | | |
|---------------------------------|-----------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B12-2 | SPECIFICATION PAGE B12-4 | HOW TO ORDER/NOMENCLATURE PAGE B12-4 | SELECTIONS PAGE B12-7 |
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DIMENSIONS

S-2000 Pillow Block with Type E Dimensions 2-BOLT





DIMENSIONS

S-2000 Pillow Block with Type E Dimensions 2-BOLT

Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

S-2000

UNISPHERE II

IMPERIAL

UNIFIED SAF

| Bearing Series | Shaft Size* | TRIDENT Seal | | | | Labyrinth Seal | | | |
|----------------|-------------|---------------|--------------|---------------|---------------|----------------|--------------|---------------|---------------|
| | | Non Expansion | | Expansion | | Non Expansion | | Expansion | |
| | | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name |
| 22208 | 1-3/8 | 071389 | EP2B-S2-106R | 071400 | EP2B-S2-106RE | 071411 | EP2B-S2-106L | 071422 | EP2B-S2-106LE |
| | 1-7/16 | 071390 | EP2B-S2-107R | 071401 | EP2B-S2-107RE | 071412 | EP2B-S2-107L | 071423 | EP2B-S2-107LE |
| 22209 | 1-11/16 | 071391 | EP2B-S2-111R | 071402 | EP2B-S2-111RE | 071413 | EP2B-S2-111L | 071424 | EP2B-S2-111LE |
| 22210 | 1-15/16 | 071392 | EP2B-S2-115R | 071403 | EP2B-S2-115RE | 071414 | EP2B-S2-115L | 071425 | EP2B-S2-115LE |
| | 2 | 071393 | EP2B-S2-200R | 071404 | EP2B-S2-200RE | 071415 | EP2B-S2-200L | 071426 | EP2B-S2-200LE |
| 22211 | 2-3/16 | 071394 | EP2B-S2-203R | 071405 | EP2B-S2-203RE | 071416 | EP2B-S2-203L | 071427 | EP2B-S2-203LE |
| 22213 | 2-7/16 | 071395 | EP2B-S2-207R | 071406 | EP2B-S2-207RE | 071417 | EP2B-S2-207L | 071428 | EP2B-S2-207LE |
| 22215 | 2-11/16 | 071396 | EP2B-S2-211R | 071407 | EP2B-S2-211RE | 071418 | EP2B-S2-211L | 071429 | EP2B-S2-211LE |
| | 2-15/16 | 071397 | EP2B-S2-215R | 071408 | EP2B-S2-215RE | 071419 | EP2B-S2-215L | 071430 | EP2B-S2-215LE |
| | 3 | 071398 | EP2B-S2-300R | 071409 | EP2B-S2-300RE | 071420 | EP2B-S2-300L | 071431 | EP2B-S2-300LE |
| 22218 | 3-7/16 | 071399 | EP2B-S2-307R | 071410 | EP2B-S2-307RE | 071421 | EP2B-S2-307L | 071432 | EP2B-S2-307LE |

*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 | Set Screw Size | S/S Torque In/Lbs |
|-----------------|------|-------|------|-------|-------|-------------|------|------|------|------|------|------|------|--------------|-------|------|----------------|-------------------|
| | | | | 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 | 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 |
| 2-11/16 | 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 |
| 2-15/16 3 | | | | | | | | | | | | | | | | | | |
| 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 |

Notes: "A" And "R" Dimensions Do Not Include "Y" Dimension

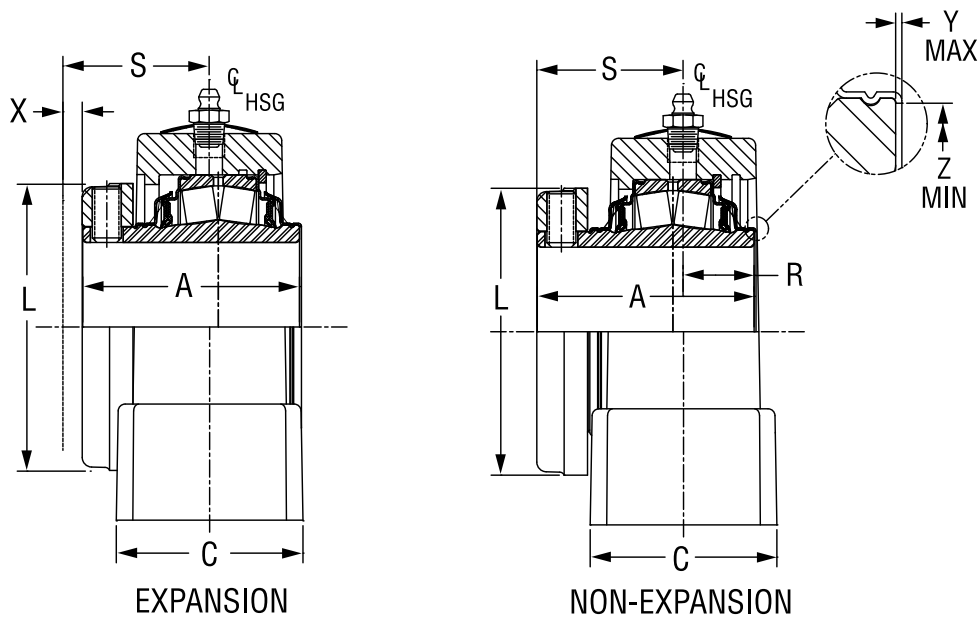
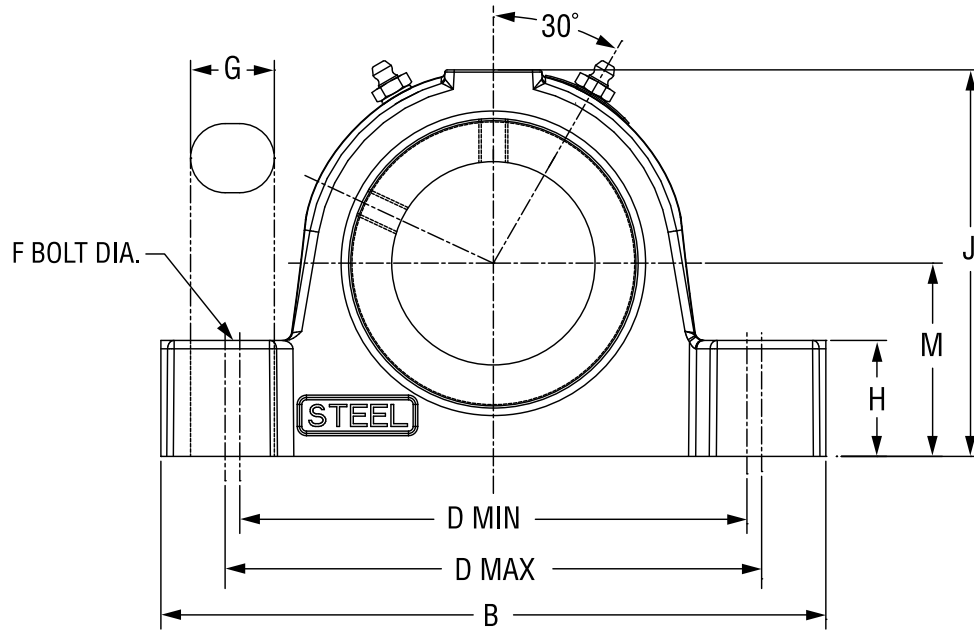
Reference Dimension Only

| | | | |
|---------------------------------|-----------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B12-2 | SPECIFICATION PAGE B12-4 | HOW TO ORDER/NOMENCLATURE PAGE B12-4 | SELECTIONS PAGE B12-7 |
|---------------------------------|-----------------------------|---|--------------------------|



DIMENSIONS

Steel S-2000-HD Pillow Block 2-Bolt



SELECTION



Steel S-2000-HD Pillow Block 2-Bolt

Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

S-2000

UNISPHERE II

IMPERIAL

UNIFIED SAF

| Shaft Size | Dodge Non-Expansion | | Dodge Expansion | |
|------------|---------------------|--------------|-----------------|---------------|
| | Part No. | Description | Part No. | Description |
| 1-3/8 | 071790 | SP2B-S2-106R | 071804 | SP2B-S2-106RE |
| 1-7/16 | 071791 | SP2B-S2-107R | 071805 | SP2B-S2-107RE |
| 1-1/2 | 071792 | SP2B-S2-108R | 071806 | SP2B-S2-108RE |
| 1-11/16 | 071793 | SP2B-S2-111R | 071807 | SP2B-S2-111RE |
| 1-3/4 | 071794 | SP2B-S2-112R | 071808 | SP2B-S2-112RE |
| 1-15/16 | 071795 | SP2B-S2-115R | 071809 | SP2B-S2-115RE |
| 2 | 071796 | SP2B-S2-200R | 071810 | SP2B-S2-200RE |
| 2-3/16 | 071797 | SP2B-S2-203R | 071811 | SP2B-S2-203RE |
| 2-7/16 | 071798 | SP2B-S2-207R | 071812 | SP2B-S2-207RE |
| 2-11/16 | 071799 | SP2B-S2-211R | 071813 | SP2B-S2-211RE |
| 2-15/16 | 071800 | SP2B-S2-215R | 071814 | SP2B-S2-215RE |
| 3 | 071801 | SP2B-S2-300R | 071815 | SP2B-S2-300RE |
| 3-7/16 | 071802 | SP2B-S2-307R | 071816 | SP2B-S2-307RE |
| 3-15/16 | 071803 | SP2B-S2-315R | 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 | 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 |
| 1-1/2 | | | | | | | | | | | | | | | | |
| 1-11/16 | 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 |
| 1-3/4 | | | | | | | | | | | | | | | | |
| 1-15/16 | 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 | | | | | | | | | | | | | | | | |
| 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 | 3.59 | 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 | | | | | | | | | | | | | | | | |
| 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" & "R" Dimensions Do Not Include "Y" Dimension

| | | | |
|---------------------------------|-----------------------------|---|---------------------------|
| FEATURES/BENEFITS PAGE B12-2 | SPECIFICATION PAGE B12-4 | HOW TO ORDER/NOMENCLATURE PAGE B12-5 | DIMENSIONS PAGE B12-14 |
|---------------------------------|-----------------------------|---|---------------------------|



SELECTION

Steel S-2000-HD Pillow Block 2-Bolt With Type E Dimensions

Bearing Reference Guide

E-Family Roller Bearings

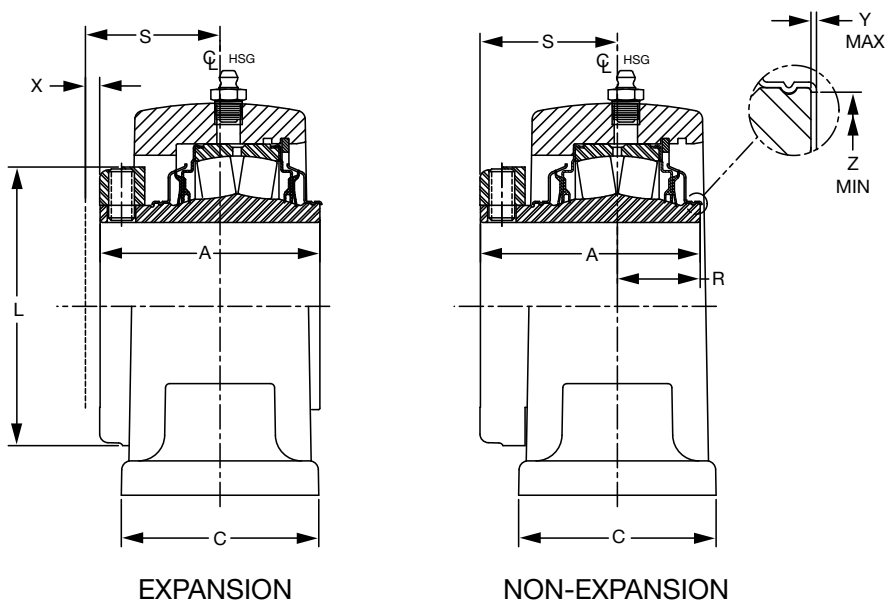
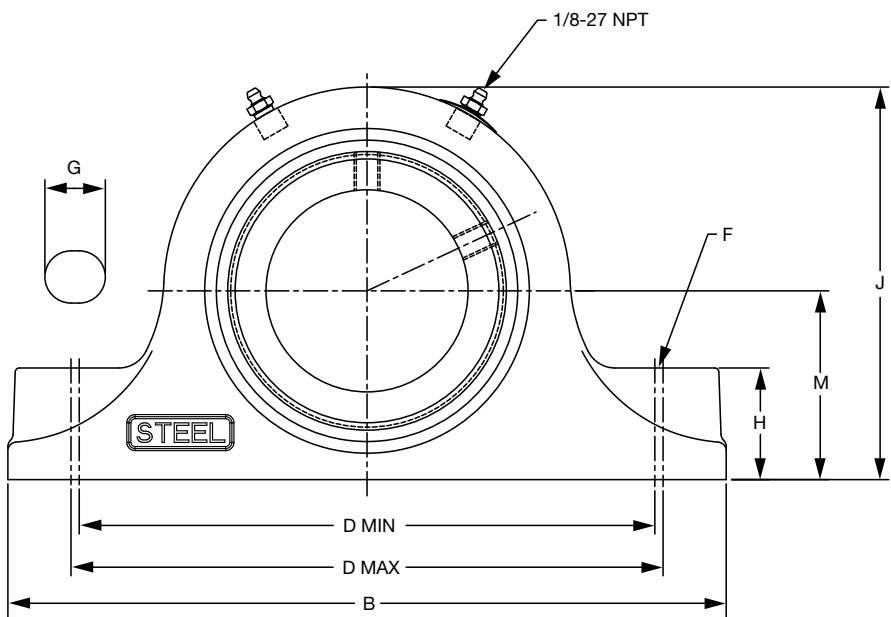
Specialty Tapered Products

S-2000

UNISPHERE II

IMPERIAL

UNIFIED SAF



| | | | |
|---------------------------------|-----------------------------|---|---------------------------|
| FEATURES/BENEFITS PAGE B12-2 | SPECIFICATION PAGE B12-4 | HOW TO ORDER/NOMENCLATURE PAGE B12-5 | DIMENSIONS PAGE B12-14 |
|---------------------------------|-----------------------------|---|---------------------------|



DIMENSIONS

Steel S-2000-HD Pillow Block 2-BOLT With Type E Dimensions

| Shaft Size | Dodge Non-Expansion | | Dodge Expansion | |
|------------|---------------------|---------------|-----------------|----------------|
| | Part No. | Description | Part No. | Description |
| 1-3/8 | 071940 | SEP2B-S2-106R | 071951 | SEP2B-S2-106RE |
| 1-7/16 | 071941 | SEP2B-S2-107R | 071952 | SEP2B-S2-107RE |
| 1-11/16 | 071942 | SEP2B-S2-111R | 071953 | SEP2B-S2-111RE |
| 1-15/16 | 071943 | SEP2B-S2-115R | 071954 | SEP2B-S2-115RE |
| 2 | 071944 | SEP2B-S2-200R | 071955 | SEP2B-S2-200RE |
| 2-3/16 | 071945 | SEP2B-S2-203R | 071956 | SEP2B-S2-203RE |
| 2-7/16 | 071946 | SEP2B-S2-207R | 071957 | SEP2B-S2-207RE |
| 2-11/16 | 071947 | SEP2B-S2-211R | 071958 | SEP2B-S2-211RE |
| 2-15/16 | 071948 | SEP2B-S2-215R | 071959 | SEP2B-S2-215RE |
| 3 | 071949 | SEP2B-S2-300R | 071960 | SEP2B-S2-300RE |
| 3-7/16 | 071950 | SEP2B-S2-307R | 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 | SS Torque In/lbs |
|-------------------|------|-------|------|------|-------|------------|------|------|------|------|------|------|------|-------------|-------|------|----------------|------------------|
| | | | | 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 | 2.94 | 9.63 | 2.50 | 6.50 | 7.88 | 5/8 | 1.45 | 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 | 10.25 | 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" & "R" Dimensions Do Not Include "Y" Dimension

| | | | |
|---------------------------------|-----------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B12-2 | SPECIFICATION PAGE B12-4 | HOW TO ORDER/NOMENCLATURE PAGE B12-4 | SELECTIONS PAGE B12-7 |
|---------------------------------|-----------------------------|---|--------------------------|



DIMENSIONS

S-2000 Pillow Block 4-BOLT BASE

Bearing Reference Guide

E-Family Roller Bearings

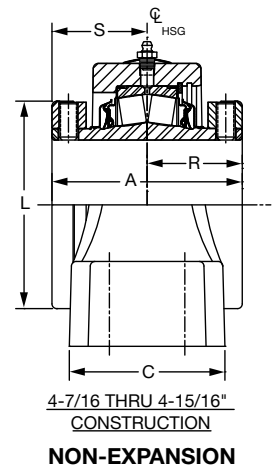
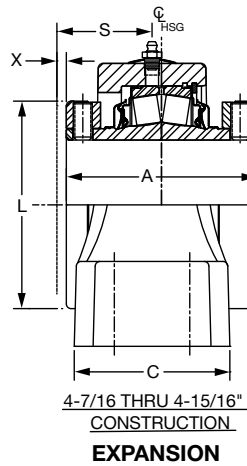
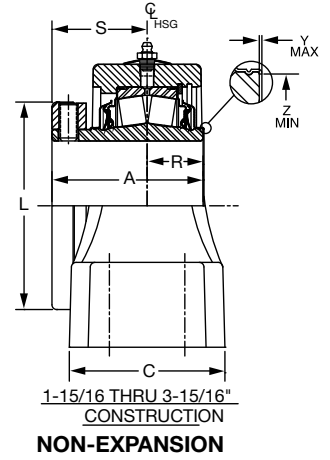
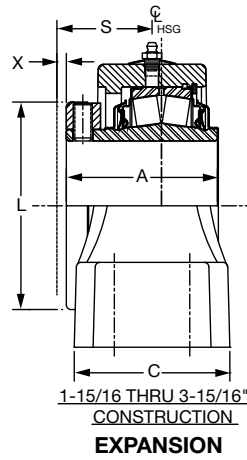
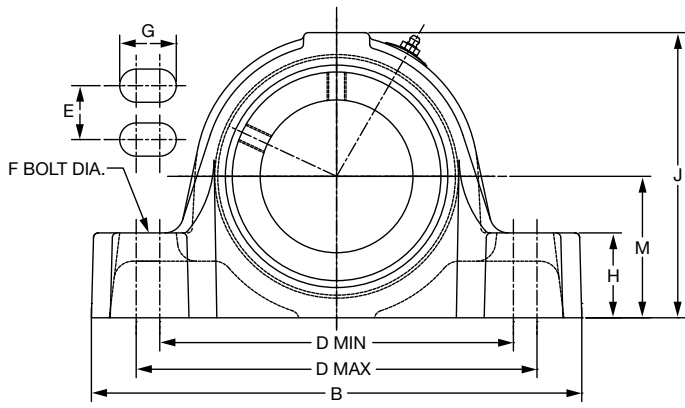
Specialty Tapered Products

S-2000

UNISPHERE II

IMPERIAL

UNIFIED SAF





DIMENSIONS

S-2000 Pillow Block 4-BOLT BASE

| Bearing | Shaft Size Inch | TRIDENT Seal | | | | Labyrinth Seal | | | |
|---------|-------------------------|---------------|-------------|---------------|--------------|----------------|-------------|---------------|--------------|
| | | Non-Expansion | | Expansion | | Non-Expansion | | Expansion | |
| | | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name |
| 22210 | 1-15/16 2 | 070361 | P4B-S2-115R | 070379 | P4B-S2-115RE | 070397 | P4B-S2-115L | 070415 | P4B-S2-115LE |
| | | 070362 | P4B-S2-200R | 070380 | P4B-S2-200RE | 070398 | P4B-S2-200L | 070416 | P4B-S2-200LE |
| 22211 | 2-3/16 | 070363 | P4B-S2-203R | 070381 | P4B-S2-203RE | 070399 | P4B-S2-203L | 070417 | P4B-S2-203LE |
| 22213 | 2-7/16 | 070365 | P4B-S2-207R | 070383 | P4B-S2-207RE | 070401 | P4B-S2-207L | 070419 | P4B-S2-207LE |
| 22215 | 2-11/16 2-15/16 3 | 070367 | P4B-S2-211R | 070385 | P4B-S2-211RE | 070403 | P4B-S2-211L | 070421 | P4B-S2-211LE |
| | | 070368 | P4B-S2-215R | 070386 | P4B-S2-215RE | 070404 | P4B-S2-215L | 070422 | P4B-S2-215LE |
| | | 070369 | P4B-S2-300R | 070387 | P4B-S2-300RE | 070405 | P4B-S2-300L | 070423 | P4B-S2-300LE |
| 22218 | 3-7/16 | 070371 | P4B-S2-307R | 070389 | P4B-S2-307RE | 070407 | P4B-S2-307L | 070425 | P4B-S2-307LE |
| 22220 | 3-15/16 | 070373 | P4B-S2-315R | 070391 | P4B-S2-315RE | 070409 | P4B-S2-315L | 070427 | P4B-S2-315LE |
| 22222 | 4-7/16 | 070375 | P4B-S2-407R | 070393 | P4B-S2-407RE | 070411 | P4B-S2-407L | 070429 | P4B-S2-407LE |
| 22226 | 4-15/16 | 070377 | P4B-S2-415R | 070395 | P4B-S2-415RE | 070413 | P4B-S2-415L | 070431 | P4B-S2-415LE |

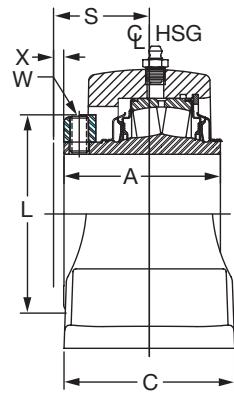
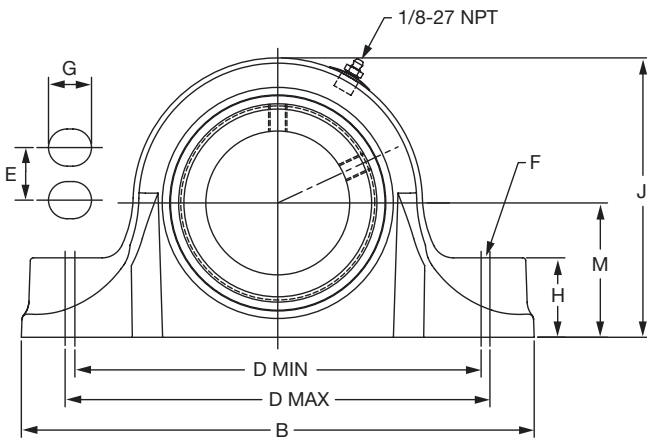
| Shaft Size | A | B | C | D | | E | F Bolt Dia. | G | H | J | L | M | R | S | X Total Exp. | Y | Z |
|--------------|------|-------|------|-------|-------|------|-------------|------|------|-------|------|------|------|------|--------------|-------|------|
| | | | | Min | Max | | | | | | | | | | | | |
| 1-15/16 2 | 2.84 | 8.00 | 3.19 | 6.06 | 6.44 | 1.59 | 1/2 | 0.81 | 1.31 | 4.56 | 3.44 | 2.25 | .84 | 2.0 | 1/4 | 0.020 | 2.30 |
| 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 | 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 |
| 2-15/16 | | | | | | | | | | | | | | | | | |
| 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 | N/A | N/A |
| 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 | N/A | N/A |

| | | | |
|---------------------------------|-----------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B12-2 | SPECIFICATION PAGE B12-4 | HOW TO ORDER/NOMENCLATURE PAGE B12-4 | SELECTIONS PAGE B12-7 |
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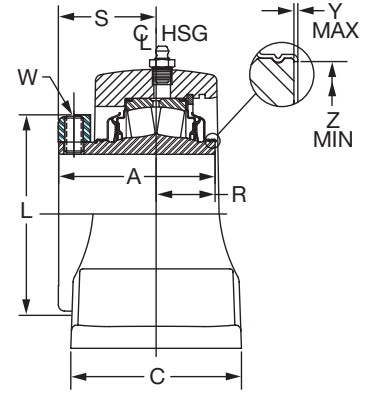
DIMENSIONS

S-2000 Pillow Block with Type E Dimensions 4-BOLT



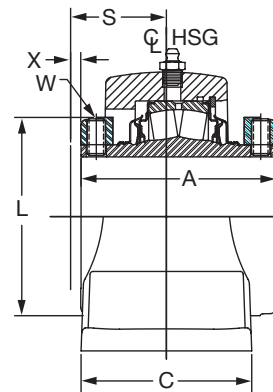
2-7/16 THRU 3-15/16"
CONSTRUCTION

EXPANSION



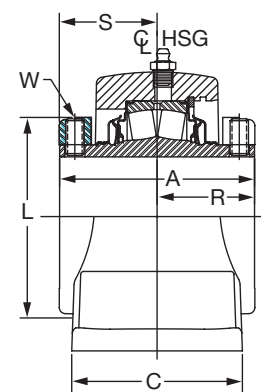
2-7/16 THRU 3-15/16"
CONSTRUCTION

NON-EXPANSION



4-7/16 THRU 4-15/16"
CONSTRUCTION

EXPANSION



4-7/16 THRU 4-15/16"
CONSTRUCTION

NON-EXPANSION

DIMENSIONS



S-200 Pillow Block with Type E Dimensions 4-BOLT

| Bearing Series | Shaft Size* | TRIDENT Seal | | | | Labyrinth Seal | | | |
|----------------|-------------|---------------|--------------|---------------|---------------|----------------|--------------|---------------|---------------|
| | | Non Expansion | | Expansion | | Non Expansion | | Expansion | |
| | | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name |
| 22213 | 2-7/16 | 071433 | EP4B-S2-207R | 071441 | EP4B-S2-207RE | 071449 | EP4B-S2-207L | 071457 | EP4B-S2-207LE |
| 22215 | 2-11/16 | 071434 | EP4B-S2-211R | 071442 | EP4B-S2-211RE | 071450 | EP4B-S2-211L | 071458 | EP4B-S2-211LE |
| | 2-15/16 | 071435 | EP4B-S2-215R | 071443 | EP4B-S2-215RE | 071451 | EP4B-S2-215L | 071459 | EP4B-S2-215LE |
| | 3 | 071436 | EP4B-S2-300R | 071444 | EP4B-S2-300RE | 071452 | EP4B-S2-300L | 071460 | EP4B-S2-300LE |
| 22218 | 3-7/16 | 071437 | EP4B-S2-307R | 071445 | EP4B-S2-307RE | 071453 | EP4B-S2-307L | 071461 | EP4B-S2-307LE |
| 22220 | 3-15/16 | 071438 | EP4B-S2-315R | 071446 | EP4B-S2-315RE | 071454 | EP4B-S2-315L | 071462 | EP4B-S2-315LE |
| 22222 | 4-7/16 | 071439 | EP4B-S2-407R | 071447 | EP4B-S2-407RE | 071455 | EP4B-S2-407L | 071463 | EP4B-S2-407LE |
| 22226 | 4-15/16 | 071440 | EP4B-S2-415R | 071448 | EP4B-S2-415RE | 071456 | EP4B-S2-415L | 071464 | EP4B-S2-415LE |

*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 | Set Screw Size | S/S Torque In/Lbs |
|------------|------|-------|------|-------|-------|------|-------------|------|------|-------|------|------|------|------|--------------|-------|------|----------------|-------------------|
| | | | | 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 | 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 |
| 2-15/16 | | | | | | | | | | | | | | | | | | | |
| 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 | N/A | N/A | 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 | N/A | N/A | 5/8 | 1325 |

Notes: "A" And "R" Dimensions Do Not Include "Y" Dimension

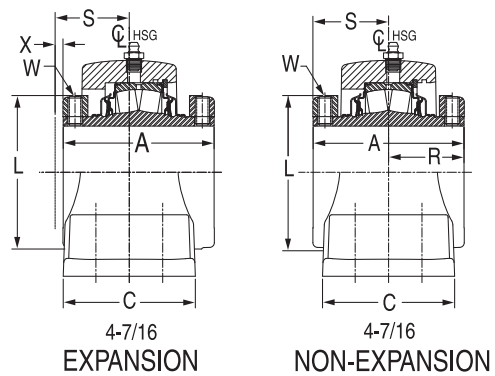
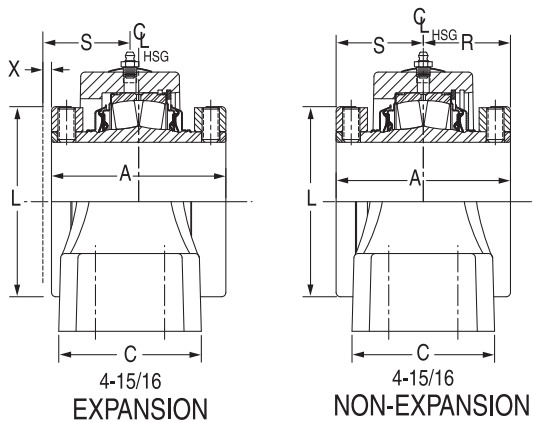
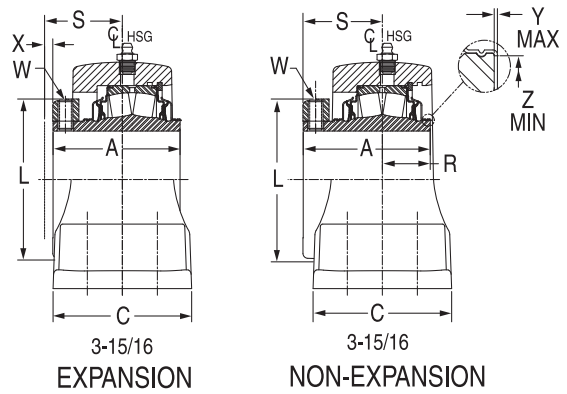
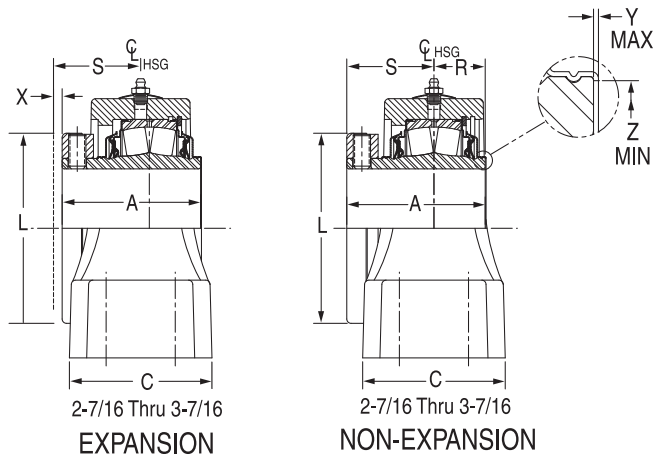
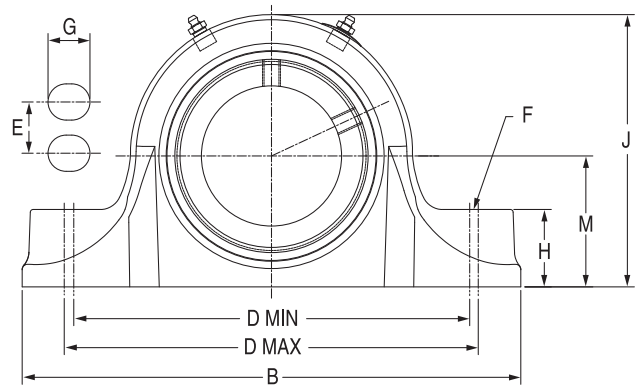
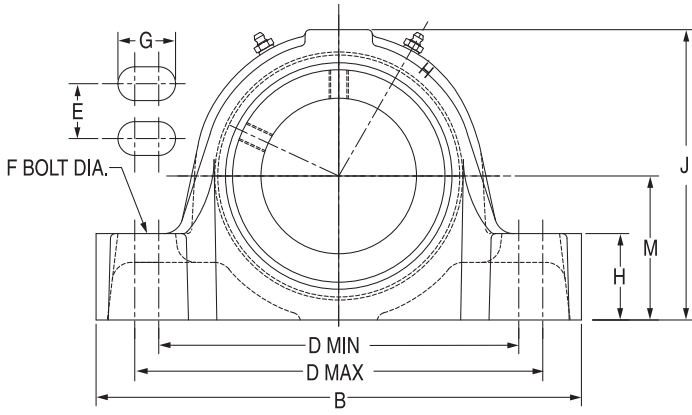
Reference Dimension Only

| | | | |
|---------------------------------|-----------------------------|---|--------------------------|
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DIMENSIONS



Steel S-2000-HD Pillow Block 4-Bolt



| | | | |
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DIMENSIONS

Steel S-2000-HD Pillow Block 4-Bolt

Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

S-2000

UNISPHERE II

IMPERIAL

UNIFIED SAF

| Shaft Size | Dodge Non-Expansion | | Dodge Expansion | |
|------------|---------------------|--------------|-----------------|---------------|
| | Dodge Part No. | Description | Dodge Part No. | Description |
| 2-7/16 | 071821 | SP4B-S2-207R | 071832 | SP4B-S2-207RE |
| 2-11/16 | 071822 | SP4B-S2-211R | 071833 | SP4B-S2-211RE |
| 2-15/16 | 071823 | SP4B-S2-215R | 071834 | SP4B-S2-215RE |
| 3 | 071824 | SP4B-S2-300R | 071835 | SP4B-S2-300RE |
| 3-7/16 | 071825 | SP4B-S2-307R | 071836 | SP4B-S2-307RE |
| 3-15/16 | 071826 | SP4B-S2-315R | 071837 | SP4B-S2-315RE |
| 4-7/16 | 071827 | SP4B-S2-407R | 071838 | SP4B-S2-407RE |
| 4-15/16 | 071828 | SP4B-S2-415R | 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 |

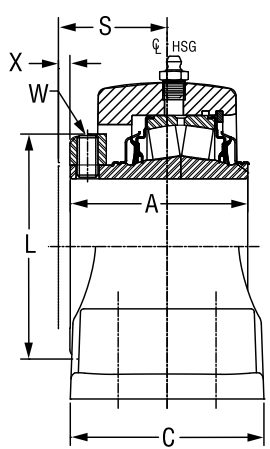
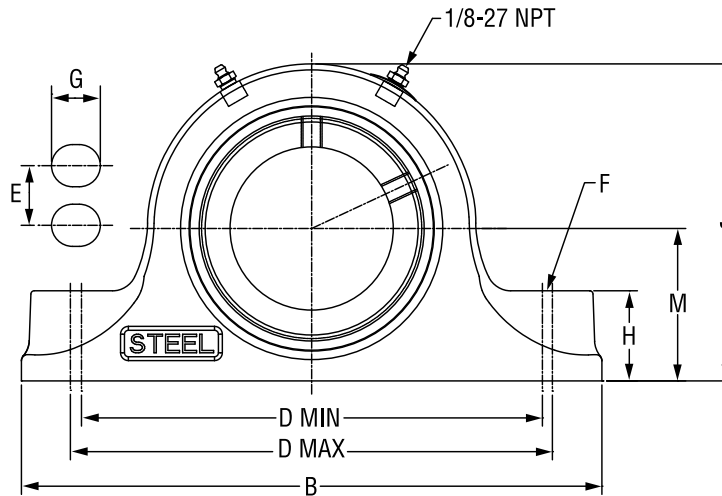
"A" & "R" Dimensions Do Not Include "Y" Dimension

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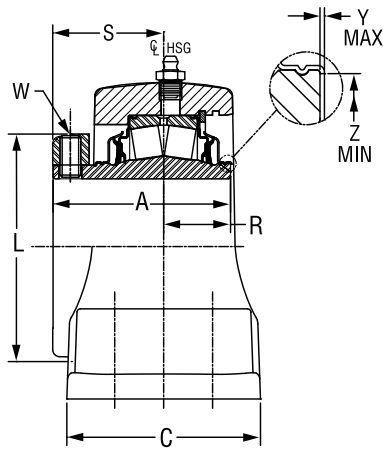


DIMENSIONS

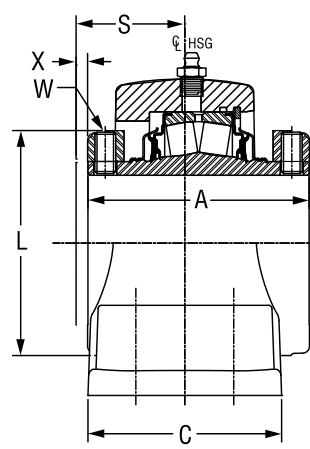
Steel S2000-HD Pillow Block 4-Bolt With Type E Dimensions



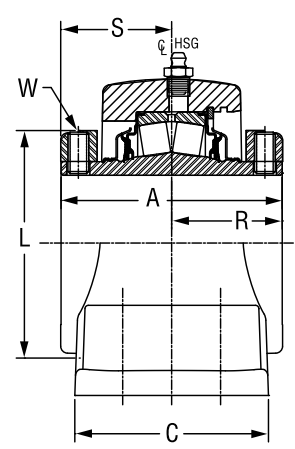
2-7/16 THRU 3-15/16
CONSTRUCTION
EXPANSION



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



DIMENSIONS

Steel S2000-HD Pillow Block 4-Bolt With Type E Dimensions

| Shaft Size | Dodge Non-Expansion | | Dodge Expansion | |
|------------|---------------------|---------------|-----------------|----------------|
| | Dodge Part No. | Description | Dodge Part No. | Description |
| 2-7/16 | 071962 | SEP4B-S2-207R | 071970 | SEP4B-S2-207RE |
| 2-11/16 | 071963 | SEP4B-S2-211R | 071971 | SEP4B-S2-211RE |
| 2-15/16 | 071964 | SEP4B-S2-215R | 071972 | SEP4B-S2-215RE |
| 3 | 071965 | SEP4B-S2-300R | 071973 | SEP4B-S2-300RE |
| 3-7/16 | 071966 | SEP4B-S2-307R | 071974 | SEP4B-S2-307RE |
| 3-15/16 | 071967 | SEP4B-S2-315R | 071975 | SEP4B-S2-315RE |
| 4-7/16 | 071968 | SEP4B-S2-407R | 071976 | SEP4B-S2-407RE |
| 4-15/16 | 071969 | SEP4B-S2-415R | 071977 | SEP4B-S2-415RE |

| Shaft Size | A | B | C | D Min | D Max | E | F Bolt Dia | G | H |
|------------|------|-------|------|-------|-------|------|------------|------|------|
| 2-7/16 | 3.20 | 10.25 | 3.25 | 7.13 | 8.75 | 1.88 | 5/8 | 1.57 | 1.63 |
| 2-11/16 | 3.59 | 10.83 | 3.38 | 8.00 | 9.60 | 2.12 | 5/8 | 1.56 | 1.88 |
| 2-15/16 | | | | | | | | | |
| 3 | 4.01 | 13.63 | 3.75 | 9.25 | 11.25 | 2.38 | 3/4 | 1.88 | 2.25 |
| 3-7/16 | | | | | | | | | |
| 3-15/16 | 4.47 | 14.88 | 4.31 | 10.88 | 13.88 | 2.25 | 3/4 | 2.13 | 2.44 |
| 4-7/16 | 6.53 | 16.13 | 4.75 | 11.88 | 14.50 | 2.50 | 3/4 | 2.19 | 2.75 |
| 4-15/16 | 6.91 | 17.50 | 5.04 | 15.13 | 15.88 | 2.88 | 7/8 | 1.38 | 3.00 |

"A" & "R" Dimensions Do Not Include "Y" Dimension

Reference Dimension Only

| Shaft Size | J | L | M | R | S | X Total Exp | Y | Z | Set Screw Size | S/S Torque In/Lbs |
|------------|-------|------|------|------|------|-------------|-------|------|----------------|-------------------|
| 2-7/16 | 5.71 | 3.86 | 2.75 | 1.20 | 2.00 | 1/4 | 0.025 | 2.94 | 3/8 | 290 |
| 2-11/16 | 6.32 | 4.61 | 3.13 | 1.34 | 2.25 | 1/4 | 0.025 | 3.47 | 1/2 | 620 |
| 2-15/16 | | | | | | | | | | |
| 3 | 7.69 | 5.50 | 3.75 | 1.51 | 2.50 | 1/4 | 0.025 | 4.05 | 1/2 | 620 |
| 3-7/16 | | | | | | | | | | |
| 3-15/16 | 8.70 | 6.00 | 4.25 | 1.25 | 3.22 | 5/16 | 0.025 | 4.50 | 5/8 | 1325 |
| 4-7/16 | 9.67 | 6.45 | 4.75 | 2.87 | 3.66 | 3/8 | 0.036 | 5.00 | 5/8 | 1325 |
| 4-15/16 | 11.16 | 7.45 | 5.50 | 3.29 | 3.62 | 3/8 | N/A | N/A | 5/8 | 1325 |

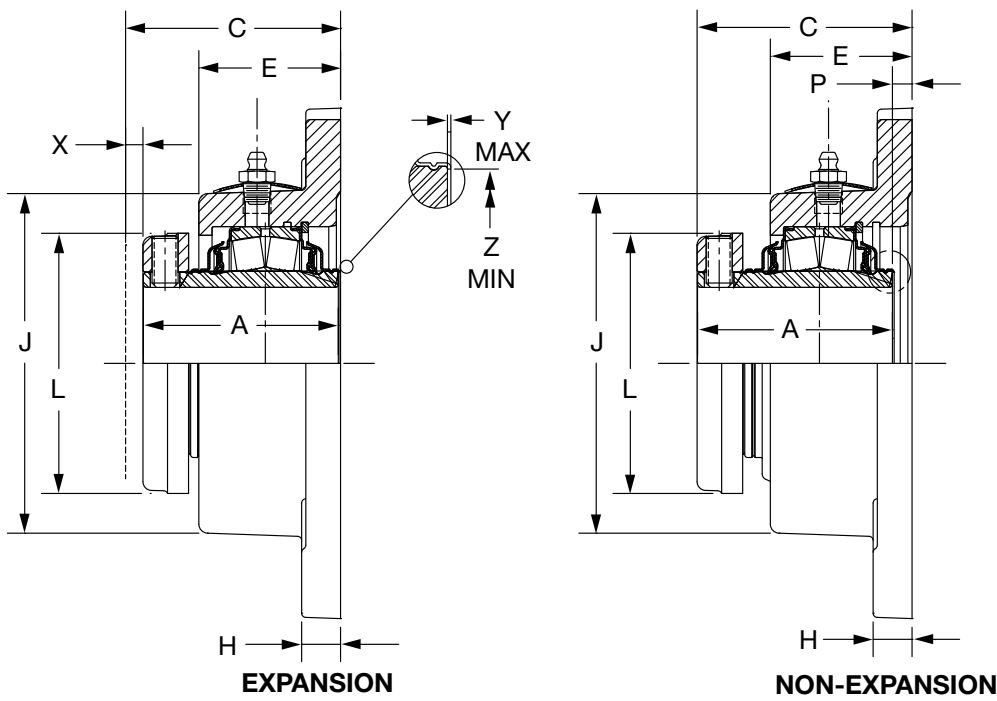
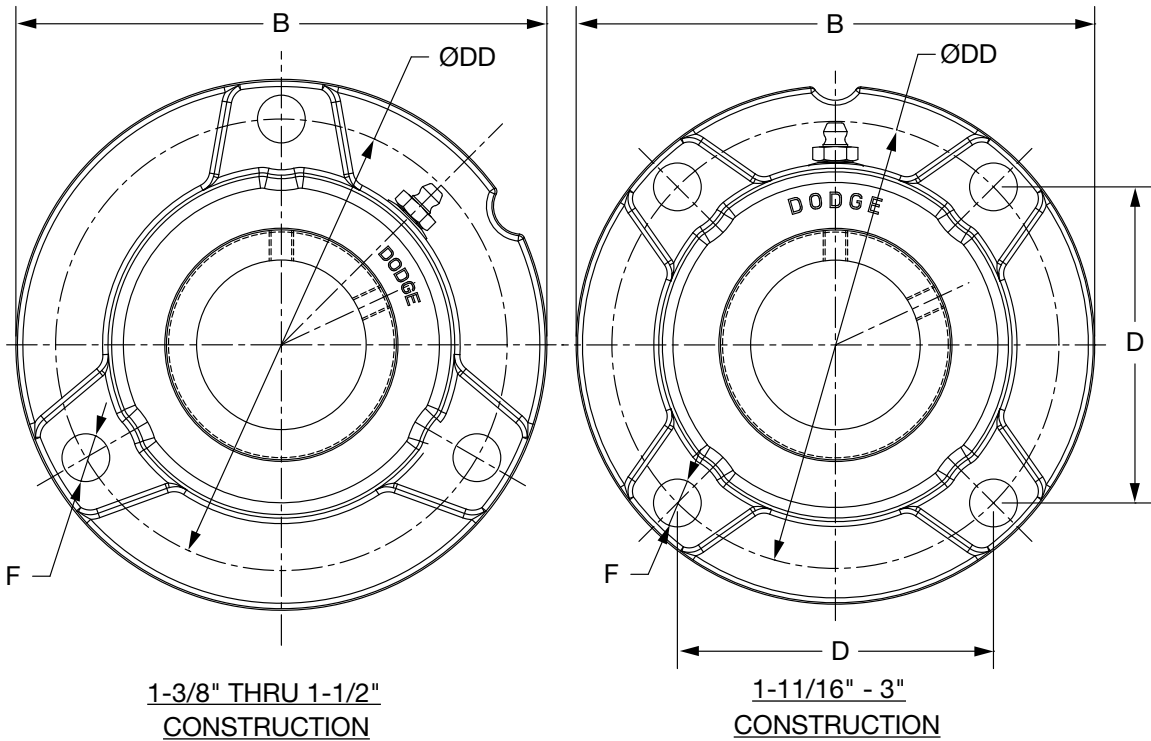
"A" & "R" Dimensions Do Not Include "Y" Dimension

| | | | |
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DIMENSIONS

S-2000 Flange Bearing - Round



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PAGE B12-4

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DIMENSIONS



S-2000 Flange Bearing - Round

| Bearing | Shaft Size Inch | TRIDENT Seal | | | | Labyrinth Seal | | | |
|---------|-----------------|---------------|-------------|---------------|--------------|----------------|-------------|---------------|--------------|
| | | Non-Expansion | | Expansion | | Non-Expansion | | Expansion | |
| | | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name |
| 22208 | 1 - 3/8 | 070436 | F3R-S2-106R | 070470 | F3R-S2-106RE | 070491 | F3R-S2-106L | 070523 | F3R-S2-106LE |
| | 1 - 7/16 | 070437 | F3R-S2-107R | 070471 | F3R-S2-107RE | 070492 | F3R-S2-107L | 070524 | F3R-S2-107LE |
| | 1 - 1/2 | 070438 | F3R-S2-108R | 070472 | F3R-S2-108RE | 070493 | F3R-S2-108L | 070525 | F3R-S2-108LE |
| 22209 | 1 - 11/16 | 070440 | F4R-S2-111R | 070474 | F4R-S2-111RE | 070495 | F4R-S2-111L | 070527 | F4R-S2-111LE |
| | 1 - 3/4 | 070441 | F4R-S2-112R | 070475 | F4R-S2-112RE | 070496 | F4R-S2-112L | 070528 | F4R-S2-112LE |
| 22210 | 1 - 15/16 | 070442 | F4R-S2-115R | 070476 | F4R-S2-115RE | 070497 | F4R-S2-115L | 070529 | F4R-S2-115LE |
| | 2 | 070443 | F4R-S2-200R | 070477 | F4R-S2-200RE | 070498 | F4R-S2-200L | 070530 | F4R-S2-200LE |
| 22211 | 2 - 3/16 | 070444 | F4R-S2-203R | 070478 | F4R-S2-203RE | 070499 | F4R-S2-203L | 070531 | F4R-S2-203LE |
| 22213 | 2-7/16 | 070446 | F4R-S2-207R | 070480 | F4R-S2-207RE | 070501 | F4R-S2-207L | 070533 | F4R-S2-207LE |
| 22215 | 2-11/16 | 070448 | F4R-S2-211R | 070482 | F4R-S2-211RE | 070503 | F4R-S2-211L | 070535 | F4R-S2-211LE |
| | 2-15/16 | 070449 | F4R-S2-215R | 070483 | F4R-S2-215RE | 070504 | F4R-S2-215L | 070536 | F4R-S2-215LE |
| | 3 | 070450 | F4R-S2-300R | 070484 | F4R-S2-300RE | 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 | 3.53 | 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 | 4.06 | 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

| | | | |
|---------------------------------|-----------------------------|---|--------------------------|
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DIMENSIONS

S-2000 Flange Bearing - Square

Bearing Reference Guide

E-Family Roller Bearings

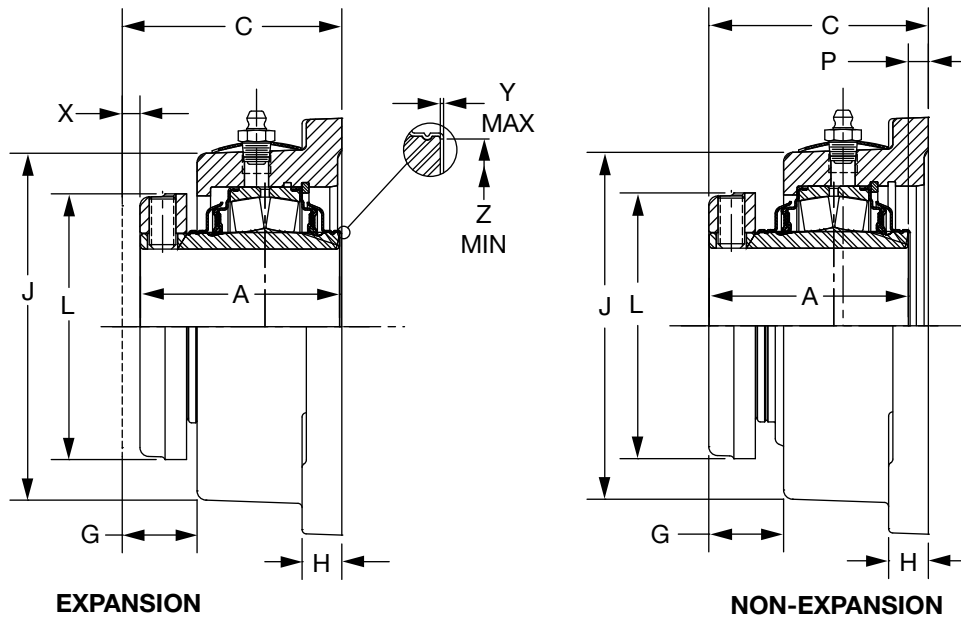
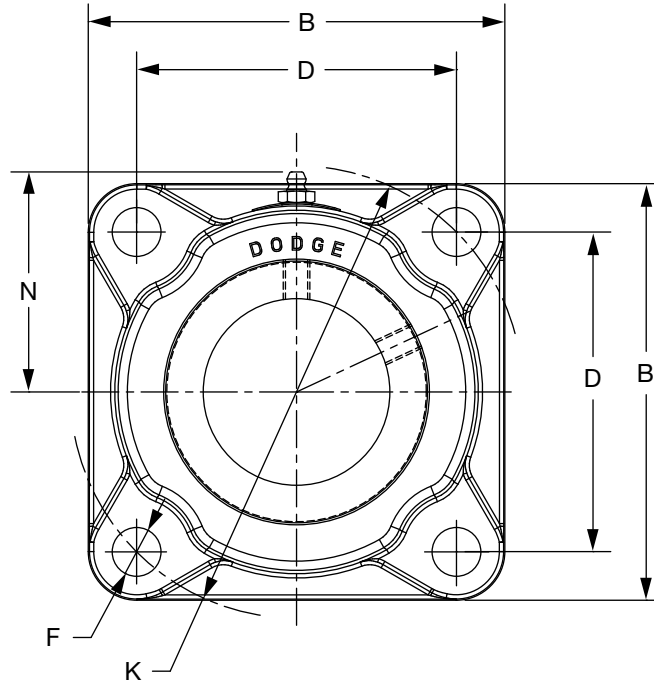
Specialty Tapered Products

S-2000

UNISPHERE II

IMPERIAL

UNIFIED SAF



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DIMENSIONS



S-2000 Flange Bearing - Square

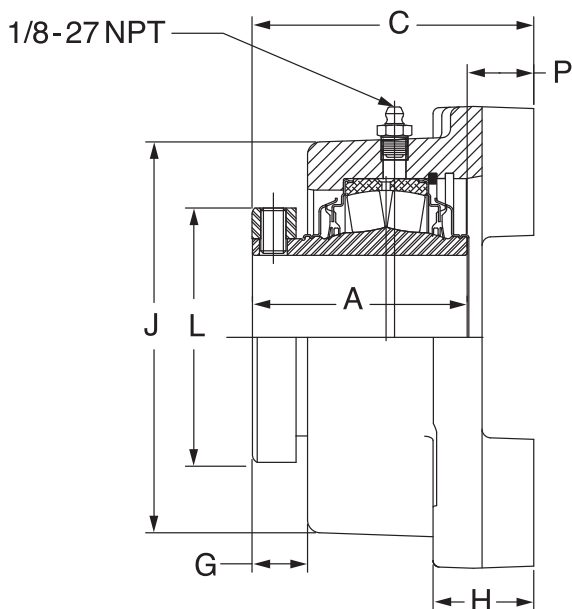
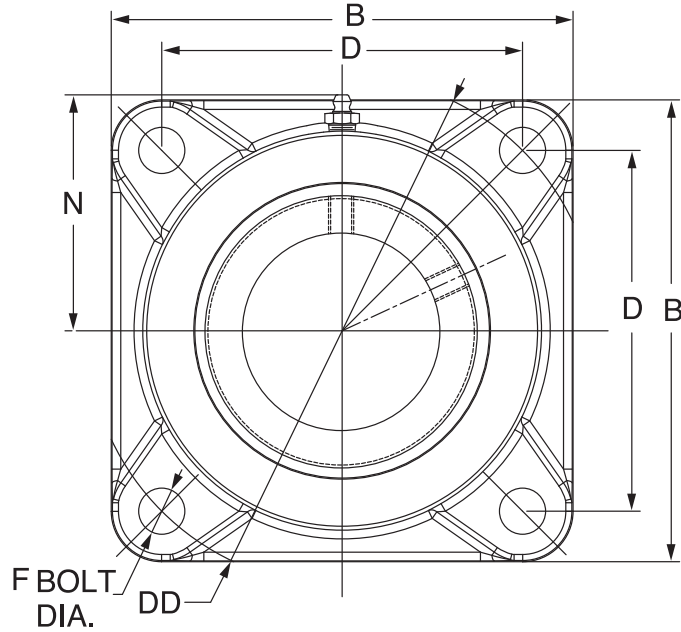
| Bearing | Shaft Size Inch | TRIDENT Seal | | | | Labyrinth Seal | | | |
|---------|--------------------|---------------|-------------|---------------|--------------|----------------|-------------|---------------|--------------|
| | | Non-Expansion | | Expansion | | Non-Expansion | | Expansion | |
| | | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name |
| 22208 | 1-3/8 | 070541 | F4S-S2-106R | 070564 | F4S-S2-106RE | 070600 | F4S-S2-106L | 070853 | F4S-S2-106LE |
| | 1-7/16 | 070542 | F4S-S2-107R | 070565 | F4S-S2-107RE | 070601 | F4S-S2-107L | 070854 | F4S-S2-107LE |
| | 1-1/2 | 070543 | F4S-S2-108R | 070566 | F4S-S2-108RE | 070602 | F4S-S2-108L | 070855 | F4S-S2-108LE |
| 22209 | 1-11/16 | 070545 | F4S-S2-111R | 070568 | F4S-S2-111RE | 070604 | F4S-S2-111L | 070857 | F4S-S2-111LE |
| | 1-3/4 | 070546 | F4S-S2-112R | 070569 | F4S-S2-112RE | 070605 | F4S-S2-112L | 070858 | F4S-S2-112LE |
| 22210 | 1-15/16 | 070547 | F4S-S2-115R | 070570 | F4S-S2-115RE | 070606 | F4S-S2-115L | 070859 | F4S-S2-115LE |
| | 2 | 070548 | F4S-S2-200R | 070571 | F4S-S2-200RE | 070607 | F4S-S2-200L | 070860 | F4S-S2-200LE |
| 22211 | 2-3/16 | 070549 | F4S-S2-203R | 070572 | F4S-S2-203RE | 070608 | F4S-S2-203L | 070861 | F4S-S2-203LE |
| 22213 | 2-7/16 | 070551 | F4S-S2-207R | 070574 | F4S-S2-207RE | 070610 | F4S-S2-207L | 070863 | F4S-S2-207LE |
| 22215 | 2-11/16 | 070553 | F4S-S2-211R | 070576 | F4S-S2-211RE | 070612 | F4S-S2-211L | 070865 | F4S-S2-211LE |
| | 2-15/16 | 070554 | F4S-S2-215R | 070577 | F4S-S2-215RE | 070613 | F4S-S2-215L | 070866 | F4S-S2-215LE |
| | 3 | 070555 | F4S-S2-300R | 070578 | F4S-S2-300RE | 070614 | F4S-S2-300L | 070867 | F4S-S2-300LE |
| 22218 | 3-7/16 | 070557 | F4S-S2-307R | 070580 | F4S-S2-307RE | 070616 | F4S-S2-307L | 070869 | F4S-S2-307LE |
| 22220 | 3-15/16 | 070559 | F4S-S2-315R | 070582 | F4S-S2-315RE | 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 | 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 |
| 1-1/2 | | | | | | | | | | | | | | | |
| 1-11/16 | 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 |
| 1-3/4 | | | | | | | | | | | | | | | |
| 1-15/16 | 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 | | | | | | | | | | | | | | | |
| 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 | 3.59 | 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 | | | | | | | | | | | | | | | |
| 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 |

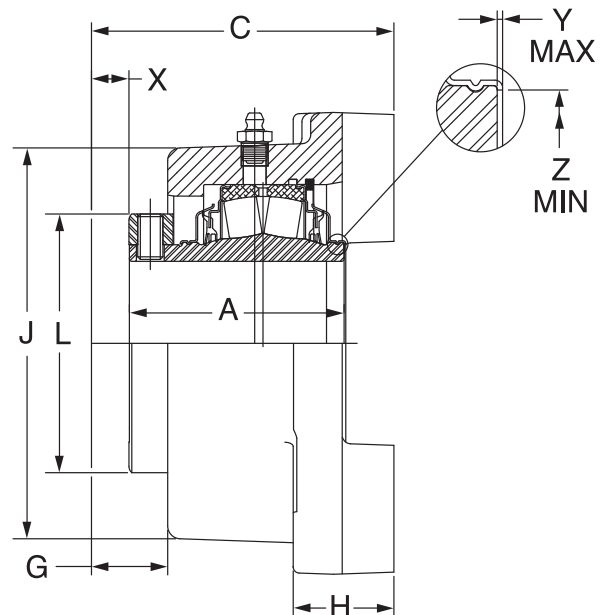
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S-2000 Flange Bearing - Square with Type E Dimensions



NON-EXPANSION



EXPANSION

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



DIMENSIONS

S-2000 Flange Bearing - Square with Type E Dimensions

| Bearing Series | Shaft Size* | TRIDENT Seal | | | | Labyrinth Seal | | | |
|----------------|-------------|---------------|--------------|---------------|---------------|----------------|--------------|---------------|---------------|
| | | Non Expansion | | Expansion | | Non Expansion | | Expansion | |
| | | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name |
| 22208 | 1-3/8 | 071469 | EF4B-S2-106R | 071482 | EF4B-S2-106RE | 071495 | EF4B-S2-106L | 071508 | EF4B-S2-106LE |
| | 1-7/16 | 071470 | EF4B-S2-107R | 071483 | EF4B-S2-107RE | 071496 | EF4B-S2-107L | 071509 | EF4B-S2-107LE |
| 22209 | 1-11/16 | 071471 | EF4B-S2-111R | 071484 | EF4B-S2-111RE | 071497 | EF4B-S2-111L | 071510 | EF4B-S2-111LE |
| 22210 | 1-15/16 | 071472 | EF4B-S2-115R | 071485 | EF4B-S2-115RE | 071498 | EF4B-S2-115L | 071511 | EF4B-S2-115LE |
| | 2 | 071473 | EF4B-S2-200R | 071486 | EF4B-S2-200RE | 071499 | EF4B-S2-200L | 071512 | EF4B-S2-200LE |
| 22211 | 2-3/16 | 071474 | EF4B-S2-203R | 071487 | EF4B-S2-203RE | 071500 | EF4B-S2-203L | 071513 | EF4B-S2-203LE |
| 22213 | 2-7/16 | 071475 | EF4B-S2-207R | 071488 | EF4B-S2-207RE | 071501 | EF4B-S2-207L | 071514 | EF4B-S2-207LE |
| | 2-11/16 | 071476 | EF4B-S2-211R | 071489 | EF4B-S2-211RE | 071502 | EF4B-S2-211L | 071515 | EF4B-S2-211LE |
| 22215 | 2-15/16 | 071477 | EF4B-S2-215R | 071490 | EF4B-S2-215RE | 071503 | EF4B-S2-215L | 071516 | EF4B-S2-215LE |
| | 3 | 071478 | EF4B-S2-300R | 071491 | EF4B-S2-300RE | 071504 | EF4B-S2-300L | 071517 | EF4B-S2-300LE |
| 22218 | 3-7/16 | 071479 | EF4B-S2-307R | 071492 | EF4B-S2-307RE | 071505 | EF4B-S2-307L | 071518 | EF4B-S2-307LE |
| 22220 | 3-15/16 | 071480 | EF4B-S2-315R | 071493 | EF4B-S2-315RE | 071506 | EF4B-S2-315L | 071519 | EF4B-S2-315LE |
| 22222 | 4-7/16 | 071481 | EF4B-S2-407R | 071494 | EF4B-S2-407RE | 071507 | EF4B-S2-407L | 071520 | EF4B-S2-407LE |

*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 | Set Screw Size | S/S Torque In/Lbs |
|-----------------|------|-------|------|------|-------|-------------|------|------|------|------|------|------|--------------|-------|------|----------------|-------------------|
| 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 | 1325 |
| 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 | N/A | N/A | 5/8-11 | 1325 |

Note(S): "P" Dimension Is For Non-Expansion Only

"A" And "P" Dimensions Do Not Include "Y" Dimension

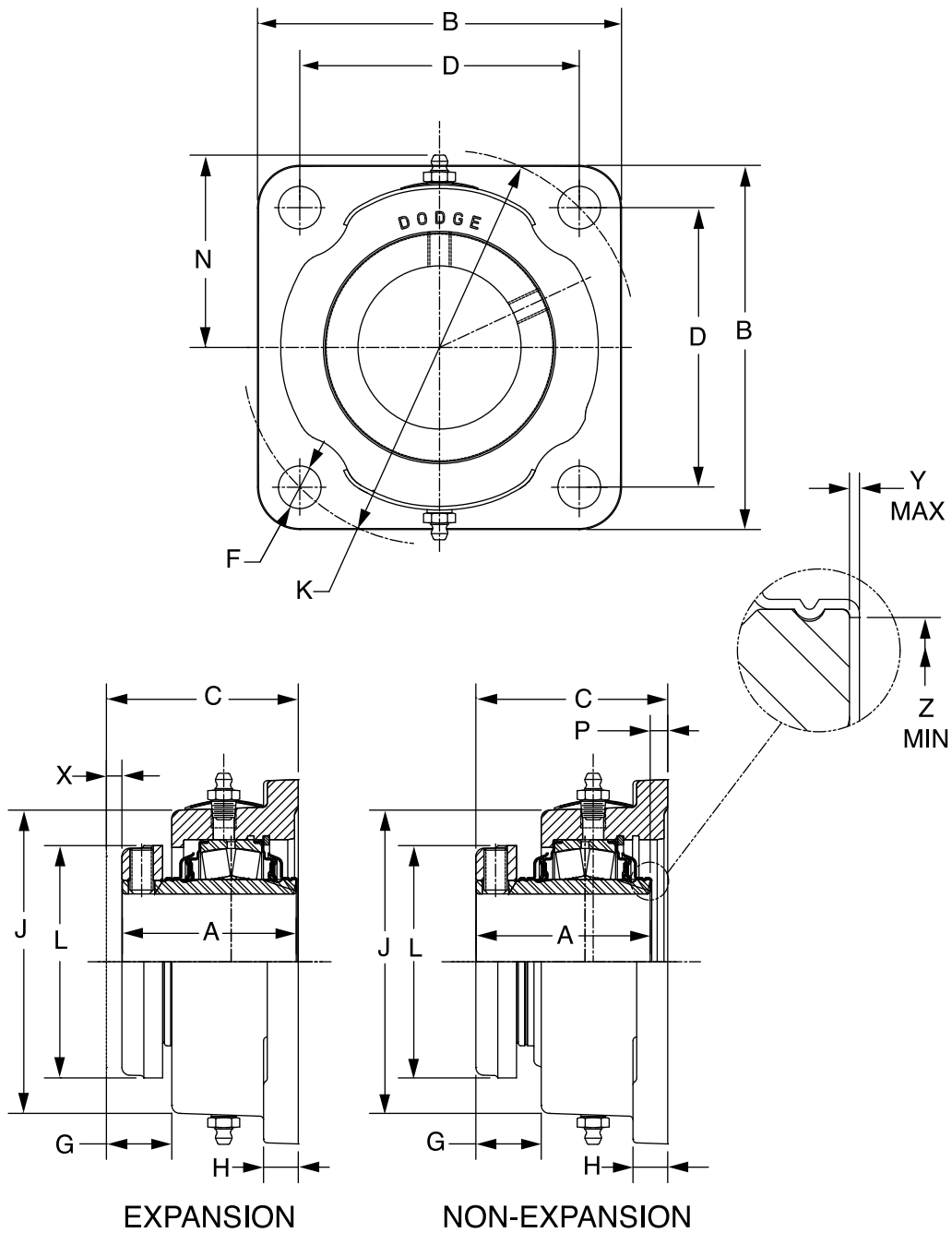
- Reference Dimensions Only

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DIMENSIONS

Steel S-2000-HD Flange 4-Bolt





DIMENSIONS

Steel S-2000-HD Flange 4-Bolt

| Shaft Size | Dodge Non-Expansion | | Dodge Expansion | |
|------------|---------------------|--------------|-----------------|---------------|
| | Dodge Part No. | Description | Dodge Part No. | Description |
| 1-3/8 | 072386 | SF4S-S2-106R | 072400 | SF4S-S2-106RE |
| 1-7/16 | 072387 | SF4S-S2-107R | 072401 | SF4S-S2-107RE |
| 1-1/2 | 072388 | SF4S-S2-108R | 072402 | SF4S-S2-108RE |
| 1-11/16 | 072389 | SF4S-S2-111R | 072403 | SF4S-S2-111RE |
| 1-3/4 | 072390 | SF4S-S2-112R | 072404 | SF4S-S2-112RE |
| 1-15/16 | 072391 | SF4S-S2-115R | 072405 | SF4S-S2-115RE |
| 2 | 072392 | SF4S-S2-200R | 072406 | SF4S-S2-200RE |
| 2-3/16 | 072393 | SF4S-S2-203R | 072407 | SF4S-S2-203RE |
| 2-7/16 | 072394 | SF4S-S2-207R | 072408 | SF4S-S2-207RE |
| 2-11/16 | 072395 | SF4S-S2-211R | 072409 | SF4S-S2-211RE |
| 2-15/16 | 072396 | SF4S-S2-215R | 072410 | SF4S-S2-215RE |
| 3 | 072397 | SF4S-S2-300R | 072411 | SF4S-S2-300RE |
| 3-7/16 | 072398 | SF4S-S2-307R | 072412 | SF4S-S2-307RE |
| 3-15/16 | 072399 | SF4S-S2-315R | 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" & "P" Dimensions Do Not Include "Y" Dimension

| | | | |
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DIMENSIONS

S-2000 Piloted Flange

Bearing Reference Guide

E-Family Roller Bearings

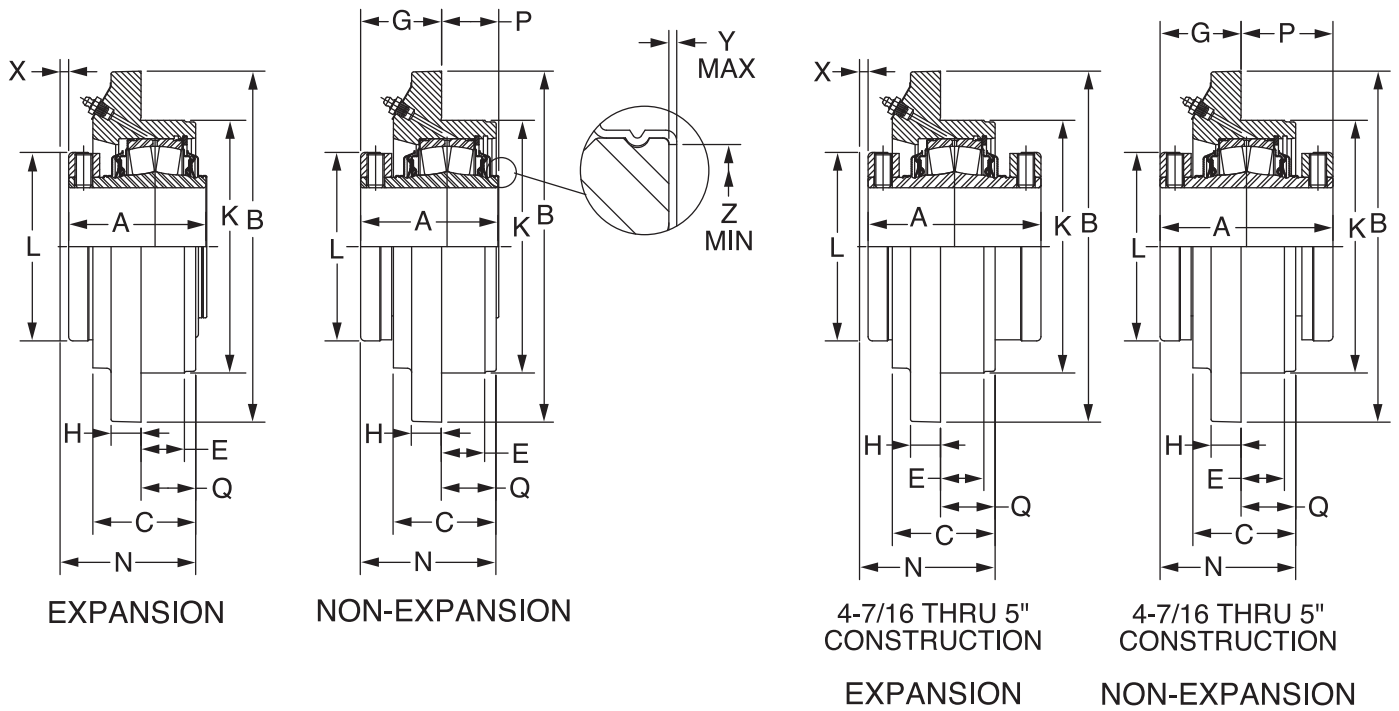
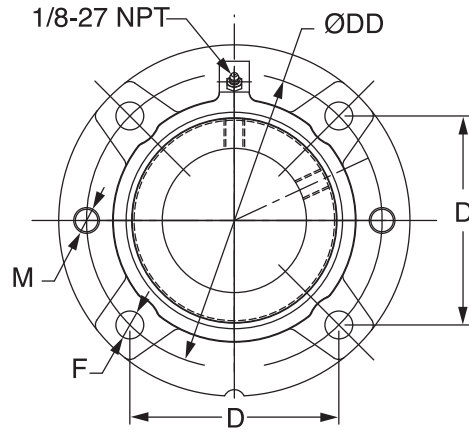
Specialty Tapered Products

S-2000

UNISPHERE II

IMPERIAL

UNIFIED SAF



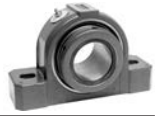
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DIMENSIONS



S-2000 Piloted Flange

| Bearing | Shaft Size Inch | TRIDENT Seal | | | | Labyrinth Seal | | | |
|---------|-----------------|---------------|------------|---------------|-------------|----------------|------------|---------------|-------------|
| | | Non-Expansion | | Expansion | | Non-Expansion | | Expansion | |
| | | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name |
| 22208 | 1-3/8 | 070644 | FC-S2-106R | 070671 | FC-S2-106RE | 070698 | FC-S2-106L | 070725 | FC-S2-106LE |
| | 1-7/16 | 070645 | FC-S2-107R | 070672 | FC-S2-107RE | 070699 | FC-S2-107L | 070726 | FC-S2-107LE |
| | 1-1/2 | 070646 | FC-S2-108R | 070673 | FC-S2-108RE | 070700 | FC-S2-108L | 070727 | FC-S2-108LE |
| 22209 | 1-11/16 | 070648 | FC-S2-111R | 070675 | FC-S2-111RE | 070702 | FC-S2-111L | 070729 | FC-S2-111LE |
| | 1-3/4 | 070649 | FC-S2-112R | 070676 | FC-S2-112RE | 070703 | FC-S2-112L | 070730 | FC-S2-112LE |
| 22210 | 1-15/16 | 070650 | FC-S2-115R | 070677 | FC-S2-115RE | 070704 | FC-S2-115L | 070731 | FC-S2-115LE |
| | 2 | 070651 | FC-S2-200R | 070678 | FC-S2-200RE | 070705 | FC-S2-200L | 070732 | FC-S2-200LE |
| 22211 | 2-3/16 | 070652 | FC-S2-203R | 070679 | FC-S2-203RE | 070706 | FC-S2-203L | 070733 | FC-S2-203LE |
| 22213 | 2-7/16 | 070654 | FC-S2-207R | 070681 | FC-S2-207RE | 070708 | FC-S2-207L | 070735 | FC-S2-207LE |
| 22215 | 2-11/16 | 070656 | FC-S2-211R | 070683 | FC-S2-211RE | 070710 | FC-S2-211L | 070737 | FC-S2-211LE |
| | 2-15/16 | 070657 | FC-S2-215R | 070684 | FC-S2-215RE | 070711 | FC-S2-215L | 070738 | FC-S2-215LE |
| | 3 | 070658 | FC-S2-300R | 070685 | FC-S2-300RE | 070712 | FC-S2-300L | 070739 | FC-S2-300LE |
| 22218 | 3-7/16 | 070660 | FC-S2-307R | 070687 | FC-S2-307RE | 070714 | FC-S2-307L | 070741 | FC-S2-307LE |
| 22220 | 3-15/16 | 070662 | FC-S2-315R | 070689 | FC-S2-315RE | 070716 | FC-S2-315L | 070743 | FC-S2-315LE |
| 22222 | 4-7/16 ** | 070664 | FC-S2-407R | 070691 | FC-S2-407RE | 070718 | FC-S2-407L | 070745 | FC-S2-407LE |
| 22226 | 4-15/16 ** | 070666 | FC-S2-415R | 070693 | FC-S2-415RE | 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 | N/A | N/A |
| 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 | N/A | N/A |

** Housing utilize 6 bolts equally spaced

* +.000/- .002"

| | | | |
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DIMENSIONS

S-2000 Piloted Flange with Type E Dimensions

Bearing Reference Guide

E-Family Roller Bearings

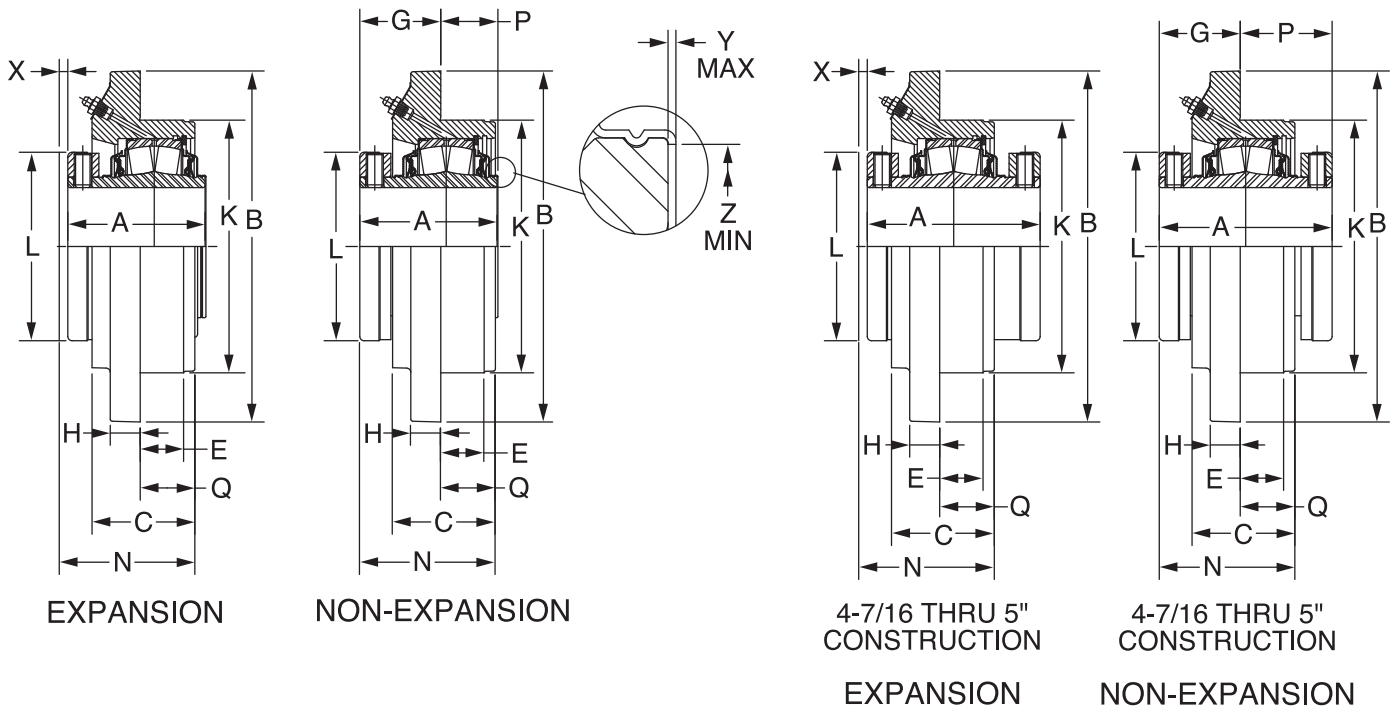
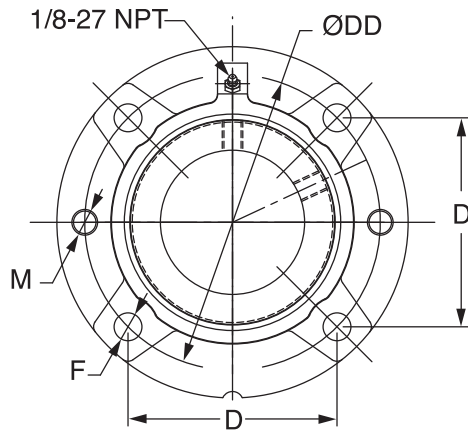
Specialty Tapered Products

S-2000

UNISPHERE II

IMPERIAL

UNIFIED SAF



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PAGE B12-4

HOW TO ORDER/NOMENCLATURE
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SELECTIONS
PAGE B12-7



DIMENSIONS

S-2000 Piloted Flange with Type E Dimensions

| Bearing Series | Shaft Size* | TRIDENT SEAL | | | | Labyrinth Seal | | | |
|----------------|-------------|---------------|-------------|---------------|--------------|----------------|-------------|---------------|--------------|
| | | Non Expansion | | Expansion | | Non Expansion | | Expansion | |
| | | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name |
| 22208 | 1-3/8 | 070644 | FC-S2-106R | 070671 | FC-S2-106RE | 070698 | FC-S2-106L | 070725 | FC-S2-106LE |
| | 1-7/16 | 070645 | FC-S2-107R | 070672 | FC-S2-107RE | 070699 | FC-S2-107L | 070726 | FC-S2-107LE |
| 22209 | 1-11/16 | 070648 | FC-S2-111R | 070675 | FC-S2-111RE | 070702 | FC-S2-111L | 070729 | FC-S2-111LE |
| 22210 | 1-15/16 | 070650 | FC-S2-115R | 070677 | FC-S2-115RE | 070704 | FC-S2-115L | 070731 | FC-S2-115LE |
| | 2 | 070651 | FC-S2-200R | 070678 | FC-S2-200RE | 070705 | FC-S2-200L | 070732 | FC-S2-200LE |
| 22211 | 2-3/16 | 070652 | FC-S2-203R | 070679 | FC-S2-203RE | 070706 | FC-S2-203L | 070733 | FC-S2-203LE |
| 22213 | 2-7/16 | 070654 | FC-S2-207R | 070681 | FC-S2-207RE | 070708 | FC-S2-207L | 070735 | FC-S2-207LE |
| 22215 | 2-11/16 | 070656 | FC-S2-211R | 070683 | FC-S2-211RE | 070710 | FC-S2-211L | 070737 | FC-S2-211LE |
| | 2-15/16 | 070657 | FC-S2-215R | 070684 | FC-S2-215RE | 070711 | FC-S2-215L | 070738 | FC-S2-215LE |
| | 3 | 070658 | FC-S2-300R | 070685 | FC-S2-300RE | 070712 | FC-S2-300L | 070739 | FC-S2-300LE |
| 22218 | 3-7/16 | 070660 | FC-S2-307R | 070687 | FC-S2-307RE | 070714 | FC-S2-307L | 070741 | FC-S2-307LE |
| 22220 | 3-15/16 | 070662 | FC-S2-315R | 070689 | FC-S2-315RE | 070716 | FC-S2-315L | 070743 | FC-S2-315LE |
| 22222 | 4-7/16 | 071521 | EFC-S2-407R | 071523 | EFC-S2-407RE | 071525 | EFC-S2-407L | 071527 | EFC-S2-407LE |
| 22226 | 4-15/16 | 071522 | EFC-S2-415R | 071524 | EFC-S2-415RE | 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 In/Lbs |
|------------|------|-------|------|------|-------|------|-------------|------|------|--------|------|---------|------|------|------|--------------|-------|------|----------------|-------------------|
| 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 | 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 |
| 1-11/16 | 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 |
| 2-3/16 | 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 | 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 |
| 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 |
| 3-7/16 | 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 | 1325 |
| 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 | N/A | N/A | 5/8 | 1325 |
| 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 | N/A | N/A | 5/8 | 1325 |

- +0.000 Note(S): "P" And "G" Dimensions Are For Non-Expansion Only
 -0.002 "A" And "P" Dimensions Do Not Include "Y" Dimension

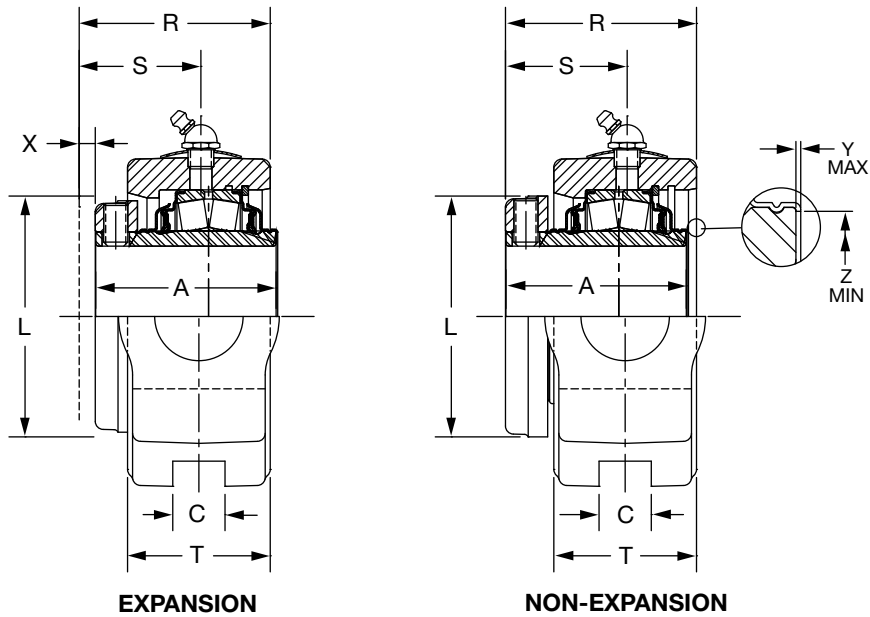
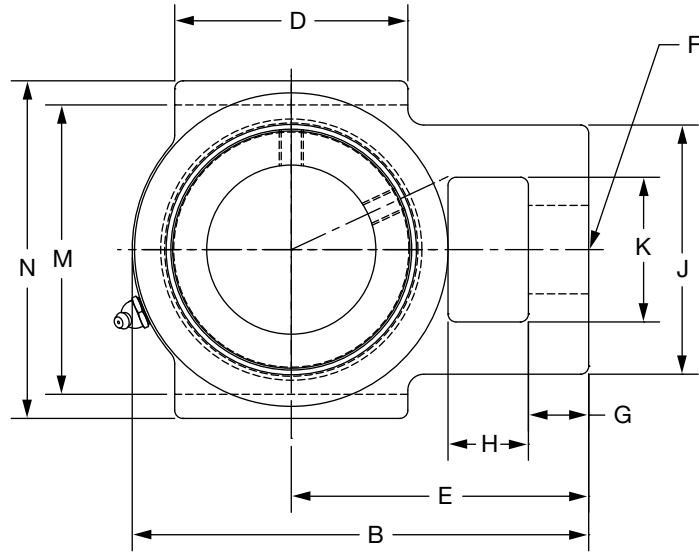
- Reference Dimension Only

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DIMENSIONS

S-2000 Wide Slot Take-Up 1-3/8 THRU 2-3/16 INCH





DIMENSIONS

S-2000 Wide Slot Take-Up 1-3/8 THRU 2-3/16 INCH

| Bearing | Shaft Size Inch | Take-Up Frame | TRIDENT Seal | | | |
|---------|-----------------|---------------|---------------|--------------|-----------|---------------|
| | | | Non-Expansion | | Expansion | |
| | | | Part No. | Part Name | Part No. | Part Name |
| 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 |
|------------|------|------|------|------|------|-------|------|------|------|------|
| 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 |
| 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 |
| 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 |
| 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 |

| Shaft Size | L | M | N | R | S | T | X Total Exp | Y | Z |
|------------|------|------|------|------|------|------|-------------|-------|------|
| 1-3/8 | | | | | | | | | |
| 1-7/16 | 2.75 | 3.50 | 4.13 | 2.73 | 1.70 | 2.06 | 3/16 | 0.020 | 1.80 |
| 1-1/2 | | | | | | | | | |
| 1-11/16 | 3.19 | 4.00 | 4.75 | 2.83 | 1.81 | 2.03 | 1/4 | 0.020 | 2.08 |
| 1-3/4 | | | | | | | | | |
| 1-15/16 | 3.44 | 4.00 | 4.75 | 2.94 | 1.94 | 2.00 | 1/4 | 0.020 | 2.30 |
| 2 | | | | | | | | | |
| 2-3/16 | 3.75 | 4.50 | 5.25 | 3.09 | 1.98 | 2.22 | 1/4 | 0.020 | 2.59 |

| | | | |
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DIMENSIONS

S-2000 Wide Slot Take-Up 2-7/16 THRU 4-15/16 INCH

Bearing Reference Guide

E-Family Roller Bearings

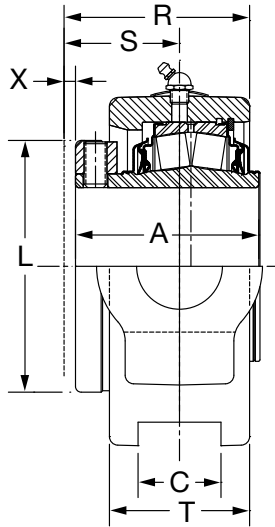
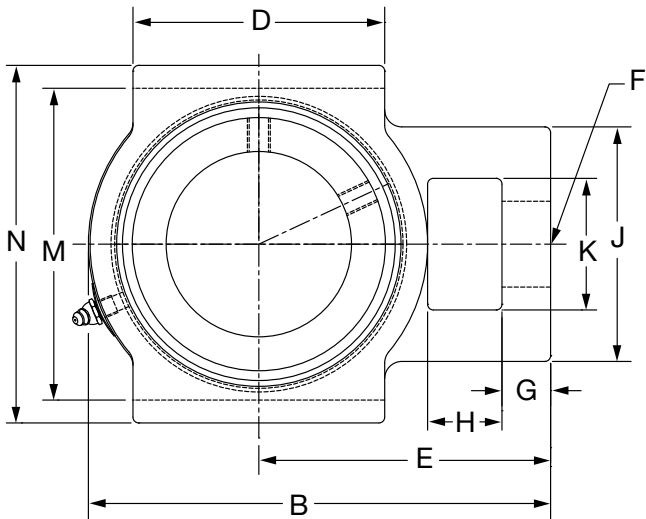
Specialty Tapered Products

S-2000

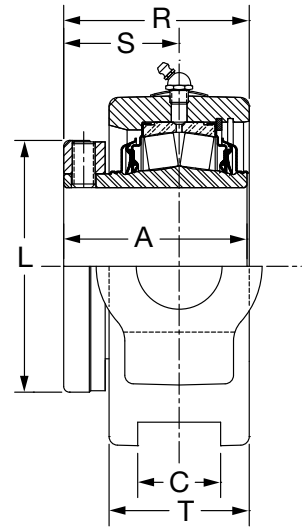
UNISPHERE II

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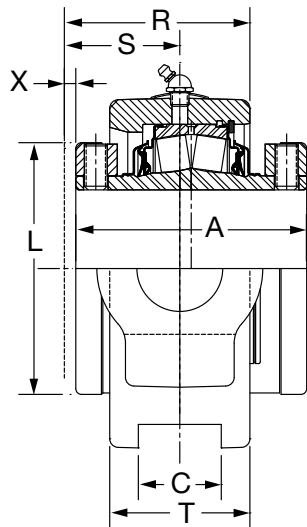
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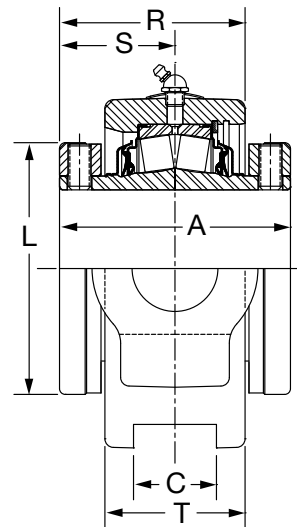
1-3/8 THRU 3-15/16"
CONSTRUCTION



1-3/8 THRU 3-15/16"
CONSTRUCTION



4-7/16 THRU 4-15/16"
CONSTRUCTION



4-7/16 THRU 4-15/16"
CONSTRUCTION

| | | | |
|---------------------------------|-----------------------------|---|--------------------------|
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DIMENSIONS

S-2000 Wide Slot Take-Up 2-7/16 THRU 4-15/16 INCH

| Bearing | Shaft Size Inch | Take-Up Frame | TRIDENT Seal | | | |
|---------|-----------------|---------------|---------------|--------------|-------------|---------------|
| | | | Non-Expansion | | Expansion | |
| | | | Part Number | Part Name | Part Number | Part Name |
| 22213 | 2-7/16 | CP-502 | 070762 | WSTU-S2-207R | 070789 | WSTU-S2-207RE |
| 22215 | 2-11/16 | CP-515 | 070764 | WSTU-S2-211R | 070791 | WSTU-S2-211RE |
| | 2-15/16 | | 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 |
|------------|------|-------|------|------|-------|-------|------|------|------|------|
| 2-7/16 | 3.20 | 7.69 | 1.06 | 4.38 | 5.00 | 1-3/8 | 1.06 | 1.25 | 4.25 | 2.50 |
| 2-11/16 | 3.59 | 8.88 | 1.81 | 4.50 | 5.75 | 1-5/8 | 1.13 | 1.50 | 4.88 | 2.75 |
| 2-15/16 | | | | | | | | | | |
| 3 | 4.00 | 10.06 | 1.81 | 5.50 | 6.38 | 1-7/8 | 1.06 | 1.63 | 5.13 | 2.88 |
| 3-7/16 | | | | | | | | | | |
| 3-15/16 | | | | | | | | | | |
| 4-7/16 | 6.53 | 13.38 | 2.06 | 7.00 | 8.75 | 2-1/8 | 2.00 | 2.13 | 6.78 | 3.38 |
| 4-15/16 | 6.91 | 15.63 | 2.06 | 9.00 | 10.31 | 2-3/8 | 2.50 | 2.50 | 7.00 | 3.75 |

| Shaft Size | L | M | N | R | S | T | X Total Exp | Y | Z |
|------------|------|-------|-------|------|------|------|-------------|-------|------|
| 2-7/16 | 4.06 | 5.13 | 5.88 | 3.20 | 2.00 | 2.44 | 1/4 | 0.025 | 2.94 |
| 2-11/16 | 4.70 | 5.94 | 6.69 | 3.75 | 2.41 | 2.69 | 1/4 | 0.025 | 3.47 |
| 2-15/16 | | | | | | | | | |
| 3 | 5.50 | 6.81 | 7.81 | 4.05 | 2.52 | 3.06 | 1/4 | 0.025 | 4.05 |
| 3-7/16 | | | | | | | | | |
| 3-15/16 | | | | | | | | | |
| 4-7/16 | 6.45 | 9.50 | 10.33 | 5.34 | 3.47 | 3.75 | 3/8 | N/A | N/A |
| 4-15/16 | 7.45 | 10.25 | 11.25 | 5.73 | 3.64 | 4.19 | 3/8 | N/A | N/A |

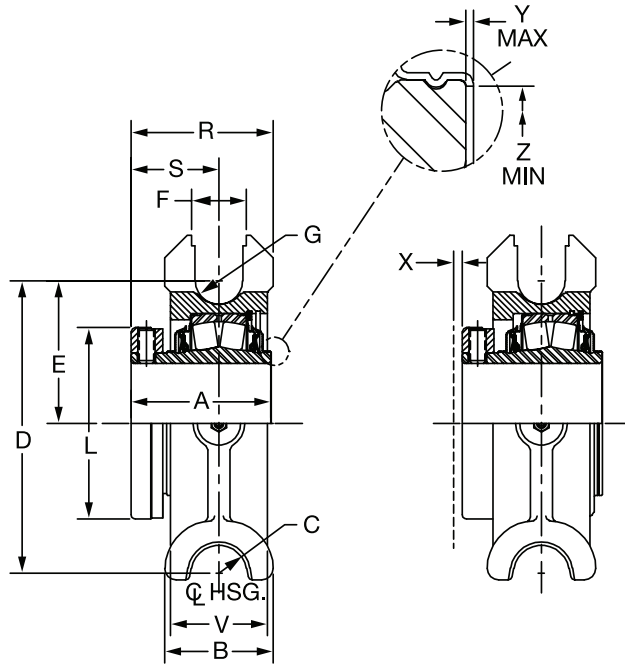
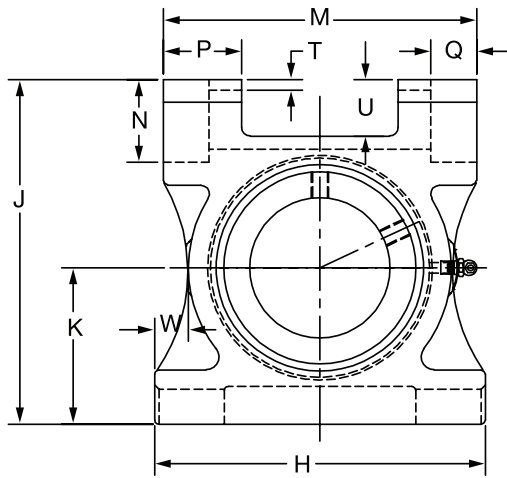
See Page B15-20 for CP Take-Up Frame

| | | | |
|---------------------------------|-----------------------------|---|--------------------------|
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DIMENSIONS

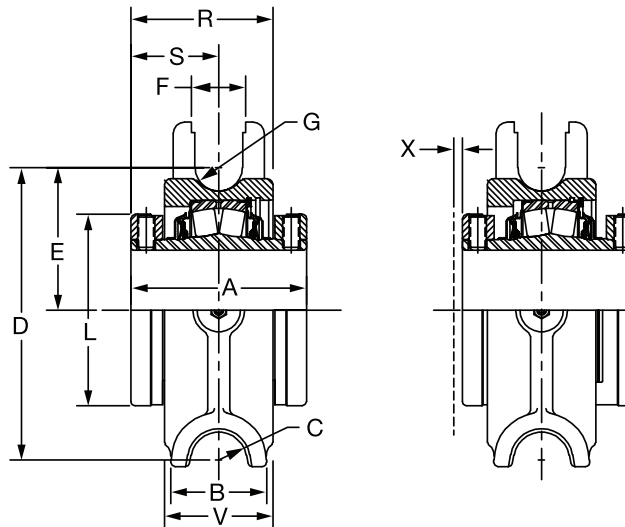


TPHU Take-Up



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

| | | | |
|---------------------------------|-----------------------------|---|--------------------------|
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DIMENSIONS



TPHU Take-Up

| Bearing Inch | Shaft Size | Take-Up Frame | | TRIDENT Seal | | | |
|--------------|-------------------------|---------------|---------|---------------|--------------|-------------|---------------|
| | | | | Non-Expansion | | Expansion | |
| | | | | Part Number | Part Name | Part Number | Part Name |
| 22210 | 1-15/16 2 | TP10 | TPHU110 | 070811 | TPHU-S2-115R | 070829 | TPHU-S2-115RE |
| | | | | 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 2-15/16 3 | TP40 | TPHU140 | 070817 | TPHU-S2-211R | 070835 | TPHU-S2-211RE |
| | | | | 070818 | TPHU-S2-215R | 070836 | TPHU-S2-215RE |
| | | | | 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 | 2.84 | 2.38 | 0.81 | 5.19 | 2.38 | 1.06 | 0.44 | 6.50 | 6.44 | 3.06 | 3.44 | 6.00 |
| 2-3/16 | 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 | 3.59 | 2.75 | 0.81 | 7.13 | 3.31 | 1.44 | 0.56 | 8.50 | 8.50 | 4.00 | 4.70 | 8.00 |
| 3-7/16 | 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 |

See Page B19-20 Thru B19-25 For TP And TPHU Frames

| Shaft Size | N | P | Q | R | S | T | U | V | W | X Total Exp | Y | Z |
|-------------------------|------|------|------|------|------|------|------|------|------|----------------|-------|------|
| 1-15/16 2 | 1.66 | 1.25 | 0.81 | 3.19 | 2.00 | 0.31 | 1.06 | 2.00 | 0.88 | 0.25 | 0.020 | 2.30 |
| 2-3/16 | 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 2-15/16 3 | 1.94 | 1.75 | 1.06 | 3.83 | 2.45 | 0.31 | 1.50 | 2.75 | 1.00 | 0.25 | 0.025 | 3.47 |
| 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 |

See Page B19-20 Thru B19-25 For TP And TPHU Frames

| | | | |
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DIMENSIONS

S-2000 Bearing Insert

Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

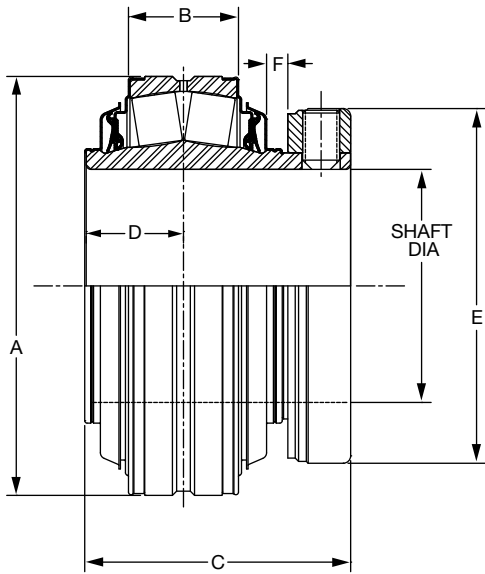
S-2000

UNISPHERE II

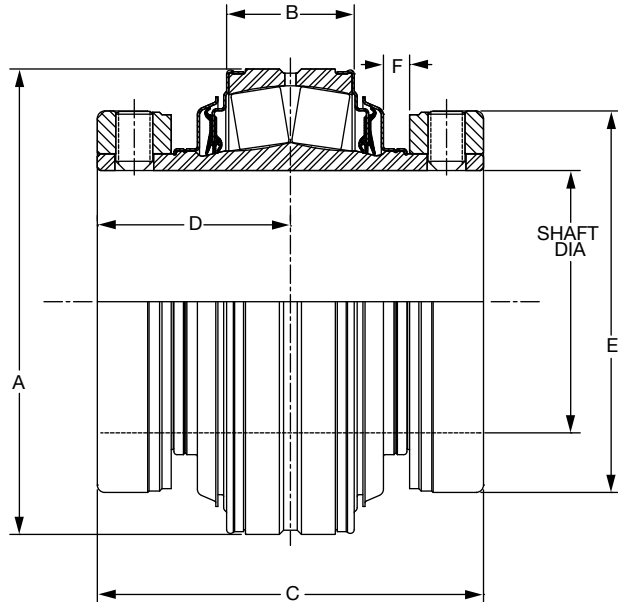
IMPERIAL

UNIFIED SAF

CONTACT SEAL

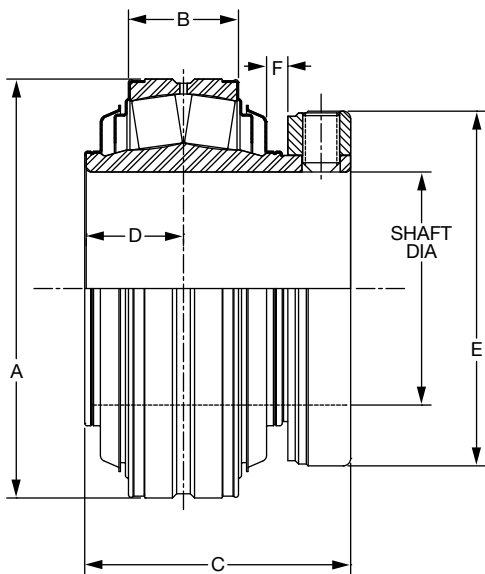


1-3/8 THRU 3-15/16" CONSTRUCTION

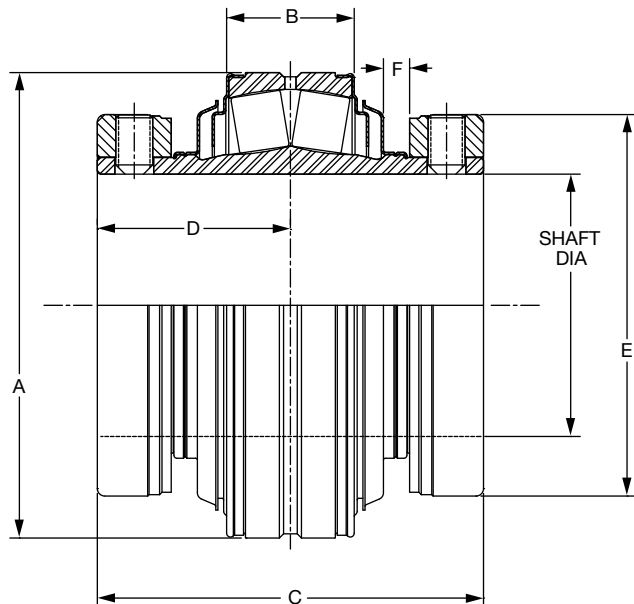


4-7/16 THRU 4-15/16" CONSTRUCTION

LABYRINTH SEAL



1-3/8 THRU 3-15/16" CONSTRUCTION



4-7/16 THRU 4-15/16" CONSTRUCTION

| | | | |
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DIMENSIONS

S-2000 Bearing Insert

| Bearing | Shaft Size | TRIDENT Seal | | Labyrinth Seal | |
|---------|------------|---------------|-------------|----------------|-------------|
| | | Part Number | Part Name | Part Number | Part Name |
| 22208 | 1-3/8 | 070000 | INS-S2-106R | 070016 | INS-S2-106L |
| | 1-7/16 | 070001 | INS-S2-107R | 070017 | INS-S2-107L |
| | 1-1/2 | 070002 | INS-S2-108R | 070018 | INS-S2-108L |
| 22209 | 1-11/16 | 070003 | INS-S2-111R | 070019 | INS-S2-111L |
| | 1-3/4 | 070004 | INS-S2-112R | 070020 | INS-S2-112L |
| 22210 | 1-15/16 | 070005 | INS-S2-115R | 070021 | INS-S2-115L |
| | 2 | 070006 | INS-S2-200R | 070022 | INS-S2-200L |
| 22211 | 2-3/16 | 070007 | INS-S2-203R | 070023 | INS-S2-203L |
| 22213 | 2-7/16 | 070008 | INS-S2-207R | 070024 | INS-S2-207L |
| 22215 | 2-11/16 | 070009 | INS-S2-211R | 070025 | INS-S2-211L |
| | 2-15/16 | 070010 | INS-S2-215R | 070026 | INS-S2-215L |
| | 3 | 070011 | INS-S2-300R | 070027 | INS-S2-300L |
| 22218 | 3-7/16 | 070012 | INS-S2-307R | 070028 | INS-S2-307L |
| 22220 | 3-15/16 | 070013 | INS-S2-315R | 070029 | INS-S2-315L |
| 22222 | 4-7/16 | 070014 | INS-S2-407R | 070030 | INS-S2-407L |
| 22226 | 4-15/16 | 070015 | INS-S2-415R | 070031 | INS-S2-415L |

| Shaft Size | A | B | C | D | E |
|------------|------|------|------|------|------|
| 1-3/8 | | | | | |
| 1-7/16 | 3.15 | 0.95 | 2.53 | 0.97 | 2.66 |
| 1-1/2 | | | | | |
| 1-11/16 | 3.35 | 0.95 | 2.66 | 0.95 | 3.10 |
| 1-3/4 | | | | | |
| 1-15/16 | 3.54 | 0.95 | 2.84 | 1.00 | 3.34 |
| 2 | | | | | |
| 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 | 5.12 | 1.28 | 3.59 | 1.22 | 4.63 |
| 3 | | | | | |
| 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 |

| | | | |
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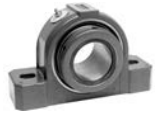
DIMENSIONS

Steel S-2000 Open End Covers



| Shaft Size | Front End | | | | Backside | | | |
|------------|------------------|----------------|---------------------|----------------|------------------|-----------------|---------------------|------------------|
| | S2000 & S2000-HD | | E-S2000 & ES2000-HD | | S2000 & S2000-HD | | E-S2000 & ES2000-HD | |
| | Dodge Part No. | Description | Dodge Part No. | Description | Dodge Part No. | Description | Dodge Part No. | 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 |

DIMENSIONS



Steel S-2000 Closed End Covers



| Shaft Size | S2000 & S2000-HD | | E-S2000 & ES2000-HD | |
|------------------|------------------|-------------|---------------------|-------------|
| | Dodge Part No. | Description | Dodge Part No. | Description |
| 1-3/8 to 1-1/2 | 069970 | S2EC08 | 069960 | IPEC08 |
| 1-11/16 to 1-3/4 | 069971 | S2EC09 | 069961 | IPEC09 |
| 1-15/16 to 2 | 069972 | S2EC10 | 069962 | IPEC10 |
| 2-3/16 | 069973 | S2EC11 | 069963 | IPEC11 |
| 2-7/16 | 069964 | S2EC13 | 069964 | IPEC13 |
| 2-11/16 to 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 |

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E-Family Roller Bearings

Specialty Tapered Products

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UNISPHERE II

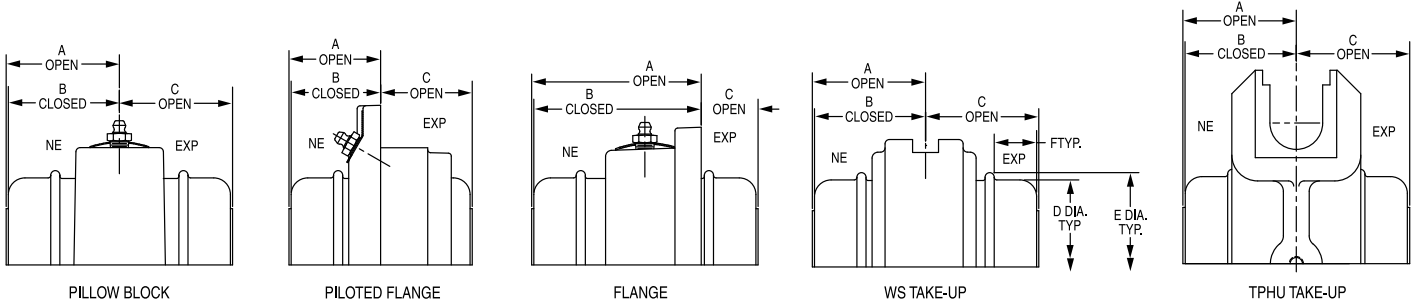
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DIMENSIONS

S2000 End Cover



| | Shaft Size | S2000 Pillow Block (2-Bolt) | S2000 Pillow Block (4-Bolt) | *E-S2000 Pillow Block (2-Bolt) | *E-S2000 Pillow Block (4-Bolt) | S2000 Piloted Flange | *E-S2000 Piloted Flange | S2000 Round Flange | S2000 Square Flange | *E-S2000 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 | N/A | 1.97 | N/A | 1.61 | 1.61 | 3.06 | 3.39 | 3.39 | 2.00 | N/A | 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 | N/A | 2.16 | N/A | 1.77 | 1.77 | 3.27 | 4.01 | 4.01 | 2.13 | N/A | 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 | N/A | 2.16 | N/A | 1.77 | 1.77 | 3.27 | 4.01 | 4.01 | 2.13 | N/A | 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 | 1-15/16 | 2.31 | 2.31 | 2.31 | | 1.92 | 1.92 | 3.47 | 3.95 | 3.95 | 2.25 | 2.31 | | | |
| B CLOSED | THRU | 2.25 | 2.25 | 2.25 | N/A | 1.86 | 1.86 | 3.41 | 3.89 | 3.89 | 2.19 | 2.25 | 3.52 | 3.61 | 1.02 |
| C OPEN | 2 | 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 | N/A | 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 | N/A | 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 | N/A | 3.36 | 3.19 | 3.19 | N/A | 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 | N/A | 3.83 | N/A | 3.78 | 3.89 | 3.72 | N/A | N/A | 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 | N/A | 4.36 | N/A | 4.33 | 4.11 | 3.95 | N/A | N/A | N/A | 4.36 | 4.36 | 8.44 | 8.69 | 1.91 |
| C OPEN | | | 4.69 | | 4.69 | 4.91 | 5.37 | | | | 4.69 | 4.68 | | | |

| | | | |
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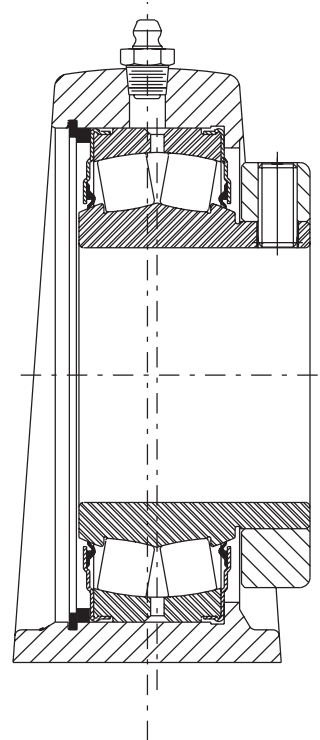
FEATURES/BENEFITS

UNISPHERE II



UNISPHERE II

- High capacity double row spherical bearings
- 2-bolt pillow blocks and 4-bolt flange bearings 1-7/16” to 4”, 40mm to 90mm.
- Same rolling elements and installation ready features as the S-2000 bearing.
- Ductile iron pillow block housing with 65,000 PSI tensile strength is 92% the strength of steel.
- DODGE “R” Seal provides contacting lip protection, crimped to the outer race; maintains sealing effectiveness at maximum misalignment.
- Springlok™ collar mount with 65 setscrew spacing for optimum clamping force.



Dimensionally comparable with ball bearings:

- Length through the bore
- Base-to-center height
- Footprint

Approximately five times the rating of a ball bearing

NOTE: Instruction manuals for Dodge bearings are available on www.dodge-pt.com

Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

S-2000

UNISPHERE II

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SPECIFICATION

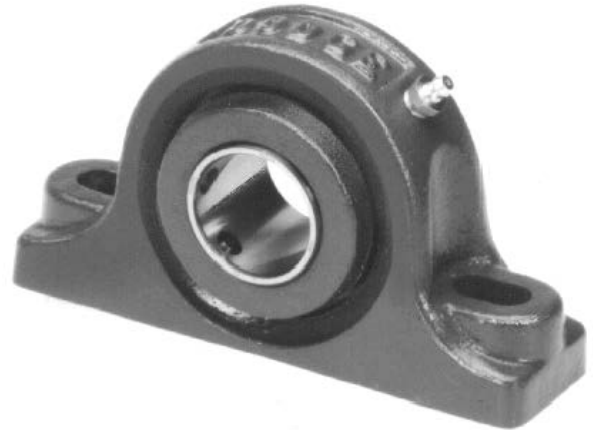
UNISPHERE II INCH

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

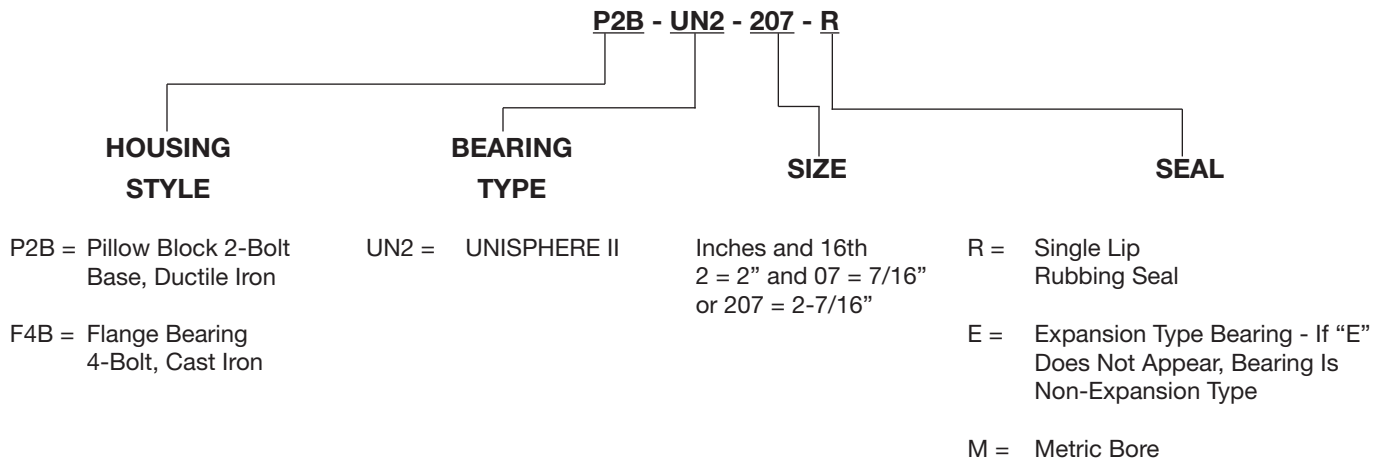
ASTM A48 Class 30 cast iron is the standard material used in S-2000 housings and UNISPHERE II flanged housings. The standard material used in UNISPHERE II pillow blocks is ductile

iron (ASTM A536 Grade 65-45-12) with 65,000 p.s.i. tensile strength. Housing designs are available for survival in extreme harsh environments, through the use of special finishes and stainless hardware.

Housings are available in a variety of standard configurations, including pillow blocks and flanges. Rubbing lip seals are standard on all units.



NOMENCLATURE



| | | | |
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SELECTION

UNISPHERE II SPHERICAL ROLLER BEARINGS

DODGE Unitized 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 DODGE Application Engineering (864-284-5700) for applications which exceed the recommendations of this catalog.

L₁₀ Hours Life - The life which may be expected from at least 90% of a given group of bearings operating under identical conditions.

$$L_{10} \text{ Life, Hours} = \left(\frac{C}{P}\right)^{10/3} \times \left(\frac{16667}{\text{RPM}}\right)$$

Where: C = Dynamic Capacity (Table 1 and Table 2 on pages B13-6 and B13-7) lbs.

P = Equivalent Radial Load, lbs.

GENERAL

Heavy Service - For heavy shock loads, frequent shock loads, or severe vibrations, add up to 50% (according to severity of conditions) to the Equivalent Radial Load 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 L₁₀ 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 L₁₀ 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.

| RPM | 20-200 | 201 - 2000 | Over 2000 |
|-------------------------|--------|------------|-----------|
| 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 on page B13-6). Where the applied radial load (FR) 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 7 on page B13-11 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 | S-2000 |
| UP TO 1-1/2" | +0.0000 -0.0005" |
| 1-9/16 TO 4" | +0.000 -0.001" |
| 4-7/16 TO 5" | +0.000 -0.0015" |

BEARING SUPPORTING RADIAL LOADS ONLY

1. Define L₁₀ Life Hours desired.
2. Establish bearing radial load, F_R
(F_R = P for Pure Radial Load Conditions). The DODGE program BEST™* can be used to find application loads.
3. Establish RPM.

Using the easy selection Table 3 on page B13-8, 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:
1. L₁₀ Life = 30,000 Hours
 2. Radial load = 4000 lbs.
 3. RPM = 1,020

At the intersection of the 1,020 RPM column and the 30,000 hours L₁₀ life row, the equivalent radial load of 4092 lbs. exceeds the 4000 lbs, radial load for shaft size 2-7/16". A bearing with bore 2-7/16", or larger, may be used for this application.

★ The DODGE Bearing Evaluation and Selection Technique (BEST) is a menu driven computer program that calculates bearing loads, fatigue life and operating temperature for a two bearing shaft system based on user supplied input parameters. This interactive web based program is available at www.dodge-pt.com. Use PT Wizard on line under the tools drop down box.

| | | | |
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SELECTION

UNISPHERE II

ALTERNATE METHOD A - SELECTING A BEARING FOR AN L₁₀ LIFE VALUE NOT SHOWN IN THE EASY SELECTION CHART.

The L₁₀ life equation can be rearranged so that the bearing dynamic capacity C is identified in terms of L₁₀, RPM and P

$$C = \left(\frac{L_{10} \times \text{RPM}}{16667} \right)^{0.3} \times P$$

(P = F_R for Pure Radial Load Conditions)

Since the L₁₀, RPM and P are known, solve for C. Select from the dynamic capacity column on Table 1 on page B13-6 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 RPM does not exceed the MAX. RPM on Table 1 and Table 2 on pages B13-6 and B13-7. Also check that the radial load does not exceed the Maximum Allowable Slip Fit Radial Load shown on Table 1 and Table 2. If it does, a line-to-line to light press fit of shaft is required. When selecting an L₁₀ 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 and 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, lbs.
- F_R = Radial load, lbs. (see Table 1 for allowable slip fit maximum load)
- F_A = Thrust (axial) load, lbs.
- e = Thrust load to radial load factor (Table 1 and Table 2)★
- X = Radial load factor (Table 1 and Table 2)★
- Y = Thrust load factor (Table 1 and 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 1 and Table 2 on pages B13-6 and B13-7 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 L₁₀, or it

can be compared to the allowable equivalent radial load ratings for the speed and hours life desired in the easy selection Table 3 on page B13-8 or Table 4 on page B13-9.

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 DODGE Application Engineering (864-284-5700).

SELECTING LUBRICATION

DODGE 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 6 on page B13-10. For very low and high speeds, for heavy loads and for low and high temperatures, special greases must be used. Contact DODGE Application Engineering (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 Unitized roller 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 DODGE Unitized Spherical Roller Bearings. UNISPHERE II bearings are designed to allow a maximum of ±1° of static and dynamic misalignment. However, for optimum seal performance, misalignment should be kept under ±0.5°. 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.

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



SELECTION

UNISPHERE II

Table 1: UNISPHERE II Spherical Roller Bearings Radial And Thrust Factors

| Shaft Size Inch | Basic Bearing Description | e | $F_A/F_R \leq e$ | | $F_A/F_R \geq e$ | | Max. Allow. Slip Fit Radial Load F_R^* Lbs. | Dynamic Capacity (C) Lbs. | Static Capacity C_0 | Maximum RPM |
|--|---------------------------|------|------------------|-----|------------------|-----|---|---------------------------|-----------------------|-------------|
| | | | X | Y | X | Y | | | | |
| 1-1/8 1-3/16 1-1/4 1-3/8 1-7/16 1-1/2 | 22208 | 0.28 | 1 | 2.4 | 0.67 | 3.6 | 3,750 | 20,800 | 21,000 | 3,000 |
| 1-5/8 1-11/16 1-3/4 | 22209 | 0.26 | 1 | 2.6 | 0.67 | 3.9 | 3,750 | 20,800 | 22,000 | 2,800 |
| 1-7/8 1-15/16 2 | 22210 | 0.24 | 1 | 2.8 | 0.67 | 4.2 | 4,000 | 22,000 | 24,000 | 2,625 |
| 2-3/16 2-1/4 | 22211 | 0.23 | 1 | 2.9 | 0.67 | 4.3 | 4,860 | 27,000 | 29,000 | 2,325 |
| 2-3/8 2-7/16 2-1/2 | 22213 | 0.24 | 1 | 2.8 | 0.67 | 4.2 | 6,840 | 39,000 | 47,500 | 1,900 |
| 2-11/16 2-3/4 2-15/16 3 | 22215 | 0.22 | 1 | 3.1 | 0.67 | 4.6 | 7,500 | 41,500 | 53,000 | 1,700 |
| 3-3/16 3-1/4 3-7/16 3-1/2 | 22218 | 0.23 | 1 | 2.9 | 0.67 | 4.3 | 11,500 | 65,500 | 81,500 | 1,400 |
| 3-11/16 3-15/16 4 | 22220 | 0.24 | 1 | 2.8 | 0.67 | 4.2 | 14,400 | 83,000 | 104,000 | 1,250 |

* If load exceeds "Max. 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.

SELECTION



UNISPHERE II

Table 2: UNISPHERE II Metric Spherical Roller Bearing

| Shaft MM | Basic Bearing Description | e | $F_A/F_R \leq e$ | | $F_A/F_R \geq e$ | | Max. Allow. Slip Fit Radial Load F_R^* kN | Dynamic Capacity (C) kN | Maximum RPM |
|----------------|---------------------------------|------|------------------|-----|------------------|-----|--|----------------------------------|----------------|
| | | | X | Y | X | Y | | | |
| 30 35 | 22208 | 0.28 | 1 | 2.4 | 0.67 | 3.6 | 17 | 93 | 3000 |
| 40 45 | 22209 | 0.26 | 1 | 2.6 | 0.67 | 3.9 | 17 | 93 | 2800 |
| 50 | 22210 | 0.24 | 1 | 2.8 | 0.67 | 4.2 | 18 | 98 | 2625 |
| 55 | 22211 | 0.23 | 1 | 2.9 | 0.67 | 4.3 | 22 | 120 | 2325 |
| 60 65 | 22213 | 0.24 | 1 | 2.8 | 0.67 | 4.2 | 30 | 169 | 1900 |
| 70 75 | 22215 | 0.22 | 1 | 3.1 | 0.67 | 4.6 | 33 | 185 | 1700 |
| 80 85 90 | 22218 | 0.23 | 1 | 2.9 | 0.67 | 4.3 | 51 | 285 | 1400 |

* If load exceeds "Max. 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.

Bearing Reference
Guide

E-Family Roller
Bearings

Specialty Tapered
Products

S-2000

UNISPHERE II

IMPERIAL

UNIFIED SAF

| | | | |
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SELECTION

UNISPHERE II

Table 3: Easy Selection Table for UNISPHERE Double Row Spherical Roller Bearings

| Shaft Size Inches | L ₁₀ Life Hours | Allowable Equivalent Radial Load Rating (lbs.) at Various Revolutions per Minute | | | | | | | | | | | | | | |
|-------------------|----------------------------|--|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|
| | | 50 | 100 | 150 | 250 | 500 | 870 | 1,020 | 1,250 | 1,400 | 1,700 | 1,900 | 2,325 | 2,625 | 2,800 | 3000 |
| 1-3/8 to 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 to 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 to 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 to 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 to 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 to 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 to 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.

| | | | |
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UNISPHERE II

Table 4: Easy Selection Table for Metric UNISPHERE Double Row Spherical Roller Bearings

| Shaft Size mm | L ₁₀ Life Hours | Allowable Equivalent Radial Load Rating (Newtons) at Various Revolutions per Minute | | | | | | | | | | | | | | |
|----------------|----------------------------|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|
| | | 50 | 100 | 150 | 250 | 500 | 870 | 1,020 | 1,250 | 1,400 | 1,700 | 1,900 | 2,325 | 2,625 | 2,800 | 3000 |
| 30 35 | 10,000 | 33,365 | 27,101 | 23,997 | 20,587 | 16,722 | 14,162 | 13,502 | 12,703 | 12,278 | 11,584 | 11,204 | 10,545 | 10,168 | 9,973 | 9,769 |
| | 30,000 | 23,997 | 19,492 | 17,259 | 14,807 | 12,027 | 10,186 | 9,711 | 9,136 | 8,831 | 8,331 | 8,058 | 7,584 | 7,313 | 7,173 | 7,026 |
| | 40,000 | 22,013 | 17,880 | 15,832 | 13,583 | 11,032 | 9,343 | 8,908 | 8,381 | 8,101 | 7,642 | 7,392 | 6,957 | 6,709 | 6,580 | 6,445 |
| | 60,000 | 19,492 | 15,832 | 14,019 | 12,027 | 9,769 | 8,273 | 7,888 | 7,421 | 7,173 | 6,767 | 6,545 | 6,160 | 5,940 | 5,826 | 5,707 |
| | 100,000 | 16,722 | 13,583 | 12,027 | 10,318 | 8,381 | 7,098 | 6,767 | 6,367 | 6,154 | 5,806 | 5,615 | 5,285 | 5,096 | 4,998 | 4,896 |
| 40 45 | 10,000 | 33,350 | 27,089 | 23,986 | 20,578 | 16,715 | 14,156 | 13,496 | 12,697 | 12,273 | 11,578 | 11,198 | 10,540 | 10,164 | 9,969 | |
| | 30,000 | 23,986 | 19,483 | 17,251 | 14,800 | 12,021 | 10,181 | 9,707 | 9,132 | 8,827 | 8,327 | 8,054 | 7,581 | 7,310 | 7,170 | |
| | 40,000 | 22,003 | 17,872 | 15,825 | 13,576 | 11,027 | 9,339 | 8,904 | 8,377 | 8,097 | 7,639 | 7,388 | 6,954 | 6,705 | 6,577 | |
| | 60,000 | 19,483 | 15,825 | 14,012 | 12,021 | 9,764 | 8,270 | 7,884 | 7,418 | 7,170 | 6,764 | 6,542 | 6,158 | 5,937 | 5,824 | |
| | 100,000 | 16,715 | 13,576 | 12,021 | 10,313 | 8,377 | 7,095 | 6,764 | 6,364 | 6,151 | 5,803 | 5,613 | 5,283 | 5,094 | 4,996 | |
| 50 | 10,000 | 35,290 | 28,664 | 25,381 | 21,775 | 17,687 | 14,979 | 14,281 | 13,436 | 12,987 | 12,252 | 11,850 | 11,154 | 10,755 | | |
| | 30,000 | 25,381 | 20,616 | 18,255 | 15,661 | 12,721 | 10,773 | 10,271 | 9,663 | 9,340 | 8,812 | 8,523 | 8,022 | 7,735 | | |
| | 40,000 | 23,283 | 18,911 | 16,745 | 14,366 | 11,669 | 9,883 | 9,422 | 8,864 | 8,568 | 8,083 | 7,818 | 7,359 | 7,096 | | |
| | 60,000 | 20,616 | 16,745 | 14,828 | 12,721 | 10,333 | 8,751 | 8,343 | 7,849 | 7,587 | 7,158 | 6,923 | 6,516 | 6,283 | | |
| | 100,000 | 17,687 | 14,366 | 12,721 | 10,913 | 8,864 | 7,507 | 7,158 | 6,734 | 6,509 | 6,141 | 5,939 | 5,590 | 5,390 | | |
| 55 | 10,000 | 43,291 | 35,163 | 31,136 | 26,712 | 21,697 | 18,375 | 17,519 | 16,482 | 15,931 | 15,030 | 14,536 | 13,682 | | | |
| | 30,000 | 31,136 | 25,290 | 22,394 | 19,212 | 15,605 | 13,216 | 12,600 | 11,854 | 11,458 | 10,810 | 10,455 | 9,841 | | | |
| | 40,000 | 28,561 | 23,199 | 20,542 | 17,623 | 14,315 | 12,123 | 11,558 | 10,874 | 10,511 | 9,916 | 9,591 | 9,027 | | | |
| | 60,000 | 25,290 | 20,542 | 18,189 | 15,605 | 12,675 | 10,735 | 10,234 | 9,629 | 9,307 | 8,780 | 8,492 | 7,993 | | | |
| | 100,000 | 21,697 | 17,623 | 15,605 | 13,388 | 10,874 | 9,209 | 8,780 | 8,261 | 7,984 | 7,533 | 7,286 | 6,857 | | | |
| 60 65 | 10,000 | 62,531 | 50,791 | 44,974 | 38,584 | 31,340 | 26,542 | 25,305 | 23,807 | 23,012 | 21,710 | 20,997 | | | | |
| | 30,000 | 44,974 | 36,530 | 32,346 | 27,750 | 22,540 | 19,089 | 18,200 | 17,123 | 16,551 | 15,614 | 15,102 | | | | |
| | 40,000 | 41,255 | 33,510 | 29,672 | 25,456 | 20,677 | 17,511 | 16,695 | 15,707 | 15,182 | 14,323 | 13,853 | | | | |
| | 60,000 | 36,530 | 29,672 | 26,273 | 22,540 | 18,308 | 15,505 | 14,783 | 13,908 | 13,443 | 12,683 | 12,266 | | | | |
| | 100,000 | 31,340 | 25,456 | 22,540 | 19,338 | 15,707 | 13,302 | 12,683 | 11,932 | 11,533 | 10,881 | 10,524 | | | | |
| 70 75 | 10,000 | 66,539 | 54,047 | 47,857 | 41,057 | 33,349 | 28,243 | 26,927 | 25,334 | 24,487 | 23,101 | | | | | |
| | 30,000 | 47,857 | 38,872 | 34,420 | 29,529 | 23,985 | 20,313 | 19,367 | 18,221 | 17,611 | 16,615 | | | | | |
| | 40,000 | 43,900 | 35,658 | 31,574 | 27,088 | 22,002 | 18,634 | 17,765 | 16,714 | 16,155 | 15,241 | | | | | |
| | 60,000 | 38,872 | 31,574 | 27,957 | 23,985 | 19,482 | 16,499 | 15,731 | 14,800 | 14,305 | 13,496 | | | | | |
| | 100,000 | 33,349 | 27,088 | 23,985 | 20,577 | 16,714 | 14,155 | 13,496 | 12,697 | 12,272 | 11,578 | | | | | |
| 80 85 90 | 10,000 | 105,020 | 85,303 | 75,533 | 64,801 | 52,635 | 44,577 | 42,499 | 39,984 | 38,648 | | | | | | |
| | 30,000 | 75,533 | 61,352 | 54,325 | 46,606 | 37,856 | 32,061 | 30,567 | 28,758 | 27,796 | | | | | | |
| | 40,000 | 69,287 | 56,279 | 49,833 | 42,753 | 34,726 | 29,410 | 28,039 | 26,380 | 25,498 | | | | | | |
| | 60,000 | 61,352 | 49,833 | 44,126 | 37,856 | 30,749 | 26,041 | 24,828 | 23,358 | 22,578 | | | | | | |
| | 100,000 | 52,635 | 42,753 | 37,856 | 32,477 | 26,380 | 22,341 | 21,300 | 20,040 | 19,370 | | | | | | |

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



SELECTION

UNISPHERE II

Table 5: UNISPHERE II Maximum Axial Expansion - Inch And Metric

| Bore Size Inches | Maximum Expansion Inches | Bore Size mm | Maximum Expansion mm |
|------------------|--------------------------|--------------|----------------------|
| 1-7/16 to 1-1/2 | 5/32 | - | - |
| 1-11/16 to 1-3/4 | 5/32 | 40, 45 | 3.9 |
| 1-15/16 to 2 | 5/32 | 50, 55 | 3.9 |
| 2-3/16 | 5/32 | 60, 65 | 4.7 |
| 2-7/16 to 2-1/2 | 3/16 | 70, 75 | 4.7 |
| 2-11/16 to 3 | 3/16 | 80, 85, 90 | 4.7 |
| 3-7/16 to 3-1/2 | 3/16 | | |
| 3-15/16 to 4 | 7/32 | | |

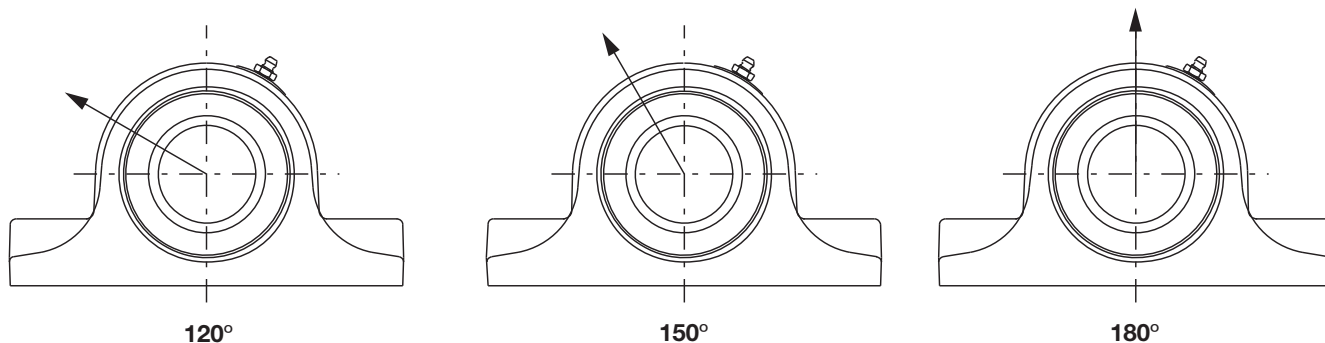
Table 6: Definition Of Operating Conditions For Unitized Spherical Roller Bearings

| | |
|--------------------|---------------------------------|
| LOW SPEED | UP TO 20% OF MAX. RPM (TABLE 1) |
| MEDIUM SPEED | OVER 20% TO 80% OF MAX. RPM |
| HIGH SPEED | OVER 80% OF MAX. 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 |



SELECTION

UNISPHERE II


Table 7: UNISPHERE II Housing Ratings, Ductile*

| Bore Size | Pillow Block Designation | Max. Recommended Housing Cap Loads | | |
|-----------------|--------------------------|------------------------------------|---------|---------|
| | | P120 lb | P150 lb | P180 lb |
| 1-1/8 to 1-1/2 | UN2107 | 5500 | 6750 | 8000 |
| 1-5/8 to 1-3/4 | UN2111 | 6800 | 8600 | 10000 |
| 1-7/8 to 2 | UN2115 | 8000 | 9900 | 11700 |
| 2-3/16 to 2-1/4 | UN2203 | 10200 | 12500 | 14800 |
| 2-3/8 to 2-1/2 | UN2207 | 10200 | 12400 | 14900 |
| 2-11/16 to 3 | UN2215 | 12900 | 15900 | 18900 |
| 3-3/16 to 3-1/2 | UN2307 | 11900 | 14600 | 17400 |
| 3-11/16 to 4 | UN2315 | 16900 | 20800 | 24600 |

* 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 on **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 8: Metric UNISPHERE II Housing Ratings, Ductile*

| Plummer Block Designation | Max. Recommended Housing Cap Loads | | |
|---------------------------|------------------------------------|---------|---------|
| | P120 kN | P150 kN | P180 kN |
| UN2040M | 31 | 37 | 44 |
| UN2045M | 31 | 37 | 44 |
| UN2050M | 35 | 44 | 52 |
| UN2055M | 45 | 55 | 65 |
| UN2060M | 45 | 55 | 66 |
| UN2065M | 45 | 55 | 66 |
| UN2070M | 57 | 70 | 84 |
| UN2075M | 57 | 70 | 84 |
| UN2080M | 53 | 65 | 77 |
| UN2085M | 53 | 65 | 77 |
| UN2090M | 53 | 65 | 77 |

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

1. The plummer block base bolts must be of **high strength (Grade 10.9) 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.

NOTE: To convert kN to pounds-force, multiply kN by a factor of 225.

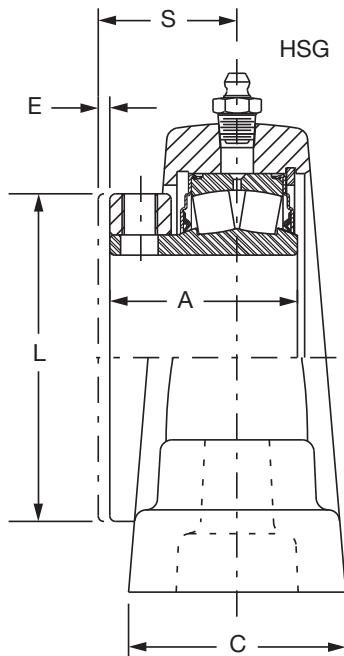
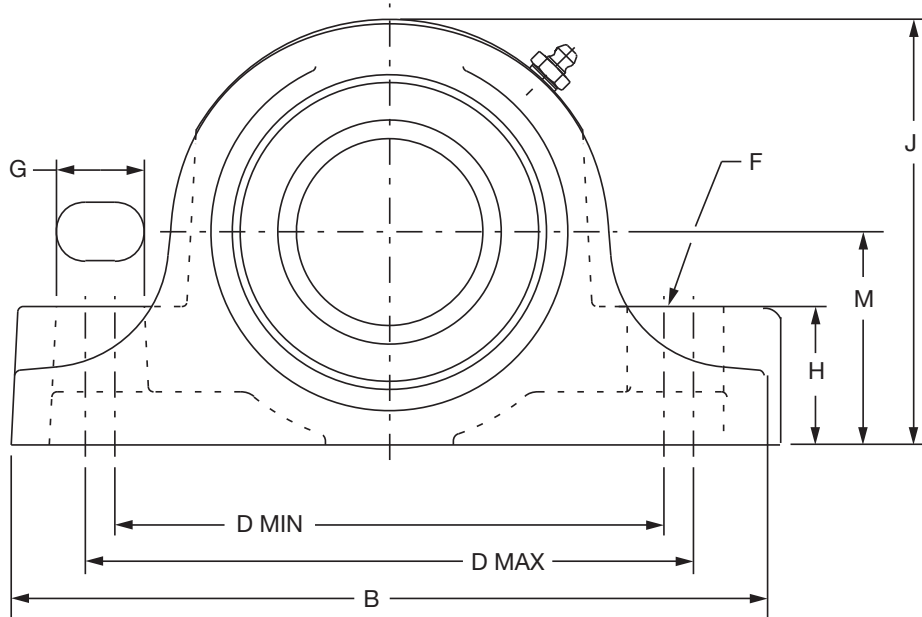
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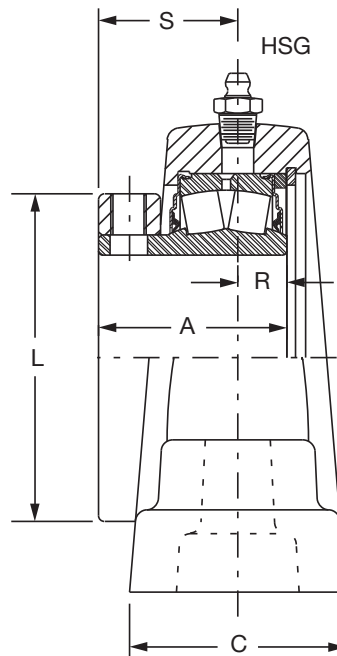
DIMENSIONS

UNISPHERE II Pillow Block - Inch

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



EXPANSION



NON-EXPANSION



DIMENSIONS

UNISPHERE II Pillow Block - Inch

| Bearing | Shaft Size Inch Δ | Non-Expansion* | | Expansion | | Approx. Wt. Lbs. |
|---------|-------------------------|-----------------|-------------|-----------------|--------------|---------------------|
| | | Part No. | Part Name | Part No. | Part Name | |
| 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 DODGE for delivery.

Δ Consult DODGE for sizes not listed.

* Furnished unless otherwise specified.

UNISPHERE II - Pillow Block - Dimensions ●

| Shaft Size Inch | 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 |

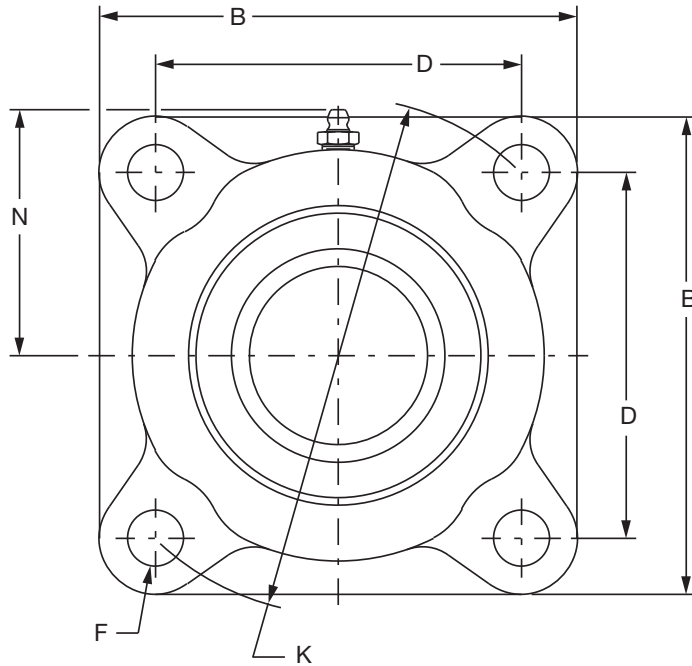
● Dimensions shown are for non-expansion units. The expansion bearing center and housing center are on the same centerline.

| | | | |
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| FEATURES/BENEFITS PAGE B13-2 | SPECIFICATION PAGE B13-3 | NOMENCLATURE PAGE B13-3 | SELECTION PAGE B13-4 |
|---------------------------------|-----------------------------|----------------------------|-------------------------|

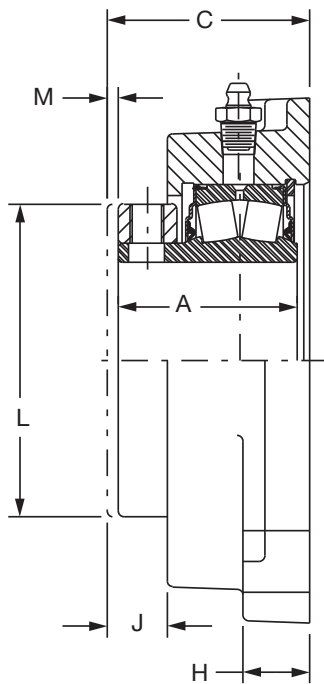


DIMENSIONS

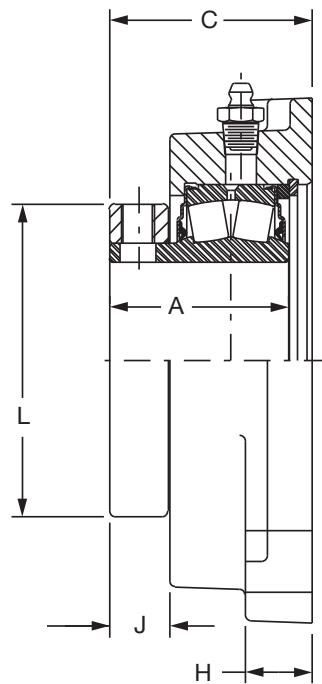
UNISPHERE II Flange Bearing - Inch 4-BOLT



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



EXPANSION



NON-EXPANSION



DIMENSIONS

UNISPHERE II Flange Bearing - Inch 4-BOLT

| Bearing | Shaft Size Inch Δ | Non-Expansion* | | Expansion | | Approx. Wt. Lbs. |
|---------|-------------------------|-----------------|-------------|-----------------|--------------|---------------------|
| | | Part No. | Part Name | Part No. | Part Name | |
| 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 DODGE for delivery.

Δ Consult DODGE for sizes not listed.

* Furnished unless otherwise specified.

UNISPHERE II 4-BOLT FLANGE DIMENSIONS ●

| Shaft Size Inch | 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 |

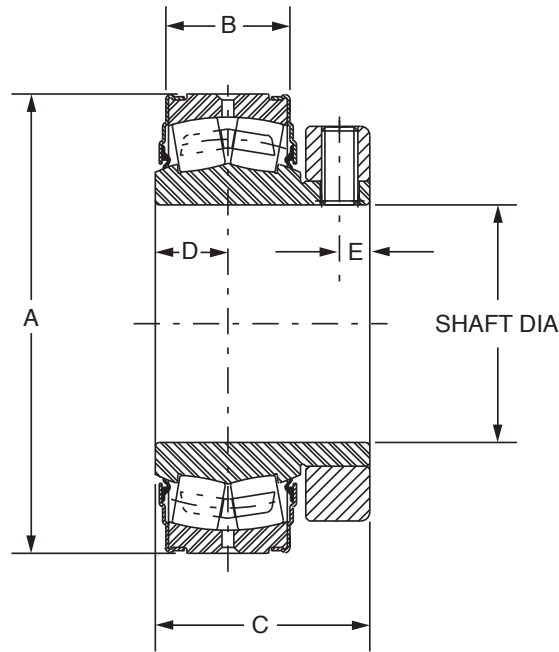
● Dimensions shown are for non-expansion units.

| | | | |
|---------------------------------|-----------------------------|----------------------------|-------------------------|
| FEATURES/BENEFITS PAGE B13-2 | SPECIFICATION PAGE B13-3 | NOMENCLATURE PAGE B13-3 | SELECTION PAGE B13-4 |
|---------------------------------|-----------------------------|----------------------------|-------------------------|



DIMENSIONS

UNISPHERE II Bearing Insert With Seal - Inch



| Bearing | Shaft Size Inch Δ | Part No. \dagger | Part Name | Approx. Wt. Lbs. |
|---------|--------------------------------|--------------------------|--------------|---------------------|
| 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 |
| | 2-7/16 | 421250 | BRG-UN2-207 | 4.1 |
| 22213 | 2-1/2 | 421251 | BRG-UN2-208 | 3.9 |
| | 2-11/16 | 421252 | BRG-UN2-211 | 5.6 |
| 22215 | 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 |

\dagger Assembled-to-order size. Consult DODGE for delivery.

Δ Consult DODGE for sizes not listed.

DIMENSIONS



UNISPHERE II Bearing Insert With Seal - Inch

Bearing Reference Guide
E-Family Roller Bearings
Specialty Tapered Products
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UNISPHERE II
IMPERIAL
UNIFIED SAF

UNISPHERE II BEARING INSERT DIMENSIONS

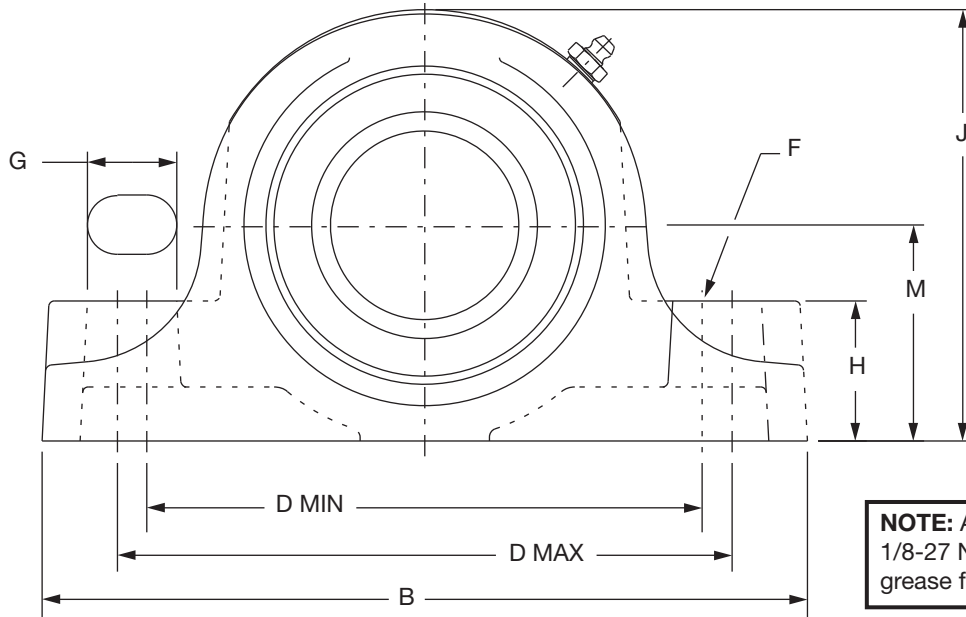
| Shaft Size Inch | A | B | C | D | E |
|----------------------------------|--------|------|------|------|------|
| 1-7/16 1-1/2 | 3.1496 | 0.95 | 1.69 | 0.56 | 0.29 |
| 1-11/16 1-3/4 | 3.3465 | 0.95 | 1.91 | 0.58 | 0.32 |
| 1-15/16 2 | 3.5433 | 0.95 | 1.91 | 0.59 | 0.32 |
| 2-3/16 | 3.9370 | 1.03 | 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 |

| | | | |
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| FEATURES/BENEFITS PAGE B13-2 | SPECIFICATION PAGE B13-3 | NOMENCLATURE PAGE B13-3 | SELECTION PAGE B13-4 |
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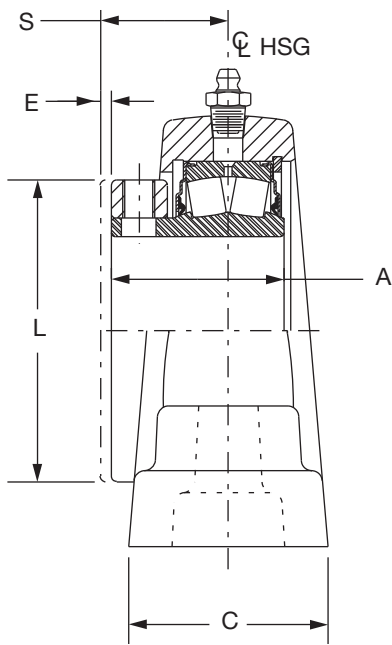


DIMENSIONS

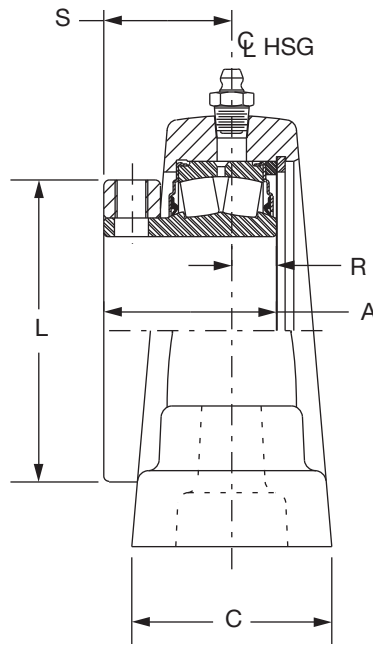
UNISPHERE II Plummer Block Bearing - Metric



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



EXPANSION



NON-EXPANSION



DIMENSIONS

UNISPHERE II Plummer Block Bearing - Metric

| Bearing | Shaft Size Δ | Non-Expansion* | | Expansion | | Approximate Weight Kgs. |
|---------|-----------------|----------------|--------------|---------------|---------------|-------------------------------|
| | | Part No. | Part Name | Part No. | Part Name | |
| 22210 | 50mm | 048109 | P2B-UN2-050M | 048124 | P2B-UN2-050ME | 3.4 |
| 22211 | 55mm | 048110 | P2B-UN2-055M | 048125 | P2B-UN2-055ME | 4.4 |
| 22213 | 60mm | 048111 | P2B-UN2-060M | 048126 | P2B-UN2-060ME | 6.2 |
| 22215 | 70mm | 048113 | P2B-UN2-070M | 048128 | P2B-UN2-070ME | 8.6 |
| | 75mm | 048114 | P2B-UN2-075M | 048129 | P2B-UN2-075ME | 8.3 |
| 22218 | 80mm | 048115 | P2B-UN2-080M | 048130 | P2B-UN2-080ME | 12.9 |
| | 85mm | 048116 | P2B-UN2-085M | 048131 | P2B-UN2-085ME | 12.6 |

† Assembled to order. Consult DODGE for delivery.

Δ Consult DODGE for sizes not listed.

* Furnished unless otherwise specified.

METRIC UNISPHERE II - PLUMMER BLOCK - DIMENSIONS (MM) ●

| Shaft Size | A mm | B mm | C mm | D | | E Total Exp. | F Bolt Dia. | G mm | H mm | J mm | L mm | M mm | R mm | S mm |
|---------------|---------|---------|---------|------|------|--------------------|-------------------|---------|---------|---------|---------|---------|---------|---------|
| | | | | Min. | Max. | | | | | | | | | |
| 50mm | 48 | 213 | 52 | 151 | 170 | 3.9 | 16 | 27 | 35 | 116 | 83 | 57.1 | 12 | 37 |
| 55mm | 51 | 225 | 59 | 164 | 181 | 3.9 | 16 | 26 | 41 | 127 | 89 | 63.5 | 13 | 38 |
| 60mm | 56 | 235 | 65 | 173 | 189 | 4.7 | 16 | 25 | 44 | 144 | 103 | 69.8 | 17 | 39 |
| 70mm | 62 | 265 | 65 | 198 | 214 | 4.7 | 20 | 29 | 57 | 164 | 120 | 82.5 | 19 | 43 |
| 75mm | | | | | | | | | | | | | | |
| 80mm | 73 | 330 | 71 | 235 | 273 | 4.7 | 22 | 43 | 57 | 190 | 140 | 95.2 | 24 | 48 |
| 85mm | | | | | | | | | | | | | | |

● Dimensions shown are for non-expansion units. The expansion bearing center and housing center are on the same centerline.

| | | | |
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| FEATURES/BENEFITS PAGE B13-2 | SPECIFICATION PAGE B13-3 | NOMENCLATURE PAGE B13-3 | SELECTION PAGE B13-4 |
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DIMENSIONS

UNISPHERE II Flange - Metric 4-BOLT

Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

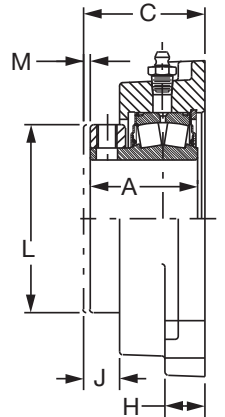
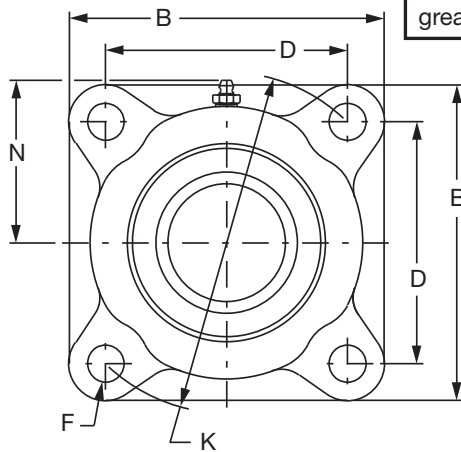
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UNISPHERE II

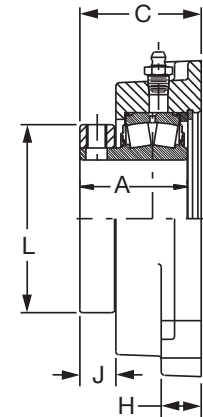
IMPERIAL

UNIFIED SAF

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



EXPANSION



NON-EXPANSION

| Bearing | Shaft Size Δ | Non-Expansion* | | Expansion | | Approx. Wt. Kgs. |
|---------|-----------------|----------------|--------------|---------------|---------------|---------------------|
| | | Part No. | Part Name | Part No. | Part Name | |
| 22209 | 40mm | 048202 | F4B-UN2-040M | 048216 | F4B-UN2-040ME | 3.1 |
| | 45mm | 048203 | F4B-UN2-045M | 048217 | F4B-UN2-045ME | 3.1 |
| 22210 | 50mm | 048204 | F4B-UN2-050M | 048218 | F4B-UN2-050ME | 3 |
| 22211 | 55mm | 048205 | F4B-UN2-055M | 048219 | F4B-UN2-055ME | 3.8 |
| 22213 | 60mm | 048206 | F4B-UN2-060M | 048220 | F4B-UN2-060ME | 4.8 |
| | 65mm | 048207 | F4B-UN2-065M | 048221 | F4B-UN2-065ME | 4.6 |
| 22215 | 70mm | 048208 | F4B-UN2-070M | 048222 | F4B-UN2-070ME | 8.2 |
| 22218 | 80mm | 048210 | F4B-UN2-080M | 048224 | F4B-UN2-080ME | 11.2 |

Δ Consult DODGE for sizes not listed.

* Furnished unless otherwise specified.

METRIC UNISPHERE II - 4-BOLT FLANGE - DIMENSIONS (mm) ●

| Shaft Size | A | B | C | D | F Bolt Dia. | H | J | K | L | M Total Exp. | N |
|------------|----|-----|----|-----|-------------|----|----|-----|-----|--------------|-----|
| 40mm | 48 | 130 | 55 | 99 | 12 | 19 | 18 | 140 | 76 | 3.9 | 70 |
| 45mm | | | | | | | | | | | |
| 50mm | 48 | 135 | 55 | 103 | 12 | 18 | 18 | 146 | 82 | 3.9 | 73 |
| 55mm | 51 | 149 | 58 | 114 | 16 | 19 | 17 | 162 | 89 | 3.9 | 78 |
| 60mm | | | | | | | | | | | |
| 65mm | 56 | 156 | 62 | 121 | 16 | 25 | 16 | 171 | 103 | 3.9 | 86 |
| 70mm | 62 | 183 | 66 | 141 | 20 | 24 | 20 | 200 | 120 | 4.7 | 97 |
| 80mm | 73 | 212 | 78 | 171 | 20 | 30 | 22 | 241 | 140 | 4.7 | 109 |

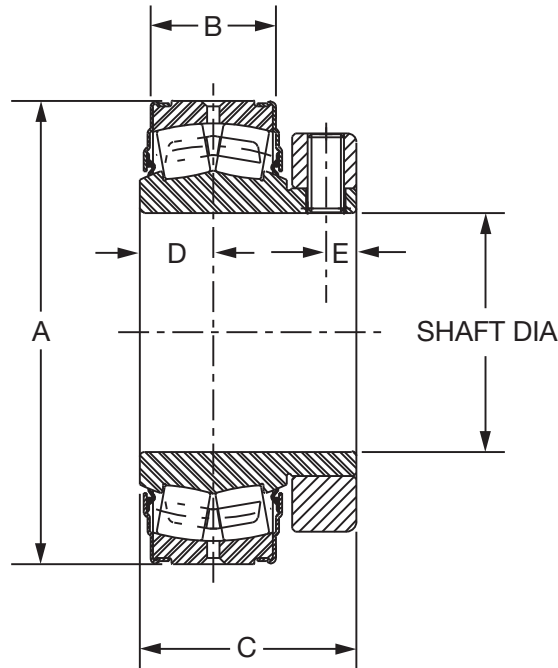
● Dimensions shown are for non-expansion units.

| | | | |
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| FEATURES/BENEFITS PAGE B13-2 | SPECIFICATION PAGE B13-3 | NOMENCLATURE PAGE B13-3 | SELECTION PAGE B13-4 |
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DIMENSIONS

UNISPHERE II Bearing Insert With Seal - Metric



| Bearing | UNISPHERE II Bearing Insert W/Seals Metric | | | | UNISPHERE II Bearing Insert Dimensions-Metric | | | | | |
|---------|---|---------------|-------------|------------------|--|------|------|------|------|------|
| | Shaft Size Δ | Part No. | Part Name | Approx. Wt. Kgs. | Shaft Size | A mm | B mm | C mm | D mm | E mm |
| 22209 | 40mm | 421362 | BRG-UN2-040 | 0.80 | 40mm | 85 | 24 | 48 | 14.7 | 7.26 |
| | 45mm | 421363 | BRG-UN2-045 | 0.70 | 45mm | | | | | |
| 22210 | 50mm | 421364 | BRG-UN2-050 | 0.75 | 50mm | 90 | 24 | 48 | 15.1 | 8.05 |
| 22211 | 55mm | 421365 | BRG-UN2-055 | 1.06 | 55mm | 100 | 26 | 51 | 16.4 | 8.05 |
| 22213 | 60mm | 421366 | BRG-UN2-060 | 1.95 | 60mm | 120 | 32.2 | 56 | 19.0 | 8.05 |
| | 65mm | 421367 | BRG-UN2-065 | 1.74 | 65mm | | | | | |
| 22215 | 70mm | 421368 | BRG-UN2-070 | 2.37 | 70mm | 130 | 32.3 | 62 | 20.2 | 11.2 |
| | 75mm | 421369 | BRG-UN2-075 | 2.09 | 75mm | | | | | |
| 22218 | 80mm | 421370 | BRG-UN2-080 | 4.54 | 80mm | 160 | 41.3 | 73 | 24.1 | 11.2 |
| | 85mm | 421371 | BRG-UN2-085 | 4.20 | 85mm | | | | | |
| | 90mm | 421372 | BRG-UN2-090 | 3.90 | 90mm | | | | | |

Δ Consult DODGE for sizes not listed.

| | | | |
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| FEATURES/BENEFITS PAGE B13-2 | SPECIFICATION PAGE B13-3 | NOMENCLATURE PAGE B13-3 | SELECTION PAGE B13-4 |
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NOTES

Bearing Reference
Guide

E-Family Roller
Bearings

Specialty Tapered
Products

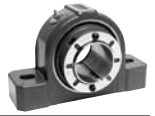
S-2000

UNISPHERE II

IMPERIAL

UNIFIED SAF

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FEATURES/BENEFITS

Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

S-2000

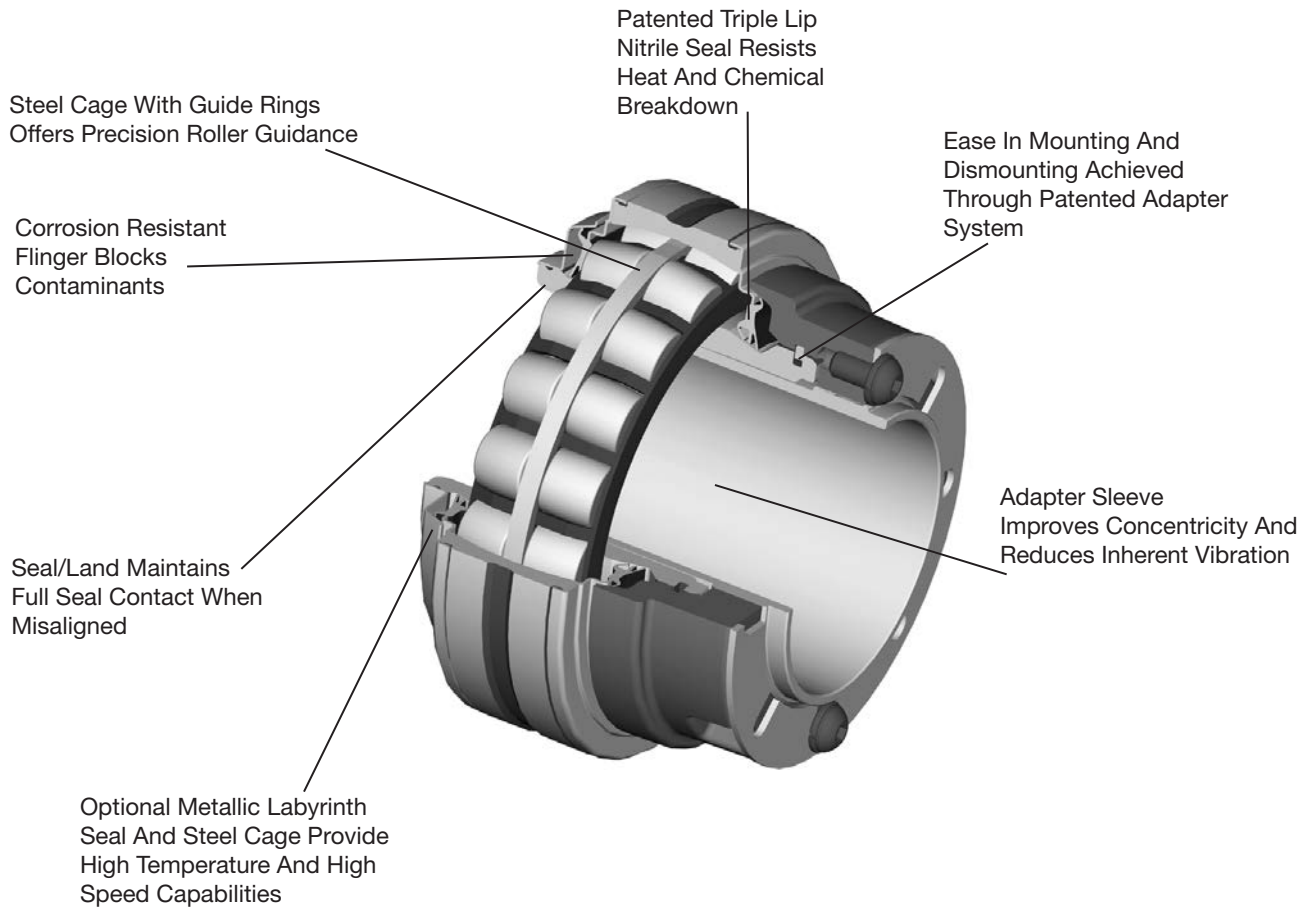
UNISPHERE II

IMPERIAL

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**IMPERIAL
Patented Adapter System
Offers Quick Installation And Removal**

The DODGE IMPERIAL bearing uses a thin wall push-pull adapter system that achieves clearance setting without the use of feeler gauges. The IMPERIAL bearing is installed by turning the locknut clockwise and removed by a counterclockwise rotation. Installation and removal of an IMPERIAL bearing can be accomplished in 15 minutes or less.



Installation and Removal Savings . . .

- Factory lubed, sealed and adjusted, ready to slip onto the shaft
- IMPERIAL adapter sleeve concentricity virtually eliminates fretting corrosion
- Field convertible from non-expansion to expansion and expansion to non-expansion
- Elongated pillow block bolt holes to facilitate mounting



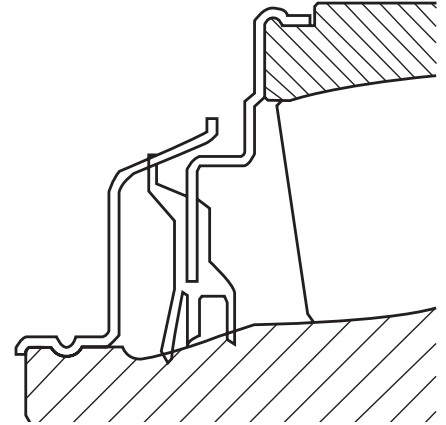
FEATURES/BENEFITS

IMPERIAL

IMPERIAL Bearings Offer Patented Seal Options To Maximize Bearing Life . . .

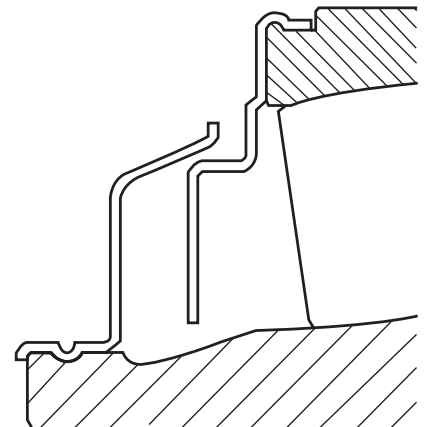
TRIDENT™ seals for low to medium speed

- Face rubbing triple lip seal
- Flinger to shield seal and bearing from contamination/damage
- Seal/land positive contact up to ± 1 degree of misalignment
- Patented design



Labyrinth seals for higher speeds or high temperatures

- High speed for relatively clean or hot environments
- 15% increase in maximum speed over standard SAF adapter mounted sphericals of the same shaft size
- Flinger to shield seal and bearing from contamination/damage
- Seal operates up to ± 1 degree of misalignment
- Patented design



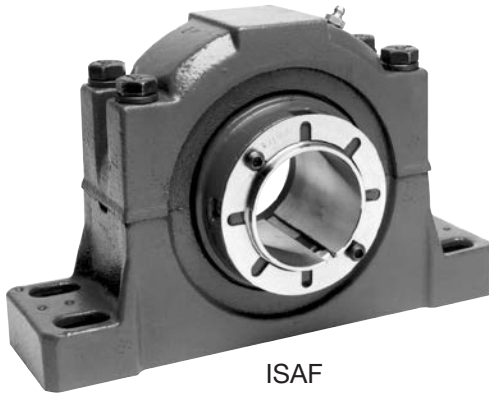


FEATURES/BENEFITS

IMPERIAL - IP



Flange IMPERIAL



ISAF



Pillow Block IMPERIAL

- Push-pull adapter mount
- Grease limiting speeds 30% higher than setscrew mounts
- Same rolling element as the S-2000 bearing
- Pillow blocks are interchangeable with S-2000 dimensions on all sizes
- All housings are Class 30 Gray Iron
- 2 bolt pillow blocks, 4 bolt flange bearings piloted flange and take-ups 1-1/8" to 4" 4 bolt pillow blocks in sizes 2-3/8" to 5"
- Jackscrew holes standard on piloted flanges
- Can replace 300 series ball bearings in many applications
- Patented adapter mounting system
- Superior holding power reduces the fretting corrosion caused by vibration
- Shaft ready installation
- No special tools required for installation
- DODGE TRIDENT triple lip seal provides superior sealing system
- Seal/land on OD of inner ring maintains full contact pressure even when misaligned
- Less shaft damage vs. setscrew mounts
- Reduced vibration damage vs. setscrew mounts

NOTE: Instruction manuals for Dodge bearings available on www.dodge-pt.com



SPECIFICATION

IMPERIAL INCH

DODGE Spherical Bearings, including IMPERIAL bearings, are general-purpose, high-capacity, double-row spherical roller bearings. All IMPERIAL 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.

ASTM A48 Class 30 cast iron is the standard material used in IMPERIAL housings. Housing designs are available for survival in extremely harsh environments, through the use of special finishes and stainless hardware.

Housings are available in a variety of standard configurations, including pillow blocks, flanges, piloted flanges and take-up bearings. TRIDENT triple lip contact seals and Labyrinth seals are available on IMPERIAL bearings.





FEATURES/BENEFITS

Dodge IMPERIAL-HD

Dodge IMPERIAL-HD mounted bearings feature proven Dodge Imperial bearing insert technology deployed in steel housings designed specifically for harsh applications that demand superior housing strength. Major features include...

- Imperial patented push-pull adapter mounting system
- High capacity cast steel housing
- Same dimensions as cast iron Imperial products
- Also available in popular “Type E” dimensioned housings
- Proven, high capacity spherical rollers
- Effective sealing systems for tough applications
- Closed & shaft through end covers
- Sealed inserts that can be easily replaced in the field
- Field convertible between Expansion & Non-Expansion

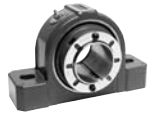
IMPERIAL-HD

- Two bolt pillow blocks – 1-1/8 to 4”
- Four bolt pillow blocks – 2-3/8 to 5”
- Four bolt square flange – 1-1/8 to 4”
- Piloted flange – 1-1/8 to 5”
- Narrow piloted “Edger” flange – 1-7/16 to 4-7/16”

“E” Dimensioned IMPERIAL-HD

- Two bolt pillow blocks – 1-3/8 to 3-1/2”
- Four bolt pillow blocks – 2-1/4 to 5”
- Four bolt square flange – 1-3/8 to 4-1/2”





SPECIFICATION

IMPERIAL-HD INCH

DODGE Spherical Bearings, including IMPERIAL-HD bearings, are general-purpose, high-capacity, double-row spherical roller bearings. All IMPERIAL-HD 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.

ASTMA A-27 Grade 70-36 Class 1 steel is the standard material used in steel IMPERIAL HD housings. Housing designs are available for survival in extremely harsh environments, through the use of special finishes and stainless hardware.

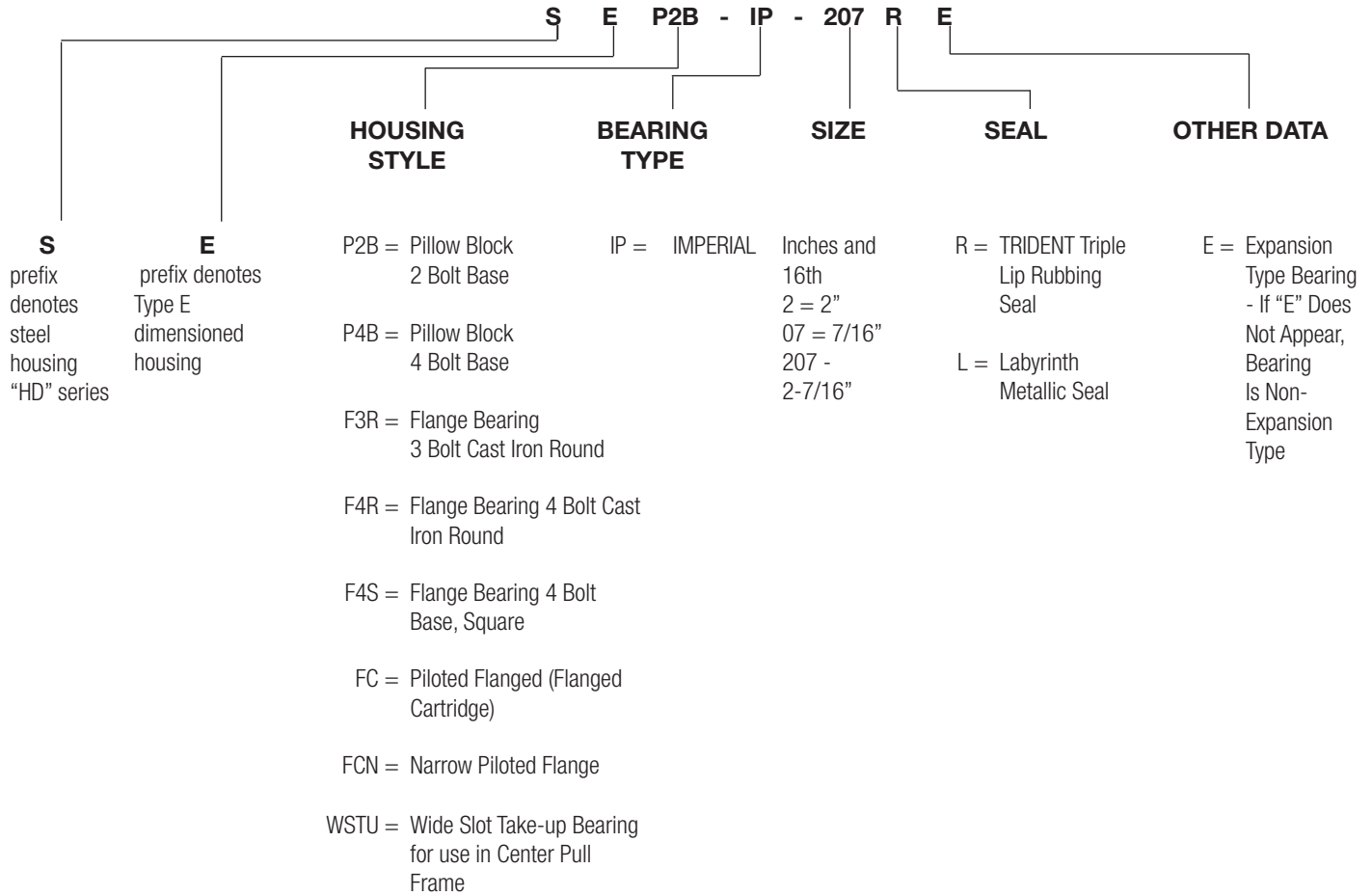
Housings are available in a variety of standard configurations, including pillow blocks, flanges, piloted flanges and take-up bearings. TRIDENT triple lip contact seals and Labyrinth seals are available on IMPERIAL bearings.



NOMENCLATURE



Imperial - IP



Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

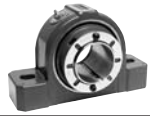
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UNISPHERE II

IMPERIAL

UNIFIED SAF

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FEATURES/BENEFITS

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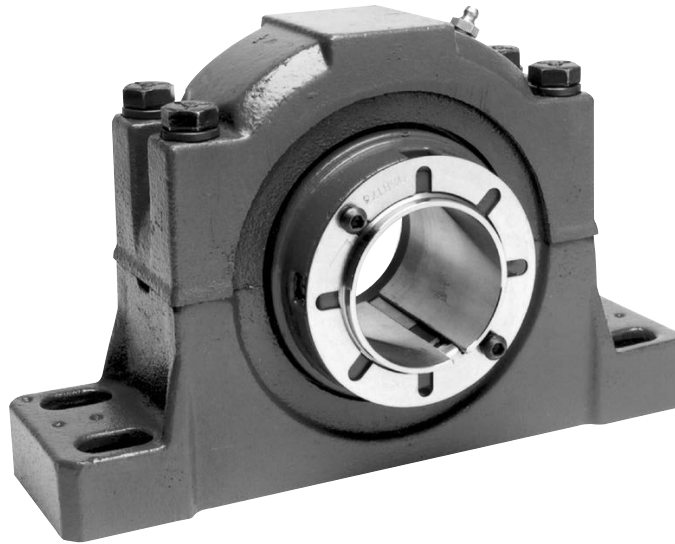
S-2000

UNISPHERE II

IMPERIAL

UNIFIED SAF

ISAF



- Interchangeable with SAF style pillow blocks
- Patented adapter mounting system
- Easy installation - no feeler gauges needed
- Easy removal - no torches, sledge hammers or special tools needed
- DODGE TRIDENT triple lip seal provides superior sealing system
- Labyrinth seal available for high speed or high temperature applications.
- Up to $\pm 1^\circ$ misalignment capability
- Seal land on OD of inner ring maintains full contact pressure even when misaligned
- High capacity double row spherical bearings
- 2 bolt pillow blocks in sizes 1-7/16" to 3-6/16"
- 4 bolt pillow blocks in sizes 2-7/16" to 7"

ISAF HYD

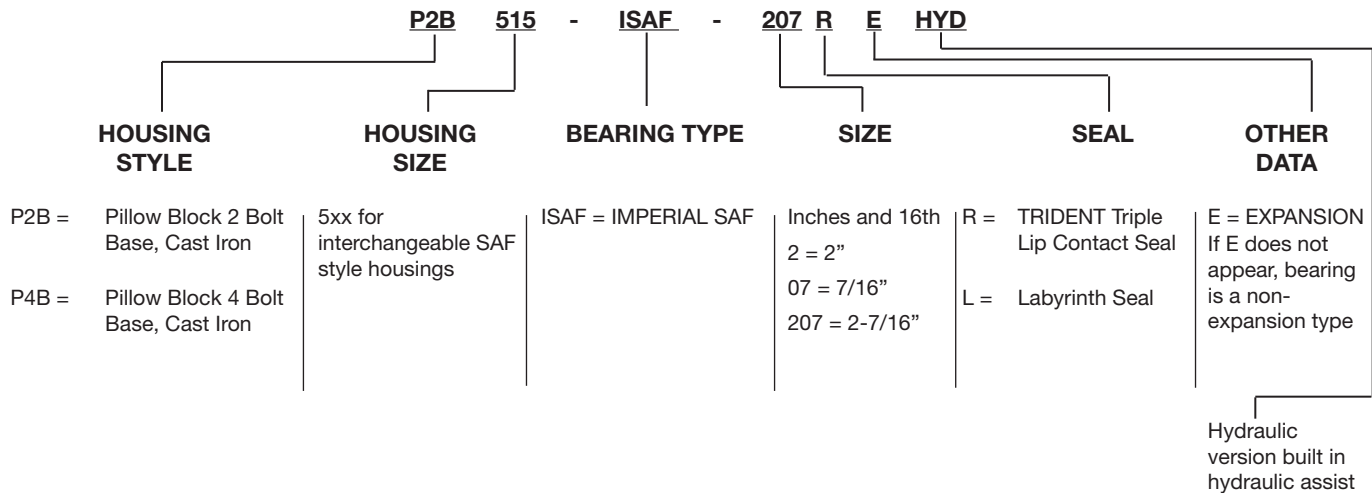


- Built in hydraulic mounting and dismounting
 - No feeler gauges for installation
 - No torches or sledge hammers for removal
- Built in taconite style sealing
- 4 bolt pillow blocks 5-7/16" through 15"
- 22232K through 23176K double row spherical bearings

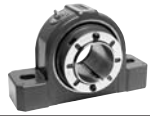


NOMENCLATURE

ISAF



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FEATURES/BENEFITS

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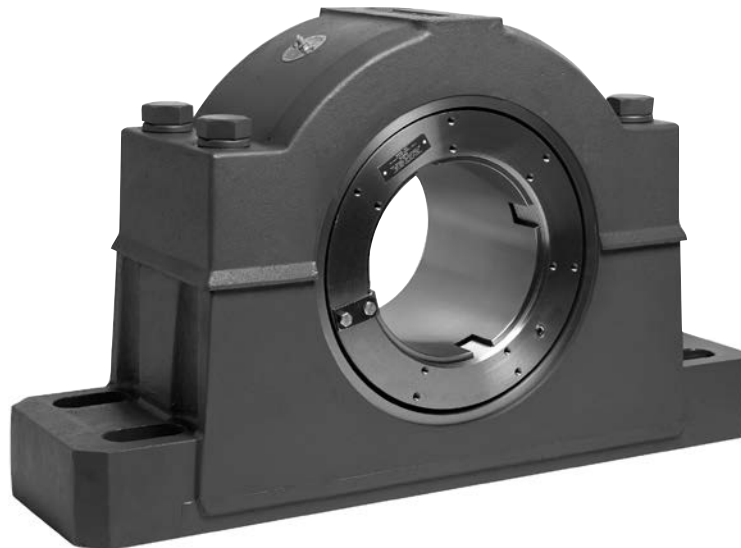
UNIFIED SAF

ISN



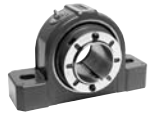
- Interchangeable with 500 series "SN" dimensioned products
- Patented Imperial "Push/Pull" adapter mounting system
- Eliminates need for feeler gauges
- Fifteen minute installation and removal
- Field convertible from expansion to non-expansion and vice versa
- Triple lip contact seals for wet or dirty applications
- Labyrinth non-contact seals for higher speed/higher temperature applications

ISNX HYD



- Interchangeable with large-bore 3100 series plummer blocks
- Built in hydraulic mounting and dismounting
 - No feeler gauges for installation
 - No torches or sledge hammers for removal
- Built in taconite style sealing
- Four-bolt pillow blocks 150mm through 360mm
- 23134K through 23176K double row spherical bearings

NOMENCLATURE



How To Order

There are two ways to specify DODGE Bearings. Most of the product offerings have part numbers with listings shown throughout this catalog. Use of part numbers ensures accurate order processing.

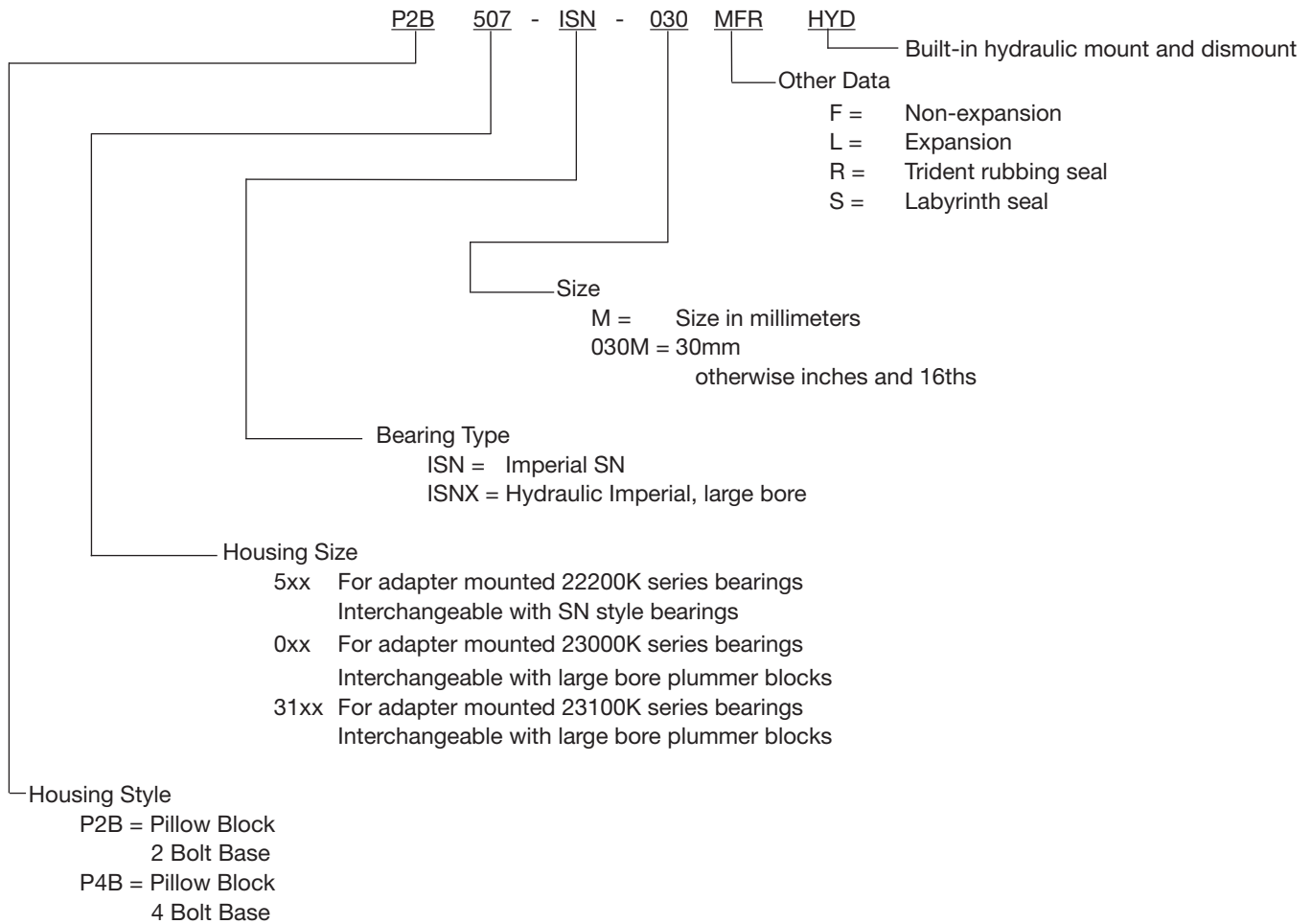
When part numbers are not shown, the product may be specified by description or part name. This method is used when ordering units that include modifications or options. To order by description, use the nomenclature key shown on this page and add any special instructions to the end of the description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

DODGE Spherical Bearings are factory adjusted and pre-lubricated. For applications where extreme ambient temperatures, high speeds, or high loads are expected,

a variety of specialty lubricants are available. Standard lubricant provided is Mobil Grease XHP 222, a lithium complex based grease. High temperature greases available upon request. Other special lubricants are available upon request. Special lubricant options usually involve set-up charges, minimum quantities and list price premiums. To order, specify type of lubricant required at the end of the product name or after the standard part number.

Example: 071792 or 071650 except with Mobil Grease HTS #2 grease
or
SP2BIP108R except with Mobil Grease HTS #2 grease

For applications requiring modifications not listed, we encourage you to contact our Application Engineering Department for Bearings at 864-284-5700.



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SELECTION

IMPERIAL-IP, ISAF, HD, ISN, ISNX

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 DODGE Application Engineering (864-284-5700) for applications which exceed the recommendations of this catalog.

L₁₀ Hours Life - The life which may be expected from at least 90% of a given group of bearings operating under identical conditions.

$$L_{10} \text{ Life, Hours} = \left(\frac{C}{P} \right)^{10/3} \times \left(\frac{16667}{\text{RPM}} \right)$$

Where:

C = Dynamic Capacity (Table 1 on page B4-17 for IMPERIAL), lbs.

P = Equivalent Radial Load, lbs.

GENERAL

Heavy Service - For heavy shock loads, frequent shock loads, or severe vibrations, add up to 50% (according to severity of conditions) to the Equivalent Radial Load 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 L₁₀ 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 L₁₀ 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.

| RPM | 20- 200 | 201-2000 | Over 2000 |
|-------------------------|---------|----------|-----------|
| 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 on page B4-15 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

| | Tolerance, Inches |
|-------------------|-------------------|
| Up To 1-1/2" | +.000 -.002" |
| 1-9/16 to 2-1/2" | +.000 -.003" |
| 2-5/8 to 4" | +.000 -.004" |
| 4-3/16 to 6" | +.000 -.005" |
| 6-7/16" and above | +.000 -.006" |

BEARING SUPPORTING RADIAL LOADS ONLY

1. Define L₁₀ Life Hours desired.
2. Establish bearing radial load, F_R (F_R = P for Pure Radial Load Conditions). The DODGE program BEST* can be used to find application loads.
3. Establish RPM.

Using the easy selection Table 2 on page B4-18 for IMPERIAL, 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:
1. L₁₀ Life = 30,000 Hours
 2. Radial load = 4000 lbs.
 3. RPM = 1,000

At the intersection of the 1,000 RPM column and the 30,000 hours L₁₀ life row, the equivalent radial load of 4116 lbs. exceeds the 4000 lbs. radial load for shaft size 2-3/8" to 2-1/2". A bearing with bore ranging from 2-3/8" to 2-1/2", or larger, may be used for this application.

| | | | |
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SELECTION

IMPERIAL-IP, ISAF, HD, ISN, ISNX

ALTERNATE METHOD A - SELECTING A BEARING FOR AN L₁₀ LIFE VALUE NOT SHOWN IN THE EASY SELECTION CHART.

The L₁₀ life equation can be rearranged so that the bearing dynamic capacity C is identified in terms of L₁₀, RPM and P

$$C = \left(\frac{L_{10} \times \text{RPM}}{16667} \right)^{0.3} \times P$$

(P = F_R for Pure Radial Load Conditions)

Since the L₁₀, RPM 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 RPM does not exceed the MAX. RPM from Table 1. When selecting an L₁₀ 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 = XFR + YFA

Where:

- P = Equivalent radial load, lbs.
- F_R = Radial load, lbs. (see Table 1 for allowable slip fit maximum load)
- F_A = Thrust (axial) load, lbs.
- 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 on page B4-17 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 L₁₀, or it can be compared to the allowable equivalent radial load ratings for the speed and hours life desired in the easy selection.

★ The DODGE Bearing Evaluation and Selection Technique (BEST) is a menu driven computer program that calculates bearing loads, fatigue life and operating temperature for a two bearing shaft system based on user supplied input parameters. This interactive program is available at www.ptwizard.com under the Product Selection area.

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 DODGE Application Engineering (864-284-5700).

SELECTING LUBRICATION

IMPERIAL 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 10 on page B4-29. For very low and high speeds, for heavy loads, and for low and high temperatures, special greases may be used. Contact DODGE Application Engineering (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 Spherical roller 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 DODGE Unitized Spherical Roller Bearings. IMPERIAL bearings are designed to allow a maximum of ±1° 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.

| | | | |
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SELECTION

IMPERIAL-ISNX

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 3 on page B4-17 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 allowable equivalent radial load ratings for the speed and hours life desired in the easy selection on page B4-17.

SELECTING BEARINGS SUPPORTING ONLY THRUST LOADS

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Lubrication Guide for Hydraulic ISAF/ISNX

| Lubrication Guide in Months | | | | |
|-----------------------------|-------------|---------------|---------------|--------------|
| Bore (in) | 1 - 250 rpm | 251 - 500 rpm | 501 - 750 rpm | 751-1000 rpm |
| 5-7/16 - 5-1/2 | 1.50 | 1 | 0.50 | 0.25 |
| 5-15/16 - 7 | 1 | 0.50 | 0.50 | 0.25 |
| 8 - 9 | 1 | 1 | 0.50 | ..... |
| 10 - 12-1/2 | 1 | 0.50 | ..... | ..... |
| 14 - 15 | 0.50 | 0.25 | ..... | ..... |

Based on 12 hrs/day, 150 F° Max
Continuous operation, 24 h/d, decrease by 50%

Lubrication Guide for Imperial/ISAF/ISN

| Re-Lubrication Intervals (Months) Based on 12 hours per day, 150°F M | | | | | | | | | |
|--|------|------|------|------|------|------|------|------|-------|
| Shaft Size. (Inches) | RPM | | | | | | | | |
| | 250 | 500 | 750 | 1000 | 1250 | 1500 | 2000 | 2500 | >3000 |
| 1-1/8 to 2 | 4 | 3 | 2 | 2 | 1 | 0.50 | 0.25 | 0.25 | 0.25 |
| 2-3/16 to 2-1/4 | 3.50 | 2.50 | 1.50 | 1 | 0.50 | 0.50 | 0.25 | 0.25 | 0.25 |
| 2-3/8 to 3 | 3 | 2 | 1.50 | 1 | 0.50 | 0.25 | 0.25 | 0.25 | 0.25 |
| 3-3/16 to 3-1/2 | 2.50 | 1.50 | 1 | 0.50 | 0.25 | 0.25 | 0.25 | 0.25 | - |
| 3-11/16 to 4-1/2 | 2 | 1.50 | 1 | 0.50 | 0.25 | 0.25 | 0.25 | - | - |
| 4-15/16 to 5-1/2 | 1.50 | 1 | 0.50 | 0.25 | 0.25 | 0.25 | - | - | - |
| 5-15/16 to 6 | 1 | 0.50 | 0.50 | 0.25 | 0.25 | 0.25 | - | - | - |
| 6-7/16 to 7 | 1 | 0.50 | 0.25 | 0.25 | 0.25 | - | - | - | - |

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SELECTION

IMPERIAL - Spherical Roller Bearing

Table 1: IMPERIAL Spherical Roller Bearing

| Shaft Size Inches | Basic Bearing Description | e | F _A /F _R <e | | F _A /F _R >e | | Adapter Maximum Thrust Load lbs. | Dynamic Capacity (C) lbs. | Static Capacity (C ₀) lbs. | Maximum Speed* | | Maximum ISAF Expansion Capability Inches |
|--|---------------------------|------|-----------------------------------|-----|-----------------------------------|-----|----------------------------------|---------------------------|--|----------------|-------------|--|
| | | | X | Y | X | Y | | | | Labyrinth RPM | TRIDENT RPM | |
| 1-1/8 1-3/16 1-1/4 1-3/8 1-7/16 1-1/2 | 22208 | 0.28 | 1.0 | 2.4 | 0.67 | 3.6 | 620 | 20,800 | 21,000 | 6,000 | 3,975 | 7/32 |
| 1-1/2 ** 1-5/8 1-11/16 1-3/4 | 22209 | 0.26 | 1.0 | 2.6 | 0.67 | 3.9 | 700 | 20,800 | 22,000 | 5,600 | 3,725 | 7/32 |
| 1-3/4 ** 1-7/8 1-15/16 2 | 22210 | 0.24 | 1.0 | 2.8 | 0.67 | 4.2 | 775 | 22,000 | 24,000 | 5,300 | 3,520 | 17/64 |
| 2-3/16 2-1/4 | 22211 | 0.23 | 1.0 | 2.9 | 0.67 | 4.3 | 930 | 27,000 | 29,000 | 4,500 | 3,000 | 7/32 |
| 2-1/4 ** 2-3/8 2-7/16 2-1/2 | 22213 | 0.24 | 1.0 | 2.8 | 0.67 | 4.2 | 1,360 | 39,000 | 47,500 | 3,800 | 2,400 | 5/16 |
| 2-11/16 2-3/4 2-15/16 3 | 22215 | 0.22 | 1.0 | 3.1 | 0.67 | 4.6 | 1,570 | 41,500 | 53,000 | 3,400 | 2,250 | 15/64 |
| 3-3/16 3-1/4 3-7/16 3-1/2 | 22218 | 0.23 | 1.0 | 2.9 | 0.67 | 4.3 | 2,430 | 65,500 | 81,500 | 2,600 | 1,825 | 3/8 |
| 3-11/16 3-15/16 4 | 22220 | 0.24 | 1.0 | 2.8 | 0.67 | 4.2 | 3,100 | 83,000 | 104,000 | 2,200 | 1,530 | 3/8 |
| 4-7/16 4-1/2 | 22222 | 0.25 | 1.0 | 2.7 | 0.67 | 4.0 | 3,930 | 104,000 | 132,000 | 2,000 | 1,325 | 3/8 |
| 4-15/16 5 | 22226 | 0.26 | 1.0 | 2.6 | 0.67 | 3.9 | 5,610 | 146,000 | 196,000 | 1,800 | 1,175 | 3/8 |
| 5-7/16 5-1/2 | 22228 | 0.25 | 1.0 | 2.7 | 0.67 | 4.0 | 6,419 | 166,000 | 236,000 | 1,700 | 1,100 | 3/8 |
| 5-15/16 6 | 22232 | 0.26 | 1.0 | 2.6 | 0.67 | 3.9 | 8,630 | 220,000 | 315,000 | 1,500 | 975 | 3/8 |
| 6-7/16 6-1/2 6-15/16 7 | 22236 | 0.25 | 1.0 | 2.7 | 0.67 | 4.0 | 10,437 | 260,000 | 375,000 | 1,300 | 845 | 3/8 |

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

** IMPERIAL - Type E Dimensional Housing

| | | | |
|---------------------------------|------------------------------|---|---------------------------|
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Bearing Reference Guide
 E-Family Roller Bearings
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 S-2000
 UNISPHERE II
 IMPERIAL
 UNIFIED SAF



SELECTION

IMPERIAL - Spherical Roller Bearing

Table 2: Allowable Equivalent Radial Load Rating (lbs) at Various Revolutions per Minute

| Size Inches | L ₁₀ Life Hours | Allowable Equivalent Radial Load Rating (lbs.) at Various Revolutions per Minute | | | | | | | | | | | | | | | | | | | | | |
|-------------------|----------------------------|--|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| | | 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 | 5600 | 6000 |
| 1-1/8 to 1-1/2 | 10,000 | 7498 | 6090 | 5393 | 4626 | 3758 | 3327 | 3052 | 2821 | 2703 | 2603 | 2559 | 2479 | 2409 | 2292 | 2253 | 2195 | 2114 | 2045 | 1944 | 1851 | 1820 | 1783 |
| | 30,000 | 5393 | 4380 | 3878 | 3327 | 2703 | 2393 | 2195 | 2029 | 1944 | 1872 | 1840 | 1783 | 1733 | 1648 | 1621 | 1579 | 1521 | 1471 | 1398 | 1331 | 1309 | 1282 |
| | 40,000 | 4947 | 4018 | 3558 | 3052 | 2479 | 2195 | 2014 | 1861 | 1783 | 1717 | 1688 | 1636 | 1590 | 1512 | 1487 | 1448 | 1395 | 1349 | 1282 | 1221 | 1201 | 1176 |
| | 60,000 | 4380 | 3558 | 3150 | 2703 | 2195 | 1944 | 1783 | 1648 | 1579 | 1521 | 1495 | 1448 | 1408 | 1339 | 1316 | 1282 | 1235 | 1195 | 1136 | 1081 | 1064 | 1042 |
| 100,000 | 3758 | 3052 | 2703 | 2319 | 1883 | 1668 | 1530 | 1414 | 1355 | 1305 | 1282 | 1243 | 1208 | 1149 | 1129 | 1100 | 1060 | 1025 | 974 | 928 | 912 | 894 | |
| *1-1/2 to 1-11/16 | 10,000 | 7,498 | 6,090 | 5,393 | 4,626 | 3,758 | 3,327 | 3,052 | 2,821 | 2,703 | 2,603 | 2,559 | 2,479 | 2,409 | 2,292 | 2,253 | 2,195 | 2,114 | 2,045 | 1,944 | 1,851 | 1,820 | |
| | 30,000 | 5,393 | 4,380 | 3,878 | 3,327 | 2,703 | 2,393 | 2,195 | 2,029 | 1,944 | 1,872 | 1,840 | 1,783 | 1,733 | 1,648 | 1,621 | 1,579 | 1,521 | 1,471 | 1,398 | 1,331 | 1,309 | |
| | 40,000 | 4,947 | 4,018 | 3,558 | 3,052 | 2,479 | 2,195 | 2,014 | 1,861 | 1,783 | 1,717 | 1,688 | 1,636 | 1,590 | 1,512 | 1,487 | 1,448 | 1,395 | 1,349 | 1,282 | 1,221 | 1,201 | |
| | 60,000 | 4,380 | 3,558 | 3,150 | 2,703 | 2,195 | 1,944 | 1,783 | 1,648 | 1,579 | 1,521 | 1,495 | 1,448 | 1,407 | 1,339 | 1,316 | 1,282 | 1,235 | 1,195 | 1,136 | 1,081 | 1,063 | |
| 100,000 | 3,758 | 3,052 | 2,703 | 2,319 | 1,883 | 1,668 | 1,530 | 1,414 | 1,355 | 1,305 | 1,282 | 1,243 | 1,208 | 1,148 | 1,129 | 1,100 | 1,060 | 1,025 | 974 | 928 | 912 | | |
| *1-3/4 to 1-15/16 | 10,000 | 7,930 | 6,441 | 5,704 | 4,893 | 3,975 | 3,519 | 3,228 | 2,984 | 2,859 | 2,753 | 2,706 | 2,622 | 2,548 | 2,424 | 2,383 | 2,322 | 2,253 | 2,163 | 2,056 | 1,957 | | |
| | 30,000 | 5,704 | 4,633 | 4,102 | 3,519 | 2,859 | 2,531 | 2,322 | 2,146 | 2,056 | 1,980 | 1,947 | 1,886 | 1,833 | 1,743 | 1,714 | 1,670 | 1,608 | 1,556 | 1,479 | 1,408 | | |
| | 40,000 | 5,232 | 4,250 | 3,763 | 3,228 | 2,622 | 2,322 | 2,130 | 1,969 | 1,886 | 1,816 | 1,786 | 1,730 | 1,681 | 1,599 | 1,572 | 1,532 | 1,475 | 1,427 | 1,356 | 1,291 | | |
| | 60,000 | 4,633 | 3,763 | 3,332 | 2,859 | 2,322 | 2,056 | 1,886 | 1,743 | 1,670 | 1,608 | 1,581 | 1,532 | 1,489 | 1,416 | 1,392 | 1,356 | 1,306 | 1,264 | 1,201 | 1,144 | | |
| 100,000 | 3,975 | 3,228 | 2,859 | 2,452 | 1,992 | 1,764 | 1,618 | 1,496 | 1,433 | 1,380 | 1,356 | 1,314 | 1,277 | 1,215 | 1,194 | 1,164 | 1,121 | 1,084 | 1,030 | 981 | | | |
| 2-3/16 to 2-1/4 | 10,000 | 9,733 | 7,905 | 7,000 | 6,005 | 4,878 | 4,319 | 3,962 | 3,662 | 3,508 | 3,379 | 3,322 | 3,218 | 3,127 | 2,975 | 2,925 | 2,859 | 2,745 | 2,655 | 2,523 | | | |
| | 30,000 | 7,000 | 5,686 | 5,035 | 4,319 | 3,508 | 3,106 | 2,850 | 2,634 | 2,523 | 2,430 | 2,389 | 2,315 | 2,249 | 2,139 | 2,104 | 2,050 | 1,974 | 1,909 | 1,815 | | | |
| | 40,000 | 6,421 | 5,216 | 4,618 | 3,962 | 3,218 | 2,850 | 2,614 | 2,416 | 2,315 | 2,229 | 2,191 | 2,123 | 2,063 | 1,963 | 1,930 | 1,880 | 1,811 | 1,751 | 1,665 | | | |
| | 60,000 | 5,686 | 4,618 | 4,089 | 3,508 | 2,850 | 2,523 | 2,315 | 2,139 | 2,050 | 1,974 | 1,940 | 1,880 | 1,827 | 1,738 | 1,709 | 1,665 | 1,603 | 1,551 | 1,474 | | | |
| 100,000 | 4,878 | 3,962 | 3,508 | 3,010 | 2,445 | 2,165 | 1,986 | 1,835 | 1,758 | 1,694 | 1,665 | 1,613 | 1,567 | 1,491 | 1,466 | 1,428 | 1,376 | 1,330 | 1,265 | | | | |
| *2-1/4 to 2-7/16 | 10,000 | 14,058 | 11,419 | 10,111 | 8,674 | 7,046 | 6,239 | 5,723 | 5,290 | 5,068 | 4,881 | 4,798 | 4,649 | 4,518 | 4,297 | 4,225 | 4,116 | 3,964 | 3,834 | | | | |
| | 30,000 | 10,111 | 8,213 | 7,272 | 6,239 | 5,068 | 4,487 | 4,116 | 3,805 | 3,645 | 3,510 | 3,451 | 3,343 | 3,220 | 3,165 | 3,067 | 2,980 | 2,835 | 2,787 | 2,716 | 2,616 | 2,530 | |
| | 40,000 | 9,275 | 7,534 | 6,671 | 5,723 | 4,649 | 4,116 | 3,776 | 3,490 | 3,343 | 3,220 | 3,165 | 3,067 | 2,980 | 2,835 | 2,787 | 2,716 | 2,616 | 2,530 | | | | |
| | 60,000 | 8,213 | 6,671 | 5,907 | 5,068 | 4,116 | 3,645 | 3,343 | 3,090 | 2,960 | 2,851 | 2,803 | 2,716 | 2,639 | 2,510 | 2,468 | 2,405 | 2,316 | 2,240 | | | | |
| 100,000 | 7,046 | 5,723 | 5,068 | 4,348 | 3,531 | 3,127 | 2,868 | 2,651 | 2,540 | 2,446 | 2,405 | 2,330 | 2,264 | 2,153 | 2,118 | 2,063 | 1,987 | 1,922 | | | | | |
| 2-11/16 to 3 | 10,000 | 14,959 | 12,151 | 10,759 | 9,230 | 7,497 | 6,639 | 6,090 | 5,629 | 5,392 | 5,194 | 5,105 | 4,946 | 4,807 | 4,572 | 4,496 | 4,380 | 4,219 | | | | | |
| | 30,000 | 10,759 | 8,739 | 7,738 | 6,639 | 5,392 | 4,775 | 4,380 | 4,048 | 3,878 | 3,735 | 3,672 | 3,558 | 3,457 | 3,288 | 3,233 | 3,150 | 3,034 | | | | | |
| | 40,000 | 9,870 | 8,017 | 7,098 | 6,090 | 4,946 | 4,380 | 4,018 | 3,714 | 3,558 | 3,427 | 3,368 | 3,263 | 3,171 | 3,016 | 2,966 | 2,890 | 2,783 | | | | | |
| | 60,000 | 8,739 | 7,098 | 6,285 | 5,392 | 4,380 | 3,878 | 3,558 | 3,288 | 3,150 | 3,034 | 2,982 | 2,890 | 2,808 | 2,671 | 2,626 | 2,559 | 2,464 | | | | | |
| 100,000 | 7,497 | 6,090 | 5,392 | 4,626 | 3,758 | 3,327 | 3,052 | 2,821 | 2,703 | 2,603 | 2,559 | 2,479 | 2,409 | 2,291 | 2,253 | 2,195 | 2,114 | | | | | | |
| 3-3/16 to 3-1/2 | 10,000 | 23,611 | 19,178 | 16,981 | 14,569 | 11,833 | 10,478 | 9,612 | 8,884 | 8,511 | 8,197 | 7,995 | 7,807 | 7,587 | 7,216 | | | | | | | | |
| | 30,000 | 16,981 | 13,793 | 12,213 | 10,478 | 8,511 | 7,536 | 6,913 | 6,390 | 6,121 | 5,896 | 5,795 | 5,615 | 5,457 | 5,190 | | | | | | | | |
| | 40,000 | 15,577 | 12,653 | 11,203 | 9,612 | 7,807 | 6,913 | 6,341 | 5,861 | 5,615 | 5,408 | 5,316 | 5,151 | 5,006 | 4,761 | | | | | | | | |
| | 60,000 | 13,793 | 11,203 | 9,920 | 8,511 | 6,913 | 6,121 | 5,615 | 5,190 | 4,972 | 4,789 | 4,707 | 4,561 | 4,432 | 4,216 | | | | | | | | |
| 100,000 | 11,833 | 9,612 | 8,511 | 7,302 | 5,931 | 5,251 | 4,817 | 4,453 | 4,266 | 4,108 | 4,038 | | | | | | | | | | | | |

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

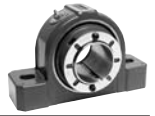
For applications in the dark shaded area, the maximum load for the specific speed is shown. The load does not correspond to the L₁₀ shown at the left.

Applications in the light shaded area may require a high temperature lubrication, consult Dodge Engineering at (864) 297-4800

* IMPERIAL - Type E Dimensional Housing

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

SELECTION



IMPERIAL - Spherical Roller Bearing

Table 2: Allowable Equivalent Radial Load Rating (lbs) at Various Revolutions per Minute (continued)

| Size Inches | L ₁₀ Life Hours | Allowable Equivalent Radial Load Rating (lbs.) at Various Revolutions per Minute | | | | | | | | | | | | | | | | | | | | | |
|-----------------|----------------------------|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|
| | | 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 | 5600 | 6000 |
| 3-11/16 to 4 | 10,000 | 29,919 | 24,302 | 21,518 | 18,461 | 14,995 | 13,278 | 12,180 | 11,258 | 7,757 | 10,387 | 10,211 | 9,893 | 9,614 | | | | | | | | | |
| | 30,000 | 21,518 | 17,478 | 15,476 | 13,278 | 10,785 | 9,549 | 8,760 | 8,097 | 7,757 | 7,471 | 7,344 | 7,115 | 6,915 | | | | | | | | | |
| | 40,000 | 19,739 | 16,033 | 14,197 | 12,180 | 9,893 | 8,760 | 8,036 | 7,427 | 7,115 | 6,853 | 6,737 | 6,527 | 6,343 | | | | | | | | | |
| | 60,000 | 17,478 | 14,197 | 12,571 | 10,785 | 8,760 | 7,757 | 7,115 | 6,577 | 6,300 | 6,068 | 5,965 | 5,779 | 5,616 | | | | | | | | | |
| 100,000 | 14,995 | 12,180 | 10,785 | 9,252 | 7,515 | 6,655 | 6,104 | 5,642 | 5,405 | 5,206 | 5,117 | 4,958 | 4,818 | | | | | | | | | | |
| 4-7/16 to 4-1/2 | 10,000 | 37,489 | 30,450 | 26,963 | 23,132 | 18,789 | 16,637 | 15,261 | 10,145 | 13,513 | 13,015 | 12,794 | 12,396 | | | | | | | | | | |
| | 30,000 | 26,963 | 21,901 | 19,392 | 16,637 | 13,513 | 11,966 | 10,976 | 10,145 | 9,719 | 9,361 | 9,202 | 8,915 | | | | | | | | | | |
| | 40,000 | 24,733 | 20,090 | 17,789 | 15,261 | 12,396 | 10,976 | 10,069 | 9,307 | 8,915 | 8,587 | 8,441 | 8,178 | | | | | | | | | | |
| | 60,000 | 21,901 | 17,789 | 15,751 | 13,513 | 10,976 | 9,719 | 8,915 | 8,241 | 7,894 | 7,603 | 7,474 | 7,242 | | | | | | | | | | |
| 100,000 | 18,789 | 15,261 | 13,513 | 11,593 | 9,417 | 8,338 | 7,649 | 7,070 | 6,773 | 6,523 | 6,412 | 6,213 | | | | | | | | | | | |
| 4-15/16 to 5 | 10,000 | 52,628 | 42,747 | 37,851 | 32,473 | 26,377 | 23,356 | 15,409 | 19,803 | 18,971 | 18,272 | 17,961 | | | | | | | | | | | |
| | 30,000 | 37,851 | 30,745 | 27,224 | 23,356 | 18,971 | 16,798 | 15,409 | 14,243 | 13,644 | 13,141 | 12,918 | | | | | | | | | | | |
| | 40,000 | 34,722 | 28,203 | 24,973 | 21,424 | 17,402 | 15,409 | 14,135 | 13,065 | 12,516 | 12,055 | 11,850 | | | | | | | | | | | |
| | 60,000 | 30,745 | 24,973 | 22,112 | 18,971 | 15,409 | 13,644 | 12,516 | 11,569 | 11,082 | 10,674 | 10,493 | | | | | | | | | | | |
| 100,000 | 26,377 | 21,424 | 18,971 | 16,275 | 13,220 | 11,706 | 10,738 | 9,925 | 9,508 | 9,157 | 9,002 | | | | | | | | | | | | |
| 5-7/16 to 5-1/2 | 10,000 | 59,838 | 48,603 | 43,037 | 36,922 | 29,990 | 26,555 | 17,520 | 22,516 | 21,569 | 20,775 | | | | | | | | | | | | |
| | 30,000 | 43,037 | 34,957 | 30,953 | 26,555 | 21,569 | 19,099 | 17,520 | 16,194 | 15,513 | 14,942 | | | | | | | | | | | | |
| | 40,000 | 39,478 | 32,066 | 28,394 | 24,359 | 19,786 | 17,520 | 16,071 | 14,855 | 14,230 | 13,706 | | | | | | | | | | | | |
| | 60,000 | 34,957 | 28,394 | 25,142 | 21,569 | 17,520 | 15,513 | 14,230 | 13,153 | 12,601 | 12,136 | | | | | | | | | | | | |
| 100,000 | 29,990 | 24,359 | 21,569 | 18,505 | 15,031 | 13,309 | 12,209 | 11,284 | 10,810 | 10,412 | | | | | | | | | | | | | |
| 5-15/16 to 6 | 10,000 | 79,303 | 64,414 | 57,036 | 48,933 | 39,746 | 25,312 | 32,283 | 29,840 | 28,586 | | | | | | | | | | | | | |
| | 30,000 | 57,036 | 46,328 | 41,022 | 35,193 | 28,586 | 25,312 | 23,219 | 21,462 | 20,560 | | | | | | | | | | | | | |
| | 40,000 | 52,320 | 42,497 | 37,630 | 32,283 | 26,222 | 23,219 | 21,299 | 19,687 | 18,860 | | | | | | | | | | | | | |
| | 60,000 | 46,328 | 37,630 | 33,320 | 28,586 | 23,219 | 20,560 | 18,860 | 17,432 | 16,700 | | | | | | | | | | | | | |
| 100,000 | 39,746 | 32,283 | 28,586 | 24,524 | 19,920 | 17,638 | 16,180 | 14,955 | 14,327 | | | | | | | | | | | | | | |
| 6-7/16 to 7 | 10,000 | 93,722 | 76,126 | 67,407 | 57,829 | 46,972 | 29,914 | 38,153 | 35,265 | | | | | | | | | | | | | | |
| | 30,000 | 67,407 | 54,751 | 48,480 | 41,592 | 33,783 | 29,914 | 27,441 | 25,364 | | | | | | | | | | | | | | |
| | 40,000 | 61,833 | 50,224 | 44,472 | 38,153 | 30,990 | 27,441 | 25,172 | 23,266 | | | | | | | | | | | | | | |
| | 60,000 | 54,751 | 44,472 | 39,378 | 33,783 | 27,441 | 24,298 | 22,289 | 20,602 | | | | | | | | | | | | | | |
| 100,000 | 46,972 | 38,153 | 33,783 | 28,983 | 23,542 | 20,845 | 19,122 | 17,675 | | | | | | | | | | | | | | | |

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

For applications in the dark shaded area, the maximum load for the specific speed is shown. The load does not correspond to the L₁₀ shown at the left.

Applications in the light shaded area may require a high temperature lubrication, consult Dodge Engineering at (864) 284-5700.

| | | | |
|---------------------------------|------------------------------|---|---------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | DIMENSIONS PAGE B14-30 |
|---------------------------------|------------------------------|---|---------------------------|

Bearing Reference Guide
 E-Family Roller Bearings
 Specialty Tapered Products
 S-2000
 UNISPHERE II
 IMPERIAL
 UNIFIED SAF



SELECTION

IMPERIAL - Spherical Roller Bearing

Table 3: ISAF Pillow Block Hydraulic - Spherical Roller Bearings

| Shaft Size Adapter Mounted Inches | Bearing Series | E | $F_A/F_R \leq e$ | | $F_A/F_R > e$ | | Adapter Maximum Allowable Thrust Load lbs. † | Dynamic Capacity (C) lbs. | Static Capacity (C ₀) lbs. | Maximum RPM |
|---|-------------------|------|------------------|------|---------------|------|--|---------------------------------|--|----------------|
| | | | X | Y | X | Y | | | | |
| 22200K Series | | | | | | | | | | |
| 5-7/16" 5-1/2" 140mm | 22232K | .26 | 1 | 2.60 | 0.67 | 3.90 | 8630 | 260,000 | 315,000 | 1500 |
| 5-15/16" 6" 150mm | 22234K | .26 | 1 | 2.60 | 0.67 | 3.90 | 9858 | 300,000 | 355,000 | 1300 |
| 6-7/16" 6-1/2" 160mm | 22236K | .25 | 1 | 2.70 | 0.67 | 4.00 | 10437 | 308,000 | 375,000 | 1300 |
| 6-15/16" 7" 170mm | 22238K | 0.28 | 1 | 2.40 | 0.67 | 3.60 | 11786 | 270,000 | 415,000 | 1200 |
| 7-1/2" 7-15/16" 8" 200mm | 22244K | .29 | 1 | 2.30 | 0.67 | 3.50 | 16020 | 365,000 | 550,000 | 950 |
| 23000K Series | | | | | | | | | | |
| 8-7/16" 8-1/2" 8-15/16" 9" 220mm | 23048K | .25 | 1 | 2.70 | 0.67 | 4.10 | 14887 | 260,000 | 490,000 | 800 |
| 9-15/16" 10" 10-7/16" 10-1/2" 260mm | 23056K | .25 | 1 | 2.70 | 0.67 | 4.10 | 20000 | 345,000 | 670,000 | 850 |
| 10-15/16" 11" 280mm | 23060K | .25 | 1 | 2.70 | .67 | 4.00 | 23875 | 440,000 | 820,000 | 630 |
| 12-7/16" 12-1/2" 320mm | 23068K | .25 | 1 | 2.70 | .67 | 4.00 | 30498 | 530,000 | 1,020,000 | 560 |
| 13-15/16" 14" 360mm | 23076K | .24 | 1 | 2.80 | .67 | 4.20 | 34598 | 570,000 | 1,190,000 | 500 |
| 15" | 23080K | .24 | 1 | 2.80 | .67 | 4.10 | 39926 | 680,000 | 1,390,000 | 450 |
| 23100K Series | | | | | | | | | | |
| 150mm | 23134K | .28 | 1 | 2.40 | .67 | 3.50 | 10090 | 232,000 | 375,000 | 1300 |
| 160mm | 23136K | .29 | 1 | 2.30 | .67 | 3.50 | 11650 | 270,000 | 430,000 | 1200 |
| 170mm | 23138K | .30 | 1 | 2.30 | .67 | 3.40 | 13320 | 305,000 | 490,000 | 1100 |
| 180mm | 23140K | .35 | 1 | 2.00 | .67 | 2.90 | 15100 | 300,000 | 510,000 | 900 |
| 200mm | 23144K | .33 | 1 | 2.00 | .67 | 3.00 | 17800 | 365,000 | 655,000 | 800 |
| 220mm | 23148K | .33 | 1 | 2.10 | .67 | 3.10 | 20710 | 415,000 | 735,000 | 750 |
| 9-7/16" 9-1/2" 240mm | 23152K | .33 | 1 | 2.00 | .67 | 3.00 | 19985 | 490,000 | 900,000 | 670 |
| 10-7/16" 10-1/2" 260mm | 23156K | .32 | 1 | 2.10 | .67 | 3.20 | 27571 | 530,000 | 980,000 | 630 |

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E-Family Roller Bearings

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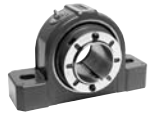
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IMPERIAL - Spherical Roller Bearing

Table 3: ISAF Pillow Block Hydraulic - Spherical Roller Bearings (Continued)

| Shaft Size Adapter Mounted Inches | Bearing Series | E | $F_A/F_R \leq e$ | | $F_A/F_R > e$ | | Adapter Maximum Allowable Thrust Load lbs. † | Dynamic Capacity (C) lbs. | Static Capacity (C ₀) lbs. | Maximum RPM |
|--|-------------------|-----|------------------|------|---------------|------|--|---------------------------------|--|----------------|
| | | | X | Y | X | Y | | | | |
| 10-15/16" 11" 280mm | 23160K | .33 | 1 | 2.10 | .67 | 3.10 | 32373 | 600,000 | 1,110,000 | 600 |
| 11-15/16" 12" 300mm | 23164K | .34 | 1 | 2.00 | .67 | 2.90 | 37984 | 720,000 | 1,340,000 | 530 |
| 12-7/16" 12-1/2" 320mm | 23168K | .34 | 1 | 2.00 | .67 | 2.90 | 43568 | 830,000 | 1,560,000 | 500 |
| 13-7/16" 13-1/2" 340mm | 23172K | .33 | 1 | 2.10 | .67 | 3.10 | 45617 | 850,000 | 1,660,000 | 480 |
| 13-15/16" 14" 360mm | 23176K | .32 | 1 | 2.10 | .67 | 3.20 | 49719 | 915,000 | 1,830,000 | 450 |

† If the thrust load exceeds adapter maximum allowable thrust load, auxiliary methods or carrying thrust are required
23100K series bearings will be provided with metric housing only

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SELECTION

IMPERIAL - Spherical Roller Bearing

Table 4: ISAF Large-Bore Hydraulic Assist Spherical Roller Bearings Selection Table

| Shaft Size | Housing Designation | Bearing Series | Max RPM Grease Life | L ₁₀ Hours | Allowable Equivalent Radial Load Rating (lbs.) At Various RPM | | | | | | | |
|----------------------|---------------------|----------------|---------------------|-----------------------|---|---------|---------|--------|--------|--------|--------|--------|
| | | | | | 50 | 100 | 150 | 200 | 250 | 300 | 400 | 500 |
| 22200K Series | | | | | | | | | | | | |
| 5-7/16" | 532 | 22232K | 1500 | 10,000 | 93,722 | 76,126 | 67,407 | 61,833 | 57,829 | 54,751 | 50,224 | 46,972 |
| 5-1/2" | | | | 30,000 | 67,407 | 54,751 | 48,480 | 44,472 | 41,592 | 39,378 | 36,122 | 33,783 |
| 140mm | | | | 60,000 | 54,751 | 44,472 | 39,378 | 36,122 | 33,783 | 31,985 | 29,340 | 27,441 |
| 5-15/16" | 534 | 22234K | 1300 | 10,000 | 108,140 | 87,837 | 77,777 | 71,346 | 66,726 | 63,175 | 57,591 | 54,199 |
| 6" | | | | 30,000 | 77,777 | 63,175 | 55,939 | 51,314 | 47,991 | 45,437 | 41,680 | 38,981 |
| 150mm | | | | 60,000 | 63,175 | 51,314 | 45,437 | 41,680 | 38,981 | 36,906 | 33,854 | 31,662 |
| 6-7/16" | 536 | 22236K | 1300 | 10,000 | 109,943 | 89,301 | 79,073 | 72,535 | 67,838 | 64,227 | 58,917 | 55,102 |
| 6-1/2" | | | | 30,000 | 79,073 | 64,227 | 56,871 | 52,169 | 48,791 | 46,194 | 42,374 | 39,631 |
| 160mm | | | | 60,000 | 64,227 | 52,169 | 46,194 | 42,374 | 39,631 | 37,521 | 34,419 | 32,190 |
| 6-15/16" | 538 | 22238K | 1200 | 10,000 | 97,326 | 79,053 | 69,999 | 64,211 | 60,054 | 56,857 | 52,156 | 48,779 |
| 7" | | | | 30,000 | 69,999 | 56,857 | 50,345 | 46,182 | 43,192 | 40,893 | 37,512 | 35,083 |
| 170mm | | | | 60,000 | 56,857 | 46,182 | 40,893 | 37,512 | 35,083 | 33,215 | 30,469 | 28,496 |
| 7-1/2" | 544 | 22244K | 950 | 10,000 | 131,571 | 106,869 | 94,629 | 86,804 | 81,184 | 76,862 | 70,507 | 65,942 |
| 7-15/16" | | | | 30,000 | 94,629 | 76,862 | 68,059 | 62,432 | 58,389 | 55,281 | 50,710 | 47,427 |
| 8" | | | | 60,000 | 76,862 | 62,432 | 55,281 | 50,710 | 47,427 | 44,902 | 41,190 | 38,522 |
| 23000K Series | | | | | | | | | | | | |
| 8-7/16" | 048 | 23048K | 800 | 10,000 | 93,722 | 76,126 | 67,407 | 61,833 | 57,829 | 54,751 | 50,224 | 46,972 |
| 8-1/2" | | | | 30,000 | 67,407 | 54,751 | 48,480 | 44,472 | 41,592 | 39,378 | 36,122 | 33,783 |
| 8-15/16" | | | | 60,000 | 54,751 | 44,472 | 39,378 | 36,122 | 33,783 | 31,985 | 29,340 | 27,441 |
| 9" | 056 | 23056K | 850 | 10,000 | 124,361 | 101,013 | 89,444 | 82,048 | 76,735 | 72,650 | 66,644 | 62,328 |
| 10-7/16" | | | | 30,000 | 89,444 | 72,651 | 64,330 | 59,010 | 55,190 | 52,252 | 47,932 | 44,828 |
| 10-1/2" | | | | 60,000 | 72,651 | 59,011 | 52,252 | 47,932 | 44,828 | 42,441 | 38,932 | 36,412 |
| 260mm | 060 | 23060K | 630 | 50,000 | 97,865 | 79,491 | 70,387 | 64,567 | 60,386 | 57,172 | 52,445 | 49,049 |
| 11" | | | | 80,000 | 84,995 | 69,037 | 61,130 | 56,076 | 52,445 | 49,653 | 45,548 | 42,598 |
| 280mm | | | | 100,000 | 79,491 | 64,567 | 57,172 | 52,445 | 49,049 | 46,438 | 42,598 | 39,840 |
| 12-7/16" | 068 | 23068K | 560 | 50,000 | 117,883 | 96,751 | 84,784 | 77,774 | 72,738 | 68,866 | 63,172 | 59,081 |
| 12-1/2" | | | | 80,000 | 102,380 | 83,158 | 73,634 | 67,546 | 63,172 | 59,809 | 54,864 | 51,312 |
| 320mm | | | | 100,000 | 94,751 | 77,774 | 68,866 | 63,172 | 59,081 | 55,937 | 51,312 | 47,989 |
| 13-15/16" | 0076 | 23076K | 500 | 50,000 | 126,780 | 102,977 | 91,183 | 83,643 | 78,227 | 74,064 | 67,940 | 64,323 |
| 14" | | | | 80,000 | 110,107 | 89,435 | 79,191 | 72,643 | 67,940 | 64,323 | 59,005 | 55,184 |
| 360mm | | | | 100,000 | 102,977 | 83,643 | 74,064 | 67,940 | 63,540 | 60,158 | 55,184 | |
| 15" | 080 | 23080K | 450 | 50,000 | 151,246 | 122,850 | 108,780 | 99,785 | 93,324 | 88,357 | 81,051 | 76,737 |
| 380mm | | | | 80,000 | 131,355 | 106,694 | 94,474 | 86,662 | 81,051 | 76,737 | 70,392 | |
| | | | | 100,000 | 122,850 | 99,785 | 88,357 | 81,051 | 75,803 | 71,768 | 65,834 | |
| 23100K Series | | | | | | | | | | | | |
| 150mm | 3134 | 23134K | 1300 | 50,000 | 51,603 | 41,914 | 37,113 | 34,044 | 31,840 | 30,145 | 27,653 | 25,862 |
| | | | | 80,000 | 44,815 | 36,401 | 32,232 | 29,567 | 27,653 | 26,181 | 24,016 | 22,461 |
| | | | | 100,000 | 41,914 | 34,044 | 30,145 | 27,653 | 25,862 | 24,485 | 22,461 | 21,007 |
| 160mm | 3136 | 23136K | 1200 | 50,000 | 60,054 | 48,779 | 43,192 | 39,621 | 37,055 | 35,083 | 32,182 | 30,098 |
| | | | | 80,000 | 52,156 | 42,364 | 37,512 | 34,410 | 32,182 | 30,469 | 27,950 | 26,140 |
| | | | | 100,000 | 48,779 | 39,621 | 35,083 | 32,182 | 30,098 | 28,496 | 26,140 | 24,447 |
| 170mm | 3138 | 23138K | 1100 | 50,000 | 67,838 | 55,102 | 48,791 | 44,757 | 41,859 | 39,631 | 36,354 | 34,000 |
| | | | | 80,000 | 58,917 | 47,855 | 42,374 | 38,871 | 36,354 | 34,419 | 31,573 | 29,528 |
| | | | | 100,000 | 55,102 | 44,757 | 39,630 | 36,354 | 34,000 | 32,190 | 29,528 | 27,616 |
| 180mm | 3140 | 23140K | 900 | 50,000 | 66,726 | 54,199 | 47,991 | 44,023 | 41,172 | 38,981 | 35,758 | 33,442 |
| | | | | 80,000 | 57,951 | 47,071 | 41,680 | 38,233 | 35,758 | 33,854 | 31,055 | 29,044 |
| | | | | 100,000 | 54,199 | 44,023 | 38,981 | 35,758 | 33,442 | 31,662 | 29,044 | 27,164 |

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IMPERIAL - Spherical Roller Bearing

Table 4: ISAF Large-Bore Hydraulic Assist Spherical Roller Bearings Selection Table (Continued)

| Shaft Size | Housing Designation | Bearing Series | Max RPM Grease Life | L ₁₀ Hours | Allowable Equivalent Radial Load Rating (lbs.) At Various RPM | | | | | | | |
|----------------------|---------------------|----------------|---------------------|-----------------------|---|--------|--------|--------|--------|--------|--------|--------|
| | | | | | 550 | 600 | 650 | 700 | 750 | 950 | 1300 | 1500 |
| 22200K Series | | | | | | | | | | | | |
| 5-7/16" | 532 | 22232K | 1500 | 10,000 | 45,648 | 44,472 | 43,417 | 42,462 | 41,592 | 38,745 | 35,265 | 33,783 |
| 5-1/2" | | | | 30,000 | 32,831 | 31,985 | 31,226 | 30,540 | 29,914 | 27,866 | 25,364 | 24,298 |
| 140mm | | | | 60,000 | 26,667 | 25,980 | 25,364 | 24,806 | 24,298 | 22,364 | 20,602 | 19,736 |
| 5-15/16" | 534 | 22234K | 1300 | 10,000 | 52,671 | 51,314 | 50,096 | 48,995 | 47,991 | 44,706 | 40,691 | |
| 6" | | | | 30,000 | 37,882 | 36,906 | 36,030 | 35,238 | 34,518 | 32,153 | 29,266 | |
| 150mm | | | | 60,000 | 30,770 | 29,977 | 29,266 | 28,622 | 28,036 | 26,117 | 23,771 | |
| 6-7/16" | 536 | 22236K | 1300 | 10,000 | 53,549 | 52,169 | 50,931 | 49,811 | 48,791 | 45,451 | 41,369 | |
| 6-1/2" | | | | 30,000 | 38,513 | 37,521 | 36,631 | 35,825 | 35,092 | 32,689 | 29,753 | |
| 160mm | | | | 60,000 | 31,283 | 30,477 | 29,753 | 29,099 | 28,503 | 26,552 | 24,167 | |
| 6-15/16" | 538 | 22238K | 1200 | 10,000 | 47,404 | 46,182 | 45,087 | 44,095 | 43,192 | 40,235 | 36,622 | |
| 7" | | | | 30,000 | 34,094 | 33,215 | 32,427 | 31,714 | 31,065 | 28,938 | 26,339 | |
| 170mm | | | | 60,000 | 27,693 | 26,979 | 26,339 | 25,760 | 25,232 | 23,505 | 21,394 | |
| 7-1/2" | 544 | 22244K | 950 | 10,000 | 64,083 | 62,432 | 60,950 | 59,610 | 58,389 | 54,392 | | |
| 7-15/16" | | | | 30,000 | 46,090 | 44,902 | 43,837 | 42,873 | 41,995 | 39,120 | | |
| 200mm | | | | 60,000 | 37,427 | 36,472 | 35,607 | 34,824 | 34,110 | 31,775 | | |
| 23000K Series | | | | | | | | | | | | |
| 8-7/16" | 048 | 23048K | 800 | 10,000 | 45,648 | 44,472 | 43,417 | 42,462 | 41,592 | 38,745 | | |
| 8-1/2" | | | | 30,000 | 32,831 | 31,985 | 31,226 | 30,540 | 29,914 | 27,866 | | |
| 8-15/16" | | | | 60,000 | 26,667 | 25,980 | 25,364 | 24,806 | 24,298 | 22,634 | | |
| 9-15/16" | 056 | 23056K | 850 | 10,000 | 60,571 | 59,010 | 57,610 | 56,344 | 55,190 | | | |
| 10" | | | | 30,000 | 43,564 | 42,442 | 41,435 | 40,524 | 39,694 | | | |
| 10-7/16" | | | | 60,000 | 35,385 | 34,474 | 33,356 | 32,916 | | | | |
| 10-1/2" | 060 | 23060K | 630 | 50,000 | 47,666 | 46,438 | 45,336 | | | | | |
| 11" | | | | 80,000 | 41,397 | 40,331 | 39,374 | | | | | |
| 280mm | | | | 100,000 | 38,717 | 37,719 | 36,284 | | | | | |
| 12-7/16" | 068 | 23068K | 560 | 50,000 | 57,416 | | | | | | | |
| 12-1/2" | | | | 80,000 | 49,665 | | | | | | | |
| 320mm | | | | 100,000 | 46,636 | | | | | | | |
| 13-15/16" | 076 | 23076K | 500 | 50,000 | | | | | | | | |
| 14" | | | | 80,000 | | | | | | | | |
| 360mm | | | | 100,000 | | | | | | | | |
| 15" | 080 | 23080K | 450 | 50,000 | | | | | | | | |
| | | | | 80,000 | | | | | | | | |
| 380mm | | | | 100,000 | | | | | | | | |
| 23100K Series | | | | | | | | | | | | |
| 150mm | 3134 | 23134K | 1300 | 50,000 | 25,133 | 24,485 | 23,905 | 23,379 | 22,900 | 21,332 | 19,416 | |
| | | | | 80,000 | 21,828 | 21,265 | 20,761 | 20,304 | 19,888 | 18,527 | 16,863 | |
| | | | | 100,000 | 20,414 | 19,888 | 19,417 | 18,990 | 18,601 | 17,327 | 15,771 | |
| 160mm | 3136 | 23136K | 1200 | 50,000 | 29,250 | 28,496 | 27,820 | 27,208 | 26,651 | 24,826 | 22,597 | |
| | | | | 80,000 | 25,403 | 24,748 | 24,161 | 23,630 | 23,146 | 21,561 | 19,625 | |
| | | | | 100,000 | 23,758 | 23,146 | 22,597 | 22,100 | 21,647 | 20,165 | 18,354 | |
| 170mm | 3138 | 23138K | 1100 | 50,000 | 33,041 | 32,190 | 31,426 | 30,735 | 30,106 | 28,045 | 25,526 | |
| | | | | 80,000 | 28,696 | 27,957 | 27,293 | 26,693 | 26,146 | 24,356 | 22,169 | |
| | | | | 100,000 | 26,838 | 26,146 | 25,526 | 24,965 | 24,453 | 22,779 | 20,734 | |
| 180mm | 3140 | 23140K | 900 | 50,000 | 32,500 | 31,662 | 30,911 | 30,231 | 29,612 | 27,585 | | |
| | | | | 80,000 | 28,226 | 27,498 | 26,846 | 26,256 | 25,718 | 23,957 | | |
| | | | | 100,000 | 26,398 | 25,718 | 25,108 | 24,556 | 24,052 | 22,406 | | |

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SELECTION

IMPERIAL - Spherical Roller Bearing

Table 4: ISAF Large-Bore Hydraulic Assist Spherical Roller Bearings Selection Table (Continued)

| Shaft Size | Housing Designation | Bearing Series | Max RPM Grease Life | L ₁₀ Hours | Allowable Equivalent Radial Load Rating (lbs.) At Various RPM | | | | | | | |
|----------------------------------|---------------------|----------------|---------------------|-----------------------|---|---------|---------|---------|---------|---------|---------|---------|
| | | | | | 50 | 100 | 150 | 200 | 250 | 300 | 400 | 500 |
| 23100K Series (Continued) | | | | | | | | | | | | |
| 200mm | 3144 | 23144K | 800 | 50,000 | 81,184 | 65,942 | 58,389 | 53,561 | 50,093 | 47,427 | 43,505 | 40,688 |
| | | | | 80,000 | 70,507 | 57,269 | 50,710 | 46,517 | 43,505 | 41,190 | 37,784 | 35,337 |
| | | | | 100,000 | 65,942 | 53,561 | 47,427 | 43,505 | 40,688 | 38,522 | 35,337 | 33,049 |
| 220mm | 3148 | 23148K | 750 | 50,000 | 92,305 | 74,975 | 66,388 | 60,898 | 56,955 | 53,923 | 49,465 | 46,262 |
| | | | | 80,000 | 80,165 | 65,115 | 57,657 | 52,889 | 49,465 | 46,832 | 42,960 | 40,178 |
| | | | | 100,000 | 74,975 | 60,898 | 53,923 | 49,465 | 46,262 | 43,799 | 40,178 | 37,576 |
| 9-7/16" | 3152 | 23152K | 670 | 50,000 | 108,992 | 88,529 | 78,390 | 71,908 | 67,252 | 63,672 | 58,407 | 54,625 |
| 9-1/2" | | | | 80,000 | 94,658 | 76,886 | 68,080 | 62,451 | 58,407 | 55,299 | 50,726 | 47,442 |
| 240mm | | | | 100,000 | 88,529 | 71,908 | 63,672 | 58,407 | 54,625 | 51,718 | 47,442 | 44,370 |
| 10-7/16" | 3156 | 23156K | 630 | 50,000 | 117,883 | 95,751 | 84,784 | 77,774 | 72,738 | 68,866 | 63,172 | 59,081 |
| 10-1/2" | | | | 80,000 | 102,380 | 83,158 | 73,634 | 67,546 | 63,172 | 59,809 | 54,864 | 51,312 |
| 260mm | | | | 100,000 | 95,751 | 77,774 | 66,866 | 63,172 | 59,061 | 55,937 | 51,312 | 47,989 |
| 10-15/16" | 3160 | 23160K | 600 | 50,000 | 133,452 | 108,397 | 95,982 | 88,046 | 82,345 | 77,962 | 71,515 | 66,885 |
| 11" | | | | 80,000 | 115,902 | 94,142 | 83,359 | 76,467 | 71,515 | 67,709 | 62,110 | 58,089 |
| 280mm | | | | 100,000 | 108,397 | 88,046 | 77,962 | 71,515 | 66,885 | 63,325 | 58,089 | 54,327 |
| 11-15/16" | 3164 | 23164K | 530 | 50,000 | 160,143 | 130,076 | 115,178 | 105,655 | 98,814 | 93,554 | 85,818 | 80,262 |
| 12" | | | | 60,000 | 139,082 | 112,970 | 100,031 | 91,760 | 85,818 | 81,251 | 74,532 | 69,706 |
| 300mm | | | | 100,000 | 130,076 | 105,655 | 93,554 | 85,818 | 80,262 | 75,989 | 69,706 | 65,193 |
| 12-7/16" | 3168 | 23168K | 500 | 50,000 | 184,609 | 149,949 | 132,775 | 121,797 | 113,910 | 107,847 | 98,930 | 92,524 |
| 12-1/2" | | | | 80,000 | 160,331 | 130,229 | 115,314 | 105,779 | 98,930 | 93,664 | 85,919 | 80,356 |
| 320mm | | | | 100,000 | 149,949 | 121,797 | 107,847 | 96,930 | 92,524 | 87,599 | 80,356 | 75,153 |
| 13-7/16" | 3172 | 23172K | 480 | 50,000 | 189,058 | 153,562 | 135,975 | 124,732 | 116,655 | 110,446 | 101,313 | 94,753 |
| 13-1/2" | | | | 80,000 | 164,194 | 133,367 | 118,092 | 108,326 | 101,313 | 95,921 | 87,990 | 82,292 |
| 340mm | | | | 100,000 | 153,562 | 124,732 | 110,446 | 101,313 | 94,753 | 87,990 | 82,292 | 76,964 |
| 13-15/16" | 3176 | 23176K | 450 | 50,000 | 203,515 | 165,306 | 146,373 | 134,270 | 125,576 | 118,892 | 109,061 | 101,999 |
| 14" | | | | 80,000 | 176,750 | 143,566 | 127,123 | 116,612 | 109,061 | 103,256 | 94,718 | 88,585 |
| 360mm | | | | 100,000 | 165,306 | 134,270 | 118,892 | 109,061 | 101,999 | 96,570 | 88,585 | 82,649 |

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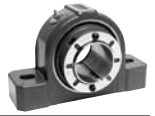
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IMPERIAL - Spherical Roller Bearing

Table 4: ISAF Large-Bore Hydraulic Assist Spherical Roller Bearings Selection Table (Continued)

| Shaft Size | Housing Designation | Bearing Series | Max RPM Grease Life | L ₁₀ Hours | Allowable Equivalent Radial Load Rating (lbs.) At Various RPM | | | | | | | |
|----------------------------------|---------------------|----------------|---------------------|-----------------------|---|--------|--------|--------|--------|-----|------|------|
| | | | | | 550 | 600 | 650 | 700 | 750 | 950 | 1300 | 1500 |
| 23100K Series (Continued) | | | | | | | | | | | | |
| 200mm | 3144 | 23144K | 800 | 50,000 | 39,541 | 38,522 | 37,608 | 36,782 | 36,028 | | | |
| | | | | 80,000 | 34,341 | 33,456 | 32,662 | 31,944 | 31,290 | | | |
| | | | | 100,000 | 32,117 | 31,290 | 30,548 | 29,876 | 29,264 | | | |
| 220mm | 3148 | 23148K | 750 | 50,000 | 44,958 | 43,799 | 42,760 | 41,820 | 40,963 | | | |
| | | | | 80,000 | 39,045 | 38,039 | 37,137 | 36,320 | 35,576 | | | |
| | | | | 100,000 | 36,517 | 35,576 | 34,732 | 33,968 | 33,273 | | | |
| 9-7/16" | 3152 | 23152K | 670 | 50,000 | 53,086 | 51,718 | 50,491 | 49,381 | 48,369 | | | |
| 9-1/2" | | | | 80,000 | 46,104 | 44,916 | 43,851 | 42,886 | 42,008 | | | |
| 240mm | | | | 100,000 | 43,119 | 42,008 | 41,011 | 40,110 | 39,288 | | | |
| 10-7/16" | 3156 | 23156K | 630 | 50,000 | 57,416 | 55,937 | 54,609 | 53,409 | 52,315 | | | |
| 10-1/2" | | | | 80,000 | 49,865 | 48,580 | 47,426 | 46,385 | 45,435 | | | |
| 260mm | | | | 100,000 | 46,636 | 45,435 | 44,357 | 43,381 | 42,493 | | | |
| 10-15/16" | 3160 | 23160K | 600 | 50,000 | 64,999 | 63,325 | 61,822 | 60,463 | 59,224 | | | |
| 11" | | | | 80,000 | 56,451 | 54,997 | 53,692 | 52,511 | 51,436 | | | |
| 280mm | | | | 100,000 | 52,796 | 51,436 | 50,215 | 49,111 | 46,105 | | | |
| 11-15/16" | 3164 | 23164K | 530 | 50,000 | 77,999 | 75,989 | 74,186 | | | | | |
| 12" | | | | 60,000 | 67,741 | 65,996 | 64,430 | | | | | |
| 300mm | | | | 100,000 | 63,355 | 61,723 | 60,258 | | | | | |
| 12-7/16" | 3168 | 23168K | 500 | 50,000 | 89,916 | 87,599 | | | | | | |
| 12-1/2" | | | | 80,000 | 78,091 | 76,079 | | | | | | |
| 320mm | | | | 100,000 | 73,034 | 71,152 | | | | | | |
| 13-7/16" | 3172 | 23172K | 480 | 50,000 | 92,062 | 89,710 | | | | | | |
| 13-1/2" | | | | 80,000 | 79,972 | 77,912 | | | | | | |
| 340mm | | | | 100,000 | 74,794 | 72,667 | | | | | | |
| 13-15/16" | 3176 | 23176K | 450 | 50,000 | 99,124 | | | | | | | |
| 14" | | | | 80,000 | 86,086 | | | | | | | |
| 360mm | | | | 100,000 | 80,514 | | | | | | | |

Bearing Reference Guide

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| | | | |
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SELECTION

IMPERIAL - IP Spherical Roller Bearings

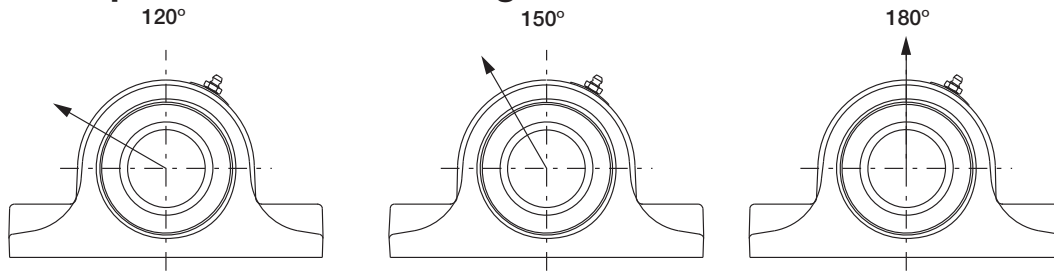


Table 5: IMPERIAL-IP 2-Bolt Pillow Block Housing Ratings*

| Bore Size | Maximum Recommended Housing Cap Loads, lb | | |
|-----------------|---|------|-------|
| | 120° | 150° | 180° |
| 1-1/8 to 1-1/2 | 2110 | 2640 | 3100 |
| 1-5/8 to 1-3/4 | 2380 | 2980 | 3500 |
| 1-7/8 to 2 | 3130 | 3910 | 4600 |
| 2-3/16 to 2-1/4 | 3330 | 4160 | 4900 |
| 2-3/8 to 2-1/2 | 3330 | 4160 | 4900 |
| 2-11/16 to 3 | 4420 | 5520 | 6500 |
| 3-3/16 to 3-1/2 | 4620 | 5780 | 6800 |
| 3-11/16 to 4 | 7500 | 9350 | 11000 |

Table 6: IMPERIAL-IP 4-Bolt Pillow Housing Ratings*

| Bore Size | Maximum Recommended Housing Cap Loads, lb | | |
|-----------------|---|-------|-------|
| | 120° | 150° | 180° |
| 2-3/8 to 2-1/2 | 3810 | 4760 | 5600 |
| 2-11/16 to 3 | 4620 | 5780 | 6800 |
| 3-3/16 to 3-1/2 | 4700 | 5870 | 6900 |
| 3-11/16 to 4 | 7500 | 9350 | 11000 |
| 4-7/16 to 4-1/2 | 9900 | 12330 | 14500 |
| 4-15/16 to 5 | 13400 | 16750 | 19700 |

Table 7: IMPERIAL-ISN*

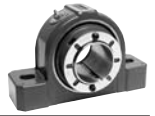
| Bore Size | Maximum Recommended Housing Cap Loads, kN | | |
|-----------|---|-------|-------|
| | 120° | 150° | 180° |
| 507 | | | |
| 508 | 9.4 | 11.7 | 13.8 |
| 509 | | | |
| 510 | 10.6 | 13.3 | 15.6 |
| 511 | 13.9 | 17.4 | 20.5 |
| 512 | 14.8 | 18.5 | 21.8 |
| 513 | | | |
| 515 | 14.8 | 18.5 | 21.8 |
| 516 | | | |
| 517 | 19.7 | 24.6 | 28.9 |
| 518 | | | |
| 519 | 20.6 | 25.7 | 30.2 |
| 520 | | | |
| 522 | 33.4 | 41.6 | 48.9 |
| 524 | 44 | 54.8 | 64.5 |
| 526 | | | |
| 528 | 59.6 | 74.5 | 87.6 |
| 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.

| | | | |
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SELECTION



Imperial-HD

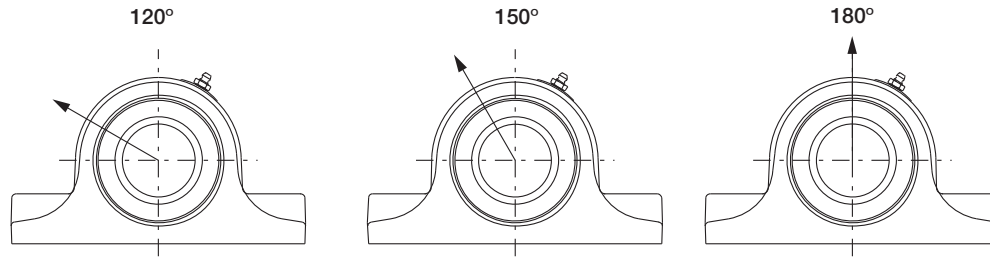


Table 8: Steel Housed Imperial - Housing Ratings*

| Shaft Sizes | Basic Bearing Description | Maximum Recommended Housing Loads, lb | |
|--|---------------------------|---------------------------------------|--------|
| | | P2B | P4B |
| 1-1/8 1-3/16 1-1/4 1-3/8 1-7/16 1-1/2 | 22208 | 24400 | |
| 1-1/2** 1-5/8 1-11/16 1-3/4 | 22209 | 26400 | |
| 1-3/4** 1-15/16 2 | 22210 | 30200 | |
| 2-3/16 2-1/4 | 22211 | 35400 | |
| 2-1/4** 2-3/8 2-7/16 2-1/2 | 22213 | 51300 | 52800 |
| 2-11/16 2-3/4 2-15/16 3 | 22215 | 59700 | 60000 |
| 3-3/16 3-1/4 3-7/16 3-1/2 | 22218 | 90700 | 95500 |
| 3-11/16 3-15/16 4 | 22220 | | 115000 |
| 4-7/16 4-1/2 | 22222 | | 152100 |
| 4-15/16 5 | 22226 | | 188200 |

* 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.,

** Imperial - Type E Dimensional Housing

| | | | |
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SELECTION

IMPERIAL - ISAF Spherical Roller Bearings

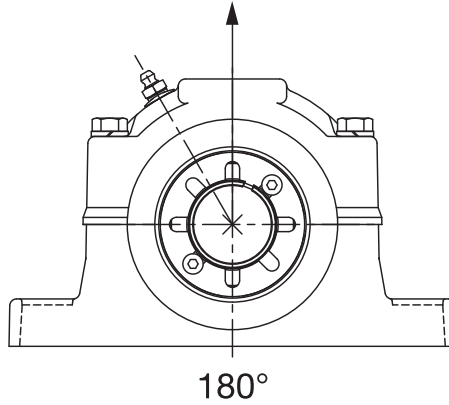
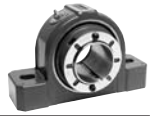


Table 9: ISAF Housing Rating*

| Shaft Size (Inches) | Maximum Recommended Housing Cap Loads, Lbs |
|------------------------|--|
| | 180° |
| 1-1/8 thru 1-1/2 | 4,600 |
| 1-5/8 thru 1-3/4 | 5,400 |
| 1-7/8 thru 2 | 7,875 |
| 2-3/16 thru 2-1/4 | 9,200 |
| 2-3/8 thru 2-1/2 | 9,220 |
| 2-11/16 thru 3 | 10,200 |
| 3-3/8 thru 3-1/2 | 14,700 |
| 3-11/16 thru 4 | 17,800 |
| 4-7/16 thru 4-1/2 | 18,300 |
| 4-15/16 thru 5 | 22,300 |
| 5-7/16 thru 5-1/2 | 25,100 |
| 5-15/16 thru 6 | 30,200 |
| 6-7/16 thru 7 | 35,300 |

* 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 L₁₀ life of the bearing should be checked for proper selection and life requirements.

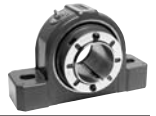


IMPERIAL - ISAF Spherical Roller Bearings

**Table 10: Definition Of Operating Conditions
For Unitized Spherical Roller Bearings**

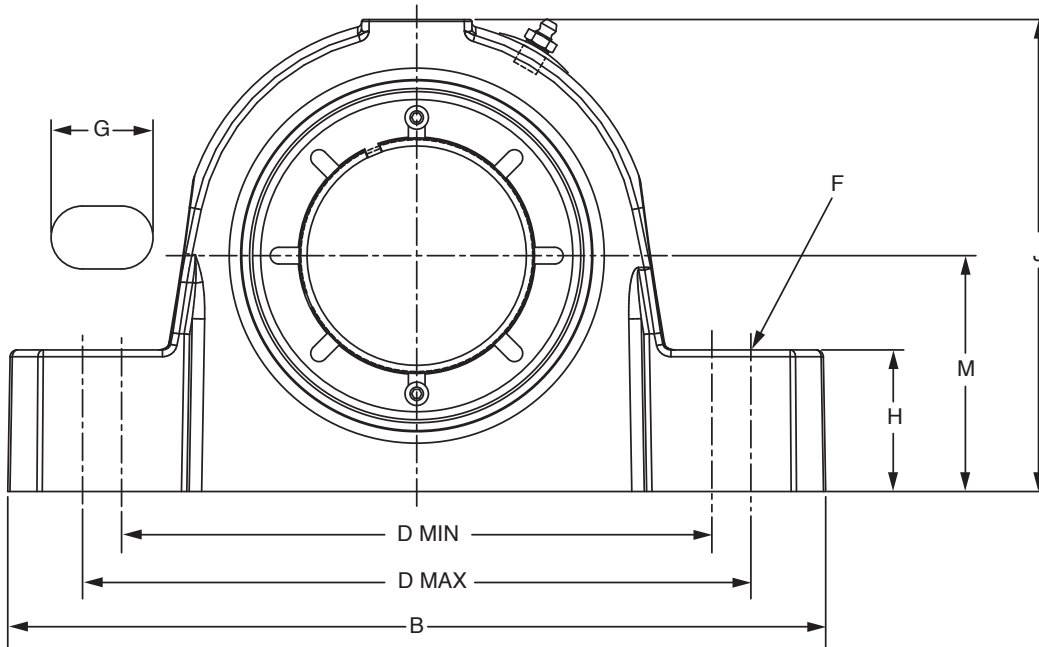
| | |
|---|--|
| LOW SPEED MEDIUM SPEED HIGH SPEED | UP TO 20% OF MAX. RPM (TABLE 1 AND/OR TABLE 3) OVER 20% TO 80% OF MAX. RPM OVER 80% OF MAX. RPM |
| LIGHT LOAD NORMAL LOAD HEAVY LOAD | UP TO 8% OF C (TABLE 1 AND/OR TABLE 3) OVER 8% TO 18% OF C OVER 18% OF C C - DYNAMIC CAPACITY |
| LOW TEMPERATURE MEDIUM TEMPERATURE HIGH TEMPERATURE | 20°F TO -100°F OVER 20°F TO 200°F OVER 200°F TO 250°F |

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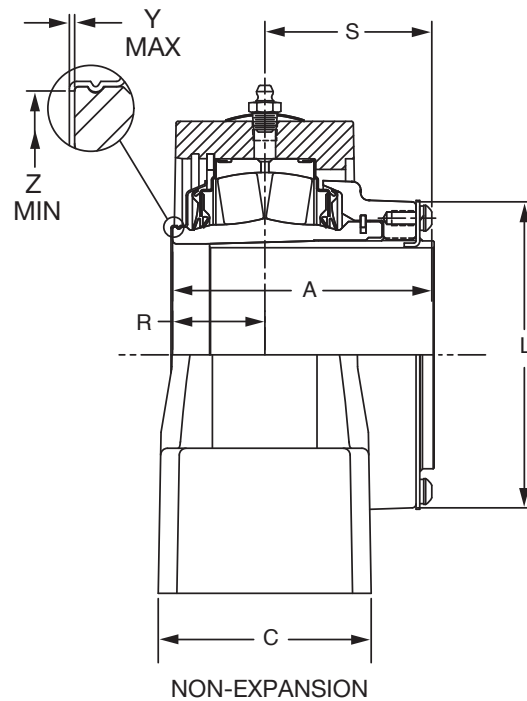
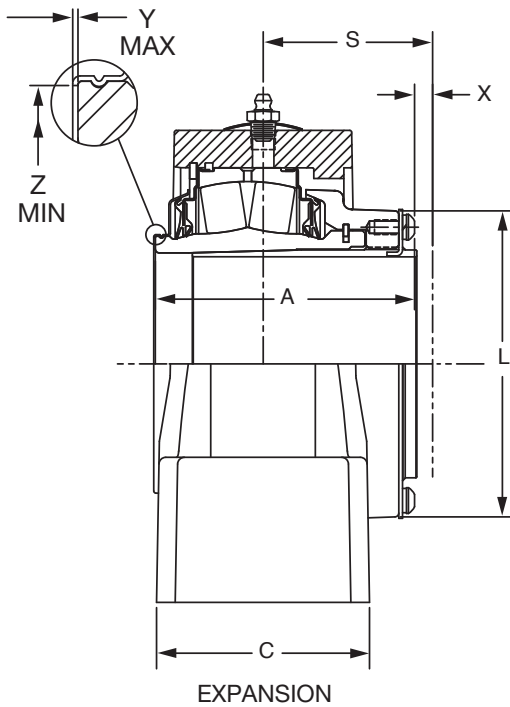


DIMENSIONS

**IMPERIAL - IP Pillow Block
1-1/8 THRU 2-1/4 INCH - 2-BOLT**



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



NOTE: See page B14-32 for 2-3/8 - 4 inch

| | | | |
|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
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DIMENSIONS



IMPERIAL - IP Pillow Block 1-1/8 THRU 2-1/4 INCH - 2-BOLT

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| Bearing | Shaft Size Inch | TRIDENT Seal | | | | Labyrinth Seal | | | |
|---------|-----------------|---------------|-------------|-----------|--------------|----------------|-------------|-----------|--------------|
| | | Non-Expansion | | Expansion | | Non-Expansion | | Expansion | |
| | | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name |
| 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 |

Metric shaft sizes available upon request

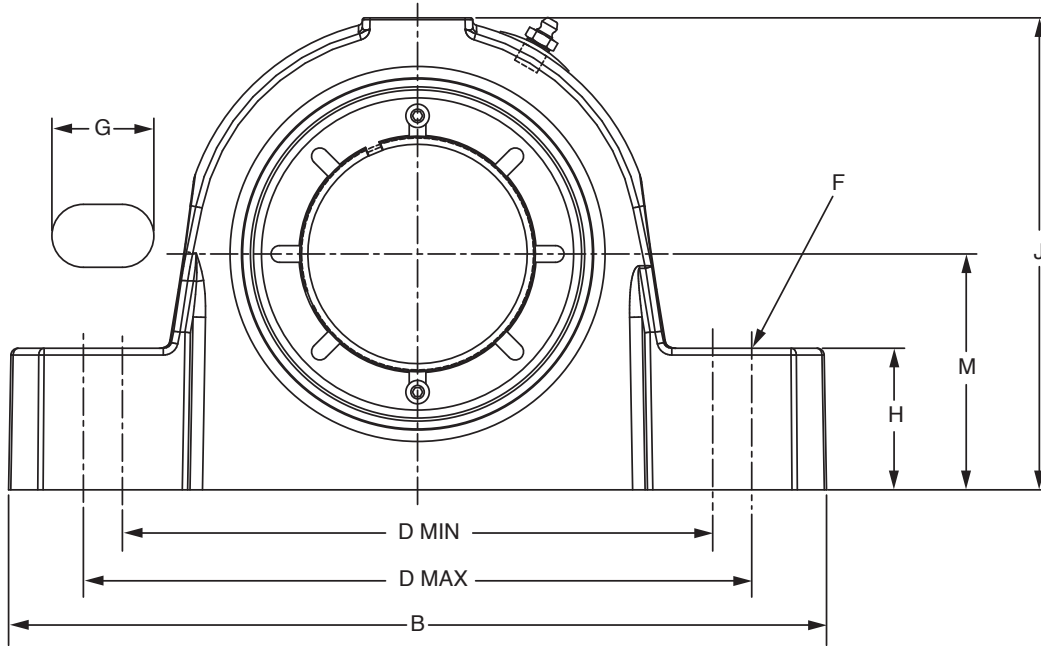
| Shaft Size | A | B | C | D | | F Bolt Dia. | G | H | J | L | M | R | S | X Total Exp. | Y | Z |
|------------|------|------|------|------|------|-------------|------|------|------|------|------|------|------|--------------|------|------|
| | | | | Min | Max | | | | | | | | | | | |
| 1-1/8 | 2.63 | 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 |
| 1-3/16 | | | | | | | | | | | | | | | | |
| 1-1/4 | | | | | | | | | | | | | | | | |
| 1-3/8 | | | | | | | | | | | | | | | | |
| 1-7/16 | | | | | | | | | | | | | | | | |
| 1-1/2 | | | | | | | | | | | | | | | | |
| 1-5/8 | 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 |
| 1-11/16 | | | | | | | | | | | | | | | | |
| 1-3/4 | | | | | | | | | | | | | | | | |
| 1-7/8 | 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 |
| 1-15/16 | | | | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | | |
| 2-3/16 | 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 |
| 2-1/4 | | | | | | | | | | | | | | | | |

| | | | |
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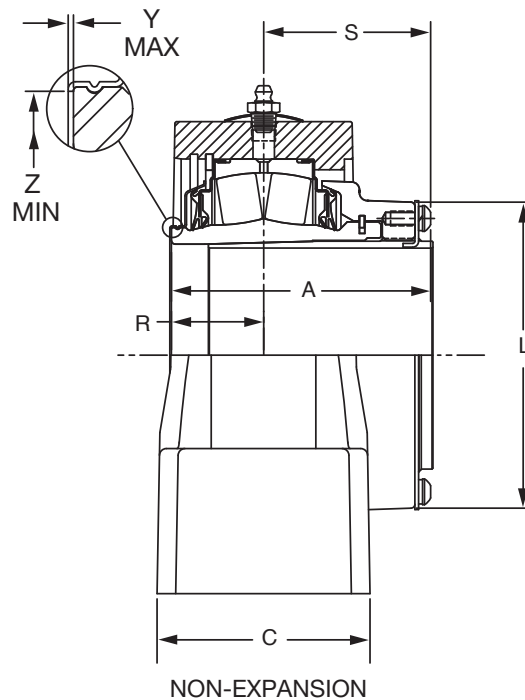
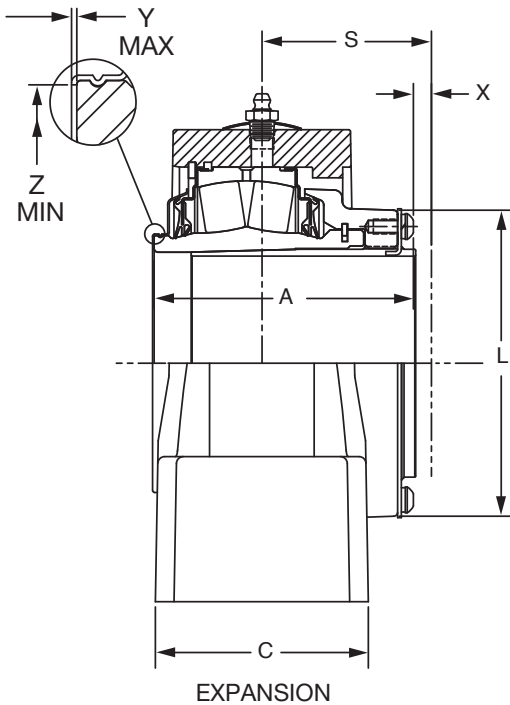


DIMENSIONS

**IMPERIAL - IP Pillow Block
2-3/8 THRU 4 INCH - 2-BOLT**



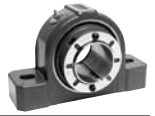
NOTE: All sizes use a 1/8-27 NPT hydraulic grease fitting



NOTE: See page B14-30 for 1-1/8 thru 2-1/4 inch

| | | | |
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DIMENSIONS



IMPERIAL - IP Pillow Block 2-3/8 THRU 4 INCH - 2-BOLT

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| Bearing | Shaft Size Inch | TRIDENT Seal | | | | Labyrinth Seal | | | |
|---------|-----------------|---------------|-------------|---------------|--------------|----------------|-------------|---------------|--------------|
| | | Non-Expansion | | Expansion | | Non-Expansion | | Expansion | |
| | | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name |
| 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 |

Metric shaft sizes available upon request

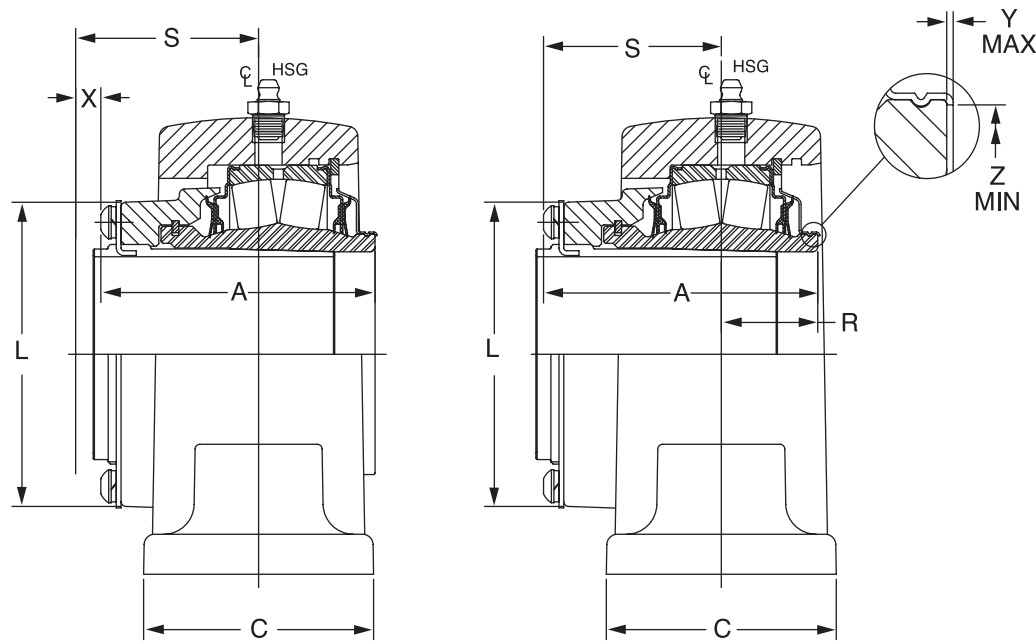
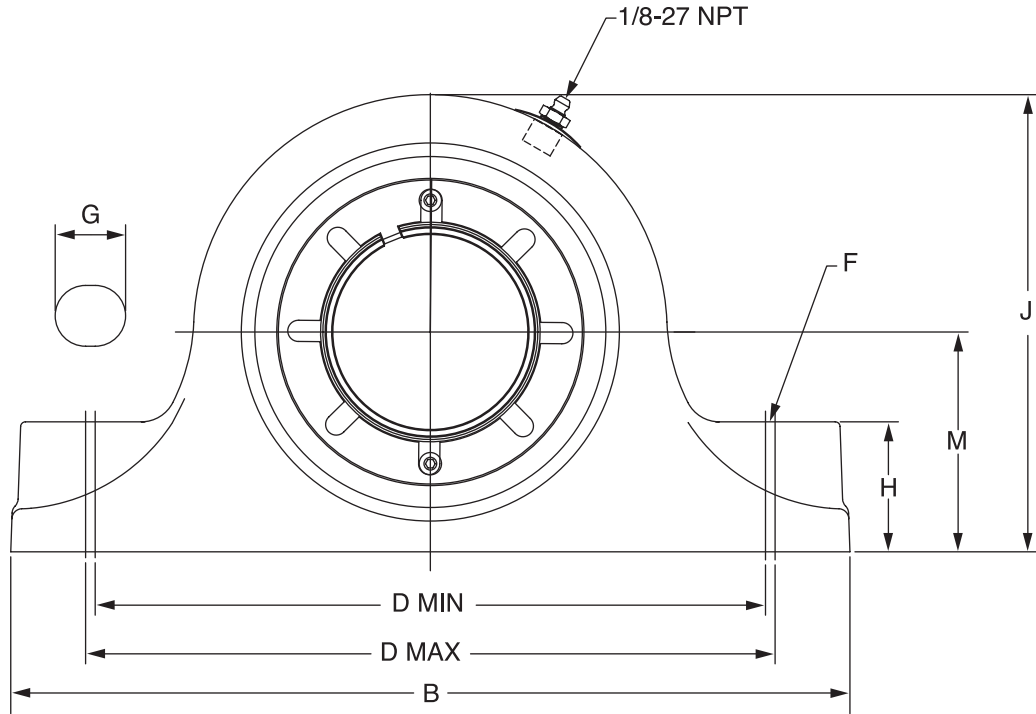
| Shaft Size | A | B | C | D | | F Bolt Dia. | G | H | J | L | M | R | S | X Total Exp. | Y | Z |
|------------|------|-------|------|-------|-------|-------------|------|------|------|------|------|------|------|--------------|------|------|
| | | | | Min | Max | | | | | | | | | | | |
| 2-3/8 | | | | | | | | | | | | | | | | |
| 2-7/16 | 3.42 | 9.25 | 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 | 2.94 |
| 2-1/2 | | | | | | | | | | | | | | | | |
| 2-11/16 | | | | | | | | | | | | | | | | |
| 2-3/4 | 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 |
| 2-15/16 | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | |
| 3-3/16 | | | | | | | | | | | | | | | | |
| 3-1/4 | 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 |
| 3-7/16 | | | | | | | | | | | | | | | | |
| 3-1/2 | | | | | | | | | | | | | | | | |
| 3-11/16 | | | | | | | | | | | | | | | | |
| 3-15/16 | 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 |
| 4 | | | | | | | | | | | | | | | | |

| | | | |
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DIMENSIONS

IMPERIAL - IP Pillow Block with Type E Dimensions
1-3/8 THRU 2-3/16 INCH 2-BOLT



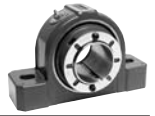
EXPANSION

NON-EXPANSION

NOTE: See page B14-36 for 2-1/4 thru 3-1/2 inch

| | | | |
|---------------------------------|------------------------------|---|--------------------------|
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DIMENSIONS



IMPERIAL - IP Pillow Block with Type E Dimensions 1-3/8 THRU 2-3/16 INCH 2-BOLT

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| Bearing Series | Shaft Size* | TRIDENT Seal | | | | Labyrinth Seal | | | |
|----------------|-------------|---------------|--------------|---------------|---------------|----------------|--------------|---------------|---------------|
| | | Non-Expansion | | Expansion | | Non-Expansion | | Expansion | |
| | | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name |
| 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 |

*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 1-7/16 | 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 |
| 1-1/2 1-5/8 1-11/16 | 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 |
| 1-3/4 1-7/8 1-15/16 2 | 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 |
| 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 | 0.03 | 2.60 |

Notes: "A" And "R" Dimensions Do Not Include "Y" Dimension

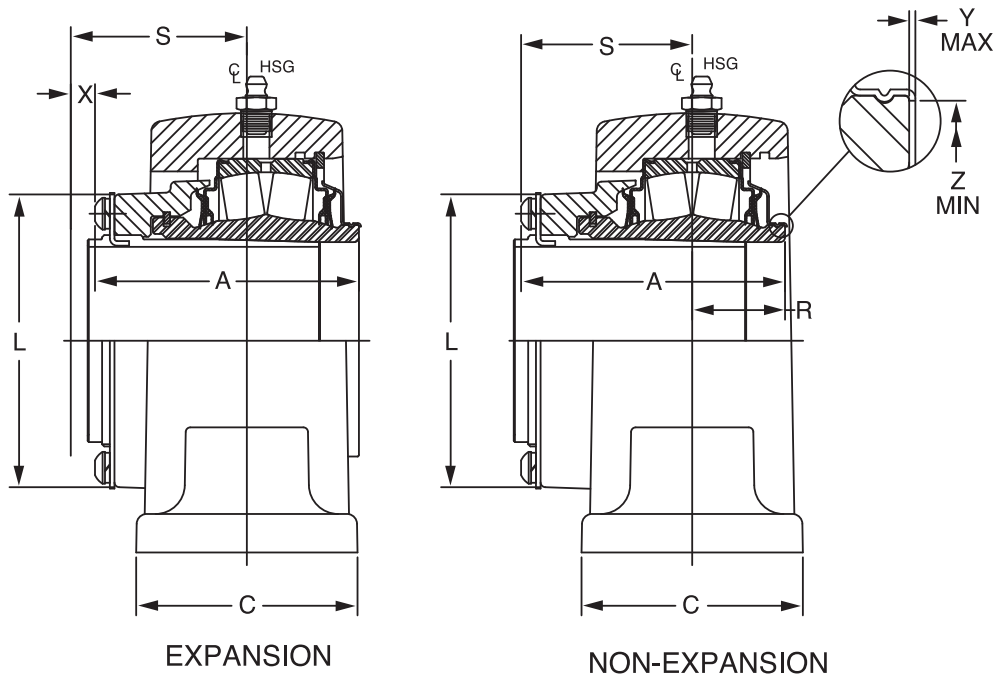
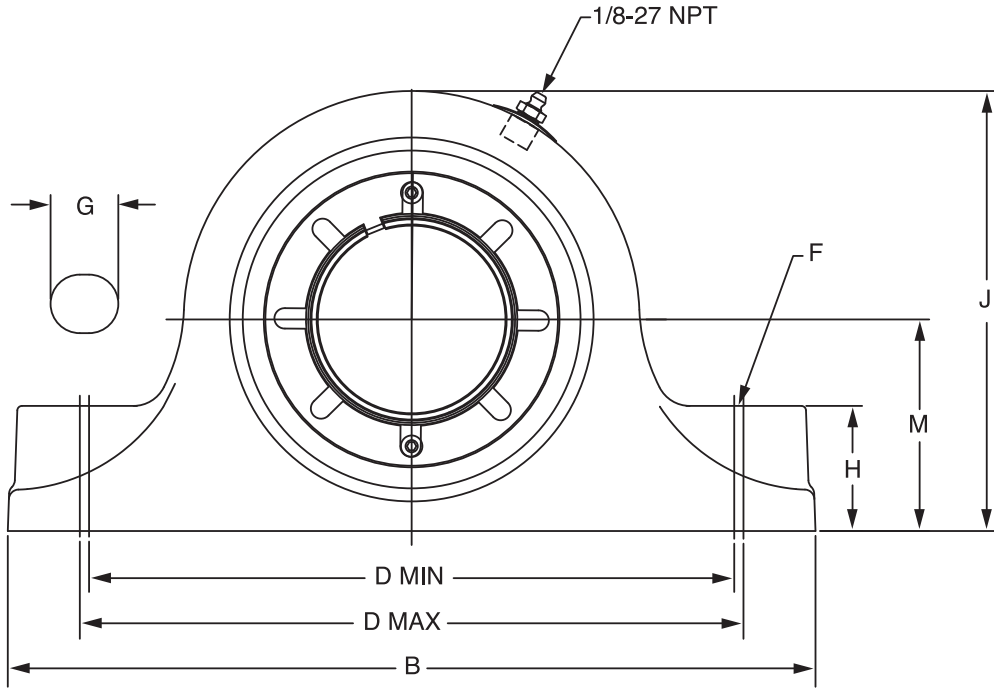
Reference Dimension Only

| | | | |
|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
|---------------------------------|------------------------------|---|--------------------------|



DIMENSIONS

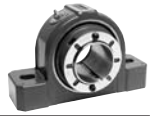
IMPERIAL - IP Pillow Block with Type E Dimensions
2-1/4 THRU 3-1/2 INCH 2-BOLT



NOTE: See page B14-34 for 1-3/8 thru 2-3/16 inch

| | | | |
|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
|---------------------------------|------------------------------|---|--------------------------|

DIMENSIONS



IMPERIAL - IP Pillow Block with Type E Dimensions 2-1/4 THRU 3-1/2 INCH 2-BOLT

Bearing Reference Guide
 E-Family Roller Bearings
 Specialty Tapered Products
 S-2000
 UNISPHERE II
 IMPERIAL
 UNIFIED SAF

| Bearing Series | Shaft Size* | TRIDENT Seal | | | | Labyrinth SEAL | | | |
|----------------|-------------|---------------|--------------|---------------|---------------|----------------|--------------|---------------|---------------|
| | | Non-Expansion | | Expansion | | Non-Expansion | | Expansion | |
| | | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name |
| 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 | | | | | | | | | | | |
| 2-1/4 2-7/16 2-1/2 | 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 | 0.03 | 2.95 |
| 2-11/16 2-3/4 2-15/16 3 | 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 | 0.03 | 3.47 |
| 3-3/16 3-1/4 3-7/16 3-1/2 | 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 | 0.03 | 4.05 |

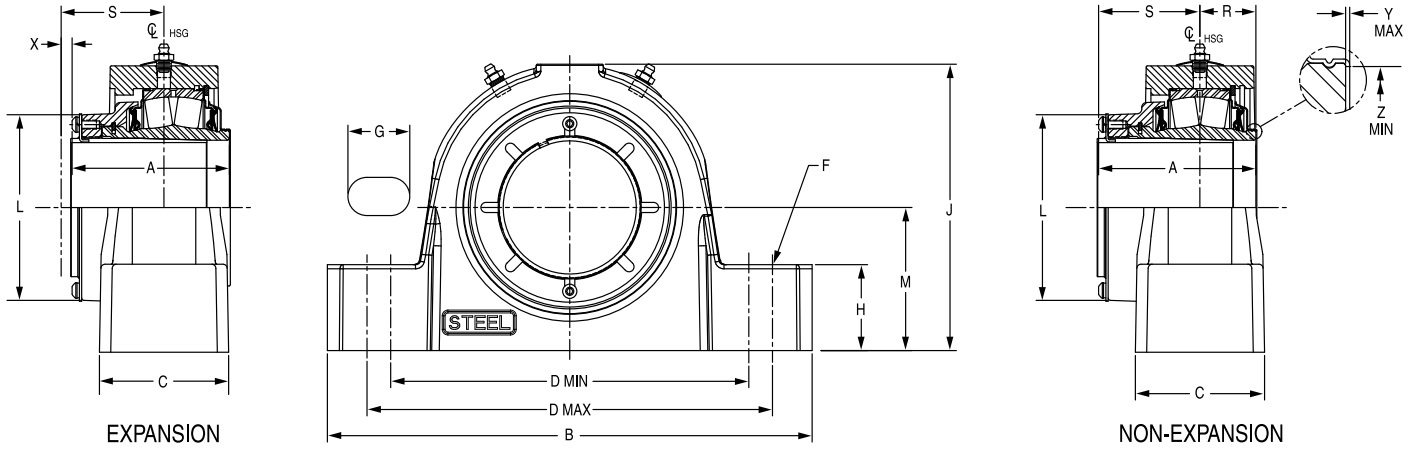
Notes: "A" And "R" Dimensions Do Not Include "Y" Dimension
Reference Dimension Only

| | | | |
|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
|---------------------------------|------------------------------|---|--------------------------|



DIMENSIONS

Steel IMPERIAL-HD Pillow Block 2-Bolt



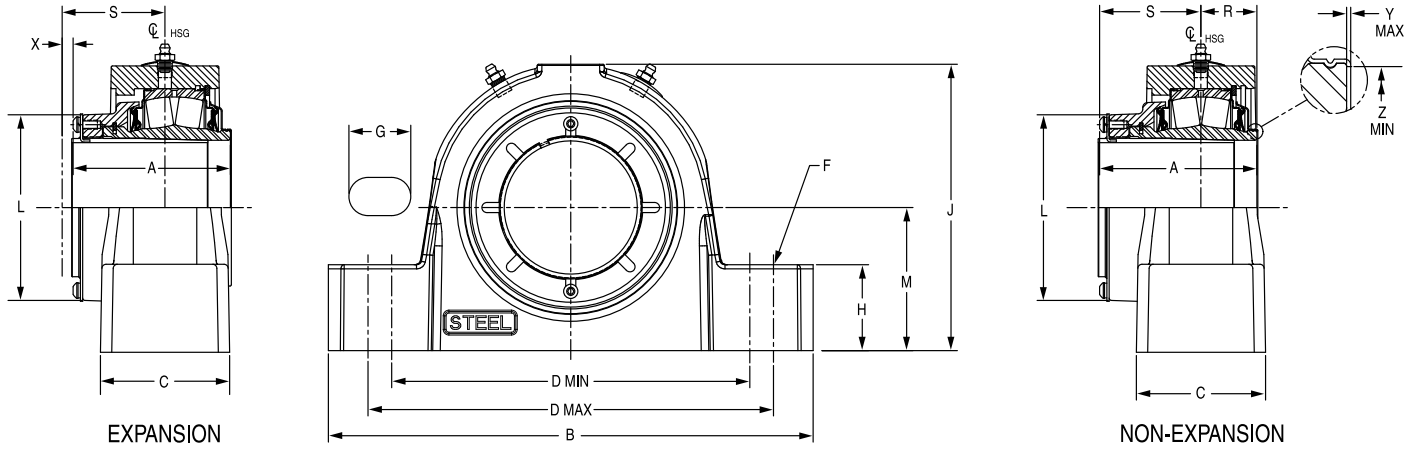
| Shaft Size | Dodge Non-Expansion | | Dodge Expansion | |
|------------|---------------------|--------------|-----------------|---------------|
| | Part No. | Description | Part No. | Description |
| 1-1/8 | 071650 | SP2B-IP-102R | 071678 | SP2B-IP-102RE |
| 1-3/16 | 071651 | SP2B-IP-103R | 071679 | SP2B-IP-103RE |
| 1-1/4 | 071652 | SP2B-IP-104R | 071680 | SP2B-IP-104RE |
| 1-3/8 | 071653 | SP2B-IP-106R | 071681 | SP2B-IP-106RE |
| 1-7/16 | 071654 | SP2B-IP-107R | 071682 | SP2B-IP-107RE |
| 1-1/2 | 071655 | SP2B-IP-108R | 071683 | SP2B-IP-108RE |
| 1-5/8 | 071656 | SP2B-IP-110R | 071684 | SP2B-IP-110RE |
| 1-11/16 | 071657 | SP2B-IP-111R | 071685 | SP2B-IP-111RE |
| 1-3/4 | 071658 | SP2B-IP-112R | 071686 | SP2B-IP-112RE |
| 1-7/8 | 071659 | SP2B-IP-114R | 071687 | SP2B-IP-114RE |
| 1-15/16 | 071660 | SP2B-IP-115R | 071688 | SP2B-IP-115RE |
| 2 | 071661 | SP2B-IP-200R | 071689 | SP2B-IP-200RE |
| 2-3/16 | 071662 | SP2B-IP-203R | 071690 | SP2B-IP-203RE |
| 2-1/4 | 071663 | SP2B-IP-204R | 071691 | SP2B-IP-204RE |
| 2-3/8 | 071664 | SP2B-IP-206R | 071692 | SP2B-IP-206RE |
| 2-7/16 | 071665 | SP2B-IP-207R | 071693 | SP2B-IP-207RE |
| 2-1/2 | 071666 | SP2B-IP-208R | 071694 | SP2B-IP-208RE |
| 2-11/16 | 071667 | SP2B-IP-211R | 071695 | SP2B-IP-211RE |
| 2-3/4 | 071668 | SP2B-IP-212R | 071696 | SP2B-IP-212RE |
| 2-15/16 | 071669 | SP2B-IP-215R | 071697 | SP2B-IP-215RE |
| 3 | 071670 | SP2B-IP-300R | 071698 | SP2B-IP-300RE |
| 3-3/16 | 071671 | SP2B-IP-303R | 071699 | SP2B-IP-303RE |
| 3-1/4 | 071672 | SP2B-IP-304R | 071700 | SP2B-IP-304RE |
| 3-7/16 | 071673 | SP2B-IP-307R | 071701 | SP2B-IP-307RE |
| 3-1/2 | 071674 | SP2B-IP-308R | 071702 | SP2B-IP-308RE |
| 3-11/16 | 071675 | SP2B-IP-311R | 071703 | SP2B-IP-311RE |
| 3-15/16 | 071676 | SP2B-IP-315R | 071704 | SP2B-IP-315RE |
| 4 | 071677 | SP2B-IP-400R | 071705 | SP2B-IP-400RE |

| | | | |
|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
|---------------------------------|------------------------------|---|--------------------------|

DIMENSIONS



Steel IMPERIAL-HD Pillow Block 2-Bolt



| Shaft Size | A | B | C | D | | F Bolt Dia. | G | H | J | L | M | R | S | X Total Exp | Y | Z |
|--|------|-------|------|-------|-------|-------------|------|------|------|------|-------|------|------|-------------|------|------|
| | | | | Min | Max | | | | | | | | | | | |
| 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 | 1.13 | 3.88 | 2.72 | 1.875 | 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 | 0.88 | 1.25 | 4.27 | 3.00 | 2.125 | 0.92 | 1.89 | 1/4 | 0.02 | 2.08 |
| 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 | 2.59 |
| 2-3/8 2-7/16 2-1/2 | 3.42 | 9.25 | 2.90 | 6.81 | 7.43 | 5/8 | 1.07 | 1.63 | 5.60 | 3.88 | 2.75 | 1.17 | 2.25 | 1/4 | 0.03 | 2.94 |
| 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 | 3.41 | 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 | 8.37 | 5.56 | 4.25 | 1.70 | 3.00 | 5/16 | 0.03 | 4.50 |

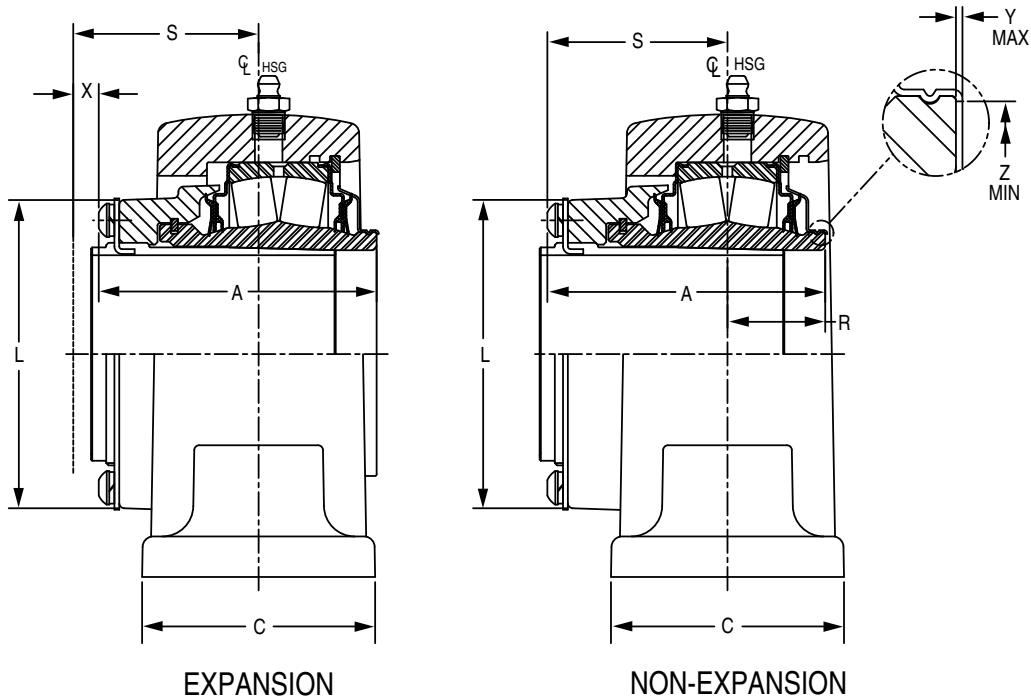
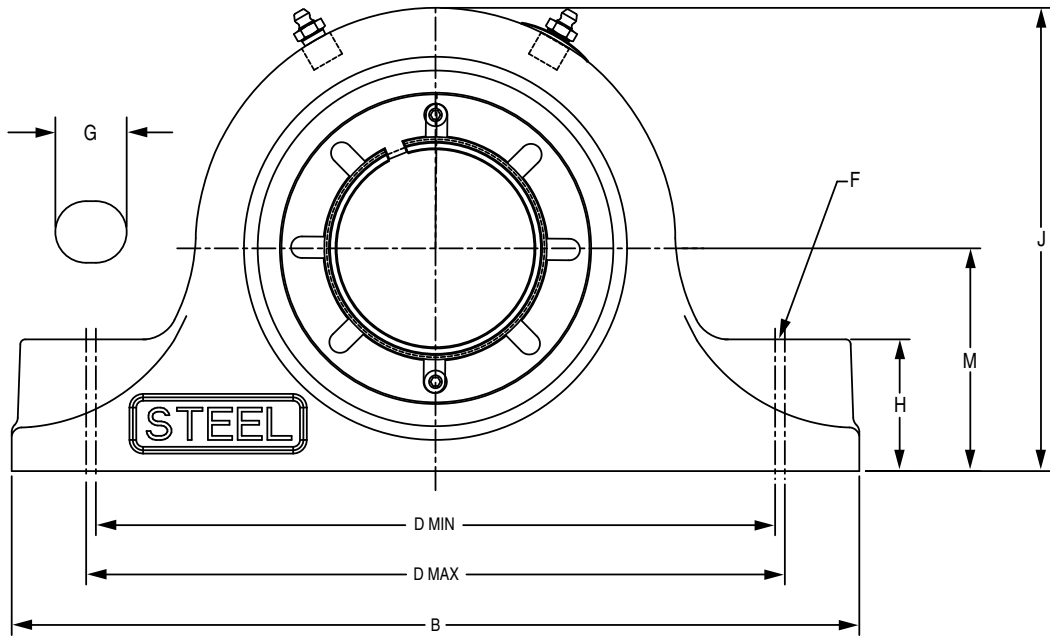
"A" & "R" Dimensions Do Not Include "Y" Dimension

| | | | |
|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
|---------------------------------|------------------------------|---|--------------------------|



DIMENSIONS

Steel IMPERIAL-HD Pillow Block 2-Bolt with Type E Dimensions



DIMENSIONS



Steel IMPERIAL-HD Pillow Block 2-Bolt with Type E Dimensions

Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

S-2000

UNISPHERE II

IMPERIAL

UNIFIED SAF

| Shaft Size | Dodge Non-Expansion | | Dodge Expansion | |
|------------|---------------------|---------------|-----------------|----------------|
| | Part No. | Description | Part No. | Description |
| 1-3/8 | 071864 | SEP2B-IP-106R | 071885 | SEP2B-IP-106RE |
| 1-7/16 | 071865 | SEP2B-IP-107R | 071886 | SEP2B-IP-107RE |
| 1-1/2 | 071866 | SEP2B-IP-108R | 071887 | SEP2B-IP-108RE |
| 1-5/8 | 071867 | SEP2B-IP-110R | 071888 | SEP2B-IP-110RE |
| 1-11/16 | 071868 | SEP2B-IP-111R | 071889 | SEP2B-IP-111RE |
| 1-3/4 | 071869 | SEP2B-IP-112R | 071890 | SEP2B-IP-112RE |
| 1-7/8 | 071870 | SEP2B-IP-114R | 071891 | SEP2B-IP-114RE |
| 1-15/16 | 071871 | SEP2B-IP-115R | 071892 | SEP2B-IP-115RE |
| 2 | 071872 | SEP2B-IP-200R | 071893 | SEP2B-IP-200RE |
| 2-3/16 | 071873 | SEP2B-IP-203R | 071894 | SEP2B-IP-203RE |
| 2-1/4 | 071874 | SEP2B-IP-204R | 071895 | SEP2B-IP-204RE |
| 2-7/16 | 071875 | SEP2B-IP-207R | 071896 | SEP2B-IP-207RE |
| 2-1/2 | 071876 | SEP2B-IP-208R | 071897 | SEP2B-IP-208RE |
| 2-11/16 | 071877 | SEP2B-IP-211R | 071898 | SEP2B-IP-211RE |
| 2-3/4 | 071878 | SEP2B-IP-212R | 071899 | SEP2B-IP-212RE |
| 2-15/16 | 071879 | SEP2B-IP-215R | 071900 | SEP2B-IP-215RE |
| 3 | 071880 | SEP2B-IP-300R | 071901 | SEP2B-IP-300RE |
| 3-3/16 | 071881 | SEP2B-IP-303R | 071902 | SEP2B-IP-303RE |
| 3-1/4 | 071882 | SEP2B-IP-304R | 071903 | SEP2B-IP-304RE |
| 3-7/16 | 071883 | SEP2B-IP-307R | 071904 | SEP2B-IP-307RE |
| 3-1/2 | 071884 | SEP2B-IP-308R | 071905 | SEP2B-IP-308RE |

| 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 | 6.88 | 2.25 | 4.69 | 5.88 | 1/2 | 1.22 | 1.13 | 3.84 | 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 | 5.7 | 6.5 | 1/2 | 1.02 | 1.25 | 4.26 | 3 | 2.125 | 0.96 | 1.83 | 3/16 | 0.02 | 2.08 |
| 1-5/8 | | | | | | | | | | | | | | | | |
| 1-11/16 | | | | | | | | | | | | | | | | |
| 1-3/4 | 2.86 | 8.88 | 2.44 | 6 | 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 | 9.63 | 2.50 | 6.50 | 7.88 | 5/8 | 1.45 | 1.50 | .00 | 3.50 | 2.500 | 1.06 | 1.97 | 1/4 | 0.03 | 2.60 |
| 2-1/4 | | | | | | | | | | | | | | | | |
| 2-7/16 | 3.42 | 10.25 | 2.9 | 6.88 | 8.62 | 5/8 | 1.63 | 1.63 | 5.71 | 3.88 | 2.75 | 1.2 | 2.22 | 1/4 | 0.03 | 2.95 |
| 2-1/2 | | | | | | | | | | | | | | | | |
| 2-11/16 | | | | | | | | | | | | | | | | |
| 2-3/4 | 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 |
| 2-15/16 | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | |
| 3-3/16 | 4.17 | 13.5 | 3.41 | 9.38 | 11.25 | 7/8 | 1.94 | 2.25 | 7.69 | 5 | 3.75 | 1.51 | 2.66 | 1/4 | 0.03 | 4.05 |
| 3-1/4 | | | | | | | | | | | | | | | | |
| 3-7/16 | | | | | | | | | | | | | | | | |
| 3-1/2 | | | | | | | | | | | | | | | | |

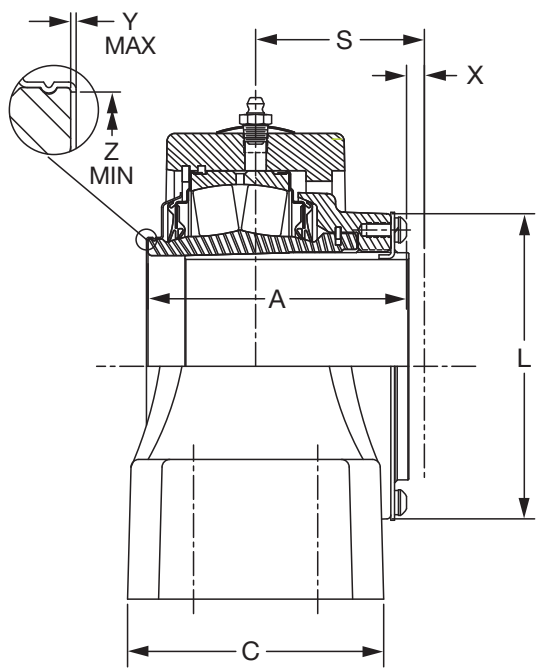
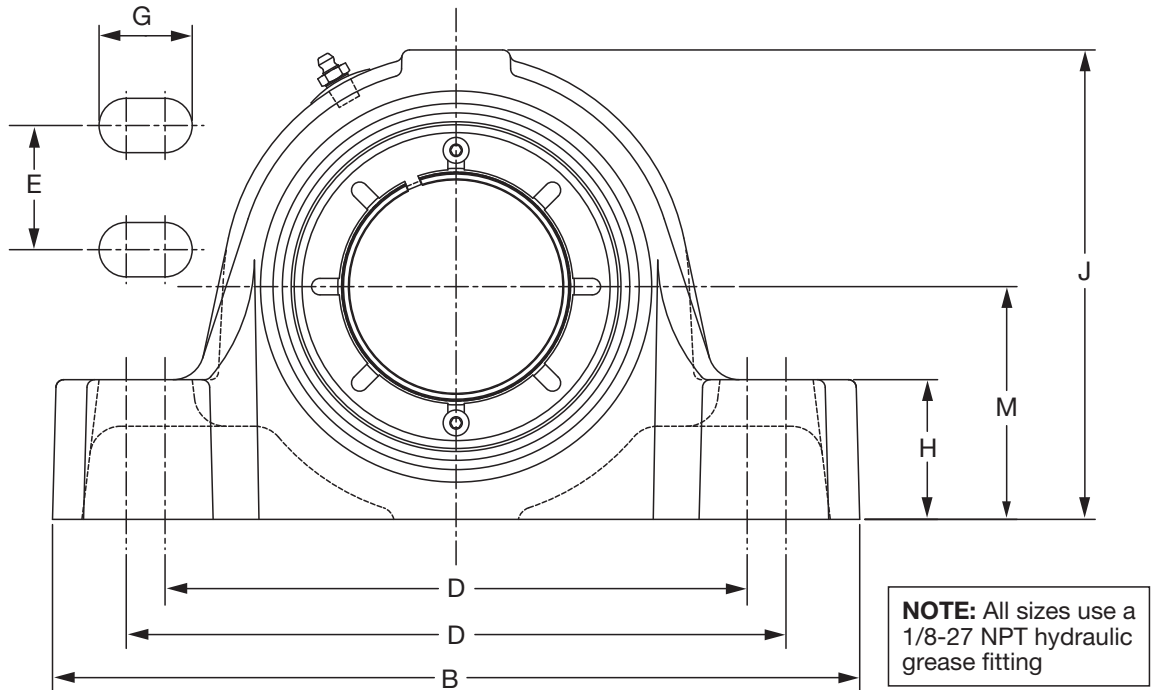
A & *R* Dimensions Do Not Include *Y* Dimension

| | | | |
|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
|---------------------------------|------------------------------|---|--------------------------|

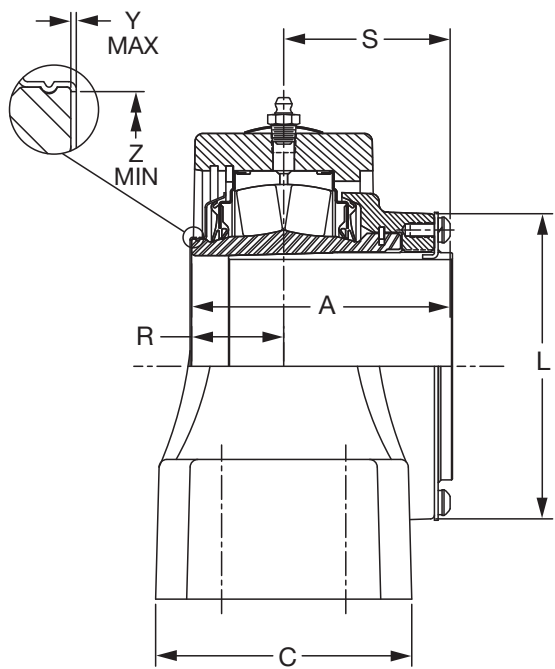


DIMENSIONS

IMPERIAL - IP Pillow Block 2-3/8 THRU 3-1/2 INCH - 4-BOLT



EXPANSION



NON-EXPANSION

NOTE: See page B14-44 for 3-11/16 thru 5 inch

| | | | |
|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
|---------------------------------|------------------------------|---|--------------------------|



DIMENSIONS

IMPERIAL - IP Pillow Block 2-3/8 THRU 3-1/2 INCH - 4-BOLT

Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

S-2000

UNISPHERE II

IMPERIAL

UNIFIED SAF

| Bearing | Shaft Size Inch | TRIDENT Seal | | | | Labyrinth Seal | | | |
|---------|-----------------|---------------|-------------|---------------|--------------|----------------|-------------|---------------|--------------|
| | | Non-Expansion | | Expansion | | Non-Expansion | | Expansion | |
| | | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name |
| 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 |

Metric shaft sizes available upon request

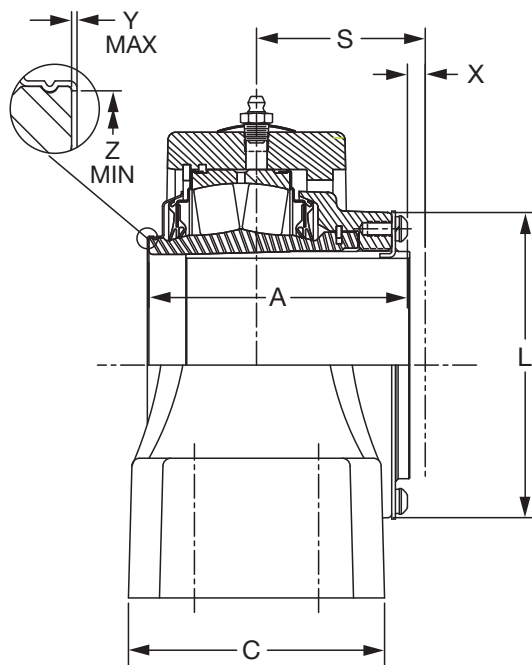
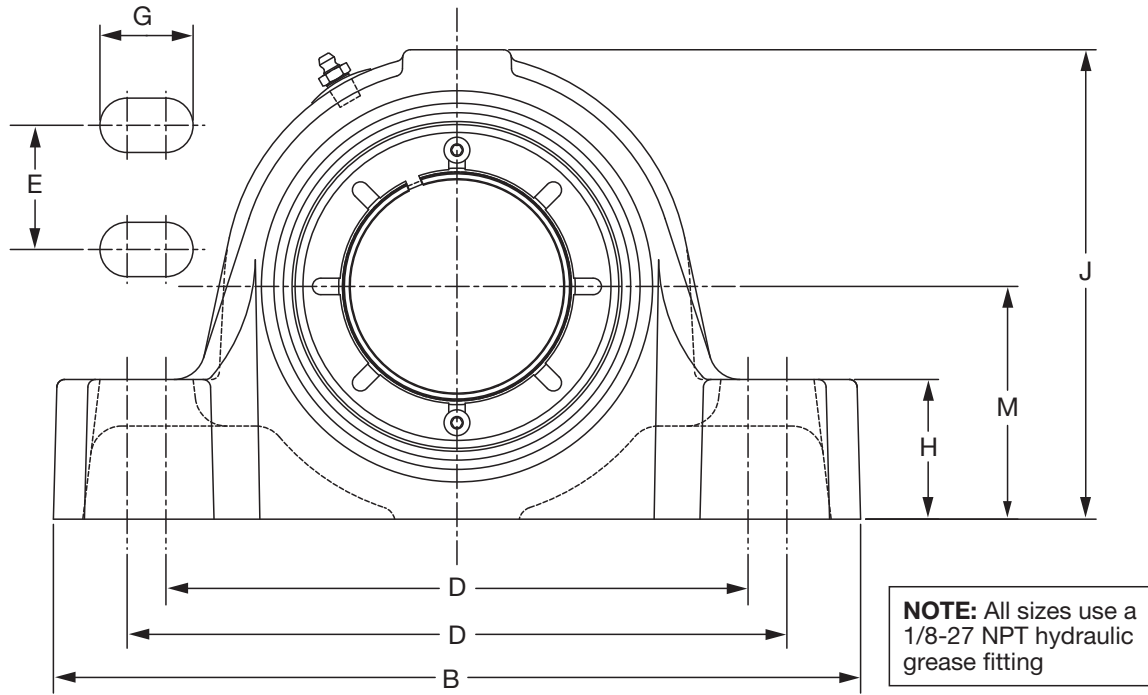
| Shaft Size | A | B | C | D | | E | F Bolt Dia. | G | H | J | L | M | R | S | X Total Exp. | Y | Z |
|------------|------|-------|------|------|-------|------|-------------|------|------|------|------|------|------|------|--------------|------|------|
| | | | | Min | Max | | | | | | | | | | | | |
| 2-3/8 | 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 |
| 2-7/16 | | | | | | | | | | | | | | | | | |
| 2-1/2 | | | | | | | | | | | | | | | | | |
| 2-11/16 | 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 |
| 2-3/4 | | | | | | | | | | | | | | | | | |
| 2-15/16 | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | |
| 3-3/16 | 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 |
| 3-1/4 | | | | | | | | | | | | | | | | | |
| 3-7/16 | | | | | | | | | | | | | | | | | |
| 3-1/2 | | | | | | | | | | | | | | | | | |

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|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
|---------------------------------|------------------------------|---|--------------------------|

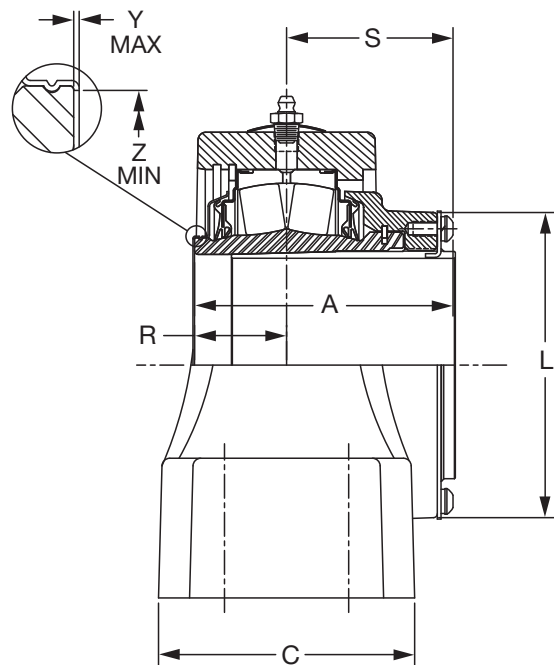


DIMENSIONS

**IMPERIAL - IP Pillow Block
3-11/16 THRU 5 INCH - 4-BOLT**



EXPANSION

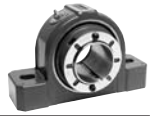


NON-EXPANSION

NOTE: See page B14-42 for 2-3/8 thru 3-1/2 inch

| | | | |
|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
|---------------------------------|------------------------------|---|--------------------------|

DIMENSIONS



IMPERIAL - IP Pillow Block 3-11/16 THRU 5 INCH - 4-BOLT

Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

S-2000

UNISPHERE II

IMPERIAL

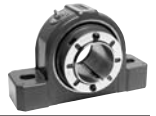
UNIFIED SAF

| Bearing | Shaft Size Inch | TRIDENT Seal | | | | Labyrinth Seal | | | |
|---------|-----------------|---------------|-------------|---------------|--------------|----------------|-------------|---------------|--------------|
| | | Non-Expansion | | Expansion | | Non-Expansion | | Expansion | |
| | | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name |
| 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 |

Metric shaft sizes available upon request

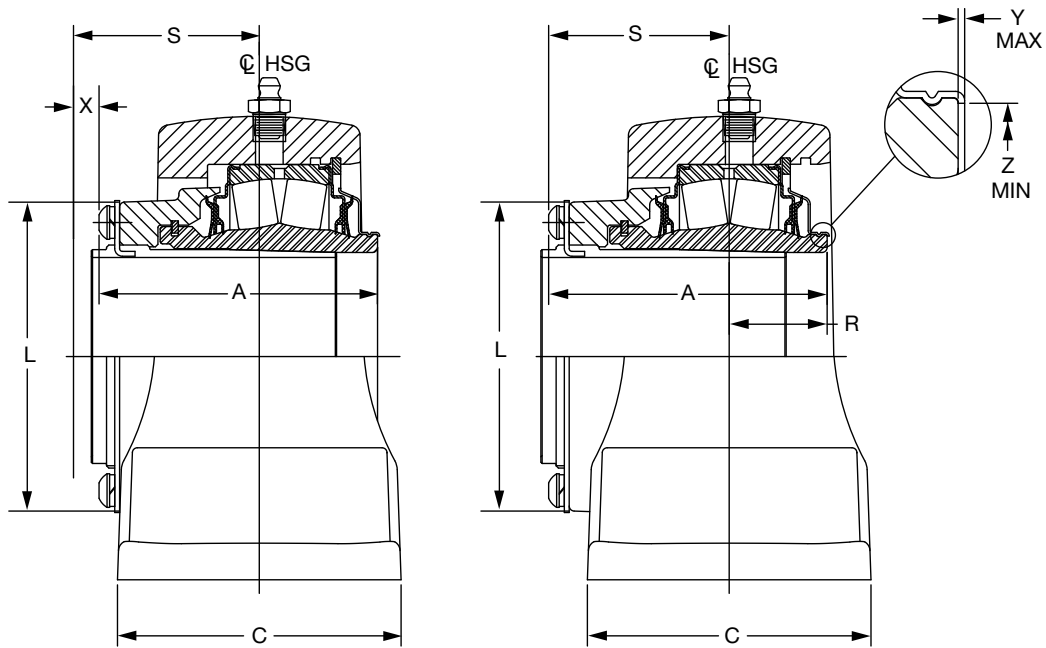
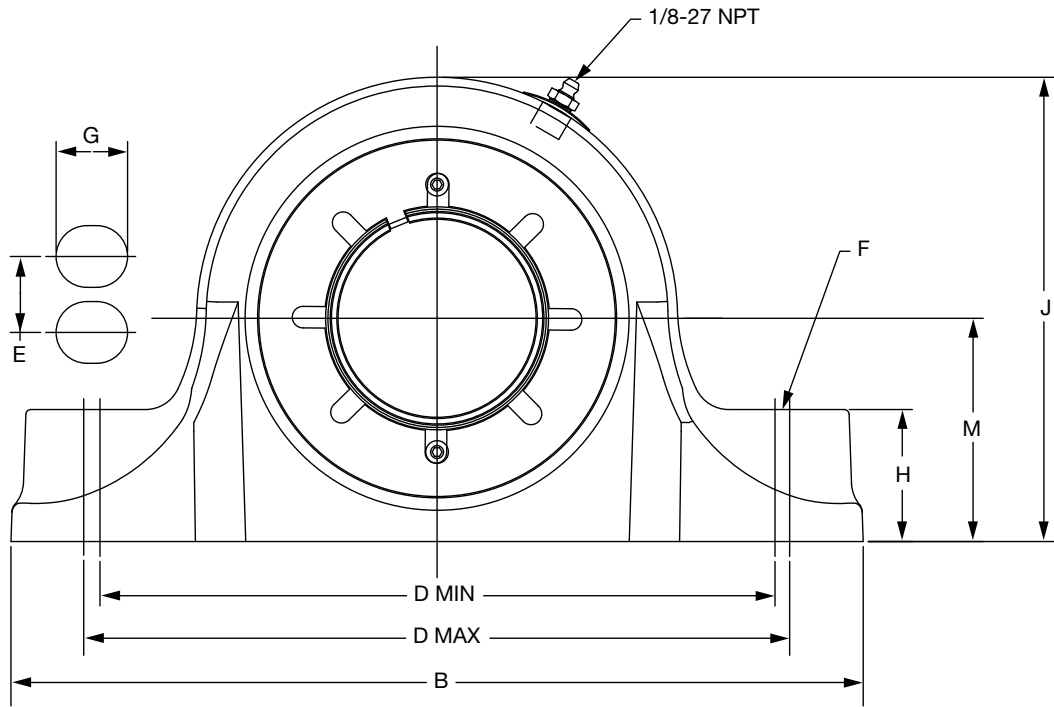
| Shaft Size | A | B | C | D | | E | F Bolt Dia. | G | H | J | L | M | R | S | X Total Exp. | Y | Z |
|------------|------|-------|------|-------|-------|------|-------------|------|------|-------|------|------|------|------|--------------|------|------|
| | | | | Min | Max | | | | | | | | | | | | |
| 3-11/16 | 4.70 | 15.25 | 4.50 | 12.13 | 12.88 | 2.25 | 3/4 | 1.25 | 2.44 | 8.44 | 5.56 | 4.25 | 1.64 | 3.06 | 5/16 | 0.03 | 4.50 |
| 3-15/16 | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | |
| 4-7/16 | 5.23 | 16.50 | 4.75 | 12.00 | 14.00 | 2.50 | 3/4 | 1.38 | 2.75 | 9.63 | 6.44 | 4.75 | 1.75 | 3.48 | 3/8 | 0.04 | 5.00 |
| 4-1/2 | | | | | | | | | | | | | | | | | |
| 4-15/16 | 5.98 | 18.63 | 5.38 | 15.00 | 16.00 | 2.75 | 7/8 | 1.50 | 3.00 | 11.13 | 7.63 | 5.50 | 1.91 | 4.08 | 3/8 | 0.04 | 5.84 |
| 5 | | | | | | | | | | | | | | | | | |

| | | | |
|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
|---------------------------------|------------------------------|---|--------------------------|



DIMENSIONS

**IMPERIAL - IP Pillow Block with Type E Dimensions
2-1/4 THRU 7 INCH - 4-BOLT**



EXPANSION

NON-EXPANSION

DIMENSIONS



IMPERIAL - IP Pillow Block with Type E Dimensions 2-1/4 THRU 7 INCH - 4-BOLT

| Bearing Series | Shaft Size* | TRIDENT Seal | | | | Labyrinth Seal | | | |
|----------------|-------------|---------------|--------------|---------------|---------------|----------------|--------------|---------------|---------------|
| | | Non-Expansion | | Expansion | | Non-Expansion | | Expansion | |
| | | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name |
| 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 2-1/2 | 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 |
| 2-11/16 2-3/4 2-15/16 3 | 3.50 | 12.00 | 4.00 | 9.18 | 9.82 | 2.13 | 5/8 | 1.00 | 1.88 | 6.33 | 4.28 | 3.13 | 1.35 | 2.15 | 1/4 | 0.03 | 3.47 |
| 3-3/16 3-1/4 3-7/16 3-1/2 | 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 | 2.63 | 1/4 | 0.03 | 4.05 |
| 3-15/16 4 | 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 |
| 4-7/16 4-1/2 | 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 |
| 4-15/16 5 | 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 |
| 5-7/16 5-1/2 | 6.17 | 22 | 6.25 | 17.38 | 19.12 | 3.75 | 1 | 2.00 | 3.25 | 13.19 | 8.75 | 6.69 | 1.4 | 4.77 | 3/8 | 0.04 | 5.92 |
| 5-15/16 6 | 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 |
| 6-7/16 6-1/2 6-15/16 7 | 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 |

Notes: "A" And "R" Dimensions Do Not Include "Y" Dimension

Reference Dimension Only

| | | | |
|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
|---------------------------------|------------------------------|---|--------------------------|



DIMENSIONS

Steel IMPERIAL-HD Pillow Block 4-Bolt

Bearing Reference Guide

E-Family Roller Bearings

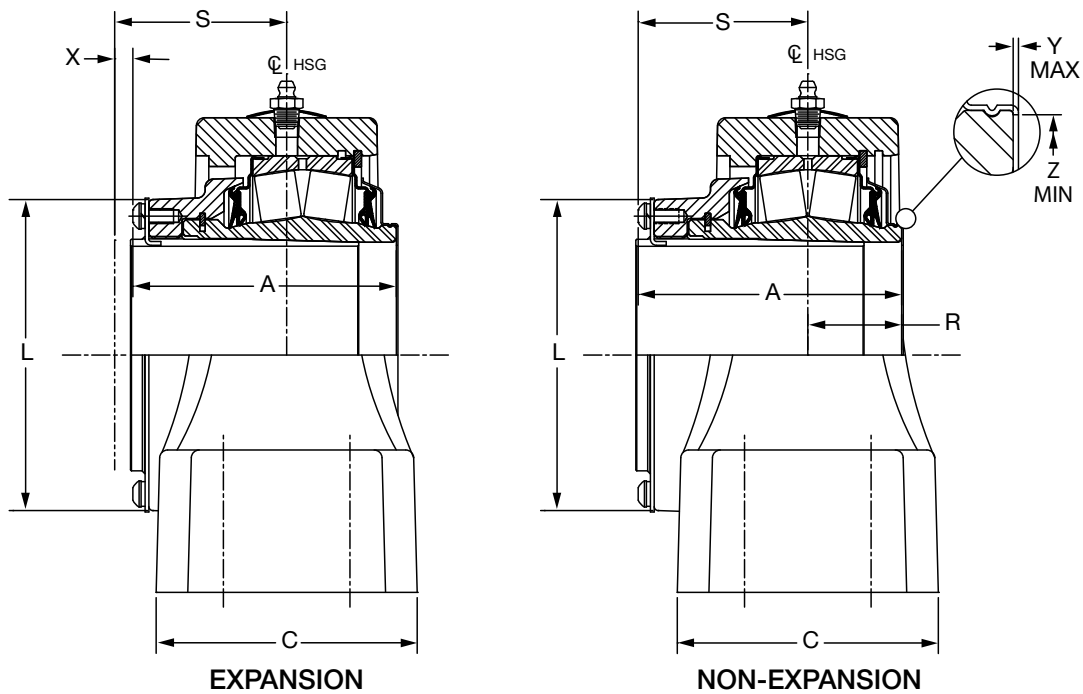
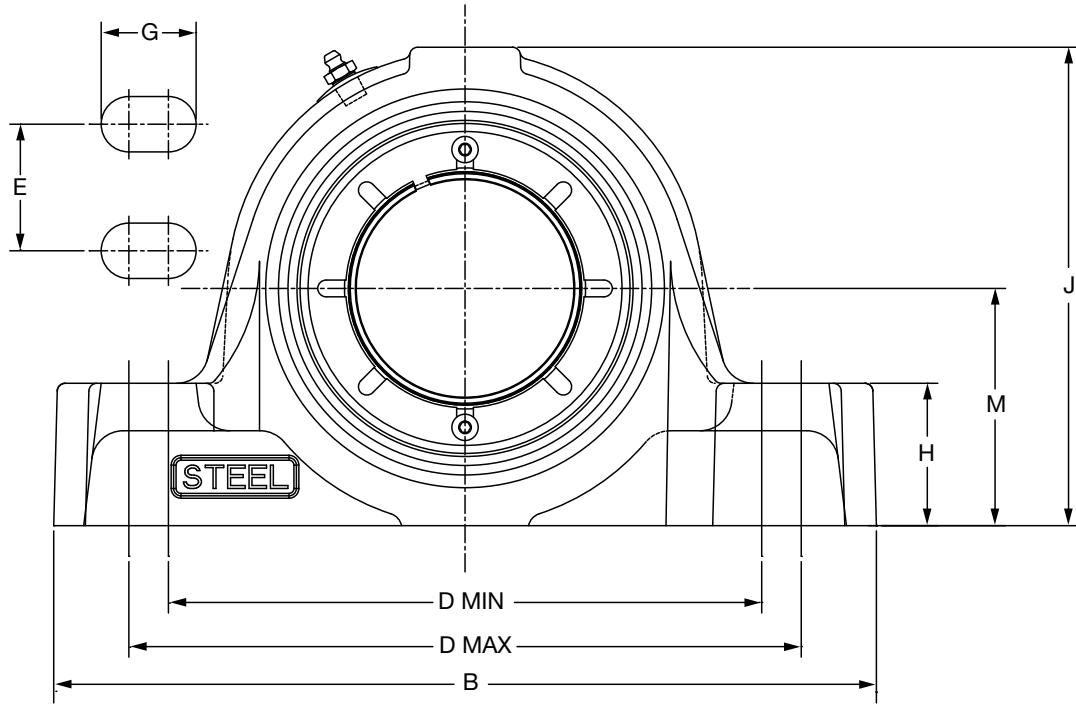
Specialty Tapered Products

S-2000

UNISPHERE II

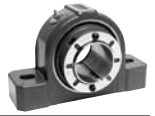
IMPERIAL

UNIFIED SAF



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DIMENSIONS



Steel IMPERIAL-HD Pillow Block 4-Bolt

Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

S-2000

UNISPHERE II

IMPERIAL

UNIFIED SAF

| Shaft Size | Dodge Non-Expansion | | Dodge Expansion | |
|------------|---------------------|--------------|-----------------|---------------|
| | Dodge Part No. | Description | Dodge Part No. | Description |
| 2-3/8 | 071706 | SP4B-IP-206R | 071724 | SP4B-IP-206RE |
| 2-7/16 | 071707 | SP4B-IP-207R | 071725 | SP4B-IP-207RE |
| 2-1/2 | 071708 | SP4B-IP-208R | 071726 | SP4B-IP-208RE |
| 2-11/16 | 071709 | SP4B-IP-211R | 071727 | SP4B-IP-211RE |
| 2-3/4 | 071710 | SP4B-IP-212R | 071728 | SP4B-IP-212RE |
| 2-15/16 | 071711 | SP4B-IP-215R | 071729 | SP4B-IP-215RE |
| 3 | 071712 | SP4B-IP-300R | 071730 | SP4B-IP-300RE |
| 3-3/16 | 071713 | SP4B-IP-303R | 071731 | SP4B-IP-303RE |
| 3-1/4 | 071714 | SP4B-IP-304R | 071732 | SP4B-IP-304RE |
| 3-7/16 | 071715 | SP4B-IP-307R | 071733 | SP4B-IP-307RE |
| 3-1/2 | 071716 | SP4B-IP-308R | 071734 | SP4B-IP-308RE |
| 3-11/16 | 071717 | SP4B-IP-311R | 071735 | SP4B-IP-311RE |
| 3-15/16 | 071718 | SP4B-IP-315R | 071736 | SP4B-IP-315RE |
| 4 | 071719 | SP4B-IP-400R | 071737 | SP4B-IP-400RE |
| 4-7/16 | 071720 | SP4B-IP-407R | 071738 | SP4B-IP-407RE |
| 4-1/2 | 071721 | SP4B-IP-408R | 071739 | SP4B-IP-408RE |
| 4-15/16 | 071722 | SP4B-IP-415R | 071740 | SP4B-IP-415RE |
| 5 | 071723 | SP4B-IP-500R | 071741 | SP4B-IP-500RE |

| 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 | 3.42 | 9.25 | 3.00 | 6.88 | 7.63 | 1.75 | 1/2 | 1.06 | 1.63 | 5.61 | 3.88 | 2.75 | 1.17 | 2.25 | 1/4 | 0.03 | 2.94 |
| 2-7/16 | | | | | | | | | | | | | | | | | |
| 2-1/2 | | | | | | | | | | | | | | | | | |
| 2-11/16 | 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 |
| 2-3/4 | | | | | | | | | | | | | | | | | |
| 2-15/16 | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | |
| 3-3/16 | 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 |
| 3-1/4 | | | | | | | | | | | | | | | | | |
| 3-7/16 | | | | | | | | | | | | | | | | | |
| 3-1/2 | | | | | | | | | | | | | | | | | |
| 3-11/16 | 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 |
| 3-15/16 | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | |
| 4-7/16 | | | | | | | | | | | | | | | | | |
| 4-1/2 | 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 |
| 4-15/16 | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | |
| 5 | 5.98 | 17.50 | 5.03 | 15.13 | 15.88 | 2.75 | 7/8 | 1.38 | 3.00 | 11.12 | 7.63 | 5.50 | 2.22 | 3.77 | 3/8 | 0.04 | 5.84 |

"A" & "R" Dimensions Do Not Include "Y" Dimension

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



DIMENSIONS

Steel IMPERIAL-HD Pillow Block 4-Bolt with Type E Dimensions

Bearing Reference Guide

E-Family Roller Bearings

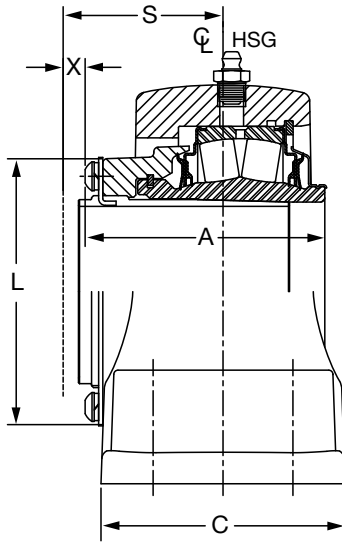
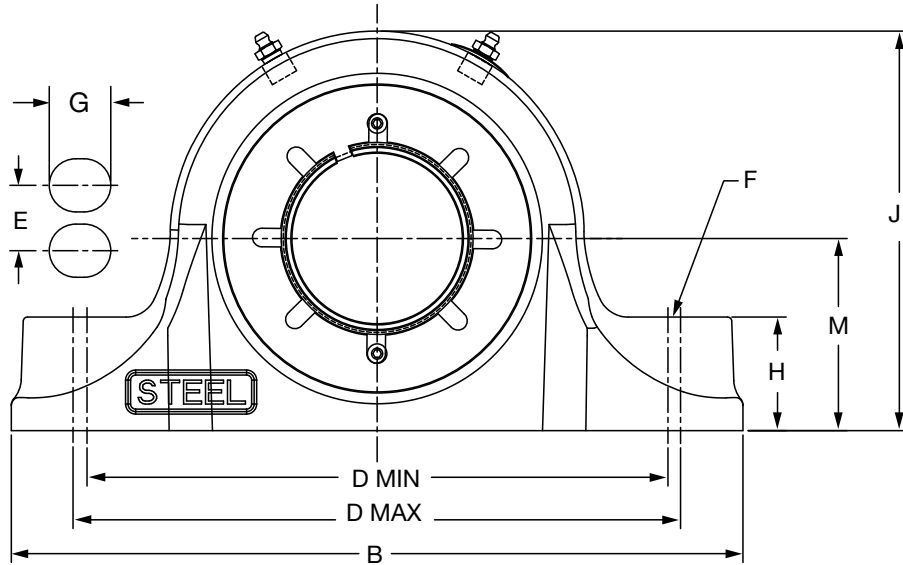
Specialty Tapered Products

S-2000

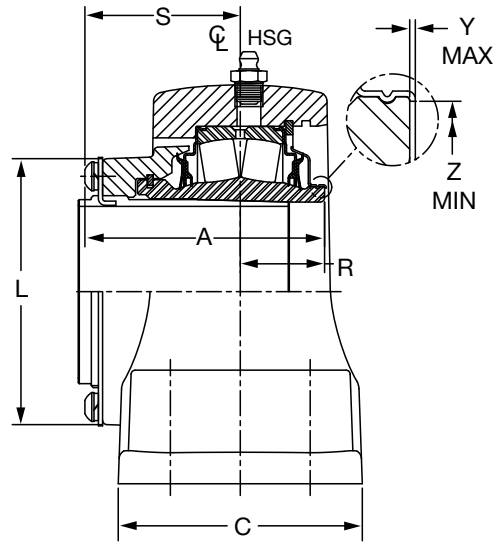
UNISPHERE II

IMPERIAL

UNIFIED SAF



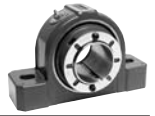
3-11/16" THRU 5"
EXPANSION



3-11/16" THRU 5"
NON-EXPANSION

| | | | |
|---|--------------------------------------|---|----------------------------------|
| <p>FEATURES/BENEFITS PAGE B14-2</p> | <p>SPECIFICATIONS PAGE B14-5</p> | <p>HOW TO ORDER/NOMENCLATURE PAGE B14-8</p> | <p>SELECTION PAGE B14-14</p> |
|---|--------------------------------------|---|----------------------------------|

DIMENSIONS



Steel IMPERIAL-HD Pillow Block 4-Bolt with Type E Dimensions

Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

S-2000

UNISPHERE II

IMPERIAL

UNIFIED SAF

| Shaft Size | Dodge Non-Expansion | | Dodge Expansion | |
|------------|---------------------|---------------|-----------------|----------------|
| | Dodge Part No. | Description | Dodge Part No. | Description |
| 2-1/4 | 071906 | SEP4B-IP-204R | 071923 | SEP4B-IP-204RE |
| 2-7/16 | 071907 | SEP4B-IP-207R | 071924 | SEP4B-IP-207RE |
| 2-1/2 | 071908 | SEP4B-IP-208R | 071925 | SEP4B-IP-208RE |
| 2-11/16 | 071909 | SEP4B-IP-211R | 071926 | SEP4B-IP-211RE |
| 2-3/4 | 071910 | SEP4B-IP-212R | 071927 | SEP4B-IP-212RE |
| 2-15/16 | 071911 | SEP4B-IP-215R | 071928 | SEP4B-IP-215RE |
| 3 | 071912 | SEP4B-IP-300R | 071929 | SEP4B-IP-300RE |
| 3-3/16 | 071913 | SEP4B-IP-303R | 071930 | SEP4B-IP-303RE |
| 3-1/4 | 071914 | SEP4B-IP-304R | 071931 | SEP4B-IP-304RE |
| 3-7/16 | 071915 | SEP4B-IP-307R | 071932 | SEP4B-IP-307RE |
| 3-1/2 | 071916 | SEP4B-IP-308R | 071933 | SEP4B-IP-308RE |
| 3-15/16 | 071917 | SEP4B-IP-315R | 071934 | SEP4B-IP-315RE |
| 4 | 071918 | SEP4B-IP-400R | 071935 | SEP4B-IP-400RE |
| 4-7/16 | 071919 | SEP4B-IP-407R | 071936 | SEP4B-IP-407RE |
| 4-1/2 | 071920 | SEP4B-IP-408R | 071937 | SEP4B-IP-408RE |
| 4-15/16 | 071921 | SEP4B-IP-415R | 071938 | SEP4B-IP-415RE |
| 5 | 071922 | SEP4B-IP-500R | 071939 | SEP4B-IP-500RE |

| 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 2-1/2 | 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 |
| 2-11/16 2-3/4 2-15/16 3 | 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 |
| 3-3/16 3-1/4 3-7/16 3-1/2 | 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 |
| 3-15/16 4 | 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 |
| 4-7/16 4-1/2 | 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 |
| 4-15/16 5 | 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 |

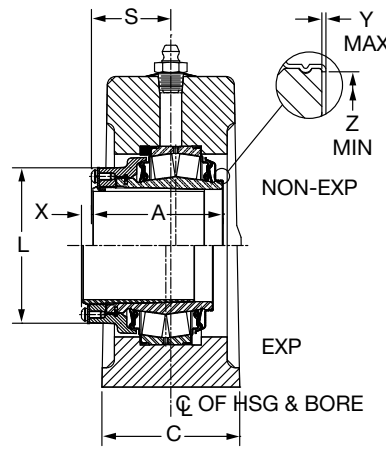
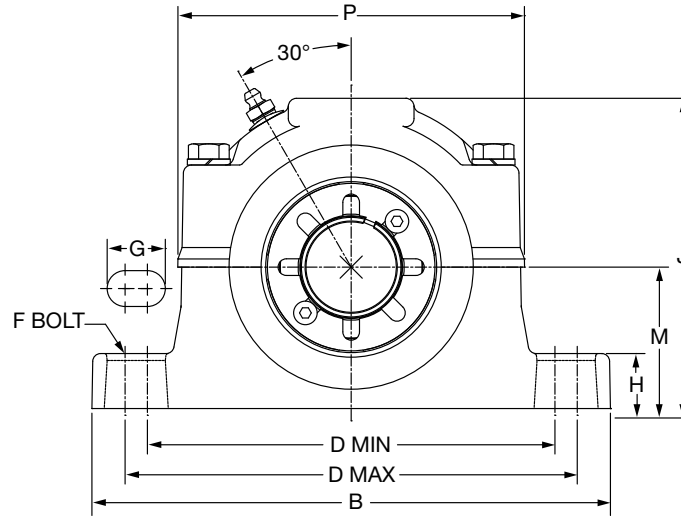
"A" & "R" Dimensions Do Not Include "Y" Dimension

| | | | |
|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
|---------------------------------|------------------------------|---|--------------------------|



DIMENSIONS

IMPERIAL ISAF 1-7/16 THRU 3-7/16 INCH - 2-BOLT



CONTACT SEAL

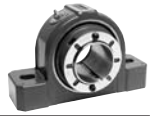
| Bearing | Shaft Size Inch | TRIDENT Seal | | | | Labyrinth Seal | | | |
|---------|-----------------|---------------|------------------|---------------|-------------------|----------------|------------------|---------------|-------------------|
| | | Non-Expansion | | Expansion | | Non-Expansion | | Expansion | |
| | | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name |
| 22208 | 1-7/16 | 070054 | P2B509-ISAF-107R | 070064 | P2B509-ISAF-107RE | 070074 | P2B509-ISAF-107L | 070084 | P2B509-ISAF-107LE |
| 22209 | 1-11/16 | 070055 | P2B510-ISAF-111R | 070065 | P2B510-ISAF-111RE | 070075 | P2B510-ISAF-111L | 070085 | P2B510-ISAF-111LE |
| 22210 | 1-15/16 | 070056 | P2B511-ISAF-115R | 070066 | P2B511-ISAF-115RE | 070076 | P2B511-ISAF-115L | 070086 | P2B511-ISAF-115LE |
| 22211 | 2-3/16 | 070057 | P2B513-ISAF-203R | 070067 | P2B513-ISAF-203RE | 070077 | P2B513-ISAF-203L | 070087 | P2B513-ISAF-203LE |
| 22213 | 2-7/16 | 070951 | P2B515-ISAF-207R | 070955 | P2B515-ISAF-207RE | 070959 | P2B515-ISAF-207L | 070963 | P2B515-ISAF-207LE |
| 22215 | 2-11/16 | 070952 | P2B516-ISAF-211R | 070956 | P2B516-ISAF-211RE | 070960 | P2B516-ISAF-211L | 070964 | P2B516-ISAF-211LE |
| 22215 | 2-15/16 | 070953 | P2B517-ISAF-215R | 070957 | P2B517-ISAF-215RE | 070961 | P2B517-ISAF-215L | 070965 | P2B517-ISAF-215LE |
| 22218 | 3-7/16 | 070954 | P2B520-ISAF-307R | 070958 | P2B520-ISAF-307RE | 070962 | P2B520-ISAF-307L | 070966 | P2B520-ISAF-307LE |

Metric shaft sizes available upon request

NOTE: See page B14-54 for 2-7/16 thru 7 inch

| | | | |
|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
|---------------------------------|------------------------------|---|--------------------------|

DIMENSIONS



IMPERIAL ISAF 1-7/16 THRU 3-7/16 INCH - 2-BOLT

Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

S-2000

UNISPHERE II

IMPERIAL

UNIFIED SAF

| Shaft Size | SAF Series | A | B | C | D | | F Bolts | G | H |
|------------|------------|------|-------|------|-------|-------|---------|------|------|
| | | | | | Min | Max | | | |
| 1-7/16 | 509 | 2.63 | 8.25 | 2.19 | 6.25 | 7.00 | 1/2 | 0.94 | 0.88 |
| 1-11/16 | 510 | 2.80 | 8.25 | 2.38 | 6.50 | 7.00 | 1/2 | 0.88 | 1.03 |
| 1-15/16 | 511 | 2.86 | 9.63 | 2.75 | 7.38 | 8.25 | 5/8 | 1.20 | 1.03 |
| 2-3/16 | 513 | 3.03 | 11.00 | 3.25 | 8.60 | 9.50 | 5/8 | 1.16 | 1.03 |
| 2-7/16 | 515 | 3.42 | 11.13 | 3.13 | 8.63 | 9.63 | 5/8 | 1.13 | 1.25 |
| 2-11/16 | 516 | 3.50 | 12.59 | 3.50 | 9.88 | 11.00 | 3/4 | 1.31 | 1.00 |
| 2-15/16 | 517 | 3.50 | 12.59 | 3.50 | 9.88 | 11.00 | 3/4 | 1.31 | 1.25 |
| 3-7/16 | 520 | 4.16 | 15.36 | 4.34 | 11.81 | 13.13 | 7/8 | 1.63 | 1.66 |

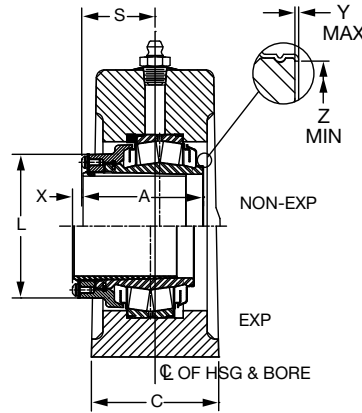
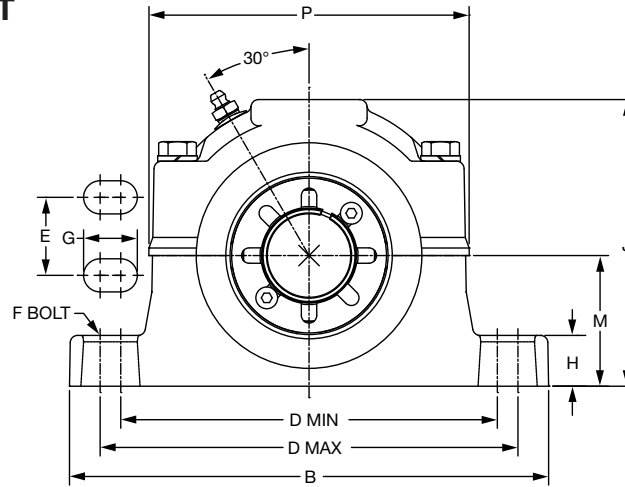
| Shaft Size | SAF Series | J | L | M | P | S | X Expansion | Y | Z |
|------------|------------|------|------|------|-------|------|-------------|------|------|
| 1-7/16 | 509 | 4.94 | 2.72 | 2.25 | 5.52 | 1.53 | 7/32 | 0.02 | 1.80 |
| 1-11/16 | 510 | 5.45 | 3.00 | 2.50 | 5.81 | 1.73 | 7/32 | 0.02 | 2.08 |
| 1-15/16 | 511 | 5.97 | 3.28 | 2.75 | 6.38 | 1.73 | 17/64 | 0.02 | 2.30 |
| 2-3/16 | 513 | 6.34 | 3.50 | 3.00 | 6.97 | 1.88 | 7/32 | 0.03 | 2.59 |
| 2-7/16 | 515 | 6.86 | 3.86 | 3.25 | 7.42 | 2.06 | 5/16 | 0.03 | 2.94 |
| 2-11/16 | 516 | 7.50 | 4.28 | 3.50 | 8.31 | 2.16 | 15/64 | 0.03 | 3.47 |
| 2-15/16 | 517 | 7.75 | 4.28 | 3.75 | 8.31 | 2.16 | 15/64 | 0.03 | 3.47 |
| 3-7/16 | 520 | 9.25 | 5.00 | 4.50 | 10.13 | 2.48 | 3/8 | 0.03 | 4.05 |

| | | | |
|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
|---------------------------------|------------------------------|---|--------------------------|



DIMENSIONS

IMPERIAL ISAF 2-7/16 THRU 7 INCH - 4-BOLT

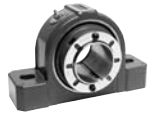


LABYRINTH SEAL

| Bearing | Shaft Size Inch | TRIDENT Seal | | | | Labyrinth Seal | | | |
|---------|-----------------|---------------|------------------|---------------|-------------------|----------------|------------------|---------------|-------------------|
| | | Non-Expansion | | Expansion | | Non-Expansion | | Expansion | |
| | | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name |
| 22213 | 2-7/16 | 070058 | P4B515-ISAF-207R | 070068 | P4B515-ISAF-207RE | 070078 | P4B515-ISAF-207L | 070088 | P4B515-ISAF-207LE |
| 22215 | 2-11/16 | 070094 | P4B516-ISAF-211R | 070095 | P4B516-ISAF-211RE | 070096 | P4B516-ISAF-211L | 070097 | P4B516-ISAF-211LE |
| 22215 | 2-15/16 | 070059 | P4B517-ISAF-215R | 070069 | P4B517-ISAF-215RE | 070079 | P4B517-ISAF-215L | 070089 | P4B517-ISAF-215LE |
| 22218 | 3-7/16 | 070060 | P4B520-ISAF-307R | 070070 | P4B520-ISAF-307RE | 070080 | P4B520-ISAF-307L | 070090 | P4B520-ISAF-307LE |
| 22220 | 3-15/16 | 070061 | P4B522-ISAF-315R | 070071 | P4B522-ISAF-315RE | 070081 | P4B522-ISAF-315L | 070091 | P4B522-ISAF-315LE |
| 22222 | 4-7/16 | 070062 | P4B526-ISAF-407R | 070072 | P4B526-ISAF-407RE | 070082 | P4B526-ISAF-407L | 070092 | P4B526-ISAF-407LE |
| 22226 | 4-15/16 | 070063 | P4B528-ISAF-415R | 070073 | P4B528-ISAF-415RE | 070083 | P4B528-ISAF-415L | 070093 | P4B528-ISAF-415LE |
| 22228 | 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 |
| 22232 | 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 |
| 22236 | 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 |
| 22236 | 6-15/16 | 037853 | P4B538-ISAF-615R | 037857 | P4B538-ISAF-615RE | 037919 | P4B538-ISAF-615L | 037920 | P4B538-ISAF-615LE |
| | 7 | 037921 | P4B538-ISAF-700R | 037922 | P4B538-ISAF-700RE | 037923 | P4B538-ISAF-700L | 037924 | P4B538-ISAF-700LE |

NOTE: See page B14-52 for 1-1/8 thru 2-3/16 inch

| | | | |
|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
|---------------------------------|------------------------------|---|--------------------------|



DIMENSIONS

IMPERIAL ISAF 2-7/16 THRU 7 INCH - 4-BOLT

| Shaft Size | SAF Series | A | B | C | D | | E | F Bolts | G | H |
|-----------------|------------|------|-------|------|-------|-------|------|---------|------|------|
| | | | | | Min | Max | | | | |
| 2-7/16 | 515 | 3.42 | 11.13 | 3.13 | 8.63 | 9.63 | 1.88 | 1/2 | 1.13 | 1.25 |
| 2-11/16 | 516 | 3.50 | 12.59 | 3.50 | 9.88 | 11.00 | 2.13 | 5/8 | 1.31 | 1.00 |
| 2-15/16 | 517 | 3.50 | 12.59 | 3.50 | 9.88 | 11.00 | 2.13 | 5/8 | 1.31 | 1.25 |
| 3-7/16 | 520 | 4.16 | 15.36 | 4.34 | 11.81 | 13.13 | 2.38 | 3/4 | 1.63 | 1.60 |
| 3-15/16 | 522 | 4.70 | 16.50 | 4.75 | 12.59 | 14.50 | 2.75 | 3/4 | 1.83 | 1.73 |
| 4-7/16 | 526 | 5.23 | 18.38 | 5.13 | 14.50 | 16.00 | 3.25 | 7/8 | 1.75 | 2.06 |
| 4-15/16 | 528 | 5.98 | 19.70 | 5.88 | 15.63 | 17.38 | 3.38 | 1 | 2.00 | 2.06 |
| 5-7/16 5-1/2 | 532 | 6.17 | 21.66 | 6.25 | 17.38 | 19.25 | 3.75 | 1 | 2.06 | 2.34 |
| 5-15/16 6 | 534 | 7.08 | 24.75 | 6.75 | 19.38 | 21.63 | 4.25 | 1 | 2.25 | 2.88 |
| 6-7/16 6-1/2 | 536 | 7.39 | 26.75 | 7.13 | 20.88 | 23.63 | 4.63 | 1 | 2.50 | 3.00 |
| 6-15/16 7 | 538 | 7.39 | 28.00 | 7.50 | 21.63 | 24.38 | 4.50 | 1-1/4 | 2.75 | 3.13 |

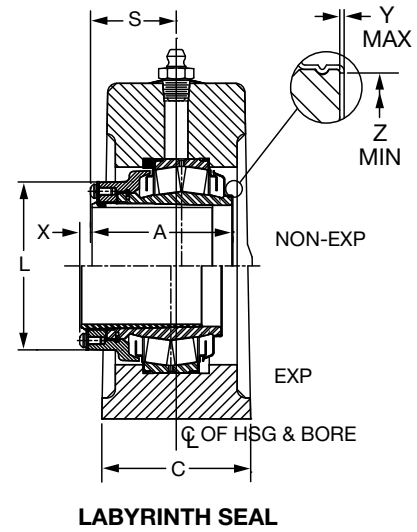
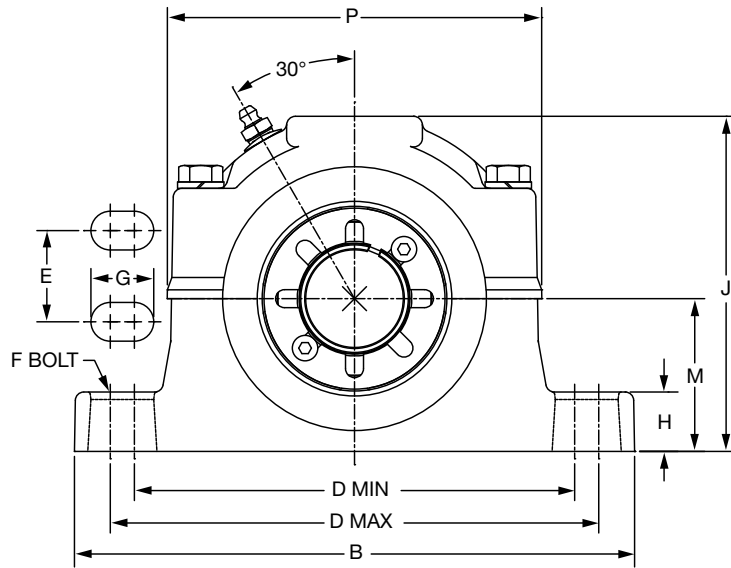
| Shaft Size | SAF Series | J | L | M | P | S | X Expansion | Y | Z |
|-----------------|------------|-------|-------|------|-------|------|-------------|------|------|
| 2-7/16 | 515 | 6.86 | 3.88 | 3.25 | 7.42 | 2.06 | 5/16 | 0.03 | 2.94 |
| 2-11/16 | 516 | 7.50 | 4.28 | 3.50 | 8.31 | 2.16 | 15/64 | 0.03 | 3.47 |
| 2-15/16 | 517 | 7.75 | 4.28 | 3.75 | 8.31 | 2.16 | 15/64 | 0.03 | 3.47 |
| 3-7/16 | 520 | 9.25 | 5.00 | 4.50 | 10.13 | 2.48 | 3/8 | 0.03 | 4.05 |
| 3-15/16 | 522 | 10.18 | 5.56 | 4.94 | 10.72 | 2.86 | 3/8 | 0.03 | 4.50 |
| 4-7/16 | 526 | 11.66 | 6.44 | 6.00 | 12.47 | 3.09 | 3/8 | 0.04 | 5.00 |
| 4-15/16 | 528 | 12.41 | 7.63 | 6.00 | 13.38 | 3.69 | 3/8 | 0.04 | 5.84 |
| 5-7/16 5-1/2 | 532 | 12.50 | 8.75 | 6.69 | 13.38 | 3.64 | 3/8 | 0.04 | 5.92 |
| 5-15/16 6 | 534 | 13.69 | 10.25 | 7.06 | 15.09 | 4.11 | 3/8 | 0.04 | 7.02 |
| 6-7/16 6-1/2 | 536 | 15.13 | 11.41 | 7.50 | 17.38 | 4.34 | 3/8 | 0.04 | 7.89 |
| 6-15/16 7 | 538 | 15.50 | 11.41 | 7.88 | 1.38 | 4.34 | 3/8 | 0.04 | 7.89 |

| | | | |
|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
|---------------------------------|------------------------------|---|--------------------------|



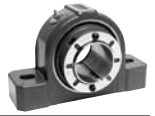
DIMENSIONS

IMPERIAL ISAF 35 THRU 90MM - 2-BOLT



| Bearing | Shaft Size in mm | Trident Seal | | | | Labyrinth Seal | | | |
|---------|------------------|---------------|-------------------|---------------|--------------------|----------------|-------------------|---------------|--------------------|
| | | Non-Expansion | | Expansion | | Non-Expansion | | Expansion | |
| | | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name |
| 22208 | 35 | 068774 | P2B509-ISAF-035MR | 068775 | P2B509-ISAF-035MRE | | P2B509-ISAF-035ML | | P2B509-ISAF-035MLE |
| 22209 | 40 | 077646 | P2B509-ISAF-040MR | | P2B509-ISAF-040MRE | | P2B509-ISAF-040ML | | P2B509-ISAF-040MLE |
| 22210 | 45 | 077647 | P2B510-ISAF-045MR | | P2B510-ISAF-045MRE | | P2B510-ISAF-045ML | | P2B510-ISAF-045MLE |
| 22210 | 50 | 073562 | P2B511-ISAF-050MR | 073561 | P2B511-ISAF-050MRE | | P2B511-ISAF-050ML | | P2B511-ISAF-050MLE |
| 22213 | 60 | 077648 | P2B513-ISAF-060MR | | P2B513-ISAF-060MRE | 067921 | P2B515-ISAF-060ML | 067922 | P2B515-ISAF-060MLE |
| 22213 | 60 | 068576 | P2B515-ISAF-060MR | | P2B515-ISAF-060MRE | | P2B515-ISAF-060ML | | P2B515-ISAF-060MLE |
| 22215 | 65 | 077649 | P2B515-ISAF-065MR | | P2B515-ISAF-065MRE | | P2B515-ISAF-065ML | | P2B515-ISAF-065MLE |
| 22215 | 70 | 077650 | P2B516-ISAF-070MR | | P2B516-ISAF-070MRE | | P2B516-ISAF-070ML | | P2B516-ISAF-070MLE |
| 22215 | 65 | 065641 | P2B517-ISAF-065MR | | P2B517-ISAF-065MRE | | P2B517-ISAF-065ML | | P2B517-ISAF-065MLE |
| 22215 | 75 | 065657 | P2B517-ISAF-075MR | 068905 | P2B517-ISAF-075MRE | | P2B517-ISAF-075ML | | P2B517-ISAF-075MLE |
| 22220 | 90 | 077651 | P2B520-ISAF-090MR | | P2B520-ISAF-090MRE | | P2B520-ISAF-090ML | | P2B520-ISAF-090MLE |

DIMENSIONS



IMPERIAL ISAF 35 THRU 90MM - 2-BOLT

Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

S-2000

UNISPHERE II

IMPERIAL

UNIFIED SAF

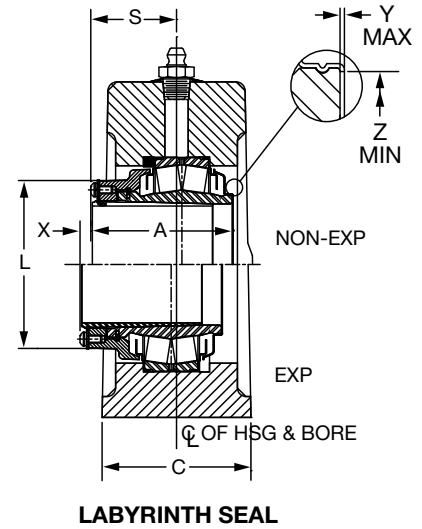
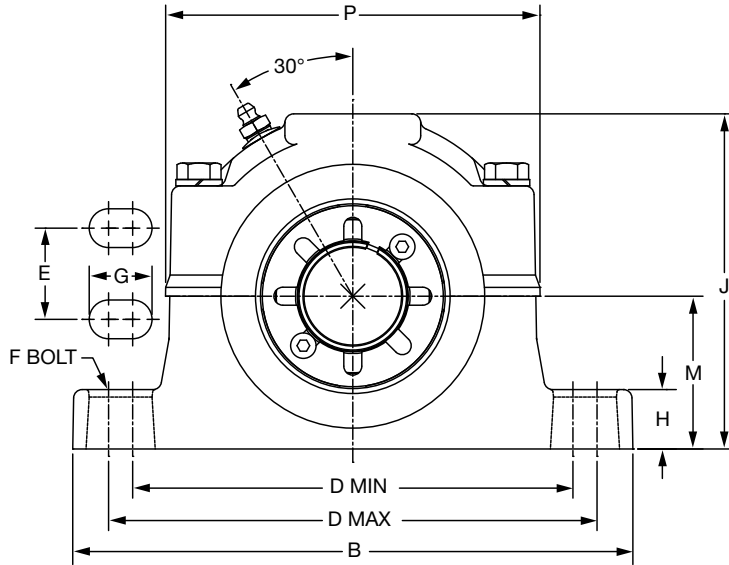
| Shaft Size | SAF Series | A | B | C | D | | F Bolts | G | H | J | L | M | P | S | X Expansion | Y | Z |
|------------|------------|--------|--------|--------|--------|--------|---------|-------|-------|--------|--------|--------|--------|-------|-------------|------|--------|
| | | | | | Min | Max | | | | | | | | | | | |
| 35 40 | 509 | 66.80 | 209.55 | 55.63 | 158.75 | 177.80 | M12 | 23.88 | 22.35 | 125.48 | 74.17 | 57.15 | 140.21 | 5.56 | 5.56 | 0.51 | 45.72 |
| 45 | 510 | 71.12 | 209.55 | 60.45 | 165.10 | 177.80 | M12 | 22.35 | 26.16 | 138.43 | 76.20 | 63.50 | 147.57 | 43.94 | 5.56 | 0.51 | 52.83 |
| 50 | 511 | 72.64 | 244.60 | 69.85 | 187.45 | 209.55 | M16 | 30.48 | 26.16 | 151.64 | 83.31 | 69.85 | 162.05 | 43.94 | 6.75 | 0.51 | 58.42 |
| 60 | 513 | 76.96 | 279.40 | 82.55 | 218.44 | 241.30 | M16 | 29.46 | 26.16 | 161.04 | 88.90 | 76.20 | 177.04 | 47.75 | 5.56 | 0.76 | 65.79 |
| 60 65 | 515 | 86.87 | 282.70 | 79.50 | 219.20 | 244.60 | M16 | 28.70 | 31.75 | 174.24 | 98.04 | 82.55 | 188.47 | 52.32 | 7.94 | 0.76 | 74.68 |
| 70 | 516 | 88.90 | 319.79 | 88.90 | 250.95 | 279.40 | M20 | 33.27 | 25.40 | 190.50 | 108.71 | 88.90 | 211.07 | 54.86 | 5.95 | 0.76 | 88.14 |
| 65 75 | 517 | 88.90 | 319.79 | 88.90 | 250.95 | 279.40 | M20 | 33.27 | 31.75 | 196.85 | 108.71 | 95.25 | 211.07 | 54.86 | 5.95 | 0.76 | 88.14 |
| 90 | 520 | 105.66 | 390.14 | 110.24 | 299.97 | 333.50 | M22 | 41.40 | 42.16 | 234.95 | 127.00 | 114.30 | 257.30 | 62.99 | 9.53 | 0.76 | 102.87 |

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



DIMENSIONS

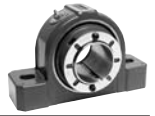
IMPERIAL ISAF 65 THRU 170MM - 4-BOLT



| Bearing | Shaft Size in mm | Trident Seal | | | | Labyrinth Seal | | | |
|---------|------------------|---------------|-------------------|---------------|--------------------|----------------|-------------------|-----------|--------------------|
| | | Non-Expansion | | Expansion | | Non-Expansion | | Expansion | |
| | | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name |
| 22215 | 65 | 077660 | P4B515-ISAF-065MR | | P4B515-ISAF-065MRE | | P4B515-ISAF-065ML | | P4B515-ISAF-065MLE |
| 22215 | 70 | 077661 | P4B516-ISAF-070MR | | P4B516-ISAF-070MRE | | P4B516-ISAF-070ML | | P4B516-ISAF-070MLE |
| 22215 | 75 | 062700 | P4B517-ISAF-075MR | | P4B517-ISAF-075MRE | | P4B517-ISAF-075ML | | P4B517-ISAF-075MLE |
| 22218 | 85 | 077458 | P4B520-ISAF-085MR | | P4B520-ISAF-085MRE | | P4B520-ISAF-085ML | | P4B520-ISAF-085MLE |
| 22220 | 90 | 077662 | P4B520-ISAF-090MR | | P4B520-ISAF-090MRE | | P4B520-ISAF-090ML | | P4B520-ISAF-090MLE |
| 22220 | 90 | 073070 | P4B522-ISAF-090MR | 073071 | P4B522-ISAF-090MRE | | P4B522-ISAF-090ML | | P4B522-ISAF-090MLE |
| 22220 | 100 | 074867 | P4B522-ISAF-100MR | 074868 | P4B522-ISAF-100MRE | | P4B522-ISAF-100ML | | P4B522-ISAF-100MLE |
| 22222 | 110 | 075444 | P4B526-ISAF-110MR | 077561 | P4B526-ISAF-110MRE | | P4B526-ISAF-110ML | | P4B526-ISAF-110MLE |
| 22226 | 115 | 077652 | P4B526-ISAF-115MR | | P4B526-ISAF-115MRE | | P4B526-ISAF-115ML | | P4B526-ISAF-115MLE |
| 22226 | 125 | 075431 | P4B528-ISAF-125MR | | P4B528-ISAF-125MRE | 077473 | P4B528-ISAF-125ML | | P4B528-ISAF-125MLE |
| 22228 | 130 | 075306 | P4B532-ISAF-130MR | | P4B532-ISAF-130MRE | | P4B532-ISAF-130ML | | P4B532-ISAF-130MLE |
| 22228 | 140 | 073938 | P4B532-ISAF-140MR | | P4B532-ISAF-140MRE | | P4B532-ISAF-140ML | | P4B532-ISAF-140MLE |
| 22232 | 150 | 075432 | P4B534-ISAF-150MR | 077897 | P4B534-ISAF-150MRE | | P4B534-ISAF-150ML | | P4B534-ISAF-150MLE |
| 22236 | 160 | 074613 | P4B536-ISAF-160MR | 074614 | P4B536-ISAF-160MRE | | P4B536-ISAF-160ML | | P4B536-ISAF-160MLE |
| 22236 | 170 | 062461 | P4B536-ISAF-170MR | | P4B536-ISAF-170MRE | | P4B536-ISAF-170ML | | P4B536-ISAF-170MLE |
| 22236 | 170 | 062270 | P4B538-ISAF-170MR | | P4B538-ISAF-170MRE | | P4B538-ISAF-170ML | | P4B538-ISAF-170MLE |

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|---------------------------------|------------------------------|---|--------------------------|
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DIMENSIONS



IMPERIAL ISAF 65 THRU 170MM - 4-BOLT

Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

S-2000

UNISPHERE II

IMPERIAL

UNIFIED SAF

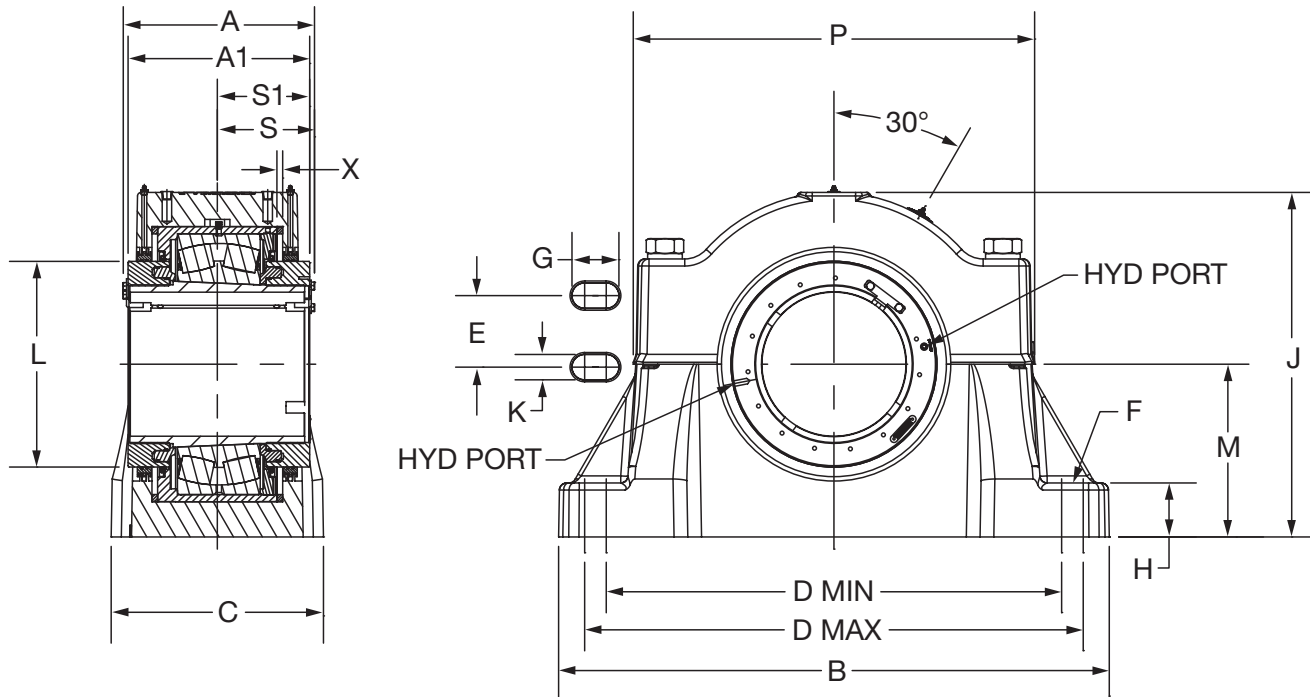
| Shaft Size | SAF Series | A | B | C | D | | E | F | G | H | J | L | M | P | S | X Expansion | Y | Z |
|------------|------------|--------|--------|--------|--------|--------|--------|-----|-------|-------|--------|--------|--------|--------|--------|-------------|------|--------|
| | | | | | Min | Max | | | | | | | | | | | | |
| 65 | 515 | 86.87 | 282.70 | 79.50 | 219.20 | 244.60 | 47.75 | M12 | 28.70 | 31.75 | 174.24 | 98.55 | 82.55 | 188.47 | 52.32 | 7.94 | 0.76 | 74.68 |
| 70 | 516 | 88.90 | 319.79 | 88.90 | 250.95 | 279.40 | 54.10 | M16 | 33.27 | 25.40 | 190.50 | 108.71 | 88.90 | 211.07 | 54.86 | 5.95 | 0.76 | 88.14 |
| 75 | 517 | 88.90 | 319.79 | 88.90 | 250.95 | 279.40 | 54.10 | M16 | 33.27 | 31.75 | 196.85 | 108.71 | 95.25 | 211.07 | 54.86 | 5.95 | 0.76 | 88.14 |
| 85 90 | 520 | 105.66 | 390.14 | 110.24 | 299.97 | 333.50 | 60.45 | M20 | 41.40 | 40.64 | 234.95 | 127.00 | 114.30 | 257.30 | 62.99 | 9.53 | 0.76 | 102.87 |
| 90 100 | 522 | 119.38 | 419.10 | 120.65 | 319.79 | 368.30 | 69.85 | M20 | 46.48 | 43.94 | 258.57 | 141.22 | 125.48 | 272.29 | 72.64 | 9.53 | 0.76 | 114.30 |
| 110 115 | 526 | 132.84 | 466.85 | 130.30 | 368.30 | 406.40 | 82.55 | M22 | 44.45 | 52.32 | 296.16 | 163.58 | 152.40 | 316.74 | 78.49 | 9.53 | 1.02 | 127.00 |
| 125 | 528 | 151.89 | 500.38 | 149.35 | 397.00 | 441.45 | 85.85 | M24 | 50.80 | 52.32 | 315.21 | 193.80 | 152.40 | 339.85 | 93.73 | 9.53 | 1.02 | 148.34 |
| 130 140 | 532 | 156.72 | 550.16 | 158.75 | 441.45 | 488.95 | 95.25 | M24 | 52.32 | 59.44 | 317.50 | 222.25 | 169.93 | 339.85 | 92.46 | 9.53 | 1.02 | 150.37 |
| 150 | 534 | 179.83 | 628.65 | 171.45 | 492.25 | 549.40 | 107.95 | M24 | 57.15 | 73.15 | 347.73 | 260.35 | 179.32 | 383.29 | 104.39 | 9.53 | 1.02 | 178.31 |
| 160 170 | 536 | 187.71 | 679.45 | 188.72 | 530.35 | 600.20 | 102.36 | M24 | 63.50 | 76.20 | 384.30 | 289.81 | 190.50 | 441.45 | 110.24 | 9.53 | 1.02 | 200.41 |
| 170 | 538 | 187.71 | 711.20 | 190.50 | 549.40 | 619.25 | 114.30 | M30 | 69.85 | 79.50 | 393.70 | 289.81 | 200.15 | 441.45 | 110.24 | 9.53 | 1.02 | 200.41 |

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|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
|---------------------------------|------------------------------|---|--------------------------|



DIMENSIONS

ISAF PILLOW BLOCK HYDRAULIC

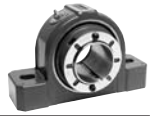


Part Numbers - Hydraulic ISAF

| Housing Designation | Bearing Series | Shaft Size | Part Number | Description | Insert Number |
|---------------------|----------------|------------|---------------|-----------------------|---------------|
| 532 | 22232K | 5-7/16" | 072955 | P4B532-ISAF-507R HYD | 072954 |
| 532 | 22232K | 5-1/2" | 072564 | P4B532-ISAF-508R HYD | 072572 |
| 534 | 22234K | 5-15/16" | 072959 | P4B534-ISAF-515R HYD | 072958 |
| 534 | 22234K | 6" | 072565 | P4B534-ISAF-600R HYD | 072573 |
| 536 | 22236K | 6-7/16" | 072963 | P4B536-ISAF-607R HYD | 072962 |
| 536 | 22236K | 6-1/2" | 072566 | P4B536-ISAF-608R HYD | 072574 |
| 538 | 22238K | 6-15/16" | 072967 | P4B538-ISAF-615R HYD | 072966 |
| 538 | 22238K | 7" | 072567 | P4B538-ISAF-700R HYD | 072575 |
| 544 | 22244K | 7-15/16" | 072490 | P4B544-ISAF-715R HYD | 072492 |
| 544 | 22244K | 8" | 072000 | P4B544-ISAF-800R HYD | 072014 |
| 048 | 23048K | 8-1/2" | 072820 | P4B048-ISAF-808R HYD | 072822 |
| 048 | 23048K | 9" | 072001 | P4B048-ISAF-900R HYD | 072015 |
| 3152 | 23152K | 9-7/16" | 072786 | P4B3152-ISAF-907R HYD | 072791 |
| 3152 | 23152K | 9-1/2" | 072789 | P4B3152-ISAF-908R HYD | 072792 |
| 056 | 23056K | 10" | 072002 | P4B056-ISAF-1000R HYD | 072016 |
| 056 | 23056K | 10-7/16" | 072772 | P4B056-ISAF-1007R HYD | 072771 |
| 056 | 23056K | 10-1/2" | 074115 | P4B056-ISAF-1008R HYD | 074117 |

| Housing Designation | Bearing Series | Shaft Size | Part Number | Description | Insert Number |
|---------------------|----------------|------------|---------------|------------------------|---------------|
| 3156 | 23156K | 10-7/16" | 072742 | P4B3156-ISAF-1007R HYD | 072746 |
| 3156 | 23156K | 10-1/2" | 072744 | P4B3156-ISAF-1008R HYD | 072747 |
| 060 | 23060K | 11" | 072003 | P4B056-ISAF-1100R HYD | 072017 |
| 3160 | 23160K | 10-15/16" | 072831 | P4B3160-ISAF-1015R HYD | 072835 |
| 3160 | 23160K | 11" | 072833 | P4B3160-ISAF-1100R HYD | 072836 |
| 3164 | 23164K | 11-15/16" | 072857 | P4B3164-ISAF-1115R HYD | |
| 3164 | 23164K | 12" | 072859 | P4B3164-ISAF-1200R HYD | |
| 068 | 23068K | 12-1/2" | 072004 | P4B068-ISAF-1208R HYD | 072018 |
| 3168 | 23168K | 12-7/16" | 072910 | P4B3168-ISAF-1207R HYD | |
| 3168 | 23168K | 12-1/2" | 072911 | P4B3168-ISAF-1208R HYD | |
| 3172 | 23172K | 13-7/16" | 072706 | P4B3172-ISAF-1307R HYD | 072710 |
| 3172 | 23172K | 13-1/2" | 072708 | P4B3172-ISAF-1308R HYD | 072711 |
| 076 | 23076K | 14" | 072005 | P4B076-ISAF-1400R HYD | 072019 |
| 3176 | 23176K | 13-15/16" | 072688 | P4B3176-ISAF-1400R HYD | 072692 |
| 3176 | 23176K | 14" | 072690 | P4B3176-ISAF-1315R HYD | 072693 |
| 080 | 23080K | 15" | 072006 | P4B080-ISAF-1500R HYD | 072020 |

DIMENSIONS



ISAF PILLOW BLOCK HYDRAULIC

Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

S-2000

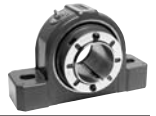
UNISPHERE II

IMPERIAL

UNIFIED SAF

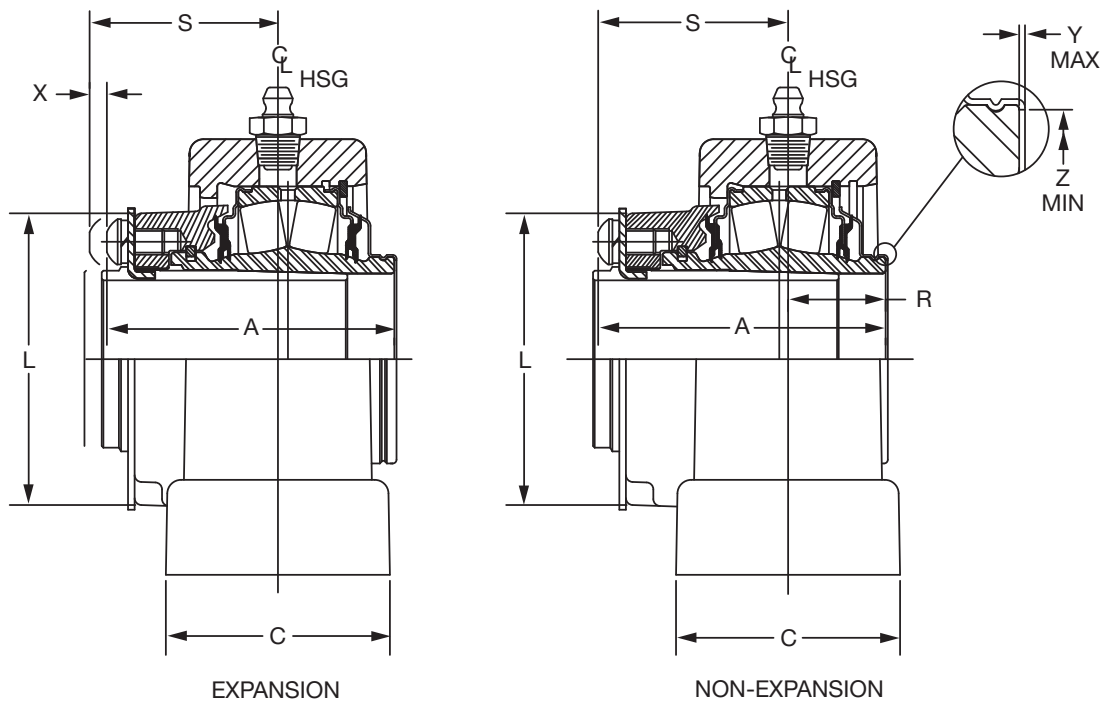
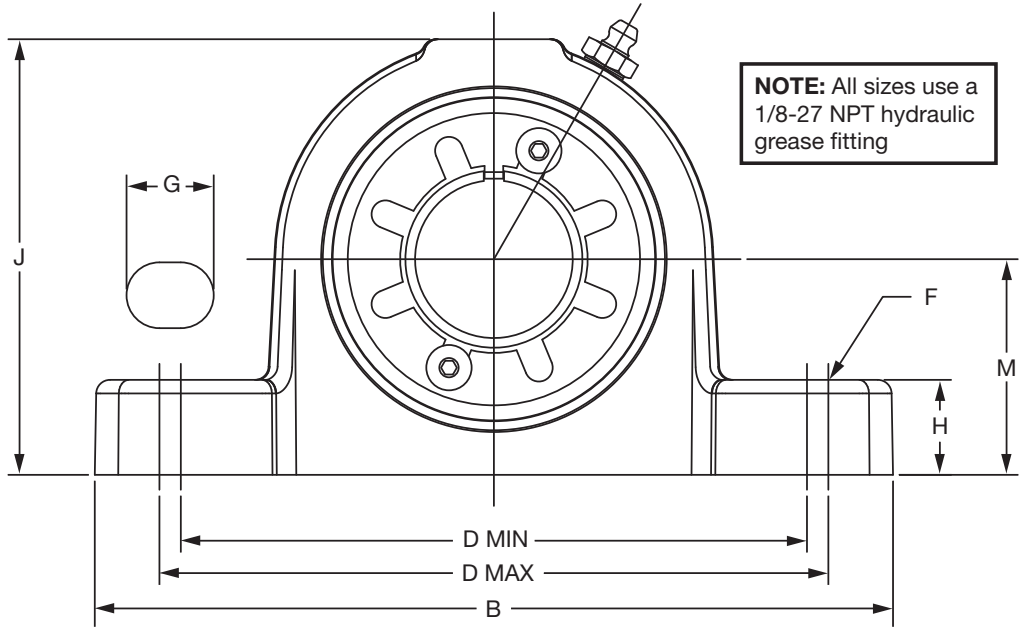
| Shaft Size | SAF Series | Bearing Series | A | A1 | B | C | D | | E | F Bolts | G | H | J | K | L | M | P | S | S1 | X Exp |
|----------------------------|------------|----------------|-------|-------|-------|-------|-------|-------|-------|---------|------|------|-------|------|-------|-------|-------|------|------|-------|
| | | | | | | | Min | Max | | | | | | | | | | | | |
| 5-7/16" 5-1/2" | 532 | 22232K | 9.59 | 9.05 | 21.66 | 6.25 | 17.38 | 19.25 | 3.75 | 1 | 2.06 | 2.34 | 13.82 | 1.12 | 9.68 | 6.69 | 16.38 | 4.68 | 4.41 | 0.38 |
| 5-15/16" 6" | 534 | 22234K | 9.81 | 9.26 | 24.75 | 6.75 | 19.38 | 21.63 | 4.25 | 1 | 2.25 | 2.87 | 14.56 | 1.12 | 10.19 | 7.06 | 17.38 | 4.81 | 4.54 | 0.38 |
| 6-7/16" 6-1/2" | 536 | 22236K | 10.15 | 9.60 | 26.75 | 7.13 | 20.88 | 23.63 | 4.63 | 1 | 2.50 | 3.00 | 15.25 | 1.12 | 10.45 | 7.50 | 18.38 | 4.82 | 4.55 | 0.38 |
| 6-15/16" 7" | 538 | 22238K | 10.20 | 9.66 | 28.00 | 7.50 | 21.63 | 24.38 | 4.50 | 1-1/4 | 2.75 | 3.13 | 16.37 | 1.38 | 10.96 | 7.88 | 19.38 | 4.94 | 4.67 | 0.38 |
| 7-15/16" 8" | 544 | 22244K | 10.58 | 9.91 | 32.75 | 8.88 | 24.75 | 27.88 | 5.25 | 1-1/2 | 3.18 | 3.75 | 19.38 | 1.62 | 12.23 | 9.50 | 22.75 | 5.12 | 4.79 | 0.38 |
| 8-1/2" 9" | 048 | 23048K | 10.28 | 9.62 | 28.75 | 8.00 | 22.50 | 25.00 | 5.00 | 1-1/4 | 2.63 | 3.38 | 17.34 | 1.38 | 12.24 | 8.25 | 20.88 | 5.14 | 4.80 | 0.38 |
| 9-7/16" 9-1/2" | 3152 | 23152K | 13.17 | 12.51 | 35.00 | 13.12 | 29.00 | 30.50 | 8.75 | 1-5/8 | 2.50 | 3.75 | 21.55 | 1.76 | 13.26 | 10.25 | 24.32 | 6.59 | 6.26 | 0.78 |
| 10" 10-7/16" 10-1/2" | 056 | 23056K | 10.99 | 10.33 | 34.25 | 9.00 | 26.25 | 29.50 | 5.50 | 1-1/2 | 3.25 | 4.00 | 20.12 | 1.62 | 14.28 | 9.88 | 23.88 | 5.58 | 5.24 | 0.38 |
| 10-7/16" 10-1/2" | 3156 | 23156K | 13.28 | 12.61 | 38.25 | 14.75 | 31.63 | 34.63 | 9.00 | 1-5/8 | 3.25 | 3.75 | 23.93 | 1.76 | 14.28 | 12.00 | 27.87 | 6.75 | 6.41 | 0.78 |
| 11" | 060 | 23060K | 11.49 | 10.82 | 38.25 | 14.75 | 31.63 | 34.63 | 9.00 | 1-5/8 | 3.25 | 3.75 | 23.93 | 1.76 | 15.30 | 12.00 | 27.87 | 5.71 | 5.38 | 0.38 |
| 10-15/16" 11" | 3160 | 23160K | 13.80 | 13.13 | 38.25 | 14.75 | 31.63 | 34.63 | 9.00 | 1-5/8 | 3.25 | 3.37 | 24.50 | 1.76 | 15.30 | 12.00 | 26.88 | 7.03 | 6.70 | 0.78 |
| 11-15/16" 12" | 3164 | 23164K | 14.46 | 13.79 | 41.75 | 15.75 | 35.00 | 36.50 | 10.50 | 1-7/8 | 2.75 | 4.50 | 26.58 | 2.00 | 16.33 | 12.81 | 29.50 | 7.22 | 6.89 | 0.78 |
| 12-1/2" | 068 | 23068K | 12.08 | 11.23 | 39.00 | 15.25 | 32.00 | 34.00 | 10.00 | 1-7/8 | 3.00 | 4.56 | 24.50 | 2.00 | 17.32 | 12.00 | 28.81 | 6.01 | 5.59 | 0.38 |
| 12-7/16" 12-1/2" | 3168 | 23168K | 15.23 | 14.39 | 43.58 | 17.75 | 36.75 | 38.25 | 10.75 | 2 | 2.87 | 5.00 | 28.06 | 2.12 | 17.31 | 14.00 | 31.50 | 7.58 | 7.16 | 0.78 |
| 13-7/16" 13-1/2" | 3172 | 23172K | 15.16 | 14.49 | 46.00 | 17.13 | 39.25 | 40.75 | 11.00 | 2 | 2.87 | 5.25 | 29.25 | 2.12 | 18.35 | 14.50 | 33.56 | 7.71 | 7.38 | 0.78 |
| 14" | 076 | 23076K | 13.01 | 12.09 | 41.75 | 15.75 | 35.00 | 36.50 | 10.50 | 2 | 2.87 | 4.50 | 26.58 | 2.12 | 18.48 | 12.81 | 29.50 | 6.40 | 5.94 | 0.38 |
| 13-15/16" 14" | 3176 | 23176K | 15.83 | 14.91 | 46.00 | 17.13 | 39.25 | 40.75 | 11.00 | 2 | 2.87 | 5.25 | 29.50 | 2.12 | 18.48 | 14.50 | 33.56 | 8.04 | 7.58 | 0.78 |
| 15" | 080 | 23080K | 13.54 | 12.62 | 46.00 | 17.13 | 39.25 | 40.75 | 11.00 | 2 | 2.87 | 5.75 | 29.00 | 2.12 | 19.49 | 14.50 | 33.56 | 6.68 | 6.22 | 0.38 |

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DIMENSIONS

IMPERIAL - ISN Metric Pillow Block 30 THROUGH 140mm, 2-BOLT



DIMENSIONS



IMPERIAL - ISN Metric Pillow Block 30 THROUGH 140mm, 2-BOLT

| Bearing | Shaft Size mm | TRIDENT SEAL | | | | LABYRINTH SEAL | | | |
|---------|---------------|---------------|-------------------|---------------|-------------------|----------------|-------------------|---------------|-------------------|
| | | NON-EXPANSION | | EXPANSION | | NON-EXPANSION | | EXPANSION | |
| | | Part Number | Description | Part Number | Description | Part Number | Description | Part Number | Description |
| 22208 | 30mm | 071000 | P2B507-ISN-030MFR | 071017 | P2B507-ISN-030MLR | 071034 | P2B507-ISN-030MFS | 071051 | P2B507-ISN-030MLS |
| | 35mm | 071001 | P2B508-ISN-035MFR | 071018 | P2B508-ISN-035MLR | 071035 | P2B508-ISN-035MFS | 071052 | P2B508-ISN-035MLS |
| 22209 | 40mm | 071002 | P2B509-ISN-040MFR | 071019 | P2B509-ISN-040MLR | 071036 | P2B509-ISN-040MFS | 071053 | P2B509-ISN-040MLS |
| 22210 | 45mm | 071003 | P2B510-ISN-045MFR | 071020 | P2B510-ISN-045MLR | 071037 | P2B510-ISN-045MFS | 071054 | P2B510-ISN-045MLS |
| | 50mm | 071004 | P2B511-ISN-050MFR | 071021 | P2B511-ISN-050MLR | 071038 | P2B511-ISN-050MFS | 071055 | P2B511-ISN-050MLS |
| 22211 | 55mm | 071005 | P2B512-ISN-055MFR | 071022 | P2B512-ISN-055MLR | 071039 | P2B512-ISN-055MFS | 071056 | P2B512-ISN-055MLS |
| 22213 | 60mm | 071006 | P2B513-ISN-060MFR | 071023 | P2B513-ISN-060MLR | 071040 | P2B513-ISN-060MFS | 071057 | P2B513-ISN-060MLS |
| 22215 | 65mm | 071007 | P2B515-ISN-065MFR | 071024 | P2B515-ISN-065MLR | 071041 | P2B515-ISN-065MFS | 071058 | P2B515-ISN-065MLS |
| 22215 | 70mm | 071008 | P2B516-ISN-070MFR | 071025 | P2B516-ISN-070MLR | 071042 | P2B516-ISN-070MFS | 071059 | P2B516-ISN-070MLS |
| 22215 | 75mm | 071009 | P2B517-ISN-075MFR | 071026 | P2B517-ISN-075MLR | 071043 | P2B517-ISN-075MFS | 071060 | P2B517-ISN-075MLS |
| 22218 | 80mm | 071010 | P2B518-ISN-080MFR | 071027 | P2B518-ISN-080MLR | 071044 | P2B518-ISN-080MFS | 071061 | P2B518-ISN-080MLS |
| 22218 | 85mm | 071011 | P2B519-ISN-085MFR | 071028 | P2B519-ISN-085MLR | 071045 | P2B519-ISN-085MFS | 071062 | P2B519-ISN-085MLS |
| 22220 | 90mm | 071012 | P2B520-ISN-090MFR | 071029 | P2B520-ISN-090MLR | 071046 | P2B520-ISN-090MFS | 071063 | P2B520-ISN-090MLS |
| | 100mm | 071013 | P2B522-ISN-100MFR | 071030 | P2B522-ISN-100MLR | 071047 | P2B522-ISN-100MFS | 071064 | P2B522-ISN-100MLS |
| 22222 | 110mm | 071014 | P2B524-ISN-110MFR | 071031 | P2B524-ISN-110MLR | 071048 | P2B524-ISN-110MFS | 071065 | P2B524-ISN-110MLS |
| 22226 | 115mm | 071015 | P2B526-ISN-115MFR | 071032 | P2B526-ISN-115MLR | 071049 | P2B526-ISN-115MFS | 071066 | P2B526-ISN-115MLS |
| | 125mm | 071016 | P2B528-ISN-125MFR | 071033 | P2B528-ISN-125MLR | 071050 | P2B528-ISN-125MFS | 071067 | P2B528-ISN-125MLS |
| 22228 | 135mm | 071102 | P2B530-ISN-135MFR | 071103 | P2B530-ISN-135MLR | 071104 | P2B530-ISN-135MFS | 071105 | P2B530-ISN-135MLS |
| 22232 | 140mm | 071106 | P2B532-ISN-140MFR | 071107 | P2B532-ISN-140MLR | 071108 | P2B532-ISN-140MFS | 071109 | P2B532-ISN-140MLS |

| Shaft Size mm | A | B | C | D | | F Bolt Dia. | G | H | J | L | M | R | S | T | 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 | 0.51 | 45.7 |
| 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 | 21.1 | 51.4 | 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 | 21.1 | 51.4 | 6.5 | 0.76 | 66.0 |
| 55 | 77.0 | 253.9 | 69.9 | 190.0 | 216.0 | M16 | 31.0 | 30.0 | 130.3 | 87.1 | 70.0 | 23.1 | 54.2 | 7.0 | 0.76 | 66.0 |
| 60 | 86.9 | 274.9 | 80.2 | 205.0 | 235.0 | M16 | 33.0 | 30.0 | 152.4 | 96.5 | 80.0 | 27.1 | 59.7 | 7.0 | 0.76 | 74.9 |
| 65 | 88.9 | 280.1 | 80.1 | 215.0 | 236.0 | M16 | 28.5 | 30.0 | 156.0 | 106.7 | 80.0 | 26.9 | 61.7 | 7.0 | 0.76 | 88.1 |
| 70 | 88.9 | 315.9 | 90.2 | 244.5 | 268.3 | M20 | 34.1 | 32.0 | 176.0 | 106.7 | 95.0 | 26.9 | 61.7 | 7.0 | 0.76 | 88.1 |
| 75 | 88.9 | 315.9 | 90.2 | 244.5 | 268.3 | M20 | 34.1 | 32.0 | 176.0 | 106.7 | 95.0 | 26.9 | 61.7 | 7.0 | 0.76 | 88.1 |
| 80 | 106.0 | 345.3 | 100.3 | 270.0 | 293.7 | M20 | 34.0 | 35.0 | 196.7 | 124.7 | 100.0 | 34.5 | 71.4 | 7.0 | 0.76 | 102.9 |
| 85 | 106.0 | 345.0 | 100.2 | 264.2 | 296.1 | M20 | 37.9 | 35.0 | 205.2 | 124.7 | 112.0 | 34.5 | 71.4 | 7.0 | 0.76 | 102.9 |
| 90 | 120.0 | 379.8 | 110.2 | 292.8 | 327.0 | M24 | 43.1 | 40.0 | 218.3 | 138.7 | 112.0 | 37.2 | 82.3 | 8.0 | 0.76 | 114.3 |
| 100 | 120.0 | 410.0 | 120.0 | 314.4 | 356.0 | M24 | 46.8 | 45.0 | 239.0 | 138.7 | 125.0 | 37.2 | 82.3 | 8.0 | 1.02 | 127.0 |
| 110 | 133.0 | 410.0 | 120.0 | 314.5 | 356.0 | M24 | 46.8 | 45.0 | 260.7 | 161.3 | 140.0 | 44.4 | 88.4 | 10.0 | 1.02 | 127.0 |
| 115 | 152.0 | 444.8 | 130.0 | 359.6 | 387.0 | M24 | 41.7 | 50.0 | 292.8 | 191.8 | 150.0 | 48.6 | 103.2 | 10.0 | 1.02 | 148.3 |
| 125 | 152.0 | 500.0 | 150.2 | 400.0 | 427.0 | M30 | 48.5 | 50.0 | 290.4 | 191.8 | 150.0 | 48.6 | 103.2 | 10.0 | 1.02 | 148.3 |
| 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 | 1.02 | 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 | 1.02 | 178.3 |

M = Size in millimeters otherwise 110 = 1 and 10/16"

Dimensions in mm

- F = Non-Expansion
- L = Expansion (Non-Locating)
- R = Trident Rubbing Seal
- S = Labyrinth Seal

| | | | |
|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
|---------------------------------|------------------------------|---|--------------------------|



DIMENSIONS

ISNX Hydraulic

Bearing Reference Guide

E-Family Roller Bearings

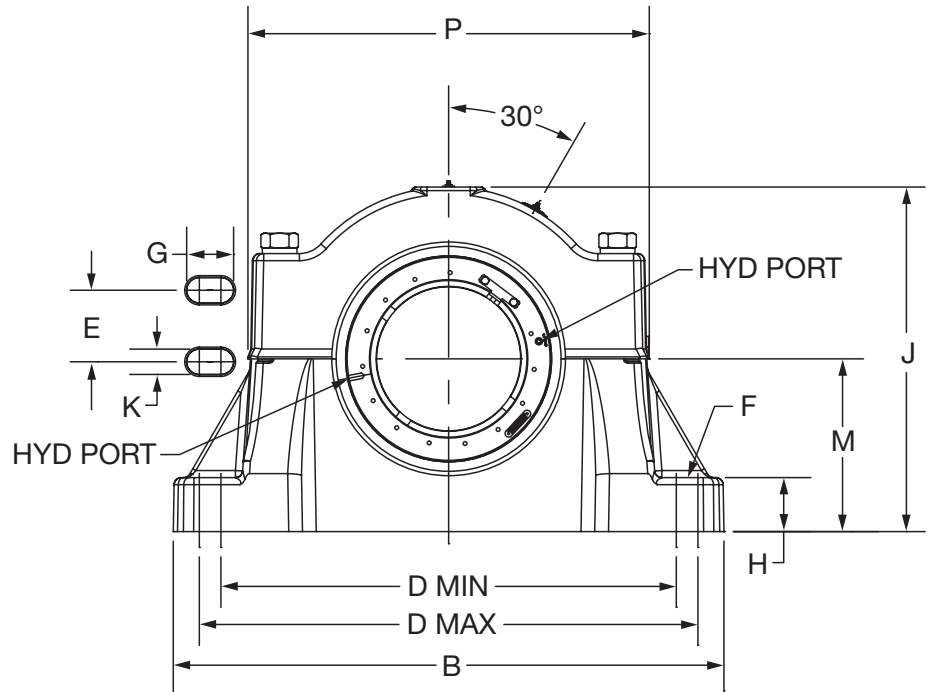
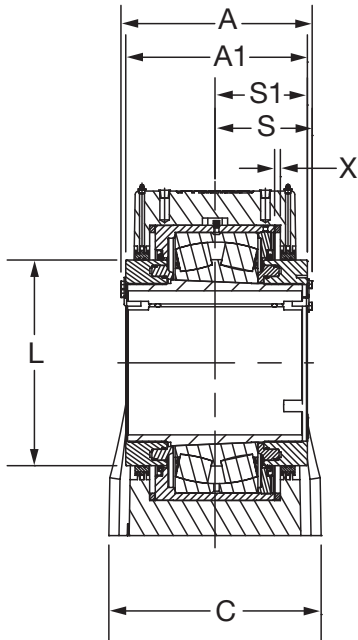
Specialty Tapered Products

S-2000

UNISPHERE II

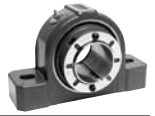
IMPERIAL

UNIFIED SAF



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| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
|---------------------------------|------------------------------|---|--------------------------|

DIMENSIONS



ISNX Hydraulic

| Housing Designation | Bearing Series | Shaft Size | Part Number | Description | Insert Number |
|---------------------|----------------|------------|---------------|-----------------------|---------------|
| 3134 | 23134K | 150mm | 072919 | P4B134-ISNX-150MR HYD | 072895 |
| 3136 | 23136K | 160mm | 072920 | P4B136-ISNX-160MR HYD | 072896 |
| 3138 | 23138K | 170mm | 072921 | P4B138-ISNX-170MR HYD | 072897 |
| 3140 | 23140K | 180mm | 072922 | P4B140-ISNX-180MR HYD | 072898 |
| 3144 | 23144K | 200mm | 072923 | P4B144-ISNX-200MR HYD | 072899 |
| 3148 | 23148K | 220mm | 072924 | P4B148-ISNX-220MR HYD | 072900 |
| 3152 | 23152K | 240mm | 072912 | P4B152-ISNX-240MR HYD | 072901 |
| 3156 | 23156K | 260mm | 072913 | P4B156-ISNX-260MR HYD | 072902 |
| 3160 | 23160K | 280mm | 072914 | P4B160-ISNX-280MR HYD | 072903 |
| 3164 | 23164K | 300mm | 072915 | P4B164-ISNX-300MR HYD | 072904 |
| 3168 | 23168K | 320mm | 072916 | P4B168-ISNX-320MR HYD | 072905 |
| 3172 | 23172K | 340mm | 072917 | P4B172-ISNX-340MR HYD | 072906 |
| 3176 | 23176K | 360mm | 072918 | P4B176-ISNX-360MR HYD | 072907 |

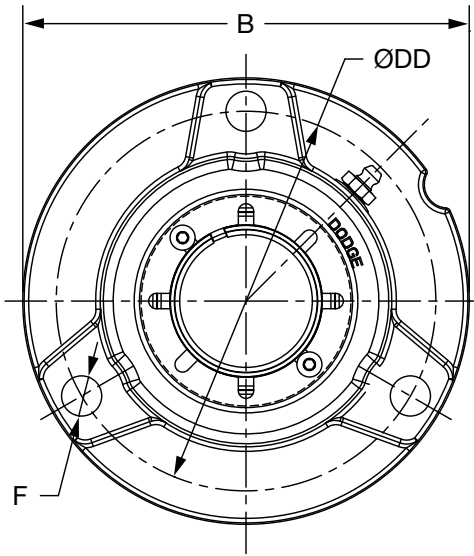
| Shaft Size mm | Series | A | A1 | A2 | B | C | D | | E | F Bolt Dia. mm | G | H | J | K | L | L2 | M | P | S | S1 | X Exp | Z |
|---------------|--------|-------|-------|-------|--------|-------|-------|-------|-------|-------------------|------|-------|-------|------|-------|-------|-------|-------|-------|-------|----------|-----|
| | | | | | | | min. | max. | | | | | | | | | | | | | | |
| 150 | 3134 | 254.5 | 240.5 | 155.2 | 510.0 | 180.1 | 423.9 | 436.1 | 100.1 | 24 | 34.0 | 70.1 | 360.4 | 27.9 | 252.5 | 268.7 | 169.9 | 416.1 | 124.0 | 116.8 | 19.8 | 0.0 |
| 160 | 3136 | 266.4 | 252.5 | 161.0 | 530.1 | 190.0 | 444.0 | 456.2 | 110.0 | 24 | 34.0 | 74.9 | 380.0 | 27.9 | 265.4 | 283.0 | 179.8 | 437.9 | 131.6 | 124.5 | 19.8 | 0.0 |
| 170 | 3138 | 268.5 | 254.5 | 168.1 | 560.1 | 210.1 | 474.0 | 486.2 | 119.9 | 24 | 34.0 | 80.0 | 399.5 | 27.9 | 278.4 | 295.9 | 190.0 | 458.2 | 133.9 | 127.0 | 19.8 | 0.0 |
| 180 | 3140 | 284.5 | 270.5 | 170.2 | 610.1 | 230.1 | 502.9 | 517.1 | 130.0 | 30 | 41.9 | 85.1 | 426.0 | 35.1 | 285.0 | 302.5 | 210.1 | 470.4 | 137.9 | 130.8 | 19.8 | 0.0 |
| 200 | 3144 | 294.9 | 277.9 | 175.8 | 640.1 | 239.8 | 532.9 | 547.1 | 140.2 | 30 | 41.9 | 89.9 | 450.9 | 35.1 | 310.6 | 328.4 | 220.0 | 500.4 | 143.8 | 135.1 | 19.8 | 0.0 |
| 220 | 3148 | 316.5 | 299.5 | 188.7 | 700.0 | 260.1 | 592.8 | 607.1 | 149.9 | 30 | 41.9 | 95.0 | 486.2 | 35.1 | 310.9 | 328.7 | 240.0 | 530.4 | 154.9 | 146.6 | 19.8 | 0.0 |
| 240 | 3152 | 334.5 | 317.8 | 197.1 | 770.1 | 279.9 | 642.1 | 658.1 | 160.0 | 36 | 50.0 | 100.1 | 546.9 | 41.9 | 336.8 | 354.3 | 259.8 | 617.7 | 167.4 | 159.0 | 19.8 | 0.0 |
| 260 | 3156 | 337.3 | 320.3 | 201.7 | 789.9 | 279.9 | 661.9 | 677.9 | 160.0 | 36 | 50.0 | 104.9 | 582.9 | 41.9 | 362.7 | 380.5 | 279.9 | 619.3 | 171.5 | 162.8 | 19.8 | 2.8 |
| 280 | 3160 | 350.5 | 333.5 | 208.5 | 830.1 | 310.1 | 702.1 | 718.1 | 190.0 | 36 | 50.0 | 110.0 | 617.5 | 41.9 | 388.6 | 405.9 | 300.0 | 682.8 | 178.6 | 170.2 | 19.8 | 3.0 |
| 300 | 3164 | 367.3 | 350.3 | 213.1 | 880.1 | 329.9 | 741.9 | 757.9 | 199.9 | 36 | 50.0 | 115.1 | 662.9 | 41.9 | 414.8 | 432.1 | 320.0 | 720.9 | 183.4 | 175.0 | 19.8 | 0.0 |
| 320 | 3168 | 386.8 | 365.5 | 222.3 | 950.0 | 359.9 | 802.1 | 818.1 | 220.0 | 36 | 50.0 | 119.9 | 697.0 | 41.9 | 439.7 | 457.2 | 339.9 | 755.9 | 192.5 | 181.9 | 19.8 | 0.0 |
| 340 | 3172 | 385.1 | 368.0 | 225.3 | 1000.0 | 359.9 | 832.1 | 848.1 | 220.0 | 36 | 50.0 | 119.9 | 724.7 | 41.9 | 466.1 | 483.6 | 350.0 | 809.8 | 195.8 | 187.5 | 19.8 | 2.3 |
| 360 | 3176 | 402.1 | 378.7 | 233.7 | 1039.9 | 359.9 | 862.1 | 878.1 | 220.0 | 36 | 50.0 | 119.9 | 740.9 | 41.9 | 469.4 | 486.7 | 359.9 | 822.5 | 204.2 | 192.5 | 19.8 | 0.0 |

| | | | |
|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
|---------------------------------|------------------------------|---|--------------------------|

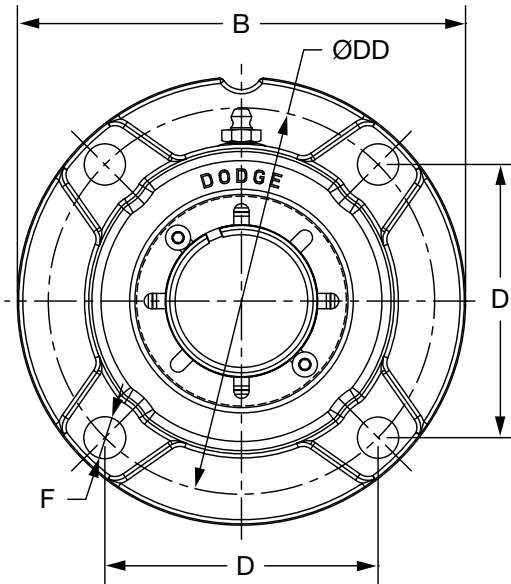


DIMENSIONS

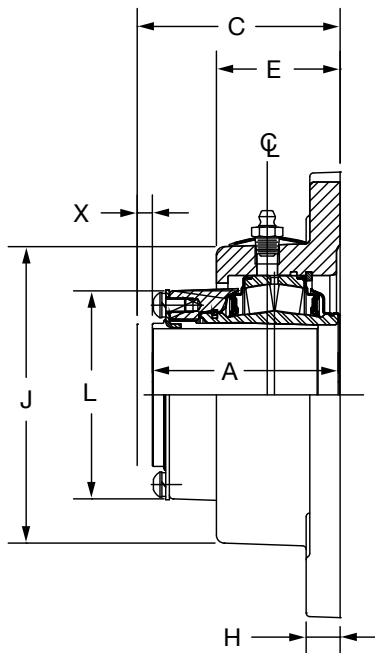
IMPERIAL - IP Flange - Round
1-1/8 THRU 2 INCH



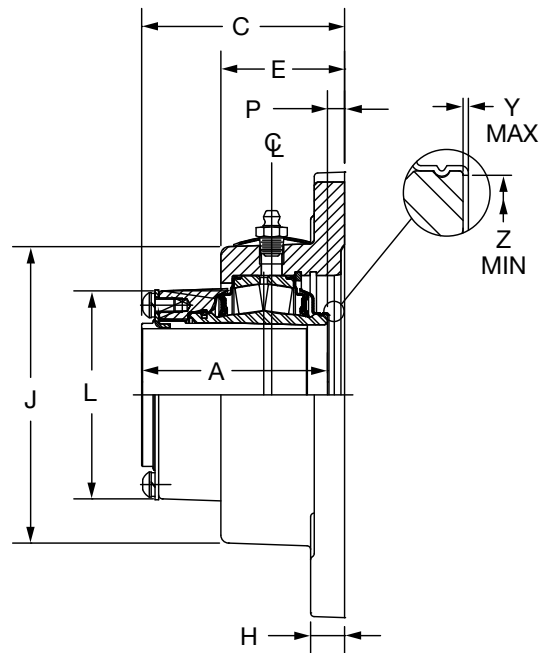
1-1/8" THRU 1-1/2"
CONSTRUCTION



1-5/8" - 2"
CONSTRUCTION



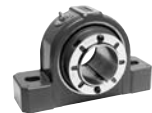
EXPANSION



NON-EXPANSION

NOTE: See page B14-64 for 2-3/16 thru 3 inch

| | | | |
|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
|---------------------------------|------------------------------|---|--------------------------|



DIMENSIONS

IMPERIAL - IP Flange - Round 1-1/8 THRU 2 INCH

Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

S-2000

UNISPHERE II

IMPERIAL

UNIFIED SAF

| Bearing | Shaft Size Inch | TRIDENT Seal | | | | Labyrinth Seal | | | |
|---------|-----------------|---------------|-------------|---------------|--------------|----------------|-------------|---------------|--------------|
| | | Non-Expansion | | Expansion | | Non-Expansion | | Expansion | |
| | | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name |
| 22208 | 1-1/8 | | F3R-IP-102R | 069630 | F3R-IP-102RE | 069651 | F3R-IP-102L | 069672 | F3R-IP-102LE |
| | 1-3/16 | 069593 | F3R-IP-103R | 069631 | F3R-IP-103RE | 069652 | F3R-IP-103L | 069673 | F3R-IP-103LE |
| | 1-1/4 | 069594 | F3R-IP-104R | 069632 | F3R-IP-104RE | 069653 | F3R-IP-104L | 069674 | F3R-IP-104LE |
| | 1-3/8 | 069595 | F3R-IP-106R | 069633 | F3R-IP-106RE | 069654 | F3R-IP-106L | 069675 | F3R-IP-106LE |
| | 1-7/16 | 069596 | F3R-IP-107R | 069634 | F3R-IP-107RE | 069655 | F3R-IP-107L | 069676 | F3R-IP-107LE |
| | 1-1/2 | 069597 | F3R-IP-108R | 069635 | F3R-IP-108RE | 069656 | F3R-IP-108L | 069677 | F3R-IP-108LE |
| 22209 | 1-5/8 | 069598 | F4R-IP-110R | 069636 | F4R-IP-110RE | 069657 | F4R-IP-110L | 069678 | F4R-IP-110LE |
| | 1-11/16 | 069599 | F4R-IP-111R | 069637 | F4R-IP-111RE | 069658 | F4R-IP-111L | 069679 | F4R-IP-111LE |
| | 1-3/4 | 069600 | F4R-IP-112R | 069638 | F4R-IP-112RE | 069659 | F4R-IP-112L | 069680 | F4R-IP-112LE |
| 22210 | 1-7/8 | 069601 | F4R-IP-114R | 069639 | F4R-IP-114RE | 069660 | F4R-IP-114L | 069681 | F4R-IP-114LE |
| | 1-15/16 | 069602 | F4R-IP-115R | 069640 | F4R-IP-115RE | 069661 | F4R-IP-115L | 069682 | F4R-IP-115LE |
| | 2 | 069603 | F4R-IP-200R | 069641 | F4R-IP-200RE | 069662 | F4R-IP-200L | 069683 | F4R-IP-200LE |

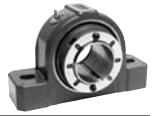
Metric shaft sizes available upon request

| Shaft Size | A | B | C | D | DD | E | F Bolt Dia. | H | J | L | P | X Total Exp | Y | Z |
|------------|------|------|------|------|------|------|-------------|------|------|------|------|-------------|------|------|
| 1-1/8 | | | | | | | | | | | | | | |
| 1-3/16 | | | | | | | | | | | | | | |
| 1-1/4 | 2.63 | 5.88 | 2.86 | 3.53 | 5.00 | 1.80 | *1/2 | 0.50 | 3.75 | 2.72 | 0.23 | 3/16 | 0.02 | 1.80 |
| 1-3/8 | | | | | | | | | | | | | | |
| 1-7/16 | | | | | | | | | | | | | | |
| 1-1/2 | | | | | | | | | | | | | | |
| 1-5/8 | | | | | | | | | | | | | | |
| 1-11/16 | 2.81 | 6.38 | 3.11 | 3.89 | 5.50 | 1.89 | *1/2 | 0.50 | 4.25 | 3.00 | 0.27 | 1/4 | 0.02 | 2.08 |
| 1-3/4 | | | | | | | | | | | | | | |
| 1-7/8 | | | | | | | | | | | | | | |
| 1-15/16 | 2.86 | 6.69 | 3.16 | 4.06 | 5.75 | 1.92 | **1/2 | 0.56 | 4.50 | 3.28 | 0.27 | 1/4 | 0.02 | 2.30 |
| 2 | | | | | | | | | | | | | | |

* 3 Equally spaced bolt holes

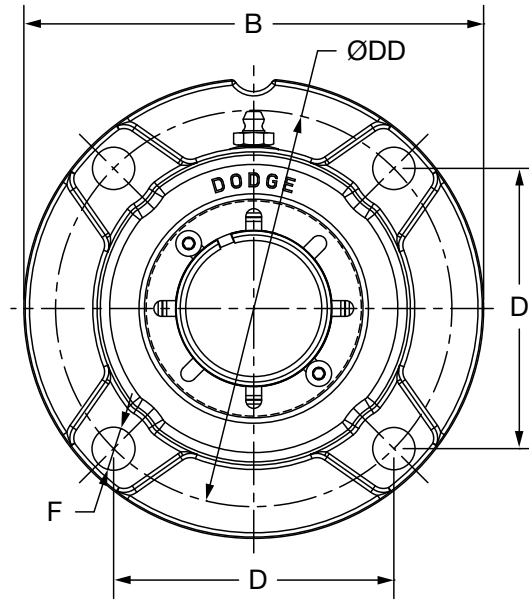
** 4 Equally spaced bolt holes

| | | | |
|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
|---------------------------------|------------------------------|---|--------------------------|

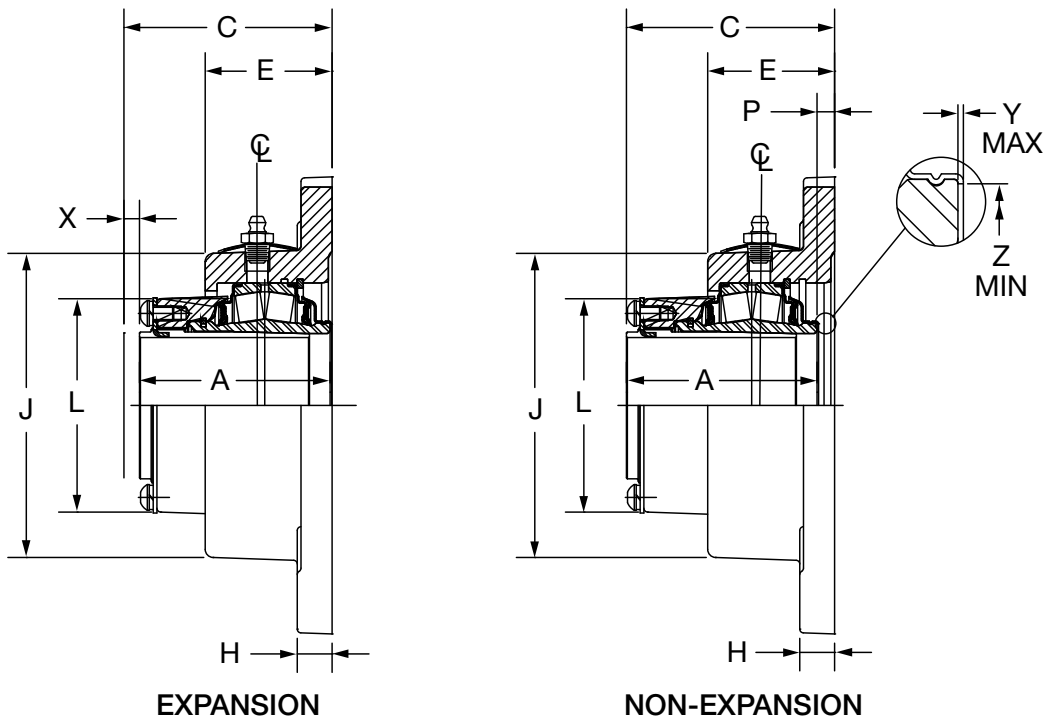


DIMENSIONS

IMPERIAL - IP Flange - Round 2-3/16 THRU 3 INCH



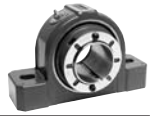
2-3/16" - 3"
CONSTRUCTION



NOTE: See page B14-62 for 1-1/8 thru 2 inch

| | | | |
|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
|---------------------------------|------------------------------|---|--------------------------|

DIMENSIONS



IMPERIAL - IP Flange - Round 2-3/16 THRU 3 INCH

Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

S-2000

UNISPHERE II

IMPERIAL

UNIFIED SAF

| Bearing | Shaft Size Inch | TRIDENT Seal | | | | Labyrinth Seal | | | |
|---------|-----------------|---------------|-------------|---------------|--------------|----------------|-------------|---------------|--------------|
| | | Non-Expansion | | Expansion | | Non-Expansion | | Expansion | |
| | | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name |
| 22211 | 2-3/16 | 069604 | F4R-IP-203R | 069642 | F4R-IP-203RE | 069663 | F4R-IP-203L | 069684 | F4R-IP-203LE |
| | 2-1/4 | 069605 | F4R-IP-204R | 069643 | F4R-IP-204RE | 069664 | F4R-IP-204L | 069685 | F4R-IP-204LE |
| 22213 | 2-3/8 | 069606 | F4R-IP-206R | 069644 | F4R-IP-206RE | 069665 | F4R-IP-206L | 069686 | F4R-IP-206LE |
| | 2-7/16 | 069607 | F4R-IP-207R | 069645 | F4R-IP-207RE | 069666 | F4R-IP-207L | 069687 | F4R-IP-207LE |
| | 2-1/2 | 069608 | F4R-IP-208R | 069646 | F4R-IP-208RE | 069667 | F4R-IP-208L | 069688 | F4R-IP-208LE |
| 22215 | 2-11/16 | 069609 | F4R-IP-211R | 069647 | F4R-IP-211RE | 069668 | F4R-IP-211L | 069689 | F4R-IP-211LE |
| | 2-3/4 | 069610 | F4R-IP-212R | 069648 | F4R-IP-212RE | 069669 | F4R-IP-212L | 069690 | F4R-IP-212LE |
| | 2-15/16 | 069611 | F4R-IP-215R | 069649 | F4R-IP-215RE | 069670 | F4R-IP-215L | 069691 | F4R-IP-215LE |
| | 3 | 069612 | F4R-IP-300R | 069650 | F4R-IP-300RE | 069671 | F4R-IP-300L | 069692 | F4R-IP-300LE |

Metric shaft sizes available upon request

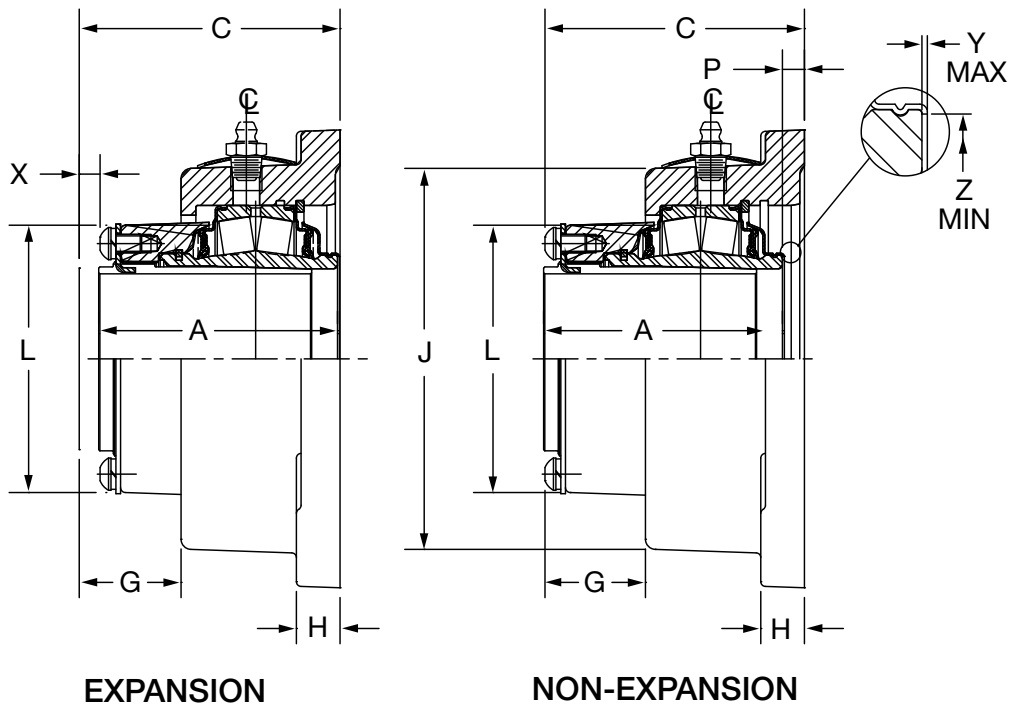
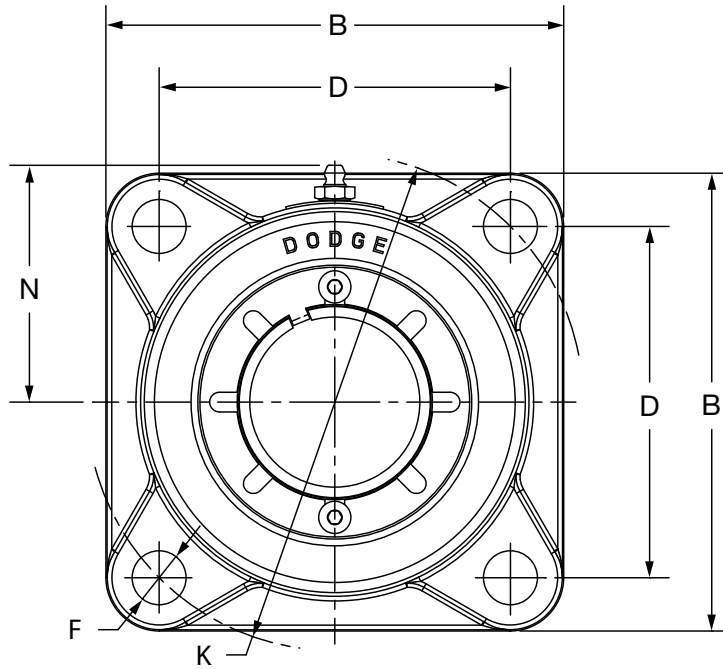
| Shaft Size | A | B | C | D | DD | E | F Bolt Dia. | H | J | L | P | X Total Exp | Y | Z |
|----------------------------------|------|------|------|------|------|------|-------------|------|------|------|------|-------------|------|------|
| 2-3/16 2-1/4 | 3.03 | 7.38 | 3.34 | 4.50 | 6.38 | 2.05 | 5/8 | 0.56 | 4.80 | 3.50 | 0.31 | 1/4 | 0.03 | 2.60 |
| 2-3/8 2-7/16 2-1/2 | 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 |
| 2-11/16 2-3/4 2-15/16 3 | 3.50 | 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 |

| | | | |
|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
|---------------------------------|------------------------------|---|--------------------------|



DIMENSIONS

IMPERIAL - IP Flange - Square 1-1/8 THRU 2-1/4 INCH



NOTE: See page B14-68 for 2-3/8 thru 4 inch

| | | | |
|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
|---------------------------------|------------------------------|---|--------------------------|

DIMENSIONS



IMPERIAL - IP Flange - Square 1-1/8 THRU 2-1/4 INCH

Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

S-2000

UNISPHERE II

IMPERIAL

UNIFIED SAF

| Bearing | Shaft Size Inch | TRIDENT Seal | | | | Labyrinth Seal | | | |
|---------|-----------------|---------------|-------------|-----------|--------------|----------------|-------------|-----------|--------------|
| | | Non-Expansion | | Expansion | | Non-Expansion | | Expansion | |
| | | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name |
| 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 |

Metric shaft sizes available upon request

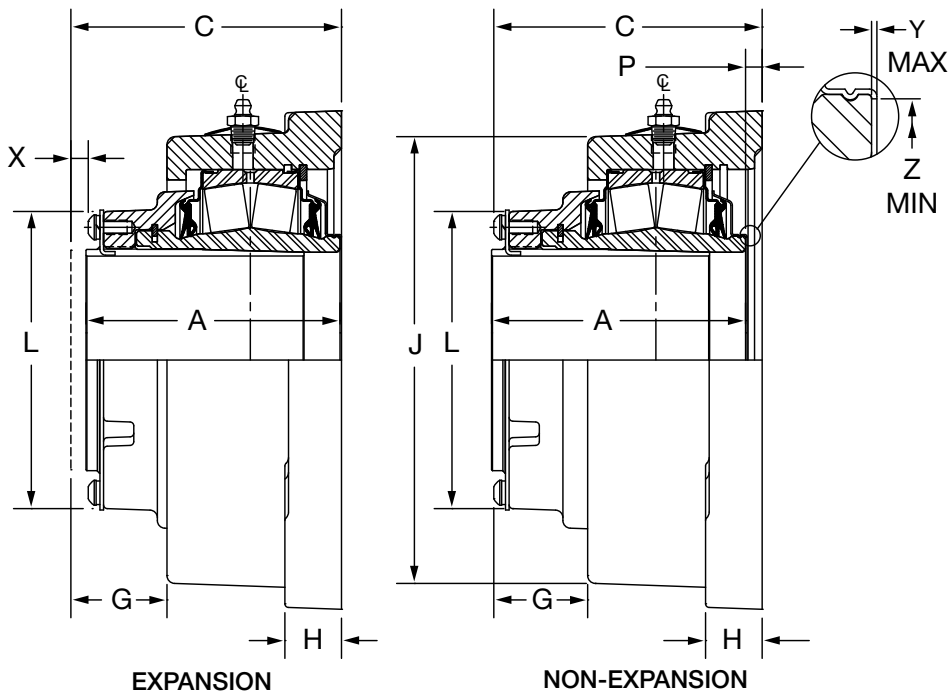
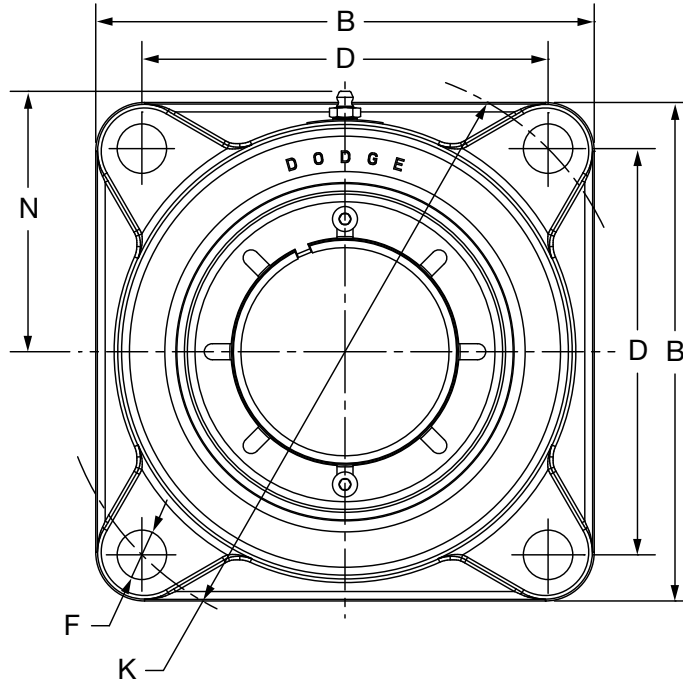
| Shaft Size | A | B | C | D | F Bolt Dia. | G | H | J | K | L | N | P | X Total Exp. | Y | Z |
|--|------|------|------|------|-------------|------|------|------|------|------|------|------|--------------|------|------|
| 1-1/8 1-3/16 1-1/4 1-3/8 1-7/16 1-1/2 | 2.63 | 4.75 | 2.86 | 3.53 | 1/2 | 1.08 | 0.50 | 3.81 | 5.00 | 2.72 | 2.48 | 0.23 | 3/16 | 0.02 | 1.80 |
| 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 | 5.30 | 3.16 | 4.06 | 1/2 | 1.23 | 0.56 | 4.97 | 5.75 | 3.28 | 2.91 | 0.30 | 1/4 | 0.02 | 2.30 |
| 2-3/16 2-1/4 | 3.03 | 5.88 | 3.34 | 4.52 | 5/8 | 1.31 | 0.56 | 5.02 | 6.38 | 3.80 | 3.09 | 0.31 | 1/4 | 0.02 | 2.60 |

| | | | |
|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
|---------------------------------|------------------------------|---|--------------------------|



DIMENSIONS

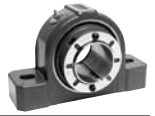
IMPERIAL - IP Flange - Square 2-3/8 THRU 4 INCH



NOTE: See page B14-66 for 1-1/8 thru 2-1/4 inch

| | | | |
|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
|---------------------------------|------------------------------|---|--------------------------|

DIMENSIONS



IMPERIAL - IP Flange - Square 2-3/8 THRU 4 INCH

Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

S-2000

UNISPHERE II

IMPERIAL

UNIFIED SAF

| Bearing | Shaft Size Inch | TRIDENT Seal | | | | Labyrinth Seal | | | |
|---------|-----------------|---------------|-------------|---------------|--------------|----------------|-------------|---------------|--------------|
| | | Non-Expansion | | Expansion | | Non-Expansion | | Expansion | |
| | | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name |
| 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 |
| 22220 | 3-11/16 | 069718 | F4S-IP-311R | 069746 | F4S-IP-311RE | 069774 | F4S-IP-311L | 069802 | F4S-IP-311LE |
| | 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 |

Metric shaft sizes available upon request

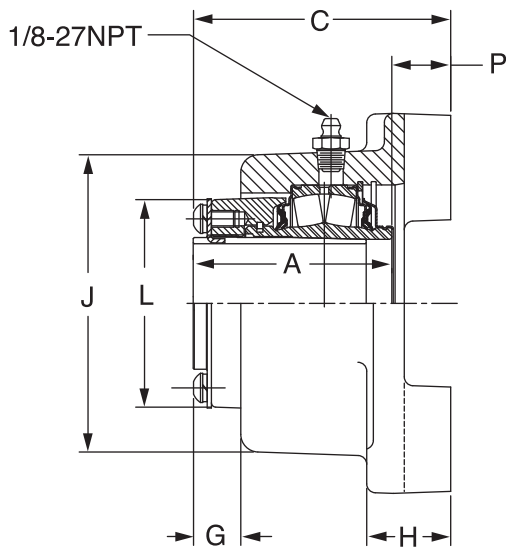
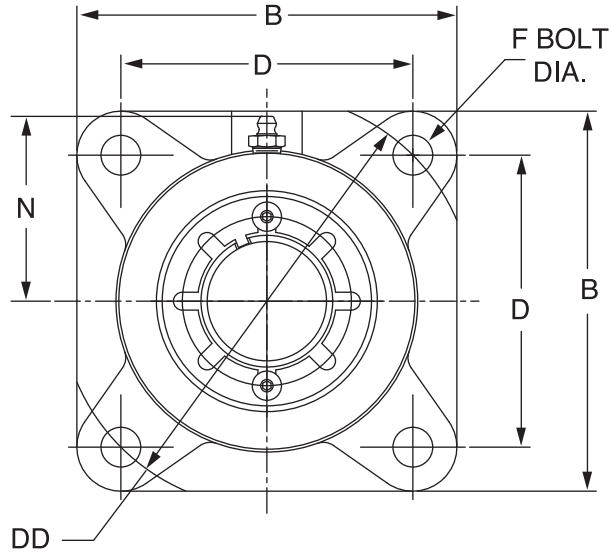
| Shaft Size | A | B | C | D | F Bolt Dia. | G | H | J | K | L | N | P | X Total Exp. | Y | Z |
|------------------------------------|------|------|------|------|-------------|------|------|------|-------|------|------|------|--------------|------|------|
| 2-3/8 2-7/16 2-1/2 | 3.42 | 6.13 | 3.73 | 4.78 | 5/8 | 1.36 | 0.64 | 5.63 | 6.75 | 3.88 | 3.41 | 0.31 | 1/4 | 0.03 | 2.95 |
| 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 | 0.03 | 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 | 0.03 | 4.05 |
| 3-11/16 3-15/16 4 | 4.70 | 9.25 | 5.08 | 7.61 | 7/8 | 1.78 | 1.06 | 8.22 | 10.75 | 5.56 | 4.70 | 0.38 | 5/16 | 0.03 | 4.50 |

| | | | |
|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
|---------------------------------|------------------------------|---|--------------------------|

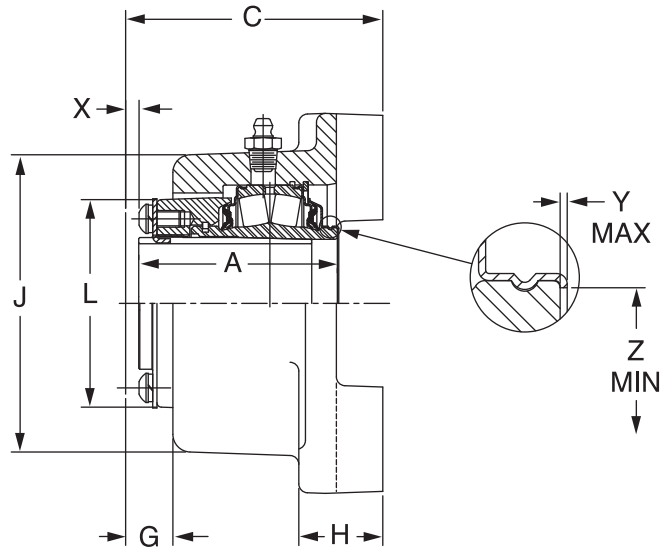


DIMENSIONS

IMPERIAL - IP Flange - Square with Type E Dimensions 1-3/8 THRU 2-3/16 INCH



NON-EXPANSION



EXPANSION

NOTE: See page B14-72 for 2-1/4 thru 4-1/2 inch

| | | | |
|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
|---------------------------------|------------------------------|---|--------------------------|

DIMENSIONS



IMPERIAL - IP Flange - Square with Type E Dimensions 1-3/8 THRU 2-3/16 INCH

Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

S-2000

UNISPHERE II

IMPERIAL

UNIFIED SAF

| Bearing Series | Shaft Size* | TRIDENT Seal | | | | Labyrinth Seal | | | |
|----------------|-------------|---------------|--------------|---------------|---------------|----------------|--------------|---------------|---------------|
| | | Non-Expansion | | Expansion | | Non-Expansion | | Expansion | |
| | | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name |
| 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 |

*Consult Dodge For Sizes Not Listed

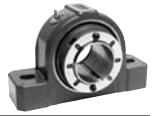
| Shaft Size | A | B# | C# | D | DD | Bolt Dia. | G | H# | J# | L | N | P | X Total Exp. | Y | Z |
|--------------------------------|------|------|------|------|------|-----------|------|------|------|------|------|------|--------------|------|------|
| 1-3/8 1-7/16 | 2.63 | 4.63 | 3.15 | 3.50 | 4.95 | 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 | 5.38 | 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 |

Note(S): "P" Dimension Is For Non-Expansion Only

"A" And "P" Dimensions Do Not Include "Y" Dimension

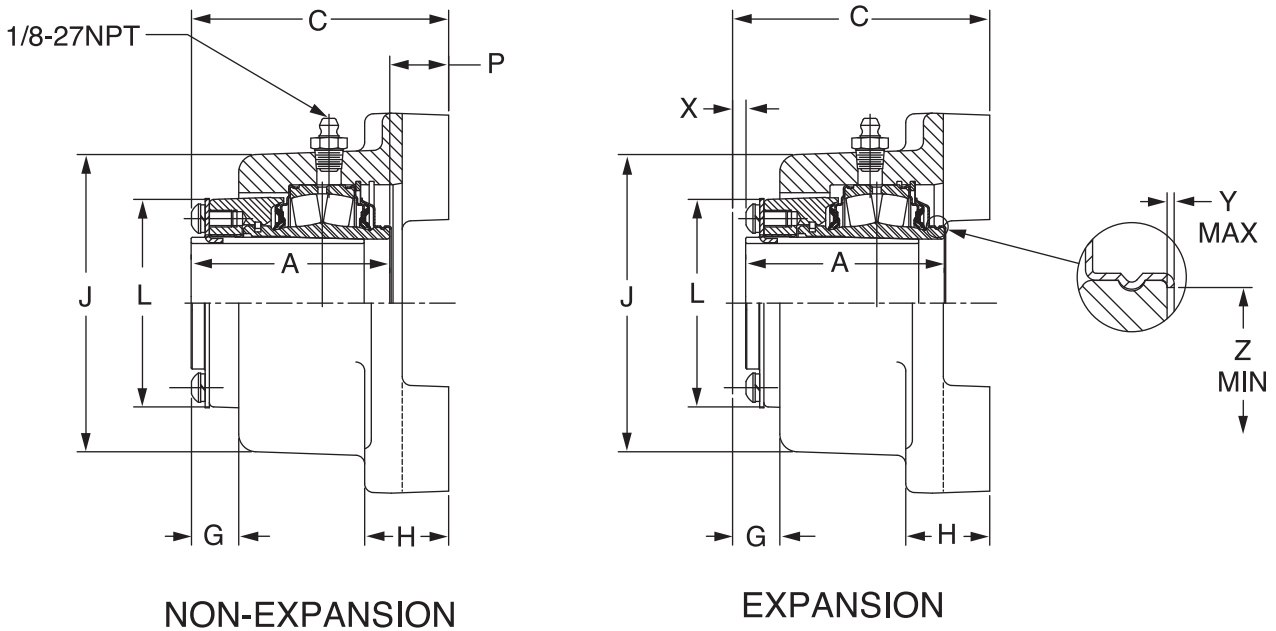
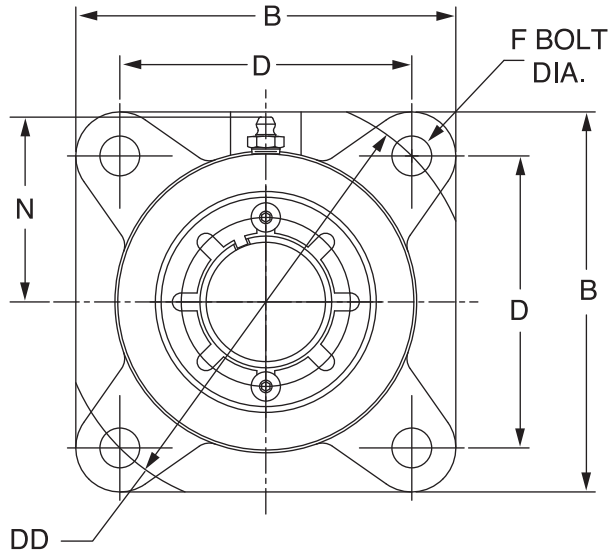
Reference Dimension Only

| | | | |
|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
|---------------------------------|------------------------------|---|--------------------------|



DIMENSIONS

IMPERIAL - IP Flange - Square with Type E Dimensions 2-1/4 THRU 4-1/2 INCH



NOTE: See page B14-70 for 1-3/8 thru 2-3/16 inch

| | | | |
|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
|---------------------------------|------------------------------|---|--------------------------|



DIMENSIONS

IMPERIAL - IP Flange - Square with Type E Dimensions 2-1/4 THRU 4-1/2 INCH

| Bearing Series | Shaft Size* | TRIDENT Seal | | | | Labyrinth Seal | | | |
|----------------|-------------|---------------|--------------|---------------|---------------|----------------|--------------|---------------|---------------|
| | | Non-Expansion | | Expansion | | Non-Expansion | | Expansion | |
| | | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name |
| 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 |
|------------------------------------|------|-------|------|------|-------|------------|------|------|------|------|------|------|--------------|------|------|
| 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 | 0.03 | 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 | 0.03 | 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 | 0.03 | 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 | 0.03 | 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 | 0.04 | 5.00 |

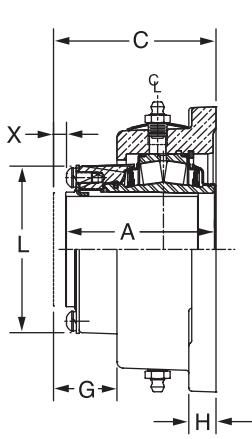
Note(S): "P" Dimension Is For Non-Expansion Only
 "A" And "P" Dimensions Do Not Include "Y" Dimension
 # Reference Dimension Only

| | | | |
|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
|---------------------------------|------------------------------|---|--------------------------|

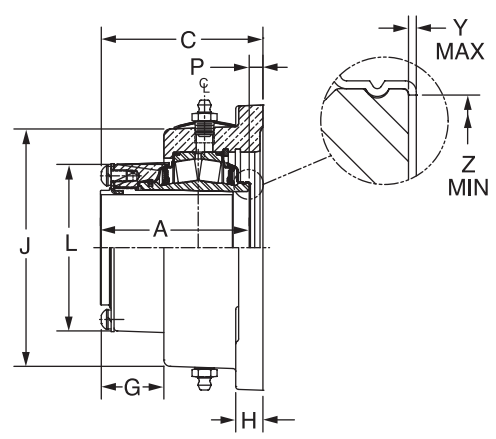
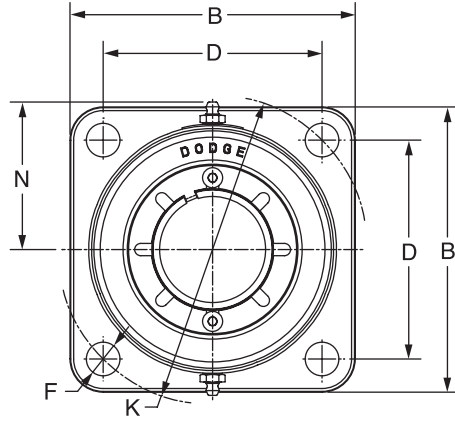


DIMENSIONS

Steel IMPERIAL-HD Flange - 4 Bolt 1-1/8 THRU 2-1/4 INCH



EXPANSION



NON-EXPANSION

| Shaft Size | Dodge Non-Expansion | | Dodge Expansion | |
|------------|---------------------|--------------|-----------------|---------------|
| | Dodge Part No. | Description | Dodge Part No. | 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 | A | B | C | D | F Bolt Dia. | G | H | J | K | L | N | P | X Total Exp | Y | Z |
|------------|------|------|------|------|-------------|------|------|------|------|------|------|------|-------------|------|------|
| 1-1/8 | 2.63 | 4.62 | 2.87 | 3.54 | 1/2 | 0.84 | 0.88 | 3.70 | 5.00 | 2.72 | 2.25 | 0.24 | 3/16 | 0.02 | 1.80 |
| 1-3/16 | | | | | | | | | | | | | | | |
| 1-1/4 | | | | | | | | | | | | | | | |
| 1-3/8 | | | | | | | | | | | | | | | |
| 1-7/16 | 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 |
| 1-1/2 | | | | | | | | | | | | | | | |
| 1-5/8 | | | | | | | | | | | | | | | |
| 1-11/16 | 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 |
| 1-3/4 | | | | | | | | | | | | | | | |
| 1-7/8 | | | | | | | | | | | | | | | |
| 1-15/16 | 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 | | | | | | | | | | | | | | | |
| 2-3/16 | | | | | | | | | | | | | | | |
| 2-1/4 | | | | | | | | | | | | | | | |

"P" Dimension Is For Non-Expansion Only

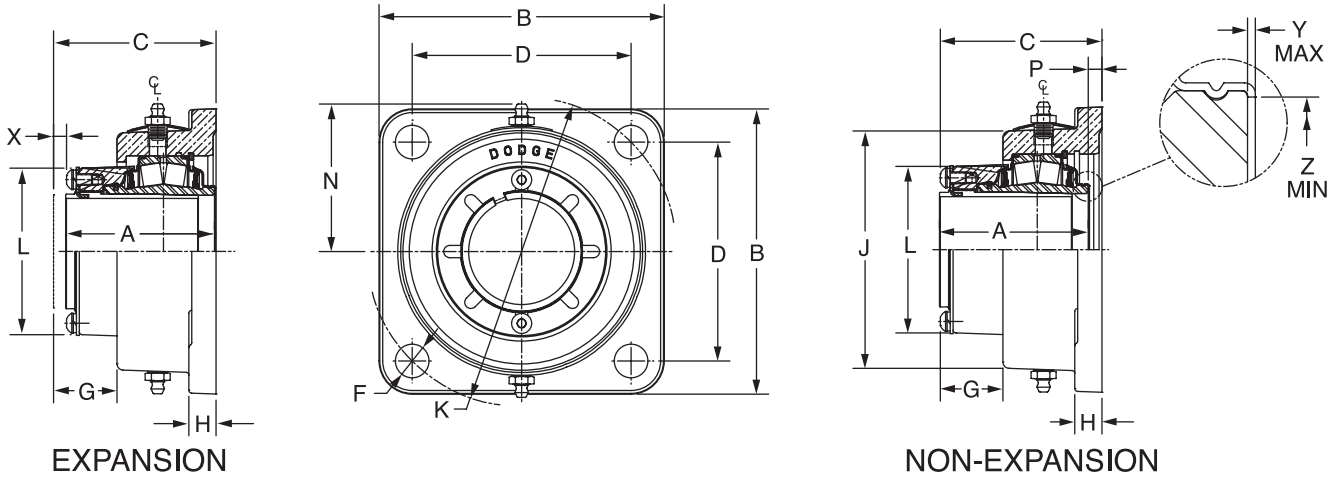
"A" & "P" Dimensions Do Not Include "Y" Dimension

| | | | |
|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
|---------------------------------|------------------------------|---|--------------------------|

DIMENSIONS



Steel IMPERIAL-HD Flange - 4 Bolt 2-3/8 THRU 4 INCH



| Shaft Size | Dodge Non-Expansion | | Dodge Expansion | |
|------------|---------------------|--------------|-----------------|---------------|
| | Dodge Part No. | Description | Dodge Part No. | 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 |

| Shaft Size | A | B | C | D | F Bolt Dia. | G | H | J | K | L | N | P | X Total Exp | Y | Z |
|------------|------|------|------|------|-------------|------|------|------|-------|------|------|------|-------------|------|------|
| 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 | 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 |
| 3-15/16 | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | |

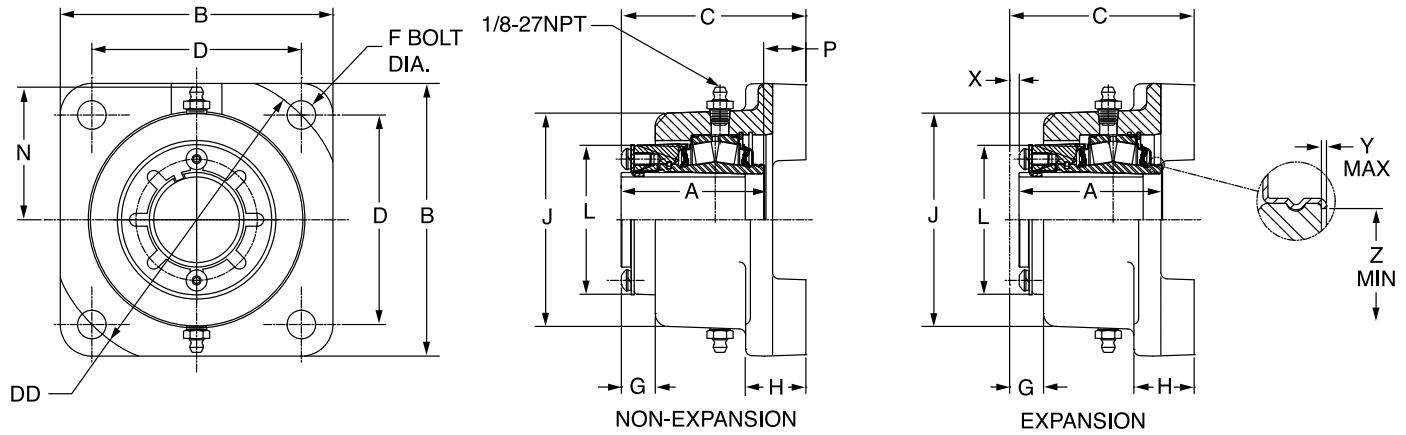
'P' Dimension Is For Non-Expansion Only
A' And 'P' Dimensions Do Not Include 'Y' Dimension

| | | | |
|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
|---------------------------------|------------------------------|---|--------------------------|



DIMENSIONS

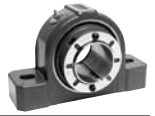
Steel IMPERIAL-HD Flange 4 Bolt With Type E Dimensions



| Shaft Size | Dodge Non-Expansion | | Dodge Expansion | |
|------------|---------------------|---------------|-----------------|----------------|
| | Dodge Part No. | Description | Dodge Part No. | 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 |
| 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 |

| | | | |
|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
|---------------------------------|------------------------------|---|--------------------------|

DIMENSIONS



Steel IMPERIAL-HD Flange 4 Bolt With Type E Dimensions

Bearing Reference Guide
 E-Family Roller Bearings
 Specialty Tapered Products
 S-2000
 UNISPHERE II
 IMPERIAL
 UNIFIED SAF

| 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 | 4.620 | 2.87 | 3.50 | 4.95 | 1/2 | 0.84 | 0.88 | 3.7 | 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 | 4.13 | 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 | 0.03 | 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 | 0.03 | 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 | 0.03 | 4.05 |
| 3-15/16 4 | 4.70 | 9.96 | 5.04 | 7.75 | 10.96 | 7/8 | 1.06 | 1.50 | 8.22 | 5.44 | 4.68 | 0.34 | 5/16 | 0.03 | 4.50 |
| 4-7/16 4-1/2 | 5.23 | 10.87 | 5.59 | 8.75 | 12.38 | 7/8 | 1.38 | 1.50 | 8.76 | 6.35 | 4.80 | 0.36 | 3/8 | 0.04 | 5.00 |

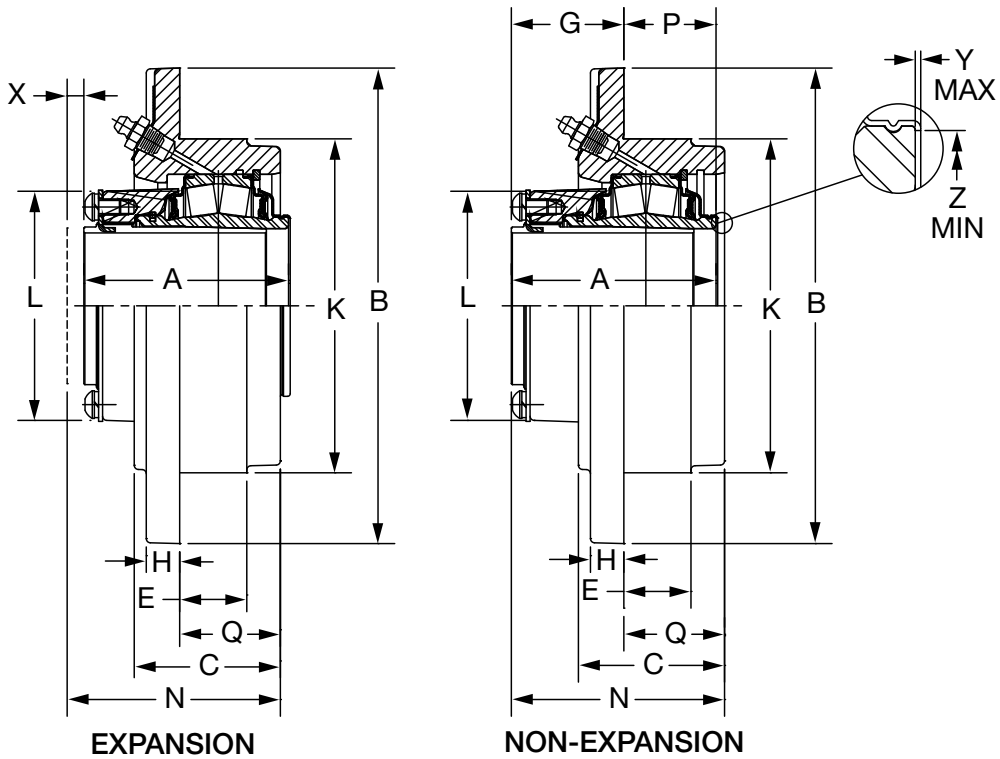
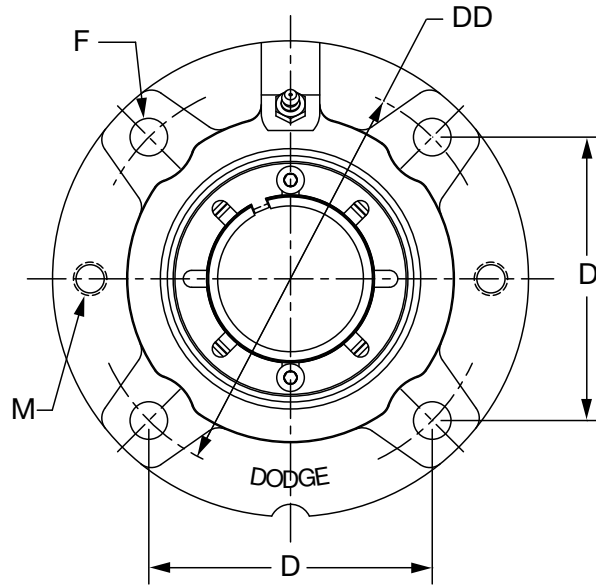
"P" Dimension Is For Non-Expansion Only
 "A" & "P" Dimensions Do Not Include "Y" Dimension

| | | | |
|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
|---------------------------------|------------------------------|---|--------------------------|



DIMENSIONS

IMPERIAL - IP Piloted Flange 1-1/8 THRU 2-1/2 INCH



NOTE: See page B14-80 for 2-11/16 thru 5 inch

| | | | |
|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
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DIMENSIONS

IMPERIAL - IP Piloted Flange 1-1/8 THRU 2-1/2 INCH

Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

S-2000

UNISPHERE II

IMPERIAL

UNIFIED SAF

| Bearing | Shaft Size Inch | TRIDENT Seal | | | | Labyrinth Seal | | | |
|---------|-----------------|---------------|------------|-----------|-------------|----------------|------------|-----------|-------------|
| | | Non-Expansion | | Expansion | | Non-Expansion | | Expansion | |
| | | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name |
| 22208 | 1-1/8 | 069805 | FC-IP-102R | 069837 | FC-IP-102RE | 069869 | FC-IP-102L | 069901 | FC-IP-102LE |
| | 1-3/16 | 069806 | FC-IP-103R | 069838 | FC-IP-103RE | 069870 | FC-IP-103L | 069902 | FC-IP-103LE |
| | 1-1/4 | 069807 | FC-IP-104R | 069839 | FC-IP-104RE | 069871 | FC-IP-104L | 069903 | FC-IP-104LE |
| | 1-3/8 | 069808 | FC-IP-106R | 069840 | FC-IP-106RE | 069872 | FC-IP-106L | 069904 | FC-IP-106LE |
| | 1-7/16 | 069809 | FC-IP-107R | 069841 | FC-IP-107RE | 069873 | FC-IP-107L | 069905 | FC-IP-107LE |
| | 1-1/2 | 069810 | FC-IP-108R | 069842 | FC-IP-108RE | 069874 | FC-IP-108L | 069906 | FC-IP-108LE |
| 22209 | 1-5/8 | 069811 | FC-IP-110R | 069843 | FC-IP-110RE | 069875 | FC-IP-110L | 069907 | FC-IP-110LE |
| | 1-11/16 | 069812 | FC-IP-111R | 069844 | FC-IP-111RE | 069876 | FC-IP-111L | 069908 | FC-IP-111LE |
| | 1-3/4 | 069813 | FC-IP-112R | 069845 | FC-IP-112RE | 069877 | FC-IP-112L | 069909 | FC-IP-112LE |
| 22210 | 1-7/8 | 069814 | FC-IP-114R | 069846 | FC-IP-114RE | 069878 | FC-IP-114L | 069910 | FC-IP-114LE |
| | 1-15/16 | 069815 | FC-IP-115R | 069847 | FC-IP-115RE | 069879 | FC-IP-115L | 069911 | FC-IP-115LE |
| | 2 | 069816 | FC-IP-200R | 069848 | FC-IP-200RE | 069880 | FC-IP-200L | 069912 | FC-IP-200LE |
| 22211 | 2-3/16 | 069817 | FC-IP-203R | 069849 | FC-IP-203RE | 069881 | FC-IP-203L | 069913 | FC-IP-203LE |
| | 2-1/4 | 069818 | FC-IP-204R | 069850 | FC-IP-204RE | 069882 | FC-IP-204L | 069914 | FC-IP-204LE |
| 22213 | 2-3/8 | 069819 | FC-IP-206R | 069851 | FC-IP-206RE | 069883 | FC-IP-206L | 069915 | FC-IP-206LE |
| | 2-7/16 | 069820 | FC-IP-207R | 069852 | FC-IP-207RE | 069884 | FC-IP-207L | 069916 | FC-IP-207LE |
| | 2-1/2 | 069821 | FC-IP-208R | 069853 | FC-IP-208RE | 069885 | FC-IP-208L | 069917 | FC-IP-208LE |

Metric shaft sizes available upon request

| 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 | 1.84 | 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 |
| 1-3/8 | | | | | | | | | | | | | | | | | | |
| 1-7/16 | | | | | | | | | | | | | | | | | | |
| 1-1/2 | | | | | | | | | | | | | | | | | | |
| 1-5/8 | | | | | | | | | | | | | | | | | | |
| 1-11/16 | 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 |
| 1-3/4 | | | | | | | | | | | | | | | | | | |
| 1-7/8 | | | | | | | | | | | | | | | | | | |
| 1-15/16 | 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 | | | | | | | | | | | | | | | | | | |
| 2-3/16 | 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 | 0.03 | 2.60 |
| 2-1/4 | | | | | | | | | | | | | | | | | | |
| 2-3/8 | | | | | | | | | | | | | | | | | | |
| 2-7/16 | 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 | 0.03 | 2.95 |
| 2-1/2 | | | | | | | | | | | | | | | | | | |

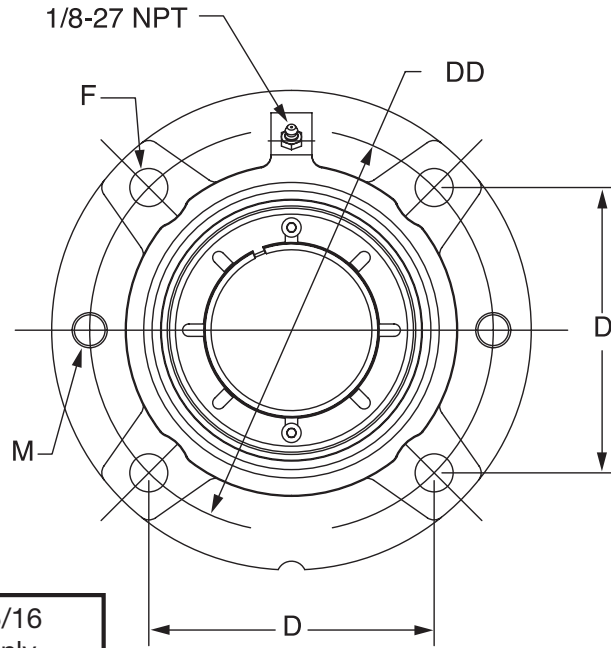
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| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
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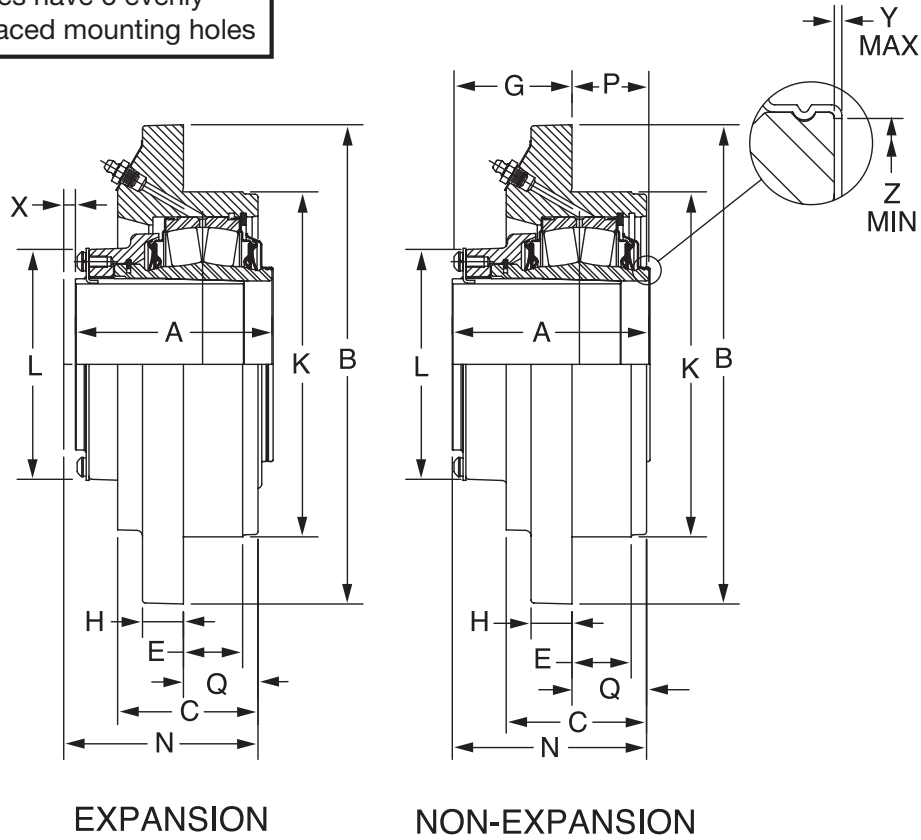


DIMENSIONS

IMPERIAL - IP Piloted Flange 2-11/16 THRU 5 INCH



Note: 4-7/16 thru 4-15/16 sizes have 6 evenly spaced mounting holes



NOTE: See page B14-78 for 1-1/8 thru 2-1/2 inch

| | | | |
|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
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DIMENSIONS

IMPERIAL - IP Piloted Flange 2-11/16 THRU 5 INCH

Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

S-2000

UNISPHERE II

IMPERIAL

UNIFIED SAF

| Bearing | Shaft Size Inch | TRIDENT Seal | | | | Labyrinth Seal | | | |
|---------|-----------------|---------------|------------|-----------|-------------|----------------|------------|-----------|-------------|
| | | Non-Expansion | | Expansion | | Non-Expansion | | Expansion | |
| | | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name |
| 22215 | 2-11/16 | 069822 | FC-IP-211R | 069854 | FC-IP-211RE | 069886 | FC-IP-211L | 069918 | FC-IP-211LE |
| | 2-3/4 | 069823 | FC-IP-212R | 069855 | FC-IP-212RE | 069887 | FC-IP-212L | 069919 | FC-IP-212LE |
| | 2-15/16 | 069824 | FC-IP-215R | 069856 | FC-IP-215RE | 069888 | FC-IP-215L | 069920 | FC-IP-215LE |
| | 3 | 069825 | FC-IP-300R | 069857 | FC-IP-300RE | 069889 | FC-IP-300L | 069921 | FC-IP-300LE |
| 22218 | 3-3/16 | 069826 | FC-IP-303R | 069858 | FC-IP-303RE | 069890 | FC-IP-303L | 069922 | FC-IP-303LE |
| | 3-1/4 | 069827 | FC-IP-304R | 069859 | FC-IP-304RE | 069891 | FC-IP-304L | 069923 | FC-IP-304LE |
| | 3-7/16 | 069828 | FC-IP-307R | 069860 | FC-IP-307RE | 069892 | FC-IP-307L | 069924 | FC-IP-307LE |
| | 3-1/2 | 069829 | FC-IP-308R | 069861 | FC-IP-308RE | 069893 | FC-IP-308L | 069925 | FC-IP-308LE |
| 22220 | 3-11/16 | 069830 | FC-IP-311R | 069862 | FC-IP-311RE | 069894 | FC-IP-311L | 069926 | FC-IP-311LE |
| | 3-15/16 | 069831 | FC-IP-315R | 069863 | FC-IP-315RE | 069895 | FC-IP-315L | 069927 | FC-IP-315LE |
| | 4 | 069832 | FC-IP-400R | 069864 | FC-IP-400RE | 069896 | FC-IP-400L | 069928 | FC-IP-400LE |
| 22222 | 4-7/16 | 069833 | FC-IP-407R | 069865 | FC-IP-407RE | 069897 | FC-IP-407L | 069929 | FC-IP-407LE |
| | 4-1/2 | 069834 | FC-IP-408R | 069866 | FC-IP-408RE | 069898 | FC-IP-408L | 069930 | FC-IP-408LE |
| 22226 | 4-15/16 | 069835 | FC-IP-415R | 069867 | FC-IP-415RE | 069899 | FC-IP-415L | 069931 | FC-IP-415LE |
| | 5 | 069836 | FC-IP-500R | 069868 | FC-IP-500RE | 069900 | FC-IP-500L | 069932 | FC-IP-500LE |

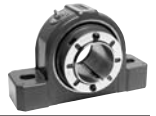
Metric shaft sizes available upon request

| Shaft Size | A | B | C | D | DD | E | F Bolt Dia. | G | H | K* | L | M | N | P | Q | X Total Exp | Y | Z |
|------------------------------------|------|-------|------|------|-------|------|-------------|------|------|--------|------|--------|------|------|------|-------------|------|------|
| 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 | 0.03 | 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 | 0.03 | 4.05 |
| 3-11/16 3-15/16 4 | 4.70 | 10.88 | 3.50 | 6.63 | 9.38 | 1.47 | 3/4 | 2.89 | 1.13 | 8.125 | 5.56 | 3/4-10 | 4.39 | 1.81 | 1.91 | 5/16 | 0.03 | 4.50 |
| 4-7/16 4-1/2 | 5.23 | 13.50 | 4.00 | 5.88 | 11.75 | 1.45 | 3/4** | 3.56 | 1.00 | 10.250 | 6.44 | 3/4-10 | 5.55 | 1.67 | 1.98 | 3/8 | 0.04 | 5.00 |
| 4-15/16 5 | 5.98 | 14.75 | 4.38 | 6.38 | 12.75 | 1.70 | 7/8** | 3.86 | 1.25 | 11.000 | 7.63 | 3/4-10 | 6.28 | 2.13 | 2.42 | 3/8 | 0.04 | 5.84 |

* +0.000", -0.002"

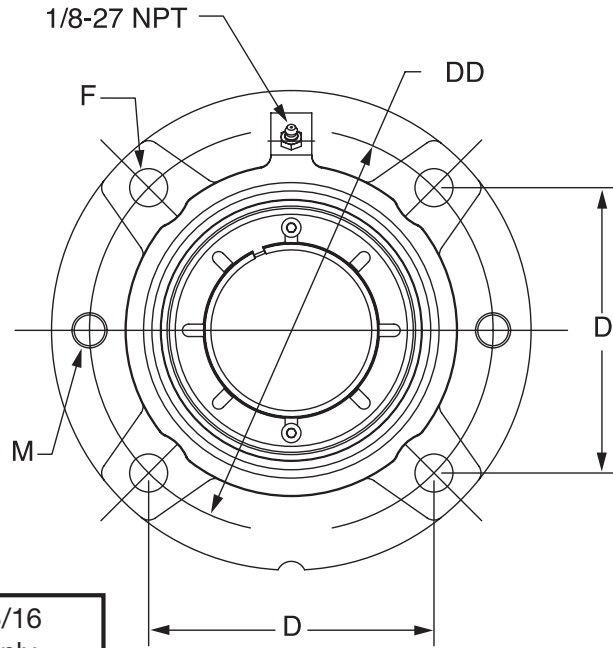
** 6 equally spaced mounting holes

| | | | |
|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
|---------------------------------|------------------------------|---|--------------------------|

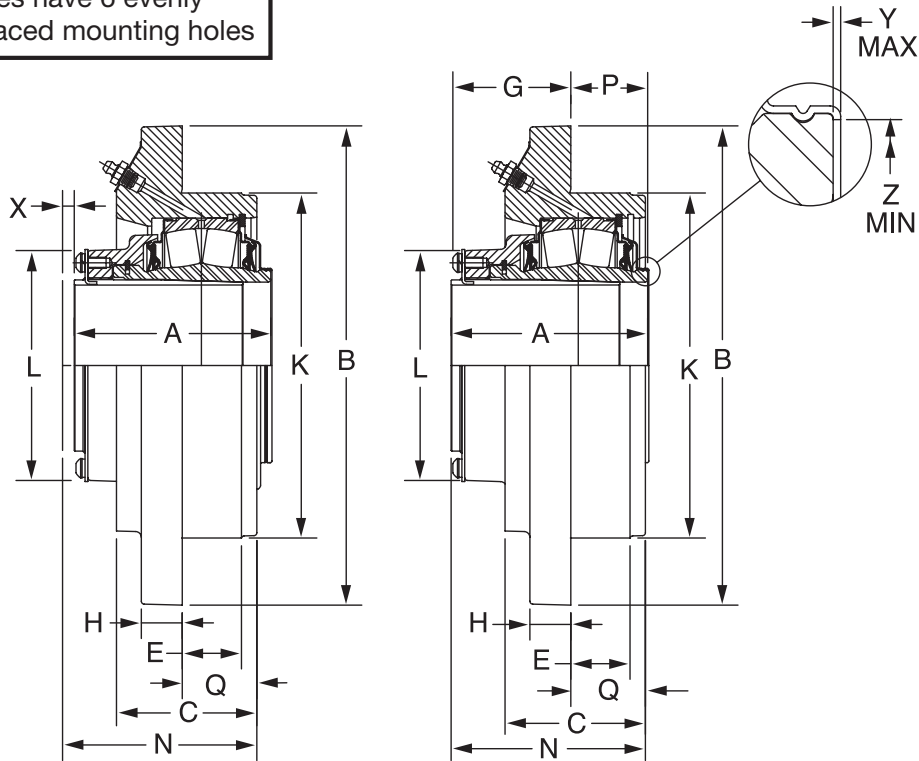


DIMENSIONS

IMPERIAL - IP Piloted Flange with Type E Dimensions
1-3/8 THRU 2-1/2 INCH



Note: 4-7/16 thru 4-15/16 sizes have 6 evenly spaced mounting holes



EXPANSION

NON-EXPANSION



DIMENSIONS

IMPERIAL - IP Piloted Flange with Type E Dimensions 1-3/8 THRU 2-1/2 INCH

Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

S-2000

UNISPHERE II

IMPERIAL

UNIFIED SAF

| Bearing Series | Shaft Size* | TRIDENT Seal | | | | Labyrinth Seal | | | |
|----------------|-------------|---------------|-------------|---------------|--------------|----------------|-------------|---------------|--------------|
| | | Non-Expansion | | Expansion | | Non-Expansion | | Expansion | |
| | | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name |
| 22208 | 1-3/8 | 069808 | FC-IP-106R | 069840 | FC-IP-106RE | 069872 | FC-IP-106L | 069904 | FC-IP-106LE |
| | 1-7/16 | 069809 | FC-IP-107R | 069841 | FC-IP-107RE | 069873 | FC-IP-107L | 069905 | FC-IP-107LE |
| 22209 | 1-1/2 | 071576 | EFC-IP-108R | 071579 | EFC-IP-108RE | 071582 | EFC-IP-108L | 071585 | EFC-IP-108LE |
| | 1-5/8 | 069811 | FC-IP-110R | 069843 | FC-IP-110RE | 069875 | FC-IP-110L | 069907 | EC-IP-110LE |
| | 1-11/16 | 069812 | FC-IP-111R | 069844 | FC-IP-111RE | 069876 | FC-IP-111L | 069908 | EC-IP-111LE |
| 22210 | 1-3/4 | 071577 | EFC-IP-112R | 071580 | EFC-IP-112RE | 071583 | EFC-IP-112L | 071586 | EFC-IP-112LE |
| | 1-7/8 | 069814 | FC-IP-114R | 069846 | FC-IP-114RE | 069878 | FC-IP-114L | 069910 | FC-IP-114LE |
| | 1-15/16 | 069815 | FC-IP-115R | 069847 | FC-IP-115RE | 069879 | FC-IP-115L | 069911 | FC-IP-115LE |
| | 2 | 069816 | FC-IP-200R | 069848 | FC-IP-200RE | 069880 | FC-IP-200L | 069912 | FC-IP-200LE |
| 22211 | 2-3/16 | 069817 | FC-IP-203R | 069849 | FC-IP-203RE | 069881 | FC-IP-203L | 069913 | FC-IP-203LE |
| 22213 | 2-1/4 | 071578 | EFC-IP-204R | 071581 | EFC-IP-204RE | 071584 | EFC-IP-204L | 071587 | EFC-IP-204LE |
| | 2-7/16 | 069820 | FC-IP-207R | 069852 | FC-IP-207RE | 069884 | FC-IP-207L | 069916 | FC-IP-207LE |
| | 2-1/2 | 069821 | FC-IP-208R | 069853 | FC-IP-208RE | 069885 | FC-IP-208L | 069917 | FC-IP-208LE |

*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 |
|--------------------------------|------|------|------|------|------|------|-------------|------|------|-------|------|---------|------|------|------|--------------|------|------|
| 1-3/8 1-7/16 | 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 |
| 1-1/2 1-5/8 1-11/16 | 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 | 1.26 | 1/4 | 0.02 | 2.08 |
| 1-3/4 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 | 1.26 | 1.26 | 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 | 1.66 | 0.56 | 5.000 | 3.50 | 1/2-13 | 3.08 | 1.38 | 1.42 | 1/4 | 0.03 | 2.59 |
| 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 | 0.03 | 2.94 |

- +0.000
-0.002

Note(S): "P" And "G" Dimensions Are For Non-Expansion Only
"A" And "P" Dimensions Do Not Include "Y" Dimension

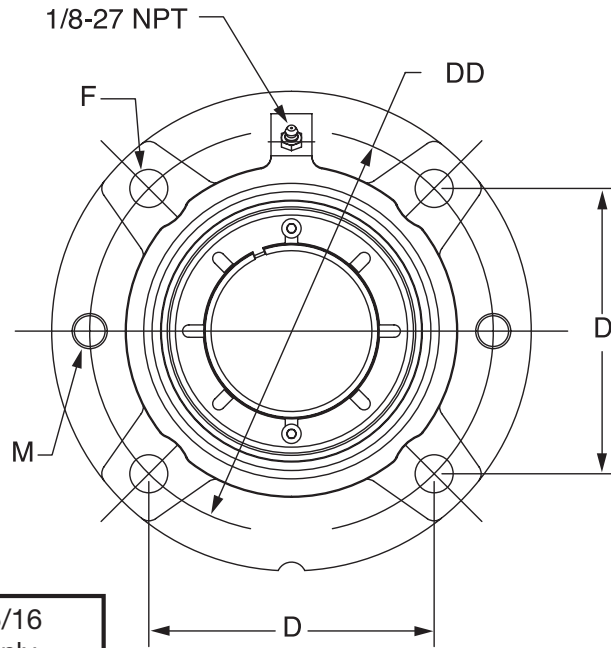
- Reference Dimension Only

| | | | |
|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
|---------------------------------|------------------------------|---|--------------------------|

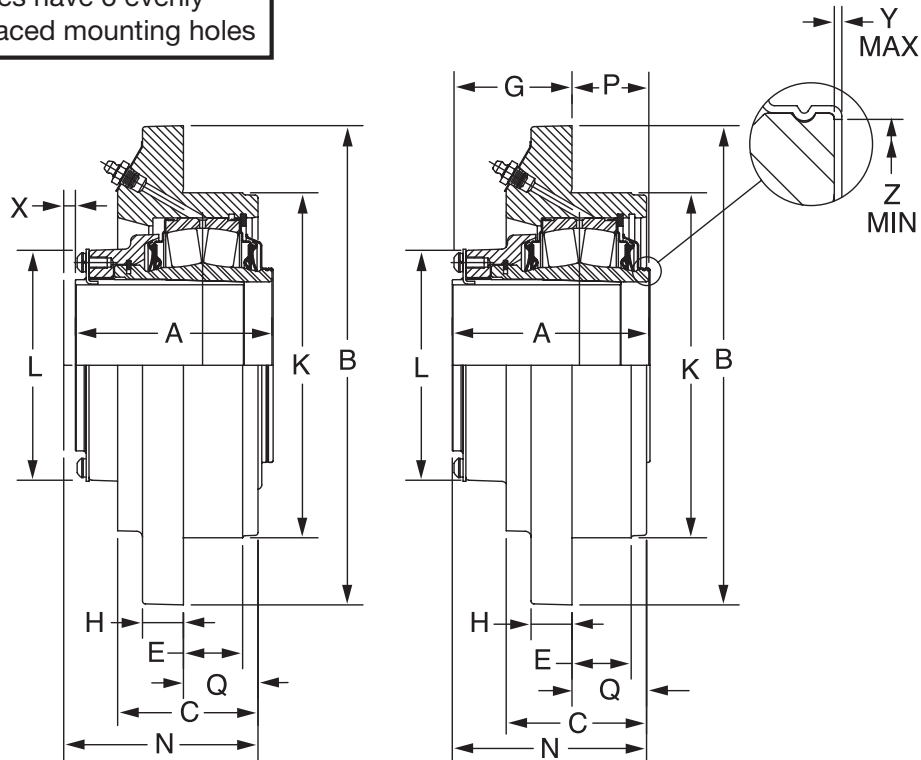


DIMENSIONS

IMPERIAL - IP Piloted Flange with Type E Dimension
2-11/16 THRU 5 INCH



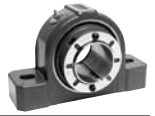
Note: 4-7/16 thru 4-15/16 sizes have 6 evenly spaced mounting holes



EXPANSION

NON-EXPANSION

DIMENSIONS



IMPERIAL - IP Piloted Flange with Type E Dimension 2-11/16 THRU 5 INCH

Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

S-2000

UNISPHERE II

IMPERIAL

UNIFIED SAF

| Bearing Series | Shaft Size* | TRIDENT Seal | | | | Labyrinth Seal | | | |
|----------------|-------------|---------------|-------------|-----------|--------------|----------------|-------------|-----------|--------------|
| | | Non-Expansion | | Expansion | | Non-Expansion | | Expansion | |
| | | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name | Part No. | Part Name |
| 22215 | 2-11/16 | 069822 | FC-IP-211R | 069854 | FC-IP-211RE | 069886 | FC-IP-211L | 069918 | FC-IP-211LE |
| | 2-3/4 | 069823 | FC-IP-212R | 069855 | FC-IP-212RE | 069887 | FC-IP-212L | 069919 | FC-IP-212LE |
| | 2-15/16 | 069824 | FC-IP-215R | 069856 | FC-IP-215RE | 069888 | FC-IP-215L | 069920 | FC-IP-215LE |
| | 3 | 069825 | FC-IP-300R | 069857 | FC-IP-300RE | 069889 | FC-IP-300L | 069921 | FC-IP-300LE |
| 22218 | 3-3/16 | 069826 | FC-IP-303R | 069858 | FC-IP-303RE | 069890 | FC-IP-303L | 069922 | FC-IP-303LE |
| | 3-1/4 | 069827 | FC-IP-304R | 069859 | FC-IP-304RE | 069891 | FC-IP-304L | 069923 | FC-IP-304LE |
| | 3-7/16 | 069828 | FC-IP-307R | 069860 | FC-IP-307RE | 069892 | FC-IP-307L | 069924 | FC-IP-307LE |
| | 3-1/2 | 069829 | FC-IP-308R | 069861 | FC-IP-308RE | 069893 | FC-IP-308L | 069925 | FC-IP-308LE |
| 22220 | 3-15/16 | 069831 | FC-IP-315R | 069863 | FC-IP-315RE | 069895 | FC-IP-315L | 069927 | FC-IP-315LE |
| | 4 | 069832 | FC-IP-400R | 069864 | FC-IP-400RE | 069896 | FC-IP-400L | 069928 | FC-IP-400LE |
| 22222 | 4-7/16 | 071272 | EFC-IP-407R | 071276 | EFC-IP-407RE | 071280 | EFC-IP-407L | 071284 | EFC-IP-407LE |
| | 4-1/2 | 071273 | EFC-IP-408R | 071277 | EFC-IP-408RE | 071281 | EFC-IP-408L | 071285 | EFC-IP-408LE |
| 22226 | 4-15/16 | 071274 | EFC-IP-415R | 071278 | EFC-IP-415RE | 071282 | EFC-IP-415L | 071286 | EFC-IP-415LE |
| | 5 | 071275 | EFC-IP-500R | 071279 | EFC-IP-500RE | 071283 | EFC-IP-500L | 071287 | EFC-IP-500LE |

*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 |
|------------------------------------|------|-------|------|------|-------|------|-------------|------|------|--------|------|--------|------|------|------|--------------|------|------|
| 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 | 0.03 | 3.47 |
| 3-3/16 3-1/4 3-7/16 3-1/2 | 4.17 | 10.25 | 3.00 | 6.09 | 8.63 | 1.26 | 3/4 | 2.53 | 0.94 | 7.375 | 5.00 | 3/4-10 | 4.06 | 1.64 | 1.52 | 1/4 | 0.03 | 4.05 |
| 3-15/16 4 | 4.70 | 10.88 | 3.50 | 6.63 | 9.38 | 1.47 | 3/4 | 2.89 | 1.13 | 8.125 | 5.56 | 3/4-10 | 4.78 | 1.81 | 1.91 | 5/16 | 0.03 | 4.50 |
| 4-7/16 4-1/2 | 5.23 | 13.50 | 4.58 | 5.88 | 11.75 | 1.45 | 3/4 ** | 3.03 | 0.94 | 10.250 | 6.44 | 3/4-10 | 5.66 | 2.20 | 2.63 | 3/8 | 0.04 | 5.00 |
| 4-15/16 5 | 5.98 | 14.75 | 4.88 | 6.38 | 12.75 | 1.70 | 7/8 ** | 3.40 | 1.25 | 11.000 | 7.63 | 3/4-10 | 6.41 | 2.59 | 3.01 | 3/8 | 0.04 | 5.84 |

- +0.000

-0.002

- Reference Dimension Only

Note(S): "P" And "G" Dimensions Are For Non-Expansion Only

"A" And "P" Dimensions Do Not Include "Y" Dimension

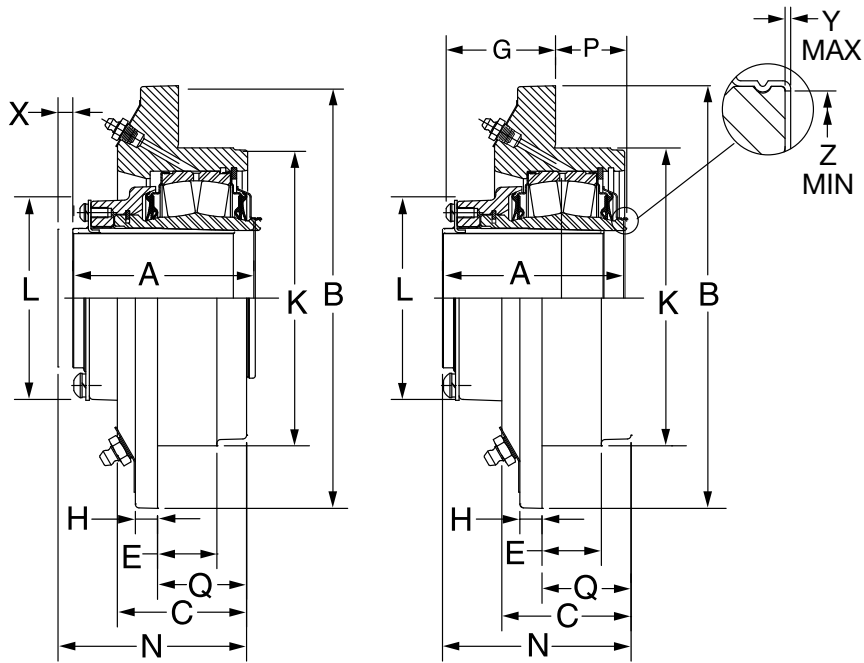
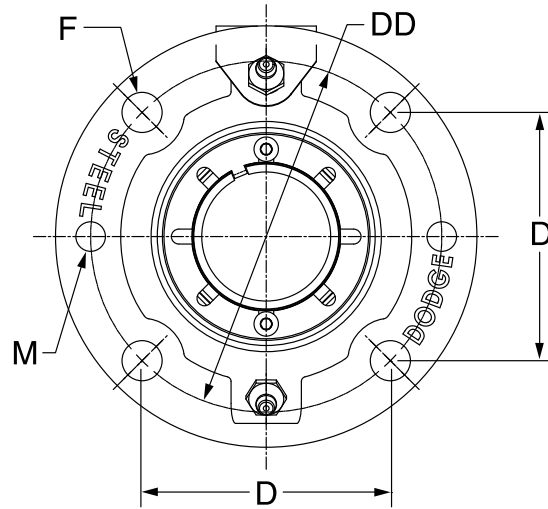
** 4-7/16 Thru 5" Have (6) Equally Spaced Mounting Holes

| | | | |
|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
|---------------------------------|------------------------------|---|--------------------------|



DIMENSIONS

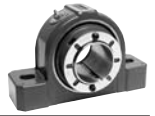
Steel IMPERIAL-HD Piloted Flange



EXPANSION

NON-EXPANSION

DIMENSIONS



Steel IMPERIAL-HD Piloted Flange

Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

S-2000

UNISPHERE II

IMPERIAL

UNIFIED SAF

| Shaft Size | Dodge Non-Expansion | | Dodge Expansion | |
|------------|---------------------|-------------|-----------------|--------------|
| | Dodge Part No. | Description | Dodge Part No. | Description |
| 1-1/8 | 072276 | SFC-IP-102R | 072307 | SFC-IP-102RE |
| 1-3/16 | 072277 | SFC-IP-103R | 072308 | SFC-IP-103RE |
| 1-1/4 | 072278 | SFC-IP-104R | 072309 | SFC-IP-104RE |
| 1-3/8 | 072279 | SFC-IP-106R | 072310 | SFC-IP-106RE |
| 1-7/16 | 072280 | SFC-IP-107R | 072311 | SFC-IP-107RE |
| 1-1/2 | 072281 | SFC-IP-108R | 072312 | SFC-IP-108RE |
| 1-5/8 | 072282 | SFC-IP-110R | 072313 | SFC-IP-110RE |
| 1-11/16 | 072283 | SFC-IP-111R | 072314 | SFC-IP-111RE |
| 1-3/4 | 072284 | SFC-IP-112R | 072315 | SFC-IP-112RE |
| 1-7/8 | 072285 | SFC-IP-114R | 072316 | SFC-IP-114RE |
| 1-15/16 | 072286 | SFC-IP-115R | 072317 | SFC-IP-115RE |
| 2 | 072287 | SFC-IP-200R | 072318 | SFC-IP-200RE |
| 2-3/16 | 072288 | SFC-IP-203R | 072319 | SFC-IP-203RE |
| 2-1/4 | 072289 | SFC-IP-204R | 072320 | SFC-IP-204RE |
| 2-7/16 | 072290 | SFC-IP-207R | 072321 | SFC-IP-207RE |
| 2-1/2 | 072291 | SFC-IP-208R | 072322 | SFC-IP-208RE |
| 2-11/16 | 072292 | SFC-IP-211R | 072323 | SFC-IP-211RE |
| 2-3/4 | 072293 | SFC-IP-212R | 072324 | SFC-IP-212RE |
| 2-15/16 | 072294 | SFC-IP-215R | 072325 | SFC-IP-215RE |
| 3 | 072295 | SFC-IP-300R | 072326 | SFC-IP-300RE |
| 3-3/16 | 072296 | SFC-IP-303R | 072327 | SFC-IP-303RE |
| 3-1/4 | 072297 | SFC-IP-304R | 072328 | SFC-IP-304RE |
| 3-7/16 | 072298 | SFC-IP-307R | 072329 | SFC-IP-307RE |
| 3-1/2 | 072299 | SFC-IP-308R | 072330 | SFC-IP-308RE |
| 3-11/16 | 072300 | SFC-IP-311R | 072331 | SFC-IP-311RE |
| 3-15/16 | 072301 | SFC-IP-315R | 072332 | SFC-IP-315RE |
| 4 | 072302 | SFC-IP-400R | 072333 | SFC-IP-400RE |
| 4-7/16 | 072303 | SFC-IP-407R | 072334 | SFC-IP-407RE |
| 4-1/2 | 072304 | SFC-IP-408R | 072335 | SFC-IP-408RE |
| 4-15/16 | 072305 | SFC-IP-415R | 072336 | SFC-IP-415RE |
| 5 | 072306 | SFC-IP-500R | 072337 | SFC-IP-500RE |

| | | | |
|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
|---------------------------------|------------------------------|---|--------------------------|



DIMENSIONS

Steel IMPERIAL-HD Piloted Flange

Bearing Reference Guide

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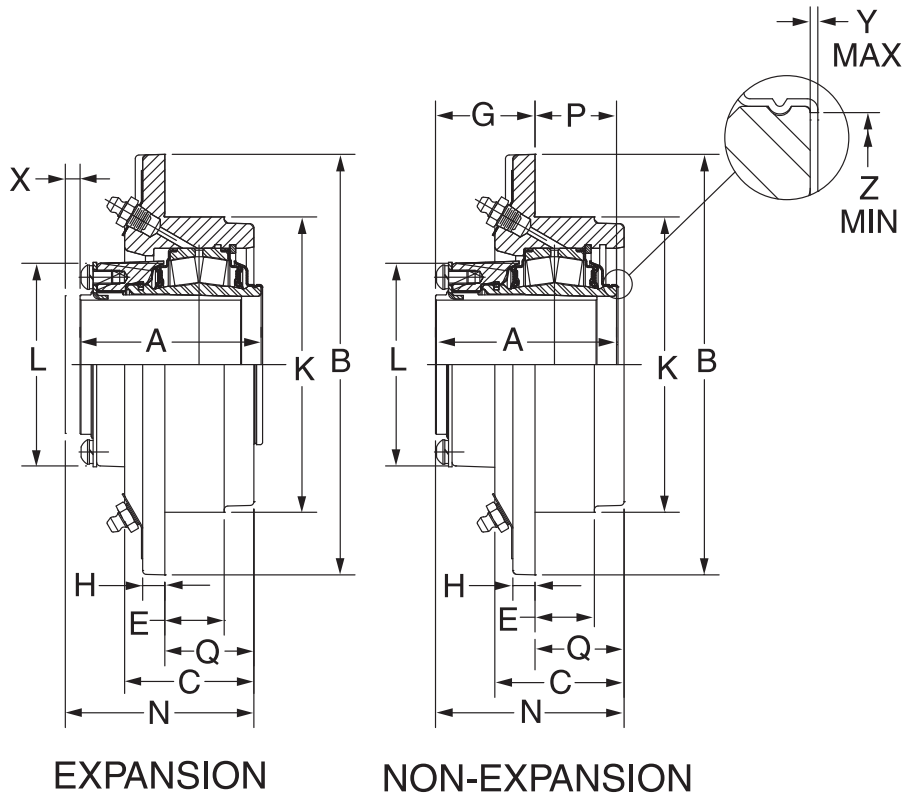
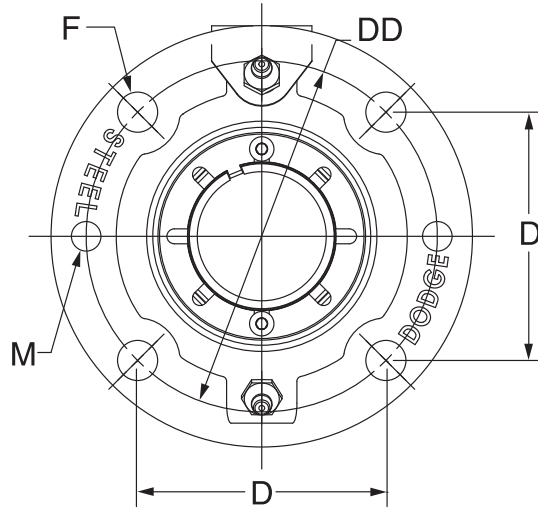
Specialty Tapered Products

S-2000

UNISPHERE II

IMPERIAL

UNIFIED SAF

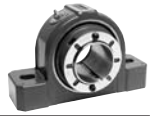


EXPANSION

NON-EXPANSION

| | | | |
|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
|---------------------------------|------------------------------|---|--------------------------|

DIMENSIONS



Steel IMPERIAL-HD Piloted Flange

| 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 | 1.94 | 3.09 | 4.38 | — | 7/16 | 1.61 | .50 | 3.625 | 2.72 | 7/16-14 | 2.78 | 1.01 | 1.17 | 3/16 | 0.02 | 1.80 |
| 1-5/8 1-11/16 1-3/4 | 2.81 | 6.13 | 2.19 | 3.63 | 5.13 | 1.33 | 7/16 | 1.44 | .31 | 4.250 | 3.00 | 7/16-14 | 3.05 | 1.36 | 1.61 | 1/4 | 0.02 | 2.08 |
| 1-7/8 1-15/16 2 | 2.86 | 6.38 | 2.15 | 3.80 | 5.38 | 1.03 | 7/16 | 1.63 | .50 | 4.500 | 3.28 | 7/16-14 | 3.05 | 1.23 | 1.42 | 1/4 | 0.02 | 2.30 |
| 2-3/16 2-1/4 | 3.03 | 7.13 | 2.42 | 4.25 | 6.00 | 1.02 | 1/2 | 1.80 | .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 2-1/2 | 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 |
| 2-11/16 2-3/4 2-15/16 3 | 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 |
| 3-3/16 3-1/4 3-7/16 3-1/2 | 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 |
| 3-11/16 3-15/16 4 | 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 |
| 4-7/16 4-1/2 | 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 |
| 4-15/16 5 | 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 |

"P" & "G" Are For Non-Expansion Only
 "A" & "P" Dimensions Do Not Include "Y" Dimension
 * +0.000 / -0.002
 4-7/16 Thru 5" have 6 equally spaced mounting holes

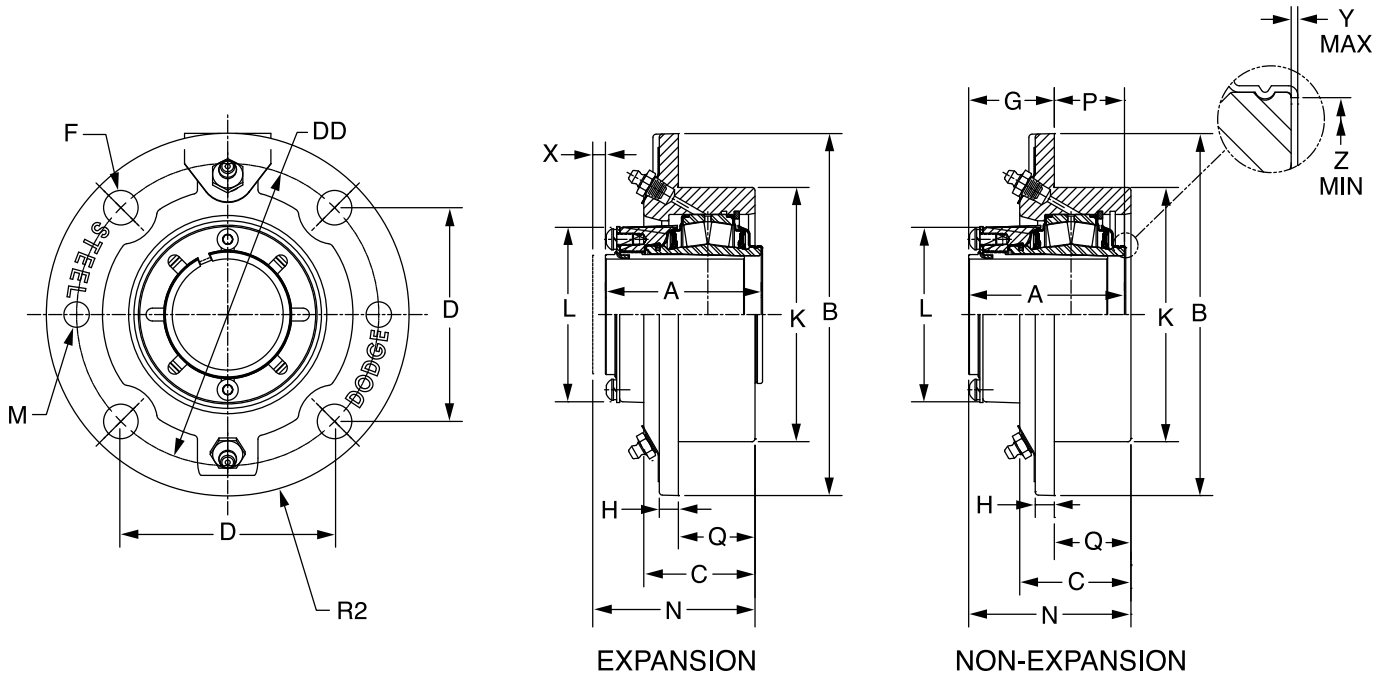
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|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
|---------------------------------|------------------------------|---|--------------------------|

Bearing Reference Guide
 E-Family Roller Bearings
 Specialty Tapered Products
 S-2000
 UNISPHERE II
 IMPERIAL
 UNIFIED SAF

DIMENSIONS



Steel IMPERIAL-HD Narrow Piloted Flange



| Shaft Size | Dodge Non-Expansion | | Dodge Expansion | |
|------------|---------------------|--------------|-----------------|---------------|
| | Dodge Part No. | Description | Dodge Part No. | Description |
| 1-7/16 | 072338 | SFCN-IP-107R | 072362 | SFCN-IP-107RE |
| 1-1/2 | 072339 | SFCN-IP-108R | 072363 | SFCN-IP-108RE |
| 1-11/16 | 072340 | SFCN-IP-111R | 072364 | SFCN-IP-111RE |
| 1-3/4 | 072341 | SFCN-IP-112R | 072365 | SFCN-IP-112RE |
| 1-15/16 | 072342 | SFCN-IP-115R | 072366 | SFCN-IP-115RE |
| 2 | 072343 | SFCN-IP-200R | 072367 | SFCN-IP-200RE |
| 2-3/16 | 072344 | SFCN-IP-203R | 072368 | SFCN-IP-203RE |
| 2-1/4 | 072345 | SFCN-IP-204R | 072369 | SFCN-IP-204RE |
| 2-7/16 | 072346 | SFCN-IP-207R | 072370 | SFCN-IP-207RE |
| 2-1/2 | 072347 | SFCN-IP-208R | 072371 | SFCN-IP-208RE |
| 2-11/16 | 072348 | SFCN-IP-211R | 072372 | SFCN-IP-211RE |
| 2-3/4 | 072349 | SFCN-IP-212R | 072373 | SFCN-IP-212RE |
| 2-15/16 | 072350 | SFCN-IP-215R | 072374 | SFCN-IP-215RE |
| 3 | 072351 | SFCN-IP-300R | 072375 | SFCN-IP-300RE |
| 3-3/16 | 072352 | SFCN-IP-303R | 072376 | SFCN-IP-303RE |
| 3-1/4 | 072353 | SFCN-IP-304R | 072377 | SFCN-IP-304RE |
| 3-7/16 | 072354 | SFCN-IP-307R | 072378 | SFCN-IP-307RE |
| 3-1/2 | 072355 | SFCN-IP-308R | 072379 | SFCN-IP-308RE |
| 3-11/16 | 072356 | SFCN-IP-311R | 072380 | SFCN-IP-311RE |
| 3-15/16 | 072358 | SFCN-IP-315R | 072382 | SFCN-IP-315RE |
| 4 | 072359 | SFCN-IP-400R | 072383 | SFCN-IP-400RE |
| 4-7/16 | 072360 | SFCN-IP-407R | 072384 | SFCN-IP-407RE |
| 4-1/2 | 072361 | SFCN-IP-408R | 072385 | SFCN-IP-408RE |

| | | | |
|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
|---------------------------------|------------------------------|---|--------------------------|

DIMENSIONS



Steel IMPERIAL-HD Narrow Piloted Flange

Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

S-2000

UNISPHERE II

IMPERIAL

UNIFIED SAF

| Shaft Size | A | B | C | D | DD | F Bolt Dta. | 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 | .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 | .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 |

*P' & 'G' ARE FOR NON-EXPANSION ONLY

'A' & 'P' DIMENSIONS DO NOT INCLUDE 'Y' DIMENSION

* +0.000 / -0.002

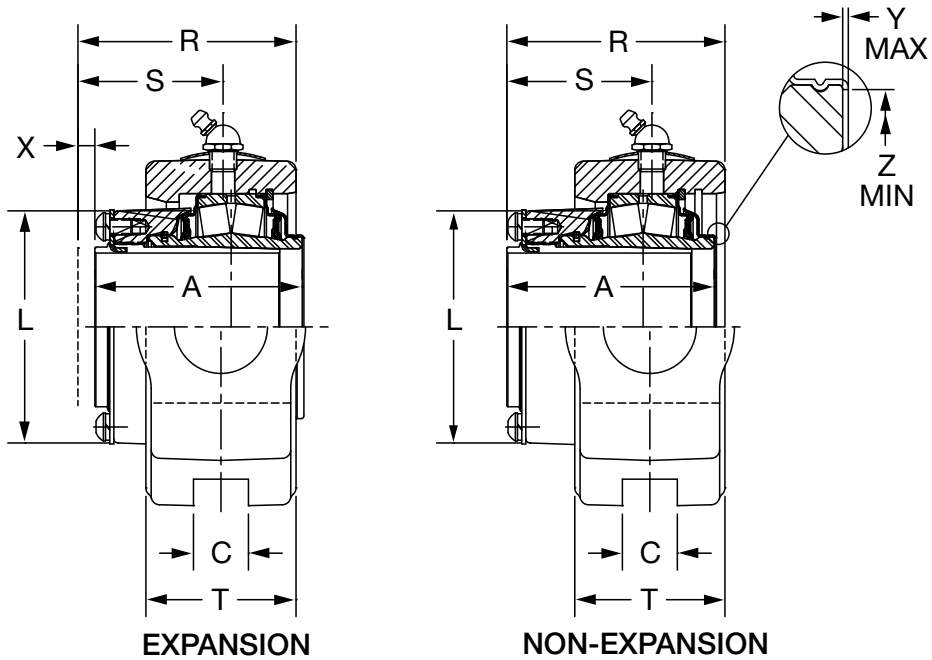
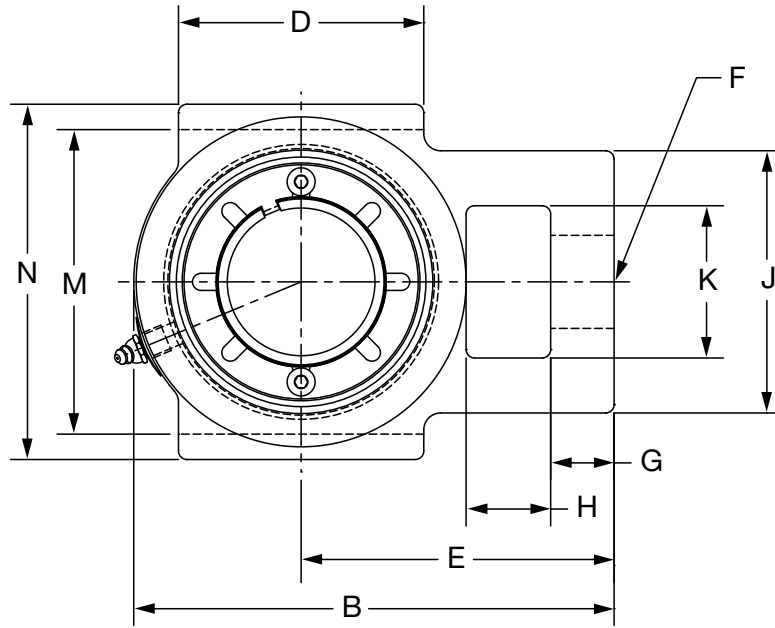
** 6 holes, equally spaced

| | | | |
|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
|---------------------------------|------------------------------|---|--------------------------|



DIMENSIONS

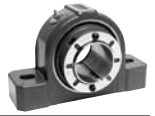
IMPERIAL - IP Wide Slot Take-Up 1-1/8 THRU 2-1/4 INCH



NOTE: See page B14-94 for 2-3/8" THRU 4"

| | | | |
|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
|---------------------------------|------------------------------|---|--------------------------|

DIMENSIONS



IMPERIAL - IP Wide Slot Take-Up 1-1/8 THRU 2-1/4 INCH

Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

S-2000

UNISPHERE II

IMPERIAL

UNIFIED SAF

| Bearing | Shaft Size Inch | Take-Up Frame | TRIDENT Seal | | | |
|---------|-----------------|---------------|---------------|--------------|---------------|---------------|
| | | | Non-Expansion | | Expansion | |
| | | | Part No. | Part Name | Part No. | Part Name |
| 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 |

Metric shaft sizes available upon request
See Page B15-20 for CP. Take-Up Frame

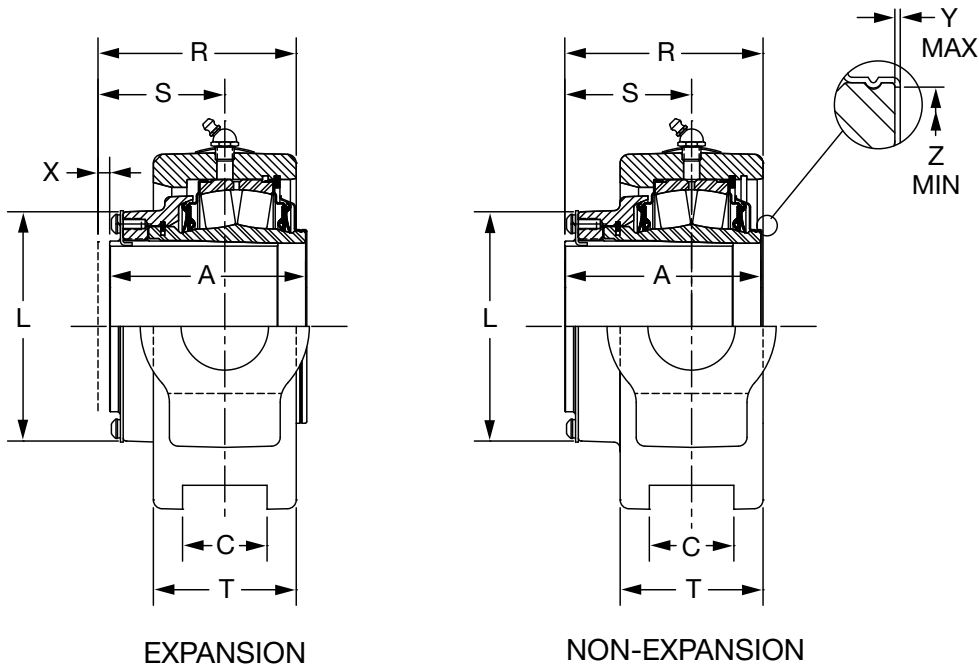
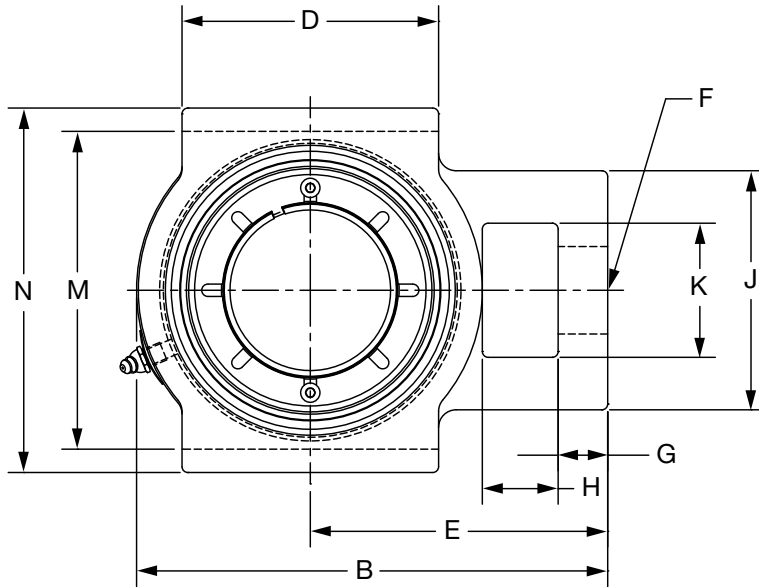
| Shaft Size | A | B | C | D | E | F | G | H | J | K | L | M | N | R | S | T | X Total Exp | Y | Z |
|------------|------|------|------|------|------|-------|------|------|------|------|------|------|------|------|------|------|-------------|------|------|
| 1-1/8 | 2.63 | 5.06 | 0.53 | 2.75 | 3.19 | 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 |
| 1-3/16 | | | | | | | | | | | | | | | | | | | |
| 1-1/4 | | | | | | | | | | | | | | | | | | | |
| 1-3/8 | | | | | | | | | | | | | | | | | | | |
| 1-7/16 | | | | | | | | | | | | | | | | | | | |
| 1-1/2 | | | | | | | | | | | | | | | | | | | |
| 1-5/8 | 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 |
| 1-11/16 | | | | | | | | | | | | | | | | | | | |
| 1-3/4 | | | | | | | | | | | | | | | | | | | |
| 1-7/8 | 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 |
| 1-15/16 | | | | | | | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | | | | | | | |
| 2-3/16 | 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 |
| 2-1/4 | | | | | | | | | | | | | | | | | | | |

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|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
|---------------------------------|------------------------------|---|--------------------------|



DIMENSIONS

IMPERIAL - IP Wide Slot Take-Up 2-3/8 THRU 4 INCH



NOTE: See page B14-92 for 1-1/8 thru 2-1/4 inch

| | | | |
|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
|---------------------------------|------------------------------|---|--------------------------|

DIMENSIONS



IMPERIAL - IP Wide Slot Take-Up 2-3/8 THRU 4 INCH

Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

S-2000

UNISPHERE II

IMPERIAL

UNIFIED SAF

| Bearing | Shaft Size inch | Take-Up Frame | TRIDENT Seal | | | |
|---------|-----------------|---------------|---------------|--------------|---------------|---------------|
| | | | Non-Expansion | | Expansion | |
| | | | Part No. | Part Name | Part No. | Part Name |
| 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 |
| 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 |

Metric shaft sizes available upon request

See Page B15-20 for CP Take-U Frame

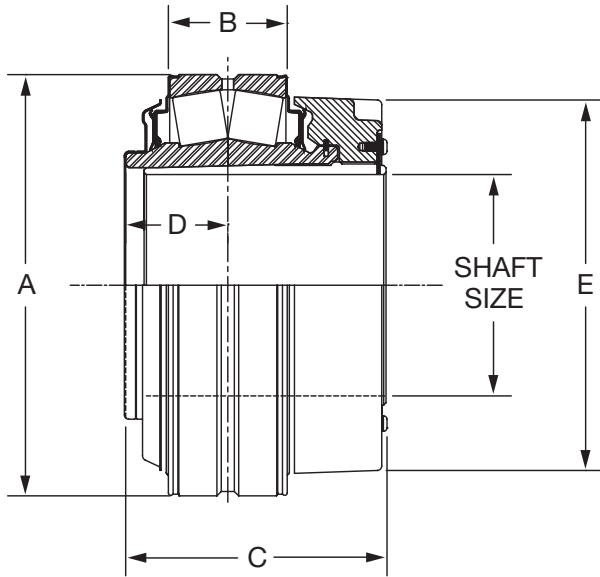
| Shaft Size | A | B | C | D | E | F | G | H | J | K | L | M | N | R | S | T | X Total Exp | Y | Z |
|------------|------|-------|------|------|------|-------|------|------|------|------|------|------|------|------|------|------|-------------|------|------|
| 2-3/8 | | | | | | | | | | | | | | | | | | | |
| 2-7/16 | 3.42 | 7.69 | 1.06 | 4.38 | 5.00 | 1-3/8 | 1.06 | 1.25 | 4.25 | 2.50 | 3.88 | 5.13 | 5.88 | 3.44 | 2.22 | 2.44 | 1/4 | 0.03 | 2.95 |
| 2-1/2 | | | | | | | | | | | | | | | | | | | |
| 2-11/16 | | | | | | | | | | | | | | | | | | | |
| 2-3/4 | 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 |
| 2-15/16 | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | |
| 3-3/16 | | | | | | | | | | | | | | | | | | | |
| 3-1/4 | 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 |
| 3-7/16 | | | | | | | | | | | | | | | | | | | |
| 3-1/2 | | | | | | | | | | | | | | | | | | | |
| 3-11/16 | | | | | | | | | | | | | | | | | | | |
| 3-15/16 | 4.70 | 12.56 | 2.06 | 7.00 | 8.38 | 2-1/8 | 2.06 | 2.13 | 6.00 | 3.38 | 5.56 | 8.63 | 9.44 | 4.80 | 3.05 | 3.44 | 5/16 | 0.03 | 4.50 |
| 4 | | | | | | | | | | | | | | | | | | | |

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|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
|---------------------------------|------------------------------|---|--------------------------|

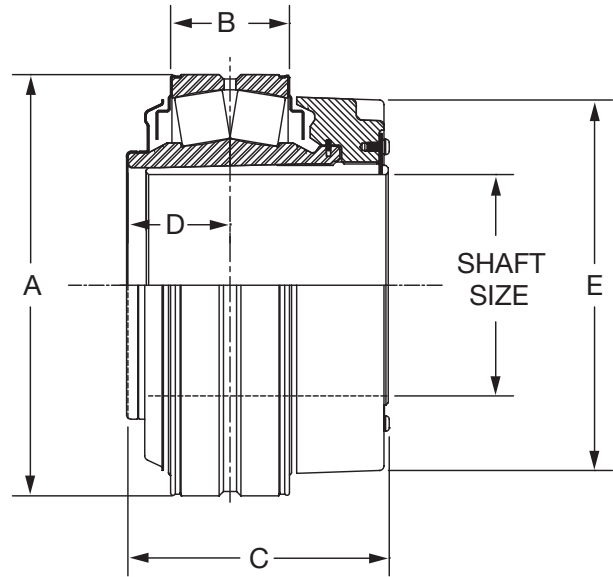


DIMENSIONS

IMPERIAL Bearing Insert 1-1/8 THRU 2-1/4 INCH



TRIDENT SEAL



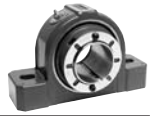
LABYRINTH SEAL

| Bearing Series | Shaft Size Inch | TRIDENT Seal | | Labyrinth Seal | | A | B | C | D | E |
|----------------|-----------------|--------------|--------------|----------------|--------------|------|------|------|------|------|
| | | Part Number | Part Name | Part Number | Part Name | | | | | |
| 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 | | | | | |
| 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 | | | | | |

* Inserts for IMPERIAL-Type E dimensioned housings only

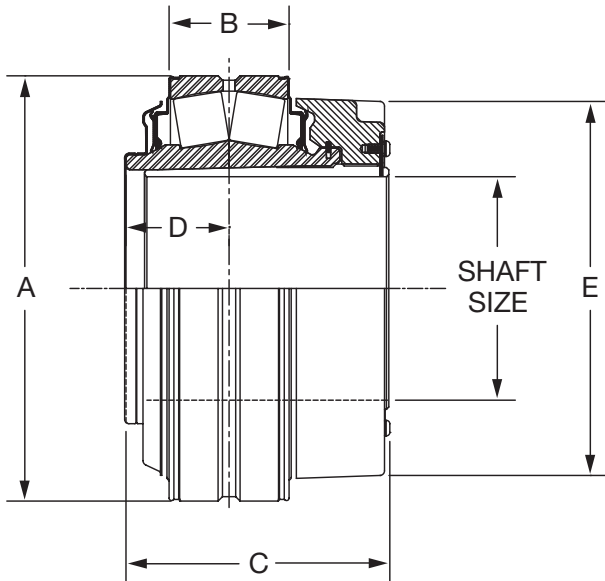
Metric shaft sizes available upon request

| | | | |
|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
|---------------------------------|------------------------------|---|--------------------------|

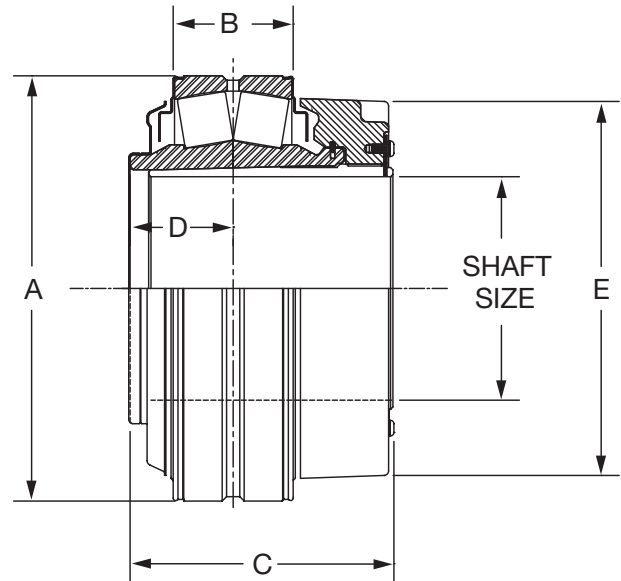


DIMENSIONS

IMPERIAL Bearing Insert 2-3/8 THRU 5 INCH



TRIDENT SEAL



LABYRINTH SEAL

| Bearing Series | Shaft Size | TRIDENT Seal | | Labyrinth Seal | | A | B | C | D | E |
|----------------|------------|---------------|-------------|----------------|-------------|------|------|------|------|------|
| | | Part Number | Part Name | Part Number | Part Name | | | | | |
| 22213 | 2-1/4 * | 071592 | INS-IP-204R | 071595 | INS-IP-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 | | | | | |
| 22220 | 3-11/16 | 070905 | INS-IP-311R | 070937 | INS-IP-311L | 7.09 | 1.88 | 4.70 | 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 | 5.23 | 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 | 5.98 | 2.11 | 7.63 |
| | 5 | 070911 | INS-IP-500R | 070943 | INS-IP-500L | | | | | |

* Insert for IMPERIAL-Type E dimensioned housings only

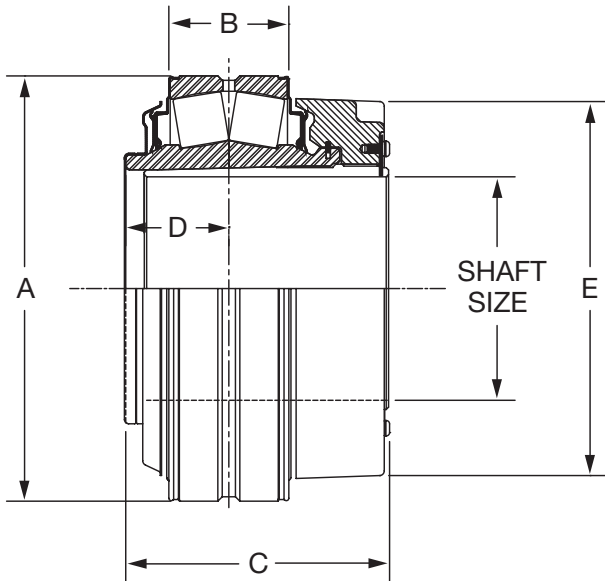
Metric shaft sizes available upon request

| | | | |
|---------------------------------|------------------------------|---|--------------------------|
| FEATURES/BENEFITS PAGE B14-2 | SPECIFICATIONS PAGE B14-5 | HOW TO ORDER/NOMENCLATURE PAGE B14-8 | SELECTION PAGE B14-14 |
|---------------------------------|------------------------------|---|--------------------------|

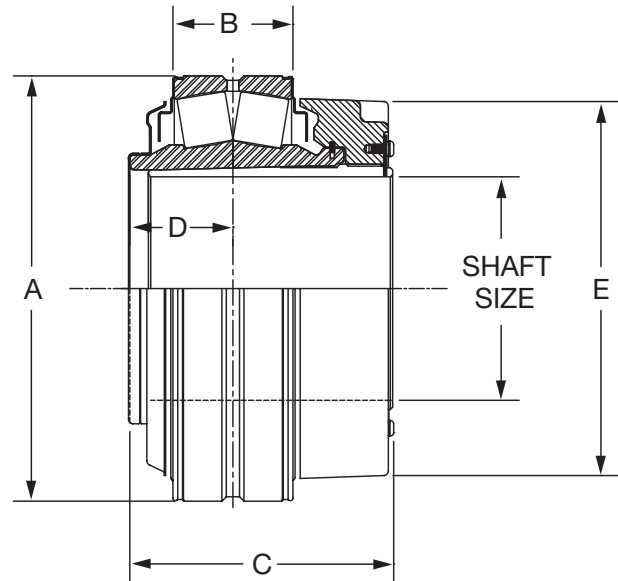


DIMENSIONS

IMPERIAL Bearing Insert - For Large Bore ISAF Housing 5-7/16 THRU 7 INCH



TRIDENT SEAL



LABYRINTH SEAL

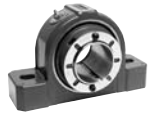
| Bearing Series | Shaft Size | TRIDENT Seal | | Labyrinth Seal | |
|----------------|------------|---------------|-------------|----------------|-------------|
| | | Part Number | Part Name | Part Number | Part Name |
| 22228 | 5-7/16 | 037925 | INS-IP-507R | 037933 | INS-IP-507L |
| | 5-1/2 | 037926 | INS-IP-508R | 037934 | INS-IP-508L |
| 22232 | 5-15/16 | 037927 | INS-IP-515R | 037935 | INS-IP-515L |
| | 6 | 037928 | INS-IP-600R | 037936 | INS-IP-600L |
| 22236 | 6-7/16 | 037929 | INS-IP-607R | 037937 | INS-IP-607L |
| | 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 |

Metric shaft sizes available upon request

| Shaft Size | A | B | C | D | E |
|------------|-------|------|------|------|-------|
| 5-7/16 | | | | | |
| 5-1/2 | 9.84 | 2.75 | 6.17 | 2.34 | 8.75 |
| 5-15/16 | | | | | |
| 6 | 11.42 | 3.22 | 7.08 | 2.77 | 10.25 |
| 6-7/16 | | | | | |
| 6-1/2 | 12.60 | 3.47 | 7.39 | 2.86 | 11.41 |
| 6-15/16 | | | | | |
| 7 | | | | | |

| | | | |
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DIMENSIONS



HOW TO ORDER ISAF SMART STOCK SELECTIONS

STEP 1: The Housing Choices

- ISAF housings with embedded thermocouple probe and adapter plate.

| Shaft Size | Series | Part Numbers Drilled Housing For Temperature or Vibration |
|------------|--------|---|
| 207 | 515 | 063765 |
| 215 | 517 | 063766 |
| 307 | 520 | 063767 |
| 315 | 522 | 063768 |
| 407 | 526 | 063769 |
| 415 | 528 | 063770 |

STEP 2: Bearing Insert

- Select insert based on shaft size and seal choice. Locknut contains holes for prox target attachment.

| Shaft Size | Contact Seal | Labyrinth Seals |
|------------|--------------|-----------------|
| 207 | 070895 | 070927 |
| 215 | 070899 | 070931 |
| 307 | 070903 | 070935 |
| 315 | 070906 | 070938 |
| 407 | 048385 | 048389 |
| 415 | 048386 | 048390 |

STEP 3: The Sensor Choices

- For speed monitoring, select prox cover and AC prox kit (055940), AC for PLC monitoring.
- For temperature monitoring, select the Thermocouple Transmitter kit **055931**.
- For temperature and vibration monitoring, select **067576**.

| Prox Covers | | |
|-------------|----------------|-------------|
| Shaft Size | Housing Series | Part Number |
| 207 | 515 | 063771 |
| 215 | 517 | 063772 |
| 307 | 520 | 063773 |
| 315 | 522 | 063774 |
| 407 | 526 | 063775 |
| 415 | 528 | 063776 |

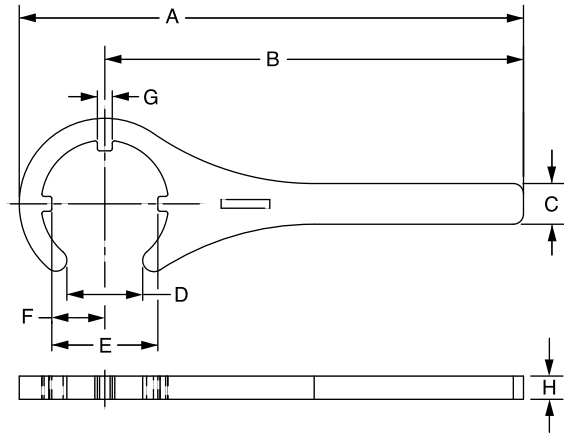
| ISAF Sensor Kits | Part Number |
|---------------------------------------|-------------|
| AC Prox | 055940 |
| Thermocouple Transmitter | 055931 |
| 4-20mA Accelerometer and Thermocouple | 067576 |

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DIMENSIONS

IMPERIAL Spanner Wrench



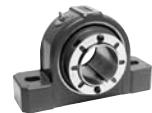
| Shaft Size | Part Number | A | B | C | D | E | F | G | H |
|-------------------------|---------------|-------|-------|------|------|-------|------|------|------|
| 1-1/8 thru 1-1/2 | 066629 | 10.84 | 9.00 | 0.88 | 1.63 | 2.28 | 1.14 | 0.32 | 0.50 |
| 1-5/8 thru 1-3/4 | 066630 | 11.04 | 9.00 | 0.88 | 1.88 | 2.48 | 1.24 | 0.32 | 0.50 |
| 1-7/8 thru 2 | 066631 | 11.20 | 9.00 | 0.88 | 2.13 | 2.72 | 1.36 | 0.32 | 0.50 |
| 2-3/16 2-1/4 | 066632 | 12.38 | 10.00 | 0.88 | 2.38 | 2.98 | 1.49 | 0.44 | 0.50 |
| 2-3/8 thru 2-1/2 | 066633 | 12.63 | 10.00 | 1.31 | 2.63 | 3.40 | 1.70 | 0.44 | 0.50 |
| 2-11/16 thru 3 | 066634 | 16.90 | 14.00 | 1.31 | 3.13 | 3.80 | 1.90 | 0.44 | 0.50 |
| 3-3/16 thru 3-1/2 | 066635 | 17.39 | 14.00 | 1.31 | 3.63 | 4.36 | 2.18 | 0.44 | 0.50 |
| 3-11/16 thru 4 | 066636 | 17.75 | 14.00 | 1.75 | 4.13 | 4.91 | 2.46 | 0.44 | 0.50 |
| 4-7/16 4-1/2 | 066637 | 20.36 | 16.00 | 1.75 | 4.63 | 5.68 | 2.84 | 0.44 | 0.50 |
| 4-15/16 5 | 066638 | 25.17 | 20.00 | 2.00 | 5.13 | 6.88 | 3.44 | 0.44 | 0.50 |
| 5-7/16 5-1/2 | 066642 | 27.82 | 22.00 | 2.00 | 5.63 | 8.05 | 4.03 | 0.69 | 0.50 |
| 5-15/16 6 | 066643 | 28.75 | 22.00 | 2.00 | 6.13 | 9.13 | 4.57 | 0.75 | 0.50 |
| 6-7/16 thru 7 | 066644 | 31.54 | 24.00 | 2.00 | 7.13 | 10.08 | 5.04 | 0.75 | 0.50 |

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SPECIFICATIONS
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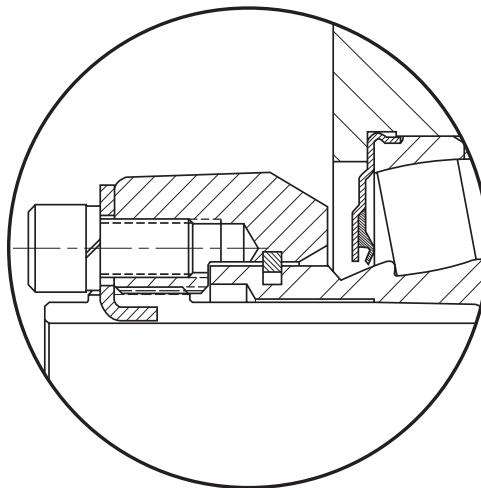
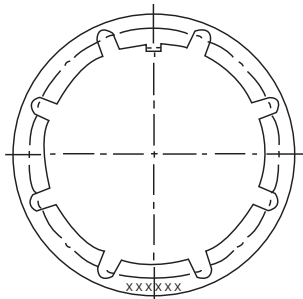
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DIMENSIONS

IMPERIAL Lockplate Kit



The Lockplate Kits consists of:
 Lockplate
 2 Socket Head Capscrews
 2 Lockwashers

| Shaft Size Inch | Part Number |
|--------------------|----------------|
| 1-7/16 | 048925 |
| 1-11/16 | 048926 |
| 1-15/16 | 048927 |
| 2 SM | |
| 2 LG | 048928 |
| 2-3/16 | |
| 2-3/8 | 048929 |
| 2-7/16 | |
| 2-11/16 | 048930 |
| 2-3/4 | |
| 2-15/16 | |
| 3-7/16 | 048931 |
| 3-15/16 | 048932 |
| 4-7/16 | 048933 |
| 4-15/16 | 048934 |

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DIMENSIONS

Steel IMPERIAL Open End Covers



| Shaft Size | Front End | | | | Backside | | | |
|------------|----------------|----------------|----------------|----------------|----------------|-----------------|----------------|-----------------|
| | IMPERIAL | | E-IMPERIAL | | IMPERIAL | | E-IMPERIAL | |
| | Dodge Part No. | Description | Dodge Part No. | Description | Dodge Part No. | Description | Dodge Part No. | 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 |

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

| | | | |
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DIMENSIONS



Steel IMPERIAL Closed End Covers



| Shaft Size | IMPERIAL | | E-IMPERIAL | |
|------------------|----------------|-------------|----------------|-------------|
| | Dodge Part No. | Description | Dodge Part No. | 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 |

Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

S-2000

UNISPHERE II

IMPERIAL

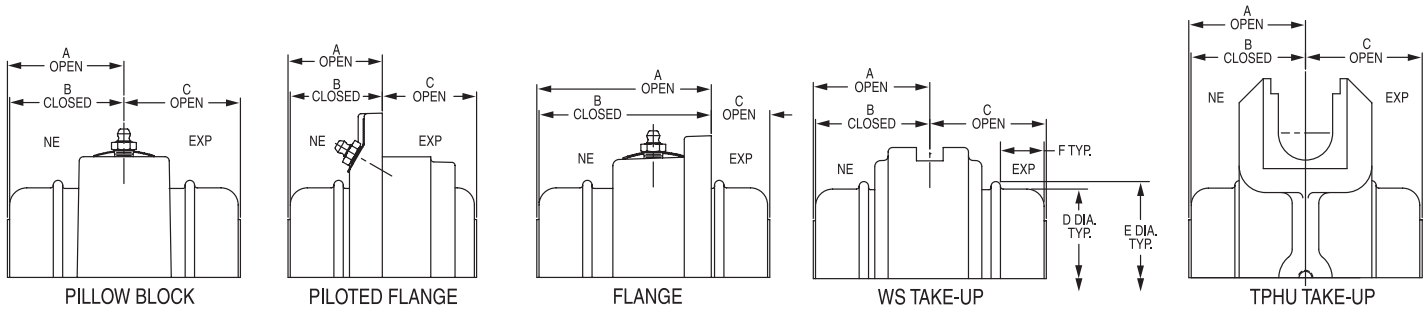
UNIFIED SAF

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DIMENSIONS

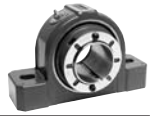
IP End Cover



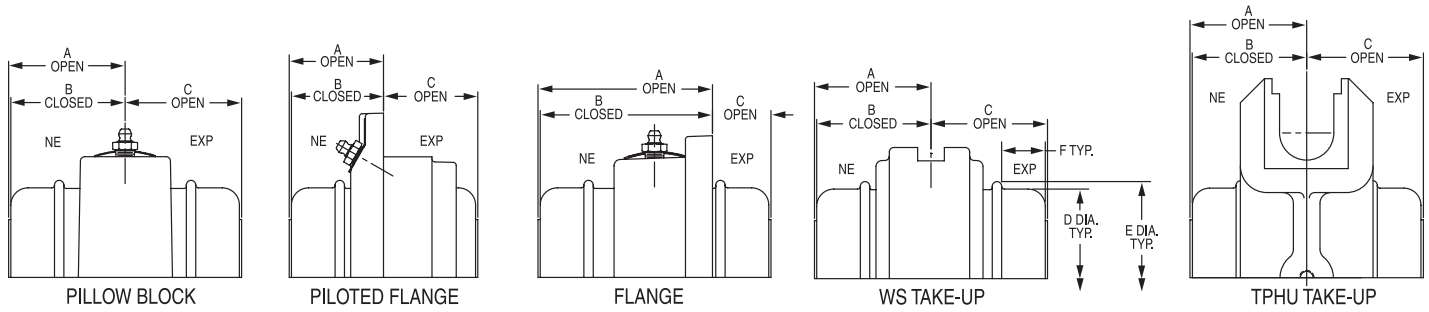
| | Shaft Size | IP Pillow Block (2 Bolt) | IP Pillow Block (4 Bolt) | IP Piloted Flange | IP Round Flange | IP Square Flange | Wide Slot Take-Up |
|----------|------------|--------------------------|--------------------------|-------------------|-----------------|------------------|-------------------|
| A Open | 1-1/8 | 2.03 | | 1.67 | 3.12 | 3.45 | 2.06 |
| B Closed | Thru | 1.97 | N/A | 1.61 | 3.06 | 3.39 | 2.00 |
| C Open | 1-1/2 | 2.10 | | 2.46 | 0.99 | 0.99 | 2.10 |
| A Open | 1-5/8 | 2.22 | | 1.83 | 3.33 | 4.07 | 2.19 |
| B Closed | 1-11/16 | 2.16 | N/A | 1.77 | 3.27 | 4.01 | 2.13 |
| C Open | 1-3/4 | 2.25 | | 2.60 | 1.10 | 1.10 | 2.25 |
| A Open | 1-7/8 | 2.31 | | 1.92 | 3.47 | 3.95 | 2.25 |
| B Closed | 1-15/16 | 2.25 | N/A | 1.86 | 3.41 | 3.89 | 2.19 |
| C Open | 2 | 2.45 | | 2.83 | 1.28 | 1.28 | 2.45 |
| A Open | 2-3/16 | 2.47 | | 2.00 | 3.69 | 4.53 | 2.42 |
| B Closed | Thru | 2.41 | N/A | 1.94 | 3.63 | 4.47 | 2.36 |
| C Open | 2-1/4 | 2.54 | | 3.00 | 1.32 | 1.32 | 2.54 |
| A Open | 2-3/8 | 2.53 | 2.53 | 2.18 | 4.04 | 4.72 | 2.53 |
| B Closed | 2-7/16 | 2.44 | 2.44 | 2.09 | 3.95 | 4.63 | 2.44 |
| C Open | 2-1/2 | 2.77 | 2.77 | 3.24 | 1.37 | 1.37 | 2.77 |
| A Open | 2-11/16 | 2.65 | 2.65 | 2.29 | 4.18 | 5.06 | 2.70 |
| B Closed | Thru | 2.56 | 2.56 | 2.20 | 4.09 | 4.97 | 2.61 |
| C Open | 3 | 3.06 | 3.06 | 3.54 | 1.66 | 1.66 | 3.06 |
| A Open | 3-3/16 | 3.07 | 3.07 | 2.91 | | 5.78 | 3.07 |
| B Closed | Thru | 2.94 | 2.94 | 2.78 | N/A | 5.65 | 2.94 |
| C Open | 3-1/2 | 3.31 | 3.31 | 3.59 | | 1.63 | 3.31 |
| A Open | 3-11/16 | 3.49 | 3.49 | 3.32 | | 7.17 | 3.52 |
| B Closed | Thru | 3.36 | 3.36 | 3.19 | N/A | 7.04 | 3.39 |
| C Open | 4 | 3.80 | 3.80 | 4.13 | | 1.94 | 3.80 |
| A Open | 4-7/16 | | 3.96 | 4.02 | | | |
| B Closed | Thru | N/A | 3.83 | 3.89 | N/A | N/A | N/A |
| C Open | 4-1/2 | | 4.23 | 4.16 | | | |
| A Open | 4-15/16 | | 4.49 | 4.24 | | | |
| B Closed | Thru | N/A | 4.36 | 4.11 | N/A | N/A | N/A |
| C Open | 5 | | 4.69 | 4.91 | | | |

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DIMENSIONS

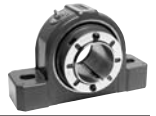


IP End Cover



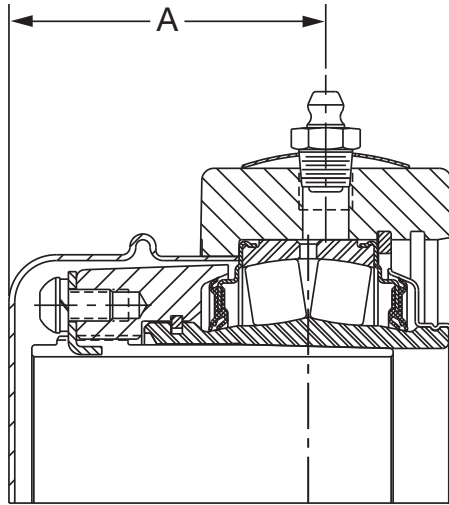
| | Shaft Size | E-IP Pillow Block (2 Bolt) | E-IP Pillow Block (4 Bolt) | E-IP Piloted Flange | E-IP Square Flange | D | E | F | | Shaft Size | ISAF Pillow Block (2 Bolt) | ISAF Pillow Block (4 Bolt) |
|----------|------------|----------------------------|----------------------------|---------------------|--------------------|------|------|---------|----------|------------|----------------------------|----------------------------|
| A Open | 1-3/8 | 2.03 | | 1.67 | 3.45 | | | | A Open | | 2.04 | |
| B Closed | Thru | 1.97 | N/A | 1.61 | 3.39 | 2.94 | 3.19 | 3/4 | B Closed | 1-7/16 | 1.98 | N/A |
| C Open | 1-7/16 | 2.07 | | 2.46 | 1.20 | | | | C Open | | 2.05 | |
| A Open | 1-1/2 | 2.22 | | 1.83 | 4.07 | | | | A Open | | 2.20 | |
| B Closed | 1-5/8 | 2.16 | N/A | 1.77 | 4.01 | 3.27 | 3.39 | 7/8 | B Closed | 1-11/16 | 2.14 | N/A |
| C Open | 1-11/16 | 2.22 | | 2.60 | 1.20 | | | | C Open | | 2.18 | |
| A Open | 1-3/4 | 2.31 | | 1.92 | 3.95 | | | | A Open | | 2.35 | |
| B Closed | Thru | 2.25 | N/A | 1.86 | 3.89 | 3.52 | 3.61 | 1-1/64 | B Closed | 1-15/16 | 2.29 | N/A |
| C Open | 2 | 2.45 | | 2.83 | 1.38 | | | | C Open | | 2.37 | |
| A Open | | 2.47 | | 2.00 | 4.53 | | | | A Open | | 2.46 | |
| B Closed | 2-3/16 | 2.41 | N/A | 1.94 | 4.47 | 3.77 | 3.95 | 1-1/32 | B Closed | 2-3/16 | 2.40 | N/A |
| C Open | | 2.54 | | 3.00 | 1.43 | | | | C Open | | 2.44 | |
| A Open | 2-1/4 | 2.53 | 2.53 | 2.18 | 4.72 | | | | A Open | | 2.74 | 2.74 |
| B Closed | 2-7/16 | 2.44 | 2.44 | 2.09 | 4.63 | 4.41 | 4.64 | 1 | B Closed | 2-7/16 | 2.65 | 2.65 |
| C Open | 2-1/2 | 2.77 | 2.77 | 3.24 | 1.69 | | | | C Open | | 2.69 | 2.69 |
| A Open | 2-11/16 | 2.65 | 2.63 | 2.29 | 5.06 | | | | A Open | | 2.83 | 2.83 |
| B Closed | Thru | 2.56 | 2.54 | 2.20 | 4.97 | 4.92 | 5.06 | 1-7/32 | B Closed | 2-11/16 | 2.74 | 2.74 |
| C Open | 3 | 3.06 | 3.06 | 3.54 | 1.62 | | | | C Open | | 2.94 | 2.94 |
| A Open | 3-3/16 | 3.07 | 3.04 | 2.91 | 5.78 | | | | A Open | | 2.83 | 2.83 |
| B Closed | Thru | 2.94 | 2.91 | 2.78 | 5.65 | 5.98 | 6.22 | 1-1/8 | B Closed | 2-15/16 | 2.74 | 2.74 |
| C Open | 3-1/2 | 3.31 | 3.31 | 3.59 | 1.38 | | | | C Open | | 2.98 | 2.98 |
| A Open | 3-15/16 | | 3.80 | 3.31 | 7.17 | | | | A Open | | 3.31 | 3.31 |
| B Closed | Thru | N/A | 3.67 | 3.19 | 7.04 | 6.67 | 6.91 | 1-3/8 | B Closed | 3-7/16 | 3.18 | 3.18 |
| C Open | 4 | | 3.80 | 4.13 | 2.06 | | | | C Open | | 3.26 | 3.26 |
| A Open | 4-7/16 | | 3.91 | 3.85 | 7.62 | | | | A Open | | | 3.70 |
| B Closed | Thru | N/A | 3.78 | 3.72 | 7.49 | 7.31 | 7.56 | 1-43/64 | B Closed | 3-15/16 | N/A | 3.57 |
| C Open | 4-1/2 | | 4.23 | 4.68 | 4.23 | | | | C Open | | | 3.68 |
| A Open | 4-15/16 | | 4.46 | 4.08 | | | | | A Open | | | 4.05 |
| B Closed | Thru | N/A | 4.33 | 3.95 | N/A | 8.44 | 8.69 | 1-29/32 | B Closed | 4-7/16 | N/A | 3.92 |
| C Open | 5 | | 4.69 | 5.37 | | | | | C Open | | | 4.02 |
| | | | | | | | | | A Open | | | 4.55 |
| | | | | | | | | | B Closed | 4-15/16 | N/A | 4.42 |
| | | | | | | | | | C Open | | | 4.49 |

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DIMENSIONS

ISN End Cap



PILLOW BLOCK

| Shaft Size (mm) | End Cover P/N | Description | "A" Dimension |
|-----------------|---------------|-------------|---------------|
| 30 | 069960 | IPEC08 | 49.5 |
| 35 | 069960 | IPEC08 | 49.5 |
| 40 | 069961 | IPEC09 | 55 |
| 45 | 069962 | IPEC10 | 58.3 |
| 50 | 069962 | IPEC10 | 58.3 |
| 55 | 069963 | IPEC11 | 61.7 |
| 60 | 069964 | IPEC13 | 66.3 |
| 65 | 069965 | IPEC15 | 70 |
| 70 | 069965 | IPEC15 | 70 |
| 75 | 069965 | IPEC15 | 70 |
| 80 | 069966 | S2IPEC18 | 78.3 |
| 85 | 069966 | S2IPEC18 | 78.3 |
| 90 | 069967 | S2IPEC20 | 91.2 |
| 100 | 069967 | S2IPEC20 | 91.2 |
| 110 | 069968 | S2IPEC22 | 97.7 |
| 115 | 069969 | S2IPEC26 | 111.4 |
| 125 | 069969 | S2IPEC26 | 111.4 |

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FEATURES/BENEFITS

DODGE UNIFIED SAF and SDAF Pillow Blocks

BEARINGS

Spherical Roller Bearing - 22200, 22300, 23000, 23100 and 23200, tapered bore for adapter mount and straight bore for direct mount.

SPLIT-SPHER Bearing

Complete split replacement for an adapter mounted 22200. Compatible with UNIFIED SAF. Available in inch bores.

SHAFT SIZES

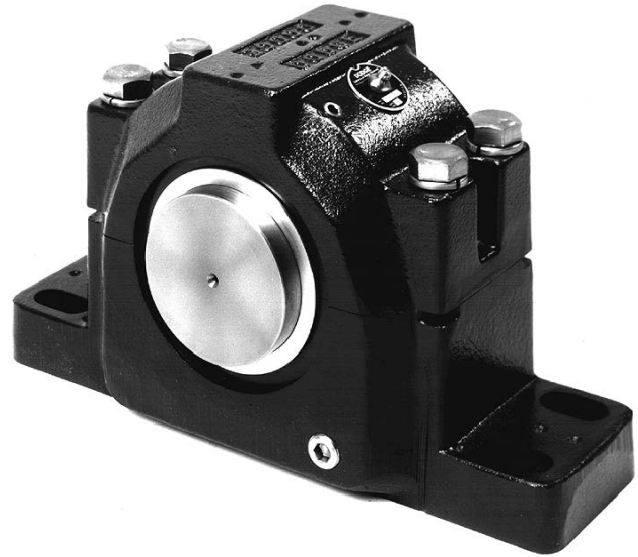
Available for shaft sizes 1-7/16" - 15-3/4" and 40 mm-140 mm in adapter mount. Additional sizes offered in direct mount. Pillow blocks are available in 200, 300, 500 and 600 series.

DIMENSIONS

UNIFIED SAF and SDAF pillow blocks match standard SAF and SDAF inch dimensions.

PLUS YOU GET BUILT-IN DESIGN ADVANCEMENTS

With DODGE UNIFIED SAF and SDAF pillow blocks, you benefit from a housing that has capabilities for harsh environments that competitive pillow blocks do not have.



VIRTUALLY EVERY FEATURE YOU EVER WANTED IN YOUR PILLOW BLOCK

- Cast-in dimples locate drill holes for lube fittings, vents, sensors and mounting modifications.
- Housing base is threaded to accept four Grade 5 cap bolts for added strength. Cap bolts match base bolts for one-wrench installation.
- Standard housings have two oversized drains adaptable to circulating oil systems.
- Pry slots allow easy separation of the pillow block.

NOTE: Instruction manuals for all Dodge bearings are available on www.dodge-pt.com



FEATURES/BENEFITS

DODGE UNIFIED SAF and SDAF Pillow Blocks



Cast iron, closed-end housings offer greater protection in high pressure washdown environments. Available from stock.



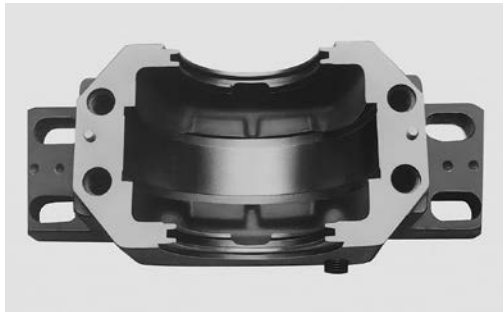
Standard modifications for wet and harsh environments include nylon coating, epoxy paints and nickel plating, as well as stainless steel hardware.



Solid cast iron feet increase strength in both two and four-bolt styles.



New drop-in TRIPLE-TECT Seal makes seal installation easier



Large capacity oil sump lowers operating temperatures, undercut bearing seat allows full lateral travel of expansion bearing, prevents stabilizer ring from binding, makes installation easy.



Exclusive oil-equalization passage simplifies maintenance. Pillow block can be drained completely from either side.



Oil return slots are cast into the interior seal grooves to keep lubricants in. This allows oil in the seal grooves to return to the oil sump instead of leaking.



Offset dowels with matched numbers on cap and base joint simplify correct assembly.

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FEATURES/BENEFITS

DODGE UNIFIED SAF with SPLIT-SPHER Bearing

SPLIT-SPHER BEARINGS FROM DODGE INCREASE PRODUCTION AND REDUCE DOWNTIME

The SPLIT-SPHER bearing is quick to install. Simplified bearing installation puts equipment back into operation faster and keeps production moving.

HERE'S WHY!

DODGE offers a split-race spherical bearing that fits SAF housings and replaces bearing and adapter assemblies. It's a real cost-saver in every case where the shaft must be stripped of components to permit sliding the new bearing onto its proper shaft location.

DIMENSIONS ARE STANDARD.

The DODGE SPLIT-SPHER bearing has the same O.D. dimensions as a standard spherical bearing. This means you can use a SPLIT-SPHER 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.

Also, if needed, the backing dimension of the SPLIT-SPHER block can be increased by shimming to meet the requirements of any roller bearing it replaces.

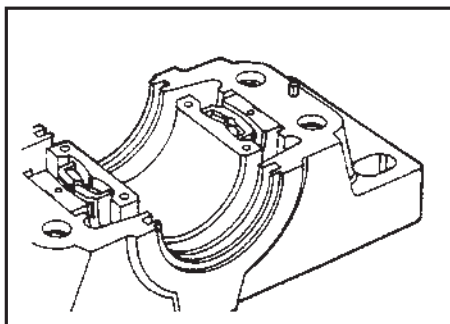
REDUCE REPLACEMENT TIME UP TO 50%.

To replace a standard spherical roller bearing with a SPLIT-SPHER insert, remove the cap, elevate the shaft enough to support the load and burn off the failed bearing and adapter with a torch.

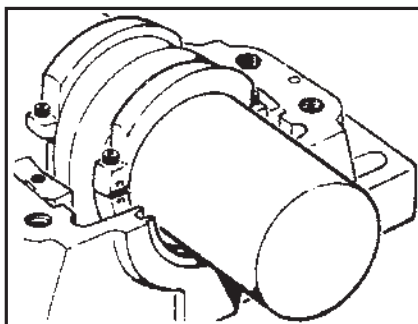
The DODGE SPLIT-SPHER replacement lower halves can then be slipped under the shaft, along with the split seals. Bolt the upper halves in place, lower the shaft and replace the cap. There's no need to remove any other shaft-mounted components or move motors and other bulky machinery.



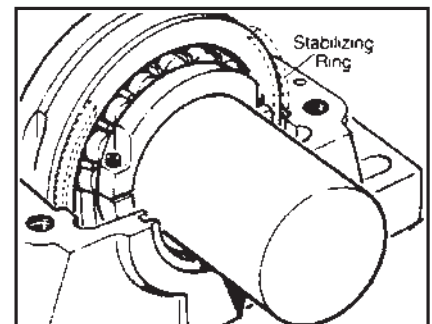
The SPLIT-SPHER insert is easy to install!



1. Slightly elevate shaft, cut off old bearing and slip lower halves of SPLIT-SPHER rings and roller assembly beneath shaft



2. Bolt upper half of inner ring to lower half



3. Place upper half of roller assembly in position and bolt on upper half of outer ring. Lower shaft and replace housing cap.

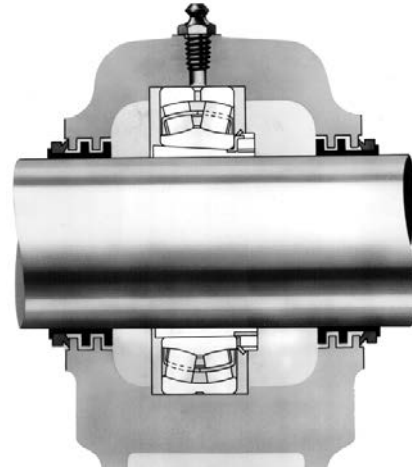


FEATURES/BENEFITS

SAF-XT Spherical Roller Bearings



The SAF-XT Pillow Block Housing is designed for typical SAF dimensional interchangeability, complete with such desirable features as 4-bolt caps, cap removal pry slots, elongated bolt holes, and dimpled feet for doweling. In addition to these features the SAF-XT housing also incorporates a better grease purging/sealing system for extra protection of the bearing in a hostile environment.



The SAF-XT pillow block has only one grease fitting. Bearings with costly, comparably effective auxiliary seals have up to three grease fittings. The single fitting speeds up lubrication, reduces chance for voids. Complete fill, bearing action, and configuration of reservoir assure maximum purging effectiveness. Grease relief channels result in self-centering positive contact seal. These factors make SAF-XT blocks easy to lubricate.

SAFS



DODGE SAFS cast steel pillow blocks mount 22200K series spherical roller bearings on 2-7/16" - 8" shafts.

These pillow blocks are well suited for applications requiring either grease or oil lubrication where adapter mounting is preferred and limited thrust loads are experienced. Cast steel housings provide greater resistance to impact and shock loading than the more economical cast iron pillow blocks. (SPLIT-SPHER

bearing and seals may also be installed in SAFS housings. See page B15-76 through B15-81 .)

SAFS pillow blocks are furnished complete with the TRIPLE-TECT combination labyrinth and face rubbing seals. LER triple ring seals are available as an alternate seal for SAFS pillow blocks. Where required, purgeable auxiliary seals and end closures are also available.

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SPECIFICATION

Housing

Grade 30 cast iron is the standard housing material except on SAFS housings. When steel housings are required, the SAFS bearing line is recommended.

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 chart on page B15-126 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 a water based U.S.D.A. approved 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 bearings with C3 fits in both direct and adapter mounts (shaft sizes larger than 8” 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, we encourage you to contact our Application Engineering Department for Bearings at 864-284-5700 during the hours of 8:00 a.m. and 5:00 p.m. Eastern time.

HOW TO ORDER

Inch

DODGE UNIFIED Spherical Bearings are housed and sealed general purpose, high capacity double row spherical roller bearings. Bearings may be mounted on shafts with adapters, or they may be mounted directly, using interference fits.

The standard material used in housings is ASTM A48 Class 30 Cast iron. Steel versions are also available in the SAFS line on page B15-61 Housings may be modified to suit customer requirements for mounting, venting, lubricating or monitoring of the bearing. Housing designs are available for performance in extreme harsh environments through the use of cast closed ends, nylon coating and stainless steel hardware.

A wide variety of standard seals is available including labyrinth and rubbing seals and combinations of the two. DODGE TRIPLE-TECT and Drop-in TRIPLE-TECT seals are recommended for general purpose applications

because of their superior combination sealing action. More information on seals is shown on page B15-19.

Locking devices, including tapered adapters and locking washers and nuts, are available to accommodate both commercial and precision machined shafting.

How to Order Dodge UNIFIED Bearings

There are two ways to specify DODGE Bearings. Most of the product offering have part numbers, with listings shown throughout this catalog. Use of part numbers insures 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/options. To order by description, use the nomenclature key shown on page B15-8 and add any special instructions to the end of the description for options not covered by the nomenclature.

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NOMENCLATURE

Complete Pillow Block - Inch

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P2B - 515 - USAF - 207 - TT

| HOUSING STYLE | BEARING SERIES AND HOUSING SIZE | TYPE OF MOUNTED BEARING | SIZE INCHES | SEAL TYPE |
|--|---|--|----------------------|-----------------------------------|
| P2B - 2 Bolt Base Pillow Block, Cast Iron, Both Ends Open | 2XX - For Direct Mount 22200 Series Bearing | UNSAF - UNIFIED SAF Pillow Block (Inch Dimensions) | 207 - Inches & 16ths | TT - TRIPLE-TECT |
| P4B - 4 Bolt Base Pillow Block, Cast Iron, Both Ends Open | 3XX - For Direct Mount 22300 Series Bearing | USDAF - UNIFIED SDAF Pillow Block | 2 = 2" | LER - Metal Labyrinth |
| CP2B - 2 Bolt Base Pillow Block, Cast Iron, One End Closed | 5XX - For Adapter Mounted 22200K Series Bearing | SS - SPLIT-SPHER Pillow Block | 07 = 7/16" | SS - Split Non-Metallic Labyrinth |
| CP4B - 4 Bolt Base Pillow Block, Cast Iron, One End Closed | 6XX - For Adapter Mounted 22300K Series Bearing | | 107 = 1-7/16" | TTDN - Drop-In TRIPLE-TECT |
| | 0XX - For Adapter Mounted 23000K Series Bearing | | 111 = 1-11/16" | AUX - Auxiliary (Taconite) |
| | | | 115 = 1-15/16" | EC - End Closure |
| | | | 203 = 2-3/16" | |
| | | | 207 = 2-7/16" | |
| | | | 208 = 2-1/2" | |
| | | | 211 = 2-11/16" | |
| | | | 212 = 2-3/4" | |
| | | | 215 = 2-15/16" | |
| | | | 300 = 3" | |
| | | | 303 = 3-3/16" | |
| | | | 307 = 3-7/16" | |
| | | | 308 = 3-1/2" | |
| | | | 315 = 3-15/16" | |
| | | | 400 = 4" | |
| | | | 403 = 4-3/16" | |
| | | | 407 = 4-7/16" | |
| | | | 408 = 4-1/2" | |
| | | | 415 = 4-15/16" | |
| | | | 500 = 5" | |
| | | | 503 = 5-3/16" | |
| | | | 507 = 5-7/16" | |
| | | | 508 = 5-1/2" | |
| | | | 515 = 5-15/16" | |
| | | | 600 = 6" | |
| | | | 607 = 6-7/16" | |
| | | | 608 = 6-1/2" | |
| | | | 615 = 6-15/16" | |
| | | | 700 = 7" | |
| | | | 703 = 7-3/16" | |
| | | | 708 = 7-1/2" | |
| | | | 715 = 7-15/16" | |
| | | | 800 = 8" | |
| | | | 807 = 8-7/16" | |
| | | | 808 = 8-1/2" | |
| | | | 815 = 8-15/16" | |
| | | | 900 = 9" | |
| | | | 907 = 9-7/16" | |
| | | | 908 = 9-1/2" | |
| | | | 915 = 9-15/16" | |
| | | | 1000 = 10" | |
| | | | 1007 = 10-7/16" | |
| | | | 1008 = 10-1/2" | |

For monitor equipped pillow blocks a C preceding the pillow block designation indicates closed ends

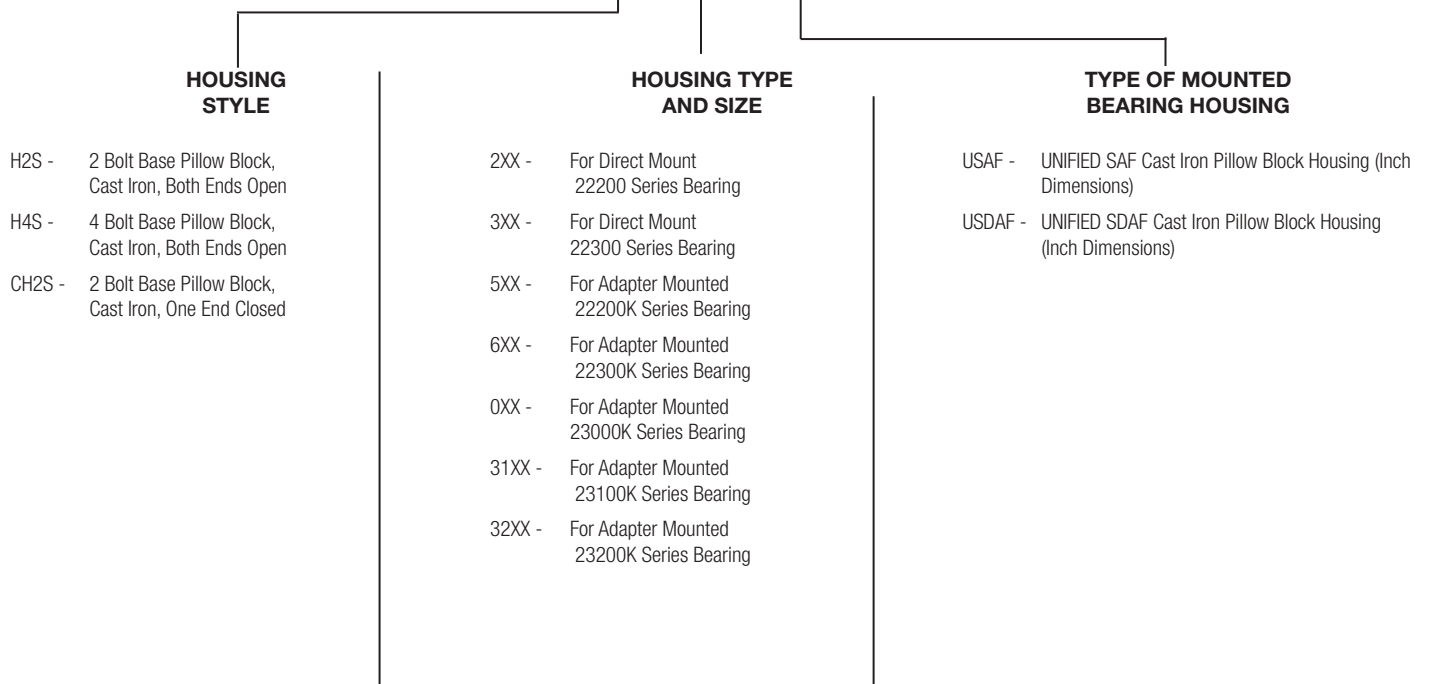
| | | | |
|---------------------------------|-----------------------------|--------------------------|-------------------------------------|
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NOMENCLATURE

Housing Only (Housing and Stab Ring) Inch

H4S - 515 - USAF

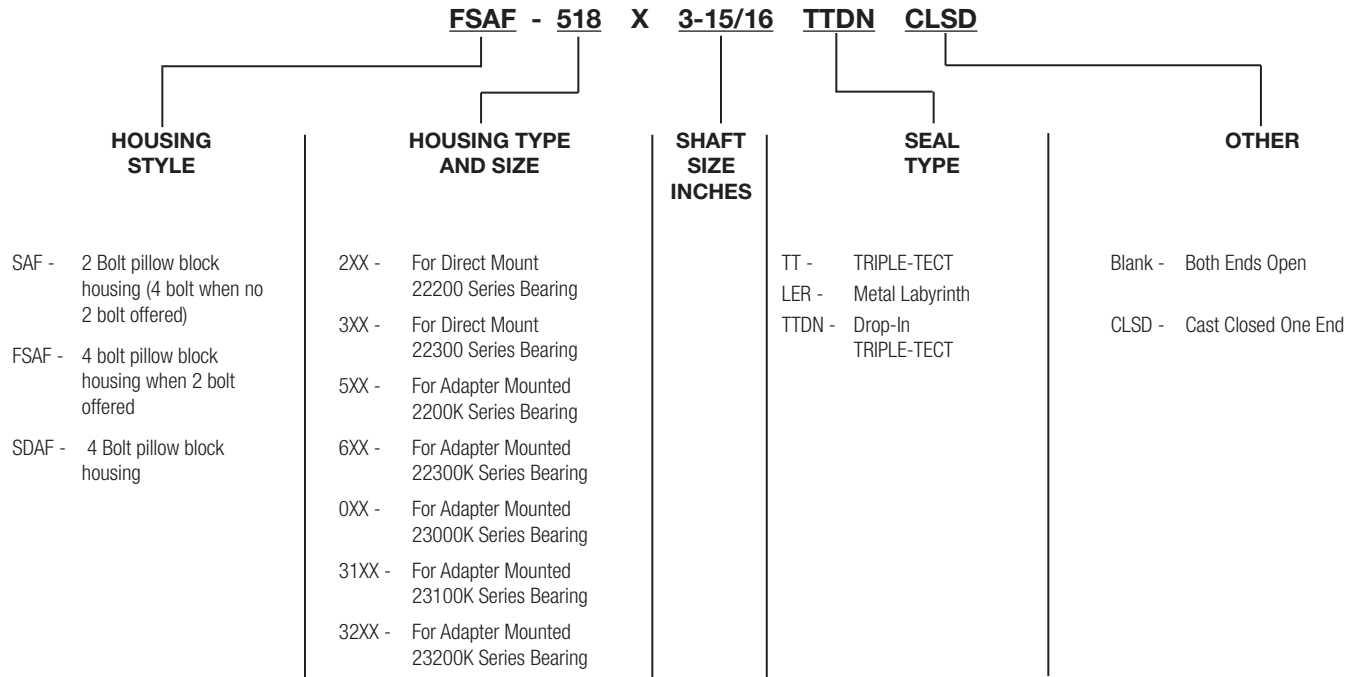


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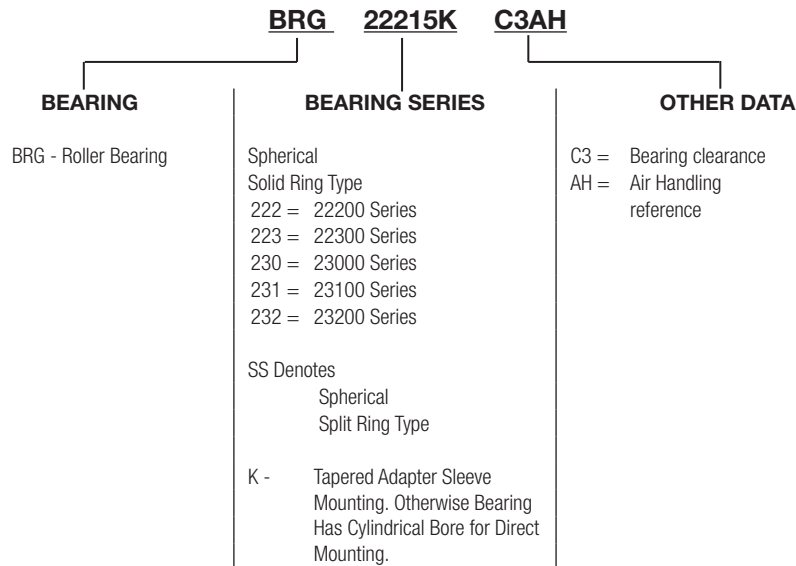


NOMENCLATURE

Housing Assembly (Housing and Stab Ring and Seals) - Inch



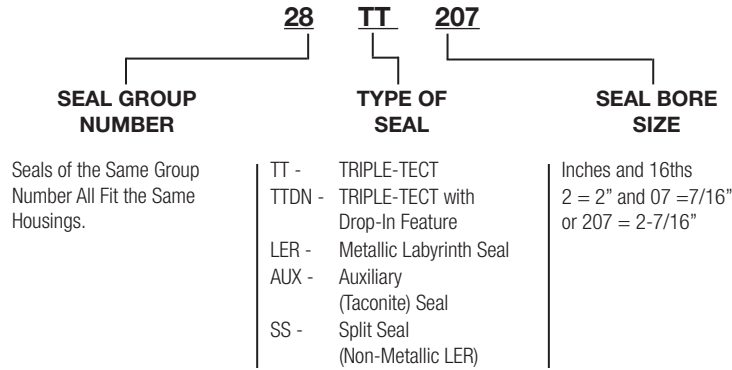
Bearing



NOMENCLATURE



Seals - Inch



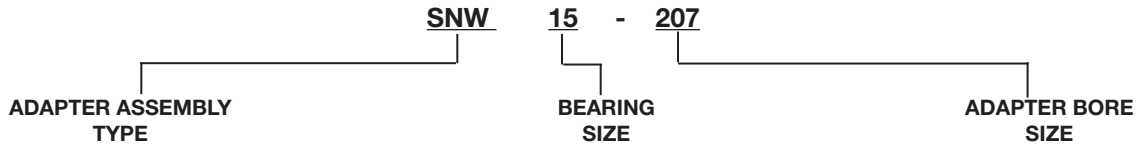
| Seal Group Number & Shaft Size | Fits Housing Sizes | Seal Group Number & Shaft Size | Fits Housing Sizes | Seal Group Number & Shaft Size | Fits Housing Sizes |
|--------------------------------|---------------------|--------------------------------|---------------------|--------------------------------|--------------------|
| 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 | | | | |

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NOMENCLATURE

Adapter Assemblies - Inch



SNW = Sleeve, Nut and Washer Assembly thru 44 (8 inch) Size

SNP = Sleeve, Nut and Lockplate Assembly 048 (8-7/16") and Larger Sizes

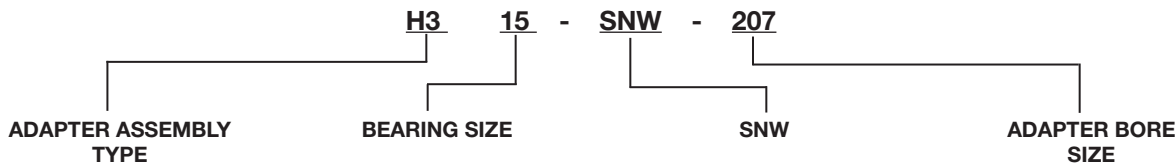
Up to 8" shaft size last two digits of bearing numerical description.

For larger sizes last four digits.

Inches and 16ths

2 = 2" and 07 = 7/16" or 207 = 2-7/16"

See size listing page B15-10



H3 Adapter Series for 22200K Series Bearings thru 4" Bore Size

H31 Adapter Series for 22200K & 23100K Series Bearings Greater Than 4"

H23 Adapter Series for 22300K Series Bearings

H32 Adapter Series for 23200K Series Bearings

Last two digits of bearing numerical description.

SNW = Sleeve, Nut and Washer Assembly thru 544 (8") Size

SNP = Sleeve Nut and Plate Assembly from 048 thru 084, 3156 thru 3176, & 3252 thru 3268

Inches and 16ths

2 = 2" and 07 = 7/16" or 207 = 2-7/16"

See size listing page B15-10



SELECTION

UNIFIED Pillow Block - Spherical Roller Bearings

(USAF 500, 600, 200, 300 SERIES AND USDAF 23000, 23100, 23200)

DODGE UNIFIED 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 UNIFIED Spherical Roller Bearings have been applied successfully even when these limits have been exceeded under controlled operating conditions. Contact DODGE Application Engineering (864-284-5700) for applications which exceed the recommendations of this catalog.

L₁₀ Hours Life - The life which may be expected from at least 90% of a given group of bearings operating under identical conditions.

$$L_{10} \text{ Life, Hours} = \left(\frac{C}{P}\right)^{10/3} \times \left(\frac{16667}{\text{RPM}}\right)$$

Where: C = Dynamic Capacity
(Table 1, page B15-15 for USAF) lbs.

P = Equivalent Radial Load, lbs.

GENERAL

Heavy Service - For heavy shock loads, frequent shock loads, or severe vibrations, add up to 50% (according to severity of conditions) to the Equivalent Radial Load 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 L₁₀ life. Where substantial radial loads are also present, it is advisable to calculate actual L₁₀ life to assure that it meets the requirements.

| RPM | 20-200 | 201-2000 | Over 2000 |
|-------------------------|--------|----------|-----------|
| RECOMMENDED THRUST LOAD | C/20 | C/40 | C/60 |

The shaft tolerances recommended below are adequate for adaptor mounted bearings. 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 B15-24 and 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.

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 | Shaft Tolerance, Inches |
|-------------------|-------------------------|
| Up To 1-1/2" | +0.000 -0.002" |
| 1-9/16 to 2-1/2" | +0.000 -0.003" |
| 2-5/8 to 4" | +0.000 -0.004" |
| 4-3/16 to 6" | +0.000 -0.005" |
| 6-7/16" and above | +0.000 -0.006" |

* Use the smaller of this value or the adaptor maximum allowable thrust load list in Table 1.

SELECTING BEARING SUPPORTING RADIAL LOADS ONLY

1. Define L₁₀ Life Hours desired.
2. Establish bearing radial load, F_R
F_R = P for Pure Radial Load Conditions
P = Equivalent radial load, lbs
The DODGE program BEST™★ can be used to find application loads.
3. Establish RPM.

Using the easy selection Table 2, page B15-16, 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.

★ The DODGE Bearing Evaluation and Selection Technique (BEST) is a menu driven computer program that calculates bearing loads, fatigue life and operating temperature for a two bearing shaft system based on user supplied input parameters. This interactive program is available at www.ptwizard.com under the Product Section area.

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SELECTION

UNIFIED Pillow Block - Spherical Roller Bearings

- Example:
1. L_{10} Life = 30,000 Hours
 2. Radial load = 4000 lbs.
 3. RPM = 1,000

At the intersection of the 950 RPM column and the 30,000 hours L_{10} life row, the equivalent radial load of 4555 lbs. exceeds the 4000 lbs. 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 4877 lbs. exceeds the 4000 lbs. application radial load for shaft size 2-3/16" adapter mount (22213K series bearing) and for shaft size 65mm 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" adapter mount | 22309K bearing |
| 2. 45 mm direct mount | 22309 bearing |
| | OR |
| 3. 2-3/16" 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} , RPM and P

$$C = \left(\frac{L_{10} \times \text{RPM}}{16667} \right)^{0.3} \times P$$

(P = F_R for Pure Radial Load Conditions)

Since the L_{10} , RPM and P are known, solve for **C**. Select from the dynamic capacity column on Table 1, page B15-15 the **C** value equal to or greater than the **C** value just calculated. The bore size on the far left represents the minimum shaft size selection. Check that the application RPM does not exceed the MAX. RPM on Table 1, page B15-15. Also check that the radial load does not exceed the Maximum Allowable Slip Fit Radial Load shown on 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, page B15-15 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, lbs.
- F_R = Radial load, lbs.
- F_A = Thrust (axial) load, lbs.
- 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} life in hours, or it can be compared to the allowable 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 DODGE Application Engineering (864-284-5700) during the hours of 8:00 a.m. and 5:00 p.m. Eastern Time.

AXIAL EXPANSION CAPABILITY

Axial expansion capability for UNIFIED SAF 500, 600, 200 and 300 pillow blocks is shown on B15-25. DODGE supplies all UNIFIED 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.



SELECTION

UNIFIED Pillow Block - Spherical Roller Bearings

Table 1: Radial & Thrust Factors For USAF Spherical Bearings

| Shaft Size | | Bearing Series | e | $F_R/F_R \leq e$ | | $F_R/F_R > e$ | | Adapter Maximum Allowable Thrust Load Pound † | Dynamic Capacity (C) Pounds | Static Capacity (Co) Lbs. | Maximum RPM | |
|------------------------|-----------------|----------------|-----|------------------|-----|---------------|-----|---|-----------------------------|---------------------------|-------------|------|
| Adapter Mounted Inches | Direct Mount mm | | | X | Y | X | Y | | | | Grease | Oil |
| - | 40 | 22308 | .36 | 1 | 1.9 | 0.67 | 2.8 | - | 35,500 | 33,500 | 4300 | 5300 |
| 1-7/16 | --- | 22209 | .26 | 1 | 2.6 | 0.67 | 3.9 | 698 | 24,500 | 23,600 | 5600 | 7000 |
| | 45 | 22309 | .36 | 1 | 1.9 | 0.67 | 2.8 | 1092 | 42,500 | 41,500 | 3800 | 4800 |
| 1-11/16 | --- | 22210 | .24 | 1 | 2.8 | 0.67 | 4.2 | 775 | 26,000 | 26,500 | 5300 | 6700 |
| | 50 | 22310 | .36 | 1 | 1.9 | 0.67 | 2.8 | 1348 | 51,000 | 50,000 | 3400 | 4300 |
| 1-15/16 | --- | 22211 | .23 | 1 | 2.9 | 0.67 | 4.4 | 927 | 31,500 | 32,500 | 4500 | 5600 |
| | 55 | 22311 | .36 | 1 | 1.9 | 0.67 | 2.8 | 1672 | 60,000 | 58,500 | 3200 | 4000 |
| | 60 | 22312 | .35 | 1 | 1.9 | 0.67 | 3 | - | 69,500 | 69,500 | 2800 | 3600 |
| 2-3/16 | --- | 22213 | .24 | 1 | 2.8 | 0.67 | 4.2 | 1359 | 45,500 | 47,500 | 3800 | 4500 |
| | 65 | 22313 | .34 | 1 | 2 | 0.67 | 3 | 2104 | 78,000 | 81,500 | 2600 | 3400 |
| | 70 | 22314 | .34 | 1 | 2 | 0.67 | 3 | - | 86,500 | 86,500 | 2400 | 3200 |
| 2-7/16 | 75 | 22215 | .22 | 1 | 3.1 | 0.67 | 4.6 | 1568 | 48,000 | 53,000 | 3400 | 4300 |
| 2-1/2 | | 22315 | .34 | 1 | 2 | 0.67 | 3 | 2782 | 100,000 | 102,000 | 2200 | 3000 |
| 2-11/16 | 80 | 22216 | .22 | 1 | 3.1 | 0.67 | 4.7 | 1780 | 56,000 | 60,000 | 3200 | 4000 |
| 2-3/4 | | 22316 | .34 | 1 | 2 | 0.67 | 3 | 3128 | 112,000 | 114,000 | 2200 | 3000 |
| 2-15/16 | 85 | 22217 | .22 | 1 | 3.1 | 0.67 | 4.5 | 2063 | 68,000 | 73,500 | 3000 | 3800 |
| 3 | | 22317 | .33 | 1 | 2 | 0.67 | 3 | 3438 | 122,000 | 125,000 | 2000 | 2800 |
| 3-3/16 | 90 | 22218 | .23 | 1 | 2.9 | 0.67 | 4.3 | 2429 | 78,000 | 85,000 | 2600 | 3400 |
| 3-7/16 | 100 | 22220 | .24 | 1 | 2.8 | 0.67 | 4.2 | 3102 | 96,500 | 106,000 | 2200 | 3000 |
| 3-1/2 | | 22320 | .34 | 1 | 2 | 0.67 | 3 | 4920 | 183,000 | 208,000 | 1700 | 2200 |
| 3-15/16 | 110 | 22222 | .25 | 1 | 2.7 | 0.67 | 4 | 3931 | 122,000 | 134,000 | 2000 | 2800 |
| 4 | | 22322 | .33 | 1 | 2.1 | 0.67 | 3.1 | 5934 | 212,000 | 240,000 | 1500 | 1900 |
| 4-3/16 | 120 | 22224 | .25 | 1 | 2.7 | 0.67 | 4 | 4693 | 143,000 | 166,000 | 1900 | 2400 |
| | | 22324 | .33 | 1 | 2.1 | 0.67 | 3.1 | 6959 | 240,000 | 265,000 | 1400 | 1800 |
| 4-7/16 | 130 | 22226 | .26 | 1 | 2.6 | 0.67 | 3.9 | 5610 | 170,000 | 200,000 | 1800 | 2200 |
| 4-1/2 | | 22326 | .33 | 1 | 2.1 | 0.67 | 3.1 | 8152 | 280,000 | 310,000 | 1300 | 1700 |
| 4-15/16 | 140 | 22228 | .25 | 1 | 2.7 | 0.67 | 4 | 6419 | 196,000 | 236,000 | 1700 | 2200 |
| 5 | | 22328 | .34 | 1 | 2 | 0.67 | 3 | 9628 | 325,000 | 365,000 | 1200 | 1600 |
| 5-3/16 | 150 | 22230 | .25 | 1 | 2.7 | 0.67 | 4 | 7383 | 228,000 | 275,000 | 1600 | 2000 |
| | | 22330 | .33 | 1 | 2 | 0.67 | 3 | 10923 | 365,000 | 415,000 | 1100 | 1500 |
| 5-7/16 | 160 | 22232 | .26 | 1 | 2.6 | 0.67 | 3.9 | 8630 | 260,000 | 315,000 | 1500 | 1800 |
| 5-1/2 | | 22332 | .37 | 1 | 1.8 | 0.67 | 2.7 | 12298 | 325,000 | 365,000 | 1000 | 1400 |
| 5-15/16 | 170 | 22234 | .26 | 1 | 2.6 | 0.67 | 3.9 | 9858 | 309,000 | 355,000 | 1300 | 1700 |
| 6 | | 22334 | .37 | 1 | 1.8 | 0.67 | 2.7 | 13755 | 360,000 | 475,000 | 950 | 1300 |
| 6-7/16 | 180 | 22236 | .25 | 1 | 2.7 | 0.67 | 4 | 10437 | 305,000 | 375,000 | 1300 | 1600 |
| 6-1/2 | | 22336 | .37 | 1 | 1.8 | 0.67 | 2.7 | 15291 | 405,000 | 475,000 | 900 | 1100 |
| 6-15/16 | 190 | 22238 | .28 | 1 | 2.4 | 0.67 | 3.6 | 11786 | 270,000 | 415,000 | 1200 | 1300 |
| 7 | | 22338 | .37 | 1 | 1.8 | 0.67 | 2.7 | 16910 | 415,000 | 570,000 | 850 | 1100 |
| 7-3/16 | 200 | 22240 | .29 | 1 | 2.3 | 0.67 | 3.5 | 13215 | 300,000 | 450,000 | 1100 | 1200 |
| 7-1/2 | 220 | 22244 | .29 | 1 | 2.3 | 0.67 | 3.5 | 16020 | 365,000 | 550,000 | 950 | 1000 |
| 7-15/16 | | | | 1 | | | | | | | | |
| 8-7/16 | - | 23048 | .25 | 1 | 2.7 | 0.67 | 4.1 | 14887 | 260,000 | 490,000 | 950 | 1000 |
| 8-1/2 | | | | 1 | | | | | | | | |
| 8-15/16, 9 | - | 23052 | .26 | 1 | 2.6 | 0.67 | 3.9 | 18232 | 340,000 | 630,000 | 900 | 950 |
| 9-7/16 | | | | 1 | | | | | | | | |
| 9-15/16, 10 | - | 23056 | .25 | 1 | 2.7 | 0.67 | 4.1 | 20000 | 345,000 | 670,000 | 850 | 900 |
| 10-7/16 | | | | 1 | | | | | | | | |
| 10-1/2 | | | | 1 | | | | | | | | |

If the thrust load exceeds adapter maximum allowable thrust load, auxiliary methods of carrying thrust are required.

| | | | |
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SELECTION

UNIFIED Pillow Block - Spherical Roller Bearings

Table 2: Selection Table for UNIFIED SAF Pillow Blocks

| Shaft Size | | Bearing Series | L ₁₀ Life Hours | Allowable Equivalent Radial Load Rating (Lbs.) at Various Revolutions Per Minute | | | | | | | | | | | | | | | |
|------------------------|-------------------|----------------|----------------------------|--|---------------|---------------|---------------|---------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Adapter Mount (Inches) | Direct Mount (mm) | | | 50 | 100 | 250 | 500 | 750 | 950 | 1,300 | 1,500 | 1,800 | 2,000 | 2,600 | 3,000 | 3,200 | 3,400 | 4500 | 5,600 |
| - | 40 | 22308 | 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 | |
| | | | 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 | |
| 1-7/16 | - | 22209 | 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 |
| | | | 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 | 1,482 | 1,455 | 1,338 | 1,253 |
| | 45 | 22309 | 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 | |
| | | | 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 | |
| 1-11/16 | - | 22210 | 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 |
| | | | 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 |
| | 50 | 22310 | 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 | | |
| | | | 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 | | |
| 1-15/16 | - | 22211 | 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 |
| | | | 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 |
| | 55 | 22311 | 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 | | |
| | | | 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 | | |
| - | 60 | 22312 | 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 | | |
| | | | 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 | | |
| 2-3/16 | - | 22213 | 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 | |
| | | | 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 | |
| | | | 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 | |
| | 65 | 22313 | 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 | | |
| - | 70 | 22314 | 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 | | | |
| | | | 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 | | | |
| 2-7/16 2-1/2 | 75 | 22215 | 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 | | |
| | | | 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 | | |
| | | | 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 | | |
| | 75 | 22315 | 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 | | | | |
| | | | 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 | | | | |
| 2-11/16 2-3/4 | 80 | 22216 | 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 | | |
| | | | 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 | | |
| | | | 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 | | |
| | 80 | 22316 | 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 | | | | |
| | | | 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

| | | | |
|---------------------------------|--|----------------------------|-------------------------------------|
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Bearing Reference Guide
 E-Family Roller Bearings
 Specialty Tapered Products
 S-2000
 UNISPHERE II
 IMPERIAL
 UNIFIED SAF



SELECTION

UNIFIED Pillow Block - Spherical Roller Bearings

Table 2: Selection Table for UNIFIED SAF Pillow Blocks

| Shaft Size | | Bearing Series | L ₁₀ Life Hours | Allowable Equivalent Radial Load Rating (Lbs.) at Various Revolutions Per Minute | | | | | | | | | | | | | | | |
|------------------------|-------------------|----------------|----------------------------|--|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|------|-------|
| Adapter Mount (Inches) | Direct Mount (mm) | | | 50 | 100 | 250 | 500 | 750 | 950 | 1,300 | 1,500 | 1,800 | 2,000 | 2,600 | 3,000 | 3,200 | 3,400 | 4500 | 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 | 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 | | | | | |
| | 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

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SELECTION

UNIFIED Pillow Block - Spherical Roller Bearings

Table 2: Selection Table for UNIFIED SAF Pillow Blocks

| Shaft Size | | Bearing Series | L ₁₀ Life Hours | Allowable Equivalent Radial Load Rating (Lbs.) at Various Revolutions Per Minute | | | | | | | | | | | | | | | | | |
|---------------------------------------|-------------------|----------------|----------------------------|--|---------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|------|-------|--|--|
| Adapter Mount (Inches) | Direct Mount (mm) | | | 50 | 100 | 250 | 500 | 750 | 950 | 1,300 | 1,500 | 1,800 | 2,000 | 2,600 | 3,000 | 3,200 | 3,400 | 4500 | 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 | 149,594 | 121,508 | 92,305 | 74,975 | 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 | | | | | | | | | | | | | | |

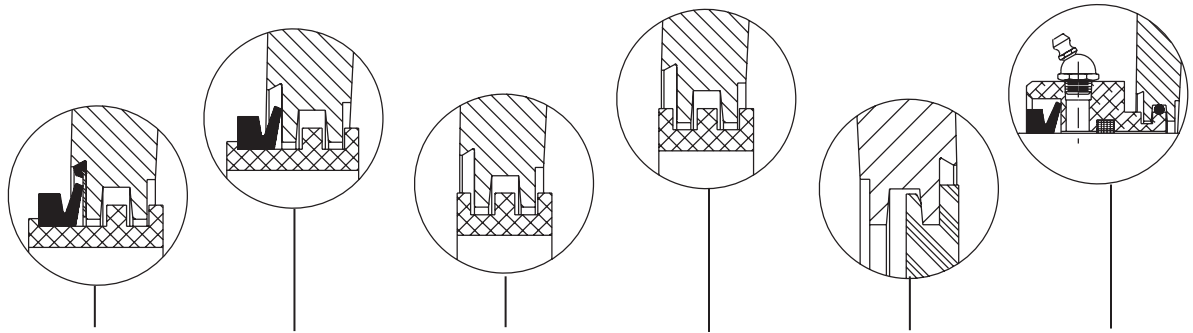
Note: Dark Shaded Areas Require Circulating Oil
Light Shaded Areas Require Static Oil

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SELECTION

UNIFIED SAF Bearing Seals



| ENVIRONMENT/ APPLICATION | DROP IN TRIPLE-TECT SEAL | TRIPLE-TECT LABYRINTH & FACE RUBBING SEAL | SPLIT LER LABYRINTH SEAL | LER LABYRINTH SEAL | END COVER | AUXILIARY TACONITE SEAL |
|---------------------------------|--------------------------------|---|--------------------------------|--------------------------|--------------------|-------------------------------|
| | 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 | + | + | O | O | ++ | + |
| High Pressure Power Washdown | ▲ | ▲ | O | O | ++ | + |
| ☆ High Temperature | O | O | O | + | ▲ | O |
| ★ High Speed | + | + | + | ++ | NS | O |
| Chemical | ▲ | ▲ | O | O | ▲ | ▲ |
| Misalignment | + | + | + | + | NS | ▲ |

++ Very Good
 + Good
 ▲ Questionable (Depends On Condition: Consult DODGE Engineering)
 O Not Recommended
 NS Not Seal Limited

Notes:
 ☆ High Temperature is above 200°F
 ★ Consideration Of High Speed Can Be A Function Of Type
 And Bearing Design

DROP-IN TRIPLE TECT SEAL

The patented Drop-In TRIPLE-TECT Seal has all the sealing features of the standard TRIPLE-TECT except it is pre-assembled at the factory for quick and easy field assembly. 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.



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SELECTION

UNIFIED SAF Bearing Lubrication

SELECTING LUBRICATION

DODGE UNIFIED pillow blocks are lubricated by the user at installation. DODGE UNIFIED bearings are specially designed to handle either grease or oil lubrication.

GREASE LUBRICATION:

DODGE UNIFIED 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% full of grease immediately after properly mounting the bearing on the shaft. If the RPM of the application falls between 20% and 80% of maximum RPM (Table 1, page B15-15), pack the lower half of the housing one-third to one-half full. If the RPM of the application is less than 20% of maximum RPM, pack bearing housing cavity 100% full. If the RPM exceeds 80% of maximum RPM, do not add grease in the lower half of the housing or in the cap.

At each re-greasing cycle, for applications up to 80% 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% of maximum RPM, add 4 strokes of a handgun at each re-greasing cycle for bores

up to 2. For bores greater than 2 up to 5, add 8 strokes of a handgun at each re-greasing cycle. For bores greater than 5 up to 10-1/2, add 16 strokes of a handgun at each re-greasing cycle. For bores greater than 10-1/2, and up to 12-1/2 add 32 strokes of a handgun at each re-greasing cycle. For bores greater than 12-1/2 up to 15-3/4 add 64 strokes of a handgun at each re-greasing cycle. For units running above 80% 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. For warning before catastrophic failure, see DODGE Smart Bearing Package on page B15-54

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 RPM and load. Use Table 4, page B15-21 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 (864-284-5700) during the hours of 8:00 a.m. and 5:00 p.m. Eastern Time.

Table 3: Viscosity Of Oil, Or Oil In Grease

| DN Δ | Viscosity for Loads Up To 18% of Dyn. Cap.* (SUS @ Oper. Temp.) | CST | DN Δ | Viscosity for Loads Up To 18% of Dyn. Cap.* (SUS. @ Oper. Temp.) | CST |
|---------|---|-----|---------|--|-----|
| 100 | 3500 | 700 | 1400 | 625 | 140 |
| 200 | 3150 | 680 | 1600 | 525 | 120 |
| 300 | 2750 | 590 | 1800 | 450 | 95 |
| 400 | 2375 | 500 | 2000 | 400 | 85 |
| 500 | 2000 | 460 | 3000 | 300 | 63 |
| 600 | 1750 | 360 | 4000 | 200 | 43 |
| 700 | 1500 | 320 | 5000 | 150 | 32 |
| 800 | 1300 | 280 | 6000 | 130 | 28 |
| 900 | 1075 | 220 | 7000 | 110 | 22 |
| 1000 | 900 | 140 | 8000 | 100 | 20 |

Δ DN = Bore Diameter (ins) x RPM

* For loads above 18% of dynamic capacity, an EP grease with viscosity selected from above is recommended

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UNIFIED SAF Bearing Lubrication

OIL LUBRICATION

DODGE UNIFIED 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 and is shown on pages B15-22, B15-23, B15-37, B15-39, B15-63, B15-97, B15-105, and B15-117. 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 semiannually. For circulating oil, the oil flow rate and size of factory drilled and tapped return drains are shown in Table 5, up to 8 bore. The viscosity of the oil should be selected based on the guidelines shown on Table 3, page B15-20. If the RPM 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 | | RPM | | | | | | | | |
|--------------------|------------------|-----|-----|-----|------|------|------|------|------|------|
| Adapter Mtg. (in.) | Direct Mtg. (mm) | 250 | 500 | 750 | 1000 | 1250 | 1500 | 2000 | 2500 | 3000 |
| 1-7/16 - 1-15/16 | 40-55 | 8 | 6 | 4 | 3 | 2 | 1 | .50 | .50 | .25 |
| 2-3/16 | 60-65 | 7 | 5 | 3 | 2 | 1 | 1 | .50 | .25 | .25 |
| 2-7/16 - 3 | 70-85 | 6 | 4 | 3 | 2 | 1 | .50 | .25 | .25 | |
| 3-3/16 - 3-1/2 | 90-100 | 5 | 3 | 2 | 1 | .50 | .50 | .25 | | |
| 3-15/16 - 4-1/2 | 110-130 | 4 | 3 | 2 | 1 | .50 | .25 | | | |
| 4-15/16 - 5-1/2 | 140-160 | 3 | 2 | 1 | .50 | .25 | | | | |
| 5-15/16 - 7-3/16 | 170-200 | 2 | 1 | 1 | .50 | | | | | |
| 7-1/2 - 9-1/2 | 220 | 1 | 1 | .50 | | | | | | |
| 9-15/16 - 10-1/2 | - | 1 | .50 | | | | | | | |
| 10-15/16 - 12-1/2 | - | 1 | .50 | | | | | | | |
| 12-15/16 - 15-3/4 | - | .50 | .25 | | | | | | | |

* For continuous operations, 24 hours per day, decrease greasing interval by 50%

| | | | |
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SELECTION

UNIFIED SAF Circulating Oil

Table 5: Circulating Oil Flow Rates, Drain Hole Sizes, Thermocouple Location And Vibration Sensor Location

| Shaft Size | | | | USAF Housing Designation | | | | Circulating Oil Flow* | | Static Oil Level Inches W** | | Drain Hole, Dry Sump*** | | | Thermocouple Hole | | Vibration ▲ Sensor Hole | | | |
|------------------------|--------------------|-------------------------|--------------------|--------------------------|-----|-----|-----|--|---|-----------------------------|----------|-------------------------|------------------|-----------------|-------------------|------|-------------------------|-------------------|-----------------|-------------------|
| 500 Adptr Mntg. Inches | 200 Drct. Mntg. mm | 600 Adptr. Mntg. Inches | 300 Drct. Mntg. mm | | | | | Amount Sufficient for Normal Lubrication | Maximum Amount for Heat Dissipation Due to External Heat Source | Gal./Min | Gal./Min | 500 & 200 Series | 600 & 300 Series | Location Inches | | | Location Inches | Wall Thck. Inches | Location Inches | Wall Thck. Inches |
| | | | | | | | | | | | | | | X | Y | Size |  |  |  |  | A | B | C | E |
| 1-7/16 | - | - | - | 509 | - | - | - | .0025 | .070 | 0.92 | - | 1.09 | 0.63 | 1-8/27 | 0.25 | 0.38 | 1.56 | 1.31 | | |
| 1-11/16 | - | - | 40 | 510 | - | - | 308 | .0030 | .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 | .0040 | .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 | .0045 | .120 | - | 1.38 | | | | | | | | | |
| 2-3/16 | - | 1-15/16 | 55 | 513 | - | 611 | 311 | .0050 | .150 | 1.11 | 1.44 | 1.66 | 0.78 | 1-8/27 | 0.34 | 0.58 | 2.02 | 1.13 | | |
| 2-7/16 | 75 | - | 60 | 515 | 215 | - | 312 | .0060 | .175 | 1.16 | 1.31 | 1.78 | 0.88 | 1/4-18 | 0.36 | 0.63 | 2.25 | 1.19 | | |
| 2-11/16 | 80 | 2-3/16 | 65 | 516 | 216 | 613 | 313 | .0065 | .195 | 1.25 | 1.41 | 1.97 | 0.95 | 1/4-18 | 0.31 | 0.50 | 2.28 | 1.52 | | |
| 2-15/16 | 85 | - | 70 | 517 | 217 | - | 314 | .0075 | .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 | 75 | 518 | 218 | 615 | 315 | .0080 | .250 | 1.47 | 1.59 | 2.25 | 1.13 | 3/8-18 | 0.44 | 0.61 | 2.72 | 1.45 | | |
| - | - | 2-11/16 | 80 | - | - | 616 | 316 | .0100 | .260 | 1.69 | 1.69 | 2.28 | 1.17 | 3/8-18 | 0.53 | 0.66 | 2.73 | 1.47 | | |
| 3-7/16 | 100 | 2-15/16 | 85 | 520 | 220 | 617 | 317 | .0110 | .350 | 1.64 | 1.75 | 2.63 | 1.25 | 3/8-18 | 0.53 | 0.70 | 3.08 | 1.67 | | |
| 3-1/2 | | 3 | | | | | | | | | | | | | | | | | | |

* Based on oil temperature of 130°F - 150°F & oil level at center line of lowest roller. For maximum oil flow values, both drains should be used.

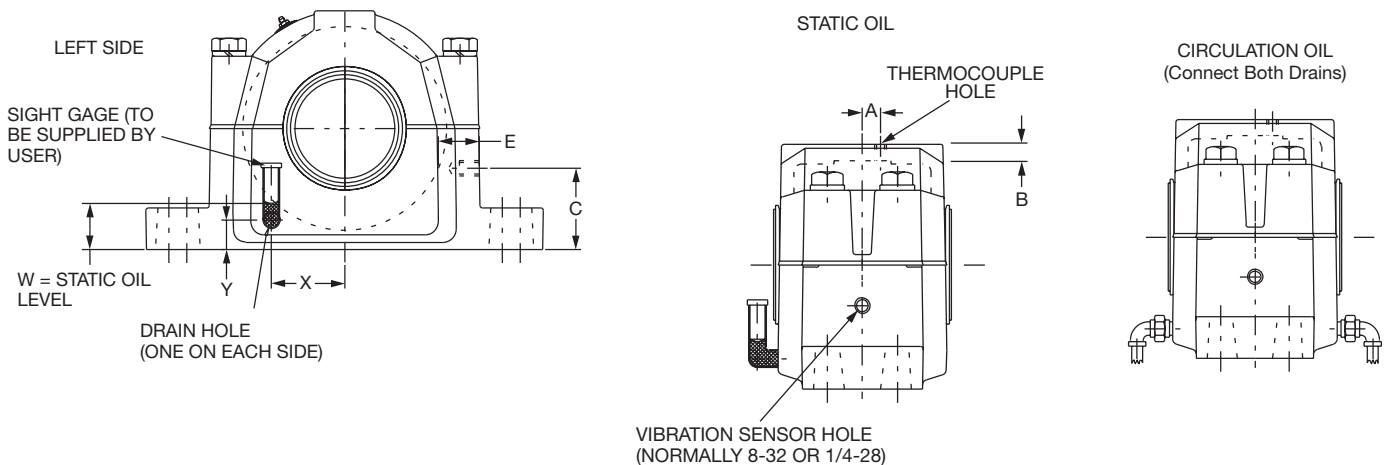
Mount block with drain holes on right side of block center line when rotation is CCW, unless cast closed end.

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 DODGE Application Engineering.

▲ For vibration sensors supplied by the user.



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UNIFIED SAF Circulating Oil

Table 5 (continued): Circulating Oil Flow Rates, Drain Hole Sizes, Thermocouple Location And Vibration Sensor Location

| Shaft Size | | | | USAF Housing Designation | | | | Circulating Oil Flow* | | Static Oil Level Inches W** | | Drain Hole, Dry Sump *** | | | Thermocouple Hole | | Vibration ▲ Sensor Hole | |
|-----------------------|-------------------|------------------------|-------------------|--------------------------|-----|-----|-----|---|--|-----------------------------|------------------|--------------------------|------|--------|-------------------|-------------------|-------------------------|-------------------|
| 500 Adptr Mtg. Inches | 200 Drct. Mtg. mm | 600 Adptr. Mtg. Inches | 300 Drct. Mtg. mm | | | | | Amount Sufficient for Normal Lubrication Gal./Min | Maximum Amount for Heat Dissipation Due to External Heat Source Gal./Min | 500 & 200 Series | 600 & 300 Series | Location Inches | | Size | Location Inches | Wall Thck. Inches | Location Inches | Wall Thck. Inches |
| | | | | | | | | | | | | X | Y |  |  |  |  |  | A | B | C | E |
| 3-15/16 4 | 110 | - | - | 522 | 222 | - | - | 0.015 | 0.42 | 1.80 | | 2.88 | 1.34 | 3/8-18 | 0.53 | 0.53 | 3.36 | 1.72 |
| 4-3/16 | 120 | 3-7/16 3-1/2 | 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 |
| 4-7/16 4-1/2 | 130 | 3-15/16 4 | 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 |
| 4-15/16 5 | 140 | - | - | 528 | 228 | - | - | 0.023 | 0.6 | 2.03 | - | 3.68 | 1.47 | 1/2-14 | 0.75 | 0.89 | 4.03 | 2.16 |
| 5-3/16 | 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 5-1/2 | 160 | 4-7/16 4-1/2 | 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 |
| 5-15/16 6 | 170 | 4-15/16 5 | 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 |
| 6-7/16 6-1/2 | 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 |
| 6-15/16 7 | 190 | 5-7/16 5-1/2 | 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 |
| 7-3/16 | 200 | 5-15/16 6 | 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 |
| 7-1/2 | 220 | 6-15/16 7 | 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 |
| 7-15/16 8 | | - | | 544 | | | | | | | | | | | | | | |

* Based on oil temperature of 130°F - 150°F & oil level at center line of lowest roller. For maximum oil flow values, both drains should be used.

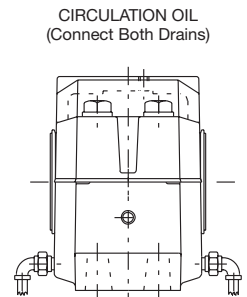
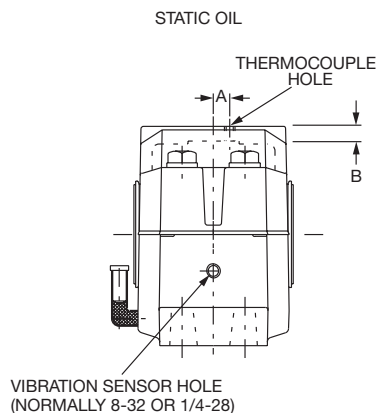
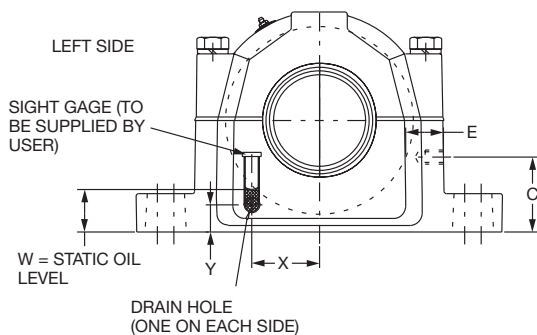
Mount block with drain holes on right side of block center line when rotation is CCW, unless cast closed end.

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 DODGE Application Engineering.

▲ For vibration sensors supplied by the user.



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SELECTION

UNIFIED SAF Housing Ratings

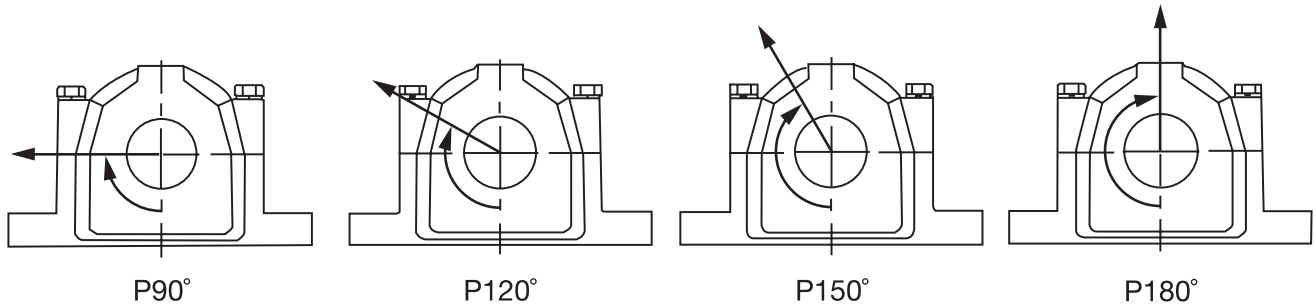


Table 6: USAF Housing Ratings And Cap Bolt Ratings*

| 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 (Ft-Lb) | SAE Grade |
| 509 | | | | 6600 | 4200 | 3600 | 4600 | 19800 | 11300 | 9900 | (4) 3/8-16 | 24-30 | 5 |
| 510 | | | 308 | 7800 | 5000 | 4400 | 5400 | 19800 | 11300 | 9900 | (4) 3/8-16 | 24-30 | 5 |
| 511 | | 610 | 310 | 11400 | 7165 | 6575 | 7875 | 27120 | 15600 | 13560 | (4) 7/16-14 | 40-50 | 5 |
| 513 | | 611 | 311 | 13360 | 8260 | 7680 | 9200 | 27120 | 15600 | 13560 | (4) 7/16-14 | 40-50 | 5 |
| 515 | 215 | | 312 | 13360 | 8260 | 7680 | 9220 | 36200 | 20800 | 18100 | (4) 1/2-13 | 60-75 | 5 |
| 516 | 216 | 613 | 313 | 12800 | 8000 | 7400 | 8900 | 57600 | 33000 | 28800 | (4) 5/8-11 | 120-150 | 5 |
| 517 | 217 | | 314 | 13600 | 9200 | 8400 | 10200 | 57600 | 33000 | 28800 | (4) 5/8-11 | 120-150 | 5 |
| 518 | 218 | 615 | 315 | 17500 | 11350 | 10200 | 12100 | 57600 | 33000 | 28800 | (4) 5/8-11 | 120-150 | 5 |
| | | 616 | 316 | 17600 | 12000 | 10500 | 12200 | 57600 | 33000 | 28800 | (4) 5/8-11 | 120-150 | 5 |
| 520 | 220 | 617 | 317 | 22500 | 14200 | 12660 | 14700 | 85200 | 48900 | 42600 | (4) 3/4-10 | 208-260 | 5 |
| 522 | 222 | | | 28100 | 17500 | 15500 | 17800 | 85200 | 48900 | 42600 | (4) 3/4-10 | 208-260 | 5 |
| 524 | 224 | 620 | 320 | 24500 | 15400 | 13700 | 15800 | 85200 | 48900 | 42600 | (4) 3/4-10 | 208-260 | 5 |
| 526 | 226 | 622 | 322 | 28970 | 18000 | 15900 | 18300 | 11800 | 67800 | 59000 | (4) 7/8-9 | 320-430 | 5 |
| 528 | 228 | | | 35800 | 22100 | 19400 | 22300 | 154400 | 88700 | 77200 | (4) 1-8 | 512-640 | 5 |
| 530 | 230 | 624 | 324 | 40000 | 24700 | 21600 | 25000 | 154400 | 88700 | 77200 | (4) 1-8 | 512-640 | 5 |
| 532 | 232 | 626 | 326 | 40200 | 24800 | 21700 | 25100 | 154400 | 88700 | 77200 | (4) 1-8 | 512-640 | 5 |
| 534 | 234 | 628 | 328 | 52000 | 32200 | 28200 | 33000 | 154400 | 88700 | 77200 | (4) 1-8 | 512-640 | 5 |
| 536 | 236 | 630 | 330 | 78200 | 49200 | 43300 | 52800 | 154400 | 88700 | 77200 | (4) 1-8 | 512-640 | 5 |
| 538 | 238 | 632 | 332 | 80600 | 50800 | 44800 | 54800 | 215200 | 123000 | 107600 | (4) 1-1/4-7 | 896-1120 | 5 |
| 540 | 240 | 634 | 334 | 83800 | 53000 | 46700 | 57500 | 215200 | 123000 | 107600 | (4) 1-1/4-7 | 896-1120 | 5 |
| 544 | 244 | 638 | 338 | 101800 | 65600 | 58200 | 73800 | 312000 | 179000 | 156000 | (4) 1-1/2-6 | 1560-1950 | 5 |
| 048 | | | | 83800 | 53000 | 46700 | 54800 | 215200 | 123000 | 107600 | (4) 1-1/4-7 | 896-1120 | 5 |
| 052 | | | | 101800 | 65600 | 58200 | 73800 | 312000 | 179000 | 156000 | (4) 1-1/2-6 | 1560-1950 | 5 |
| 056 | | | | 110200 | 71800 | 64000 | 82100 | 312000 | 179000 | 156000 | (4) 1-1/2-6 | 1560-1950 | 5 |

* When utilizing heavy cap loads an 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 L₁₀ life of the bearing should be checked for proper selection and life requirements.

♦ For USDAF housing and Cap Bolt Ratings consult DODGE Application Engineering (864-284-5700).

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SELECTION

UNIFIED SAF Expansion Capabilities

Table 7: UNIFIED 500, 200, 600 And 300 Series And Split-Spher Pillow Blocks Total Expansion Capability

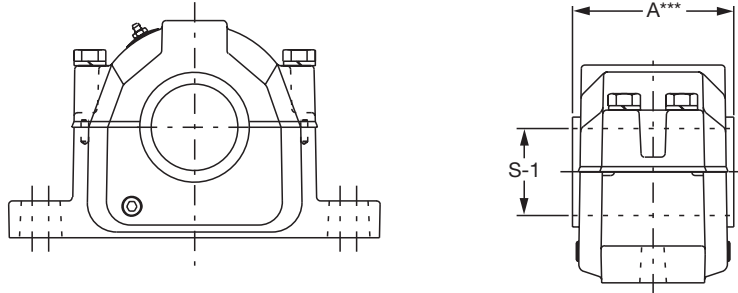
| Shaft Size | | | | USAF Housing Designation | | | | Total Expansion, Inches |
|-------------------------|--------------------|-------------------------|--------------------|--------------------------|-----|------|------|-------------------------|
| 500 Adptr. Mntg. Inches | 200 Drct. Mntg. mm | 600 Adptr. Mntg. Inches | 300 Drct. Mntg. mm | | | | | |
| 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 | 75 | - | 60 | 515 | 215 | - | 312 | 1/4 |
| 2-1/2 | | | | | | | | |
| 2-11/16 | 80 | 2-7/16 | 65 | 516 | 216 | 613 | 313 | 3/8 |
| 2-3/4 | | | | | | | | |
| 2-15/16 | 85 | - | 70 | 517 | 217 | - | 314 | 3/8 |
| 3 | | | | | | | | |
| 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 | 100 | 2-15/16 3 | 85 | 520 | 220 | 617 | 317 | 3/8 |
| 3-1/2 | | | | | | | | |
| 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 | 140 | | | 528 | 228 | | | 3/8 |
| 5 | | | | | | | | |
| 5-3/16 | 150 | 4-3/16 | 120 | 530 | 230 | 624 | 324 | 3/8 |
| 5-7/16 | 160 | 4-7/16, 4-1/2 | 130 | 532 | 232 | 626 | 326 | 3/8 |
| 5-1/2 | | | | | | | | |
| 5-15/16 | 170 | 4-15/16, 5 | 140 | 534 | 234 | 628 | 328 | 3/8 |
| 6 | | | | | | | | |
| 6-7/16 | 180 | 5-3/16 | 150 | 536 | 236 | 630 | 330 | 3/8 |
| 6-1/2 | | | | | | | | |
| 6-15/16 | 190 | 5-7/16 5-1/2 | 160 | 538 | 238 | 632 | 332 | 3/8 |
| 7 | | | | | | | | |
| 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 | | - | | 544 | | | | |
| 8 | | | | | | | | |
| 8-7/16, 8-1/2 | - | - | - | 048 | - | - | - | 5/8 |
| 8-15/16, 9 | | | | | | | | |
| 9-7/16, 9-1/2 | - | - | - | 052 | - | - | - | 9/16 |
| 9-15/16, 10 | - | - | - | 056 | - | - | - | 1-5/8 |
| 10-7/16 | - | - | - | 056L | - | - | - | 1-5/8 |
| 10-1/2 | | | | | | | | |

* 1/4 Total Expansion



SELECTION/DIMENSIONS

USAF 500 Adapter Mount Pillow Block with TRIPLE-TECT Seal Assembly 500 SERIES OPEN END HOUSING



| Shaft Dia S-1 | Complete Pillow Block Part No. | Housing W/ Stab Ring Part No. | Bearing Part No. | Dynamic Capacity (C), lbs. | Max RPM (Grease) |
|------------------|--------------------------------|-------------------------------|-----------------------|----------------------------|------------------|
| 1-7/16 | P2B509-USAF-107TT 043015 | H2S-509-USAF 043995 | BRG22209KC3 422134 | 24,500 | 5,600 |
| 1-11/16 | P2B510-USAF-111TT 043048 | H2S-510-USAF 043996 | BRG22210KC3 422137 | 26,000 | 5,300 |
| 1-15/16 | P2B511-USAF-115TT 043248 | H2S-511-USAF 043997 | BRG22211KC3 422123 | 31,500 | 4,500 |
| 2-3/16 | P2B513-USAF-203TT 043249 | H2S-513-USAF 043998 | BRG22213KC3 422124 | 45,500 | 3,800 |
| | P4B513-USAF-203TT 039579 | H4S-513-USAF 039669 | BRG22213KC3 422124 | | |
| 2-7/16 | P2B515-USAF-207TT 041860 | H2S-515-USAF 044000 | BRG22215KC3 422001 | 48,000 | 3,400 |
| | P4B515-USAF-207TT 041861 | H4S-515-USAF 044003 | BRG22215KC3 422001 | | |
| 2-1/2 | P2B515-USAF-208TT 041862 | H2S-515-USAF 044000 | BRG22215KC3 422001 | 48,000 | 3,400 |
| | P4B515-USAF-208TT 041863 | H4S-515-USAF 044003 | BRG22215KC3 422001 | | |
| 2-11/16 | P2B516-USAF-211TT 042406 | H2S-516-USAF 044198 | BRG22216KC3 422003 | 56,000 | 3,200 |
| | P4B516-USAF-211TT 044015 | H4S-516-USAF 044007 | BRG22216KC3 422003 | | |
| 2-3/4 | P2B516-USAF-212TT 042409 | H2S-516-USAF 044198 | BRG22216KC3 422003 | 56,000 | 3,200 |
| | P4B516-USAF-212TT 042423 | H4S-516-USAF 044007 | BRG22216KC3 422003 | | |
| 2-15/16 | P2B517-USAF-215TT 041864 | H2S-517-USAF 044010 | BRG22217KC3 422005 | 68,000 | 3,000 |
| | P4B517-USAF-215TT 041865 | H4S-517-USAF 044013 | BRG22217KC3 422005 | | |
| 3 | P2B517-USAF-300TT 041866 | H2S-517-USAF 044010 | BRG22217KC3 422005 | 68,000 | 3,000 |
| | P4B517-USAF-300TT 041867 | H4S-517-USAF 044013 | BRG22217KC3 422005 | | |
| 3-3/16 | P2B518-USAF-303TT 042422 | H2S-518-USAF 044199 | BRG22218KC3 422007 | 78,000 | 2,600 |
| | P4B518-USAF-303TT 044115 | H4S-518-USAF 044114 | BRG22218KC3 422007 | | |

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SELECTION/DIMENSIONS

USAF 500 Adapter Mount Pillow Block with TRIPLE-TECT Seal Assembly 500 SERIES OPEN END HOUSING

| Shaft Dia S-1 | SNW Part No. | TRIPLE-TECT Part No. | TTDN Part No. | #LER Part No. | Aux Part No. | End Cover Part No. |
|---------------|--------------|----------------------|---------------|---------------|--------------|--------------------|
| 1-7/16 | H309-SNW-107 | 08TT107 | --- | 08LER107 | | EC08 |
| | 046350 | 043578 | | 042193 | | |
| 1-11/16 | H310-SNW-111 | 10TT111 | --- | 10LER111 | | EC10 |
| | 046351 | 043579 | | *042199 | | |
| 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.

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SELECTION/DIMENSIONS

USAF 500 Adapter Mount Pillow Block with TRIPLE-TECT Seal Assembly 500 SERIES OPEN END HOUSING

| Shaft Dia S-1 | Complete Pillow Block Part No. | Housing W/ Stab Ring Part No. | Bearing Part No. | Dynamic Capacity (C), lbs. | Max RPM (Grease) |
|------------------|--------------------------------|-------------------------------|-----------------------|----------------------------|------------------|
| 3-7/16 | P2B520-USAF-307TT 041868 | H2S-520-USAF 044020 | BRG22220KC3 422009 | 96,500 | 2,200 |
| | P4B520-USAF-307TT 041869 | H4S-520-USAF 044023 | BRG22220KC3 422009 | | |
| 3-1/2 | P2B520-USAF-308TT 041870 | H2S-520-USAF 044020 | BRG22220KC3 422009 | 96,500 | 2,200 |
| | P4B520-USAF-308TT 041871 | H4S-520-USAF 044023 | BRG22220KC3 422009 | | |
| 3-15/16 | P4B522-USAF-315TT 041872 | H4S-522-USAF 044025 | BRG22222KC3 422011 | 122,000 | 2,000 |
| 4 | P4B522-USAF-400TT 041873 | H4S-522-USAF 044025 | BRG22222KC3 422011 | 122,000 | 2,000 |
| 4-3/16 | P4B524-USAF-403TT 042431 | H4S-524-USAF 044202 | BRG22224KC3 422013 | 143,000 | 1,900 |
| 4-7/16 | P4B526-USAF-407TT 041874 | H4S-526-USAF 044031 | BRG22226KC3 422015 | 170,000 | 1,800 |
| 4-1/2 | P4B526-USAF-408TT 041875 | H4S-526-USAF 044031 | BRG22226KC3 422015 | 170,000 | 1,800 |
| 4-15/16 | P4B528-USAF-415TT 041876 | H4S-528-USAF 044034 | BRG22228KC3 422017 | 196,000 | 1,700 |
| 5 | P4B528-USAF-500TT 041877 | H4S-528-USAF 044034 | BRG22228KC3 422017 | 196,000 | 1,700 |
| 5-3/16 | P4B530-USAF-503TT 042438 | H4S-530-USAF 044203 | BRG22230KC3 422019 | 228,000 | 1,600 |
| 5-7/16 | P4B532-USAF-507TT 041878 | H4S-532-USAF 044040 | BRG22232KC3 422021 | 260,000 | 1,500 |
| 5-1/2 | P4B532-USAF-508TT 041879 | H4S-532-USAF 044040 | BRG22232KC3 422021 | 260,000 | 1,500 |
| 5-15/16 | P4B534-USAF-515TT 041880 | H4S-534-USAF 044043 | BRG22234KC3 422023 | 300,000 | 1,300 |
| 6 | P4B534-USAF-600TT 041881 | H4S-534-USAF 044043 | BRG22234KC3 422023 | 300,000 | 1,300 |
| 6-7/16 | P4B536-USAF-607TT 041882 | H4S-536-USAF 044046 | BRG22236KC3 422025 | 305,000 | 1,300 |
| 6-1/2 | P4B536-USAF-608TT 041883 | H4S-536-USAF 044046 | BRG22236KC3 422025 | 305,000 | 1,300 |
| 6-15/16 | P4B538-USAF-615TT 041884 | H4S-538-USAF 044049 | BRG22238KC3 422027 | 270,000 | 1,200 |
| 7 | P4B538-USAF-700TT 041885 | H4S-538-USAF 044049 | BRG22238KC3 422027 | 270,000 | 1,200 |
| 7-3/16 | P4B540-USAF-703TT 039606 | H4S-540-USAF 039681 | BRG22240KC3 422064 | 300,000 | 900 |
| 7-1/2 | P4B544-USAF-708TT 042445 | H4S-544S-USAF 044054 | BRG22244KC3 422029 | 365,000 | 950 |
| 7-15/16 | P4B544-USAF-715TT 041886 | H4S-544-USAF 044055 | BRG22244KC3 422029 | 365,000 | 950 |

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SELECTION/DIMENSIONS

USAF 500 Adapter Mount Pillow Block with TRIPLE-TECT Seal Assembly 500 SERIES OPEN END HOUSING

| Shaft Dia S-1 | SNW Part No. | TRIPLE-TECT Part No. | TTDN Part No. | #LER Part No. | Aux Part No. | End Cover Part No. |
|------------------|-------------------------|----------------------|---------------------|--------------------|---------------------|--------------------|
| 3-7/16 | H320-SNW-307 046361 | 46TT307 043549 | 46TTDN307 039859 | 46LER307 042521 | 46AUX307 042383 | EC46 040708 |
| | H320-SNW-307 046361 | 46TT307 043549 | 46TTDN307 039859 | 46LER307 042521 | 46AUX307 042383 | EC46 040708 |
| 3-1/2 | H320-SNW-308 046362 | 46TT308 043550 | 46TTDN308 039860 | 46LER308 042522 | 46AUX308 040919 | EC46 040708 |
| | H320-SNW-308 046362 | 46TT308 043550 | 46TTDN308 039860 | 46LER308 042522 | 46AUX308 040919 | EC46 040708 |
| 3-15/16 | H322-SNW-315 046363 | 50TT315 043551 | 50TTDN315 039861 | 50LER315 042523 | 50AUX315 042384 | EC50 040709 |
| 4 | H322-SNW-400 046364 | 50TT400 043552 | 50TTDN400 039862 | 50LER400 042524 | 50AUX400 040893 | EC50 040709 |
| 4-3/16 | H3124-SNW-403 046430 | 52TT403 043553 | 52TTDN403 039863 | 52LER403 042525 | 52AUX403 044360 | EC52 040710 |
| 4-7/16 | H3126-SNW-407 046431 | 54TT407 043554 | 54TTDN407 039864 | 54LER407 042526 | 54AUX407 042385 | EC54 040711 |
| 4-1/2 | H3126-SNW-408 046432 | 54TT408 043555 | 54TTDN408 039865 | 54LER408 042527 | 54AUX408 042386 | EC54 040711 |
| 4-15/16 | H3128-SNW-415 046433 | 56TT415 043556 | 56TTDN415 039866 | 56LER415 042528 | 56AUX415 042387 | EC56 040712 |
| 5 | H3128-SNW-500 046434 | 56TT500 043557 | 56TTDN500 039867 | 56LER500 042529 | 56AUX500 040894 | EC562 040712 |
| 5-3/16 | SNW30X503 043618 | 58TT503 043558 | --- | 58LER503 042530 | | EC58 040713 |
| 5-7/16 | SNW32X507 043619 | 60TT507 043559 | --- | 60LER507 042531 | 60AUX507 042388 | EC60 040714 |
| 5-1/2 | SNW32X508 043634 | 60TT508 043574 | --- | 60LER508 042532 | 60AUX508 040895 | EC60 040714 |
| 5-15/16 | SNW34X515 043620 | 64TT515 043560 | --- | 64LER515 042533 | 64AUX515 042389 | EC64 040681 |
| 6 | SNW34X600 043621 | 64TT600 043561 | --- | 64LER600 042534 | 64AUX600 041646 | EC64 040681 |
| 6-7/16 | SNW36X607 043622 | 68TT607 043562 | --- | 68LER607 042535 | 68AUX607 042390 | EC68 040682 |
| 6-1/2 | SNW36X608 043623 | 68TT608 043563 | --- | 68LER608 042536 | 68AUX608 042391 | EC68 040682 |
| 6-15/16 | SNW38X615 043624 | 72TT615 043564 | --- | 72LER615 042537 | 72AUX615 042392 | EC72 040683 |
| 7 | SNW38X700 043625 | 72TT700 043565 | --- | 72LER700 042538 | 72AUX700 043109 | EC72 040683 |
| 7-3/16 | SNW40X703 046545 | 74TT703 046421 | --- | 74LER703 043386 | 74AUX703 040690 | --- |
| 7-1/2 | SNW44X708 043627 | 76TT708 043567 | --- | 76LER708 042539 | 76AUX708 040896 | EC76 040684 |
| 7-15/16 | SNW44X715 043626 | 78TT715 043566 | --- | 78LER715 042540 | 78AUX715 042393* | EC78 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.

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SELECTION/DIMENSIONS

USAF 500 Adapter Mount Pillow Block with TRIPLE-TECT Seal Assembly 500 SERIES OPEN END HOUSING

| Shaft Dia S-1 | Complete Pillow Block Part No. | Housing W/ Stab Ring Part No. | Bearing Part No. | Dynamic Capacity (C), lbs. | Max RPM (Grease) |
|---------------|--------------------------------|-------------------------------|-----------------------|----------------------------|------------------|
| 8 | P4B544-USAF-800TT 041887 | H4S-544-USAF 044055 | BRG22244KC3 422029 | 365,000 | 950 |
| 8-7/16 | P4B048-USAF-807TT 042447 | H4S-048-USAF 044200 | BRG23048KC3 422031 | 260,000 | 950 |
| 8-1/2 | P4B048-USAF-808TT 042448 | H4S-048-USAF 044200 | BRG23048KC3 422031 | 260,000 | 950 |
| 8-15/16 | P4B048-USAF-815TT 042449 | H4S-048-USAF 044200 | BRG23048KC3 422031 | 260,000 | 950 |
| 9 | P4B048-USAF-900TT 042453 | H4S-048-USAF 044200 | BRG23048KC3 422031 | 260,000 | 950 |
| 9-7/16 | P4B052-USAF-907TT 042454 | H4S-052-USAF 422542 | BRG23052KC3 422543 | 340,000 | 900 |
| 9-1/2 | P4B052-USAF-908TT 422544 | H4S-052-USAF 422542 | BRG23052KC3 422543 | 340,000 | 900 |
| 9-15/16 | P4B056-USAF-915TT 042458 | H4S-056-USAF 422560 | BRG23056KC3 422030 | 345,000 | 850 |
| 10 | P4B056-USAF-1000TT 041628 | H4S-056-USAF 422560 | BRG23056KC3 422030 | 345,000 | 850 |
| 10-7/16 | P4B056-USAF-1007TT 042463 | H4S-056L-USAF 044201 | BRG23056KC3 422030 | 345,000 | 850 |
| 10-1/2 | P4B056-USAF-1008TT 042464 | H4S-056L-USAF 044201 | BRG23056KC3 422030 | 345,000 | 850 |

Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

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SELECTION/DIMENSIONS

USAF 500 Adapter Mount Pillow Block with TRIPLE-TECT Seal Assembly 500 SERIES OPEN END HOUSING

| Shaft Dia S-1 | SNW Part No. | TRIPLE-TECT Part No. | TTDN Part No. | #LER Part No. | Aux Part No. | End Cover Part No. |
|---------------|------------------------|----------------------|---------------|----------------------|----------------------|--------------------|
| 8 | SNW44X800 043628 | 78TT800 043568 | --- | 78LER800 042541* | 78AUX800 042394* | EC78 040685 |
| 8-7/16 | SNP3048X807 043629 | 90TT807 043569 | --- | 90LER807 042542* | 90AUX807 040897* | EC90 042368 |
| 8-1/2 | SNP3048X808 043630 | 90TT808 043570 | --- | 90LER808 042543* | 90AUX808 040898* | EC90 042368 |
| 8-15/16 | SNP3048X815 043631 | 90TT815 043571 | --- | 90LER815 042544* | | EC90 042368 |
| 9 | SNP3048X900 043632 | 90TT900 043572 | --- | 90LER900 042545* | 90AUX900 040995* | EC90 042368 |
| 9-7/16 | SNP3052X907 043585 | 84TT907 043538 | --- | 84LER907 042510* | 84AUX907 040900* | EC84 422606 |
| 9-1/2 | SNP3052X908 422538 | 84TT908 422545 | --- | 84LER908 422594 | 84AUX908 040901* | EC84 422606 |
| 9-15/16 | SNP3056X915 043586 | 92TT915 043575 | --- | 92LER915 042511* | | EC92 042369 |
| 10 | SNP3056X1000 043633 | 92TT1000 043573 | --- | 92LER1000 041082* | 92AUX1000 042395* | EC92 042369 |
| 10-7/16 | SNP3056X1007 043580 | 94TT1007 047940 | --- | 94LER1007 042036* | | EC94 040689 |
| 10-1/2 | SNP3056X1008 422567 | 94TT1008 047941 | --- | 94LER1008 422573* | 94AUX1008 042396* | EC94 040689 |

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Bearing Reference Guide

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SELECTION/DIMENSIONS

USAF 500 Adapter Mount Pillow Block with TRIPLE-TECT Seal Assembly 500 SERIES CAST CLOSED HOUSING

| Shaft Dia S-1 | Complete Pillow Block Part No. | Housing Part No.** | Bearing Part No. | Dynamic Capacity (C), lbs. | Max RPM (Grease) | SNW Part No. | 1-7/16" - 4-15/16" Seals | | | |
|---------------|--------------------------------|-------------------------------|-------------------------|----------------------------|------------------|------------------------|--------------------------|------------------------------|--------------------|-----------------------|
| | | | | | | | TRIPLE-TECT Part No. | Drop In TRIPLE-TECT Part No. | # LER Part No. | Aux Taconite Part No. |
| 1-7/16 | CP2B509-USAF-107TT 039575 | CH2S-509-USAF 039665 | BRG22209KC3 422134 | 24,500 | 5,600 | H309-SNW-107 046350 | 08TT107 043578 | --- | 08LER107 042193 | |
| | 1-11/16 | CP2B510--USAF-111TT 039576 | CH2S-510-USAF 039666 | BRG22210KC3 422137 | 26,000 | 5,300 | H310-SNW-111 046351 | 10TT111 043579 | --- | 10LER111 042199 |
| 1-15/16 | CP2B511-USAF-115TT 039577 | CH2S-511-USAF 039667 | BRG22211KC3 422123 | 31,500 | 4,500 | H311-SNW-115 046352 | 12TT115 043540 | 12TTDN115 039852 | 12LER115 042512 | 12AUX115 041687 |
| 2-3/16 | CP2B513-USAF-203TT 039578 | CH2S-513-USAF 039668 | BRG22213KC3 422124 | 45,500 | 3,800 | H313-SNW-203 046353 | 14TT203 043541 | 14TTDN203 039853 | 14LER203 042513 | 14AUX203 041688 |
| | CP4B513-USAF-203TT 039580 | CH4S-513-USAF 039670 | BRG22213KC3 422124 | 45,500 | 3,800 | H313-SNW-203 046353 | 14TT203 043541 | 14TTDN203 039853 | 14LER203 042513 | 14AUX203 041688 |
| 2-7/16 | CP2B515-USAF-207TT 039581 | CH2S-515-USAF 039544 | BRG22215KC3 422001 | 48,000 | 3,400 | H315-SNW-207 046354 | 20TT207 043542 | 20TTDN207 039538 | 20LER207 042514 | 20AUX207 042380 |
| | CP4B515-USAF-207TT 039582 | CH4S-515-USAF 039545 | BRG22215KC3 422001 | 48,000 | 3,400 | H315-SNW-207 046354 | 20TT207 043542 | 20TTDN207 039538 | 20LER207 042514 | 20AUX207 042380 |
| 2-1/2 | CP2B515-USAF-208TT 039583 | CH2S-515-USAF 039544 | BRG22215KC3 422001 | 48,000 | 3,400 | H315-SNW-208 046355 | 20TT208 043543 | 20TTDN208 039854 | 20LER208 042515 | 20AUX208 040890 |
| | CP4B515-USAF-208TT 039584 | CH4S-515-USAF 039545 | BRG22215KC3 422001 | 48,000 | 3,400 | H315-SNW-208 046355 | 20TT208 043543 | 20TTDN208 039854 | 20LER208 042515 | 20AUX208 040890 |
| 2-11/16 | CP2B516-USAF-211TT 039585 | CH2S-516-USAF 039671 | BRG22216KC3 422003 | 56,000 | 3,200 | H316-SNW-211 046356 | 24TT211 043544 | 24TTDN211 039855 | 24LER211 042516 | 24AUX211 042381 |
| | CP4B516-USAF-211TT 039586 | CH4S-516-USAF 039672 | BRG22216KC3 422003 | 56,000 | 3,200 | H316-SNW-211 046356 | 24TT211 043544 | 24TTDN211 039855 | 24LER211 042516 | 24AUX211 042381 |
| 2-3/4 | CP2B516-USAF-212TT 039587 | CH2S-516-USAF 039671 | BRG22216KC3 422003 | 56,000 | 3,200 | H316-SNW-212 046357 | 24TT212 043545 | 24TTDN212 039856 | 24LER212 042517 | 24AUX212 040891 |
| | CP4B516-USAF-212TT 039588 | CH4S-516-USAF 039672 | BRG22216KC3 422003 | 56,000 | 3,200 | H316-SNW-212 046357 | 24TT212 043545 | 24TTDN212 039856 | 24LER212 042517 | 24AUX212 040891 |
| 2-15/16 | CP2B517-USAF-215TT 039589 | CH2S-517-USAF 039508 | BRG22217KC3 422005 | 68,000 | 3,000 | H317-SNW-215 046358 | 28TT215 043546 | 28TTDN215 039530 | 28LER215 042518 | 28AUX215 042382 |
| | CP4B517-USAF-215TT 039590 | CH4S-517-USAF 039509 | BRG22217KC3 422005 | 68,000 | 3,000 | H317-SNW-215 046358 | 28TT215 043546 | 28TTDN215 039530 | 28LER215 042518 | 28AUX215 042382 |
| 3 | CP2B517-USAF-300TT 039591 | CH2S-517-USAF 039508 | BRG22217KC3 422005 | 68,000 | 3,000 | H317-SNW-300 046359 | 28TT300 043547 | 28TTDN300 039857 | 28LER300 042519 | 28AUX300 040918 |
| | CP4B517-USAF-300TT 039592 | CH4S-517-USAF 039509 | BRG22217KC3 422005 | 68,000 | 3,000 | H317-SNW-300 046359 | 28TT300 043547 | 28TTDN300 039857 | 28LER300 042519 | 28AUX300 040918 |
| 3-3/16 | CP2B518-USAF-303TT 039593 | CH2S-518-USAF 039673 | BRG22218KC3 422007 | 78,000 | 2,600 | H318-SNW-303 046360 | 34TT303 043548 | 34TTDN303 039858 | 34LER303 042520 | 34AUX303 040892 |
| | CP4B518-USAF-303TT 039594 | CH4S-518-USAF 039674 | BRG22218KC3 422007 | 78,000 | 2,600 | H318-SNW-303 046360 | 34TT303 043548 | 34TTDN303 039858 | 34LER303 042520 | 34AUX303 040892 |
| 3-7/16 | CP2B520-USAF-307TT 039595 | CH2S-520-USAF 039675 | BRG22220KC3 422009 | 96,500 | 2,200 | H320-SNW-307 046361 | 46TT307 043549 | 46TTDN307 039859 | 46LER307 042521 | 46AUX307 042383 |
| | CP4B520-USAF-307TT 039596 | CH4S-520-USAF 039676 | BRG22220KC3 422009 | 96,500 | 2,200 | H320-SNW-307 046361 | 46TT307 043549 | 46TTDN307 039859 | 46LER307 042521 | 46AUX307 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.

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SELECTION/DIMENSIONS

USAF 500 Adapter Mount Pillow Block with TRIPLE-TECT Seal Assembly 500 SERIES CAST CLOSED HOUSING

| Shaft Dia S-1 | Complete Pillow Block Part No. | Housing Part No.** | Bearing Part No. | Dynamic Capacity (C) Lbs. | Max RPM Ler (Grease) | Snw Part No. | 5" - 10-1/2" Seals | | | |
|---------------|--------------------------------|--------------------------|-----------------------|---------------------------|----------------------|-------------------------|----------------------|------------------------------|--------------------|-----------------------|
| | | | | | | | Triple Tect Part No. | Drop In Triple Tect Part No. | # Ler Part No. | Aux Taconite Part No. |
| 3-1/2 | CP2B520-USAF-308TT 039597 | CH2S-520-USAF 039675 | BRG22220KC3 422009 | 96,500 | 2,200 | H320-SNW-308 046362 | 46TT308 043550 | 46TTDN308 039860 | 46LER308 042522 | 46AUX308 040919 |
| | CP4B520-USAF-308TT 039598 | CH4S-520-USAF 039676 | BRG22220KC3 422009 | 96,500 | 2,200 | H320-SNW-308 046362 | 46TT308 043550 | 46TTDN308 039860 | 46LER308 042522 | 46AUX308 040919 |
| 3-15/16 | CP4B522-USAF-305TT 039599 | CH4S-522-USAF 039677 | BRG22222KC3 422011 | 122,000 | 2,000 | H322-SNW-315 046363 | 50TT315 043551 | 50TTDN315 039861 | 50LER315 042523 | 50AUX315 042384 |
| 4 | CP4B522-USAF-400TT 039600 | CH4S-522-USAF 039677 | BRG22222KC3 422011 | 122,000 | 2,000 | H322-SNW-400 046364 | 50TT400 043552 | 50TTDN400 039862 | 50LER400 042524 | 50AUX400 040893 |
| 4-3-16 | CP4B524-USAF-403TT 039601 | CH4S-524-USAF 039678 | BRG22224KC3 422013 | 143,000 | 1,900 | H3124-SNW-403 046430 | 52TT403 043553 | 52TTDN403 039863 | 52LER403 042525 | 52AUX403 044360 |
| 4-7/16 | CP4B526-USAF-407TT 039602 | CH4S-526-USAF 039679 | BRG22226KC3 422015 | 170,000 | 1,800 | H3126-SNW-407 046431 | 54TT407 043554 | 54TTDN407 039864 | 54LER407 042526 | 54AUX407 042385 |
| 4-1/2 | CP4B526-USAF-408TT 039603 | CH4S-526-USAF 039679 | BRG22226KC3 422015 | 170,000 | 1,800 | H3126-SNW-408 046432 | 54TT408 043555 | 54TTDN408 039865 | 54LER408 042527 | 54AUX408 042386 |
| 4-15/16 | CP4B528-USAF-415TT 039604 | CH4S-528-USAF 039680 | BRG22228KC3 422017 | 196,000 | 1,700 | H3128-SNW-415 046433 | 56TT415 043556 | 56TTDN415 039866 | 56LER415 042528 | 56AUX415 042387 |
| 5 | CP4B528-USAF-500TT 039605 | CH4S-528-USAF 039680 | BRG22228KC3 422017 | 196,000 | 1,700 | H3128-SNW-500 046434 | 56TT500 043557 | 56TTDN500 039867 | 56LER500 042529 | 56AUX500 040894 |
| 5-3/16 | CP4B530-USAF-503TT 039138 | CH4S-530-USAF 039217 | BRG2223KC3 422019 | 228,000 | 1,600 | SNW30X503 043618 | 58TT503 043558 | --- | 58LER503 042530 | |
| 5-7/16 | CP4B532-USAF-507TT 039141 | CH4S-532-USAF 039218 | BRG22232KC3 422021 | 260,000 | 1,500 | SNW32X507 043619 | 60TT507 043559 | --- | 60LER507 042531 | 60AUX507 |
| 5-1/2 | CP4B532-USAF-508TT 039142 | CH4S-532-USAF 039218 | BRG22232KC3 422021 | 260,000 | 1,500 | SNW32X508 043634 | 60TT508 043574 | --- | 60LER508 042532 | 60AUX508 040895 |
| 5-15/16 | CP4B534-USAF-515TT 039147 | CH4S-534-USAF 039219 | BRG22234KC3 422023 | 300,000 | 1,300 | SNW34X515 043620 | 64TT515 043560 | --- | 64LER515 042533 | 64AUX515 042389 |
| 6 | CP4B534-USAF-600TT 039148 | CH4S-534-USAF 039219 | BRG22234KC3 422023 | 300,000 | 1,300 | SNW34X600 043621 | 64TT600 043561 | --- | 64LER600 042534 | 64AUX600 041646 |
| 6-7/16 | CP4B536-USAF-607TT 039151 | CH4S-536-USAF 039220 | BRG22236KC3 422025 | 305,000 | 1,300 | SNW36X607 043622 | 68TT607 042562 | --- | 68LER607 042535 | 68AUX607 042390 |
| 6-1/2 | CP4B536-USAF-608TT 039152 | CH4S-536-USAF 039220 | BRG22236KC3 422025 | 305,000 | 1,300 | SNW36X608 043623 | 68TT608 043563 | --- | 68LER608 042536 | 68AUX608 042391 |
| 6-15/16 | CP4B538-USAF-615TT 039155 | CH4S-538-USAF 039221 | BRG22238KC3 422027 | 270,000 | 1,200 | SNW38X615 043624 | 72TT615 043564 | --- | 72LER615 042537 | 72AUX615 042392 |
| 7 | CP4B538-USAF-700TT 039156 | CH4S-538-USAF 039221 | BRG22238KC3 422027 | 270,000 | 1,200 | SNW38X700 043625 | 72TT700 043565 | --- | 72LER700 042538 | 72AUX700 043109 |
| 7-3/16 | CP4B540-USAF-703TT 039159 | CH4S-540-USAF 039222 | BRG22240KC3 422064 | 300,000 | 900 | SNW40X703 046545 | 74TT703 046421 | --- | 74LER703 043386 | 74AUX703 040690 |
| 7-1/2 | CP4B544-USAF-708TT 039160 | CH4S-544S-USAF 039223 | BRG22244KC3 422029 | 365,000 | 950 | SNW44X708 043627 | 76TT708 043567 | --- | 76LER708 042539 | 76AUX708 040896 |
| 7-15/16 | CP4B544-USAF-715TT 039163 | CH4S-544-USAF 039224 | BRG22244KC3 422029 | 365,000 | 950 | SNW44X715 043626 | 78TT715 043566 | --- | 78LER715 042540 | 78AUX715 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.

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SELECTION/DIMENSIONS

USAF 500 Adapter Mount Pillow Block with TRIPLE-TECT Seal Assembly 500 SERIES CAST CLOSED HOUSING

| Shaft Dia S-1 | Complete Pillow Block Part No. | Housing Part No.** | Bearing Part No. | Dynamic Capacity (C) Lbs. | Max RPM LER (Grease) | SNW Part No. | 5" - 10-1/2" Seals | | | |
|------------------|--------------------------------|--------------------------|-----------------------|---------------------------|----------------------|------------------------|----------------------|------------------------------|----------------------|-----------------------|
| | | | | | | | Triple Tect Part No. | Drop In Triple Tect Part No. | # LER Part No. | Aux Taconite Part No. |
| 8 | CP4B544-USAF-800TT 039164 | CH4S-544-USAF 039224 | BRG22244KC3 422029 | 365,000 | 950 | SNW44X800 043628 | 78TT800 043568 | --- | 78LER800 042541* | 78AUX800 042394* |
| 8-7/16 | CP4B048-USAF-807TT 039165 | CH4S-048-USAF 039225 | BRG23048KC3 422031 | 260,000 | 800 | SNP3048X807 043629 | 90TT807 043569 | --- | 90LER807 042542* | 90AUX807 040897* |
| 8-1/2 | CP4B048-USAF-808TT 039166 | CH4S-048-USAF 039225 | BRG23048KC3 422031 | 260,000 | 800 | SNP3048X808 043630 | 90TT808 043570 | --- | 90LER808 042543* | 90AUX808 040898* |
| 8-15/16 | CP4B048-USAF-815TT 039167 | CH4S-048-USAF 039225 | BRG23048KC3 422031 | 260,000 | 800 | SNP3048X815 043631 | 90TT815 043571 | --- | 90LER815 042544* | |
| 9 | CP4B048-USAF-900TT 039168 | CH4S-048-USAF 039225 | BRG23048KC3 422031 | 260,000 | 800 | SNP3048X900 043632 | 90TT900 043572 | --- | 90LER900 042545* | 90AUX900 040995* |
| 9-7/16 | CP4B052-USAF-907TT 039169 | CH4S-052-USAF 039226 | BRG23052KC3 422543 | 340,000 | 750 | SNP3052X907 043585 | 84TT907 043538 | --- | 84LER907 042510* | 84AUX907 040900* |
| 9-1/2 | CP4B052-USAF-908TT 039170 | CH4S-052-USAF 039226 | BRG23052KC3 422543 | 340,000 | 750 | SNP3052X908 422538 | 84TT908 422545 | --- | 84LER908 042594* | 84AUX908 040901* |
| 9-15/16 | CP4B056-USAF-915TT 039171 | CH4S-056-USAF 039227 | BRG23056KC3 422030 | 345,000 | 700 | SNP3056X915 043586 | 92TT915 043575 | --- | 92LER915 042511* | |
| 10 | CP4B056-USAF-1000TT 039172 | CH4S-056-USAF 039227 | BRG23056KC3 422030 | 345,000 | 700 | SNP3056X1000 043633 | 92TT1000 043573 | --- | 92LER1000 041082* | 92AUX1000 042395* |
| 10-7/16 | CP4B056-USAF-1007TT 039173 | CH4S-056L-USAF 039228 | BRG23056KC3 422030 | 345,000 | 700 | SNP3056X1007 043580 | 94TT1007 047940 | --- | 94LER1007 042036* | |
| 10-1/2 | CP4B056-USAF-1008TT 039174 | CH4S-056L-USAF 039228 | BRG23056KC3 422030 | 345,000 | 700 | SNP3056X1008 422567 | 94TT1008 047941 | --- | 94LER1008 422573* | 94AUX1008 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.



SELECTION/DIMENSIONS

USAF 500 Adapter Mount Pillow Block Housing

| S-1 Shaft Size (Inch) | Housing | 500 Housing † | | | | | | | |
|-----------------------------|---------|---------------|-------------------|----------|-------------------|--------------------|-------------------|----------|-------------------|
| | | Thru Housing | | | | Closed End Housing | | | |
| | | 2-Bolt | | 4-Bolt | | 2-Bolt | | 4-Bolt | |
| | | Part No. | Approx. Wt. (Lbs) | Part No. | Approx. Wt. (Lbs) | Part No. | Approx. Wt. (Lbs) | Part No. | Approx. Wt. (Lbs) |
| 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 | - | 23.5 |
| 2-3/16 | 513 | 043998 | 21.4 | 039669 | 22.5 | 039668 | 22.4 | 039670 | 23.5 |
| 2-7/16 | 515 | 044000 | 24.8 | 044003 | 26.4 | 039544 | 26.6 | 039545 | 27.9 |
| 2-1/2 | | | | | | | | | |
| 2-11/16 | 516 | 044198 | 28.0 | 044007 | 28.0 | 039671 | 29.0 | 039672 | 29.0 |
| 2-3/4 | | | | | | | | | |
| 2-15/16 | 517 | 044010 | 34.7 | 044013 | 38.3 | 039508 | 37.0 | 039509 | 40.6 |
| 3 | | | | | | | | | |
| 3-3/16 | 518 | 044199 | 36.8 | 044114 | 37.2 | 039673 | 40.7 | 039674 | 41.2 |
| 3-7/16 | 520 | 044020 | 61.2 | 044023 | 61.8 | 039675 | 65.3 | 039676 | 65.9 |
| 3-1/2 | | | | | | | | | |
| 3-15/16 | 522 | - | - | 044025 | 78.9 | - | - | 039677 | 84.0 |
| 4-3/16 | 524 | - | - | 044202 | 90.6 | - | - | 039678 | 96.1 |
| 4-7/16 | 526 | - | - | 044031 | 121.6 | - | - | 039679 | 128.2 |
| 4-1/2 | | | | | | | | | |
| 4-15/16 | 528 | - | - | 044034 | 152.2 | - | - | 039680 | 162.2 |
| 5-3/16 | 530 | - | - | 044203 | 170.5 | - | - | 039217 | 182.3 |
| 5-7/16 | 532 | - | - | 044040 | 220.1 | - | - | 039218 | 235.2 |
| 5-1/2 | | | | | | | | | |
| 5-15/16 | 534 | - | - | 044043 | 269.9 | - | - | 039219 | 282.8 |
| 6-7/16 | 536 | - | - | 044046 | 328.5 | - | - | 039220 | 349.7 |
| 6-1/2 | | | | | | | | | |
| 6-15/16 | 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 | 544 | - | - | 044055 | 621.0 | - | - | 039224 | 631.0 |
| 8-7/16 | 048 | - | - | 044200 | 386.0 | - | - | 039225 | 412.2 |
| 8-1/2 | | | | | | | | | |
| 8-15/16 | | | | | | | | | |
| 9-7/16 | 052 | - | - | 422542 | 575.0 | - | - | 039226 | 590.4 |
| 9-1/2 | | | | | | | | | |
| 9-15/16 | 056 | - | - | 422560 | 692.0 | - | - | 039227 | 722.6 |
| 10-7/16 | 056L | - | - | 044201 | 690.0 | - | - | 039228 | 720.0 |
| 10-1/2 | | | | | | | | | |

† Includes Stabilizing Ring(s)

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



SELECTION/DIMENSIONS

USAF 500 Housing Dimensions

Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

S-2000

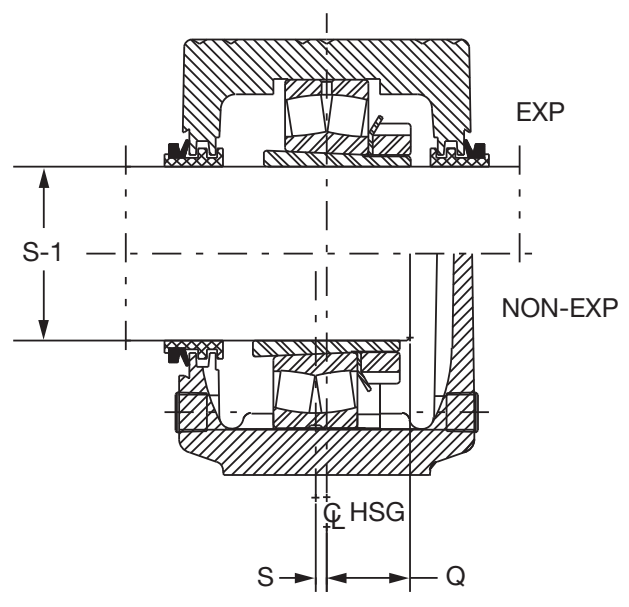
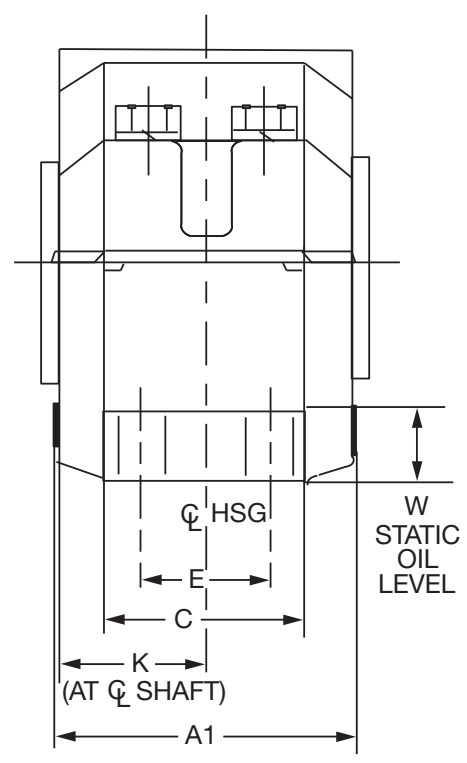
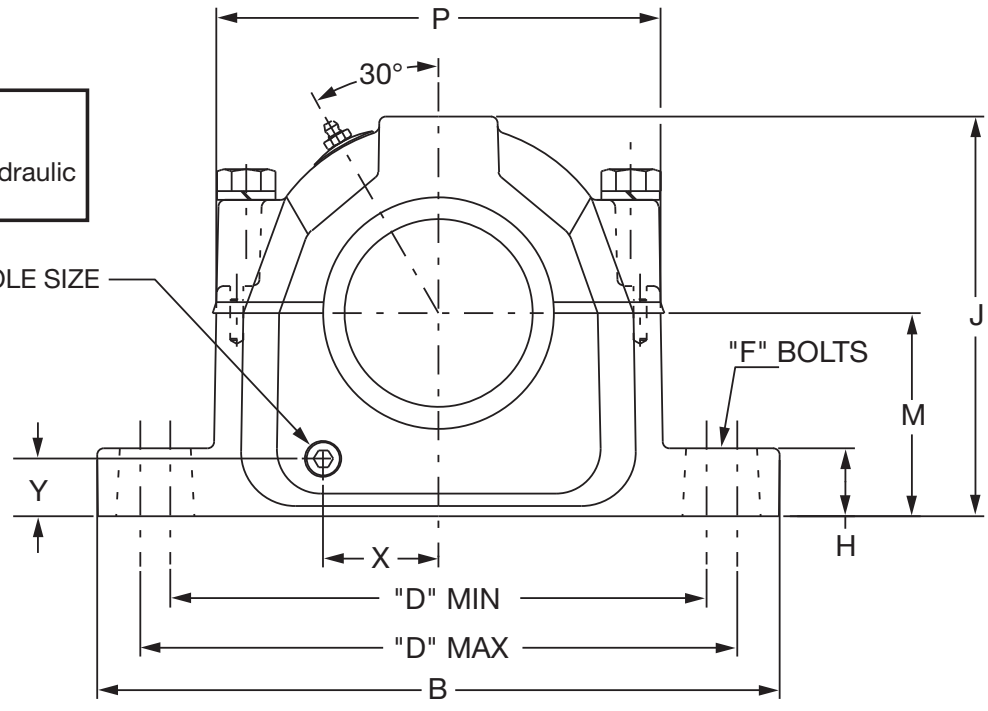
UNISPHERE II

IMPERIAL

UNIFIED SAF

LUBE NOTE:
All Sizes Use A
1/8-27 NPT Hydraulic
Grease Fitting

DRAIN HOLE SIZE



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



SELECTION/DIMENSIONS

USAF 500 Housing Dimensions

| S-1 Shaft Size | Housing | A1▲ | B | C | D | | | | E | F | |
|----------------------|---------|------|-------|------|--------|-------|--------|-------|------|-----------|--------|
| | | | | | 2-Bolt | | 4-Bolt | | | Bolt Dia. | |
| | | | | | 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 | M | P | Q ★ | S ● | W Static Oil Level | X | Y | Drain Hole Size |
|----------------------|---------|------|-------|------|------|-------|--------|--------|-----------------------------|------|------|-----------------------|
| 1-7/16 | 509 | 0.88 | 4.30 | 1.78 | 2.25 | 4.88 | 1.03 | 0.13 | 0.92 | 1.09 | 0.63 | 1/8-27NPSI |
| 1-11/16 | 510 | 1.03 | 4.59 | 1.88 | 2.50 | 5.13 | 1.11 | 0.13 | 1.08 | 1.25 | 0.81 | 1/8-27NPSI |
| 1-15/16 | 511 | 1.03 | 5.25 | 1.97 | 2.75 | 5.78 | 1.20 | 0.13 | 1.16 | 1.94 | 0.83 | 1/8-27NPSI |
| 2-3/16 | 513 | 1.03 | 5.94 | 2.16 | 3.00 | 6.50 | 1.38 | 0.16 | 1.11 | 1.66 | 0.78 | 1/8-27NPSI |
| 2-7/16 2-1/2 | 515 | 1.25 | 6.44 | 2.31 | 3.25 | 7.06 | 1.39 | 0.13 | 1.16 | 1.78 | 0.88 | 1/4-18NPSF |
| 2-11/16 2-3/4 | 516 | 1.06 | 6.75 | 2.42 | 3.50 | 7.94 | 1.44 | 0.18 | 1.25 | 1.97 | 0.95 | 1/4-18NPSF |
| 2-15/16 3 | 517 | 1.25 | 7.38 | 2.47 | 3.75 | 8.19 | 1.50 | 0.19 | 1.38 | 2.13 | 1.06 | 3/8-18NPSF |
| 3-3/16 | 518 | 1.44 | 7.75 | 2.84 | 4.00 | 8.66 | 1.72 | 0.19 | 1.47 | 2.50 | 1.13 | 3/8-18NPSF |
| 3-7/16 3-1/2 | 520 | 1.66 | 8.75 | 3.16 | 4.50 | 9.78 | 1.92 | 0.19 | 1.64 | 2.63 | 1.25 | 3/8-18NPSF |
| 3-15/16 4 | 522 | 1.78 | 9.41 | 3.30 | 4.94 | 10.59 | 2.09 | 0.19 | 1.80 | 2.88 | 1.34 | 3/8-18NPSF |
| 4-3/16 | 524 | 1.50 | 10.25 | 3.64 | 5.25 | 11.25 | 2.28 | 0.19 | 1.84 | 3.19 | 1.38 | 1/2-14NPSF |
| 4-7/16 4-1/2 | 526 | 2.06 | 11.53 | 3.75 | 6.00 | 12.41 | 2.47 | 0.19 | 2.34 | 3.31 | 1.63 | 1/2-14NPSF |
| 4-15/16 5 | 528 | 2.06 | 11.81 | 4.00 | 6.00 | 13.25 | 2.45 | 0.19 | 2.03 | 3.63 | 1.47 | 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
- Dowel hole locations for Precision Positioning, see Page B15-24 - B15-25

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



SELECTION/DIMENSIONS

USAF 500 Housing Dimensions

Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

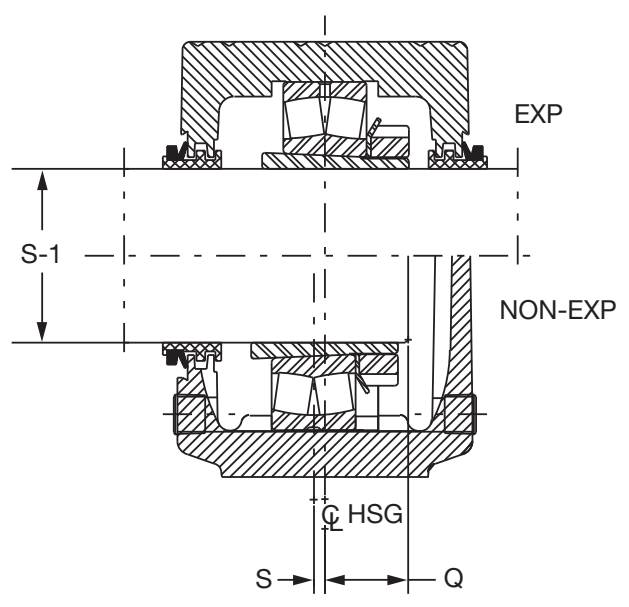
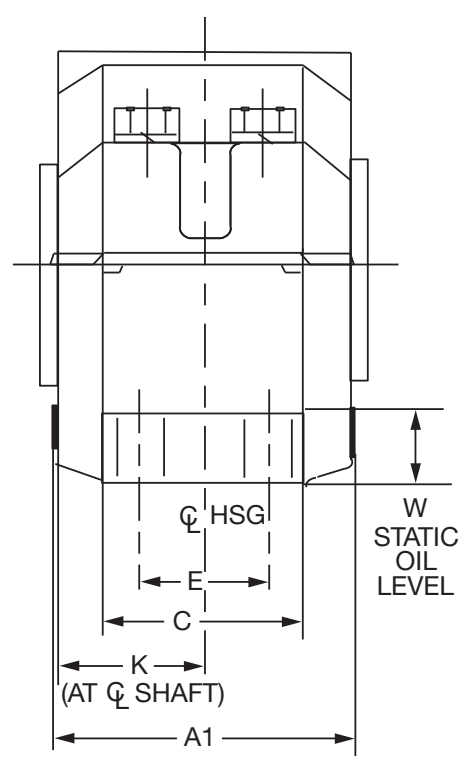
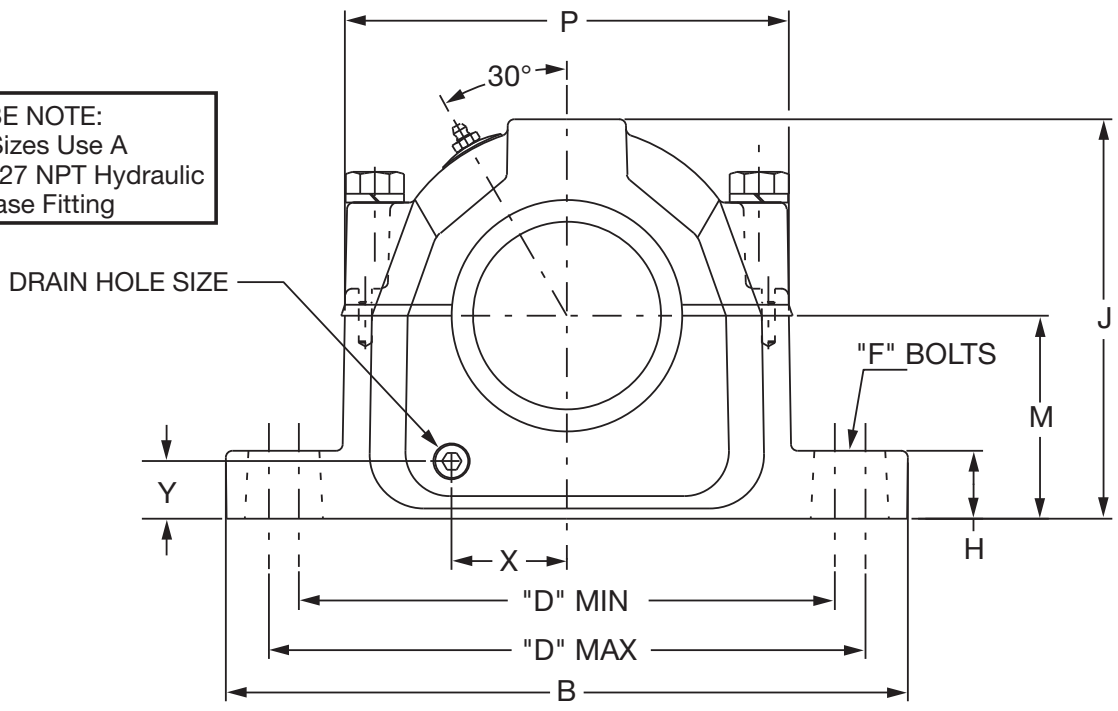
S-2000

UNISPHERE II

IMPERIAL

UNIFIED SAF

LUBE NOTE:
All Sizes Use A
1/8-27 NPT Hydraulic
Grease Fitting



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



SELECTION/DIMENSIONS

USAF 500 Housing Dimensions

| S-1 Shaft Size | Housing | A1▲ | B | C | D | | | | E | F | |
|---------------------------------|---------|-------|-------|------|--------|-----|--------|-------|------|-----------|--------|
| | | | | | 2-Bolt | | 4-Bolt | | | Bolt Dia. | |
| | | | | | Min | Max | Min | Max | | 2-Bolt | 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 | M | P | Q ★ | S ● | W Static Oil Level | X | Y | Drain Hole Size |
|---------------------------------|---------|------|-------|------|------|-------|--------|--------|--------------------------|------|------|-----------------------|
| 5-3/16 | 530 | 2.38 | 12.50 | 4.33 | 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 | 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 | 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 | 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 | 7.88 | 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 | 8.25 | 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 | 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 | 8.25 | 19.00 | 3.56 | 0.00 | 2.25 | - | - | - |
| 9-7/16 9-1/2 | 52 | 3.75 | 18.88 | 5.81 | 9.50 | 21.25 | 3.88 | 0.00 | 2.89 | - | - | - |
| 9-15/16 10 | 56 | 4.00 | 20.00 | 6.38 | 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

| | | | |
|---------------------------------|--|----------------------------|--------------------------|
| FEATURES/BENEFITS PAGE B15-3 | SPECIFICATION/HOW TO ORDER PAGE B15-7 | NOMENCLATURE PAGE B15-8 | SELECTION PAGE B15-13 |
|---------------------------------|--|----------------------------|--------------------------|

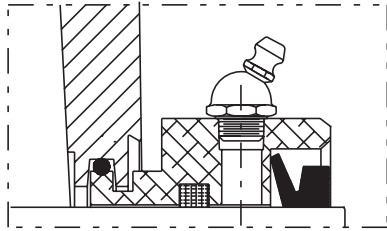
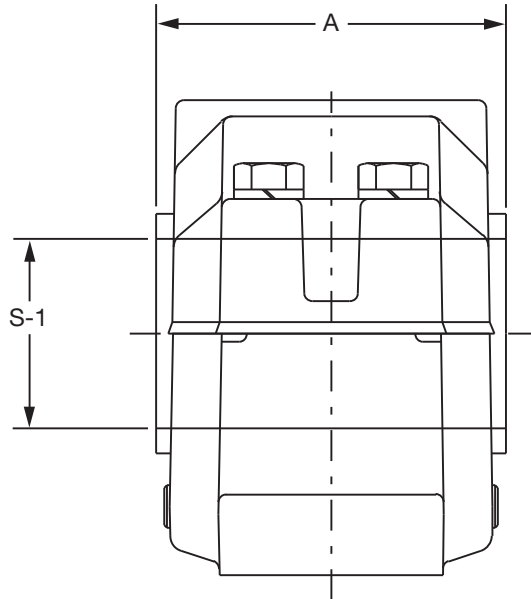
Bearing Reference Guide
 E-Family Roller Bearings
 Specialty Tapered Products
 S-2000
 UNISPHERE II
 IMPERIAL
 UNIFIED SAF



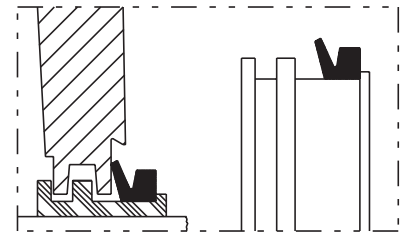
SELECTION/DIMENSIONS

USAF 500 Pillow Block Seals

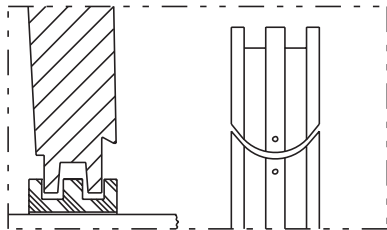
LENGTH THRU BORE W/SEALS



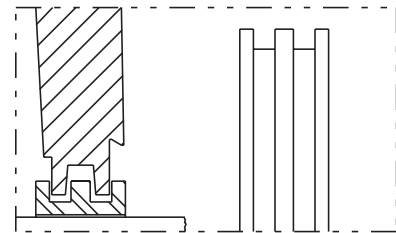
AUXILIARY TACONITE Seal
For dusty environments and low to moderate speeds



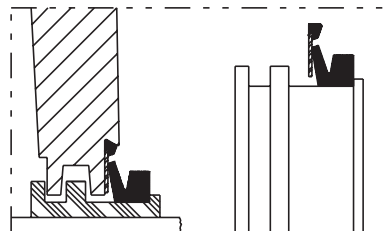
TRIPLE-TECT Seal
General purpose seal for wet or dirty environments



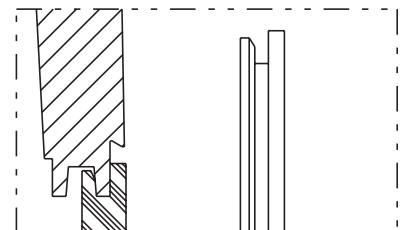
SPLIT Seal
Permits easy installation in hard-to-reach applications without removing shaft. Non-metallic split LER. See page B11-80 for SPLIT Seal part numbers



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

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SPECIFICATION/HOW TO ORDER
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NOMENCLATURE
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PAGE B15-13



SELECTION/DIMENSIONS

USAF 500 Pillow Block Seals

| 500 Seals - Inch | | | | | | | | | | | |
|-----------------------------|---------|---------------|---------------------|----------------------------------|------------------------------|--------------------------------|--------------|-------|-------|-------|-------|
| S-1 Shaft size (Inch) | 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 | 041685 | 040700 | 3.97 | 3.97 | 3.42 | 6.56 |
| 1-11/16 | 510 | 10 | 043579 | - | 042199 | 041686 | 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 | 15.97 |
| 7-15/16 | 544 | 78 | 043566 | - | 042540 | 042393 | 040685 | | | | |
| 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* | - | 042397 | 14.05 | - | 12.66 | 17.13 |
| 10-1/2 | | | 047941 | - | 422573* | 042396 | 042397 | | | | |

NOTE: LER seals are made from Aluminum unless otherwise noted by the * symbol.

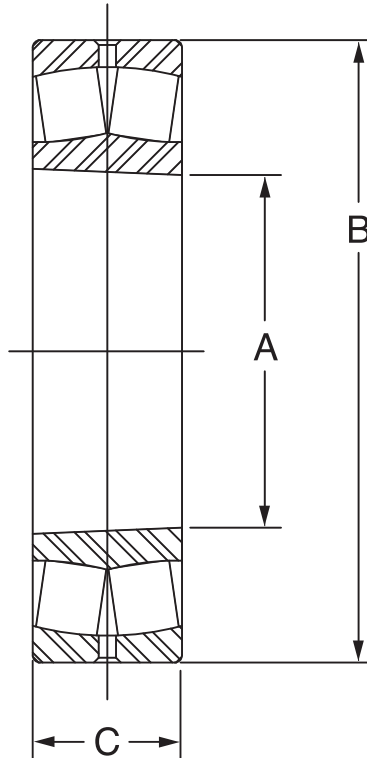
If an * appears by the part number, the LER seal is manufactured from Steel.

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SELECTION/DIMENSIONS

USAF 22200K and 23000K Spherical Roller Bearings



Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

S-2000

UNISPHERE II

IMPERIAL

UNIFIED SAF

| | | | |
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SELECTION/DIMENSIONS

USAF 22200K and 23000K Spherical Roller Bearings

| S-1 Shaft Size (Inch) | Housing | Bearing No. | Part No. | Approx. Wt. (Lbs) | A Inch (mm) | B Inch (mm) | C Inch (mm) |
|---------------------------------|-------------|-------------|---------------|-------------------|---------------|---------------|--------------|
| 1-7/16 | 509 | 22209K | 422134 | 1.2 | 1.7717 (45) | 3.3465 (85) | .9055 (23) |
| 1-11/16 | 510 | 22210K | 422137 | 1.3 | 1.9685 (50) | 3.5233 (90) | .9055 (23) |
| 1-15/16 | 511 | 22211K | 422123 | 1.8 | 2.1654 (55) | 3.9370 (100) | .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 7-1/2 | 540 544S | 22244K | 422064 | 94.1 | 7.8740 (200) | 14.1732 (360) | 3.8583 (98) |
| 7-15/16 8 | 544 | | 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 | 056 | 23056K | 422030 | 114.0 | 11.0236 (280) | 16.5354 (430) | 4.1732 (106) |
| 10-7/16 10-1/2 | 056L | | | | | | |

Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

S-2000

UNISPHERE II

IMPERIAL

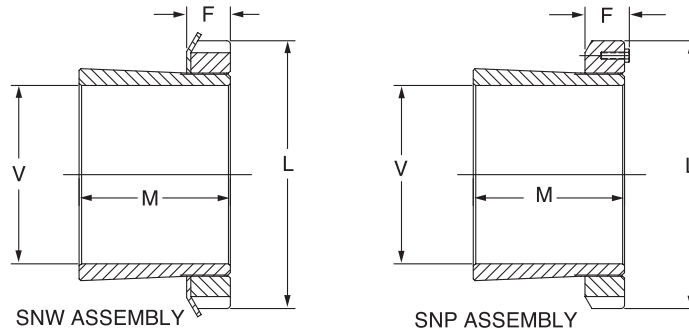
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SELECTION/DIMENSIONS

USAF 500 Adaptor Assembly (SNW)



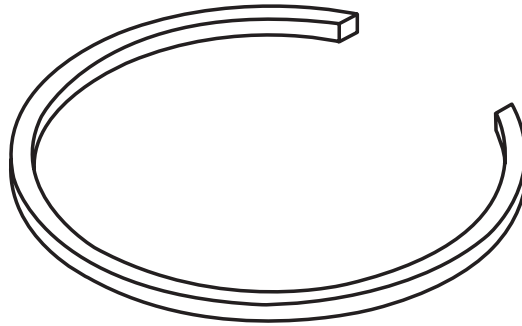
| V Shaft Dia. (In) | Housing | SNW/SNP Number | Part Number | Approx Wt. (Lbs) | L (in.) | F Max (in.) | M (in.) |
|-------------------|---------|----------------|---------------|------------------|---------|-------------|---------|
| 1-7/16 | 509 | H309-SNW-107 | 046350 | 1.0 | 2.53 | 0.52 | 1.58 |
| 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 | | | |

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SELECTION/DIMENSIONS

USAF Stabilizing Rings



| Housing | Stab. Ring No. | Stab. Ring Part No. ▲ |
|--------------|----------------|--------------------------|
| 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 | Stab. Ring No. | Stab. Ring Part No. ▲ |
|---------|----------------|--------------------------|
| 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

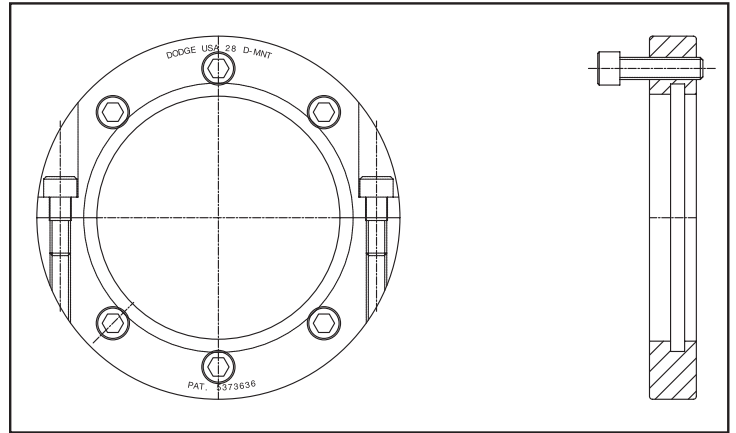
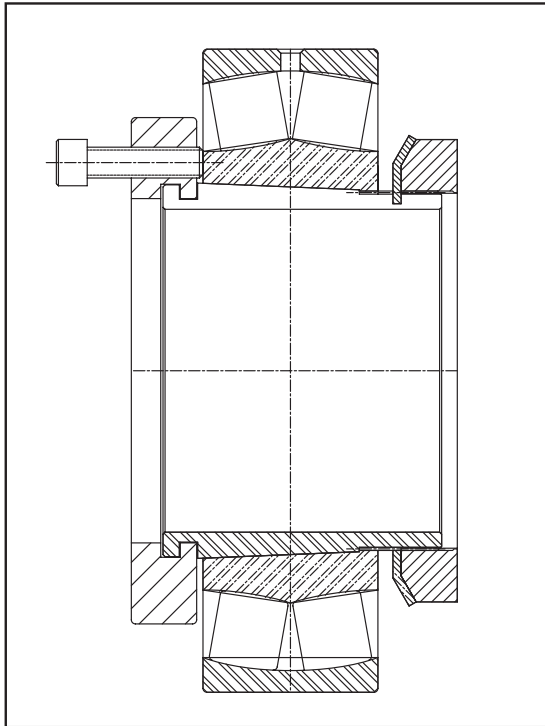
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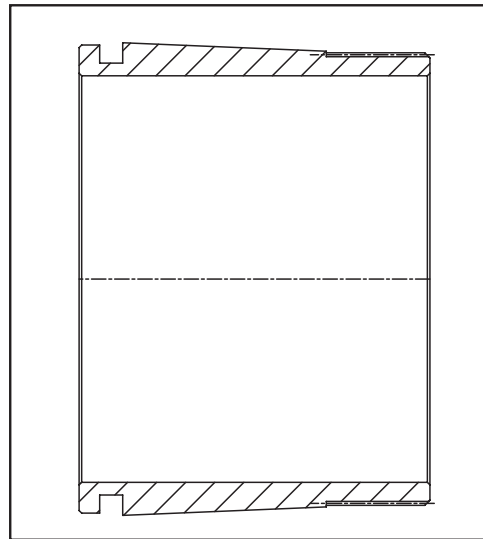
SELECTION/DIMENSIONS

USAF/SN D-Mount Adapter System

1. Saves time removing bearing from shaft!
2. Reduces the use of blue flame torches!
3. Increases uptime!
4. Lowers maintenance costs!



D-MOUNT TOOL



D-MOUNT ADAPTER SLEEVE

D-MOUNT TOOL - SNW - BEARING WITH TOOL ASSEMBLED READY TO REMOVE BEARING

For use on 22209K through 22244K size bearings

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.



SELECTION/DIMENSIONS

D-MOUNT Adapter System SAF/SN Mounted Bearings PART NUMBERS AND DESCRIPTION

| Part No. | Description-Inch |
|---|------------------|
| D-Mount Adapter with Removal Feature-USAF500 | |
| 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 | DH1 6-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 |

* Made to order.

| Part No. | Description-Metric |
|--|--------------------|
| D-Mount Adapter with Removal Feature-USN500 | |
| 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 |

NOTE: The D-MOUNT Adapter Sleeve SNW Assembly should be used in place of the standard SNW assembly during installation. The D-MOUNT tool will be needed during removal.

| Part No. | Description |
|--------------------------------------|-----------------|
| D-Mount Adapter Removal Tools | |
| 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 |

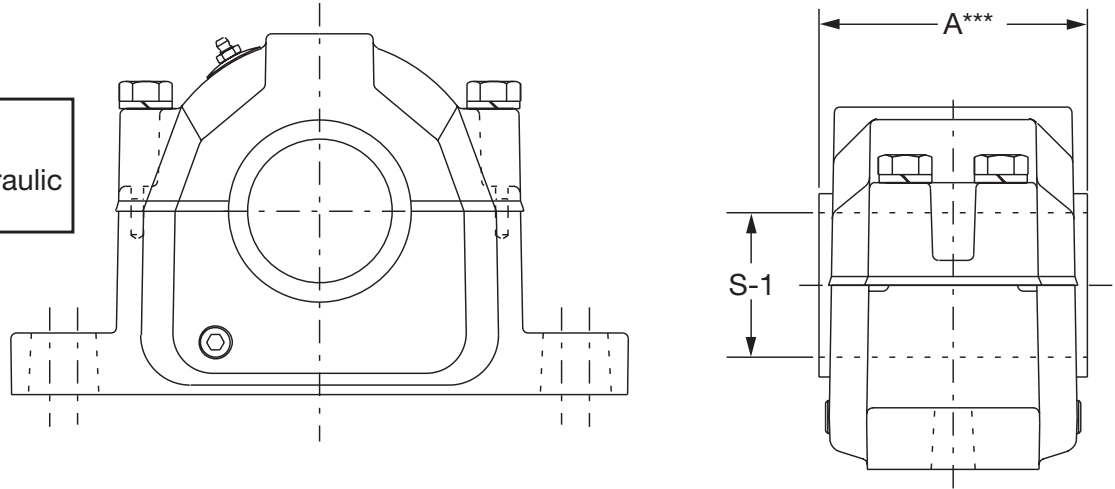
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SELECTION/DIMENSIONS

USAF 500 Air Handling Pillow Blocks with TRIPLE-TECT Seals

LUBE NOTE:
All Sizes Use A
1/8-27 NPT Hydraulic
Grease Fitting



| Shaft Dia S-1 | Complete Pillow Block Part No. | Housing W/ Stab Ring Part No. | Bearing Part No. | Dynamic Capacity (C), lbs. | Max Rpm (Grease) | SNW Part No. | TRIPLE-TECT Part No. | End Cover Part No. |
|------------------|--------------------------------|-------------------------------|-------------------------|----------------------------|------------------|------------------------|----------------------|--------------------|
| 1-7/16 | P2B509-USAF-107TTAH 039100 | H2S-509-USAF 043995 | BRG22209KC3AH 422980 | 24,500 | 5,600 | H309-SNW-107 046350 | 08TT107 043578 | EC08 040700 |
| 1-11/16 | P2B510-USAF-111TTAH 039101 | H2S-510-USAF 043996 | BRG22210KC3AH 422981 | 26,000 | 5,300 | H310-SNW-111 046351 | 10TT111 043579 | EC10 040701 |
| 1-15/16 | P2B511-USAF-115TTAH 039102 | H2S-511-USAF 043997 | BRG22211KC3AH 422982 | 31,500 | 4,500 | H311-SNW-115 046352 | 12TT115 043540 | EC12 040702 |
| 2-3/16 | P2B513-USAF-203TTAH 039103 | H2S-513-USAF 043998 | BRG22213KC3AH 422983 | 45,500 | 3,800 | H313-SNW-203 046353 | 14TT203 043541 | EC14 040703 |
| | P4B513-USAF-203TTAH 039113 | H4S-513-USAF 039669 | BRG22213KC3AH 422983 | 45,500 | 3,800 | H313-SNW-203 046353 | 14TT203 043541 | EC14 040703 |
| 2-7/16 | P2B515-USAF-207TTAH 039104 | H2S-515-USAF 044000 | BRG22215KC3AH 422984 | 48,000 | 3,400 | H315-SNW-207 046354 | 20TT207 043542 | EC20 040704 |
| | P4B515-USAF-207TTAH 039114 | H4S-515-USAF 044003 | BRG22215KC3AH 422984 | 48,000 | 3,400 | H315-SNW-207 046354 | 20TT207 043542 | EC20 040704 |
| 2-1/2 | P2B515-USAF-208TTAH 039105 | H2S-515-USAF 044000 | BRG22215KC3AH 422984 | 48,000 | 3,400 | H315-SNW-208 046355 | 20TT208 043543 | EC20 040704 |
| | P4B515-USAF-208TTAH 039115 | H4S-515-USAF 044003 | BRG22215KC3AH 422984 | 48,000 | 3,400 | H315-SNW-208 046355 | 20TT208 043543 | EC20 040704 |
| 2-11/16 | P2B516-USAF-211TTAH 039106 | H2S-516-USAF 044198 | BRG22216KC3AH 422985 | 56,000 | 3,200 | H316-SNW-211 046356 | 24TT211 043544 | EC24 040705 |
| | P4B516-USAF-211TTAH 039116 | H4S-516-USAF 044007 | BRG22216KC3AH 422985 | 56,000 | 3,200 | H316-SNW-211 046356 | 24TT211 043544 | EC24 040705 |
| 2-3/4 | P2B516-USAF-212TTAH 039107 | H2S-516-USAF 044198 | BRG22216KC3AH 422985 | 56,000 | 3,200 | H316-SNW-212 046357 | 24TT212 043545 | EC24 040705 |
| | P4B516-USAF-212TTAH 039117 | H4S-516-USAF 044007 | BRG22216KC3AH 422985 | 56,000 | 3,200 | H316-SNW-212 046357 | 24TT212 043545 | EC24 040705 |
| 2-15/16 | P2B517-USAF-215TTAH 039108 | H2S-517-USAF 044010 | BRG22217KC3AH 422986 | 68,000 | 3,000 | H317-SNW-215 046358 | 28TT215 043546 | EC28 040706 |
| | P4B517-USAF-215TTAH 039118 | H4S-517-USAF 044013 | BRG22217KC3AH 422986 | 68,000 | 3,000 | H317-SNW-215 046358 | 28TT215 043546 | EC28 040706 |



SELECTION/DIMENSIONS

USAF 500 Air Handling Pillow Blocks with TRIPLE-TECT Seals

Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

S-2000

UNISPHERE II

IMPERIAL

UNIFIED SAF

| Shaft Dia S-1 | Complete Pillow Block Part No. | Housing W/ Stab Ring Part No. | Bearing Part No. | Dynamic Capacity (C), lbs. | Max Rpm (Grease) | SNW Part No. | TRIPLE-TECT Part No. | End Cover Part No. |
|---------------|--------------------------------|-------------------------------|-------------------------|----------------------------|------------------|-------------------------|----------------------|--------------------|
| 3 | P2B517-USAF-300TTAH 039109 | H2S-517-USAF 044013 | BRG22217KC3AH 422986 | 68,000 | 3,000 | H317-SNW-300 046359 | 28TT300 043547 | EC28 040706 |
| | P4B517-USAF-300TTAH 039119 | H4S-517-USAF 044013 | BRG22217KC3AH 422986 | 68,000 | 3,000 | H317-SNW-300 046359 | 28TT300 043547 | EC28 040706 |
| 3-3/16 | P2B518-USAF-303TTAH 039110 | H2S-518-USAF 044199 | BRG22218KC3AH 422987 | 78,000 | 2,600 | H318-SNW-303 046360 | 34TT303 043548 | EC34 040707 |
| | P4B518-USAF-303TTAH 039120 | H4S-518-USAF 044114 | BRG22218KC3AH 422987 | 78,000 | 2,600 | H318-SNW-303 046360 | 34TT303 043548 | EC34 040707 |
| 3-7/16 | P2B520-USAF-307TTAH 039111 | H2S-520-USAF 044020 | BRG22220KC3AH 422988 | 96,500 | 2,200 | H320-SNW-307 046361 | 46TT307 043549 | EC46 040708 |
| | P4B520-USAF-307TTAH 039121 | H4S-520-USAF 044023 | BRG22220KC3AH 422988 | 96,500 | 2,200 | H320-SNW-307 046361 | 46TT307 043549 | EC46 040708 |
| 3-1/2 | P2B520-USAF-308TTAH 039112 | H2S-520-USAF 044020 | BRG22220KC3AH 422988 | 96,500 | 2,200 | H320-SNW-308 046362 | 46TT308 043550 | EC46 040708 |
| | P4B520-USAF-308TTAH 039122 | H4S-520-USAF 044023 | BRG22220KC3AH 422988 | 96,500 | 2,200 | H320-SNW-308 046362 | 46TT308 043550 | EC46 040708 |
| 3-15/16 | P4B522-USAF-315TTAH 039123 | H4S-522-USAF 044025 | BRG22222KC3AH 422989 | 122,000 | 2,000 | H322-SNW-315 046363 | 50TT315 043551 | EC50 040709 |
| 4 | P4B522-USAF-400TTAH 039124 | H4S-522-USAF 044025 | BRG22222KC3AH 422989 | 122,000 | 2,000 | H322-SNW-400 046364 | 50TT400 043552 | EC50 040709 |
| 4-3/16 | P4B524-USAF-403TTAH 039125 | H4S-524-USAF 044202 | BRG22224KC3AH 422990 | 143,000 | 1,900 | H3124-SNW-403 046430 | 52TT403 043553 | EC52 040710 |
| 4-7/16 | P4B526-USAF-407TTAH 039126 | H4S-526-USAF 044031 | BRG22226KC3AH 422991 | 170,000 | 1,800 | H3126-SNW-407 046431 | 54TT407 043554 | EC54 040711 |
| 4-1/2 | P4B526-USAF-408TTAH 039127 | H4S-526-USAF 044031 | BRG22226KC3AH 422991 | 170,000 | 1,800 | H3126-SNW-408 046432 | 54TT408 043555 | EC54 040711 |
| 4-15/16 | P4B528-USAF-415TTAH 039128 | H4S-528-USAF 044034 | BRG22228KC3AH 422992 | 196,000 | 1,700 | H3128-SNW-415 046433 | 56TT415 043556 | EC56 040712 |
| 5 | P4B528-USAF-500TTAH 039129 | H4S-528-USAF 044034 | BRG22228KC3AH 422992 | 196,000 | 1,700 | H3128-SNW-500 046434 | 56TT500 043557 | EC56 040712 |

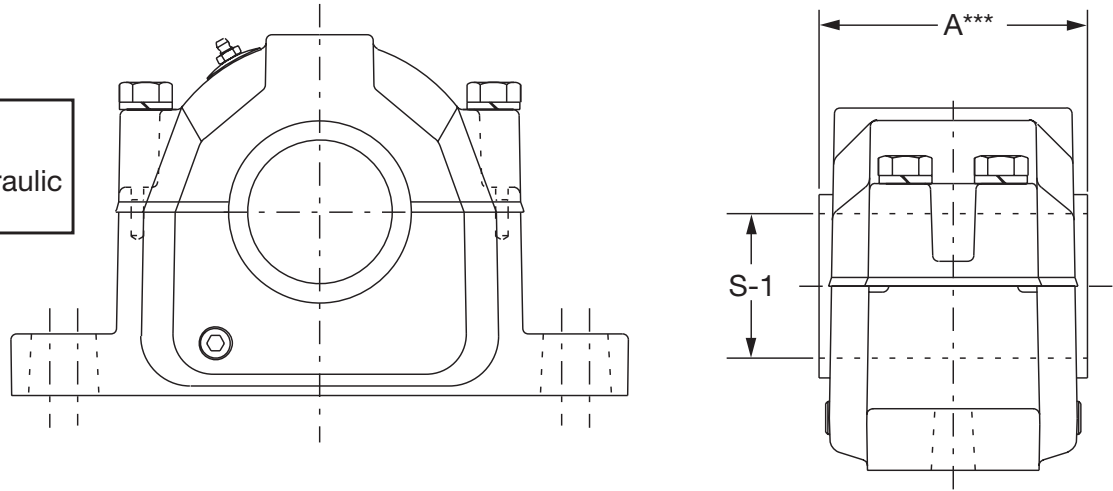
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| FEATURES/BENEFITS PAGE B15-3 | SPECIFICATION/HOW TO ORDER PAGE B15-7 | NOMENCLATURE PAGE B15-8 | SELECTION PAGE B15-13 |
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SELECTION/DIMENSIONS

USAF 500 Air Handling Pillow Blocks with LER Seals

LUBE NOTE:
All Sizes Use A
1/8-27 NPT Hydraulic
Grease Fitting



| Shaft Dia S-1 | Complete Pillow Block Part No. | Housing W/ Stab Ring Part No. | Bearing Part No. | Dynamic Capacity (C), lbs. | Max Rpm LER (Grease) | SNW Part No. | # LER Part No. | End Cover Part No. |
|------------------|--------------------------------|-------------------------------|-----------------------|----------------------------|----------------------|------------------------|----------------------|--------------------|
| 1-7/16 | P2B509-USAF-107LERAH 035762 | H2S-509-USAF 043995 | BRG22209KC3 422980 | 24,500 | 5,600 | H309-SNW-107 046350 | 08LER107 042193 | EC08 040700 |
| 1-11/16 | P2B510-USAF-111LERAH 035763 | H2S-510-USAF 043996 | BRG22210KC3 422981 | 26,000 | 5,300 | H310-SNW-111 046351 | 10LER111 042199 * | EC10 040701 |
| 1-15/16 | P2B511-USAF-115LERAH 035764 | H2S-511-USAF 043997 | BRG22211KC3 422982 | 31,500 | 4,500 | H311-SNW-115 046352 | 12LER115 042512 | EC12 040702 |
| 2-3/16 | P2B513-USAF-203LERAH 035765 | H2S-513-USAF 043998 | BRG22213KC3 422983 | 45,500 | 3,800 | H313-SNW-203 046353 | 14LER203 042513 | EC14 040703 |
| | P4B513-USAF-203LERAH 035775 | H4S-513-USAF 039669 | BRG22213KC3 422983 | 45,500 | 3,800 | H313-SNW-203 046353 | 14LER203 042513 | EC14 040703 |
| 2-7/16 | P2B515-USAF-207LERAH 035766 | H2S-515-USAF 044000 | BRG22215KC3 422984 | 48,000 | 3,400 | H315-SNW-207 046354 | 20LER207 042514 | EC20 040704 |
| | P4B515-USAF-207LERAH 035776 | H4S-515-USAF 044003 | BRG22215KC3 422984 | 48,000 | 3,400 | H315-SNW-207 046354 | 20LER207 042514 | EC20 040704 |
| 2-1/2 | P2B515-USAF-208LERAH 035767 | H2S-515-USAF 044000 | BRG22215KC3 422984 | 48,000 | 3,400 | H315-SNW-208 046355 | 20LER208 042515 | EC20 040704 |
| | P4B515-USAF-208LERAH 035777 | H4S-515-USAF 044003 | BRG22215KC3 422984 | 48,000 | 3,400 | H315-SNW-208 046355 | 20LER208 042515 | EC20 040704 |
| 2-11/16 | P2B516-USAF-211LERAH 035768 | H2S-516-USAF 044198 | BRG22216KC3 422985 | 56,000 | 3,200 | H316-SNW-211 046356 | 24LER211 042516 | EC24 040705 |
| | P4B516-USAF-211LERAH 035778 | H4S-516-USAF 044007 | BRG22216KC3 422985 | 56,000 | 3,200 | H316-SNW-211 046356 | 24LER211 042516 | EC24 040705 |
| 2-3/4 | P2B516-USAF-212LERAH 035769 | H2S-516-USAF 044198 | BRG22216KC3 422985 | 56,000 | 3,200 | H316-SNW-212 046357 | 24LER212 042517 | EC24 040705 |
| | P4B516-USAF-212LERAH 035779 | H4S-516-USAF 044007 | BRG22216KC3 422985 | 56,000 | 3,200 | H316-SNW-212 046357 | 24LER212 042517 | EC24 040705 |
| 2-15/16 | P2B517-USAF-215LERAH 035770 | H2S-517-USAF 044010 | BRG22217KC3 422986 | 68,000 | 3,000 | H317-SNW-215 046358 | 28LER215 042518 | EC28 040706 |
| | P4B517-USAF-215LERAH 035780 | H4S-517-USAF 044013 | BRG22217KC3 422986 | 68,000 | 3,000 | H317-SNW-215 046358 | 28LER215 042518 | EC28 040706 |

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.

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



SELECTION/DIMENSIONS

USAF 500 Air Handling Pillow Blocks with LER Seals

Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

S-2000

UNISPHERE II

IMPERIAL

UNIFIED SAF

| Shaft Dia S-1 | Complete Pillow Block Part No. | Housing W/ Stab Ring Part No. | Bearing Part No. | Dynamic Capacity (C), lbs. | Max Rpm LER (Grease) | SNW Part No. | # LER Part No. | End Cover Part No. |
|---------------|--------------------------------|-------------------------------|-----------------------|----------------------------|----------------------|-------------------------|--------------------|--------------------|
| 3 | P2B517-USAF-300LERAH 035771 | H2S-517-USAF 044010 | BRG22217KC3 422986 | 68,000 | 3,000 | H317-SNW-300 046359 | 28LER300 042519 | EC28 040706 |
| | P4B517-USAF-300LERAH 035781 | H4S-517-USAF 044013 | BRG22217KC3 422986 | 68,000 | 3,000 | H317-SNW-300 046359 | 28LER300 042519 | EC28 040706 |
| 3-3/16 | P2B518-USAF-303LERAH 035772 | H2S-518-USAF 044199 | BRG22218KC3 422987 | 78,000 | 2,600 | H318-SNW-303 046360 | 34LER303 042520 | EC34 040707 |
| | P4B518-USAF-303LERAH 035782 | H4S-518-USAF 044114 | BRG22218KC3 422987 | 78,000 | 2,600 | H318-SNW-303 046360 | 34LER303 042520 | EC34 040707 |
| 3-7/16 | P2B520-USAF-307LERAH 035773 | H2S-520-USAF 044020 | BRG22220KC3 422988 | 96,500 | 2,200 | H320-SNW-307 046361 | 46LER307 042521 | EC46 040708 |
| | P4B520-USAF-307LERAH 035783 | H4S-520-USAF 044023 | BRG22220KC3 422988 | 96,500 | 2,200 | H320-SNW-307 046361 | 46LER307 042521 | EC46 040708 |
| 3-1/2 | P2B520-USAF-308LERAH 035774 | H2S-520-USAF 044020 | BRG22220KC3 422988 | 96,500 | 2,200 | H320-SNW-308 046362 | 46LER308 042522 | EC46 040708 |
| | P4B520-USAF-308LERAH 035784 | H4S-520-USAF 044023 | BRG22220KC3 422988 | 96,500 | 2,200 | H320-SNW-308 046362 | 46LER308 042522 | EC46 040708 |
| 3-15/16 | P4B522-USAF-315LERAH 035785 | H4S-522-USAF 044025 | BRG22222KC3 422989 | 122,000 | 2,000 | H322-SNW-315 046363 | 50LER315 042523 | EC50 040709 |
| 4 | P4B522-USAF-400LERAH 035786 | H4S-522-USAF 044025 | BRG22222KC3 422989 | 122,000 | 2,000 | H322-SNW-400 046364 | 50LER400 042524 | EC50 040709 |
| 4-3/16 | P4B524-USAF-403LERAH 035787 | H4S-524-USAF 044202 | BRG22224KC3 422990 | 143,000 | 1,900 | H3124-SNW-403 046430 | 52LER403 042525 | EC52 040710 |
| 4-7/16 | P4B526-USAF-407LERAH 035788 | H4S-526-USAF 044031 | BRG22226KC3 422991 | 170,000 | 1,800 | H3126-SNW-407 046431 | 54LER407 042526 | EC54 040711 |
| 4-1/2 | P4B526-USAF-408LERAH 035789 | H4S-526-USAF 044031 | BRG22226KC3 422991 | 170,000 | 1,800 | H3126-SNW-408 046432 | 54LER408 042527 | EC54 040711 |
| 4-15/16 | P4B528-USAF-415LERAH 035790 | H4S-528-USAF 044034 | BRG22228KC3 422992 | 196,000 | 1,700 | H3128-SNW-415 046433 | 56LER415 042528 | EC56 040712 |
| 5 | P4B528-USAF-500LERAH 035791 | H4S-528-USAF 044034 | BRG22228KC3 422992 | 196,000 | 1,700 | H3128-SNW-500 046434 | 56LER500 042529 | EC56 040712 |

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.

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| FEATURES/BENEFITS PAGE B15-3 | SPECIFICATION/HOW TO ORDER PAGE B15-7 | NOMENCLATURE PAGE B15-8 | SELECTION PAGE B15-13 |
|---------------------------------|--|----------------------------|--------------------------|



SELECTION/DIMENSIONS

DODGE USAF Air Handling Bearing Assemblies Using 12XX Series Self Aligning Double Row Ball Bearing

| Shaft Size | Housing Series | Housing Part No. | | Bearing | | SNW Part No. | Seal Part No. # LER (2-Req) | Stab Ring For Fixed Units | | |
|------------|----------------|------------------|--------|----------|-------------|--------------|-----------------------------|---------------------------|---------|----------|
| | | 2-Bolt | 4-Bolt | Part No. | Description | | | Description | Qty Req | Part No. |
| 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 AH 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" unit is not available as fixed unit due to non-standard stab ring width. (2) special width.503-.057" would be needed.

In cases where two stab rings are needed, one should be placed on each side of the bearing.

* DODGE USAF Air Handling Bearing Assemblies use the USAF 500 Series Housings. See Page B15-36 - B15-39 for dimensions

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.

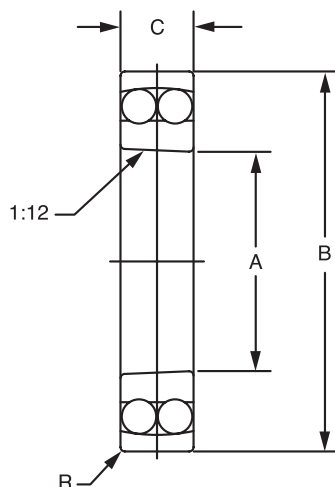
STABILIZING RING DIMENSIONS

| Stab Ring | |
|-----------|-----------|
| O.D. | Width |
| 3.31 | .382-.386 |
| 3.51 | .382-.386 |
| 3.9 | .382-.386 |
| 4.68 | .311-.315 |
| 5.08 | .236-.232 |
| 5.47 | .326-.330 |
| 5.87 | .346-.350 |
| 6.26 | .386-.390 |
| 7.04 | .425-.429 |
| 7.83 | .484-.488 |



SELECTION/DIMENSIONS

DODGE USAF Air Handling 1200 Series Self-Aligning Ball Bearing



| Shaft Size | Bearing Series | e | F _A /F _R ≤ e | F _A /F _R > e | Dynamic Capacity C | Static Capacity C ₀ | Maximum RPM | |
|------------|----------------|------|------------------------------------|------------------------------------|--------------------|--------------------------------|-------------|------|
| | | | Y | Y | | | Grease | Oil |
| 107 | 1209 | 0.21 | 3.0 | 4.7 | 4900 | 1660 | 7500 | 9000 |
| 111 | 1210 | 0.20 | 3.2 | 4.9 | 5100 | 1830 | 7000 | 8500 |
| 115 | 1211 | 0.19 | 3.3 | 5.1 | 6000 | 2240 | 6300 | 7500 |
| 203 | 1213 | 0.18 | 3.6 | 5.5 | 6950 | 2800 | 5300 | 6300 |
| 207 | 1215 | 0.17 | 3.6 | 5.6 | 8800 | 3450 | 4800 | 5600 |
| 211 | 1216 | 0.16 | 3.9 | 6.0 | 9000 | 3800 | 4300 | 5000 |
| 215 | 1217 | 0.17 | 3.7 | 5.8 | 11000 | 4550 | 4000 | 4800 |
| 303 | 1218 | 0.17 | 3.7 | 5.8 | 12900 | 5300 | 3800 | 4500 |
| 307 | 1220 | 0.18 | 3.6 | 5.5 | 15600 | 6700 | 3200 | 3800 |
| 315 | 1222 | 0.17 | 3.6 | 5.6 | 19600 | 8650 | 2800 | 3400 |
| 403 | 1224 | 0.20 | 3.11 | 4.81 | 27000 | 11800 | 2800 | 3400 |

NOTE:

$P_{eq} = F_R + YFA$ when $F_A / F_R \leq e$

$P_{eq} = 0.65 F_R + YFA$ when $F_A / F_R > e$

$$L_{10} = \left(\frac{C}{P}\right)^3 \times \left(\frac{16667}{RPM}\right)$$

NOTE: For more information, see Page B15-36 thru B15-39

| Shaft | Housing | Bearing No | A | | B | | C | | R | |
|-------|---------|------------|--------|------|--------|------|---------|------|-------|------|
| | | | Inch | (mm) | Inch | (mm) | Inch | (mm) | Inch | (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 |

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



SELECTION/DIMENSIONS

How to Order USAF Smart Stock Selections

Step 1: The Housing Choices

All smart housings feature an embedded thermocouple.

When speed is monitored, select cast-closed end.

For temperature and/or vibration monitoring without speed, both sides open may be selected

For speed, as well as temperature and vibration monitoring, select cast closed end.

Stab rings are included with all housings.

| Size | Housing Series | 4B Both Sides Open Part No. | 4B Cast Close End Part No. |
|------|----------------|-----------------------------|----------------------------|
| 207 | 515 | 067501 | 067503 |
| 215 | 517 | 067509 | 067511 |
| 307 | 520 | 067517 | 067519 |
| 315 | 522 | 067520 | 067521 |
| 407 | 526 | 055572 | 055654 |
| 415 | 528 | 055734 | 055906 |
| 515 | 534 | 057958 | 055881 |
| 615 | 538 | 055876 | 057966 |

Step 2: The Sensor Choices

For speed monitoring use AC prox

AND/OR For temperature monitoring, use thermocouple transmitter

| USAF Sensor Kits | Part No. |
|--|----------|
| AC Prox | 055940 |
| Thermocouple Transmitter | 055931 |
| 4 - 20 ma Accelerometer and Thermocouple | 067576 |

Step 3: Other Parts You Will Need To Order

If monitoring speed, you will need a special SNW. If you are not monitoring speed, you can use a standard SNW. Special SNW's feature a modified nut with prox targets

| Bearings | | | Adapters | | | Seals | | | | |
|----------|----------------|----------|----------|----------------------|-----------------------|-------|----------------------|------------------------------|--------------|-------------------|
| Size | Bearing Series | Part No. | Size | Special SNW Part No. | Standard SNW Part No. | Size | TRIPLE-TECT Part No. | Drop-In TRIPLE-TECT Part No. | LER Part No. | Taconite Part No. |
| 207 | 22215K | 422001 | 207 | 055740 | 046354 | 207 | 043542 | 039538 | 042514 | 042380 |
| 215 | 22217K | 422005 | 215 | 055710 | 046358 | 215 | 043546 | 039530 | 042518 | 042382 |
| 307 | 22220K | 422009 | 307 | 055714 | 046361 | 307 | 043549 | 039859 | 042521 | 042383 |
| 315 | 22222K | 422011 | 315 | 055712 | 046363 | 315 | 043551 | 039861 | 042523 | 042384 |
| 407 | 22226K | 422015 | 407 | 055716 | 046431 | 407 | 043554 | 039864 | 042526 | 042385 |
| 415 | 22228K | 422017 | 415 | 055907 | 046433 | 415 | 043556 | 039866 | 042528 | 042387 |
| 515 | 22234K | 422023 | 515 | 055898 | 043620 | 515 | 043560 | N/A | 042533 | 042389 |
| 615 | 22238K | 422027 | 615 | 067326 | 043624 | 615 | 043564 | N/A | 042537 | 042392 |

For additional details on DODGE Smart Bearings, see brochure DMR 2026-6

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SELECTION/DIMENSIONS

SAF-XT and SAFS Spherical Roller Bearings

DODGE SAF-XT, and SAFS Spherical 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. DODGE Spherical Roller Bearings have been applied successfully when these limits have been exceeded under controlled operating conditions. Contact DODGE Application Engineering (864-284-5700) for applications which exceed the recommendations of this catalog.

Select a bearing from the SAF-XT, and SAFS Spherical Roller Bearing Selection Chart having a radial load rating at the operating speed equal to or greater than the calculated Equivalent Radial Load for a desired L_{10} life. This simple method is all that is required for the majority of general applications and provides for occasional average shock loads.

L_{10} Hours Life - The life which may be expected from at least 90% of a given group of bearings operating under identical conditions.

For L_{10} hours life other than those listed in the selection chart, multiply the Equivalent Radial Load by one of the following factors. For 20,000 L_{10} hours life use factor of .88; 40,000, 1.09; 60,000, 1.23; 80,000, 1.34. Then select a bearing from the bold face (30,000) L_{10} ratings only in the selection chart having a rating equal to or greater than this value.

Heavy Service - For heavy shock loads, frequent shock loads, or severe vibrations, add up to 50% (according to severity of conditions) to the Equivalent Radial Load 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 it meets the requirements. The maximum thrust load should not exceed SAF-XT adapter maximum allowable thrust load (Table 8 on page B15-57) nor the pillow block limits shown on page B15-58. The effectiveness of the shaft attachment to carry thrust load depends on proper tightening of the adapter and shaft deflections.

| RPM | 20-200 | 201 - 2000 | Over2000 |
|-------------------------|--------|------------|----------|
| RECOMMENDED THRUST LOAD | C/20 | C/40 | C/60 |

* Compare thrust load to adapter maximum allowed thrust load. If this value is exceeded, auxiliary method of carrying thrust load is required.

The shaft tolerances recommended (page B15-9) 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, consult DODGE Applications Engineering for recommendations. 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.

To determine the L_{10} hours life for loads and RPM's not listed, use the following equation:

$$L_{10} \text{ Life, Hours} = \left(\frac{C}{P} \right)^{10/3} \times \left(\frac{16667}{\text{RPM}} \right)$$

Where:

C = Dynamic Capacity (Table 14 on page B15-76), lbs.

P = Equivalent Radial Load, lbs.

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SELECTION/DIMENSIONS

SAF-XT/SAFS Bearings

When the load on a two row roller bearing is solely a radial load with no thrust (axial) load, the load is shared equally by both rows of rollers and the equivalent radial load (P) is equal to the actual radial load. However, when a thrust load is applied, 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 8 converts the actual applied 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 $P = XFR + YFA$

Where:

P = Equivalent radial load, lbs

F_R = Radial load, lbs.

F_A = Thrust (axial) load, lbs. (** See Note below)

e = Thrust load or radial load factor (Table 14)

X = Radial load factor (Table 14)

Y = Thrust load factor (Table 14)

To find X and Y, first calculate F_A/F_R and compare to e. Determine X and Y from Table 10: Light thrust F_A/F_R less than or equal to e or heavy thrust F_A/F_R greater than e.

Substitute all known values into the equivalent radial load equation. P (equivalent radial load) thus determined can be used in the life formula to determine L_{10} , or it can be compared to the allowable equivalent radial load ratings for the speed and hours life desired in the expanded rating table on B15-58 and B15-59.

****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 DODGE Application Engineering.

L_{10} Life Adjustment - The calculated L_{10} life obtained from the above procedure is subject to life adjustment factors in accordance with ABMA standards. Consult DODGE Application Engineering for assistance.

Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

S-2000

UNISPHERE II

IMPERIAL

UNIFIED SAF

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SELECTION/DIMENSIONS

SAF-XT/SAFS Bearings

Table 8: Radial and Thrust Factors

| Shaft Size Inch | Basic Bearing Description | e | $F_A/F_R \leq e$ | | $F_A/F_R \geq e$ | | ★ Adapter. Max. Allow. Thrust Load F_A (LBS.) | Dynamic Capacity (C) Lbs. | Static Capacity Co Lbs. | Max. Rpm | |
|------------------------------|---------------------------|------|------------------|------|------------------|------|---|---------------------------|-------------------------|----------|-------|
| | | | X | Y | X | Y | | | | Grease | Oil ▲ |
| 1-15/16 | 22211K | 0.23 | 1.00 | 2.90 | 0.67 | 4.30 | 927 | 31,500 | 32,500 | 4500 | 5600 |
| 2-3/16 | 22213K | 0.24 | 1.00 | 2.80 | 0.67 | 4.20 | 1359 | 45,500 | 47,500 | 3800 | 4500 |
| 2-7/16, 2-1/2 | 22215K | 0.22 | 1.00 | 3.10 | 0.67 | 4.60 | 1568 | 48,000 | 53,000 | 3400 | 4300 |
| 2-11/16, 2-3/4 | 22216K | 0.22 | 1.00 | 3.10 | 0.67 | 4.60 | 1780 | 56,000 | 60,000 | 3200 | 4000 |
| 2-15/16, 3 | 22217K | 0.22 | 1.00 | 3.00 | 0.67 | 4.50 | 2063 | 68,000 | 73,500 | 3000 | 3800 |
| 3-3/16 | 22218K | 0.23 | 1.00 | 2.90 | 0.67 | 4.30 | 2429 | 78,000 | 85,000 | 2600 | 3400 |
| 3-7/16, 3-1/2 | 22220K | 0.24 | 1.00 | 2.80 | 0.67 | 4.20 | 3102 | 96,500 | 106,000 | 2200 | 3000 |
| 3-15/16, 4 | 22222K | 0.25 | 1.00 | 2.70 | 0.67 | 4.10 | 3931 | 122,000 | 134,000 | 2000 | 2800 |
| 4-3/16 | 22224K | 0.25 | 1.00 | 2.70 | 0.67 | 4.00 | 4693 | 143,000 | 166,000 | 1900 | 2400 |
| 4-7/16, 4-1/2 | 22226K | 0.26 | 1.00 | 2.60 | 0.67 | 3.90 | 5610 | 170,000 | 200,000 | 1800 | 2200 |
| 4-15/16, 5 | 22228K | 0.25 | 1.00 | 2.70 | 0.67 | 4.00 | 6419 | 196,000 | 236,000 | 1700 | 2000 |
| 5-3/16 | 22230K | 0.25 | 1.00 | 2.70 | 0.67 | 4.00 | 7383 | 228,000 | 275,000 | 1600 | 1900 |
| 5-7/16, 5-1/2 | 22232K | 0.26 | 1.00 | 2.60 | 0.67 | 3.90 | 8630 | 260,000 | 315,000 | 1500 | 1800 |
| 5-15/16, 6 | 22234K | 0.26 | 1.00 | 2.60 | 0.67 | 3.90 | 9858 | 300,000 | 355,000 | 1300 | 1700 |
| 6-7/16, 6-1/2 | 22236K | 0.25 | 1.00 | 2.70 | 0.67 | 4.00 | 10437 | 305,000 | 375,000 | 1300 | 1600 |
| 6-15/16, 7 | 22238K | 0.28 | 1.00 | 2.40 | 0.67 | 3.60 | 11786 | 270,000 | 415,000 | 1200 | 1300 |
| 7-1/2, 7-15/16, 8 | 22244K | 0.29 | 1.00 | 2.30 | 0.67 | 3.50 | 16020 | 365,000 | 550,000 | 950 | 1000 |
| 8-7/16, 8-1/2, 8-15/16, 9 | 23048K | 0.25 | 1.00 | 2.70 | 0.67 | 4.10 | 14887 | 260,000 | 490,000 | 800 | 1000 |
| 9-7/16, 9-1/2 | 23052K | 0.26 | 1.00 | 2.60 | 0.67 | 3.90 | 18232 | 340,000 | 630,000 | 750 | 950 |
| 9-15/16, 10, 10-7/16, 10-1/2 | 23056K | 0.25 | 1.00 | 2.70 | 0.67 | 4.10 | 20012 | 345,000 | 670,000 | 700 | 900 |

Comparing Spherical to Tapered Roller Bearing: The dynamic capacity C (spherical) and C90 (taper) are not to the same base. To compare basic dynamic capacities multiply C x .259 and compare to C90. To select and then compare, use the complete selection procedure for each bearing and then compare

- ▲ For shaft size 1-7/16 through 4-3/16 inclusive TRIPLE-TECT seals will perform like LER seals when operating above the grease speed limit
- ★ If thrust load exceeds adapter maximum allowable thrust load, auxiliary method of carrying thrust load required.

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SELECTION/DIMENSIONS

SAF-XT and SAFS Spherical Roller Bearings

Table 9: Selection Table

| Shaft Size | | L ₁₀ Life Hours | Allowable Equivalent Radial Load Rating (Lbs.) at Various Revolutions Per Minute | | | | | | | | | | | | | | | |
|------------------------------|-------------------|----------------------------------|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Adapter Mount (Inches) | Bearing Series | | 50 | 100 | 250 | 500 | 750 | 950 | 1,300 | 1,500 | 1,800 | 2,000 | 2,600 | 3,000 | 3,200 | 3,400 | 4500 | 5,600 |
| 1-15/16 | 22211 | 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 |
| | | 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 |
| 2-3/16 | 22213 | 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 | |
| | | 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 | |
| | | 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 | |
| 2-7/16 2-1/2 | 22215 | 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 | | |
| | | 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 | | |
| | | 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 | | |
| 2-11/16 2-3/4 | 22216 | 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 | | |
| | | 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 | | |
| | | 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 | | |
| 2-15/16 3 | 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 | | |
| 3-3/16 | 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 | 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 | | | | |
| 3-15/16 4 | 22222 | 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 | | | | | |
| 4-3/16 | 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 | | | | | | |
| 4-7/16 4-1/2 | 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 | | | | | | |
| 4-15/16 5 | 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 | | | | | | |
| 5-3/16 | 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 | | | | | | |
| 5-7/16 5-1/2 | 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 | | | | | | | |

Note: Dark Shaded Areas Require Circulating Oil

Light Shaded Areas Require Static Oil

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SELECTION/DIMENSIONS

SAF-XT and SAFS Spherical Roller Bearings

Table 9 (Continued): Selection Table

| Shaft Size | | L ₁₀ Life Hours | Allowable Equivalent Radial Load Rating (Lbs.) at Various Revolutions Per Minute | | | | | | | | | | | | | | | |
|--------------------------------------|----------------|----------------------------|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-------|-------|-------|-------|-------|-------|------|-------|
| Adapter Mount (Inches) | Bearing Series | | 50 | 100 | 250 | 500 | 750 | 950 | 1,300 | 1,500 | 1,800 | 2,000 | 2,600 | 3,000 | 3,200 | 3,400 | 4500 | 5,600 |
| 5 -15/16 6 | 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 | | | | | | | | |
| 6 -7/16 6 1/2 | 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 | 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 | | | | | | | | | |
| 7 -3/16 | 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 | 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 -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

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SELECTION/DIMENSIONS

Pillow Block Housing Permissible Thrust Load*

(lbs Maximum)

| Shaft Size - Inches | HSG. No. | Bearing Type | | | |
|------------------------------|----------|--------------|--------|--------|--------|
| | | SAF-XT | | SAFS | |
| | | 2-Bolt | 4-Bolt | 2-Bolt | 4-Bolt |
| 1-3/16 | 507 | - | - | 2900 | - |
| 1-7/16 | 509 | - | - | 3100 | - |
| 1-11/16 | 510 | - | - | 2800 | - |
| 1-15/16 | 511 | 4700 | - | 4600 | - |
| 2-3/16 | 513 | 4800 | - | 4800 | - |
| 2-7/16, 2-1/2 | 515 | 4500 | 5600 | 4500 | 5600 |
| 2-11/16, 2-3/4 | 516 | 6900 | 9300 | 6900 | 9300 |
| 2-15/16, 3 | 517 | 6500 | 8700 | 6500 | 8700 |
| 3-3/16 | 518 | 6600 | 9000 | 6600 | 9000 |
| 3-7/16, 3-1/2 | 520 | 5500 | 13400 | 5500 | 13400 |
| 3-15/16, 4 | 522 | - | 13300 | - | 13300 |
| 4-3/16 | 524 | - | 12500 | - | 12500 |
| 4-7/16, 4-1/2 | 526 | - | 9700 | - | 9800 |
| 4-15/16, 5 | 528 | - | 14700 | - | 14700 |
| 5-3/16 | 530 | - | 14800 | - | 14800 |
| 5-7/16, 5-1/2 | 532 | - | 14000 | - | 14000 |
| 5-15/16, 6 | 534 | - | 14400 | - | 14300 |
| 6-7/16, 6-1/2 | 536 | - | 14200 | - | 14300 |
| 6-15/16, 7 | 538 | - | 22800 | - | 22800 |
| 7-1/2, 7-15/16, 8 | 544 | - | 32000 | - | 32000 |
| 8-7/16, 8-1/2, 8-15/16, 9 | 48 | - | 23000 | - | 23000 |
| 9-7/16, 9-1/2 | 52 | - | 32000 | - | 32000 |
| 9-15/16, 10, 10-7/16, 10-1/2 | 56 | - | 55000 | - | 59000 |

1. When utilizing heavy thrust loads on pillow block housings, the installation will require proper mounting procedures.
2. The pillow block base bolts must be of adequate strength (Grade 8) and properly tightened to the mounting structure.
3. The use of stop bars (shear strips) against pillow block mounting base is required.
4. Shaft shoulder, snap rings or thrust collars should be used to locate the inner ring on the shaft.
5. In all cases where thrust loads are large, the L_{10} Life of the bearing should be checked for proper selection and life requirements.

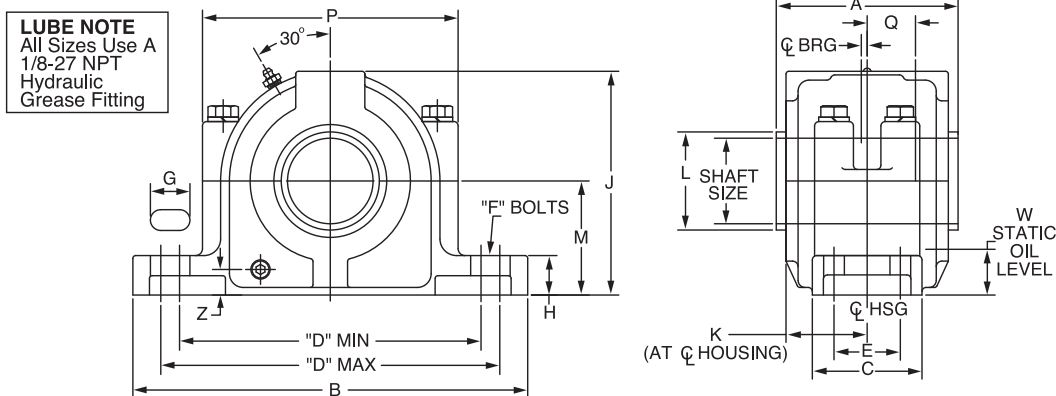
* Spherical bearings require a radial load at least equal to the thrust load for proper operation $F_R/F_R \leq 1$. If the thrust load exceeds this limit, consult DODGE Application Engineering.

| | | | |
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SELECTION/DIMENSIONS

SAFS Steel Housing Pillow Blocks (22200K/2300K ADAPTER MOUNT BEARING)



| Shaft Size Inch ▲ | Housing No. | Part Numbers | | | | Approx. Wt. lbs. | A with Seals | | | B | C |
|-------------------------|-------------|-------------------------|--------------|-------------------------|--------------|------------------|------------------|----------|-------|-------|------|
| | | SAFS 2-Bolt | | SAFS 4-Bolt | | | Std. TRIPLE-TECT | Optional | | | |
| | | Complete Pillow Block ★ | Housing Only | Complete Pillow Block ★ | Housing Only | | | LER/ER | 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 | | | | | | |
| 3-1/2 | 520 | 042405 | 042440 | 042415 | 042443 | 74 | 6.41 | 5.81 | 8.50 | 15.25 | 4.38 |
| 3-15/16 | 522 | - | - | 042416 | 042450 | | | | | | |
| 4 | 522 | - | - | 042417 | 042450 | 97 | 6.86 | 6.38 | 8.64 | 16.50 | 4.75 |
| 4-3/16 | 524 | - | - | 042432 | 044235 | 120 | 8.03 | 7.44 | 8.89 | 16.50 | 4.75 |
| 4-7/16 | 526 | - | - | 042568 | 042455 | | | | | | |
| 4-1/2 | 526 | - | - | 042575 | 042455 | 160 | 8.47 | 7.88 | 9.45 | 18.38 | 5.13 |
| 4-15/16 | 528 | - | - | 042569 | 042460 | | | | | | |
| 5 | 528 | - | - | 042576 | 042460 | 175 | 8.09 | 7.50 | 10.33 | 20.13 | 5.88 |
| 5-3/16 | 530 | - | - | 042439 | 044236 | | | | | | |
| 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") and (2) TRIPLE-TECT Seals unless otherwise noted.

▲ Sizes not listed will be quoted on application

SAFS 2-Bolt Pillow Block (P2B-SAFS - - -)

SAFS 4-Bolt Pillow Block (P4B-SAFS - - -)

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



SELECTION/DIMENSIONS

SAFS Steel Housing Pillow Blocks

Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

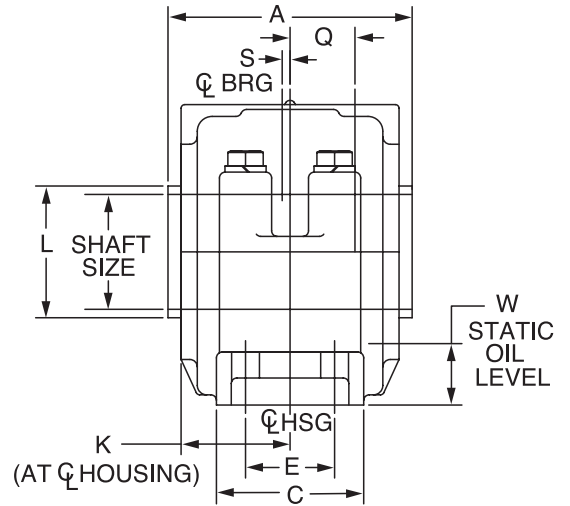
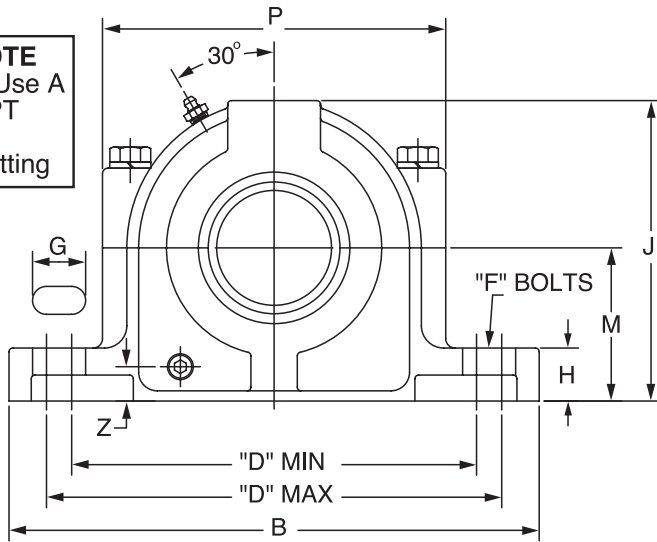
S-2000

UNISPHERE II

IMPERIAL

UNIFIED SAF

LUBE NOTE
All Sizes Use A
1/8-27 NPT
Hydraulic
Grease Fitting



| | | | |
|---------------------------------|--|----------------------------|--------------------------|
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SELECTION/DIMENSIONS

SAFS Steel Housing Pillow Blocks

| Shaft Size Inch | Dimension | | | | E | Bolt Dia. | | G | H | J | K | L | M | P | Q | S | W | Z |
|-----------------------|-----------|-------|--------|-------|------|-----------|-------|----------------------|------|-------|------|--------------|------|-------|------|------|------|------|
| | D | | | | | F | | | | | | | | | | | | |
| | 2-Bolt | | 4-Bolt | | | 2B | 4B | | | | | | | | | | | |
| | Min. | Max. | Min. | Max. | | | | | | | | | | | | | | |
| 2-7/16 2-1/2 | 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 |
| 2-11/16 2-3/4 | 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 |
| 2-15/16 3 | 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 |
| 3-3/16 | 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 3-1/2 | 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 |
| 3-15/16 4 | - | - | 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 |
| 4-3/16 | - | - | 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 4-1/2 | - | - | 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 |
| 4-15/16 5 | - | - | 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 |
| 5-3/16 | - | - | 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 5-1/2 | - | - | 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 |
| 5-15/16 6 | - | - | 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 |
| 6-7/16 6-1/2 | - | - | 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 |
| 6-15/16 7 | - | - | 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 |
| 7-1/2 7-15/16 8 | - | - | 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 |

◆ 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.

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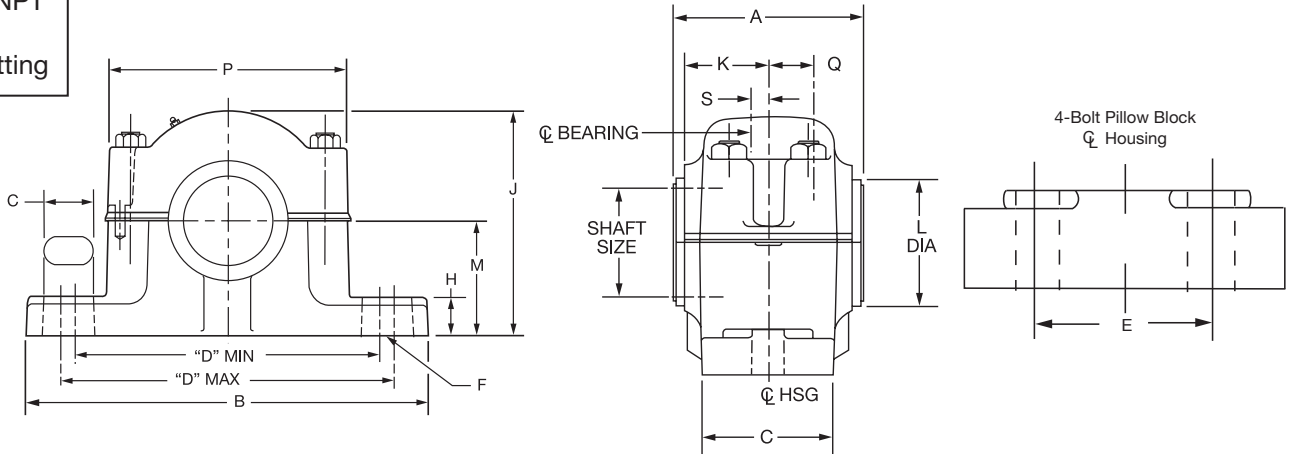


SELECTION/DIMENSIONS

SAF-XT Pillow Blocks - 2-Bolt Base (22200K Adapter Mount Bearings)

LUBE NOTE:

All Sizes Use
A 1/8-27 NPT
Hydraulic
Grease Fitting



(22200K Adapter Mount Bearing)

| Shaft Size ▲ Inch | Complete Pillow Block Design SAF-XT | Part No. ★ | Wt. | A | | | B | C | D | | Bolt Dia. F | G | H | J | K | L ▼ | M | P | Q ◆ | S CL of Housing to CL of Bearing | |
|-------------------------|---|---------------|------|------------------|----------|------|-------|------|-------|-------|----------------|------|------|------|------|--------|------|------|--------|----------------------------------|----------------|
| | | | | Std. TRIPLE-TECT | Optional | | | | Min. | Max. | | | | | | | | | | Exp. Block | Non-Exp. Block |
| | | | | | LER | AUX. | | | | | | | | | | | | | | | |
| 1-15/16 | 22511 | 042001 | 17.3 | 4.14 | 3.6.3 | 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 (C₁) if pillow block is closed end style.

▼ Dimensions shown with TRIPLE-TECT seals installed.

NOTE: SAF-XT Pillow Blocks use UNIFIED adaptors, seals and bearings. All UNIFIED 500 Series accessories are available for use with SAF-XT except Drop-In TRIPLE-TECT and SPLIT-SPHER which are UNIFIED exclusives.



SELECTION/DIMENSIONS

SAF-XT Pillow Blocks - 4-Bolt Base (22200K/23000K Adapter Mount Bearings)

| Shaft Size ▲ Inch | Complete Pillow Block Design SAF-XT | Part No. ★ P4B-SFXT | Wt. | A | | | B | C | D | | E | Bolt Dia. F | G | H | J | K | L ▼ | M | P | Q ◆ | S C _L of Housing to C _L of Bearing Exp Non-Exp | |
|-------------------------|-------------------------------------|---------------------------|-------|-------------|----------|-------|-------|-------|-------|-------|------|-------------|------|-------|-------|------|--------|------|-------|--------|--|------|
| | | | | TRIPLE-TECT | Optional | | | | Min. | Max. | | | | | | | | | | | | |
| | | | | | 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 | 0.72 |
| 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 | 0.72 |
| 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 | 2356 | 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.
- ◆ Distance shaft should extend beyond housing centerline (C_L) if pillow block is closed end style.
- ★ Includes (1) Housing with Spacer, (1) Standard Spherical Bearing, (1) SNW Assembly (SNP above 8,) and (2) TRIPLE-TECT Seals unless otherwise noted.
- ▼ 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 adaptors, seals, and bearings. Part numbers for these individual components can be found on Pages B15-26 thru B15-39.
All USAF 500 Series accessories are available for use with SAF-XT except Drop-In TRIPLE-TECT seals and SPLIT-SPHER components which are UNIFIED exclusives

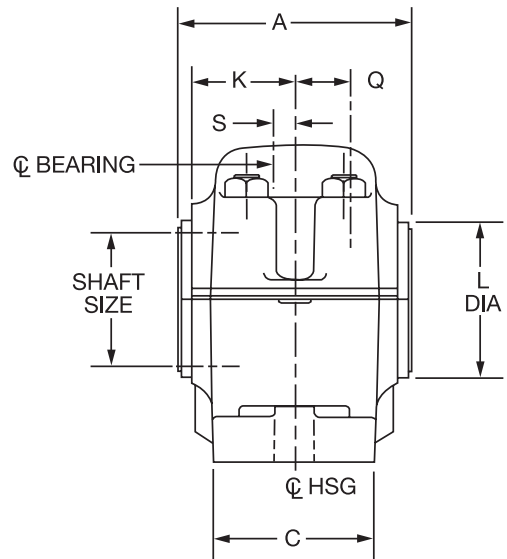
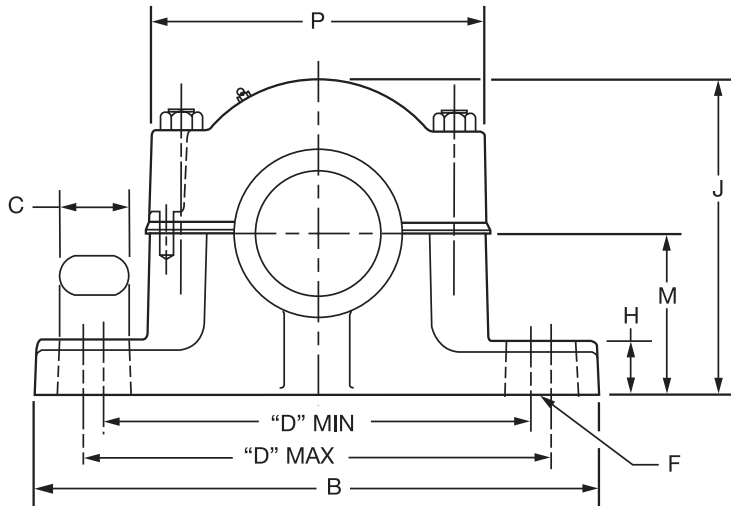
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SELECTION/DIMENSIONS

SAF-XT Pillow Blocks Housing

LUBE NOTE:
 All Sizes Use
 A 1/8-27 NPT
 Hydraulic Grease
 Fitting





SELECTION/DIMENSIONS

SAF-XT Pillow Blocks Housing

| S-1 Size Inch (mm) | Shaft Housing | 2-Bolt | | 4-Bolt | |
|--------------------------|------------------|----------------|-----------------------|----------------|--------------------|
| | | Part Number | Approx. Wt. (lbs.) | Part Number | Approx. Wt. 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 | 516 | 042111 | 30.5 | 042114 | 30 |
| 2-3/4 | | | | | |
| 2-15/16 | 517 | 042116 | 31.5 | 042119 | 32 |
| 3 | | | | | |
| 3-3/16 | 518 | 042121 | 38 | 042124 | 40 |
| 3-7/16 | 520 | 042126 | 51.5 | 042129 | 52 |
| 3-1/2 | | | | | |
| 3-15/16 | 522 | - | - | 042131 | 68 |
| 4 | | | | | |
| 4-3/16 | 524 | - | - | 042134 | 70 |
| (110) | 524M | | | 046326 | |
| 4-7/16 | 526 | - | - | 042137 | 108 |
| 4-1/2 | | | | | |
| 4-15/16 | 528 | - | - | 042140 | 143 |
| 5 | | | | | |
| 5-3/16 | 530 | - | - | 042143 | 120 |
| 5-7/16 | 532 | | | | |
| 5-1/2 | | | | | 042146 | 168 |
| 5-15/16 | 534 | - | - | 042149 | 220 |
| 6 | | | | | |
| 6-7/16 | 536 | - | - | 042152 | 266 |
| 6-1/2 | | | | | |
| 6-15/16 | 538 | - | - | 042155 | 295 |
| 7 | | | | | |
| 7-1/2 | 544S | - | - | 042167 | 443 |
| 7-15/16 | 544 | | | | |
| 8 | | | | | 042158 | 443 |
| 8-7/16, 8-1/2 | 48 | - | - | 042161 | 308 |
| 8-15/16, 9 | | | | | |
| 9-7/16 | 52 | - | - | 422555 | 440 |
| 9-1/2 | | | | | |
| 9-15/16 | 56 | - | - | 042164 | 549 |
| 10 | | | | | |
| 10-7/16 | 056L | - | - | 422571 | 620 |
| 10-1/2 | | | | | |

Bearing Reference
Guide

E-Family Roller
Bearings

Specialty Tapered
Products

S-2000

UNISPHERE II

IMPERIAL

UNIFIED SAF

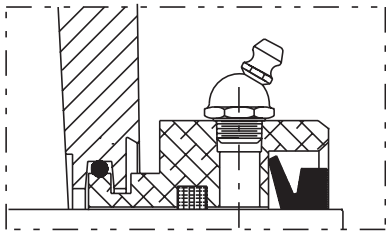
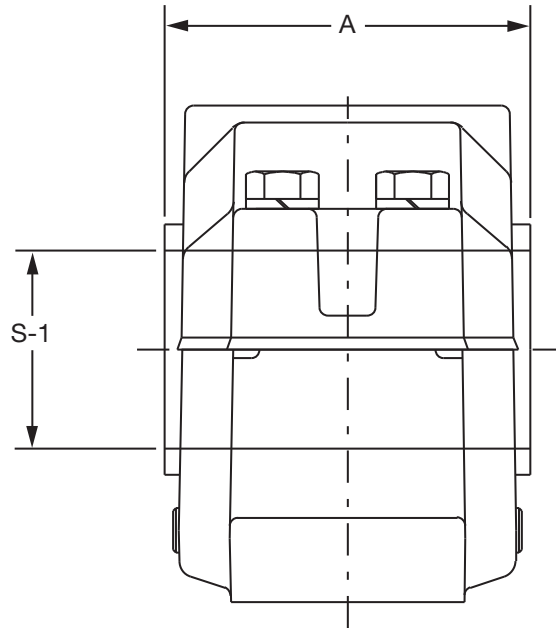
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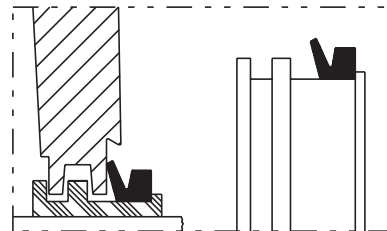
SELECTION/DIMENSIONS

SAF-XT & SAFS Pillow Block Seals

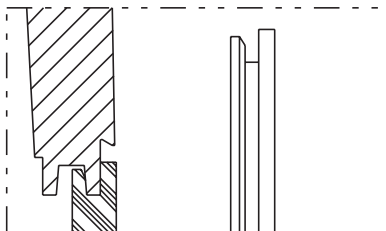
LENGTH THRU BORE W/SEALS



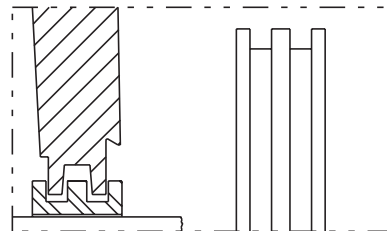
AUXILIARY TACONITE Seal
For dusty environments and low to moderate speeds



TRIPLE-TECT Seal
General purpose seal for wet or dirty environments



END COVER Seal
Allows use of open shaft housing as closed-end



LER SEAL
High speed seal for relatively clean environments

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SELECTION/DIMENSIONS

SAF-XT & SAFS Pillow Block Seals

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Specialty Tapered Products

S-2000

UNISPHERE II

IMPERIAL

UNIFIED SAF

| 500 Seals - Inch | | | | | | |
|-----------------------|---------|------------|------------------|-------------------------|--------------------------|-----------|
| S-1 Shaft Size (Inch) | 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 | - | 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 | | | 422594 | 042594* | 040901 | 422606 |
| 9-15/16 | 056 | 92 | 043575 | 042511* | - | 042369 |
| 10 | | | 043573 | 041082* | 042395 | 042369 |
| 10-7/16 | 056L | 94 | 047940 | 042036* | - | 042397 |
| 10-1/2 | | | 047941 | 422573* | 042396 | 042397 |

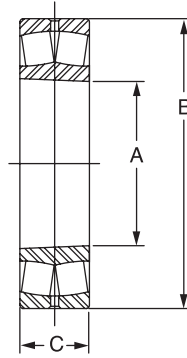
NOTE: LER seals are made from Aluminum unless otherwise noted by the * symbol.
If an * appears by the part number, the LER seal is manufactured from Steel.

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SELECTION/DIMENSIONS

SAF-XT & SAFS 22200K and 23000K Spherical Roller Bearings



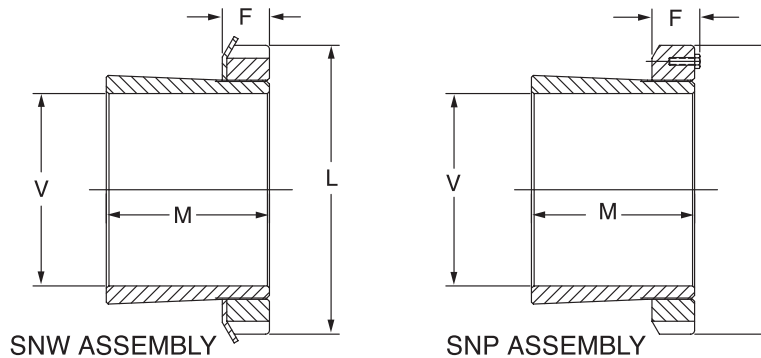
| S-1 Shaft Size (Inch) | Housing | Bearing No. | Part No. | Approx. Wt. (lbs) | A Inch (mm) | B Inch (mm) | C Inch (mm) |
|---------------------------------|---------|-------------|---------------|-------------------|---------------|---------------|--------------|
| 1-15/16 | 511 | 22211K | 422123 | 1.8 | 2.1654 (55) | 3.9370 (100) | .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) | 14.7480 (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 (430) | 4.1732 (106) |
| 10-7/16 10-1/2 | 056L | | | | | | |

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SELECTION/DIMENSIONS

SAF-XT & SAFS Adaptor Assembly (SNW)



| V Shaft Dia. (In) | Housing | SNW/SNP Number | Part Number | Approx Wt. (Lbs) | L (in.) | F Max (in.) | M (in.) |
|----------------------|---------|-------------------|----------------|---------------------|------------|----------------|------------|
| 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 | 13.00 | 1.89 | 6.19 |
| 10-1/2 | | SNP056-1008 | 422567 | 28.0 | | | |

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SELECTION/DIMENSIONS

Pillow Block SPLIT-SPHER™ Roller Bearings (USAF 500 SERIES)

DODGE SPLIT-SPHER 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 (864-284-5700) for applications which exceed the recommendations of this catalog.

L₁₀ Hours Life - The life which may be expected from at least 90% of a given group of bearings operating under identical conditions.

$$L_{10} \text{ Life, Hours} = \left(\frac{C}{P}\right)^{10/3} \times \left(\frac{16667}{\text{RPM}}\right)$$

Where:

C = Dynamic Capacity (Table 11 on page B15-70), lbs.
P = Equivalent Radial Load, lbs.

(See Equation 1 on page B15-74 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% (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 L₁₀ life. Where substantial radial load is also present, it is advisable to calculate actual L₁₀ life to assure that the bearing meets the requirements.

| RPM | 20-200 | 201 - 2000 | Over2000 |
|-------------------------|--------|------------|----------|
| 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 uplift loads are involved, see B15-21 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 L₁₀ 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, Inches | Tolerance, Inches |
|---------------------|-------------------|
| Up to 1-1/2" | +.000 - .002" |
| 1-9/16 to 2-1/2" | +.000 - .003" |
| 2-5/8 to 4" | +.000 - .004" |
| 4-7/16 to 6" | +.000 - .005" |

* Use the smaller of this value or the maximum allowable thrust load listed in Table 10.

NOTE: Polyamide cages may limit bearing operating temperature.



SELECTION/DIMENSIONS

Selecting Bearings - Supporting Radial Loads Only

1. Define the desired L_{10} Life in Hours.
2. Establish bearing radial load, F_R .
3. Establish RPM.
4. Calculate the equivalent radial load.
 $(P = F_R \times 1.1\# = \text{Equivalent radial load})$
 (The DODGE program BEST ♦ can be used to find application loads.)

Using the easy selection Table 12 on page B15-75, 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:
1. L_{10} Life = 30,000 Hours
 2. Radial load = 4,000 lbs.
 3. RPM = 950

At the intersection of the 950 RPM column and the 30,000 hours L_{10} life row, the equivalent radial load of 4445 lbs. exceeds the 4400 lbs. (4000×1.1) application equivalent radial load for shaft size 2-7/16" - 2-1/2". A SPLIT-SPHER bearing with shaft size of 2-7/16" - 2-1/2" may be used for this application.

- 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% of the Dynamic Capacity C .
- ♦ The DODGE Bearing Evaluation and Selection Technique (BEST) is a menu driven computer program that calculates bearing loads, fatigue life and operating temperature for a two bearing shaft system based on user supplied input parameters. This interactive program is available at www.ptwizard.com under the Product Section area.

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} , RPM and P .

$$C = \left(\frac{L_{10} \times \text{RPM}}{16667} \right)^{0.3} \times P$$

$(P = F_R \times 1.1\bullet = \text{Equivalent Radial Load})$

Since the L_{10} , RPM, and F_R are known, solve for C . Select from the dynamic capacity column on Table 11 on page B15-74 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 RPM does not exceed the MAX. RPM 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.

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SELECTION/DIMENSIONS

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 11 on page B15-74 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 $P = (XFR + YFA) \times 1.1$

Where:

P = Equivalent radial load, lbs

F_R = Radial load, lbs

F_A = Thrust (axial) load, lbs (** See Note below)

e = Thrust load or radial load factor (Table 11)

X = Radial load factor (Table 11)

Y = Thrust load factor (Table 11)

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 allowable equivalent radial load ratings for the speed and hours life desired in the easy selection chart.

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 DODGE Application Engineering (864-284-5700).

AXIAL EXPANSION CAPABILITY

The axial expansion capability of SPLIT-SPHER Pillow Blocks is the same as the UNIFIED 500 pillow blocks. See Table 7 on page B15-25.

- 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% of the Dynamic Capacity C

Table 11: SPLIT-SPHER Bearings Radial & Thrust Factor

| Shaft Size Inches | Replaces Bearing Series | e | $F_A/F_R \leq e$ | | $F_A/F_R > e$ | | Max. Allow. Thrust Load F_A Lbs. | Dynamic* Capacity (C) Pounds | Max. RPM (Grease) |
|-------------------|-------------------------|------|------------------|------|---------------|------|------------------------------------|------------------------------|-------------------|
| | | | X | Y | X | Y | | | |
| 2-3/16 | 22213K | 0.24 | 1 | 2.80 | 0.67 | 4.20 | 1200 | 35,000 | 2600 |
| 2-7/16 | 22215K | 0.24 | 1 | 2.80 | 0.67 | 4.20 | 1200 | 41,500 | 2350 |
| 2-15/16 - 3 | 22217K | 0.22 | 1 | 3.10 | 0.67 | 4.60 | 1700 | 45,000 | 2200 |
| 3-3/16 | 22218K | 0.22 | 1 | 2.90 | 0.67 | 4.60 | 1700 | 52,000 | 2100 |
| 3-7/16 | 22220K | 0.23 | 1 | 2.80 | 0.67 | 4.30 | 1700 | 71,000 | 1700 |
| 3-15/16 - 4 | 22222K | 0.24 | 1 | 2.80 | 0.67 | 4.20 | 3100 | 90,000 | 1450 |
| 4-7/16 | 22226K | 0.25 | 1 | 2.70 | 0.67 | 4.00 | 3100 | 132,000 | 1200 |
| 4-15/16 | 22228K | 0.26 | 1 | 2.60 | 0.67 | 3.90 | 3100 | 153,000 | 1100 |
| 5-7/16 | 22232K | 0.25 | 1 | 2.70 | 0.67 | 4.00 | 5000 | 204,000 | 1000 |
| 5-15/16 - 6 | 22234K | 0.26 | 1 | 2.60 | 0.67 | 3.90 | 5000 | 232,000 | 950 |

* At no time load on a SPLIT-SPHER bearing should exceed 20% of the Dynamic Capacity C.

| | | | |
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SELECTION/DIMENSIONS

Table 12: Selection Table For SPLIT-SPHER Spherical Roller Bearings

| Shaft Size Inches | L ₁₀ Life Hrs. | Allowable Equivalent Radial Load Rating (Lbs.) At Various Revolutions Per Minute | | | | | | | | | | | | | |
|-------------------|---------------------------|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|-------------|-------------|-------------|-------------|
| | | 50 | 100 | 250 | 375 | 450 | 800 | 950 | 1100 | 1200 | 1300 | 1700 | 2100 | 2350 | 2600 |
| 2-3/16 | 10000 | 7000 | 7000 | 7000 | 6990 | 6620 | 5570 | 5290 | 5060 | 4930 | 4815 | 4440 | 4170 | 4030 | 3910 |
| | 30000 | 7000 | 7000 | 5680 | 5030 | 4760 | 4005 | 3805 | 3640 | 3545 | 3465 | 3195 | 3000 | 2900 | 2810 |
| | 50000 | 7000 | 6415 | 4870 | 4315 | 4085 | 3435 | 3265 | 3125 | 3045 | 2970 | 2740 | 2570 | 2485 | 2415 |
| | 100000 | 6415 | 5210 | 3955 | 3505 | 3315 | 2790 | 2650 | 2535 | 2470 | 2415 | 2225 | 2090 | 2020 | 1960 |
| 2-7/16 | 10000 | 8300 | 8300 | 8300 | 8175 | 7740 | 6510 | 6185 | 5920 | 5765 | 5630 | 5195 | 4875 | 4710 | |
| | 30000 | 8300 | 8300 | 6640 | 5880 | 5565 | 4685 | 4445 | 4255 | 4145 | 4050 | 3735 | 3505 | 3390 | |
| | 50000 | 8300 | 7495 | 5695 | 5045 | 4775 | 4015 | 3815 | 3650 | 3555 | 3475 | 3205 | 3005 | 2905 | |
| | 100000 | 7495 | 6090 | 4625 | 4095 | 3880 | 3265 | 3100 | 2965 | 2890 | 2820 | 2600 | 2445 | 2360 | |
| 2-15/16 3 | 10000 | 9000 | 9000 | 9000 | 8860 | 8390 | 7060 | 705 | 6415 | 6250 | 6105 | 5630 | 5285 | | |
| | 30000 | 9000 | 9000 | 7200 | 6375 | 6035 | 5080 | 4820 | 4615 | 4495 | 4390 | 4050 | 3800 | | |
| | 50000 | 9000 | 8130 | 6175 | 5470 | 5175 | 4355 | 4135 | 3960 | 3855 | 3765 | 3475 | 3260 | | |
| | 100000 | 8130 | 6605 | 5015 | 4440 | 4205 | 3540 | 3360 | 3215 | 3135 | 3060 | 2820 | 2650 | | |
| 3-3/16 | 10000 | 10400 | 10400 | 10400 | 10240 | 9695 | 8160 | 7750 | 7415 | 7225 | 7055 | 6505 | 6105 | | |
| | 30000 | 10400 | 10400 | 8320 | 7365 | 6975 | 5870 | 5575 | 5335 | 5195 | 5070 | 4680 | 4390 | | |
| | 50000 | 10400 | 9395 | 7135 | 6320 | 5980 | 5035 | 4780 | 4575 | 4455 | 4350 | 4015 | 3770 | | |
| | 100000 | 9395 | 7630 | 5795 | 5130 | 4860 | 4090 | 3885 | 3715 | 3620 | 3535 | 3260 | 3060 | | |
| 3-7/16 | 10000 | 14200 | 14200 | 14200 | 13985 | 13240 | 11140 | 10580 | 10125 | 9865 | 9630 | 8885 | | | |
| | 30000 | 14200 | 14200 | 11355 | 10055 | 9520 | 8010 | 7610 | 7280 | 7095 | 6925 | 6390 | | | |
| | 50000 | 14200 | 12825 | 9745 | 8630 | 8170 | 6875 | 6530 | 6245 | 6085 | 5940 | 5480 | | | |
| | 100000 | 12825 | 10420 | 7915 | 7010 | 6635 | 5585 | 5300 | 5075 | 4945 | 4825 | 4455 | | | |
| 3-15/16 4 | 10000 | 18000 | 18000 | 18000 | 17725 | 16780 | 14120 | 13410 | 12835 | 12505 | 12205 | | | | |
| | 30000 | 18000 | 18000 | 14395 | 12750 | 12070 | 10155 | 9645 | 9230 | 8995 | 8780 | | | | |
| | 50000 | 18000 | 16260 | 12350 | 10935 | 10355 | 8715 | 8275 | 7920 | 7715 | 7530 | | | | |
| | 100000 | 16260 | 13205 | 10030 | 8885 | 8410 | 7075 | 6720 | 6430 | 6265 | 6120 | | | | |
| 4-7/16 | 10000 | 26400 | 26400 | 26400 | 25995 | 24615 | 20710 | 19670 | 18825 | 18340 | | | | | |
| | 30000 | 26400 | 26400 | 21115 | 18695 | 17700 | 14895 | 14145 | 13540 | 13190 | | | | | |
| | 50000 | 26400 | 23845 | 18115 | 16040 | 15185 | 12780 | 12135 | 11615 | 11315 | | | | | |
| | 100000 | 23845 | 19370 | 14715 | 13030 | 12335 | 10380 | 9860 | 9435 | 9190 | | | | | |
| 4-15/16 | 10000 | 30600 | 30600 | 30600 | 30130 | 28530 | 24005 | 22800 | 21820 | | | | | | |
| | 30000 | 30600 | 30600 | 24475 | 21670 | 20520 | 17265 | 16400 | 15690 | | | | | | |
| | 50000 | 30600 | 27640 | 20995 | 18590 | 17605 | 14810 | 14070 | 13460 | | | | | | |
| | 100000 | 27640 | 22450 | 17055 | 15100 | 14300 | 12030 | 11425 | 10935 | | | | | | |
| 5-7/16 | 10000 | 40800 | 40800 | 40800 | 40175 | 38040 | 32010 | 30400 | | | | | | | |
| | 30000 | 40800 | 40800 | 32635 | 28895 | 27360 | 23020 | 21865 | | | | | | | |
| | 50000 | 40800 | 36855 | 27995 | 24790 | 23470 | 19750 | 18755 | | | | | | | |
| | 100000 | 36855 | 29935 | 22740 | 20135 | 19065 | 16040 | 15235 | | | | | | | |
| 5-15/16 6 | 10000 | 46400 | 46400 | 46400 | 45690 | 43260 | 36400 | 34570 | | | | | | | |
| | 30000 | 46400 | 46400 | 37115 | 32860 | 31115 | 26180 | 24865 | | | | | | | |
| | 50000 | 46400 | 41915 | 31840 | 28195 | 26690 | 22460 | 21330 | | | | | | | |
| | 100000 | 41915 | 34045 | 25860 | 22900 | 21680 | 18245 | 17325 | | | | | | | |

Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

S-2000

UNISPHERE II

IMPERIAL

UNIFIED SAF

| | | | |
|---------------------------------|--|----------------------------|--------------------------|
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SELECTION/DIMENSIONS

Selecting Lubrication

DODGE SPLIT-SPHER Roller Bearings are lubricated by the user at installation. DODGE SPLIT-SPHER 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% full of grease immediately after properly mounting the bearing on the shaft. If the RPM of the application falls between 20% and 80% of maximum RPM (Table 11 on page B15-74), pack the lower half of the housing one-third to one-half full. If the RPM of the application is less than 20% of maximum RPM, pack bearing housing cavity 100% full. If the RPM exceeds 80% of maximum RPM, do not add grease in the lower half of the housing nor in the cap.

At each re-greasing cycle, for applications up to 80% 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% of maximum RPM, add 4 strokes of a handgun at each re-greasing cycle for bores up to 2". For bores greater than 2", up to 5", add 8" strokes of a handgun at each re-greasing cycle. For bores greater than 5", up to 6", add 16 strokes of a handgun at each re-greasing cycle. For units running above 80% 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. For warning before catastrophic failure, see DODGE Temperature Monitor Package on page B15-54.

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 on page B15-76 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 (864-284-5700).

Table 13: Viscosity Of Oil In Grease

| DN Δ | Viscosity for Loads Up To 18% of Dyn. Cap. ♦ (SUS @ Oper. Temp.) | DN Δ | Viscosity for Loads Up To 18% of Dyn. Cap. ♦ (SUS. @ Oper. Temp.) |
|---------|--|---------|---|
| 100 | 3500 | 1400 | 625 |
| 200 | 3150 | 1600 | 525 |
| 300 | 2750 | 1800 | 450 |
| 400 | 2375 | 2000 | 400 |
| 500 | 2000 | 3000 | 300 |
| 600 | 1750 | 4000 | 200 |
| 700 | 1500 | 5000 | 150 |
| 800 | 1300 | 6000 | 130 |
| 900 | 1075 | 7000 | 110 |
| 1000 | 900 | 8000 | 100 |

Δ DN = Bore Diameter (inches) x RPM

♦ For loads above 18% of dynamic capacity, an EP grease with the viscosity selected from above is recommended.

**Table 14: Re-Greasing Intervals (Months*)
(Based on 12 Hours per Day, 150-F Max.)**

| Shaft Size (inch) | RPM | | | | | | | |
|----------------------|-----|-----|-----|-----|------|------|------|------|
| | 250 | 500 | 750 | 100 | 1250 | 1500 | 2000 | 2500 |
| 1-7/16 - 1-15/16 | 8 | 6 | 4 | 3 | 2 | 1 | .50 | .50 |
| 2-3/16 | 7 | 5 | 3 | 2 | 1 | 1 | .50 | .25 |
| 2-7/16 - 3 | 6 | 4 | 3 | 2 | 1 | .50 | .25 | .25 |
| 3-3/16 - 3-1/2 | 5 | 3 | 2 | 1 | .50 | .50 | .25 | |
| 3-15/16 - 4-7/16 | 4 | 3 | 2 | 1 | .50 | .25 | | |
| 4-15/16 - 5-1/2 | 3 | 2 | 1 | .50 | .25 | | | |
| 5-15/16 - 6 | 2 | 1 | 1 | .50 | | | | |

* For continuous operation, 24 hrs./day, reduce the re-greasing intervals by half.

| | | | |
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SELECTION/DIMENSIONS

USAF 500 SPLIT-SPHER Pillow Block

| Shaft Dia S-1 | Complete Pillow Block Part No. | Housing W/ Stab Ring Part No. | Bearing Part No. | Dynamic Capacity (C), lbs. | Max RPM (Grease) | Split LER Seal |
|---------------|--------------------------------|-------------------------------|----------------------|----------------------------|------------------|-------------------|
| 2-3/16 | P2B13-SS-203 043958 | H2S-513-USAF 043998 | BRG13SS203 043393 | 32,500 | 2,600 | 14SS203 043501 |
| | P4B13-SS-203 046110 | H4S-513-USAF 039669 | BRG13SS203 043393 | 32,500 | 2,600 | 14SS203 043501 |
| 2-7/16 | P2B15-SS-207 043959 | H2S-515-USAF 044000 | BRG15SS207 043400 | 39,000 | 2,350 | 20SS207 043502 |
| | P4B15-SS-207 043964 | H4S-515-USAF 044003 | BRG15SS207 043400 | 39,000 | 2,350 | 20SS207 043502 |
| 2-11/16 | P2B16-SS-211 043960 | H2S-516-USAF 044198 | BRG16SS211 043401 | 40,500 | 2,300 | 24SS211 043504 |
| | P4B16-SS-211 043965 | H4S-516-USAF 044007 | BRG16SS211 043401 | 40,500 | 2,300 | 24SS211 043504 |
| 2-15/16 | P2B17-SS-215 043961 | H2S-517-USAF 044010 | BRG17SS215 043402 | 41,500 | 2,200 | 28SS215 043506 |
| | P4B17-SS-215 043966 | H4S-517-USAF 044013 | BRG17SS215 043402 | 41,500 | 2,200 | 28SS215 043506 |
| 3-3/16 | P2B18-SS-303 043962 | H2S-518-USAF 044199 | BRG18SS303 043403 | 47,500 | 2,000 | 34SS303 043508 |
| | P4B18-SS-303 043967 | H4S-518-USAF 044114 | BRG18SS303 043403 | 47,500 | 2,000 | 34SS303 043508 |
| 3-7/16 | P2B20-SS-307 043963 | H2S-520-USAF 044020 | BRG20SS307 043404 | 64,000 | 1,700 | 46SS307 043509 |
| | P4B20-SS-307 043968 | H4S-520-USAF 044023 | BRG20SS307 043404 | 64,000 | 1,700 | 46SS307 043509 |
| 3-15/16 | P4B22-SS-315 043969 | H4S-522-USAF 044025 | BRG22SS315 043405 | 80,000 | 1,450 | 50SS315 043511 |
| 4 | P4B22-SS-400 043970 | H4S-522-USAF 044025 | BRG22SS400 043406 | 80,000 | 1,450 | 50SS400 043512 |
| 4 3/16 | P4B24-SS-403 043971 | H4S-524-USAF 044202 | BRG24SS403 043421 | 102,000 | 1,300 | 52SS403 043513 |
| 4-7/16 | P4B26-SS-407 043972 | H4S-526-USAF 044031 | BRG26SS407 043407 | 120,000 | 1,200 | 54SS407 043514 |
| 4-15/16 | P4B28-SS-415 043974 | H4S-528-USAF 044034 | BRG28SS415 043408 | 143,000 | 1,100 | 56SS415 043516 |
| 5-7/16 | P4B32-SS-507 043976 | H4S-532-USAF 044040 | BRG32SS507 043410 | 190,000 | 950 | 60SS507 043519 |
| 5-15/16 | P4B34-SS-515 043977 | H4S-534-USAF 044043 | BRG34SS515 043411 | 216,000 | 900 | 64SS515 043520 |
| 6 | P4B34-SS-600 043978 | H4S-534-USAF 044043 | BRG34SS600 043412 | 216,000 | 900 | 64SS600 043521 |

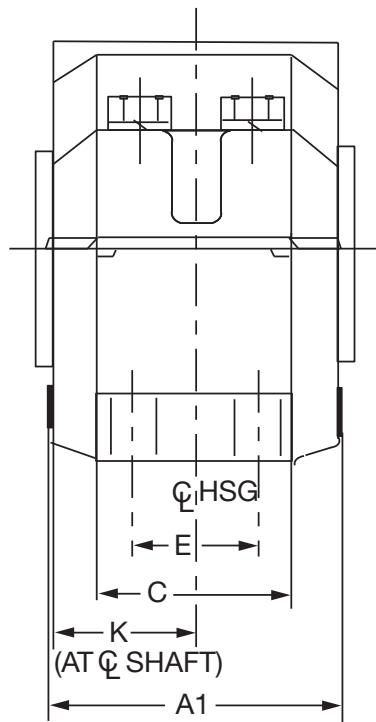
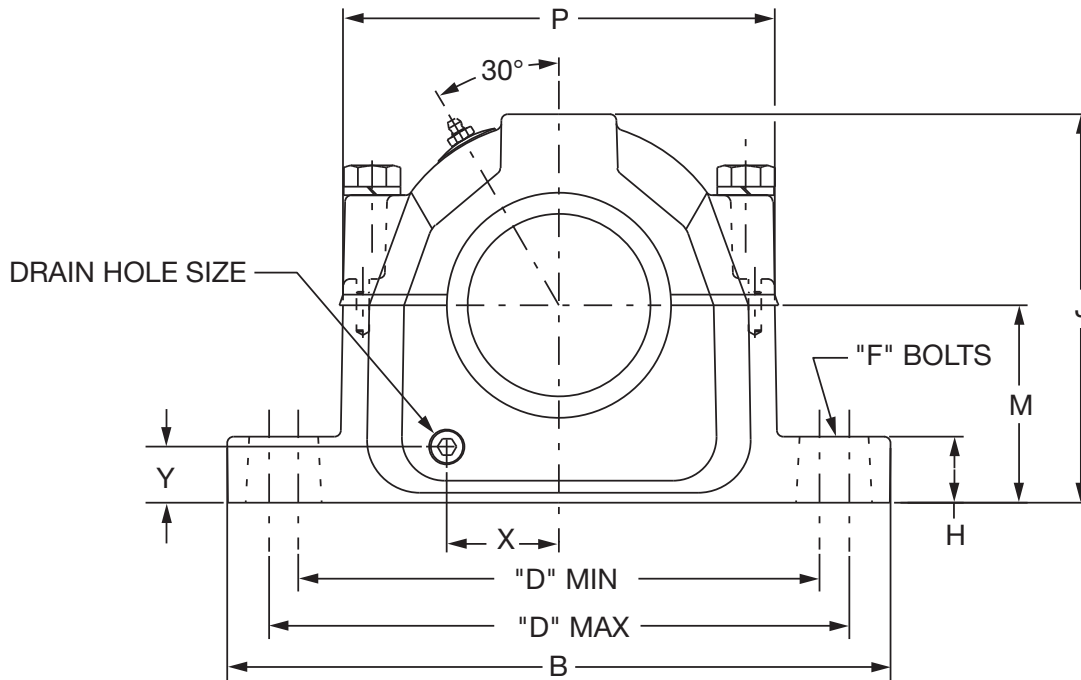
NOTE: Ratings Per FAG Catalog

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SELECTION/DIMENSIONS

USAF 500 SPLIT-SPHER Housing Dimensions





SELECTION/DIMENSIONS

USAF 500 SPLIT-SPHER Housing Dimensions

| S-1 Shaft Size | Housing | ▲ A1 | B | C | D | | | | E |
|----------------|---------|------|-------|------|--------|-------|--------|-------|------|
| | | | | | 2-Bolt | | 4-Bolt | | |
| 2-3/16 | 513 | 4.64 | 11.00 | 3.13 | 8.13 | 9.50 | 8.13 | 9.50 | 1.88 |
| 2-7/16 | 515 | 5.20 | 11.13 | 3.13 | 8.63 | 9.63 | 8.63 | 9.63 | 1.88 |
| 2-11/16 | 516 | 5.44 | 12.59 | 3.50 | 9.63 | 11.00 | 9.63 | 11.00 | 2.13 |
| 2-15/16 | 517 | 5.39 | 12.59 | 3.50 | 9.88 | 11.00 | 9.88 | 11.00 | 2.13 |
| 3-3/16 | 518 | 6.16 | 13.63 | 3.88 | 10.25 | 11.75 | 10.38 | 11.63 | 2.13 |
| 3-7/16 | 520 | 6.78 | 15.36 | 4.34 | 11.63 | 13.13 | 11.63 | 13.13 | 2.38 |
| 3-15/16 4 | 522 | 7.08 | 16.50 | 4.75 | - | - | 12.59 | 14.50 | 2.75 |
| 4-7/16 | 526 | 8.27 | 18.38 | 5.13 | - | - | 14.50 | 16.00 | 3.25 |
| 4-15/16 | 528 | 8.77 | 19.69 | 5.88 | - | - | 15.63 | 17.38 | 3.38 |
| 5-7/16 | 532 | 9.92 | 21.66 | 6.75 | - | - | 17.38 | 19.25 | 3.75 |
| 5-15/16 6 | 534 | 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
- ◆ Distance shaft should extend beyond housing centerline if pillow block is closed end style
- Non-expansion bearing offset from centerline.

Dowel hole locations for Precision Positioning, see Page B15-126 - B15-127

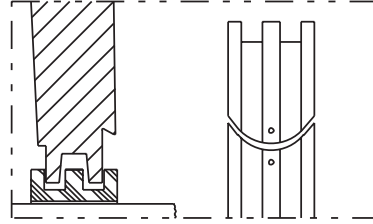
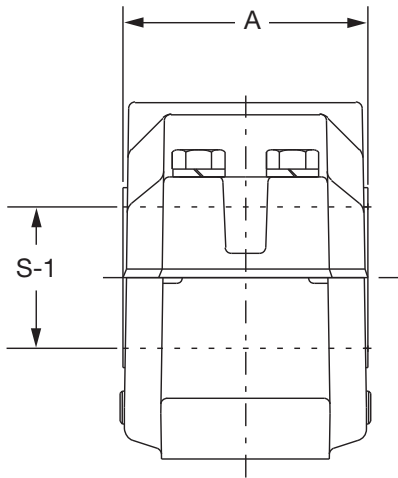
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SELECTION/DIMENSIONS

USAF 500 SPLIT-SPHER Pillow Block Seals

LENGTH THRU BORE W/SEALS



SPLIT Seal

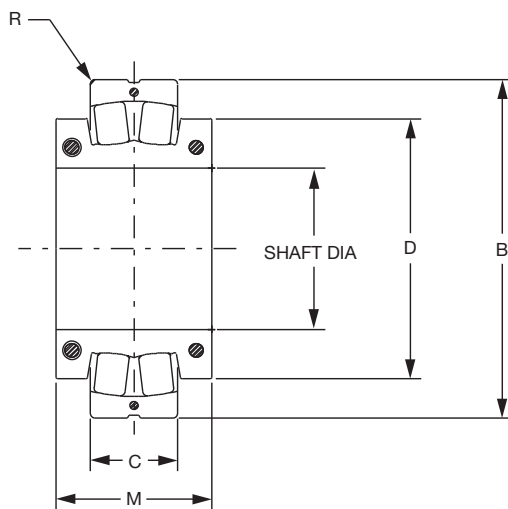
Permits easy installation in hard-to-reach applications without removing shaft.
Non-metallic split LER.

| S-1 Shaft Size Inch | 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 |



SELECTION/DIMENSIONS

USAF 22200 SPLIT-SPHER Roller Bearings



| Shaft Dia. Inch | Housing | Bearing Descriptive No. | Bearing Part No. | Approx. Weight (Lbs) | B Inch (mm) | C Inch (mm) | M Inch (mm) | D Inch | R Inch |
|-----------------|---------|-------------------------|------------------|----------------------|---------------|-------------|--------------|--------|--------|
| 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 4 | 522 | 22222SS315 | 043405 | 22.0 | 7.874 (200) | 2.0866 (53) | 3.622 (92) | 5.4331 | 0.08 |
| | | 22222SS400 | 043406 | 22.0 | | | | | |
| 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 6 | 534 | 22234SS515 | 043411 | 82.2 | 12.2047 (310) | 3.3858 (86) | 5.0394 (128) | 7.9527 | 0.12 |
| | | 22234SS600 | 043412 | 82.2 | | | | | |

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SELECTION/DIMENSIONS

USDAF Pillow Block - Spherical Roller Bearings

Table 15: Radial & Thrust Factors For USDAF Spherical Bearings

| 23000K SERIES | | | | | | | | | | |
|----------------------------|----------------|------|------------------|------|---------------|------|--|----------------------------|----------|-----|
| Shaft Size (in.) | Bearing Series | e | $F_A/F_R \leq e$ | | $F_A/F_R > e$ | | Adapter Maximum Allowable Thrust Load, lbs.* | Dynamic Capacity (C), lbs. | Max. RPM | |
| | | | X | Y | X | Y | | | Grease | Oil |
| 10-15/16,11 | 23060K | 0.25 | 1 | 2.70 | 0.67 | 4 | 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 | 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 |
| 23100K SERIES | | | | | | | | | | |
| 9-7/16,9-1/2 | 23152K | 0.33 | 1 | 2 | 0.67 | 3 | 19,985 | 490,000 | 670 | 850 |
| 10-7/16,10-1/2 | 23156K | 0.32 | 1 | 2.10 | 0.67 | 3.20 | 27,571 | 530,000 | 630 | 800 |
| 10-15/16,11 | 23160K | 0.33 | 1 | 2.10 | 0.67 | 3.10 | 32,373 | 600,000 | 600 | 750 |
| 11-15/16,12 | 23164K | 0.34 | 1 | 2 | 0.67 | 2.90 | 37,984 | 720,000 | 530 | 670 |
| 12-7/16,12-1/2 | 23168K | 0.34 | 1 | 2 | 0.67 | 2.90 | 43,568 | 830,000 | 500 | 630 |
| 13-7/16,13-1/2 | 23172K | 0.33 | 1 | 2.10 | 0.67 | 3.10 | 45,617 | 850,000 | 480 | 600 |
| 13-15/16,14 | 23176K | 0.32 | 1 | 2.10 | 0.67 | 3.20 | 49,719 | 915,000 | 450 | 560 |
| 23200K SERIES | | | | | | | | | | |
| 8-15/16,9 | 23248K | 0.37 | 1 | 1.80 | 0.67 | 2.70 | 25,891 | 560,000 | 700 | 900 |
| 9-7/16,9-1/2 | 23252K | 0.37 | 1 | 1.80 | 0.67 | 2.70 | 30,511 | 655,000 | 630 | 800 |
| 10-7/16,10-1/2 | 23256K | 0.36 | 1 | 1.90 | 0.67 | 2.80 | 33,236 | 680,000 | 600 | 750 |
| 10-7/16,11 | 23260K | 0.37 | 1 | 1.80 | 0.67 | 2.70 | 38,847 | 780,000 | 560 | 700 |
| 11-15/16,12 | 23264K | 0.37 | 1 | 1.80 | 0.67 | 2.70 | 44,890 | 865,000 | 530 | 670 |
| 12-7/16,12-1/2 | 23268K | 0.38 | 1 | 1.80 | 0.67 | 2.70 | 51,365 | 1,000,000 | 480 | 600 |

If the thrust load exceeds adapter maximum allowable thrust load, auxiliary methods of carrying thrust are required.

SELECTION/DIMENSIONS



USDAF Pillow Block - Spherical Roller Bearings

Table 16: Selection Table For USDAF Spherical Bearings

| Shaft Size | Bearing Series | L ₁₀ Life Hours | Allowable Equivalent Radial Load Rating (Lbs.) at Various Rpm. * | | | | | | | | | | | | |
|-------------------------------|----------------|----------------------------|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| | | | 50 | 100 | 150 | 200 | 250 | 300 | 400 | 500 | 550 | 600 | 650 | 700 | 750 |
| 23000K SERIES | | | | | | | | | | | | | | | |
| 10-15/16, 11 | 23060K | 50,000 | 97865 | 79491 | 70387 | 64567 | 60386 | 57172 | 52445 | 49049 | 47666 | 46438 | 45336 | 44339 | 43431 |
| | | 80,000 | 84995 | 69037 | 61130 | 56076 | 52445 | 49653 | 45548 | 42598 | 41397 | 40331 | 39374 | 38508 | 37719 |
| | | 100,000 | 79491 | 64567 | 57172 | 52445 | 49049 | 46438 | 42598 | 39840 | 38717 | 37719 | 36824 | 36015 | 35277 |
| 11-7/16,11-1/2 11-15/16,12 | 23064K | 50,000 | 101201 | 82201 | 72786 | 66768 | 62445 | 59121 | 54233 | 50721 | 49291 | 48021 | 46882 | 45851 | 44912 |
| | | 80,000 | 87892 | 71391 | 63214 | 57987 | 54233 | 51346 | 47100 | 44050 | 42809 | 41706 | 40716 | 39821 | 39005 |
| | | 100,000 | 82201 | 66768 | 59121 | 54233 | 50721 | 46021 | 44050 | 41198 | 40037 | 39005 | 38080 | 37243 | 36480 |
| 12-7/16,12-1/2 | 23068K | 50,000 | 117883 | 95751 | 84784 | 77774 | 72738 | 68866 | 63172 | 59081 | 57416 | 55937 | 54609 | 53409 | |
| | | 80,000 | 102380 | 83158 | 73634 | 67546 | 63172 | 59809 | 54864 | 51312 | 49665 | 48580 | 47428 | 46385 | |
| | | 100,000 | 95751 | 77774 | 68866 | 63172 | 59081 | 55937 | 51312 | 47989 | 46636 | 45435 | 44357 | 43381 | |
| 12-15/16,13 13-7/16,13-1/2 | 23072K | 50,000 | 122331 | 99364 | 87984 | 80709 | 75483 | 71465 | 65556 | 61311 | 59583 | 58048 | 56670 | | |
| | | 80,000 | 106243 | 86296 | 76413 | 70094 | 65556 | 62066 | 56934 | 53248 | 51747 | 50414 | 49217 | | |
| | | 100,000 | 99363 | 80709 | 71465 | 65556 | 61311 | 56048 | 53248 | 49800 | 48396 | 47149 | 46031 | | |
| 13-15/16, 14 | 23076K | 50,000 | 126780 | 102977 | 91183 | 83643 | 78227 | 74064 | 67940 | 63540 | 61749 | 60158 | | | |
| | | 80,000 | 110107 | 89435 | 79191 | 72643 | 67940 | 64323 | 59005 | 55184 | 53629 | 52247 | | | |
| | | 100,000 | 102977 | 83643 | 74064 | 67940 | 63540 | 60158 | 55184 | 51611 | 50156 | 48864 | | | |
| 15 | 23080K | 50,000 | 151246 | 122850 | 108780 | 99785 | 93324 | 88357 | 81051 | 75803 | 73666 | | | | |
| | | 80,000 | 131355 | 106694 | 94474 | 86662 | 81051 | 76737 | 70392 | 65834 | 63978 | | | | |
| | | 100,000 | 122850 | 99785 | 88357 | 81051 | 75803 | 71768 | 65834 | 61571 | 59835 | | | | |
| 15-3/4 | 23084K | 50,000 | 157919 | 128270 | 113579 | 104187 | 97441 | 92255 | 84627 | 79147 | 76916 | | | | |
| | | 80,000 | 137151 | 111401 | 98642 | 90486 | 84627 | 80122 | 73497 | 66736 | 66601 | | | | |
| | | 100,000 | 128270 | 104187 | 92255 | 84627 | 79147 | 74934 | 68738 | 64287 | 62475 | | | | |
| 23100K SERIES | | | | | | | | | | | | | | | |
| 9-7/16, 9-1/2 | 23152K | 50,000 | 108992 | 88529 | 78390 | 71908 | 67252 | 63672 | 58407 | 54625 | 53086 | 51718 | 50491 | 49381 | 48369 |
| | | 80,000 | 94658 | 76886 | 68080 | 62451 | 58407 | 55299 | 50726 | 47442 | 46104 | 44916 | 43851 | 42886 | 42008 |
| | | 100,000 | 88529 | 71908 | 63672 | 58407 | 54625 | 51718 | 47442 | 44370 | 43119 | 42008 | 41011 | 40110 | 39288 |
| 10-7/16, 10-1/2 | 23156K | 50,000 | 117883 | 95751 | 84784 | 77774 | 72738 | 68866 | 63172 | 59081 | 57416 | 55937 | 54609 | 53409 | 52315 |
| | | 80,000 | 102380 | 83158 | 73634 | 67546 | 63172 | 59809 | 54864 | 51312 | 49865 | 48580 | 47426 | 46385 | 45435 |
| | | 100,000 | 95751 | 77774 | 68866 | 63172 | 59061 | 55937 | 51312 | 47989 | 46636 | 45435 | 44357 | 43381 | 42493 |
| 10-15/16, 11 | 23160K | 50,000 | 133452 | 108397 | 95982 | 88046 | 82345 | 77962 | 71515 | 66885 | 64999 | 63325 | 61822 | 60463 | 59224 |
| | | 80,000 | 115902 | 94142 | 83359 | 76467 | 71515 | 67709 | 62110 | 58089 | 56451 | 54997 | 53692 | 52511 | 51436 |
| | | 100,000 | 108397 | 88046 | 77962 | 71515 | 66885 | 63325 | 58089 | 54327 | 52796 | 51436 | | | |
| 11-15/16,12 | 23164K | 50,000 | 160143 | 130076 | 115178 | 105655 | 98814 | 93554 | 85818 | 80262 | 77999 | 75989 | 74186 | | |
| | | 60,000 | 139082 | 112970 | 100031 | 91760 | 85818 | 81251 | 74532 | 69706 | 67741 | 65996 | 64430 | | |
| | | 100,000 | 130076 | 105655 | 93554 | 85818 | 80262 | 75989 | 69706 | 65193 | 63355 | 61723 | 60258 | | |
| 12-7/16,12-1/2 | 23168K | 50,000 | 184609 | 149949 | 132775 | 121797 | 113910 | 107847 | 98930 | 92524 | 89916 | 87599 | | | |
| | | 80,000 | 160331 | 130229 | 115314 | 105779 | 98930 | 93664 | 85919 | 80356 | 78091 | 76079 | | | |
| | | 100,000 | 149949 | 121797 | 107847 | 96930 | 92524 | 87599 | 80356 | 75153 | 73034 | 71152 | | | |
| 13-7/16, 13-1/2 | 23172K | 50,000 | 189058 | 153562 | 135975 | 124732 | 116655 | 110446 | 101313 | 94753 | 92062 | 89710 | | | |
| | | 80,000 | 164194 | 133367 | 118092 | 108326 | 101313 | 95921 | 87990 | 82292 | 79972 | 77912 | | | |
| | | 100,000 | 153562 | 124732 | 110446 | 101313 | 94753 | 69710 | 82292 | 76964 | 74794 | 72667 | | | |
| 13-15/16,14 | 23176K | 50,000 | 203515 | 165306 | 146373 | 134270 | 125576 | 118892 | 109061 | 101999 | 99124 | | | | |
| | | 80,000 | 176750 | 143566 | 127123 | 116612 | 109061 | 103256 | 94718 | 88585 | 86086 | | | | |
| | | 100,000 | 165306 | 134270 | 118892 | 109061 | 101999 | 96570 | 88585 | 82649 | 80514 | | | | |
| 23200K SERIES | | | | | | | | | | | | | | | |
| 8-15/16, 9 | 23248K | 50,000 | 124562 | 101176 | 89588 | 82180 | 76859 | 72768 | 66751 | 62429 | 60669 | 59106 | 57704 | 56435 | 55279 |
| | | 80,000 | 108181 | 87870 | 77806 | 71373 | 66751 | 63198 | 57973 | 54219 | 52691 | 51333 | 50115 | 49013 | 48009 |
| | | 100,000 | 101176 | 82180 | 72768 | 66751 | 62429 | 59106 | 54219 | 50708 | 49279 | 48009 | 46870 | 45839 | 44900 |
| 9-7/16,9-1/2 | 23252K | 50,000 | 145686 | 118333 | 104780 | 96117 | 89893 | 85108 | 78071 | 73016 | 70958 | 69129 | 67469 | 66005 | 64653 |
| | | 60,000 | 126526 | 102771 | 91001 | 83476 | 78071 | 73915 | 67804 | 63413 | 61626 | 60036 | 58613 | 57325 | 56150 |
| | | 100,000 | 116333 | 96117 | 85108 | 76071 | 73016 | 69129 | 63413 | 59307 | 57635 | 56150 | 54816 | 53613 | 52515 |
| 10-7/16,10-1/2 | 23256K | 50,000 | 151246 | 122850 | 106780 | 99765 | 93324 | 86357 | 81051 | 75603 | 73666 | 71768 | 70065 | 68524 | 67121 |
| | | 80,000 | 131355 | 106694 | 94474 | 86662 | 81051 | 76737 | 70392 | 65834 | 63978 | 62330 | 60651 | 59513 | 58294 |
| | | 100,000 | 122850 | 99785 | 86357 | 81051 | 75803 | 71768 | 65634 | 61571 | 59635 | 58294 | 56910 | 55659 | 54519 |
| 10-15/16,11 | 23260K | 50,000 | 173488 | 140916 | 124777 | 114459 | 107048 | 101350 | 92970 | 86950 | 84499 | 82322 | 80369 | 78602 | |
| | | 60,000 | 150672 | 122384 | 106367 | 99407 | 92970 | 87043 | 80743 | 75515 | 73366 | 71496 | 69799 | 68265 | |
| | | 100,000 | 140916 | 114459 | 101350 | 92970 | 86950 | 82322 | 75515 | 70625 | 68635 | 66666 | | | |
| 11-15/16,12 | 23264K | 50,000 | 192394 | 156272 | 138374 | 126933 | 118714 | 112395 | 103101 | 96425 | 93707 | 91293 | 89127 | | |
| | | 80,000 | 167092 | 135721 | 120176 | 110240 | 103101 | 97614 | 69542 | 83744 | 81364 | 79267 | 77406 | | |
| | | 100,000 | 156272 | 126933 | 112395 | 103101 | 96425 | 91293 | 83744 | 78322 | 76114 | 74153 | 72393 | | |
| 12-7/16 12-1/2 | 23266K | 50,000 | 222421 | 180662 | 159970 | 146743 | 137241 | 129936 | 119192 | 111474 | 108332 | 105541 | | | |
| | | 80,000 | 193170 | 158903 | 138932 | 127445 | 119192 | 112848 | 103517 | 96614 | 94085 | 91681 | | | |
| | | 100,000 | 180662 | 146743 | 129936 | 119192 | 111474 | 105541 | 96614 | 90545 | 87993 | 85726 | | | |

* Oil lubrication to the right of the heavy line.

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SELECTION/DIMENSIONS

USDAF Adapter Mount Pillow Block

| Shaft Dia | Housing | Open Housing Part No.** | Closed Housing Part No.** | Bearing Part No. | Dynamic Capacity (C), lbs. | Max RPM LER (Grease) | SNP Part No. | TRIPLE-TECT Part No. | # LER Part No. | Aux Part No. |
|-----------|---------|--------------------------|---------------------------|------------------|----------------------------|----------------------|---------------------------|----------------------|----------------------|----------------------|
| 8-15/16 | 3248 | H4S-USDAF-3248 037464 | CH4S-USDAF-3248 037465 | 23248K 422511 | 560,000 | 700 | H3248-SNP-815 047628 | 90TT815 *043571 | 90LER815 042544 | 90AUX815 040899 |
| | | H4S-USDAF-3248 037464 | CH4S-USDAF-3248 037465 | 23248K 422511 | | | H3248-SNP-900 047629 | 90TT900 043572 | 90LER900 *042545 | 90AUX900 040995 |
| 9 | 3248 | H4S-USDAF-3152 037461 | CH4S-USDAF-3152 037462 | 23152K 421294 | 490,000 | 670 | H3152-SNP-907 047630 | 84TT908 043538 | 84LER907 *042510 | 84AUX907 040900 |
| | | H4S-USDAF-3252 037442 | CH4S-USDAF-3252 037443 | 23252K 421290 | | | H3252-SNP-907 047646 | 84TT907 043538 | 84LER907 *042510 | 84AUX907 040900 |
| 9-7/16 | 3152 | H4S-USDAF-3152 037461 | CH4S-USDAF-3152 037462 | 23152K 421294 | 490,000 | 670 | H3152-SNP-908 047631 | 84TT908 422545 | 84LER908 *422594 | 84AUX908 040901 |
| | | H4S-USDAF-3252 037442 | CH4S-USDAF-3252 037443 | 23252K 421290 | | | H3252-SNP-908 047647 | 84TT908 422545 | 84LER908 *422594 | 84AUX908 040901 |
| 9-1/2 | 3152 | H4S-USDAF-3156 037432 | CH4S-USDAF-3156 037433 | 23156K 421285 | 530,000 | 630 | H3156SNP-1007 045431 | 94TT1007 047940 | 94LER1007 *042036 | 94AUX1007 045778 |
| | | H4S-USDAF-3256 037444 | CH4S-USDAF-3256 037446 | 23256K 421291 | | | H325-SNP-1007 047648 | 94TT1007 047940 | 94LER1007 *042036 | 94AUX1007 045778 |
| 10-7/16 | 3156 | H4S-USDAF-3156 037432 | CH4S-USDAF-3156 037433 | 23156K 421285 | 530,000 | 630 | H3156-SNP-1008 047637 | 94TT1008 047941 | 94LER1008 *422573 | 94AUX1008 042396 |
| | | H4S-USDAF-3256 037444 | CH4S-USDAF-3256 037446 | 23256K 421291 | | | H3256-SNP-1008 047649 | 94TT1008 047941 | 94LER1008 *422573 | 94AUX1008 042396 |
| 10-1/2 | 3156 | H4S-USDAF-3156 037432 | CH4S-USDAF-3156 037433 | 23156K 421285 | 530,000 | 630 | H3156-SNP-1008 047637 | 94TT1008 047941 | 94LER1008 *422573 | 94AUX1008 042396 |
| | | H4S-USDAF-3256 037444 | CH4S-USDAF-3256 037446 | 23256K 421291 | | | H3256-SNP-1008 047649 | 94TT1008 047941 | 94LER1008 *422573 | 94AUX1008 042396 |
| 10-15/16 | 060 | H4S-USDAF-060 422580 | CH4S-USDAF-060 037426 | 23060K 422582 | 440,000 | 630 | H3060-SNP-1015 043581 | 96TT1015 047942 | 96LER1015 *042037 | 96AUX1015 045781 |
| | | H4S-USDAF-3160 037434 | CH4S-USDAF-3160 037435 | 23160K 421286 | | | H3160-SNP-1015 047638 | 96TT1015 047942 | 96LER1015 *042037 | 96AUX1015 045781 |
| | | H4S-USDAF-3260 037447 | CH4S-USDAF-3260 037448 | 23260K 421292 | | | H3260-SNP-1015 047678 | 96TT1015 047942 | 96LER1015 *042037 | 96AUX1015 045781 |
| 11 | 060 | H4S-USDAF-060 422580 | CH4S-USDAF-060 037426 | 23060K 422582 | 440,000 | 630 | H3060-SNP-1100 422576 | 96TT1100 047943 | 96LER1100 *422588 | 96AUX1100 044440 |
| | | H4S-USDAF-3160 037434 | CH4S-USDAF-3160 037435 | 23160K 421286 | | | H3160-SNP-1100 045464 | 96TT1100 047943 | 96LER1100 *422588 | 96AUX1100 044440 |
| | | H4S-USDAF-3260 037447 | CH4S-USDAF-3260 037448 | 23260K 421292 | | | H3260-SNP-1100 047679 | 96TT1100 047943 | 96LER1100 *422588 | 96AUX1100 044440 |
| 11-7/16 | 064 | H4S-USDAF-064 422502 | CH4S-USDAF-064 037427 | 23064K 422531 | 455,000 | 600 | H3064-SNP-1107 043582 | 98TT1107 047944 | 98LER1107 *042038 | 98AUX1107 045784 |
| 11-1/2 | 064 | H4S-USDAF-064 422502 | CH4S-USDAF-064 037427 | 23064K 422531 | 455,000 | 600 | H3064-SNP-1108 043583 | 98TT1108 047945 | 98ER1108 *042039 | 98AUX1107 045787 |
| 11-15/16 | 064L | H4S-USDAF-064L 422529 | CH4S-USDAF-064L 037428 | 23064K 422531 | 455,000 | 600 | H3064L-SNP-1115 043584 | 100TT1115 047946 | 100ER1115 *042040 | 100AUX1115 045790 |
| | | H4S-USDAF-3164 037436 | CH4S-USDAF-3164 037437 | 23164K 421287 | | | H3164-SNP-1115 047639 | 100TT1115 047946 | 100ER1115 *042040 | 100AUX1115 045790 |
| | | H4S-USDAF-3264 037449 | CH4S-USDAF-3264 037450 | 23264K 422844 | | | H3264-SNP-1115 047680 | 100TT1115 047946 | 100ER1115 *042040 | 100AUX1115 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.

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Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

S-2000

UNISPHERE II

IMPERIAL

UNIFIED SAF



SELECTION/DIMENSIONS

USDAF Adapter Mount Pillow Block

| Shaft Dia | Housing | Open Housing Part No.** | Closed Housing Part No.** | Bearing Part No. | Dynamic Capacity (C), lbs. | Max RPM LER (Grease) | SNP Part No. | TRIPLE-TEGT Part No. | # LER Part No. | Aux Part No. |
|-----------|---------|--------------------------|---------------------------|------------------|----------------------------|----------------------|---------------------------|----------------------|----------------------|----------------------|
| 12 | 064L | H4S-USDAF-064L 422529 | CH4S-USDAF-064L 037428 | 23064K 422531 | 455,000 | 600 | H3064L-SNP-1200 422525 | 100TT1200 047947 | 100ER1200 *422535 | 100AUX1200 045793 |
| | 3164 | H4S-USDAF-3164 037436 | CH4S-USDAF-3164 037437 | 23164K 421287 | 720,000 | 530 | H3164-SNP-1200 050531 | 100TT1200 047947 | 100ER1200 *422535 | 100AUX1200 045793 |
| | 3264 | H4S-USDAF-3264 037449 | CH4S-USDAF-3264 037450 | 23264K 422844 | 865,000 | 530 | H3264-SNP-1200 422843 | 100TT1200 047947 | 100ER1200 *422535 | 100AUX1200 045793 |
| 12-7/16 | 068 | H4S-USDAF-068 035183 | CH4S-USDAF-068 035185 | 23068K 421282 | 530,000 | 560 | H3064-SNP-1207 047632 | 102TT1207 047948 | 102ER1207 *046498 | 102AUX1207 046567 |
| | 3168 | H4S-USDAF-3168 035945 | CH4S-USDAF-3168 035946 | 23168K 052081 | 830,000 | 500 | H3168-SNP-1207 047641 | 102TT1207 047948 | 102ER1207 *046498 | 102AUX1207 046567 |
| | 3268 | H4S-USDAF-3268 037451 | CH4S-USDAF-3268 037452 | 23268K 421293 | 1,000,000 | 480 | H328-SNP-1207 047681 | 102TT1207 047948 | 102ER1207 *046498 | 102AUX1207 046567 |
| 12-1/2 | 068 | H4S-USDAF-068 035183 | CH4S-USDAF-068 035185 | 23068K 421282 | 530,000 | 560 | H3068-SNP-1208 047635 | 102TT1208 047949 | 102ER1208 *046499 | 102AUX1208 046568 |
| | 3168 | H4S-USDAF-3168 035945 | CH4S-USDAF-3168 035946 | 23168K 052081 | 830,000 | 500 | H31680-SNP-1208 047642 | 102TT1208 047949 | 102ER1208 *046499 | 102AUX1208 046568 |
| | 3268 | H4S-USDAF-3268 037451 | CH4S-USDAF-3268 037452 | 23268K 421293 | 1,000,000 | 480 | H3268-SNP-1208 047682 | 102TT1208 047949 | 102ER1208 *046499 | 102AUX1208 046568 |
| 12-15/16 | 072 | H4S-USDAF-072 044164 | CH4S-USDAF-072 037429 | 23072K 422036 | 550,000 | 530 | H3072-SNP-1215 043635 | 104TT1215 047950 | 104ER1215 *042090 | 102AUX1215 045796 |
| 13 | 072 | H4S-USDAF-072 044164 | CH4S-USDAF-072 037429 | 23072K 422036 | 550,000 | 530 | H3072-SNP-1300 043636 | 104TT1300 047951 | 072ER1300 *042091 | 104AUX1300 045799 |
| 13-7/16 | 072L | H4S-USDAF-072L 044165 | CH4S-USDAF-072L 037430 | 23072K 422036 | 550,000 | 530 | H3072L-SNP-1307 043637 | 106TT1307 047952 | 106ER1307 *042092 | 106AUX1307 045802 |
| | 3172 | H4S-USDAF-3172 037438 | CH4S-USDAF-3172 037439 | 23172K 421288 | 850,000 | 480 | H3172-SNP-1307 047643 | 106TT1307 047952 | 106ER1307 *042092 | 106AUX1307 045802 |
| 13-1/2 | 072L | H4S-USDAF-072L 044165 | CH4S-USDAF-072L 037430 | 23072 422036 | 550,000 | 530 | H3072L-SNP-1308 043638 | 106TT1308 047953 | 106ER1308 *042093 | 106AUX1308 045805 |
| | 3172 | H4S-USDAF-3172 037438 | CH4S-USDAF-3172 037439 | 23172K 421288 | 850,000 | 480 | H3172-SNP-1308 045434 | 106TT1308 047953 | 106ER1308 *042093 | 106AUX1308 045805 |
| 13-15/16 | 076 | H4S-USDAF-076 044166 | CH4S-USDAF-076 037431 | 23076K 422054 | 570,000 | 500 | H3076-SNP-1315 043639 | 108TT1315 047954 | 108ER1315 *042094 | 108AUX1315 045808 |
| | 3176 | H4S-USDAF-3176 037440 | CH4S-USDAF-3176 037441 | 23176K 421289 | 915,000 | 450 | H3176-SNP-1315 047644 | 108TT1315 047954 | 108ER1315 *042094 | 108AUX1315 045808 |
| 14 | 076 | H4S-USDAF-076 044166 | CH4S-USDAF-076 037431 | 23076K 422054 | 570,000 | 500 | H3076-SNP-1400 043640 | 108TT1400 047955 | 108ER1400 *042095 | 108AUX1400 046569 |
| | 3176 | H4S-USDAF-3176 037440 | CH4S-USDAF-3176 037441 | 23176K 421289 | 915,000 | 450 | H3176-SNP-1400 047645 | 108TT1400 047955 | 108ER1400 *042095 | 108AUX1400 046569 |
| 15 | 080 | H4S-USDAF-080 035417 | CH4S-USDAF-080 035418 | 23080K 421283 | 680,000 | 450 | H3080-SNP-1500 040830 | 110TT1500 047956 | 110ER1500 *050474 | 110AUX1500 046570 |
| 15-3/4 | 84 | H4S-USDAF-084 035943 | CH4S-USDAF-084 035944 | 23084K 421284 | 710,000 | 450 | H3084-SNP-1512 047636 | 112TT1512 047957 | 112ER1512 *046566 | 112AUX1512 046572 |

NOTE: LER seals are made from Aluminum unless otherwise noted by the * symbol.

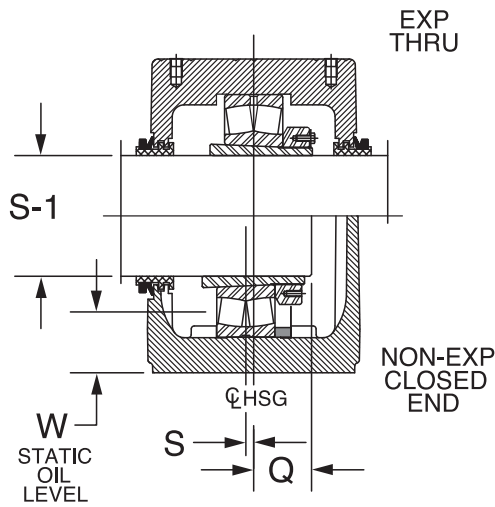
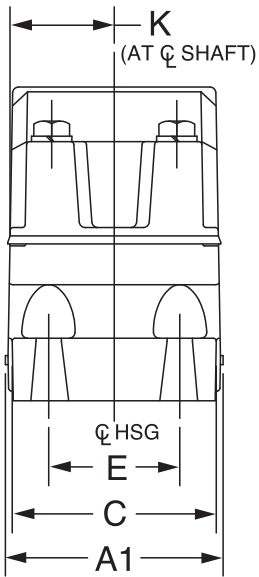
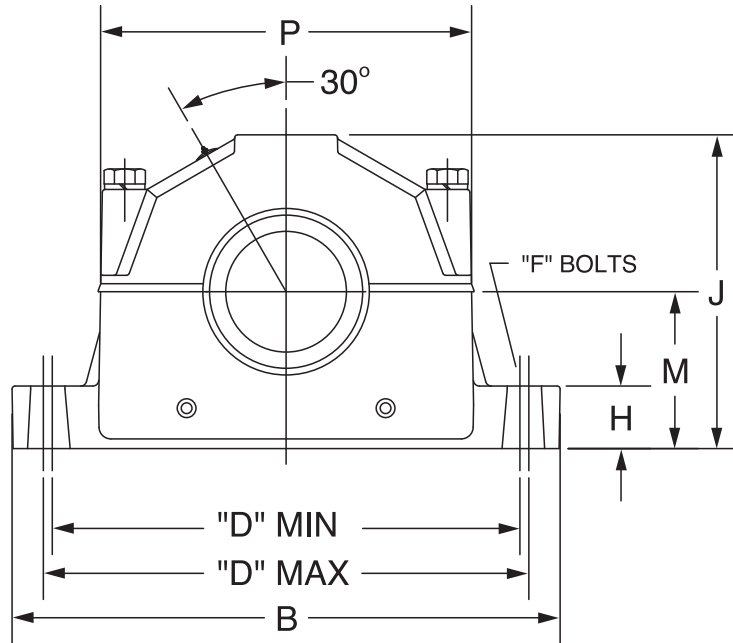
If an * appears by the part number, the LER seal is manufactured from Steel.

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

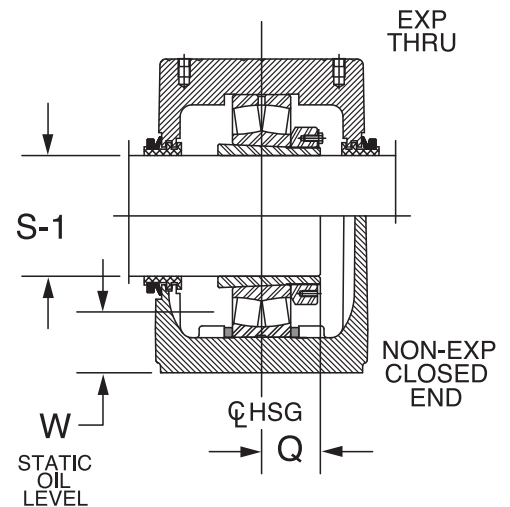


SELECTION/DIMENSIONS

USDAF Housing Dimensions



23000 SERIES
(REQUIRES (1) STABILIZING RING)



23100, 23200 SERIES
(REQUIRES (2) STABILIZING RINGS)

| | | | |
|---------------------------------|--|----------------------------|--------------------------|
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SELECTION/DIMENSIONS

USDAF Housing Dimensions

| S-1 Shaft Size | Housing | Bearing Number | A1 ▲ | B | C | D | | E | F Base Bolt Size 4-Req'd | H | | | | | | | | |
|-------------------|------------|------------------|-------|-------|-------|-------|-------|------|--------------------------|------|-------|-------|-------|-------|-------|-------|-------|------|
| | | | | | | Min | Max | | | | | | | | | | | |
| 8-15/16 9 | 3248 | 23248K | 14.28 | 35.00 | 13.75 | 29.00 | 30.50 | 8.75 | 1-5/8 | 3.75 | | | | | | | | |
| 9-7/16 | 3152 | 23152K | | | | | | | | | | | | | | | | |
| 9-1/2 | 3252 | 23252K | | | | | | | | | | | | | | | | |
| 10-7/16 | 3156 | 23156K | | | | | | | | | | | | | | | | |
| 10-1/2 | 3256 | 23256K | | | | | | | | | | | | | | | | |
| 10-15/16 11 | 60 3160 | 23060K 23160K | | | | | | | | | | | | | | | | |
| 11-7/16 11-1/2 | 64 | 23064K | 16.36 | 38.25 | 14.75 | 31.63 | 34.63 | 9.00 | 1-5/8 | 3.38 | | | | | | | | |
| 11-15/16 12 | 064L | | | | | | | | | | | | | | | | | |
| 12-7/16 12-1/2 | 68 | 23068K | | | | | | | | | 15.85 | 39.00 | 15.25 | 32.00 | 34.00 | 10.00 | 1-7/8 | 4.19 |

| S-1 Shaft Size | Housing | Bearing Number | J | K | M | P | Q ★ | S • | Total Exp. | | | | |
|-------------------|------------|------------------|-------|------|-------|-------|-------|------|------------|-------|-------|------|------|
| 8-15/16 9 | 3248 | 23248K | 20.88 | 6.83 | 10.25 | 23.94 | 4.88 | 0.00 | 3/8 | | | | |
| 9-7/16 | 3152 | 23152K | | | | | 4.63 | | 3/8 | | | | |
| 9-1/2 | 3252 | 23252K | | | | | 5.42 | | 3/4 | | | | |
| 10-7/16 | 3156 | 23156K | | | | | 5.00 | | 3/4 | | | | |
| 10-1/2 | 3256 | 23256K | | | | | 4.58 | | 3/4 | | | | |
| 10-15/16 11 | 60 3160 | 23060K 23160K | | | | | 23.44 | | 7.72 | 12.00 | 26.50 | 4.31 | 0.19 | 3/8 |
| 11-7/16 11-1/2 | 64 | 23064K | 5.33 | 0.00 | 3/4 | | | | | | | | |
| 11-15/16 12 | 064L | | 4.45 | 0.19 | 3/8 | | | | | | | | |
| 12-7/16 12-1/2 | 68 | 23068K | 24.00 | 7.47 | 12.00 | 26.38 | | 4.81 | | | | 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

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



SELECTION/DIMENSIONS

USDAF Housing Dimensions

Bearing Reference Guide

E-Family Roller Bearings

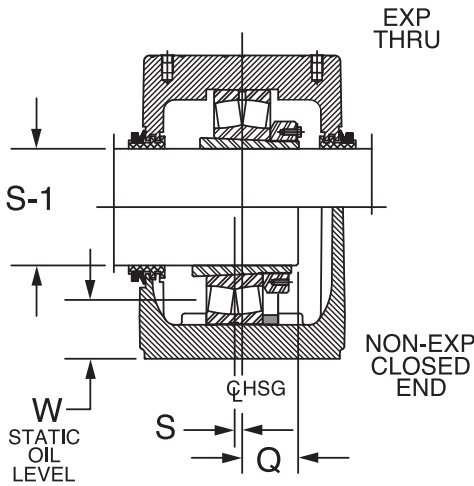
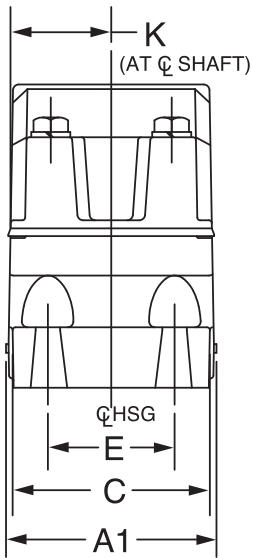
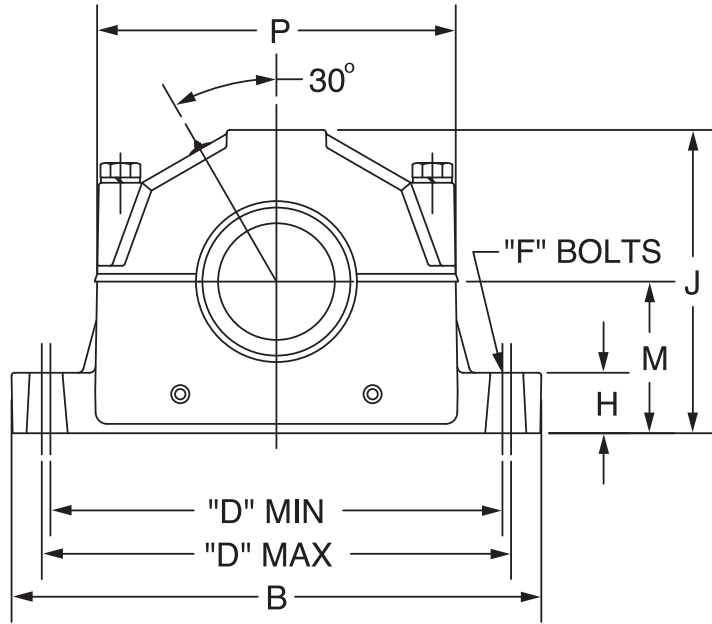
Specialty Tapered Products

S-2000

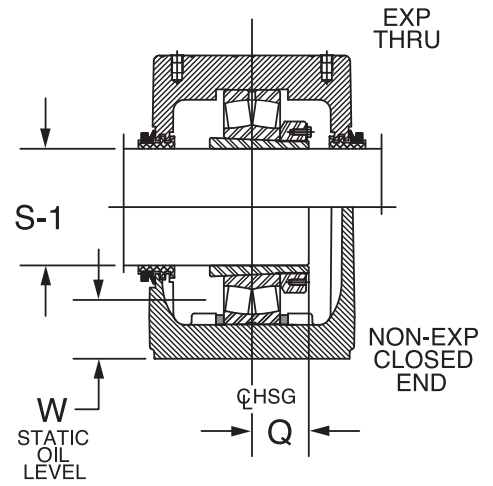
UNISPHERE II

IMPERIAL

UNIFIED SAF



23000 SERIES
(REQUIRES (1) STABILIZING RING)



23100, 23200 SERIES
(REQUIRES (2) STABILIZING RINGS)

| | | | |
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SELECTION/DIMENSIONS

USDAF Housing Dimensions

| 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 11 | 3260 | 23260K | 16.98 | 41.75 | 15.75 | 35.00 | 36.50 | 10.25 | 1-7/8 | 4.50 |
| 11-15/16 12 | 3164 | 23164K | | | | | | | | |
| 12-15/16 13 | 072 | 23072K | | | | | | | | |
| 13-7/16 13-1/2 | 072L | | | | | | | | | |
| 13-15/16 14 | 076 | 23076K | 18.31 | 43.58 | 17.75 | 36.75 | 38.25 | 10.75 | 2 | 5.00 |
| 11-15/16 12 | 3264 | 23264K | | | | | | | | |
| 12-7/16 | 3168 | 23168K | | | | | | | | |
| 12-1/2 | 3268 | 23268K | | | | | | | | |
| 13-7/16 13-1/2 | 3172 | 23172K | | | | | | | | |
| 13-15/16 14 | 3176 | 23176K | | | | | | | | |
| 15 | 080 | 23080K | | | | | | | | |
| 15-3/4 | 084 | 23084K | 18.38 | 46.00 | 17.13 | 39.25 | 40.75 | 11.00 | 2 | 5.25 |
| 11-15/16 12 | 3264 | 23264K | | | | | | | | |
| 12-7/16 | 3168 | 23168K | | | | | | | | |
| 12-1/2 | 3268 | 23268K | | | | | | | | |
| 13-7/16 13-1/2 | 3172 | 23172K | | | | | | | | |
| 13-15/16 14 | 3176 | 23176K | | | | | | | | |
| 15 | 080 | 23080K | | | | | | | | |
| 15-3/4 | 084 | 23084K | | | | | | | | |

| S-1 Shaft Size | Housing | Bearing Number | J | K | M | P | Q ★ | S • | Total Exp. |
|-------------------|---------|----------------|-------|------|-------|-------|------|------|------------|
| 10-15/16 11 | 3260 | 23260K | 25.75 | 8.16 | 12.81 | 29.13 | 5.95 | 0.00 | 3/4 |
| 11-15/16 12 | 3164 | 23164K | | | | | 5.72 | 0.00 | 3/4 |
| 12-15/16 13 | 072 | 23072K | | | | | 4.81 | 0.19 | 3/8 |
| 13-7/16 13-1/2 | 072L | | | | | | 3/8 | | |
| 13-15/16 14 | 076 | 23076K | 5.95 | 0.19 | 3/8 | | | | |
| 11-15/16 12 | 3264 | 23264K | 28.00 | 8.70 | 14.00 | 31.13 | 6.22 | 0.00 | 1/2 |
| 12-7/16 | 3168 | 23168K | | | | | 6.00 | 0.00 | 1/2 |
| 12-1/2 | 3268 | 23268K | 29.00 | 8.75 | 14.50 | 33.17 | 6.66 | 0.00 | 1/2 |
| 13-7/16 13-1/2 | 3172 | 23172K | | | | | 6.14 | 0.00 | 3/4 |
| 13-15/16 14 | 3176 | 23176K | | | | | 6.31 | 0.00 | 3/4 |
| 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

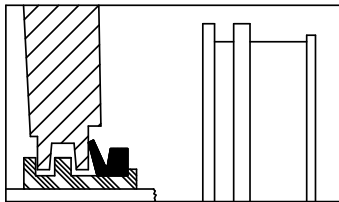
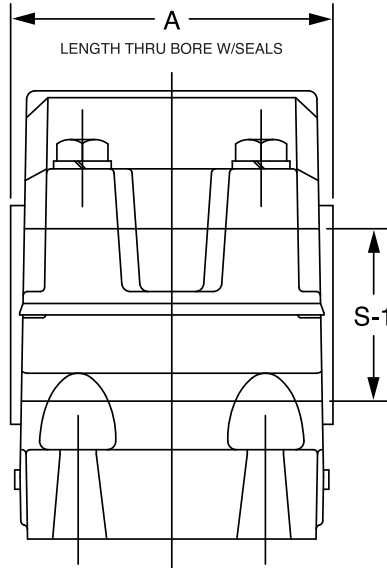
• Non-expansion Bearing Offset From Centerline. For Expansion Bearing S = 0

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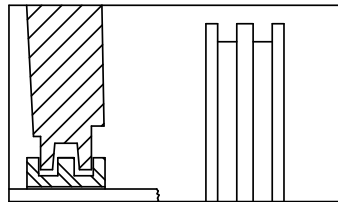


SELECTION/DIMENSIONS

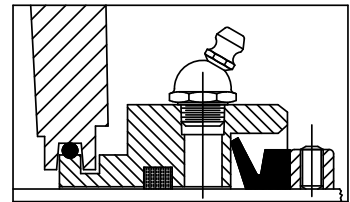
USDAF Pillow Block Seals



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



SELECTION/DIMENSIONS

USDAF Pillow Block Seals - Inch

| S-1 Shaft Size (Inch) | Housing | Seal Group | Part Numbers | | | A | | |
|-----------------------|------------|------------|------------------|----------------------|------------------|-------|-------|----------------|
| | | | TRIPLE-TECT (TT) | Metal Labyrinth (ER) | Auxiliary (AUX) | TT | ER | AUX* |
| 10-15/16 11 | 060 | 96 | 047942 047943 | 042037 422588 | 045781 044440 | 16.53 | 15.25 | 19.84 19.59 |
| 11-7/16 11-1/2 | 064 | 98 | 047944 047945 | 042038 042039 | 045784 045787 | | | 19.84 |
| 11-15/16 2 | 064L | 100 | 047946 047947 | 042040 422535 | 045790 045793 | 16.09 | 14.81 | 19.41 |
| 12-7/16 12-1/2 | 068 | 102 | 047948 047949 | 046498 046499 | 046567 046568 | 17.44 | 16.23 | 20.52 |
| 12-15/16 13 | 072 | 104 | 047950 047951 | 042090 042091 | 045796 045799 | | | 20.77 |
| 13-7/16 13-1/2 | 072L | 106 | 047952 047953 | 042092 042093 | 045802 045805 | 18.63 | 17.42 | 21.97 22.23 |
| 13-15/16 14 | 076 | 108 | 047954 047955 | 042094 042095 | 045808 046569 | | | 18.25 |
| 15 15-3/4 | 080 084 | 110 112 | 047956 047957 | 050474 046566 | 046570 046572 | 13.86 | 13.44 | 18.25 |
| 9-7/16 9-1/2 | 3152 | 84 | 043538 422545 | 042510 422594 | 040900 040901 | 16.53 | 15.17 | 19.64 |
| 10-7/16 10-1/2 | 3156 | 94 | 047940 047941 | 042036 422573 | 045778 042396 | | | 19.84 19.59 |
| 10-15/16 11 | 3160 | 96 | 047942 047943 | 042037 422588 | 045781 044440 | 17.44 | 16.16 | 20.75 |
| 11-15/16 12 | 3164 | 100 | 047946 047947 | 042040 422535 | 045790 045793 | 18.63 | 17.36 | 21.94 |
| 12-7/16 12-1/2 | 3168 | 102 | 047948 047949 | 046498 046499 | 046567 046568 | | | 21.71 |
| 13-7/16 13-1/2 | 3172 | 106 | 047952 047953 | 042092 042093 | 045802 045805 | 17.42 | 17.42 | 21.97 |
| 13-15/16 14 | 3176 | 108 | 047954 047955 | 042094 042095 | 045808 046569 | | | 18.25 |
| 8-15/16 9 | 3248 | 90 | 043571 043572 | 042544 042545 | 040899 040995 | 14.78 | 13.44 | 18.25 |
| 9-7/16 | 3252 | 84 | 043538 422545 | 042510 422594 | 040900 040901 | 15.48 | 15.06 | 19.88 |
| 10-7/16 10-1/2 | 3256 | 94 | 047940 047941 | 042036 422573 | 045778 042396 | 16.53 | 15.17 | 19.64 |
| 10-15/16 11 | 3260 | 96 | 047942 047943 | 042037 422588 | 045781 044440 | 17.44 | 16.16 | 20.75 20.50 |
| 11-15/16 12 | 3264 | 100 | 047946 047947 | 042040 422535 | 045790 045793 | 18.63 | 17.36 | 21.94 |
| 12-7/16 12-1/2 | 3268 | 102 | 047948 047949 | 046498 046499 | 046557 046568 | | | 21.95 |

* Includes Collar

Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

S-2000

UNISPHERE II

IMPERIAL

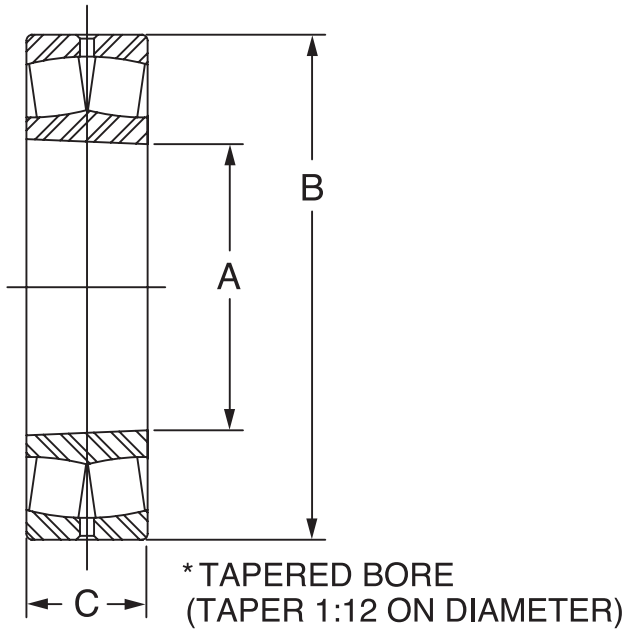
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SELECTION/DIMENSIONS

USDAF 23000, 23100, 23200 Spherical Roller Bearings

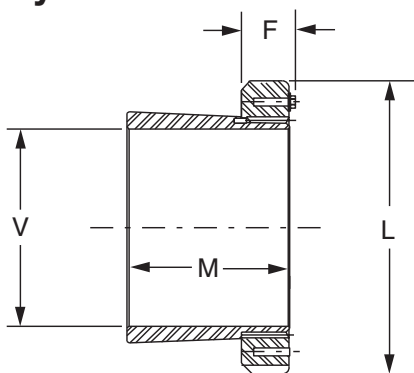


| Housing | Bearing Number | Part Number | Approx. Weight (lbs) | A* inch (mm) | B inch (mm) | C inch (mm) |
|----------|----------------|---------------|----------------------|--------------|--------------|-------------|
| 060 | 23060K | 422582 | 150 | 11.8110(300) | 18.1102(460) | 4.6457(118) |
| 064/064L | 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) |
| 3152 | 23152K | 421294 | 192 | 10.2362(260) | 17.3228(440) | 5.6693(144) |
| 3156 | 23156K | 421285 | 205 | 11.0236(280) | 18.1102(460) | 5.7488(146) |
| 3160 | 23160K | 421286 | 268 | 11.8110(300) | 19.6850(500) | 6.2992(160) |
| 3164 | 23164K | 421287 | 350 | 12.5984(320) | 21.2598(540) | 6.9291(176) |
| 3168 | 23168K | 052081 | 440 | 13.3858(340) | 22.8346(580) | 7.4803(190) |
| 3172 | 23172K | 421288 | 463 | 14.1732(360) | 23.6220(600) | 7.5590(192) |
| 3176 | 23176K | 421289 | 487 | 14.9606(380) | 24.4094(620) | 7.6378(194) |
| 3248 | 23248K | 422511 | 225 | 9.4488(240) | 17.3228(440) | 6.2992(160) |
| 3252 | 23252K | 421290 | 295 | 10.2362(260) | 18.8976(480) | 6.8504(174) |
| 3256 | 23256K | 421291 | 311 | 11.0236(280) | 19.6850(500) | 6.9291(176) |
| 3260 | 23260K | 421292 | 405 | 11.8110(300) | 21.2598(540) | 7.5590(192) |
| 3264 | 23264K | 422844 | 519 | 12.5984(320) | 22.8346(580) | 8.1890(208) |
| 3268 | 23268K | 421293 | 629 | 13.3858(340) | 24.4094(620) | 8.8189(224) |



SELECTION/DIMENSIONS

USDAF SNP Adapter Assembly



| Housing | Bearing Number | SNP Number | Part Number | Approx Weight (Lbs) | V Shaft Size (In.) | L (In.) | F Max (In.) | M (In.) |
|---------|----------------|----------------|---------------|---------------------|--------------------|---------|-------------|---------|
| 60 | 23060K | SNP3060-1015 | 043581 | 59.0 | 10-15/16 | 14.19 | 1.94 | 6.72 |
| | | SNP3060-1100 | 422576 | 56.8 | 11 | | | |
| 64 | 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 | | | |
| 68 | 23068K | SNP3068-1207 | 047632 | 78.0 | 12-7/16 | 15.76 | 2.16 | 7.53 |
| | | SNP3068-1208 | 047635 | 75.4 | 12-1/2 | | | |
| 72 | 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 | | | |
| 76 | 23076K | SNP3076-1315 | 043639 | 94.3 | 13-15/16 | 17.76 | 2.36 | 7.73 |
| | | SNP3076-1400 | 043640 | 91.5 | 14 | | | |
| 80 | 23080K | SNP3080-1500 | 040830 | 100.0 | 15 | 18.51 | 2.52 | 8.4 |
| 84 | 23084K | SNP3084-1512 | 047636 | 105.0 | 15-3/4 | 19.32 | 2.52 | 8.49 |
| 3152 | 23152K | SNP3152-907 | 047630 | 44.0 | 9-7/16 | 12.19 | 1.77 | 7.58 |
| | | SNP3152-908 | 047631 | 42.0 | 9-1/2 | | | |
| 3156 | 23156K | H3156-SNP-1007 | 045431 | 30.06 | 10-7/16 | 13.01 | 1.85 | 7.76 |
| | | H3156-SNP-1008 | 047637 | 28.4 | 10-1/2 | | | |
| 3160 | 23160K | H3160-SNP-1015 | 047638 | 65.0 | 10-15/16 | 14.19 | 1.94 | 8.37 |
| | | H3160-SNP-1100 | 045464 | 62.4 | 11 | | | |
| 3164 | 23164K | H3164-SNP-1115 | 047639 | 74.0 | 11-15/16 | 15.01 | 2.03 | 9.1 |
| | | H3164-SNP-1200 | 050531 | 71.0 | 12 | | | |
| 3168 | 23168K | H3168-SNP-1207 | 047641 | 117.2 | 12-7/16 | 15.76 | 2.16 | 9.78 |
| | | H3168-SNP-1208 | 047642 | 113.8 | 12-1/2 | | | |
| 3172 | 23172K | H3172-SNP-1307 | 047643 | 120.0 | 13-7/16 | 16.51 | 2.16 | 9.85 |
| | | H3172-SNP-1308 | 045434 | 116.3 | 13-1/2 | | | |
| 3176 | 23176K | H3176-SNP-1315 | 047644 | 125.0 | 13-15/16 | 17.76 | 2.36 | 10.06 |
| | | H3176-SNP-1400 | 047645 | 121.1 | 14 | | | |
| 3248 | 23248K | SNP-148-815 | 047628 | 48.5 | 8-15/16 | 11.44 | 1.7 | 8.1 |
| | | SNP-148-900 | 047629 | 46.5 | 9 | | | |
| 3252 | 23252K | H3252-SNP-907 | 047646 | 54.5 | 9-7/16 | 12.19 | 1.75 | 8.76 |
| | | H3252-SNP-908 | 047647 | 52.2 | 9-1/2 | | | |
| 3256 | 23256K | H3256-SNP-1007 | 047648 | 59.0 | 10-7/16 | 13.01 | 1.85 | 8.94 |
| | | H3256-SNP-1008 | 047649 | 56.4 | 10-1/2 | | | |
| 3260 | 23260K | H3260-SNP-1015 | 047678 | 69.5 | 10-15/16 | 14.19 | 1.94 | 9.63 |
| | | H3260-SNP-1100 | 047679 | 65.5 | 11 | | | |
| 3264 | 23264K | H3264-SNP-1115 | 047680 | 98.0 | 11-15/16 | 15.01 | 2.03 | 10.36 |
| | | H3264-SNP-1200 | 422843 | 94.5 | 12 | | | |
| 3268 | 23268K | H3268-SNP-1207 | 047681 | 132.1 | 12-7/16 | 15.76 | 2.16 | 11.12 |
| | | H3268-SNP-1208 | 047682 | 128.2 | 12-1/2 | | | |

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SELECTION/DIMENSIONS

USAF 600 Adapter Mount Pillow Block with TRIPLE-TECT Seal Assembly

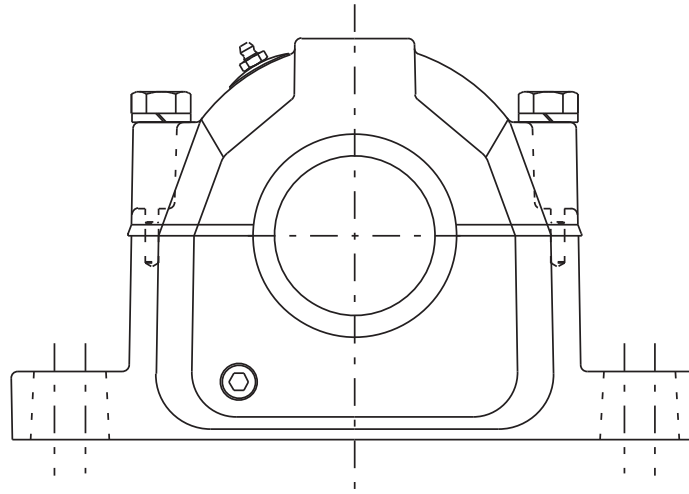


Table 17: Radial & Thrust Factors For USAF Spherical Bearings

| Shaft Size | | Bearing Series | e | $F_A/F_R \leq e$ | | $F_A/F_R > e$ | | Adapter Maximum Allowable Thrust Load Pound † | Dynamic Capacity (C) Pounds | Static Capacity (Co) Lbs. | Maximum RPM | |
|------------------------|-----------------|----------------|-----|------------------|-----|---------------|-----|---|-----------------------------|---------------------------|-------------|------|
| Adapter Mounted Inches | Direct Mount mm | | | X | Y | X | Y | | | | Grease | Oil |
| 1-11/16 | 50 | 22310 | .36 | 1 | 1.9 | 0.67 | 2.8 | 1348 | 51,000 | 50,000 | 3400 | 4300 |
| 1-15/16 | 55 | 22311 | .36 | 1 | 1.9 | 0.67 | 2.8 | 1672 | 60,000 | 58,500 | 3200 | 4000 |
| | 60 | 22312 | .35 | 1 | 1.9 | 0.67 | 3 | - | 69,500 | 69,500 | 2800 | 3600 |
| 2-3/16 | 65 | 22313 | .34 | 1 | 2 | 0.67 | 3 | 2104 | 78,000 | 81,500 | 2600 | 3400 |
| | 70 | 22314 | .34 | 1 | 2 | 0.67 | 3 | - | 86,500 | 86,500 | 2400 | 3200 |
| 2-7/16 | 75 | 22315 | .34 | 1 | 2 | 0.67 | 3 | 2782 | 100,000 | 102,000 | 2200 | 3000 |
| 2-11/16 | 80 | 22316 | .34 | 1 | 2 | 0.67 | 3 | 3128 | 112,000 | 114,000 | 2200 | 3000 |
| 2-15/16 | 85 | 22317 | .33 | 1 | 2 | 0.67 | 3 | 3438 | 122,000 | 125,000 | 2000 | 2800 |
| 3-7/16 | 100 | 22320 | .34 | 1 | 2 | 0.67 | 3 | 4920 | 183,000 | 208,000 | 1700 | 2200 |
| 3-15/16 | 110 | 22322 | .33 | 1 | 2.1 | 0.67 | 3.1 | 5934 | 212,000 | 240,000 | 1500 | 1900 |
| 4-3/16 | 120 | 22324 | .33 | 1 | 2.1 | 0.67 | 3.1 | 6959 | 240,000 | 265,000 | 1400 | 1800 |
| 4-7/16 | 130 | 22326 | .33 | 1 | 2.1 | 0.67 | 3.1 | 8152 | 280,000 | 310,000 | 1300 | 1700 |
| 4-15/16 | 140 | 22328 | .34 | 1 | 2 | 0.67 | 3 | 9628 | 325,000 | 365,000 | 1200 | 1600 |
| 5-3/16 | 150 | 22330 | .33 | 1 | 2 | 0.67 | 3 | 10923 | 365,000 | 415,000 | 1100 | 1500 |
| 5-7/16 | 160 | 22332 | .37 | 1 | 1.8 | 0.67 | 2.7 | 12298 | 325,000 | 365,000 | 1000 | 1400 |
| 5-15/16 6 | 170 | 22334 | .37 | 1 | 1.8 | 0.67 | 2.7 | 13755 | 360,000 | 475,000 | 950 | 1300 |
| 6-15/16 7 | 190 | 22338 | .28 | 1 | 2.4 | 0.67 | 3.6 | 11786 | 415,000 | 570,000 | 1200 | 1300 |
| | | | .37 | 1 | 1.8 | 0.67 | 2.7 | 16910 | | | 850 | 1100 |

If the thrust load exceeds adapter maximum allowable thrust load, auxiliary methods of carrying thrust are required.

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SELECTION/DIMENSIONS

USAF 600 Adapter Mount Pillow Block with TRIPLE-TECT Seal Assembly

| Shaft Dia S-1 | Complete Pillow Block Part # | Housing W/ Stab Ring Part No. | Bearing Part No. | Dynamic Capacity (C), lbs.ʹ | Max RPM (Grease) | SNW Part No. | TRIPLE-TECT Part No. | TTDN Part No. | # LER Part No. | End Cover |
|---------------|------------------------------|-------------------------------|-----------------------|-----------------------------|------------------|-------------------------|----------------------|---------------------|----------------------|----------------|
| 1-11/16 | P2B610-USAF-111TT 035929 | H2S-610-USAF 035431 | BRG22310KC3 423372 | 42,500 | 3,400 | H2310-SNW-111 046680 | 10TT111 043579 | --- | 10LER111 * 042199 | EC10 040701 |
| 1-15/16 | P2B611-USAF-115TT 039404 | H2S-611-USAF 039760 | BRG22311KC3 423102 | 50,000 | 3,200 | H2311-SNW-115 046551 | 12TT115 043540 | 12TTDN115 039582 | 12LER115 042512 | EC12 040702 |
| | P4B611-USAF-115TT 039413 | H4S-611-USAF 039762 | BRG22311KC3 423102 | 50,000 | 3,200 | H2311-SNW-115 046551 | 12TT115 043540 | 12TTDN115 039582 | 12LER115 042512 | EC12 040702 |
| 2-3/16 | P2B613-USAF-203TT 039405 | H2S-613-USAF 039764 | BRG22313KC3 423104 | 65,500 | 2,600 | H2313-SNW-203 046552 | 14TT203 043541 | 14TTDN203 039583 | 14LER203 042513 | EC14 040703 |
| | P4B613-USAF-203TT 039414 | H4S-613-USAF 039766 | BRG22313KC3 423104 | 65,500 | 2,600 | H2313-SNW-203 046552 | 14TT203 043541 | 14TTDN203 039583 | 14LER203 042513 | EC14 040703 |
| 2-7/16 | P2B615-USAF-207TT 039406 | H2S-615-USAF 039768 | BRG22315KC3 423106 | 83,000 | 2,200 | H2315-SNW-207 046553 | 20TT207 043542 | 20TTDN207 039538 | 20LER207 042514 | EC20 040704 |
| | P4B615-USAF-207TT 039415 | H4S-615-USAF 039770 | BRG22315KC3 423106 | 83,000 | 2,200 | H2315-SNW-207 046553 | 20TT207 043542 | 20TTDN207 039538 | 20LER207 042514 | EC20 040704 |
| 2-11/16 | P2B616-USAF-211TT 035930 | H2S-616-USAF 035432 | BRG22316KC3 423373 | 93,000 | 2,200 | H2316-SNW-211 046682 | 24TT211 043544 | 24TTDN211 039855 | 24LER211 042516 | EC24 040705 |
| | P4B616-USAF-211TT 035931 | H4S-616-USAF 035433 | BRG22316KC3 423373 | 93,000 | 2,200 | H2316-SNW-211 046682 | 24TT211 043544 | 24TTDN211 039855 | 24LER211 042516 | EC24 040705 |
| 2-15/16 | P2B617-USAF-215TT 039407 | H2S-617-USAF 039772 | BRG22317KC3 423108 | 102,000 | 2,000 | H2317-SNW-215 046554 | 28TT215 043546 | 28TTDN215 039530 | 28LER215 042518 | EC28 040706 |
| | P4B617-USAF-215TT 039416 | H4S-617-USAF 039774 | BRG22317KC3 423108 | 102,000 | 2,000 | H2317-SNW-215 046554 | 28TT215 043546 | 28TTDN215 039530 | 28LER215 042518 | EC28 040706 |
| 3-7/16 | P4B620-USAF-307TT 039417 | H4S-620-USAF 039776 | BRG22320KC3 423110 | 146,000 | 1,700 | H2320-SNW-307 046555 | 46TT307 043549 | 46TTDN307 039859 | 46LER307 042521 | EC46 040708 |
| 4-3/16 | P4B624-USAF-403TT 039419 | H4S-624-USAF 039780 | BRG22324KC3 422140 | 204,000 | 1,400 | H2324-SNW-403 046557 | 52TT403 043553 | 52TTDN403 039863 | 52LER403 042525 | EC52 040710 |
| 4-7/16 | P4B626-USAF-407TT 039420 | H4S-626-USAF 039781 | BRG22326KC3 423114 | 236,000 | 1,300 | H2326-SNW-407 046558 | 54TT407 043554 | 54TTDN407 039864 | 54LER407 042526 | EC54 040711 |
| 4-15/16 | P4B628-USAF-415TT 039421 | H4S-628-USAF 039553 | BRG22328KC3 422035 | 275,000 | 1,200 | H2328-SNW-415 046559 | 56TT415 043556 | 56TTDN415 039866 | 56LER415 042528 | EC56 040712 |
| 5-3/16 | P4B630-USAF-503TT 039422 | H4S-630-USAF 039782 | BRG22330KC3 423116 | 310,000 | 1,100 | H2330-SNW-503 046560 | 58TT503 043558 | --- | 58LER503 042530 | EC58 040713 |
| 5-7/16 | P4B632-USAF-507TT 039423 | H4S-632-USAF 039783 | BRG22332KC3 423118 | 325,000 | 1,000 | H2332-SNW-507 046561 | 60TT507 043559 | --- | 60LER507 042531 | EC60 040714 |
| 5-15/16 | P4B634-USAF-515TT 039424 | H4S-634-USAF 039784 | BRG22334KC3 423120 | 360,000 | 950 | H2332-SNW-515 046562 | 64TT515 043560 | --- | 64LER515 042533 | EC64 040681 |
| 6 | P4B634-USAF-600TT 039425 | H4S-634-USAF 039784 | BRG22334KC3 423120 | 360,000 | 950 | H2334-SNW-600 046563 | 64TT600 043561 | --- | 64LER600 042534 | EC64 040681 |
| 6-15/16 | P4B638-USAF-615TT 039426 | H4S-638-USAF 039785 | BRG22338KC3 423122 | 415,000 | 850 | H2338-SNW-615 046564 | 72TT615 043564 | --- | 72LER615 042537 | EC72 040683 |
| 7 | P4B638-USAF-700TT 039427 | H4S-638-USAF 039785 | BRG22338KC3 423122 | 415,000 | 850 | H2338-SNW-700 046565 | 72TT700 043565 | --- | 72LER700 042538 | EC72 040683 |

NOTE: LER seals are made from Aluminum unless otherwise noted by the * symbol.

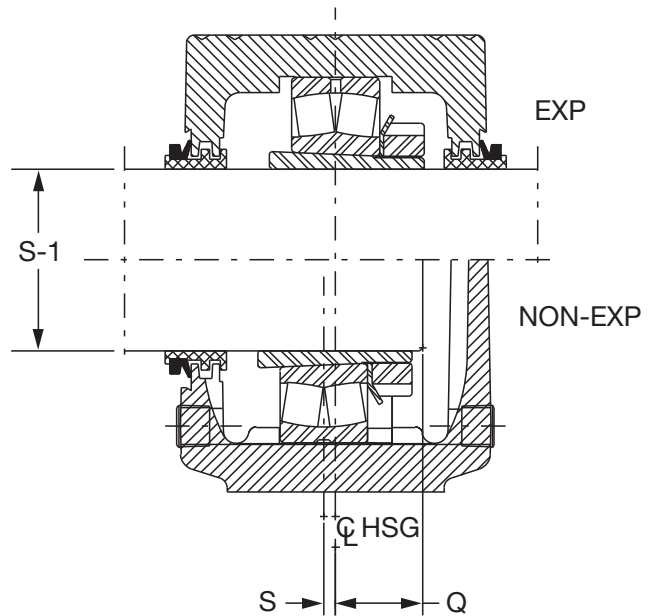
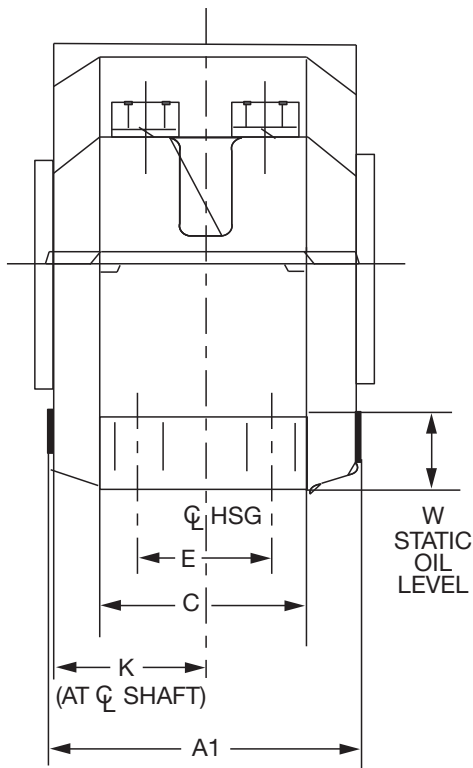
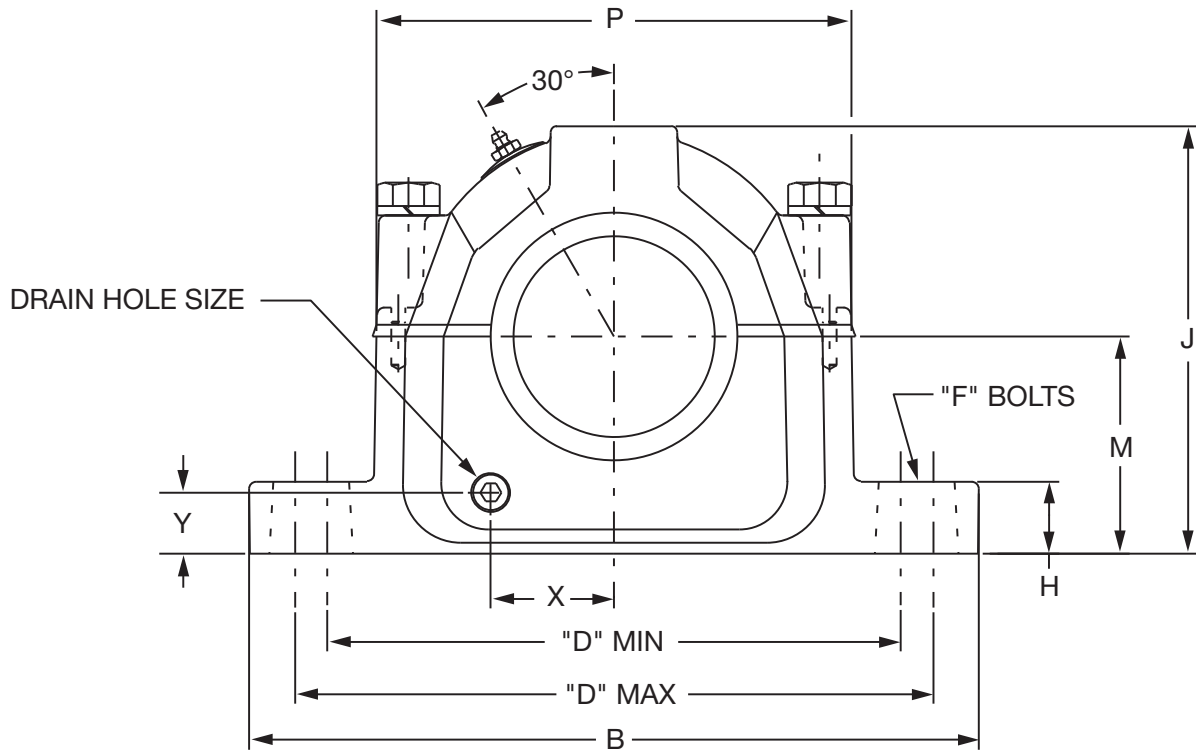
If an * appears by the part number, the LER seal is manufactured from Steel.

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SELECTION/DIMENSIONS

USAF 600 Housing Dimensions - Inch



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SELECTION/DIMENSIONS

USAF 600 Housing Dimensions - Inch

| S1 Shaft Size | Housing | A1 ▲ | B | C | D | | | | E | F | |
|---------------------|---------|---------|-------|------|--------|-------|--------|-------|------|-----------|--------|
| | | | | | 2-Bolt | | 4-Bolt | | | Bolt Dia. | |
| | | | | | 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.

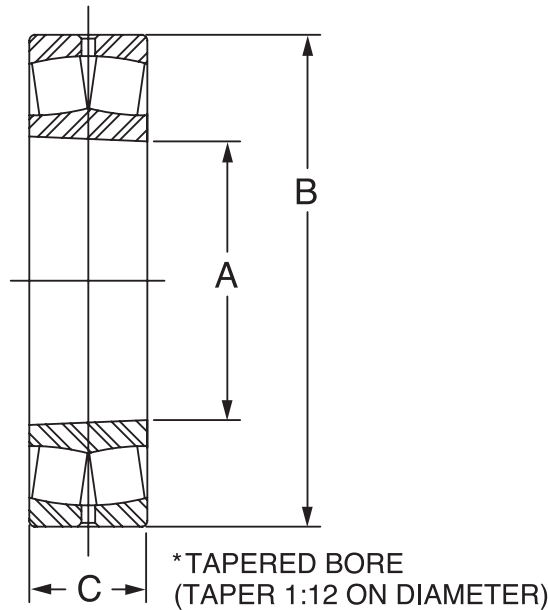
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Bearing Reference Guide
 E-Family Roller Bearings
 Specialty Tapered Products
 S-2000
 UNISPHERE II
 IMPERIAL
 UNIFIED SAF



SELECTION/DIMENSIONS

USAF 22300K Spherical Roller Bearings

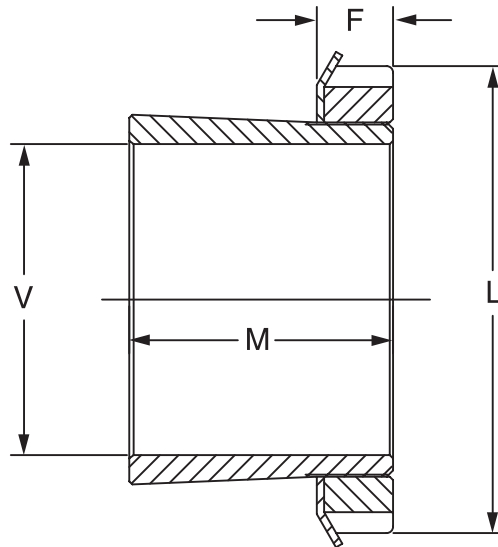


| Shaft Size (Inch) | Housing | Bearing No. | Part No. | Approx. Wt (lbs) | A* | B | C |
|----------------------|---------|----------------|---------------|---------------------|--------------|---------------|--------------|
| | | | | | Inch (mm) | Inch (mm) | Inch (mm) |
| 1-7/16 | 609 | 22309K | 423100 | 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) |



SELECTION/DIMENSIONS

USAF 600 Adapter Assembly (SNW)



| V Shaft Dia. (Inch) | Housing | Adapter Number | Part Number | Aprox. Wt (Lbs) | L (in) | F Max (In) | M (In) |
|---------------------|---------|----------------|---------------|-----------------|--------|------------|--------|
| 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 | | | |

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SELECTION/DIMENSIONS

USAF 200 Direct Mount Pillow Block with TRIPLE-TECT Seal Assembly

Bearing Reference Guide

E-Family Roller Bearings

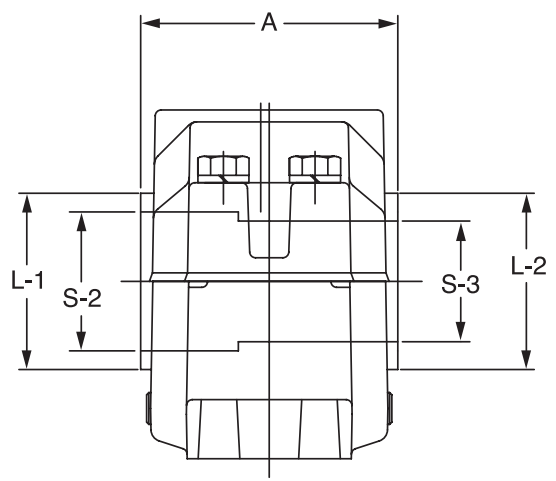
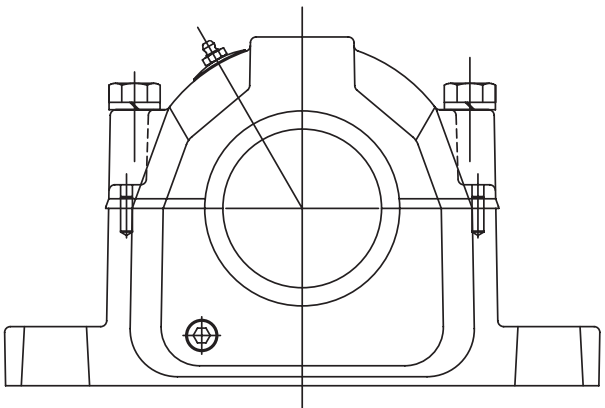
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SELECTION/DIMENSIONS

USAF 200 Direct Mount Pillow Block with TRIPLE-TECT Seal Assembly

| Shaft Dia. | | Bearing Bore mm. | Complete Pillow Block Part # | Housing Part No.** | Bearing Part No. | Dynamic Capacity (C), lbs. | Max RPM (Grease) | Locknut Part No. |
|------------|---------|------------------|------------------------------|------------------------|----------------------|----------------------------|------------------|------------------|
| S-2 | S-3 | | | | | | | |
| 3-7/16 | 2-13/16 | 75 | P2B215-USAF-307TT 039175 | H2S-215-USAF 039682 | BRG22215C3 421265 | 48,000 | 3,400 | AN15 460901 |
| | | | P4B215-USAF-307TT 039177 | H4S-215-USAF 039684 | BRG22215C3 421265 | 48,000 | 3,400 | AN15 460901 |
| 3-5/8 | 3 | 80 | P2B216-USAF-310TT 039179 | H2S-216-USAF 039686 | BRG22216C3 421266 | 56,000 | 3,200 | AN16 460902 |
| | | | P4B216-USAF-310TT 039181 | H4S-216-USAF 039688 | BRG22216C3 421266 | 56,000 | 3,200 | AN16 460902 |
| 3-15/16 | 3-3/16 | 85 | P2B217-USAF-315TT 039183 | H2S-217-USAF 039690 | BRG22217C3 421267 | 68,000 | 3,000 | AN17 460903 |
| | | | P4B217-USAF-315TT 039185 | H4S-217-USAF 039692 | BRG22217C3 421267 | 68,000 | 3,000 | AN17 460903 |
| 4-1/8 | 3-3/8 | 90 | P2B218-USAF-402TT 039187 | H2S-218-USAF 039694 | BRG22218C3 421268 | 78,000 | 2,600 | AN18 460904 |
| | | | P4B218-USAF-402TT 039189 | H4S-218-USAF 039696 | BRG22218C3 421268 | 78,000 | 2,600 | AN18 460904 |
| 4-1/2 | 3-13/16 | 100 | P2B220-USAF-408TT 039191 | H2S-220-USAF 039698 | BRG22220C3 421269 | 96,500 | 2,200 | AN20 460905 |
| | | | P4B220-USAF-408TT 039193 | H4S-220-USAF 039700 | BRG22220C3 421269 | 96,500 | 2,200 | AN20 460905 |
| 4-7/8 | 4-3/16 | 110 | P4B222-USAF-414TT 039195 | H4S-222-USAF 039702 | BRG22222C3 421270 | 122,000 | 2,000 | AN22 460906 |
| 5-5/16 | 4-9/16 | 120 | P4B224-USAF-505TT 039197 | H4S-224-USAF 039704 | BRG22224C3 421271 | 143,000 | 1,900 | AN24 041071 |
| 5-7/8 | 4-15/16 | 130 | P4B226-USAF-514TT 039199 | H4S-226-USAF 039706 | BRG22226C3 421272 | 170,000 | 1,800 | AN26 041064 |
| 6-1/4 | 5-5/16 | 140 | P4B228-USAF-604TT 039201 | H4S-228-USAF 039708 | BRG22228C3 421273 | 196,000 | 1,700 | AN28 041065 |
| 6-5/8 | 5-3/4 | 150 | P4B230-USAF-610TT 039203 | H4S-230-USAF 039710 | BRG22230C3 421274 | 228,000 | 1,600 | AN30 041072 |
| 7 | 6-1/16 | 160 | P4B232-USAF-700TT 039205 | H4S-232-USAF 039711 | BRG22232C3 421275 | 260,000 | 1,500 | AN32 041066 |
| 7-7/16 | 6-7/16 | 170 | P4B234-USAF-707TT 039207 | H4S-234-USAF 039712 | BRG22234C3 421276 | 308,000 | 1,300 | AN34 041067 |
| 7-13/16 | 6-7/8 | 180 | P4B236-USAF-713TT 039209 | H4S-236-USAF 039713 | BRG22236C3 421277 | 308,000 | 1,300 | AN36 041070 |
| 8-3/8 | 7-1/4 | 190 | P4B238-USAF-806TT 039211 | H4S-238-USAF 039714 | BRG22238C3 421278 | 270,000 | 1,200 | AN38 041068 |
| 8-3/4 | 7-5/8 | 200 | P4B240-USAF-812TT 039213 | H4S-240-USAF 039715 | BRG22240C3 421279 | 300,000 | 900 | AN40 040838 |
| 9-9/16 | 8-5/16 | 220 | P4B244-USAF-909TT 039215 | H4S-244-USAF 039716 | BRG22244C3 421280 | 365,000 | 950 | AN44 041069 |

Bearing Reference Guide

E-Family Roller Bearings

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SELECTION/DIMENSIONS

USAF 200 Direct Mount Pillow Block With TRIPLE-TECT Seal Assembly

Bearing Reference Guide

E-Family Roller Bearings

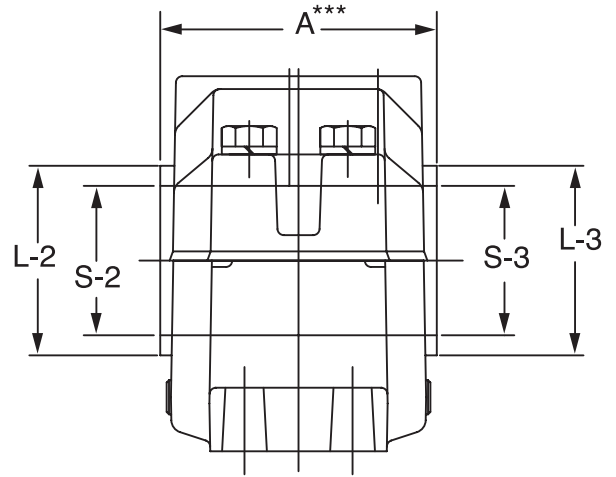
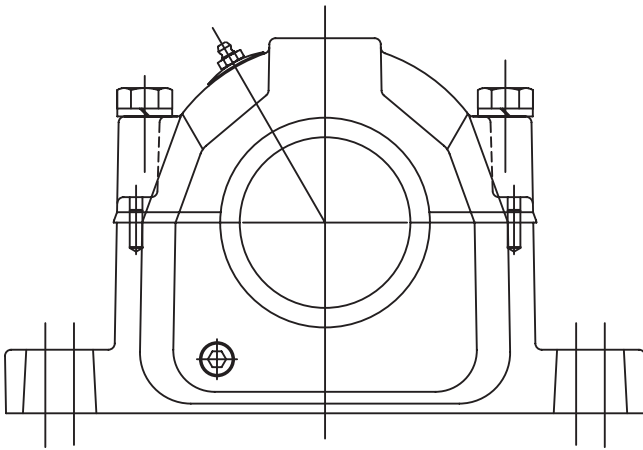
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SELECTION/DIMENSIONS

USAF 200 Direct Mount Pillow Block With TRIPLE-TECT Seal Assembly

| Shaft Dia. | | Bearing Bore mm. | Lock washer Part No. | TRIPLE-TECT Part No. | | TTDN Part No. | | # LER Part No. | | End Cover Part No. |
|------------|---------|------------------|----------------------|----------------------|-----------|---------------|-----------|----------------|-----------|--------------------|
| 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 |
| W24 | 58TT510 | | 54TT409 | --- | --- | 58LER505 | 54LER409 | EC54 | | |
| 419162 | 046411 | | 046409 | --- | --- | 042248 | 045943 | 040711 | | |
| 5-5/16 | 4-9/16 | 120 | W26 | 62TT514 | 56TT415 | --- | --- | 62LER514 | 56LER415 | EC56 |
| | | | 419164 | 046410 | 043556 | --- | --- | 042085 | 042528 | 040712 |
| W28 | 66TT604 | | 58TT505 | --- | --- | 66LER604 | 58LER505 | EC58 | | |
| 419166 | 046412 | | 046411 | --- | --- | 042249 | 042248 | 040713 | | |
| 6-1/4 | 5-5/16 | 140 | W30 | 70TT610 | 62TT512 | --- | --- | 70LER610 | 62LER512 | --- |
| | | | 419168 | 046414 | 046413 | --- | --- | 045951 | 045949 | --- |
| 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 |
| 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 |
| 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.

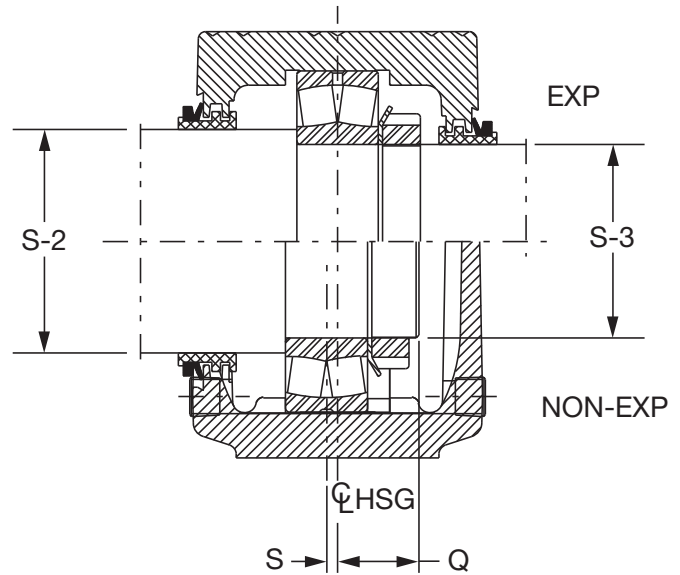
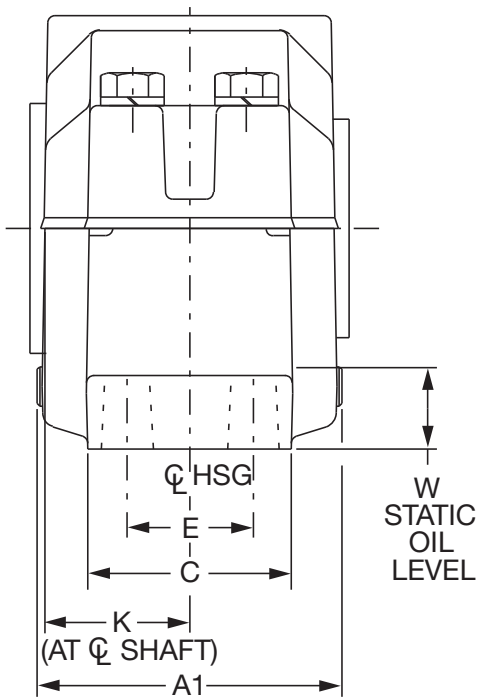
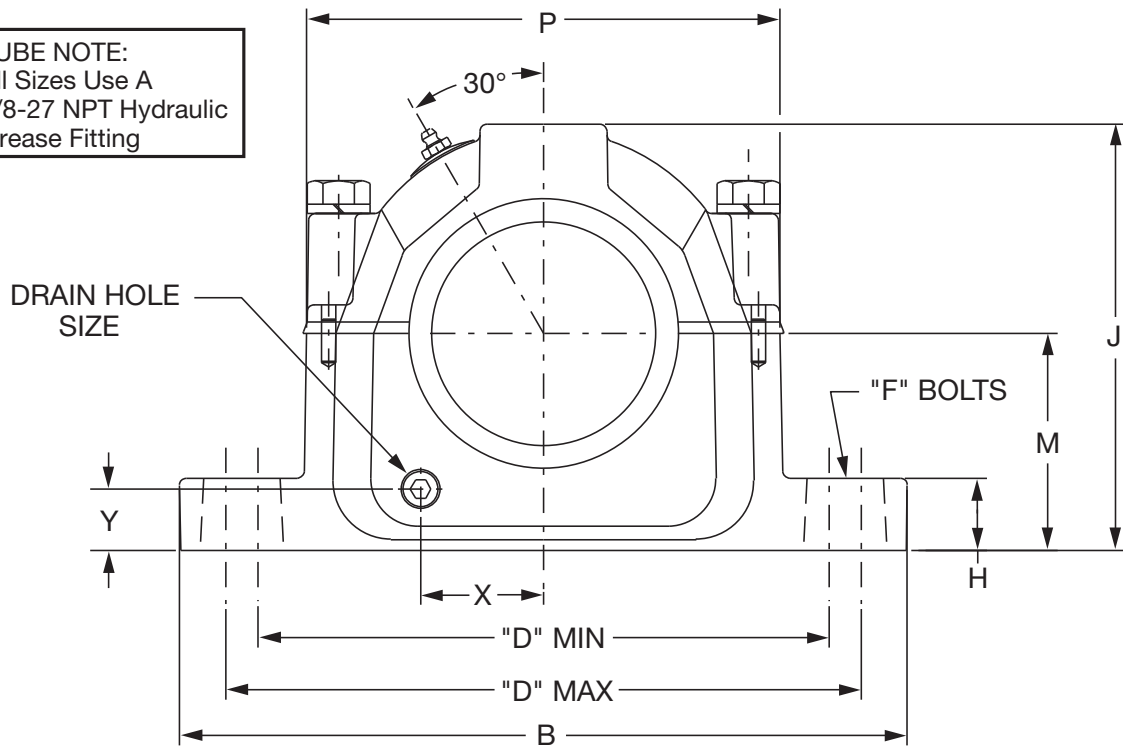
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SELECTION/DIMENSIONS

USAF 200 Housing Dimensions - Inch

LUBE NOTE:
All Sizes Use A
1/8-27 NPT Hydraulic
Grease Fitting





SELECTION/DIMENSIONS

USAF 200 Housing Dimensions - Inch

| S-2 Shaft Size | S-3 Shaft Size | Housing | A1 ▲ | B | C | D | | | | E | F | |
|----------------------|----------------------|---------|---------|-------|------|--------|-------|--------|-------|------|-----------|-------|
| | | | | | | 2-Bolt | | 4-Bolt | | | Bolt Dia. | |
| | | | | | | Min | Max | Min | Max | | H | J |
| 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.

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SELECTION/DIMENSIONS

USAF 200 Pillow Block Seals

Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

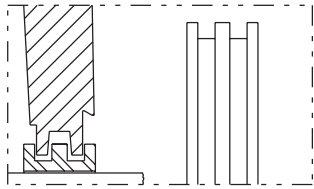
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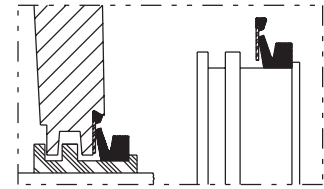
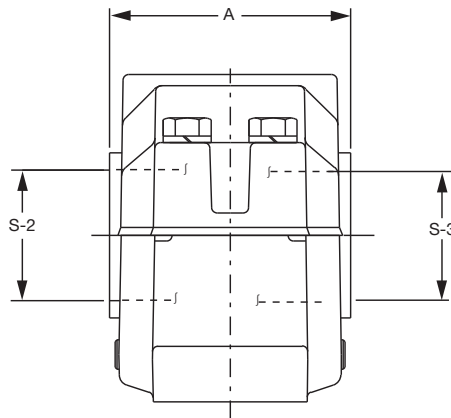
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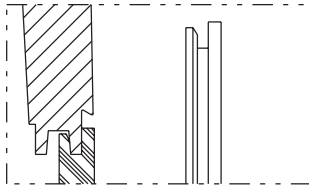
LENGTH THRU BORE W/SEALS



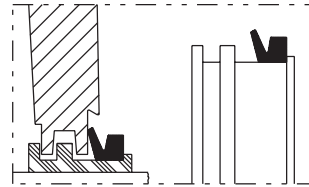
LER SEAL
High speed seal for relatively clean environments



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



TRIPLE-TECT Seal
General purpose seal for wet or dirty environments

| S-2 Shaft Size (Inch) | S-3 Shaft Size (Inch) | Housing | Seal Group | | Part Number | | | | | | | A | | |
|-----------------------|-----------------------|---------|------------|----|------------------|--------|----------------------------|--------|------------------------|---------|--------------------|-----------|-------------|------------|
| | | | | | TRIPLE-TECT (TT) | | TRIPLE-TECT Drop-in (TTDN) | | #Metal Labyrinth (LER) | | End Cover Part No. | TT (Inch) | TTDN (Inch) | LER (Inch) |
| | | | | | 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.

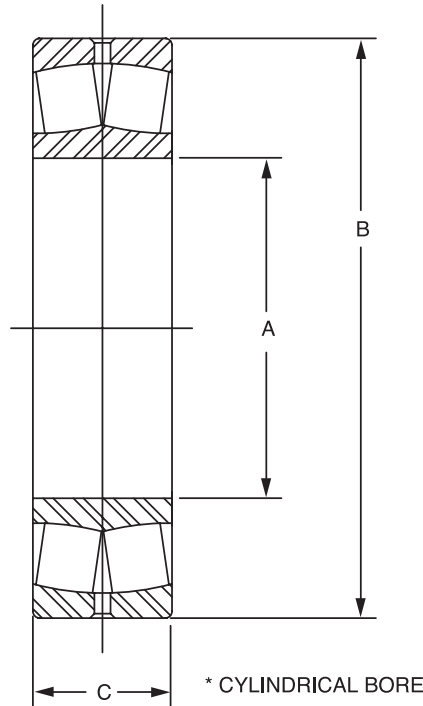
If an * appears by the part number, the LER seal is manufactured from Steel.

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SELECTION/DIMENSIONS

USAF 22200 Spherical Roller Bearings



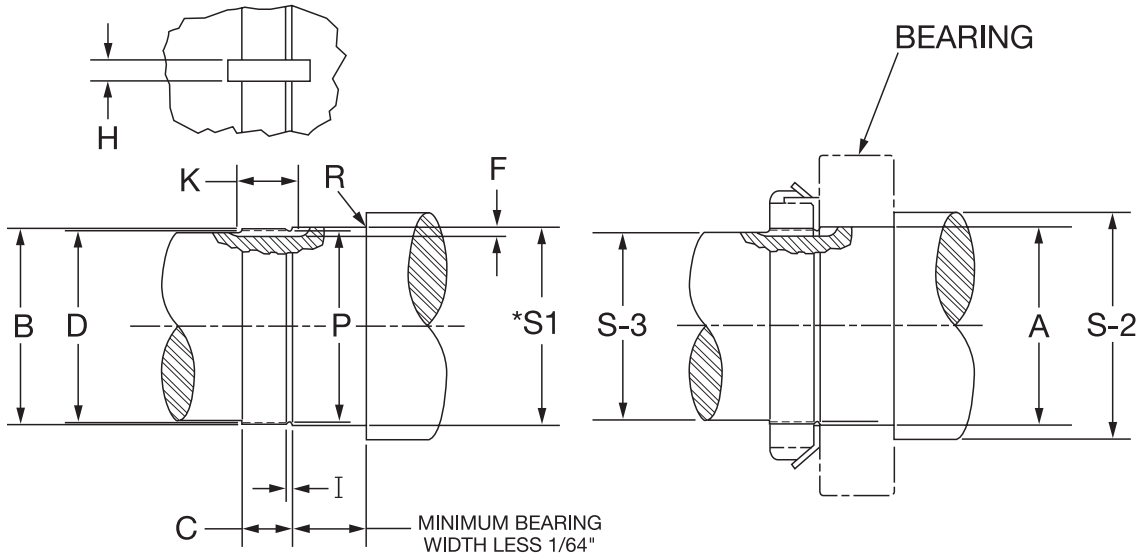
| Bearing Bore mm | Housing | Bearing No. | Part No. | Approx. Wt. (lbs) | A Inch (mm) | B Inch (mm) | C Inch (mm) |
|--------------------|---------|----------------|---------------|----------------------|----------------|----------------|----------------|
| 75 | 215 | 22215 | 421265 | 3.6 | 2.9528 (75) | 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) |

| | | | |
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SELECTION/DIMENSIONS

USAF 200 Series Bearing Shaft Details



| Nominal Bearing Bore Dia. (mm) | Shaft Bearing Seat Diameters (Inch) | | | | | |
|--------------------------------|-------------------------------------|--------|----------|-----------|--------|----------|
| | Normal Load | | | High Load | | |
| | * S-1 | | Mean Fit | * S-1 | | Mean Fit |
| | Max | Min | | Max | Min | |
| 75 | 2.9540 | 2.9532 | .0011T | 2.9543 | 2.9536 | .0014T |
| 80 | 3.1508 | 3.1501 | .0012T | 3.1511 | 3.1504 | .0015T |
| 85 | 3.3479 | 3.3470 | .0014T | 3.3484 | 3.3475 | .0019T |
| 90 | 3.5447 | 3.5438 | | 3.5452 | 3.5443 | |
| 95 | 3.7416 | 3.7407 | | 3.7421 | 3.7412 | |
| 100 | 3.9384 | 3.9375 | | 3.9389 | 3.9380 | |
| 105 | 4.1353 | 4.1344 | | 4.1358 | 4.1349 | |
| 110 | 4.3321 | 4.3312 | .0016T | 4.3326 | 4.3317 | .0022T |
| 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 | .0019T | 5.9077 | 5.9067 | .0026T |
| 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 | |
| 200 | 7.8758 | 7.8746 | .0032T | 7.8772 | 7.8760 | |
| 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 (lbs.)
C= Basic dynamic load rating of bearing (lbs.)

| | | | |
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SELECTION/DIMENSIONS

USAF 200 Series Bearing Shaft Details

USAF 22200 BEARING SHAFT DIMENSIONS - INCH

| Housing | Locknut & Washer Kit Part No. | A Brg 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 (75mm) | 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 |

USAF 22200 BEARING SHAFT DIMENSIONS - INCH

| Housing | Threads Per Inch | B Thread Major Dia | | D Thread Pitch Dia | | C Thread Length +1/64 -0 | I Thread Relief +1/64 -0 | P † Thread Relief DIA. |
|---------|------------------|--------------------|--------|--------------------|--------|--------------------------|--------------------------|------------------------|
| | | Max | Min | Max | Min | | | |
| | | 215 | 12 | 2.9330 | 2.9218 | | | |
| 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 ±.005 through 2.6672 dia.; ±.010 for larger sizes

| | | | |
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USAF 200 Series Locknuts & Washers

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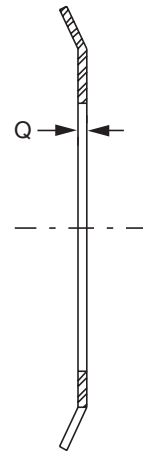
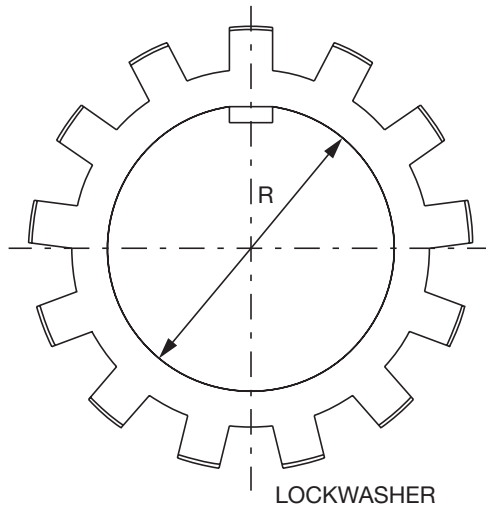
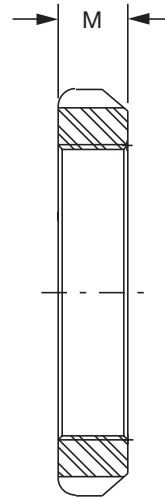
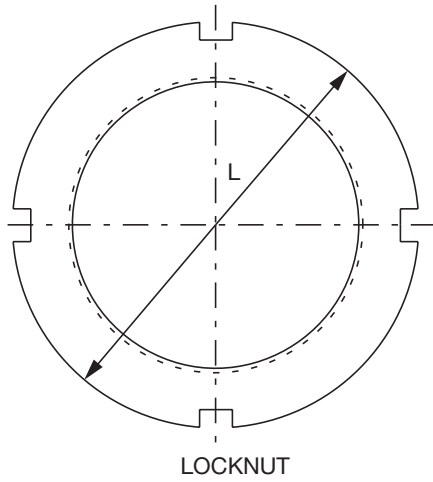
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| Housing | Locknut | | Lockwasher | | L Inch | M Inch | R Inch | Q Inch |
|---------|----------|---------------|------------|---------------|-----------|-----------|-----------|-----------|
| | Descrip. | Part No. | Descrip. | Part No. | | | | |
| 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 |

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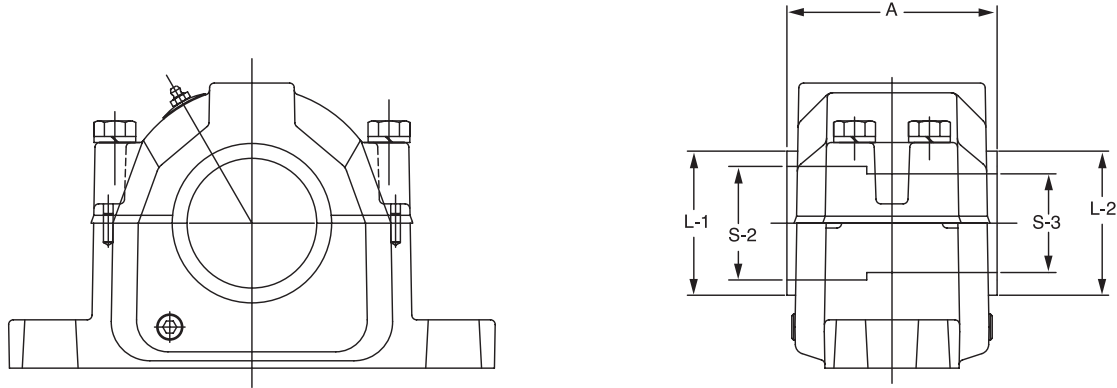
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SELECTION/DIMENSIONS

USAF 300 Direct Mount Pillow Block With TRIPLE-TECT Seal Assembly



| Shaft Dia. | | Bearing Bore mm. | Complete Pillow Block Part No. | Housing Part No.** | Bearing Part No. | Dynamic Capacity (C), lbs.** | Max Rpm (Grease) | Shaft Locknut Part No. |
|------------|---------|------------------|--------------------------------|------------------------|----------------------|------------------------------|------------------|------------------------|
| S-2 | S-3 | | | | | | | |
| 1-15/16 | 1-7/16 | 40 | P2B308-USAF-115TT 039355 | H2S-308-USAF 039717 | BRG22308C3 423124 | 35,500 | 4,300 | N08 407305 |
| 2-1/8 | 1-11/16 | 45 | P2B309-USAF-202TT 039356 | H2S-309-USAF 039719 | BRG22309C3 423125 | 42,500 | 3,800 | N09 419187 |
| 2-3/8 | 1-7/8 | 50 | P2B310-USAF-206TT 035915 | H2S-310-USAF 035437 | BRG22310C3 423143 | 51,000 | 3,400 | N10 419188 |
| 2-9/16 | 2-1/16 | 55 | P2B311-USAF-209TT 039357 | H2S-311-USAF 039721 | BRG22311C3 423126 | 60,000 | 3,200 | N11 419184 |
| | | | P4B311-USAF-209TT 039371 | H4S-311-USAF 039723 | BRG22311C3 423126 | 60,000 | 3,200 | N11 419184 |
| 2-7/8 | 2-1/4 | 60 | P2B312-USAF-214TT 039358 | H2S-312-USAF 039725 | BRG22312C3 423127 | 69,500 | 2,800 | N12 407302 |
| | | | P4B312-USAF-214TT 039372 | H4S-312-USAF 039727 | BRG22312C3 423127 | 69,500 | 2,800 | N12 407302 |
| 3-1/6 | 2-7/16 | 65 | P2B313-USAF-301TT 039359 | H2S-313-USAF 039729 | BRG22313C3 423128 | 78,000 | 2,600 | N13 419185 |
| | | | P4B313-USAF-301TT 039373 | H4S-313-USAF 039731 | BRG22313C3 423128 | 78,000 | 2,600 | N13 419185 |
| 3-1/4 | 2-5/8 | 70 | P2B314-USAF-304TT 039360 | H2S-314-USAF 039733 | BRG22314C3 423129 | 86,500 | 2,400 | N14 407036 |
| | | | P4B314-USAF-304TT 039374 | H4S-314-USAF 039735 | BRG22314C3 423129 | 86,500 | 2,400 | N14 407036 |
| 3-7/16 | 2-13/16 | 75 | P2B315-USAF-307TT 039361 | H2S-315-USAF 039737 | BRG22315C3 423130 | 100,000 | 2,200 | AN15 460901 |
| | | | P4B315-USAF-307TT 039375 | H4S-315-USAF 039739 | BRG22315C3 423130 | 100,000 | 2,200 | AN15 460901 |
| 3-5/8 | 3 | 80 | P2B316-USAF-310TT 035916 | H2S-316-USAF 035438 | BRG22316C3 423144 | 112,000 | 2,200 | AN16 460902 |
| | | | P4B316-USAF-310TT 035917 | H4S-316-USAF 035439 | BRG22316C3 423144 | 112,000 | 2,200 | AN16 460902 |
| 3-15/16 | 3-3/16 | 85 | P2B317-USAF-315TT 039362 | H2S-317-USAF 039741 | BRG22317C3 423131 | 122,000 | 2,000 | AN17 460903 |
| | | | P4B317-USAF-315TT 039376 | H4S-317-USAF 039743 | BRG22317C3 423131 | 122,000 | 2,000 | AN17 460903 |

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USAF 300 Direct Mount Pillow Block With TRIPLE-TECT Seal Assembly

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| Shaft Dia. | | Bearing Bore mm. | Lockwasher Part No. | TRIPLE-TECT Part No. | | TTDN Part No. | | # LER Part No. | | End Cover Part No. |
|------------|---------|------------------|---------------------|----------------------|---------|---------------|-----------|----------------|----------|--------------------|
| 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 040700 |
| | | | 419151 | 043540 | 043578 | | | 042512 | 042193 | |
| 2-1/8 | 1-11/16 | 45 | W09 | 14TT202 | 10TT111 | --- | --- | 14LER202 | 10LER111 | EC-10 040701 |
| | | | 419180 | 046464 | 043579 | | | *046472 | *042199 | |
| 2-3/8 | 1-7/8 | 50 | W10 | 18TT206 | 12TT114 | --- | --- | 18LER206 | 12LER114 | EC-12 040702 |
| | | | 419181 | 046166 | 046167 | | | 046175 | 046176 | |
| 2-9/16 | 2-1/16 | 55 | W11 | 22TT209 | 14TT201 | 22TTDN209 | 14TTDN201 | 22LER209 | 14LER201 | EC-14 040703 |
| | | | 419182 | 046466 | 046463 | 035748 | 035745 | *046474 | *046471 | |
| 2-7/8 | 2-1/4 | 60 | W12 | 26TT214 | 14TT204 | 26TTDN214 | 14TTDN204 | 26LER214 | 14LER204 | EC-14 040703 |
| | | | 419008 | 046468 | 046465 | 035750 | 035747 | 046476 | 046473 | |
| 3-1/6 | 2-7/16 | 65 | 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 | |
| 3-7/16 | 2-13/16 | 75 | W15 | 38TT307 | 24TT213 | 38TTDN307 | 24TTDN213 | 38LER307 | 24LER213 | EC24 040705 |
| | | | 419150 | 046401 | 046400 | 039568 | 039289 | *045928 | *045927 | |
| 3-5/8 | 3 | 80 | W16 | 38TT310 | 28TT300 | 38TTDN310 | 28TTDN300 | 38LER310 | 28LER300 | EC28 040706 |
| | | | 419152 | 046402 | 042547 | 039291 | 039857 | 045931 | 042519 | |
| 3-15/16 | 3-3/16 | 85 | 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.

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SELECTION/DIMENSIONS

USAF 300 Direct Mount Pillow Block With TRIPLE-TECT Seal Assembly

| Shaft Dia. | | Bearing Bore mm. | Complete Pillow Block Part No. | Housing Part No.** | Bearing Part No. | Dynamic Capacity (C), lbs. | Max Rpm (Grease) | Locknut Part No. |
|------------|---------|------------------|--------------------------------|------------------------|----------------------|----------------------------|------------------|------------------|
| S-2 | S-3 | | | | | | | |
| 4-1/2 | 3-13/16 | 100 | P4B320-USAF-408TT 039377 | H4S-320-USAF 039745 | BRG22320C3 423132 | 146,000 | 1,700 | AN204 060905 |
| 4-7/8 | 4-3/16 | 110 | P4B322-USAF-414TT 039378 | H4S-322-USAF 039747 | BRG22322C3 423133 | 180,000 | 1,500 | AN224 060906 |
| 5-5/16 | 4-9/16 | 120 | P4B324-USAF-505TT 039380 | H4S-324-USAF 039749 | BRG22324C3 423134 | 204,000 | 1,400 | AN24 041071 |
| 5-7/8 | 4-15/16 | 130 | P4B326-USAF-514TT 039381 | H4S-326-USAF 039750 | BRG22326C3 423135 | 236,000 | 1,300 | AN26 041064 |
| 6-1/4 | 5-5/16 | 140 | P4B328-USAF-604TT 039382 | H4S-328-USAF 039751 | BRG22328C3 423136 | 275,000 | 1,200 | AN28 041065 |
| 6-5/8 | 5-3/4 | 150 | P4B330-USAF-610TT 039383 | H4S-330-USAF 039752 | BRG22330C3 423137 | 310,000 | 1,100 | AN30 041072 |
| 7 | 6-1/16 | 160 | P4B332-USAF-700TT 039384 | H4S-332-USAF 039753 | BRG22332C3 423138 | 325,000 | 1,000 | AN32 041066 |
| 7-7/16 | 6-7/16 | 170 | P4B334-USAF-707TT 039385 | H4S-334-USAF 039754 | BRG22334C3 423139 | 360,000 | 950 | AN34 041067 |
| 8-3/8 | 7-1/4 | 190 | P4B338-USAF-806TT 039386 | H4S-338-USAF 039755 | BRG22338C3 423140 | 415,000 | 850 | AN38 041068 |

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SELECTION/DIMENSIONS

USAF 300 Direct Mount Pillow Block With TRIPLE-TECT Seal Assembly

| Shaft Dia. | | Bearing Bore mm. | Lock-washer Part No. | TRIPLE-TECT Part No. | | TTDN Part No. | | # LER Part No. | | End Cover Part No. |
|------------|---------|------------------|----------------------|----------------------|---------|---------------|-----------|----------------|----------|--------------------|
| S2 | S3 | | | S-2 | S-3 | S-2 | S-3 | S2 | S3 | |
| 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.

If an * appears by the part number, the LER seal is manufactured from Steel.

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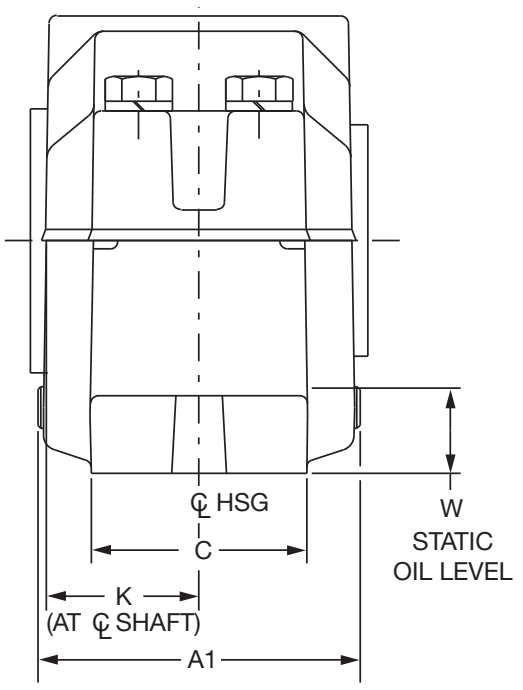
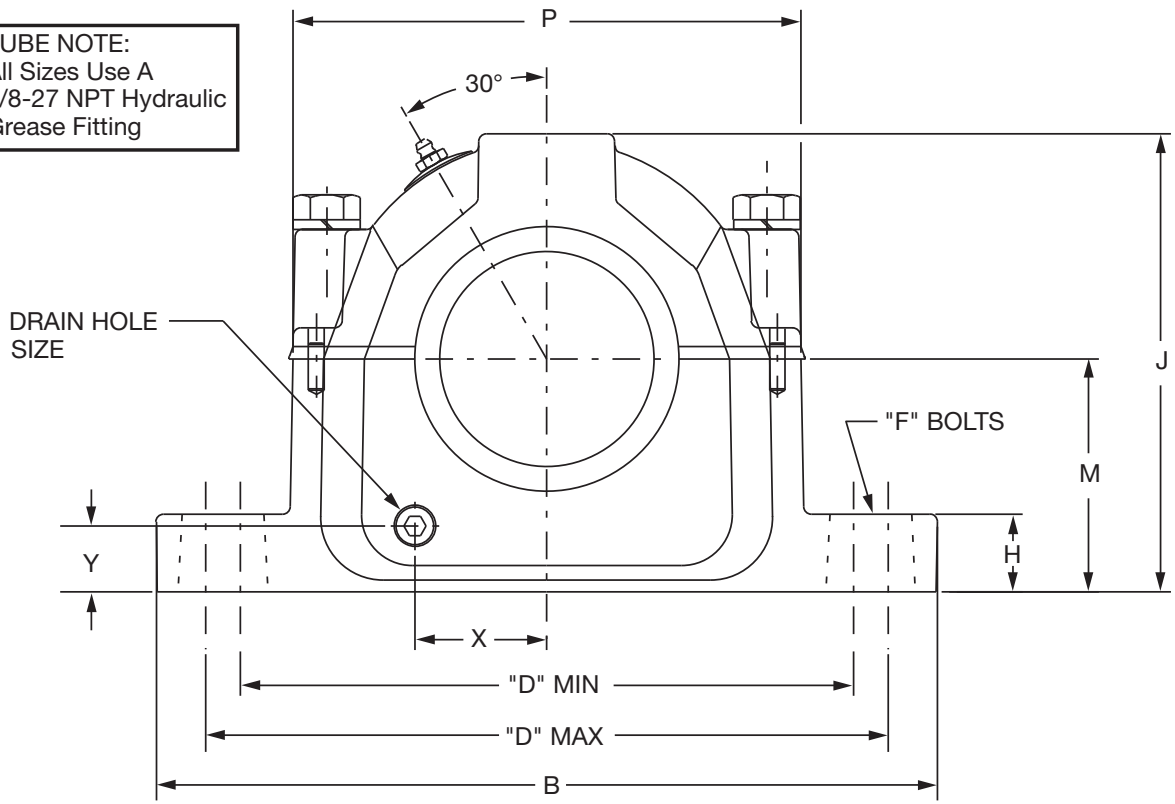
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SELECTION/DIMENSIONS

USAF 300 Housing Dimensions - Inch

LUBE NOTE:
All Sizes Use A
1/8-27 NPT Hydraulic
Grease Fitting



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SELECTION/DIMENSIONS

USAF 300 Housing Dimensions - Inch

| S-2 Shaft Size | S-3 Shaft Size | Housing | A1 ▲ | B | C | D | | | | E | F | |
|----------------|----------------|---------|-------|-------|------|--------|-------|--------|-------|------|-----------|--------|
| | | | | | | 2-Bolt | | 4-Bolt | | | Bolt Dia. | |
| | | | | | | 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. Length thru bore page B15-118.

★ Distance shaft should extend beyond housing centerline if pillow block is closed end style

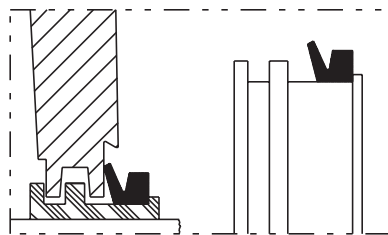
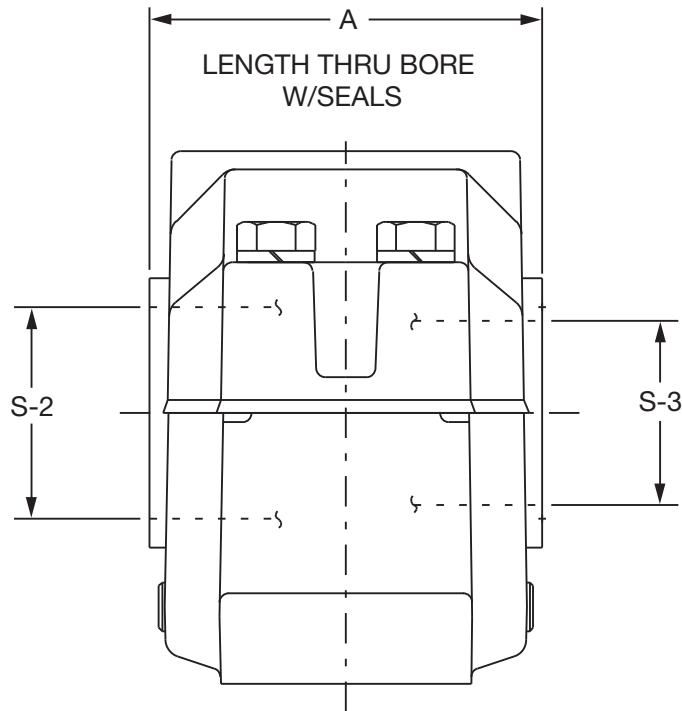
● Non-expansion bearing offset from centerline. For expansion bearing S = 0.

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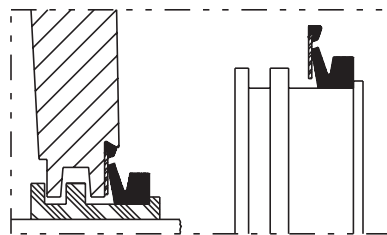


SELECTION/DIMENSIONS

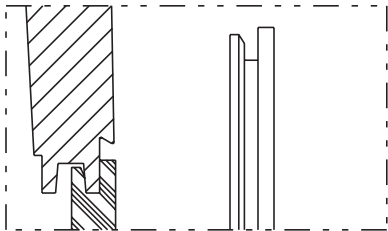
USAF 300 Pillow Block Seals



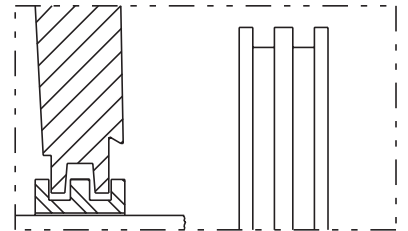
TRIPLE-TECT Seal
General purpose seal for wet or dirty environments



DROP-IN TRIPLE-TECT Seal
DODGE exclusive. Popular TRIPLE-TECT features simplify installation.



END COVER Seal
Allows use of open shaft housing as closed-end



LER Seal
High speed seal for relatively clean environments

| | | | |
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SELECTION/DIMENSIONS

USAF 300 Pillow Block Seals

| S-2 Shaft Size (Inch) | S-3 Shaft Size (Inch) | Housing | Seal Group | | Part Number | | | | | | | A | | |
|-----------------------|-----------------------|---------|------------|----|------------------|--------|----------------------------|--------|-------------------------|---------|-----------|-----------|-------------|------------|
| | | | | | TRIPLE-TECT (TT) | | TRIPLE-TECT Drop-In (TTDN) | | # Metal Labyrinth (LER) | | End Cover | TT (Inch) | TTDN (Inch) | LER (Inch) |
| | | | | | 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.

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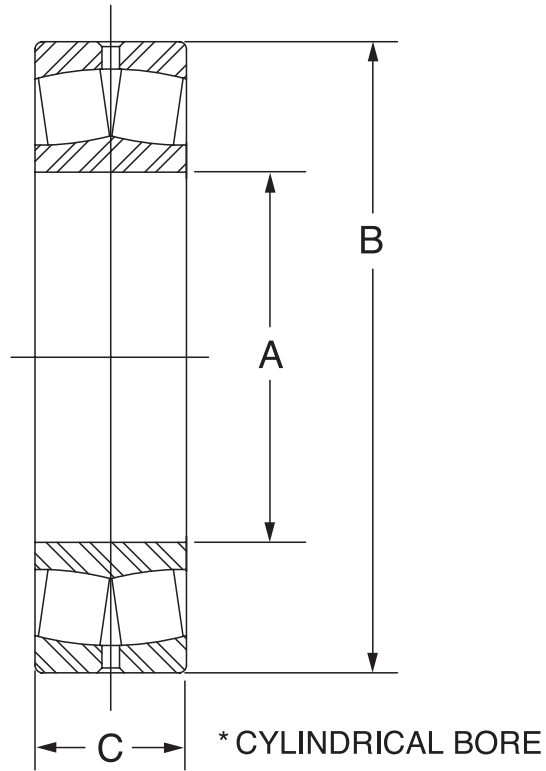
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SELECTION/DIMENSIONS

USAF 22300 Spherical Roller Bearings



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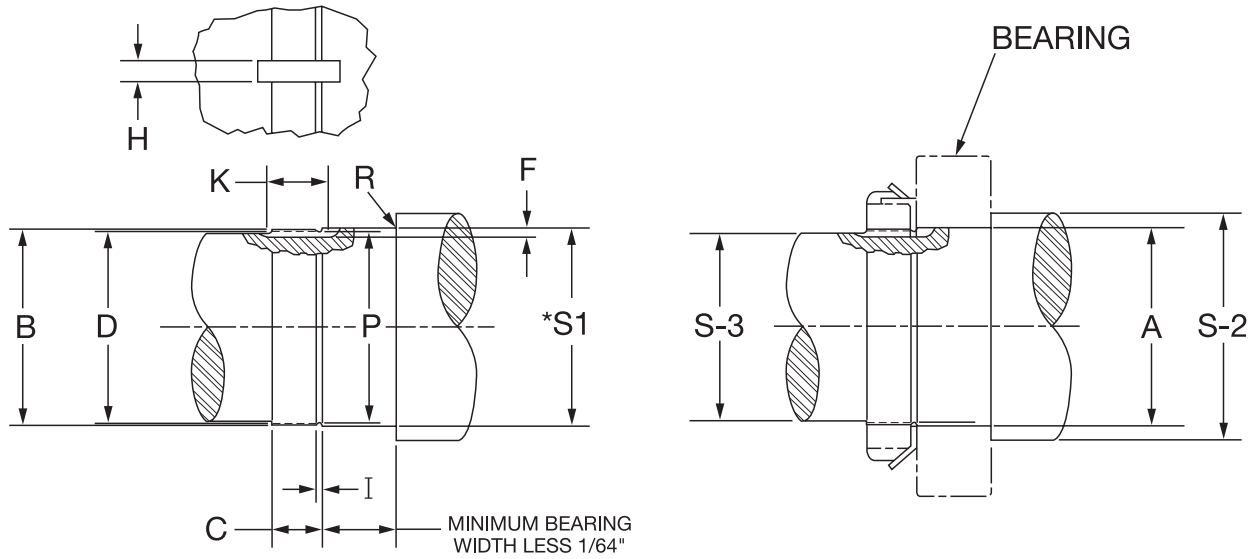
| Shaft Size Under Brg. mm | Housing | Bearing No | Part No | Approx. Wt (Lbs.) | A Inch | B Inch | C Inch |
|--------------------------|---------|------------|---------------|-------------------|--------------|---------------|--------------|
| 40 | 308 | 22308 | 423124 | 2.3 | 1.5748 (40) | 3.5433 (90) | 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 | 2230 | 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) |

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SELECTION/DIMENSIONS

USAF 300 Series Bearing Shaft Details



| Nominal Bearing Bore Dia. (mm) | Shaft Bearing Seat Diameters (Inch) | | | | | |
|--------------------------------|-------------------------------------|--------|----------|-----------|--------|----------|
| | Normal Load | | | High Load | | |
| | * S-1 | | Mean Fit | * S-1 | | Mean Fit |
| | Max | Min | | Max | Min | |
| 40 | 1.5758 | 1.5752 | .0009T | 1.5761 | 1.5655 | .0012T |
| 45 | 1.7727 | 1.7721 | | 1.7730 | 1.7724 | |
| 50 | 1.9697 | 1.9689 | .0011T | 1.9700 | 1.9693 | .0014T |
| 55 | 2.1666 | 2.1658 | | 2.1669 | 2.1662 | |
| 60 | 2.3634 | 2.3626 | | 2.3637 | 2.3630 | |
| 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 | .0012T | 3.1511 | 3.1504 | .0015T |
| 85 | 3.3479 | 3.3470 | .0014T | 3.3484 | 3.3475 | .0019T |
| 100 | 3.9384 | 3.9375 | | 3.9389 | 3.9380 | |
| 110 | 4.3321 | 4.3312 | | 4.3326 | 4.3317 | |
| 120 | 4.7258 | 4.7249 | | 4.7263 | 4.7254 | |
| 130 | 5.1197 | 5.1187 | .0016T | 5.1203 | 5.1193 | .0022T |
| 140 | 5.5134 | 5.5124 | | 5.5140 | 5.5130 | |
| 150 | 5.9071 | 5.9061 | | 5.9077 | 5.9067 | |
| 160 | 6.3008 | 6.2998 | | 6.3014 | 6.3004 | |
| 170 | 6.6945 | 6.6935 | | 6.6951 | 6.6941 | |
| 190 | 7.4821 | 7.4809 | | .0019T | 7.4829 |  | 7.4817 | .0026T |

Normal Load
P/C = 0.10 TO 0.18

High Load
P/C > 0.18

Where P = Equivalent dynamic load on the bearing (lbs.)
C = Basic dynamic load rating of bearing (lbs.)

| | | | |
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SELECTION/DIMENSIONS

USAF 300 Series Bearing Shaft Details

Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

S-2000

UNISPHERE II

IMPERIAL

UNIFIED SAF

| Housing | Locknut & Washer Kit Part No. | A Brg Bore | S-2 | S-3 | Keyway | | | |
|---------|-------------------------------|-----------------|---------|---------|-------------------|-------------------|---------------------|--------------|
| | | | | | F Depth +1/64 - 0 | H Width +1/64 - 0 | K Full Depth Length | R Max Radius |
| 308 | 046751 | 1.5748 (40 mm) | 1-15/16 | 1-7/16 | 3/32 | 5/16 | 21/32 | 0.059 |
| 309 | 046752 | 1.7717 (45 mm) | 2-1/8 | 1-11/16 | 3/32 | 5/16 | 11/16 | 0.059 |
| 310 | 046753 | 1.9685 (50 mm) | 2-3/8 | 1-7/8 | 3/32 | 5/16 | 3/4 | 0.079 |
| 311 | 046754 | 2.1654 (55 mm) | 2-9/16 | 2-1/16 | 1/8 | 5/16 | 3/4 | 0.079 |
| 312 | 046772 | 2.3622 (60 mm) | 2-7/8 | 2-1/4 | 1/8 | 5/16 | 25/32 | 0.079 |
| 313 | 046755 | 2.5591 (65 mm) | 3-1/16 | 2-7/16 | 1/8 | 5/16 | 13/16 | 0.079 |
| 314 | 046773 | 2.7559 (70 mm) | 3-1/4 | 2-5/8 | 1/8 | 5/16 | 29/32 | 0.079 |
| 315 | 046756 | 2.9528 (75 mm) | 3-7/16 | 2-13/16 | 1/8 | 5/16 | 15/16 | 0.079 |
| 316 | 046757 | 3.1496 (80 mm) | 3-5/8 | 3 | 1/8 | 3/8 | 15/16 | 0.079 |
| 317 | 046758 | 3.3465 (85 mm) | 3-15/16 | 3-3/16 | 1/8 | 3/8 | 31/32 | 0.098 |
| 320 | 046760 | 3.9370 (100 mm) | 4-1/2 | 3-13/16 | 5/32 | 3/8 | 1-3/16 | 0.098 |
| 322 | 046761 | 4.3307 (110 mm) | 4-7/8 | 4-3/16 | 3/16 | 3/8 | 1-7/32 | 0.098 |
| 324 | 046762 | 4.7244 (120 mm) | 5-5/16 | 4-9/16 | 3/16 | 3/8 | 1-1/4 | 0.098 |
| 326 | 046763 | 5.1181 (130 mm) | 5-7/8 | 4-15/16 | 3/16 | 1/2 | 1-5/16 | 0.118 |
| 328 | 046764 | 5.5118 (140 mm) | 6-1/4 | 5-5/16 | 3/16 | 5/8 | 1-3/8 | 0.118 |
| 330 | 046765 | 5.9055 (150 mm) | 6-5/8 | 5-3/4 | 7/32 | 5/8 | 1-1/2 | 0.118 |
| 332 | 046766 | 6.2992 (160 mm) | 7 | 6-1/16 | 15/64 | 5/8 | 1-9/16 | 0.118 |
| 334 | 046767 | 6.6929 (170 mm) | 7-7/16 | 6-7/16 | 15/64 | 3/4 | 1-19/32 | 0.118 |
| 338 | 046769 | 7.4803 (190 mm) | 8-3/8 | 7-1/4 | 15/64 | 3/4 | 1-21/32 | 0.157 |

| Housing | Threads Per Inch | B Thread Major Dia | | D Thread Pitch Dia | | C Thread Length +1/64 - 0 | I Thread Relief +1/64 - 0 | P† Thread Relief Dia. |
|---------|------------------|--------------------|--------|--------------------|--------|---------------------------|---------------------------|-----------------------|
| | | 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 |

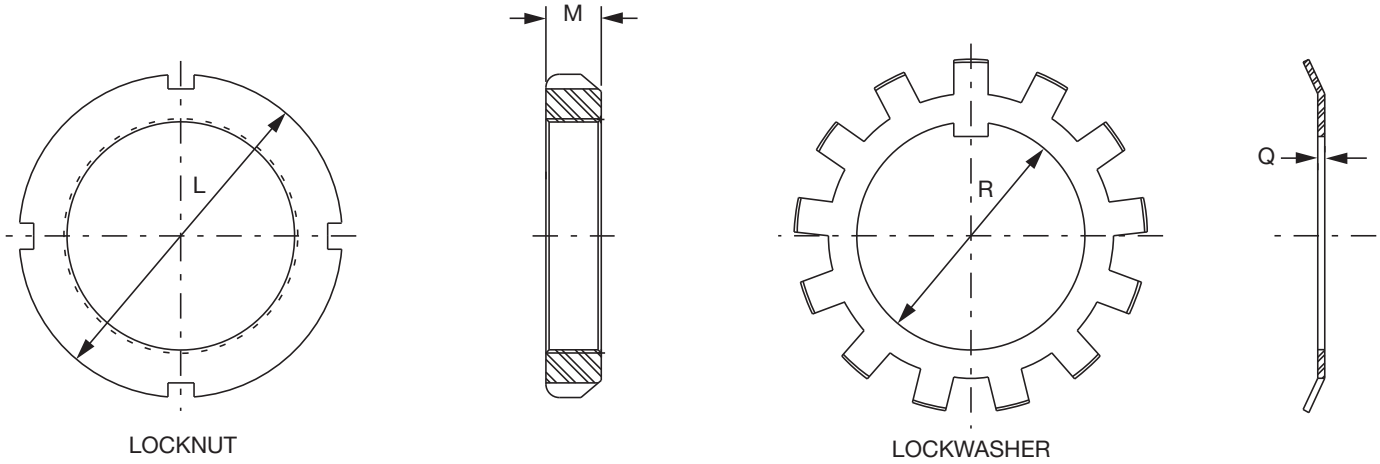
† Tolerance ±.005 through 2.6672 dia; ±.010 for larger sizes

| | | | |
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SELECTION/DIMENSIONS

USAF 300 Series Bearing Locknut & Washers



LOCKNUT

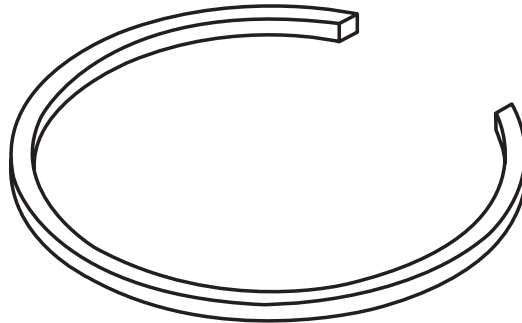
LOCKWASHER

| Housing | Locknut | | Lockwasher | | L (Inch) | M (Inch) | R (Inch) | Q (Inch) |
|---------|----------|----------|------------|----------|-------------|-------------|-------------|-------------|
| | Descrip. | Part No. | Descrip. | Part No. | | | | |
| 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 |



SELECTION/DIMENSIONS

USAF Stabilizing Rings



| Housing | Stab. Ring No. | Stab. Ring Part No. |
|--------------|----------------|---------------------|
| | | ▲ |
| 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 | Stab. Ring No. | Stab. Ring Part No. |
|---------|----------------|---------------------|
| | | ▲ |
| 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 | 040850 |
| 638/338 | 44-38 | 041183 |

* Two stabilizing rings required per housings

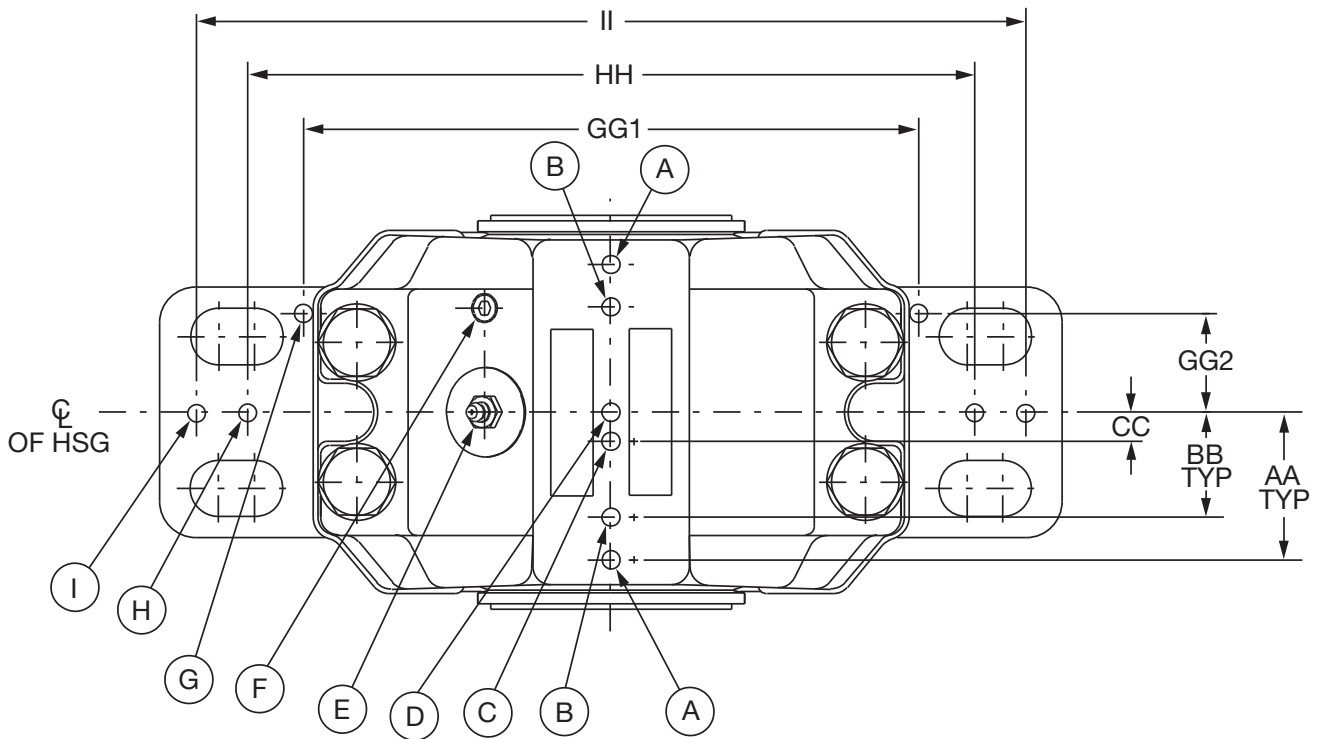
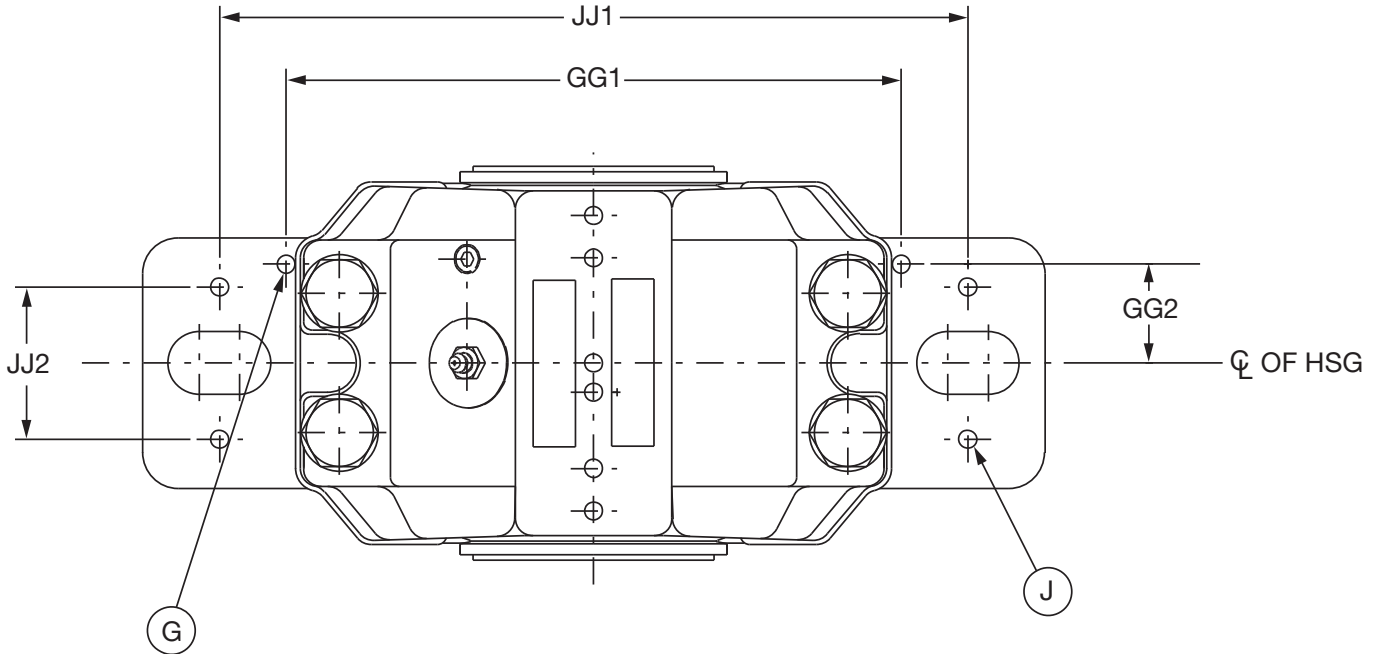
▲ Part numbers for reference only. Housings come equipped with stabilizing rings enclosed

| | | | |
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SELECTION/DIMENSIONS

USAF Pillow Block - 500 & 200 DOWEL PIN, LUBRICATION & MOUNTING HOLE POSITIONS





SELECTION/DIMENSIONS

USAF Pillow Block - 500 & 200 DOWEL PIN, LUBRICATION & 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 |

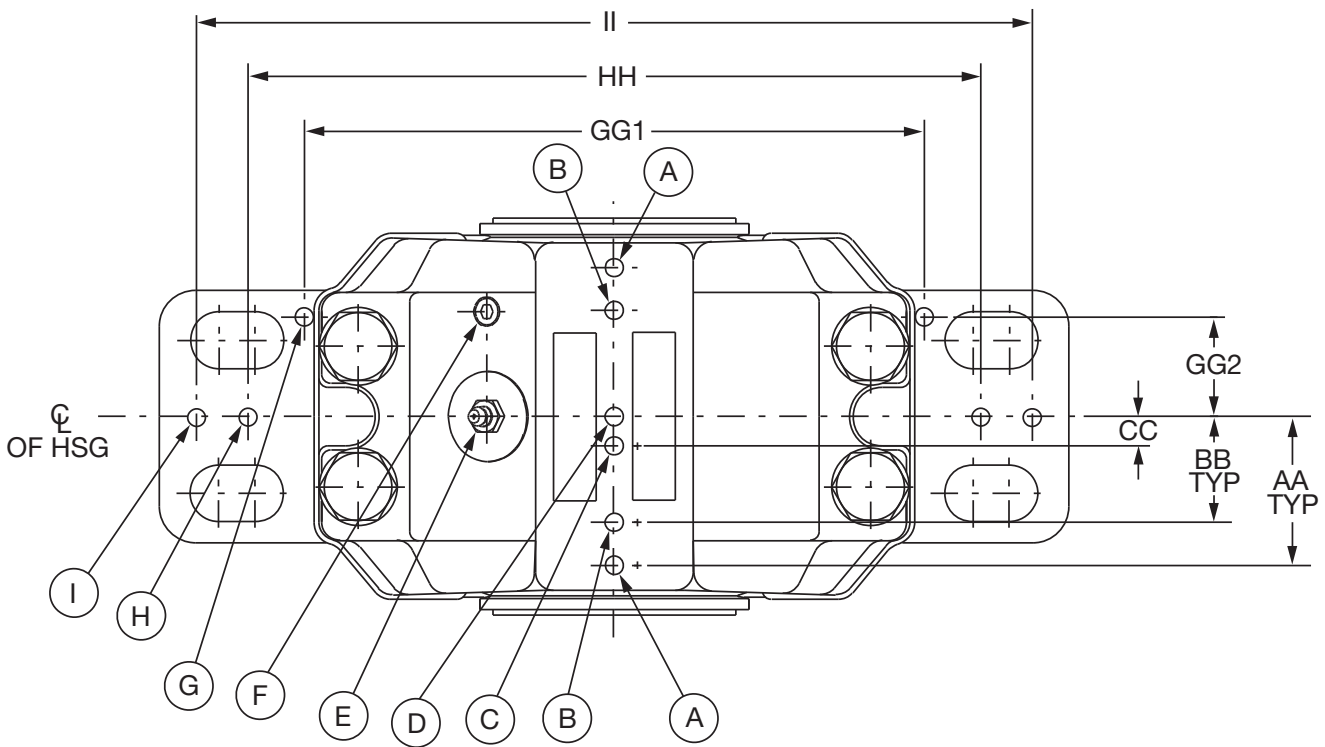
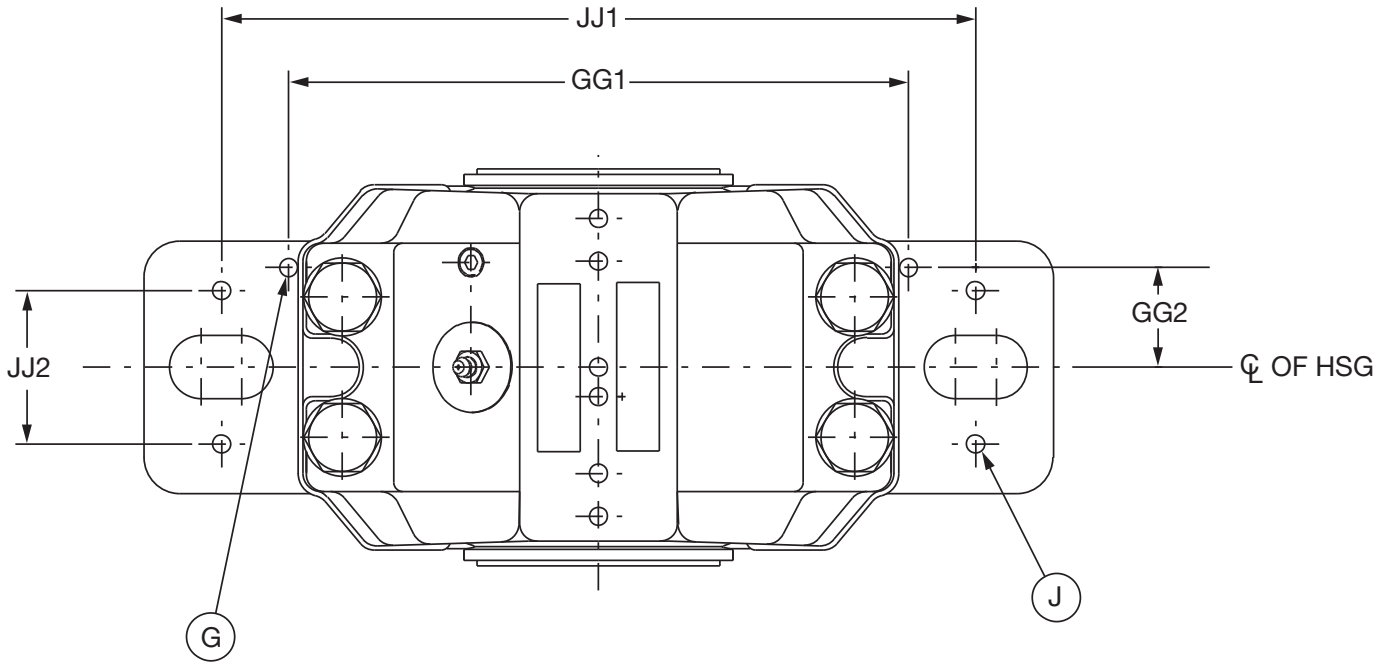
| USAF Housing | AA | BB | CC | GG1 | GG2 | G Max Dia | HH | H | | II | JJ1 | JJ2 | J | |
|--------------|------|------|------|-------|------|-----------|-------|-----------|-----------|-------|-------|------|-----------|-----------|
| | | | | | | | | Hole Size | Bolt Size | | | | Hole Size | Bolt Size |
| 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 | - | - | - | - |

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SELECTION/DIMENSIONS

USAF Pillow Block - 600 & 300 DOWEL PIN, LUBRICATION & MOUNTING HOLE POSITIONS





SELECTION/DIMENSIONS

USAF Pillow Block - 600 & 300 DOWEL PIN, LUBRICATION & 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 | - | - | - | - |

Bearing Reference Guide

E-Family Roller Bearings

Specialty Tapered Products

S-2000

UNISPHERE II

IMPERIAL

UNIFIED SAF

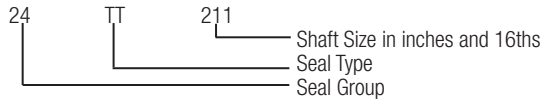
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SELECTION/DIMENSIONS

USAF Housing VS Seal Group Interchange Chart

All DODGE seals are identified as follows:



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 | Shaft Size | Housing | Seal* Group | Shaft Size | Housing | Seal* Group | Shaft Size | Housing | Seal* Group | |
|------------|---------|-------------|------------|---------|-------------|------------|---------|-------------|------------|---------|-------------|------|
| 1-7/16 | 509 | 08 | 3-5/8 | 216 | 38 | 6-1/4 | 228 | 66 | 11-15/16 | 064L | 100 | |
| | 308 | | | 316 | | | 328 | | | 12 | | 3164 |
| | 609 | | | 220 | | | 334 | | | 068 | | 3264 |
| 1-11/16 | 510 | 10 | 3-13/16 | 320 | 50 | 6-7/16 | 234 | 68 | 12-7/16 | 068 | 102 | |
| | 309 | | | 217 | | | 536 | | | 3168 | | |
| | 610 | | | 317 | | | 536 | | | 3268 | | |
| 1-7/8 | 310 | 12 | 3-15/16 | 522 | 50 | 6-5/8 | 230 | 70 | 12-15/16 | 072 | 104 | |
| | 511 | | | 622 | | | 330 | | | 13 | | |
| | 308 | | | 522 | | | 236 | | | 072L | | |
| 1-15/16 | 611 | 4 | 4 | 622 | 50 | 6-7/8 | 538 | 72 | 13-7/16 | 3172 | 106 | |
| | 311 | | | 218 | | | 638 | | | 076 | | |
| | 309 | | | 524 | | | 232 | | | 3176 | | |
| 2-1/16 | 513 | 14 | 4-1/8 | 222 | 44 | 4-3/16 | 332 | 72 | 13-15/16 | 080 | 110 | |
| | 613 | | | 624 | | | 538 | | | 084 | | |
| | 312 | | | 322 | | | 638 | | | 112 | | |
| 2-3/8 | 310 | 18 | 4-7/16 | 526 | 54 | 7-3/16 | 540 | 74 | 15-3/4 | 084 | 112 | |
| | 515 | | | 626 | | | 238 | | | 072 | | |
| | 615 | | | 220 | | | 338 | | | 072L | | |
| 2-7/16 | 313 | 22 | 4-1/2 | 320 | 54 | 7-1/4 | 334 | 76 | 13-1/2 | 3172 | 106 | |
| | 515 | | | 526 | | | 234 | | | 076 | | |
| | 615 | | | 626 | | | 544S | | | 080 | | |
| 2-1/2 | 314 | 22 | 4-9/16 | 224 | 56 | 7-1/2 | 240 | 78 | 14 | 3176 | 108 | |
| | 311 | | | 324 | | | 236 | | | 080 | | |
| | 516 | | | 222 | | | 544 | | | 084 | | |
| 2-11/16 | 616 | 24 | 4-7/8 | 322 | 56 | 7-13/16 | 236 | 80 | 15 | 080 | 110 | |
| | 516 | | | 226 | | | 244 | | | 084 | | |
| | 616 | | | 326 | | | 238 | | | 088 | | |
| 2-3/4 | 215 | 26 | 4-15/16 | 528 | 58 | 8-3/8 | 338 | 82 | 15-3/4 | 084 | 112 | |
| | 315 | | | 628 | | | 048 | | | 090 | | |
| | 312 | | | 528 | | | 240 | | | 092 | | |
| 2-7/8 | 517 | 28 | 5 | 628 | 58 | 8-1/2 | 048 | 84 | 15-3/4 | 084 | 112 | |
| | 617 | | | 530 | | | 048 | | | 090 | | |
| | 216 | | | 630 | | | 9 | | | 3248 | | |
| 3 | 316 | 32 | 5-3/16 | 224 | 60 | 9-7/16 | 052 | 84 | 15-3/4 | 084 | 112 | |
| | 517 | | | 228 | | | 3152 | | | 092 | | |
| | 617 | | | 324 | | | 3252 | | | 096 | | |
| 3-1/16 | 313 | 34 | 5-5/16 | 328 | 62 | 9-1/2 | 244 | 94 | 15-3/4 | 084 | 112 | |
| | 217 | | | 532 | | | 9-9/16 | | | 244 | | |
| | 317 | | | 632 | | | 56 | | | 092 | | |
| 3-3/16 | 518 | 36 | 5-7/16 | 532 | 64 | 10-7/16 | 056L | 94 | 15-3/4 | 084 | 112 | |
| | 314 | | | 632 | | | 3156 | | | 096 | | |
| | 218 | | | 230 | | | 3256 | | | 096 | | |
| 3-1/4 | 215 | 38 | 5-3/4 | 330 | 64 | 10-1/2 | 060 | 96 | 15-3/4 | 084 | 112 | |
| | 315 | | | 226 | | | 3160 | | | 096 | | |
| | 520 | | | 326 | | | 3260 | | | 096 | | |
| 3-7/16 | 620 | 46 | 5-7/8 | 534 | 64 | 11-7/16 | 064 | 98 | 15-3/4 | 084 | 112 | |
| | 520 | | | 634 | | | 11-1/2 | | | 064 | | |
| | 620 | | | 534 | | | 064 | | | 098 | | |
| 3-1/2 | 520 | 46 | 5-15/16 | 634 | 64 | 11-1/2 | 064 | 98 | 15-3/4 | 084 | 112 | |
| | 620 | | | 534 | | | 064 | | | 098 | | |
| | 520 | | | 634 | | | 064 | | | 098 | | |
| 3-1/2 | 520 | 46 | 6 | 634 | 64 | 11-1/2 | 064 | 98 | 15-3/4 | 084 | 112 | |
| | 620 | | | 634 | | | 064 | | | 098 | | |
| | 520 | | | 232 | | | 064 | | | 098 | | |
| 3-1/2 | 620 | 46 | 6-1/16 | 332 | 64 | 11-1/2 | 064 | 98 | 15-3/4 | 084 | 112 | |
| | 520 | | | 332 | | | 064 | | | 098 | | |
| | 620 | | | 332 | | | 064 | | | 098 | | |

Seal groups in 200/300 housing require two seals of different diameters.

| | | | |
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SELECTION/DIMENSIONS

DODGE Cool Lube 2 System

Custom Engineered for oil lubricated, mounted bearings on fan applications. The DODGE 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 bearing operation by continuous oil cooling, filtration, and proper oil level maintenance while your fan is running. Eighty percent of all mounted bearing failures are caused by contamination and lubrication issues. The DODGE Cool Lube System helps to minimize this risk.

The DODGE 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. The DODGE Cool Lube System continuously circulates and filters harmful particles from the bearing oil sump.
- **Automatic Oil Level Control:** The DODGE Cool Lube System will maintain the proper oil level within the oil sump.

One Cool Lube system for two (2) mounted 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 (Exp. 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

- **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



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
- Baldor NEMA Motor
- All Components Mounted to a Base Plate

Optional Features:

- 260 Watt Oil Heater with Thermostat sold separately. If required order one of the following:
 - p/n 434725 – 260 watt x 120v Heater
 - p/n 434726 – 260 watt x 240v Heater
- Oil Level Switch
- Temperature/Oil Level Switch Assembly
 - p/n 434941 (sold separately)
- Duplex Dual Filter Arrangement

NOTE: Replacement Filter Part Number **078358**

| | | | |
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SELECTION/DIMENSIONS

DODGE 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 & 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

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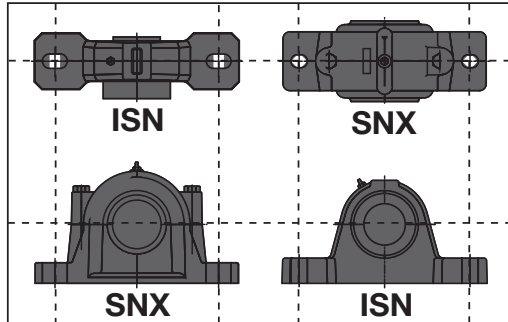
FEATURES/BENEFITS

ISN

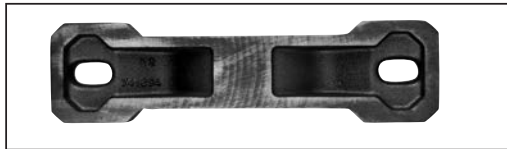
Shaft Ready / Adapter Mount / SN Dimensions

Patented Adapter Mounting System

- Quick installation and removal in 15 minutes or less
- Clearance setting without feeler gauges
- Full shaft contact reduces or eliminates fretting corrosion
- Locknut tightens the bearing on the shaft when turned clockwise
- Counter-clockwise rotation of the locknut loosens the bearing from the shaft
- 22200 series spherical roller bearing with steel cage and guide ring



Dimensionally interchangeable with housings of the SN family. Preassembled - no risk of bearing contamination during field assembly or incorrect parts.



Stronger feet for higher load capacity.



Cast-in drilling location dimples: for dowels or four-bolt mounting.

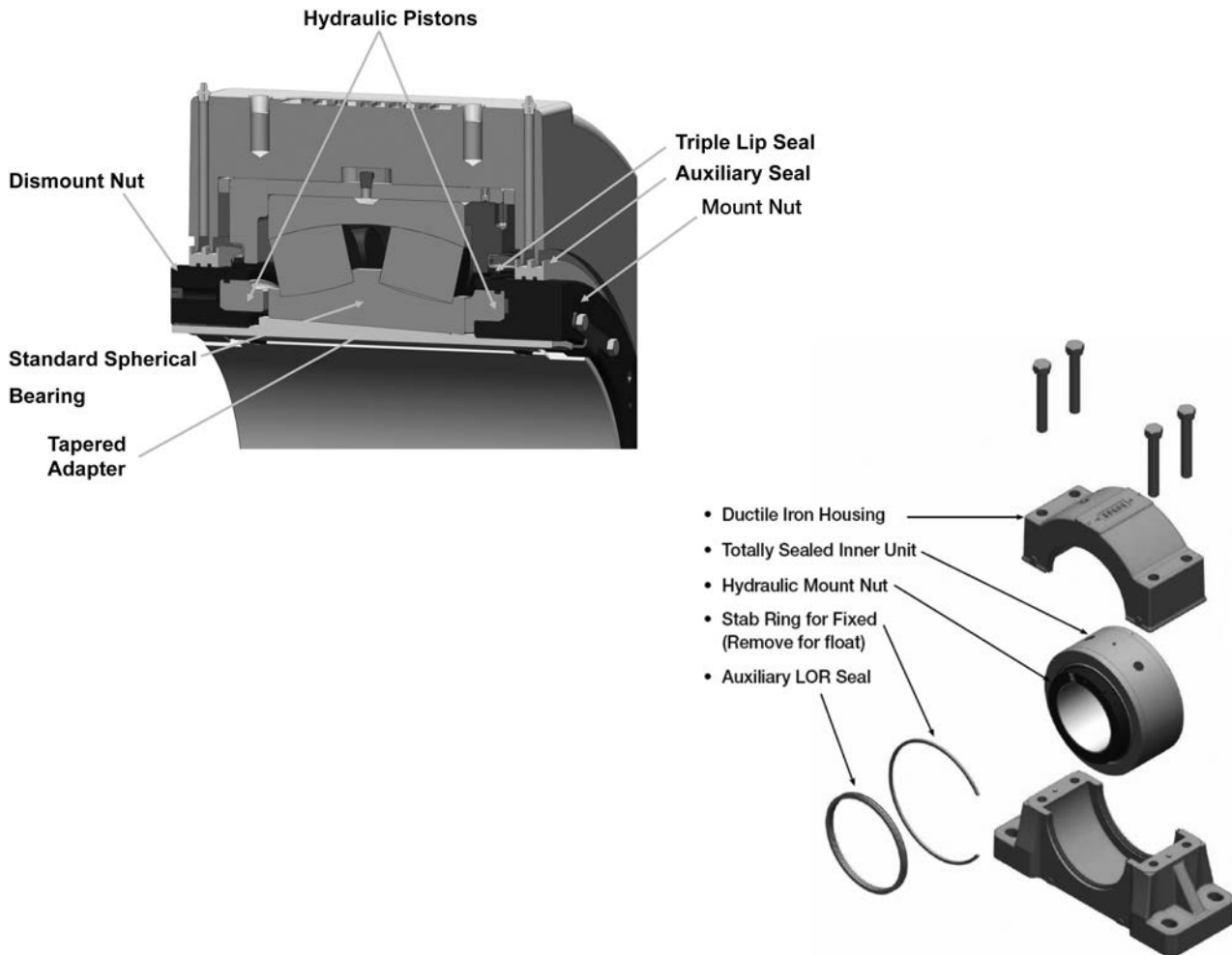
FEATURES/BENEFITS

ISNX

Hydraulic Mount/Dismount with SN Dimensions

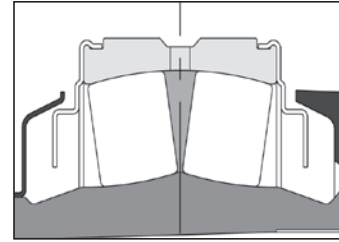
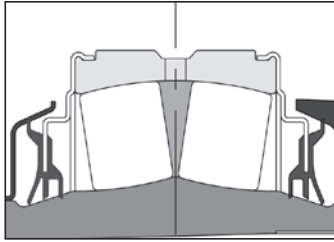
Patented Hydraulic Mount and Dismount System

- Incorporates a hydraulic mount and dismount nut as a standard feature on the inner unit for quicker installation and removal of bearing.
- Totally sealed inner unit prevents contamination during installation
- Harsh duty sealing system is functionally equivalent to a standard Taconite seal
- SN/SD dimensioned housing that matches ISO 113 standards
- Incorporates standard 23144 thru 23176 double row spherical roller bearings
- 150mm thru 360mm bore size
- High strength ductile iron housing is standard
- Incorporates a fixing ring for expansion/non-expansion capability



FEATURES/BENEFITS

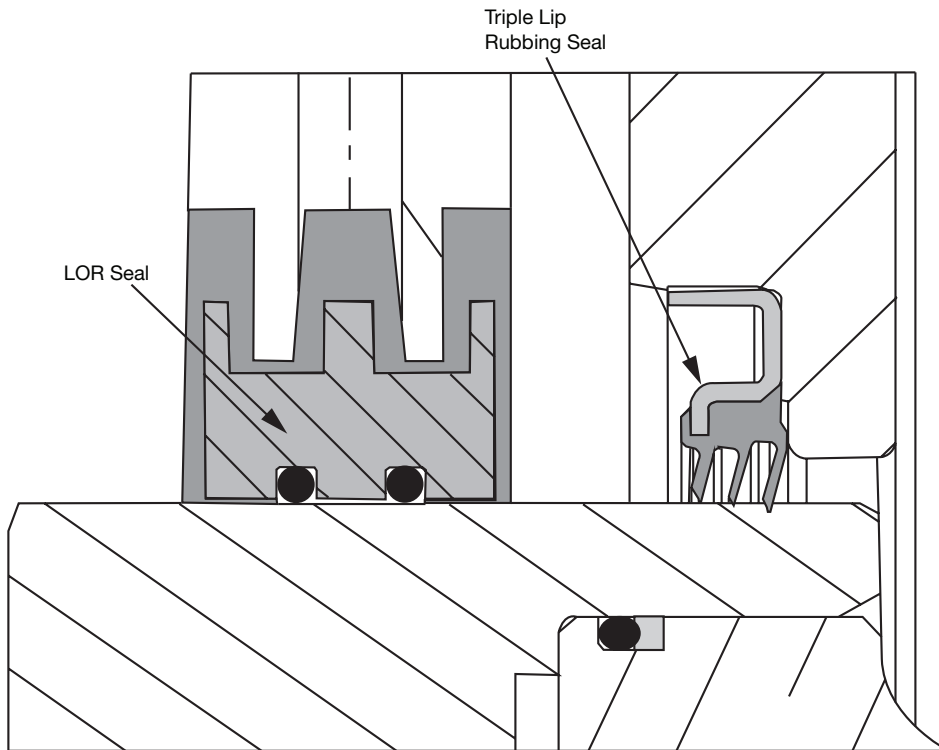
ISN



TRIDENT™ Seal - Patented design triple-lip rubbing seal with corrosion resistant flingers; positive seal contact up to $\pm 1^\circ$ misalignment.

Labyrinth Seal - Patented design clearance steel seal carrier with corrosion resistant flingers.

ISNX



NOMENCLATURE

ISN BEARING NOMENCLATURE

Plummer Blocks

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P2B524 - ISN - 110MFR

Housing Style Options:

P2B = Plummer Block, 2-Bolt Base, Cast Iron
 F4B = Flange 4-Bolt, Cast Iron

Housing Size:

5xx describes the associated DIN - SN Pillow block housing size

M = Size in millimeters otherwise 1-10/16"

Other Data / Seals:

- F = non-expansion
- L = expansion (non-locating)
- R = Trident Rubbing Seal
- S = Labyrinth Seal
- HYD = Integral Hydraulic Mounting/Dismounting

Bearing Type Options:

- ISN, SN style w/Imperial locking mechanism
- IP = Imperial Mount
- ISAF- Imperial Mount SAF
- ISNX HYD = Hydraulic Mount/Dismount
- SNX = Plummer Block to 140 mm
- SDX = Plummer Block to 320 mm

| | | | |
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SELECTION

IMPERIAL HOUSING STYLES



ISN
35 - 140mm
1-1/4" - 5-1/2"

ISAF
35 - 125mm
1-7/16" - 7"



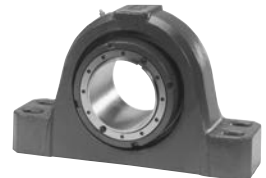
ISNX HYD
150 - 360mm

ISAF HYD
140 - 380mm
5-7/16" - 15"



P2B
35 - 100mm
1-1/8" - 4"

P4B
35 - 140mm
2-3/8" - 5-1/2"



F4B
35 - 100mm
1-7/16" - 3-15/16"

FC
35 - 125mm
1-1/8" - 5"



WSTU
35 - 100mm
1-1/8" - 4"

Insert / Lager
35 - 140mm
1-1/8" - 7"



EP2B
35 - 90mm
1-3/8" - 3-1/2"

EP4B
60 - 125mm
2-1/4" - 5"

Plummer Blocks

Sleeve Bearings

SLEEVOIL

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NOMENCLATURE

ISN RATINGS

Table 1: ISN Spherical Roller Bearings

| Housing | Bearings | Maximum Allowable Adapter Thrust kN | Basic Load Ratings | | e | $F_A/F_R \leq e$ | | $F_A/F_R > e$ | | Max. RPM ★ | | Maximum Expansion |
|-------------------|--------------|--|----------------------------|---|------|------------------|----------------|----------------|----------------|--------------|----------------|-------------------|
| | | | Dynamic Capacity (C) kN | Static Capacity (C ₀) kN | | X ₁ | Y ₁ | X ₂ | Y ₂ | Trident Seal | Labyrinth Seal | |
| | | | | | | | | | | | | |
| 507 508 | 22208 | 2,7 | 93 | 94 | 0,28 | 1,0 | 2,4 | 0,67 | 3,6 | 3975 | 6000 | 3,18 |
| 509 | 22209 | 3,1 | 93 | 105 | 0,26 | 1,0 | 2,6 | 0,67 | 3,9 | 3725 | 5600 | 3,18 |
| 510 511 | 22210 | 3,4 | 98 | 118 | 0,24 | 1,0 | 2,8 | 0,67 | 4,2 | 3520 | 5300 | 6,35 |
| 512 | 22211 | 4,1 | 120 | 145 | 0,23 | 1,0 | 2,9 | 0,67 | 4,3 | 3000 | 4500 | 6,35 |
| 513 | 22213 | 6,0 | 174 | 216 | 0,24 | 1,0 | 2,8 | 0,67 | 4,2 | 2400 | 3800 | 6,35 |
| 515 516 517 | 22215 | 7,0 | 185 | 236 | 0,22 | 1,0 | 3,1 | 0,67 | 4,6 | 2250 | 3400 | 6,35 |
| 518 519 | 22218 | 10,8 | 285 | 363 | 0,23 | 1,0 | 2,9 | 0,67 | 4,3 | 1825 | 2600 | 6,35 |
| 520 522 | 22220 | 13,8 | 369 | 463 | 0,24 | 1,0 | 2,8 | 0,67 | 4,2 | 1530 | 2200 | 7,94 |
| 524 | 22222 | 17,5 | 463 | 587 | 0,25 | 1,0 | 2,7 | 0,67 | 4,0 | 1325 | 2000 | 9,53 |
| 526 528 | 22226 | 25,0 | 650 | 872 | 0,26 | 1,0 | 2,6 | 0,67 | 4,0 | 1175 | 1800 | 9,53 |
| 530 | 22228 | 28.5 | 738 | 1050 | 0.25 | 1,0 | 2.7 | 0,67 | 4,0 | 1100 | 1700 | 9,53 |
| 532 | 22232 | 38.4 | 979 | 1401 | 0.26 | 1,0 | 2.6 | 0,68 | 3,9 | 975 | 1500 | 9,53 |

Refer to pages B10-1 and B10-2 for information on bearing calculations, including L₁₀ life and loads

★ Maximum grease speed is dependant on load and ambient conditions. Consult Dodge Engineering.

NOMENCLATURE

ISN EASY SELECTION

Table 2: ISN Double Row Spherical Roller Bearing

| Housing | L ₁₀ Life Hours | Allowable Equivalent Radial Load Rating (kN) at Various RPM | | | | | | | | | | | | | | | | | | | | | | |
|---------|----------------------------------|---|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|---|
| | | 50 | 100 | 150 | 250 | 500 | 750 | 1000 | 1300 | 1500 | 1700 | 1800 | 2000 | 2200 | 2600 | 2750 | 3000 | 3400 | 3800 | 4500 | 5300 | 5600 | 6000 | |
| 507 | 10000 | 33 | 27 | 24 | 21 | 17 | 15 | 14 | 13 | 12 | 12 | 11 | 11 | 11 | 10 | 10 | 10 | 7 | 6 | 9 | 8 | 8 | 8 | |
| | 30000 | 24 | 20 | 17 | 15 | 12 | 11 | 10 | 9 | 9 | 8 | 8 | 8 | 8 | 7 | 7 | 7 | 7 | 6 | 6 | 6 | 6 | 6 | |
| | 40000 | 22 | 18 | 16 | 14 | 11 | 10 | 9 | 8 | 8 | 8 | 8 | 7 | 7 | 7 | 7 | 6 | 6 | 6 | 6 | 5 | 5 | 5 | 5 |
| | 60000 | 20 | 16 | 14 | 12 | 10 | 9 | 8 | 7 | 7 | 7 | 7 | 6 | 6 | 6 | 6 | 6 | 6 | 5 | 5 | 5 | 5 | 5 | 5 |
| | 100000 | 17 | 14 | 12 | 10 | 8 | 7 | 7 | 6 | 6 | 6 | 6 | 6 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 4 | 4 | 4 | 4 |
| 508 | 10000 | 33 | 27 | 24 | 21 | 17 | 15 | 14 | 13 | 12 | 12 | 11 | 11 | 11 | 10 | 10 | 10 | 7 | 6 | 9 | 8 | 8 | 8 | |
| | 30000 | 24 | 20 | 17 | 15 | 12 | 11 | 10 | 9 | 9 | 8 | 8 | 8 | 8 | 7 | 7 | 7 | 7 | 6 | 6 | 6 | 6 | 6 | |
| | 40000 | 22 | 18 | 16 | 14 | 11 | 10 | 9 | 8 | 8 | 8 | 8 | 7 | 7 | 7 | 7 | 6 | 6 | 6 | 6 | 5 | 5 | 5 | 5 |
| | 60000 | 20 | 16 | 14 | 12 | 10 | 9 | 8 | 7 | 7 | 7 | 7 | 6 | 6 | 6 | 6 | 6 | 6 | 5 | 5 | 5 | 5 | 5 | 5 |
| | 100000 | 17 | 14 | 12 | 10 | 8 | 7 | 7 | 6 | 6 | 6 | 6 | 6 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 4 | 4 | 4 | 4 |
| 509 | 10000 | 33 | 27 | 24 | 21 | 17 | 15 | 14 | 13 | 12 | 12 | 11 | 11 | 11 | 10 | 10 | 10 | 7 | 9 | 9 | 6 | 8 | | |
| | 30000 | 24 | 20 | 17 | 15 | 12 | 11 | 10 | 9 | 9 | 8 | 8 | 8 | 8 | 7 | 7 | 7 | 7 | 7 | 8 | 6 | 6 | 6 | |
| | 40000 | 22 | 18 | 16 | 14 | 11 | 10 | 9 | 8 | 8 | 8 | 8 | 7 | 7 | 7 | 7 | 6 | 6 | 6 | 6 | 6 | 5 | 5 | |
| | 60000 | 20 | 16 | 14 | 12 | 10 | 9 | 8 | 7 | 7 | 7 | 7 | 6 | 6 | 6 | 6 | 6 | 6 | 5 | 5 | 5 | 5 | 5 | |
| | 100000 | 17 | 14 | 12 | 10 | 8 | 7 | 7 | 6 | 6 | 6 | 6 | 6 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 4 | 4 | 4 | 4 |
| 510 | 10000 | 35 | 29 | 25 | 22 | 18 | 16 | 14 | 13 | 13 | 12 | 12 | 12 | 11 | 11 | 11 | 10 | 7 | 10 | 9 | 9 | | | |
| | 30000 | 25 | 21 | 18 | 16 | 13 | 11 | 10 | 10 | 9 | 9 | 9 | 8 | 8 | 8 | 8 | 7 | 7 | 7 | 7 | 7 | 6 | | |
| | 40000 | 23 | 19 | 17 | 14 | 12 | 10 | 10 | 9 | 8 | 8 | 8 | 8 | 8 | 7 | 7 | 7 | 7 | 7 | 6 | 6 | 6 | | |
| | 60000 | 21 | 17 | 15 | 13 | 10 | 9 | 8 | 8 | 7 | 7 | 7 | 7 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 5 | 5 | | |
| | 100000 | 18 | 14 | 13 | 11 | 9 | 8 | 7 | 7 | 6 | 6 | 6 | 6 | 6 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | | |
| 511 | 10000 | 35 | 29 | 25 | 22 | 18 | 16 | 14 | 13 | 13 | 12 | 12 | 12 | 11 | 11 | 11 | 10 | 7 | 10 | 9 | 9 | | | |
| | 30000 | 25 | 21 | 18 | 16 | 13 | 11 | 10 | 10 | 9 | 9 | 9 | 8 | 8 | 8 | 8 | 7 | 7 | 7 | 7 | 7 | 6 | | |
| | 40000 | 23 | 19 | 17 | 14 | 12 | 10 | 10 | 9 | 8 | 8 | 8 | 8 | 8 | 7 | 7 | 7 | 7 | 7 | 6 | 6 | 6 | | |
| | 60000 | 21 | 17 | 15 | 13 | 10 | 9 | 8 | 8 | 7 | 7 | 7 | 7 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 5 | 5 | | |
| | 100000 | 18 | 14 | 13 | 11 | 9 | 8 | 7 | 7 | 6 | 6 | 6 | 6 | 6 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | | |
| 512 | 10000 | 43 | 35 | 31 | 27 | 22 | 19 | 18 | 16 | 16 | 15 | 15 | 14 | 14 | 13 | 13 | 9 | 12 | 12 | 11 | | | | |
| | 30000 | 31 | 25 | 22 | 19 | 16 | 14 | 13 | 12 | 11 | 11 | 11 | 10 | 10 | 10 | 9 | 9 | 9 | 9 | 8 | | | | |
| | 40000 | 29 | 23 | 21 | 18 | 14 | 13 | 12 | 11 | 10 | 10 | 10 | 9 | 9 | 9 | 9 | 8 | 8 | 8 | 7 | | | | |
| | 60000 | 25 | 21 | 18 | 16 | 13 | 11 | 10 | 10 | 9 | 9 | 9 | 8 | 8 | 8 | 8 | 7 | 7 | 7 | 7 | 7 | | | |
| | 100000 | 22 | 18 | 16 | 13 | 11 | 10 | 9 | 8 | 8 | 8 | 8 | 7 | 7 | 7 | 7 | 6 | 6 | 6 | 6 | 6 | | | |
| 513 | 10000 | 61 | 50 | 44 | 38 | 31 | 27 | 25 | 23 | 22 | 21 | 21 | 20 | 14 | 19 | 18 | 18 | 17 | 17 | | | | | |
| | 30000 | 44 | 36 | 32 | 27 | 22 | 19 | 18 | 17 | 16 | 15 | 15 | 15 | 14 | 13 | 13 | 13 | 12 | 12 | 12 | 113 | 11 | | |
| | 40000 | 40 | 33 | 29 | 25 | 20 | 18 | 16 | 15 | 15 | 14 | 14 | 13 | 13 | 12 | 12 | 12 | 11 | 11 | 10 | 10 | 10 | | |
| | 60000 | 36 | 29 | 26 | 22 | 18 | 16 | 15 | 13 | 13 | 12 | 12 | 12 | 11 | 11 | 11 | 10 | 10 | 10 | 10 | 10 | 10 | | |
| | 100000 | 31 | 25 | 22 | 19 | 15 | 14 | 12 | 12 | 11 | 11 | 10 | 10 | 10 | 9 | 9 | 9 | 9 | 9 | 8 | | | | |
| 515 | 10000 | 67 | 54 | 48 | 41 | 33 | 30 | 27 | 25 | 24 | 23 | 23 | 22 | 15 | 20 | 20 | 19 | 19 | | | | | | |
| | 30000 | 48 | 39 | 34 | 30 | 24 | 21 | 20 | 18 | 17 | 17 | 16 | 16 | 15 | 15 | 14 | 14 | 14 | | | | | | |
| | 40000 | 44 | 36 | 32 | 27 | 22 | 20 | 18 | 17 | 16 | 15 | 15 | 15 | 14 | 13 | 13 | 13 | 12 | | | | | | |
| | 60000 | 39 | 32 | 28 | 24 | 20 | 17 | 16 | 15 | 14 | 14 | 13 | 13 | 13 | 12 | 12 | 11 | 11 | | | | | | |
| | 100000 | 33 | 27 | 24 | 21 | 17 | 15 | 14 | 13 | 12 | 12 | 11 | 11 | 11 | 10 | 10 | 10 | 9 | | | | | | |
| 516 | 10000 | 67 | 54 | 48 | 41 | 33 | 30 | 27 | 25 | 24 | 23 | 23 | 22 | 15 | 20 | 20 | 19 | 19 | | | | | | |
| | 30000 | 48 | 39 | 34 | 30 | 24 | 21 | 20 | 18 | 17 | 17 | 16 | 16 | 15 | 15 | 14 | 14 | 14 | | | | | | |
| | 40000 | 44 | 36 | 32 | 27 | 22 | 20 | 18 | 17 | 16 | 15 | 15 | 15 | 14 | 13 | 13 | 13 | 12 | | | | | | |
| | 60000 | 39 | 32 | 28 | 24 | 20 | 17 | 16 | 15 | 14 | 14 | 13 | 13 | 13 | 12 | 12 | 11 | 11 | | | | | | |
| | 100000 | 33 | 27 | 24 | 21 | 17 | 15 | 14 | 13 | 12 | 12 | 11 | 11 | 11 | 10 | 10 | 10 | 9 | | | | | | |

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 L₁₀ shown.

Applications in the Light shaded areas may require high temperature lubrication. Please consult DODGE Engineering.

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NOMENCLATURE

ISN EASY SELECTION

Table 2: ISN Double Row Spherical Roller Bearing (continued)

| Housing | L ₁₀ Life Hours | Allowable Equivalent Radial Load Rating (kN) at Various RPM | | | | | | | | | | | | | | | | | | | | | |
|---------|----------------------------------|---|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | | 50 | 100 | 150 | 250 | 500 | 750 | 1000 | 1300 | 1500 | 1700 | 1800 | 2000 | 2200 | 2600 | 2750 | 3000 | 3400 | 3800 | 4500 | 5300 | 5600 | 6000 |
| 517 | 10000 | 67 | 54 | 48 | 41 | 33 | 30 | 27 | 25 | 24 | 23 | 23 | 22 | 15 | 20 | 20 | 19 | 19 | | | | | |
| | 30000 | 48 | 39 | 34 | 30 | 24 | 21 | 20 | 18 | 17 | 17 | 16 | 16 | 15 | 15 | 14 | 14 | 14 | | | | | |
| | 40000 | 44 | 36 | 32 | 27 | 22 | 20 | 18 | 17 | 16 | 15 | 15 | 15 | 14 | 13 | 13 | 13 | 12 | | | | | |
| | 60000 | 39 | 32 | 28 | 24 | 20 | 17 | 16 | 15 | 14 | 14 | 13 | 13 | 13 | 12 | 12 | 11 | 11 | | | | | |
| | 100000 | 33 | 27 | 24 | 21 | 17 | 15 | 14 | 13 | 12 | 12 | 11 | 11 | 11 | 10 | 10 | 10 | 9 | | | | | |
| 518 | 10000 | 105 | 85 | 76 | 65 | 53 | 47 | 43 | 40 | 38 | 37 | 26 | 35 | 34 | 32 | | | | | | | | |
| | 30000 | 76 | 61 | 54 | 47 | 38 | 34 | 31 | 28 | 27 | 26 | 26 | 25 | 24 | 23 | | | | | | | | |
| | 40000 | 69 | 56 | 50 | 43 | 35 | 31 | 28 | 26 | 25 | 24 | 24 | 23 | 22 | 21 | | | | | | | | |
| | 60000 | 61 | 50 | 44 | 38 | 31 | 27 | 25 | 23 | 22 | 21 | 21 | 20 | 20 | 19 | | | | | | | | |
| | 100000 | 53 | 43 | 38 | 33 | 26 | 23 | 21 | 20 | 19 | 18 | 18 | 17 | 17 | 16 | | | | | | | | |
| 519 | 10000 | 105 | 85 | 76 | 65 | 53 | 47 | 43 | 40 | 38 | 37 | 26 | 35 | 34 | 32 | | | | | | | | |
| | 30000 | 76 | 61 | 54 | 47 | 38 | 34 | 31 | 28 | 27 | 26 | 26 | 25 | 24 | 23 | | | | | | | | |
| | 40000 | 69 | 56 | 50 | 43 | 35 | 31 | 28 | 26 | 25 | 24 | 24 | 23 | 22 | 21 | | | | | | | | |
| | 60000 | 61 | 50 | 44 | 38 | 31 | 27 | 25 | 23 | 22 | 21 | 21 | 20 | 20 | 19 | | | | | | | | |
| | 100000 | 53 | 43 | 38 | 33 | 26 | 23 | 21 | 20 | 19 | 18 | 18 | 17 | 17 | 16 | | | | | | | | |
| 520 | 10000 | 133 | 108 | 96 | 82 | 67 | 59 | 54 | 50 | 35 | 46 | 45 | 44 | 43 | | | | | | | | | |
| | 30000 | 96 | 78 | 69 | 59 | 48 | 43 | 39 | 36 | 35 | 33 | 33 | 32 | 31 | | | | | | | | | |
| | 40000 | 88 | 71 | 63 | 54 | 44 | 39 | 36 | 33 | 32 | 31 | 30 | 29 | 28 | | | | | | | | | |
| | 60000 | 78 | 63 | 56 | 48 | 39 | 35 | 32 | 29 | 28 | 27 | 27 | 26 | 25 | | | | | | | | | |
| | 100000 | 67 | 54 | 48 | 41 | 33 | 30 | 27 | 25 | 24 | 23 | 23 | 22 | 21 | | | | | | | | | |
| 522 | 10000 | 133 | 108 | 96 | 82 | 67 | 59 | 54 | 50 | 35 | 46 | 45 | 44 | 43 | | | | | | | | | |
| | 30000 | 96 | 78 | 69 | 59 | 48 | 43 | 39 | 36 | 35 | 33 | 33 | 32 | 31 | | | | | | | | | |
| | 40000 | 88 | 71 | 63 | 54 | 44 | 39 | 36 | 33 | 32 | 31 | 30 | 29 | 28 | | | | | | | | | |
| | 60000 | 78 | 63 | 56 | 48 | 39 | 35 | 32 | 29 | 28 | 27 | 27 | 26 | 25 | | | | | | | | | |
| | 100000 | 67 | 54 | 48 | 41 | 33 | 30 | 27 | 25 | 24 | 23 | 23 | 22 | 21 | | | | | | | | | |
| 524 | 10000 | 167 | 135 | 120 | 103 | 84 | 74 | 68 | 45 | 60 | 58 | 57 | 55 | | | | | | | | | | |
| | 30000 | 120 | 97 | 86 | 74 | 60 | 53 | 49 | 45 | 43 | 42 | 41 | 40 | | | | | | | | | | |
| | 40000 | 110 | 89 | 79 | 68 | 55 | 49 | 45 | 41 | 40 | 38 | 38 | 36 | | | | | | | | | | |
| | 60000 | 97 | 79 | 70 | 60 | 49 | 43 | 40 | 37 | 35 | 34 | 33 | 32 | | | | | | | | | | |
| | 100000 | 84 | 68 | 60 | 52 | 42 | 37 | 34 | 31 | 30 | 29 | 29 | 28 | | | | | | | | | | |
| 526 | 10000 | 234 | 190 | 168 | 144 | 117 | 104 | 69 | 88 | 84 | 81 | 80 | | | | | | | | | | | |
| | 30000 | 168 | 137 | 121 | 104 | 84 | 75 | 69 | 63 | 61 | 59 | 58 | | | | | | | | | | | |
| | 40000 | 154 | 125 | 111 | 95 | 77 | 69 | 63 | 58 | 56 | 54 | 53 | | | | | | | | | | | |
| | 60000 | 137 | 111 | 98 | 84 | 69 | 61 | 56 | 52 | 49 | 48 | 47 | | | | | | | | | | | |
| | 100000 | 117 | 95 | 84 | 72 | 59 | 52 | 48 | 44 | 42 | 41 | 40 | | | | | | | | | | | |
| 528 | 10000 | 234 | 190 | 168 | 144 | 117 | 104 | 69 | 88 | 84 | 81 | 80 | | | | | | | | | | | |
| | 30000 | 168 | 137 | 121 | 104 | 84 | 75 | 69 | 63 | 61 | 59 | 58 | | | | | | | | | | | |
| | 40000 | 154 | 125 | 111 | 95 | 77 | 69 | 63 | 58 | 56 | 54 | 53 | | | | | | | | | | | |
| | 60000 | 137 | 111 | 98 | 84 | 69 | 61 | 56 | 52 | 49 | 48 | 47 | | | | | | | | | | | |
| | 100000 | 117 | 95 | 84 | 72 | 59 | 52 | 48 | 44 | 42 | 41 | 40 | | | | | | | | | | | |
| 530 | 10000 | 266 | 216 | 191 | 164 | 133 | 118 | 78 | 100 | 96 | 92 | | | | | | | | | | | | |
| | 30000 | 191 | 155 | 138 | 118 | 96 | 85 | 78 | 72 | 69 | 66 | | | | | | | | | | | | |
| | 40000 | 176 | 143 | 126 | 108 | 88 | 78 | 71 | 66 | 63 | 61 | | | | | | | | | | | | |
| | 60000 | 155 | 126 | 112 | 96 | 78 | 69 | 63 | 59 | 56 | 54 | | | | | | | | | | | | |
| | 100000 | 133 | 108 | 96 | 82 | 67 | 59 | 54 | 50 | 48 | 46 | | | | | | | | | | | | |
| 532 | 10000 | 353 | 287 | 254 | 218 | 177 | 113 | 144 | 133 | 127 | | | | | | | | | | | | | |
| | 30000 | 254 | 206 | 182 | 157 | 127 | 113 | 103 | 95 | 91 | | | | | | | | | | | | | |
| | 40000 | 233 | 189 | 167 | 144 | 117 | 103 | 95 | 88 | 84 | | | | | | | | | | | | | |
| | 60000 | 206 | 167 | 148 | 127 | 103 | 91 | 84 | 78 | 74 | | | | | | | | | | | | | |
| | 100000 | 177 | 144 | 127 | 109 | 89 | 78 | 72 | 67 | 64 | | | | | | | | | | | | | |

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 L₁₀ shown.
 Applications in the Light shaded areas may require high temperature lubrication. Please consult DODGE Engineering.

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NOMENCLATURE

IMPERIAL - ISN Spherical Roller Bearings

**Table 4: Definition Of Operating Conditions
For Unitized Spherical Roller Bearings**

| | |
|--------------------|---------------------------------|
| LOW SPEED | UP TO 20% OF MAX. RPM (TABLE 1) |
| MEDIUM SPEED | OVER 20% TO 80% OF MAX. RPM |
| HIGH SPEED | OVER 80% OF MAX. 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 | -73°C to -7°C |
| MEDIUM TEMPERATURE | OVER -7°C to 93°C |
| HIGH TEMPERATURE | OVER 93°C to 122°C |

| | | | |
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SELECTION

ISN PLUMMER BLOCKS WITH TRIDENT SEALS

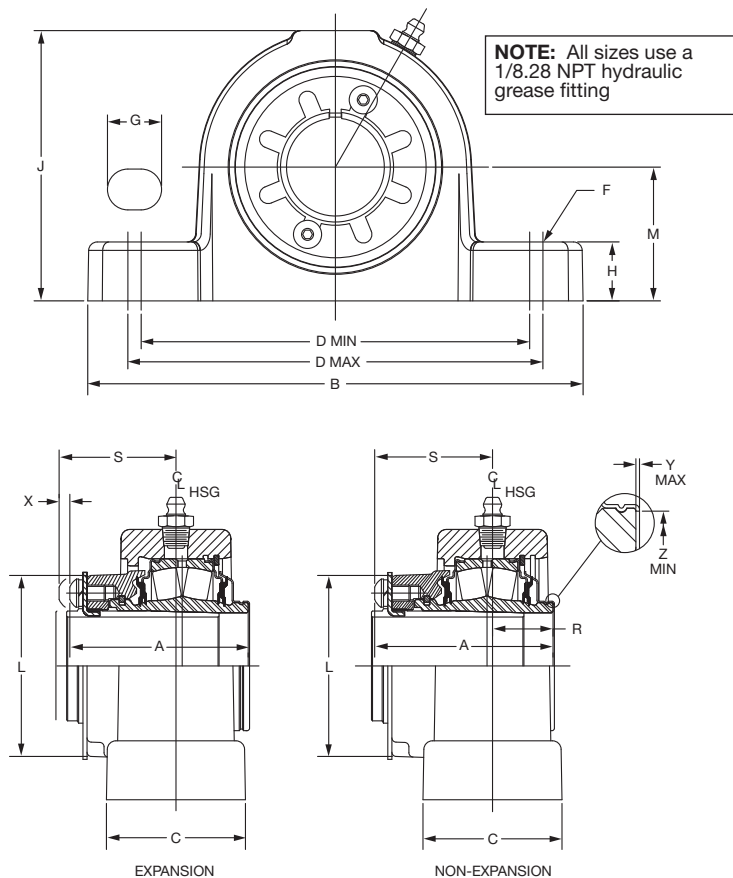
| Series | Ø Shaft | Fixed bearing | | Expansion Bearing | | Hsg / Insert Pt # | Description | Sleeve Pt # | Description |
|--------|---------|---------------|-------------------|-------------------|-------------------|-------------------|----------------------|---------------|----------------------|
| | | Part No. | Description | Part No. | Description | | | | |
| 507 | 30mm | 071000 | P2B507-ISN-030MFR | 071017 | P2B507-ISN-030MLR | 071983 | ISN 507-22208 FR | 744975 | ADPTR-IP-22208-30M |
| | 1-1/8 | 747900 | P2B507-ISN-102 FR | 747904 | P2B507-ISN-102 LR | 071983 | ISN 507-22208 FR | 069286 | ADPTR-IP-22208-102 |
| | 1-3/16 | 747901 | P2B507-ISN-103FR | 747905 | P2B507-ISN-103 LR | 071983 | ISN 507-22208 FR | 069287 | ADPTR-IP-22208-103 |
| 508 | 35mm | 071001 | P2B508-ISN-035MFR | 071018 | P2B508-ISN-035MLR | 071984 | ISN 508-22208 FR | 744976 | ADPTR-IP-22208-35M |
| | 1-1/4 | 747908 | P2B508-ISN-104 FR | 747912 | P2B508-ISN-104 LR | 071984 | ISN 508-22208 FR | 069288 | ADPTR-IP-22208-104 |
| | 1-3/8 | 747909 | P2B508-ISN-106 FR | 747913 | P2B508-ISN-106 LR | 071984 | ISN 508-22208 FR | 069289 | ADPTR-IP-22208-106 |
| 509 | 40mm | 071002 | P2B509-ISN-040MFR | 071019 | P2B509-ISN-040MLR | 071985 | ISN 509-22209 FR | 744977 | ADPTR-IP-22209-40M |
| | 1-7/16 | 747916 | P2B509-ISN-107 FR | 747920 | P2B509-ISN-107 LR | 071985 | ISN 509-22209 FR | 064153 | ADPTR-IP-22209-107 |
| | 1-1/2 | 747917 | P2B509-ISN-108 FR | 747921 | P2B509-ISN-108 LR | 071985 | ISN 509-22209 FR | 064154 | ADPTR-IP-22209-108 |
| 510 | 45mm | 071003 | P2B510-ISN-045MFR | 071020 | P2B510-ISN-045MLR | 071986 | ISN 510-22210 FR | 744978 | ADPTR-IP-22210-45M |
| | 1-11/16 | 747924 | P2B510-ISN-111 FR | 747928 | P2B510-ISN-111 LR | 071986 | ISN 510-22210 FR | 064155 | ADPTR-IP-22210-111 |
| | 1-3/4 | 747925 | P2B510-ISN-112 FR | 747929 | P2B510-ISN-112 LR | 071986 | ISN 510-22210 FR | 064156 | ADPTR-IP-22210-112 |
| 511 | 50mm | 071004 | P2B511-ISN-050MFR | 071021 | P2B511-ISN-050MLR | 071987 | ISN 511-22210 FR | 744979 | ADPTR-IP-22210-50M |
| | 1-15/16 | 747932 | P2B511-ISN-115 FR | 747936 | P2B511-ISN-115 LR | 071987 | ISN 511-22210 FR | 069296 | ADPTR-IP-22210-115 |
| | 2 | 747933 | P2B511-ISN-200 FR | 747937 | P2B511-ISN-200 LR | 071987 | ISN 511-22210 FR | 069297 | ADPTR-IP-22210-200 |
| 512 | 55mm | 071005 | P2B512-ISN-055MFR | 071022 | P2B512-ISN-055MLR | 071988 | ISN 512-22211 FR | 744980 | ADPTR-IP-22211-055M |
| | 2-1/8 | 748012 | P2B512-ISN-202 FR | 748013 | P2B512-ISN-202 LR | 071988 | ISN 512-22211FR | 064157 | ADPTR-IP-22211-202 |
| 513 | 60mm | 071006 | P2B513-ISN-060MFR | 071023 | P2B513-ISN-060MLR | 071989 | ISN 513-22213 FR | 744981 | ADPTR-IP-22213-60M |
| | 2-3/16 | 747940 | P2B513-ISN-203 FR | 747944 | P2B513-ISN-203 LR | 071989 | ISN 513-22213 FR | 064070 | ADPTR-IP-22213-203 |
| | 2-1/4 | 747941 | P2B513-ISN-204 FR | 747945 | P2B513-ISN-204 LR | 071989 | ISN 513-22213 FR | 064071 | ADPTR-IP-22213-204 |
| 515 | 65mm | 071007 | P2B515-ISN-065MFR | 071024 | P2B515-ISN-065MLR | 071990 | ISN 515-22215 FR | 744982 | ADPTR-IP-22215-65M |
| | 2-7/16 | 747948 | P2B515-ISN-207 FR | 747952 | P2B515-ISN-207 LR | 071990 | ISN 515-22215 FR | 064072 | ADPTR-IP-22215-207 |
| | 2-1/2 | 747949 | P2B515-ISN-208 FR | 747953 | P2B515-ISN-208 LR | 071990 | ISN 515-22215 FR | 064073 | ADPTR-IP-22215-208 |
| 516 | 70mm | 071008 | P2B516-ISN-070MFR | 071025 | P2B516-ISN-070MLR | 071991 | ISN 516/517-22215 FR | 744983 | ADPTR-IP-22215-70M |
| | 2-11/16 | 747956 | P2B516-ISN-211 FR | 747960 | P2B516-ISN-211 LR | 071991 | ISN 516/517-22215 FR | 069303 | ADPTR-IP-22215-211 |
| | 2-3/4 | 747957 | P2B516-ISN-212 FR | 747961 | P2B516-ISN-212 LR | 071991 | ISN 516/517-22215 FR | 069304 | ADPTR-IP-22215-212 |
| 517 | 75mm | 071009 | P2B517-ISN-075MFR | 071026 | P2B517-ISN-075MLR | 071991 | ISN 516/517-22215 FR | 744984 | ADPTR-IP-22215-75MM |
| | 2-15/16 | 747964 | P2B517-ISN-215 FR | 747968 | P2B517-ISN-215 LR | 071991 | ISN 516/517-22215 FR | 069305 | ADPTR-IP-22215-215 |
| | 3 | 747965 | P2B517-ISN-300 FR | 747969 | P2B517-ISN-300 LR | 071991 | ISN 516/517-22215 FR | 069306 | ADPTR-IP-22215-300 |
| 518 | 80mm | 071010 | P2B518-ISN-080MFR | 071027 | P2B518-ISN-080MLR | 071992 | ISN 518-22218 FR | 744985 | ADPTR-IP-22218-80M |
| | 3-3/16 | 747972 | P2B518-ISN-303 FR | 747976 | P2B518-ISN-303 LR | 071992 | ISN 518-22218 FR | 069307 | ADPTR-IP-22218-303 |
| | 3-1/4 | 747973 | P2B518-ISN-304 FR | 747977 | P2B518-ISN-304 LR | 071992 | ISN 518-22218 FR | 069308 | ADPTR-IP-304 |
| 519 | 85mm | 071011 | P2B519-ISN-085MFR | 071028 | P2B519-ISN-085MLR | 071993 | ISN 519-22218 FR | 744986 | ADPTR-IP-22218-85M |
| 520 | 90mm | 071012 | P2B520-ISN-090MFR | 071029 | P2B520-ISN-090MLR | 071994 | ISN 520-22220 FR | 744987 | ADPTR-IP-22220-090MM |
| | 3-7/16 | 747980 | P2B520-ISN-307 FR | 747984 | P2B520-ISN-307 LR | 071994 | ISN 520-22220 FR | 064074 | ADPTR-IP-22220-307 |
| | 3-1/2 | 747981 | P2B520-ISN-308 FR | 747985 | P2B520-ISN-308 LR | 071994 | ISN 520-22220 FR | 064075 | ADPTR-IP-22220-308 |
| 522 | 100mm | 071013 | P2B522-ISN-100MFR | 071030 | P2B522-ISN-100MLR | 071995 | ISN 522-22220 FR | 744988 | ADPTR-IP-22220-100MM |
| | 3-15/16 | 747988 | P2B522-ISN-315 FR | 747992 | P2B522-ISN-315 LR | 071995 | ISN 522-22220 FR | 069312 | ADPTR-IP-22220-315 |
| | 4 | 747989 | P2B522-ISN-400 FR | 747993 | P2B522-ISN-400 LR | 071995 | ISN 522-22220 FR | 069313 | ADPTR-IP-22220-400 |
| 524 | 110mm | 071014 | P2B524-ISN-110MFR | 071031 | P2B524-ISN-110MLR | 071996 | ISN 524-22222 FR | 744989 | ADPTR-IP-22222-110MM |
| 526 | 115mm | 071015 | P2B526-ISN-115MFR | 071032 | P2B526-ISN-115MLR | 071997 | ISN 526-22226 FR | 744990 | ADPTR-IP-22226-115MM |
| | 4-7/16 | 747996 | P2B526-ISN-407 FR | 748000 | P2B526-ISN-407 LR | 071997 | ISN 526-22226 FR | 064076 | ADPTR-IP-22226-407 |
| | 4-1/2 | 747997 | P2B526-ISN-408 FR | 748001 | P2B526-ISN-408 LR | 071997 | ISN 526-22226 FR | 064077 | ADPTR-IP-22226-408 |
| 528 | 125mm | 071016 | P2B528-ISN-125MFR | 071033 | P2B528-ISN-125MLR | 071998 | ISN 528-22226 FR | 744991 | ADPTR-IP-22226-125MM |
| | 4-15/16 | 748004 | P2B528-ISN-415 FR | 748008 | P2B528-ISN-415 LR | 071998 | ISN 528-22226 FR | 069316 | ADPTR-IP-22226-415 |
| | 5 | 748005 | P2B528-ISN-500 FR | 748009 | P2B528-ISN-500 LR | 071998 | ISN 528-22226 FR | 069317 | ADPTR-IP-22226-500 |
| 530 | 135mm | 071102 | P2B530-ISN-135MFR | 071103 | P2B530-ISN-135MLR | | | 071114 | ADPTR-IP-22228-135M |
| 532 | 140 | 071106 | P2B532-ISN-140MFR | 071107 | P2B532-ISN-140MLR | | | 071115 | ADPTR-IP-22230-140M |

F = Non-Expansion, L = Expansion, R = Trident Rubbing Seal, S = Labyrinth Seal

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SELECTION

ISN DIMENSIONS



| Series | Shaft Size mm | A | B | C | D | | F Bolt Dia | G | H | J | L | M | R | S | X Total Expansion |
|--------|---------------|-------|-------|-------|-------|-------|------------|------|------|-------|-------|-------|------|-------|-------------------|
| | | | | | Min | Max | | | | | | | | | |
| 507 | 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 |
| 508 | 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 |
| 509 | 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 |
| 510 | 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 |
| 511 | 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 |
| 512 | 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 | 7.0 |
| 513 | 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 |
| 515 | 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 |
| 516 | 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 |
| 517 | 75 | 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 |
| 518 | 80 | 106.0 | 345.3 | 110.3 | 270.0 | 293.7 | M20 | 34.0 | 35.0 | 196.7 | 124.7 | 100.0 | 37.7 | 68.3 | 7.0 |
| 519 | 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 |
| 520 | 90 | 120.0 | 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 |
| 522 | 100 | 120.0 | 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 |
| 524 | 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 |
| 526 | 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 |
| 528 | 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 |
| 530 | 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 |
| 532 | 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 |

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SELECTION

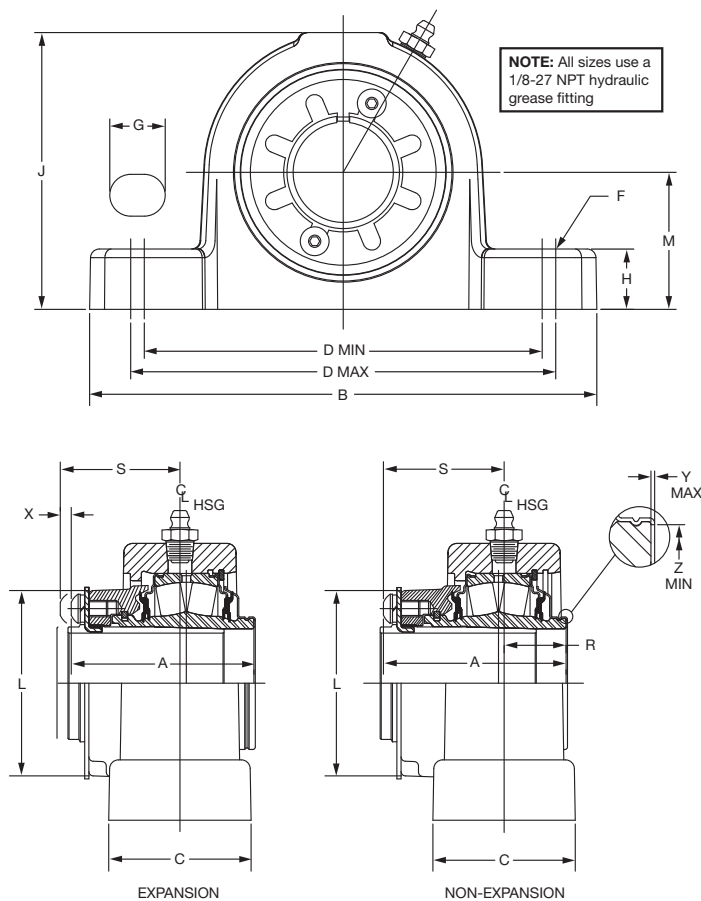
ISN PLUMMER BLOCKS WITH LABYRINTH SEALS

30 Through 140mm, 2-Bolt

| Series | Ø Shaft | Part No. | Fixed Bearing Description | Part No. | Exp. Bearing Description |
|--------|---------------------------|---------------|---------------------------|---------------|--------------------------|
| 507 | 30mm | 071034 | P2B507-ISN-030MFS | 071051 | P2B507-ISN-030MLS |
| 508 | 35mm | 071035 | P2B508-ISN-035MFS | 071052 | P2B508-ISN-035MLS |
| 509 | 40mm 1-1/2" | 071036 | P2B509-ISN-040MFS | 070053 | P2B509-ISN-040MLS |
| | | 075154 | P2B509-ISN-108 FS | | |
| 510 | 45mm | 071037 | P2B510-ISN-045MFS | 071054 | P2B510-ISN-045MLS |
| 511 | 50mm | 071038 | P2B511-ISN-050MFS | 071055 | P2B511-ISN-050MLS |
| 512 | 55mm | 071039 | P2B512-ISN-055MFS | 071056 | P2B512-ISN-055MLS |
| 513 | 60mm 2-3/16" 2-1/2" | 071040 | P2B513-ISN-060MFS | 071057 | P2B513-ISN-060MLS |
| | | 077481 | P2B513-ISN-203 FS | | |
| 515 | 65mm 2-1/2" | 071041 | P2B515-ISN-065MFS | 071058 | P2B515-ISN-065MLS |
| | | 074989 | P2B515-ISN-208 FS | | |
| 516 | 70mm | 071042 | P2B516-ISN-070MFS | 071059 | P2B516-ISN-070MLS |
| 517 | 75mm | 071043 | P2B517-ISN-075MFS | 071060 | P2B517-ISN-075MLS |
| 518 | 80mm | 071044 | P2B518-ISN-080MFS | 071061 | P2B518-ISN-080MLS |
| 519 | 85mm | 071045 | P2B519-ISN-085MFS | 071062 | P2B519-ISN-085MLS |
| 520 | 90mm | 071046 | P2B520-ISN-090MFS | 071063 | P2B520-ISN-090MLS |
| 522 | 100mm | 071047 | P2B522-ISN-100MFS | 071064 | P2B522-ISN-100MLS |
| 524 | 110mm | 071048 | P2B524-ISN-110MFS | 071065 | P2B524-ISN-110MLS |
| 526 | 115mm | 071049 | P2B526-ISN-115MFS | 071066 | P2B526-ISN-115MLS |
| 528 | 125mm | 071050 | P2B528-ISN-125MFS | 071067 | P2B528-ISN-125MLS |
| 530 | 135mm | 071104 | P2B530-ISN-135MFS | 071105 | P2B530-ISN-135MLS |
| 532 | 140mm | 071108 | P2B532-ISN-140MFS | 071109 | P2B532-ISN-140MLS |

DIMENSIONS

ISN PLUMMER BLOCK DIMENSIONS



| Series | Shaft Size mm | A | B | C | D | | F Bolt Dia | G | H | J | L | M | R | S | X Total Expansion |
|--------|---------------|-------|-------|-------|-------|-------|------------|------|------|-------|-------|-------|------|-------|-------------------|
| | | | | | Min | Max | | | | | | | | | |
| 507 | 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 |
| 508 | 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 |
| 509 | 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 |
| 510 | 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 |
| 511 | 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 |
| 512 | 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 | 7.0 |
| 513 | 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 |
| 515 | 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 |
| 516 | 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 |
| 517 | 75 | 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 |
| 518 | 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 |
| 519 | 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 |
| 520 | 90 | 120.0 | 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 |
| 522 | 100 | 120.0 | 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 |
| 524 | 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 |
| 526 | 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 |
| 528 | 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 |
| 530 | 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 |
| 532 | 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 |

| | | | |
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DIMENSIONS

ISN BEARING INSERTS
Metric Sizes 30-170 mm

Plummer Blocks

Sleeve Bearings

SLEEVOIL

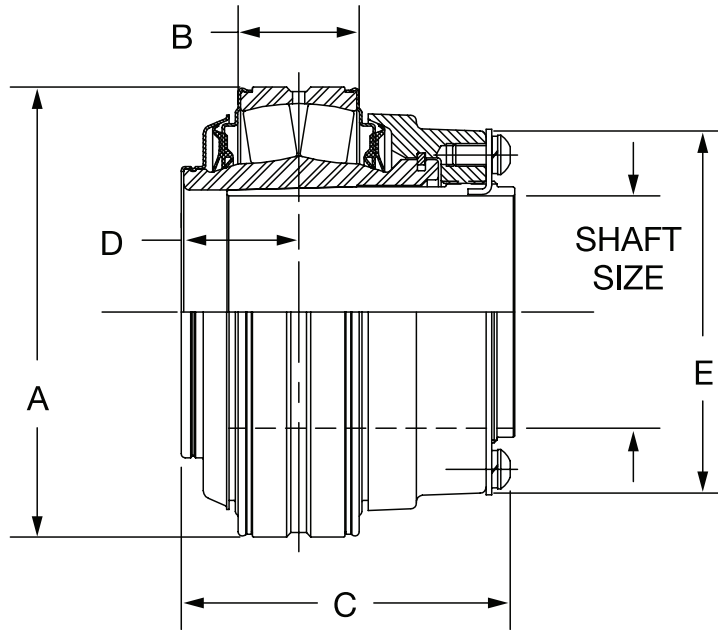
Take-Up Frames

Engineering

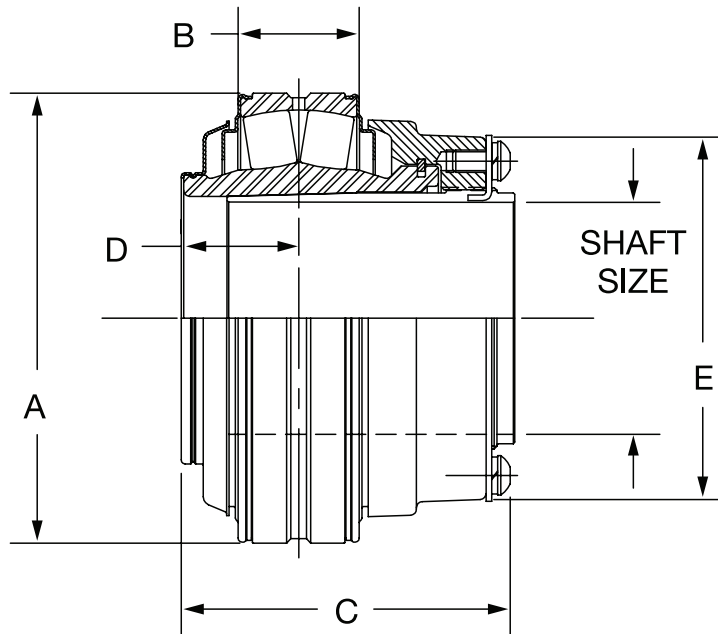
Part Number Index

Keyword Index

CONTACT SEAL



LABYRINTH SEAL



| | | | |
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DIMENSIONS

ISN BEARING INSERTS Metric Sizes 30-170 mm

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

| | | | |
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DIMENSIONS

ISNX Pillow Block Hydraulic

Table 5: Spherical Roller Bearings

23100K Series

| Shaft Size Adapter Mounted Inches | Bearing Series | e | F _A /F _R ≤ e | | F _A /F _R > e | | Adapter Maximum Allowable Thrust Load kN † | Dynamic Capacity (C) kN | Static Capacity (C ₀) kN | Maximum RPM |
|--|-------------------|-----|------------------------------------|------|------------------------------------|------|--|----------------------------------|--|----------------|
| | | | X | Y | X | Y | | | | |
| 150mm | 23134K | .28 | 1 | 2.40 | .67 | 3.50 | 45 | 1032 | 1668 | 1300 |
| 160mm | 23136K | .29 | 1 | 2.30 | .67 | 3.50 | 52 | 1201 | 1913 | 1200 |
| 170mm | 23138K | .30 | 1 | 2.30 | .67 | 3.40 | 59 | 1357 | 2180 | 1100 |
| 180mm | 23140K | .35 | 1 | 2.00 | .67 | 2.90 | 67 | 1335 | 2269 | 900 |
| 200mm | 23144K | .33 | 1 | 2.00 | .67 | 3.00 | 79 | 1624 | 2914 | 800 |
| 220mm | 23148K | .33 | 1 | 2.10 | .67 | 3.10 | 92 | 1846 | 3269 | 750 |
| 9-7/16" 9-1/2" 240mm" | 23152K | .33 | 1 | 2.00 | .67 | 3.00 | 89 | 2180 | 4003 | 670 |
| 10-7/16" 10-1/2" 260mm" | 23156K | .32 | 1 | 2.10 | .67 | 3.20 | 123 | 2358 | 4359 | 630 |
| 10-15/16" 11" 280mm" | 23160K | .33 | 1 | 2.10 | .67 | 3.10 | 144 | 2669 | 4938 | 600 |
| 11-15/16" 12" 300mm" | 23164K | .34 | 1 | 2.00 | .67 | 2.90 | 169 | 3203 | 5961 | 530 |
| 12-7/16" 12-1/2" 320mm" | 23168K | .34 | 1 | 2.00 | .67 | 2.90 | 194 | 3692 | 6939 | 500 |
| 13-7/16" 13-1/2" 340mm" | 23172K | .33 | 1 | 2.10 | .67 | 3.10 | 203 | 3781 | 7384 | 480 |
| 13-15/16" 14" 360mm" | 23176K | .32 | 1 | 2.10 | .67 | 3.20 | 221 | 4070 | 8140 | 450 |

If the thrust load exceeds adapter maximum allowable thrust load, auxiliary methods of carrying thrust are required.
23100K series bearings will be provided with metric housings only.

| | | | |
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DIMENSIONS

ISNX Large-Bore Hydraulic Assist Spherical Roller Bearing Selection

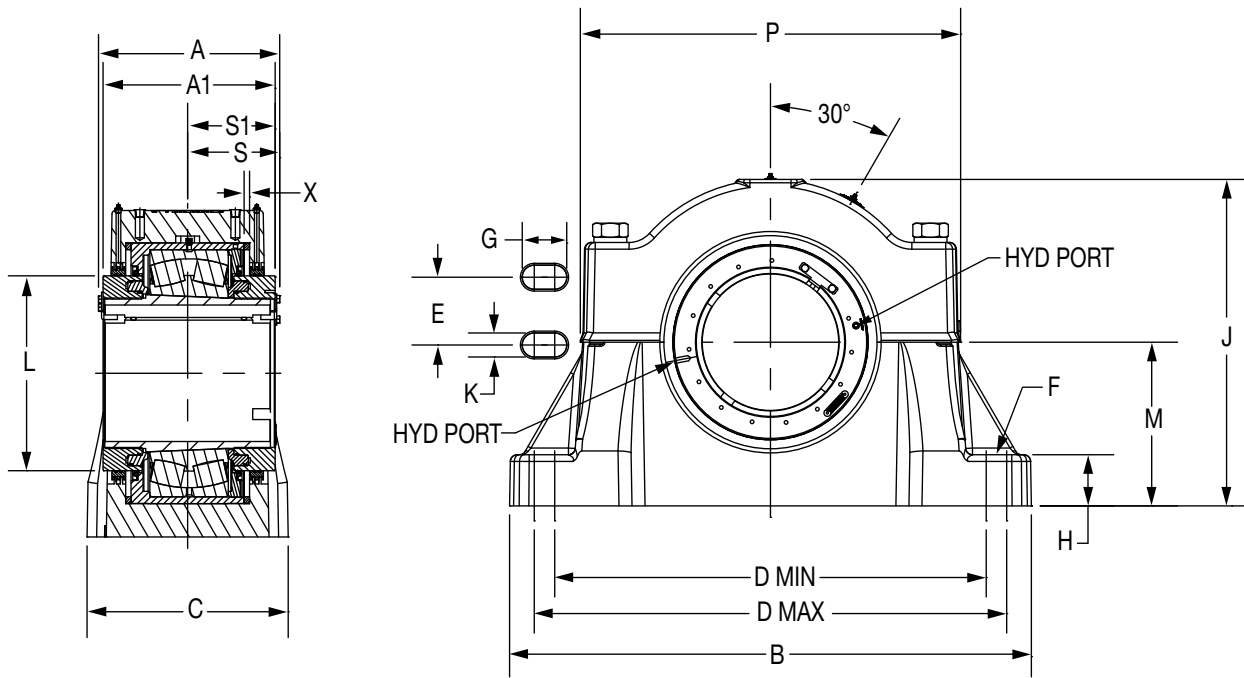
Table 6: ISNX Large-Bore Hydraulic Assist Spherical Roller Bearings Selection Table

| Shaft Size | Housing Designation | Bearing Series | Max RPM Grease Life | L10 Hours | Allowable Equivalent Radial Load Rating (kN) AT VARIOUS RPM | | | | | | | | | | | | | | |
|------------------------------|---------------------|----------------|---------------------|-----------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| | | | | | 50 | 100 | 150 | 200 | 250 | 300 | 400 | 500 | 550 | 600 | 650 | 700 | 750 | 950 | 1300 |
| 23100K Series | | | | | | | | | | | | | | | | | | | |
| 150mm | 3134 | 23134K | 1300 | 50,000 | 230 | 186 | 165 | 151 | 142 | 134 | 123 | 115 | 112 | 109 | 106 | 104 | 102 | 95 | 86 |
| | | | | 80,000 | 199 | 162 | 143 | 132 | 123 | 116 | 107 | 200 | 97 | 95 | 92 | 90 | 88 | 82 | 75 |
| | | | | 100,000 | 186 | 151 | 134 | 123 | 115 | 109 | 100 | 93 | 91 | 88 | 86 | 84 | 83 | 77 | 70 |
| 160mm | 3136 | 23136K | 1200 | 50,000 | 267 | 217 | 192 | 176 | 165 | 156 | 143 | 134 | 130 | 127 | 124 | 121 | 119 | 110 | 101 |
| | | | | 80,000 | 232 | 188 | 167 | 153 | 143 | 136 | 124 | 116 | 113 | 110 | 107 | 105 | 103 | 96 | 87 |
| | | | | 100,000 | 217 | 176 | 156 | 143 | 134 | 127 | 116 | 109 | 106 | 103 | 101 | 98 | 96 | 90 | 82 |
| 170mm | 3138 | 23138K | 1100 | 50,000 | 302 | 245 | 217 | 199 | 186 | 176 | 162 | 151 | 147 | 143 | 140 | 137 | 134 | 125 | 114 |
| | | | | 80,000 | 262 | 213 | 188 | 173 | 162 | 153 | 140 | 131 | 128 | 124 | 121 | 119 | 116 | 108 | 99 |
| | | | | 100,000 | 245 | 199 | 176 | 162 | 151 | 143 | 131 | 123 | 119 | 116 | 114 | 111 | 109 | 101 | 92 |
| 180mm | 3140 | 23140K | 900 | 50,000 | 297 | 241 | 213 | 196 | 183 | 173 | 159 | 149 | 145 | 141 | 137 | 134 | 132 | 123 | |
| | | | | 80,000 | 258 | 209 | 185 | 170 | 159 | 151 | 138 | 129 | 126 | 122 | 119 | 117 | 114 | 107 | |
| | | | | 100,000 | 241 | 196 | 173 | 159 | 149 | 141 | 129 | 121 | 117 | 114 | 112 | 109 | 107 | 100 | |
| 200mm | 3144 | 23144K | 800 | 50,000 | 361 | 293 | 260 | 238 | 223 | 211 | 194 | 181 | 176 | 171 | 167 | 164 | 160 | | |
| | | | | 80,000 | 314 | 255 | 226 | 207 | 194 | 183 | 168 | 157 | 153 | 149 | 145 | 142 | 139 | | |
| | | | | 100,000 | 293 | 238 | 211 | 194 | 181 | 171 | 157 | 147 | 143 | 139 | 136 | 133 | 130 | | |
| 220mm | 3148 | 23148K | 750 | 50,000 | 411 | 334 | 295 | 271 | 253 | 240 | 220 | 206 | 200 | 195 | 190 | 186 | 182 | | |
| | | | | 80,000 | 357 | 290 | 256 | 235 | 220 | 208 | 191 | 179 | 174 | 169 | 165 | 162 | 158 | | |
| | | | | 100,000 | 334 | 271 | 240 | 220 | 206 | 195 | 179 | 167 | 162 | 158 | 154 | 151 | 148 | | |
| 9-7/16" 9-1/2" 240mm | 3152 | 23152K | 670 | 50,000 | 485 | 394 | 349 | 320 | 299 | 283 | 260 | 243 | 236 | 230 | 225 | 220 | 215 | | |
| | | | | 80,000 | 421 | 342 | 303 | 278 | 260 | 246 | 226 | 211 | 205 | 200 | 195 | 191 | 187 | | |
| | | | | 100,000 | 394 | 320 | 283 | 260 | 243 | 230 | 211 | 197 | 192 | 187 | 182 | 178 | 175 | | |
| 10-7/16" 10-1/2" 260mm | 3156 | 23156K | 630 | 50,000 | 524 | 426 | 377 | 346 | 324 | 306 | 281 | 263 | 255 | 249 | 243 | 238 | 233 | | |
| | | | | 80,000 | 455 | 370 | 328 | 300 | 281 | 266 | 244 | 228 | 222 | 216 | 211 | 206 | 202 | | |
| | | | | 100,000 | 426 | 346 | 297 | 281 | 263 | 249 | 228 | 213 | 207 | 202 | 197 | 193 | 189 | | |
| 10-15/16" 11" 280mm | 3160 | 23160K | 600 | 50,000 | 594 | 482 | 427 | 392 | 366 | 347 | 318 | 298 | 289 | 282 | 275 | 269 | 263 | | |
| | | | | 80,000 | 419 | 419 | 371 | 340 | 318 | 301 | 276 | 258 | 251 | 245 | 239 | 234 | 229 | | |
| | | | | 100,000 | 482 | 392 | 347 | 318 | 298 | 282 | 258 | 242 | 235 | 229 | 223 | 218 | 205 | | |
| 11-15/16" 12" 300mm | 3164 | 23164K | 530 | 50,000 | 712 | 579 | 512 | 470 | 440 | 416 | 382 | 357 | 347 | 338 | 330 | | | | |
| | | | | 60,000 | 619 | 503 | 445 | 408 | 382 | 361 | 332 | 310 | 301 | 294 | 287 | | | | |
| | | | | 100,000 | 579 | 470 | 416 | 382 | 268 | 338 | 310 | 390 | 282 | 275 | 268 | | | | |
| 12-7/16" 12-1/2" 320mm | 3168 | 23168K | 500 | 50,000 | 821 | 667 | 591 | 542 | 507 | 480 | 440 | 412 | 400 | 301 | | | | | |
| | | | | 80,000 | 713 | 579 | 513 | 471 | 440 | 417 | 382 | 357 | 347 | 338 | | | | | |
| | | | | 100,000 | 667 | 542 | 480 | 431 | 412 | 390 | 357 | 334 | 325 | 316 | | | | | |
| 13-7/16" 13-1/2" 340mm | 3172 | 23172K | 480 | 50,000 | 841 | 683 | 605 | 555 | 519 | 491 | 451 | 421 | 410 | 399 | | | | | |
| | | | | 80,000 | 730 | 593 | 525 | 482 | 451 | 427 | 391 | 277 | 356 | 347 | | | | | |
| | | | | 100,000 | 683 | 555 | 491 | 451 | 421 | 310 | 366 | 342 | 333 | 323 | | | | | |
| 13-15/16" 14" 360mm | 3176 | 23176K | 450 | 50,000 | 905 | 735 | 651 | 597 | 559 | 529 | 485 | 454 | 441 | | | | | | |
| | | | | 80,000 | 786 | 639 | 565 | 519 | 485 | 459 | 421 | 394 | 383 | | | | | | |
| | | | | 100,000 | 735 | 597 | 529 | 485 | 454 | 430 | 394 | 368 | 358 | | | | | | |

| | | | |
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DIMENSIONS

ISNX HYD LARGE BORE SN DIMENSION PLUMMER BLOCKS

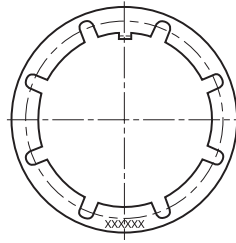


| Housing Designation | Bearing Series | Shaft Size | Part Number | Description | Insert Number |
|---------------------|----------------|------------|---------------|-----------------------|---------------|
| 3134 | 23134K | 150mm | 072919 | P4B134-ISNX-150MR HYD | 072895 |
| 3136 | 23136K | 160mm | 072920 | P4B136-ISNX-160MR HYD | 072896 |
| 3138 | 23138K | 170mm | 072921 | P4B138-ISNX-170MR HYD | 072897 |
| 3140 | 23140K | 180mm | 072922 | P4B140-ISNX-180MR HYD | 072898 |
| 3144 | 23144K | 200mm | 072923 | P4B144-ISNX-200MR HYD | 072899 |
| 3148 | 23148K | 220mm | 072924 | P4B148-ISNX-220MR HYD | 072900 |
| 3152 | 23152K | 240mm | 072912 | P4B152-ISNX-240MR HYD | 072901 |
| 3156 | 23156K | 260mm | 072913 | P4B156-ISNX-260MR HYD | 072902 |
| 3160 | 23160K | 280mm | 072914 | P4B160-ISNX-280MR HYD | 072903 |
| 3164 | 23164K | 300mm | 072915 | P4B164-ISNX-300MR HYD | 072904 |
| 3168 | 23168K | 320mm | 072916 | P4B168-ISNX-320MR HYD | 072905 |
| 3172 | 23172K | 340mm | 072917 | P4B172-ISNX-340MR HYD | 072906 |
| 3176 | 23176K | 360mm | 072918 | P4B176-ISNX-360MR HYD | 072907 |

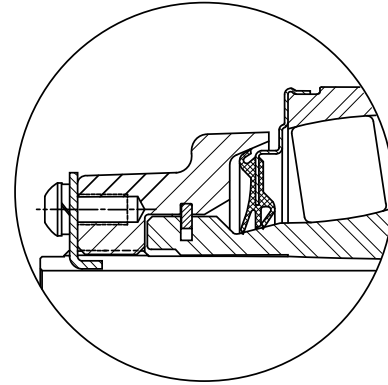
DIMENSIONS

ISN LOCKPLATE KITS

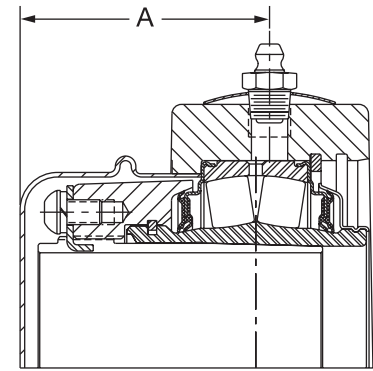
| Size | Part No. |
|------|----------|
| 30 | 048925 |
| 35 | 048925 |
| 40 | 048926 |
| 45 | 048927 |
| 50 | 048927 |
| 55 | 048928 |
| 60 | 048929 |
| 65 | 048930 |
| 70 | 048930 |
| 75 | 048930 |
| 80 | 048931 |
| 85 | 048931 |
| 90 | 048932 |
| 100 | 048932 |
| 110 | 048933 |
| 115 | 048934 |
| 125 | 048934 |
| 135 | --- |
| 140 | --- |



Kit consists of:
 1 Lockplate
 2 Socket head capscrews
 2 Lockwashers



ISN END COVER



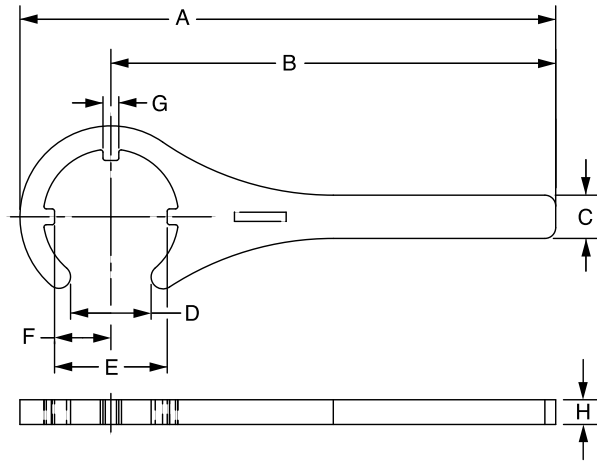
Plummer Block

| Housing Series | Bore Size | Front Side Closed Cover | | Front Side Open Cover | | Back Side Open Cover | | A Dimensions in 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 |

| | | | |
|---------------------------------|----------------------------|-------------------------|---------------------------|
| FEATURES/BENEFITS PAGE B16-3 | NOMENCLATURE PAGE B16-6 | SELECTION PAGE B16-8 | DIMENSIONS PAGE B16-13 |
|---------------------------------|----------------------------|-------------------------|---------------------------|

DIMENSIONS

IMPERIAL SPANNER

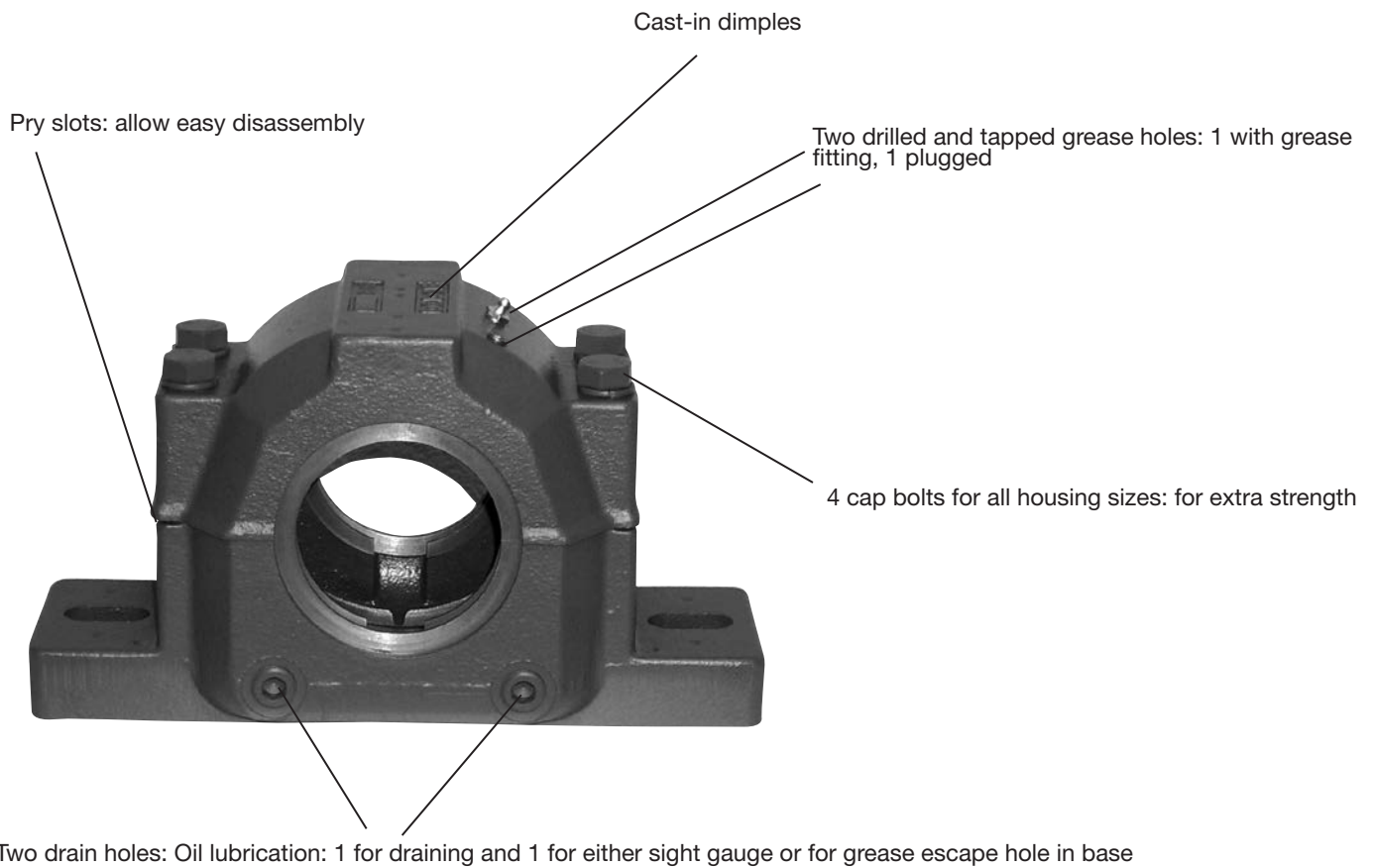


Dimensions mm/inch

| Shaft Size | | Part No. | A | B | C | D | E | F | G | N | Housing Series |
|--------------------|-------------------------|---------------|----------------|----------------|--------------|---------------|---------------|---------------|--------------|--------------|--------------------|
| mm | Inch | | | | | | | | | | |
| 30 thru 35 | 1-1/8 thru 1-1/2 | 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 | 507 thru 508 |
| 40 | 1-5/8 thru 1-3/4 | 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 | 509 |
| 45 thru 50 | 1-7/8 thru 2 | 066631 | 11.20 284.5 | 9.00 228.6 | 0.88 22.4 | 2.13 54.1 | 2.73 69.2 | 1.36 34.5 | 0.32 8.1 | 0.50 12.7 | 510 |
| 55 | 2-1/8 | 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 | 512 |
| 60 | 2-3/16 thru 2-1/4 | 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 | 513 |
| 60 70 75 | 2-7/16 thru 3 | 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 | 515 516 517 |
| 80 thru 85 | 3-3/16 thru 3-1/4 | 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 | 518 thru 519 |
| 90 thru 100 | 3-7/16 thru 4 | 066636 | 17.75 450.9 | 14.00 355.6 | 1.75 44.5 | 4.13 104.9 | 4.91 124.7 | 2.46 62.5 | 0.44 11.2 | 0.50 12.7 | 520 thru 522 |
| 110 | | 066637 | 20.36 517.1 | 16.00 406.4 | 1.75 44.5 | 4.63 117.6 | 5.68 144.3 | 2.84 72.1 | 0.44 11.2 | 0.50 12.7 | 524 |
| 115 thru 125 | 4-7/16 thru 5 | 066638 | 25.17 639.3 | 20.00 508.0 | 2.00 50.8 | 5.13 130.3 | 6.88 174.8 | 3.44 87.4 | 0.44 11.2 | 0.50 12.7 | 526 thru 528 |
| 135 | 5-7/16 thru 5-1/2 | 066642 | 27.82 706.6 | 22.00 558.8 | 2.00 50.8 | 5.63 143.0 | 8.05 204.5 | 4.03 102.4 | 0.69 4.8 | 0.50 12.7 | 530 |
| 140 | 5-15/16 thru 6 | 066643 | 28.75 730.3 | 22.00 558.8 | 2.00 50.8 | 6.13 155.7 | 9.13 231.9 | 4.57 116.1 | 0.75 19.1 | 0.50 12.7 | 536 |

FEATURES/BENEFITS

SNX[™]
HOUSINGS OF CAST IRON GG25



FEATURES/BENEFITS

SNX



Oil equalization passage: allows oil flow from side to side

Standard SNX housings are suitable for either oil or grease lubrication

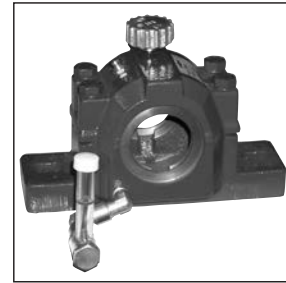
Seal options: Felt, V-Ring, LD, TS and TT Seals in the 200 and 500 Series



Extra capacity oil sump: lowers operating temperature



Oil return slots: prevent leaking



Oil sight gauge & breather kit available



Offset dowels and match mark: allows matching of cap to corresponding base

DODGE® SDX™ HOUSINGS OF GREY CAST IRON GG25 (SDX) OR SPHEROIDAL DUCTILE IRON GGG40 (SDXD)

SD housing with extra capability

- Size Range 3040 to 3068, 3134 to 3164
- Available in cast iron (GG) and spheroidal ductile iron (GGG40) from stock
- Accepts 23000K & 23100K spherical bearings
- Drilled and tapped grease hole with grease fitting
- TS labyrinth seal standard
- TT Triple-Tect seal optional; housing machined to allow direct greasing of seal and ability to purge seal
- Pre-drilled with grease hole & fitting over seal groove

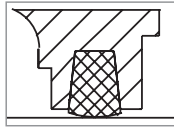


FEATURES/BENEFITS

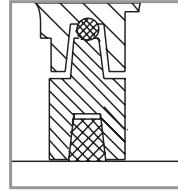
SEALS

ONE HOUSING – MANY SEALS

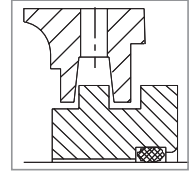
FS
Felt Seal: Standard
SNX 209 - SNX 232
SNX 3028 - SNX 3038



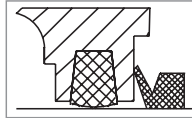
SK FS
Felt strip
SNX 509 - SNX 532
SNX 308/608 - SNX 320/620



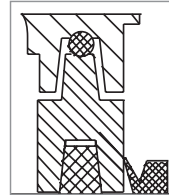
TS - SNX
Labyrinth seal
SNX 209/509 -
SNX 232/532



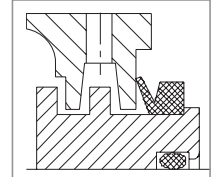
VR
Felt strip with V-ring seal
SNX 209 - SNX 232
SNX 3024 - SNX 3038



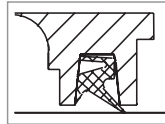
SK VR
Felt strip with V-ring seal
SNX 509 - SNX 532
SNX 308/608 - SNX 320/620



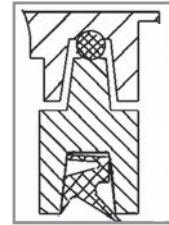
TT - SNX
Triple-Tect
SNX 209/509 -
SNX 232/532



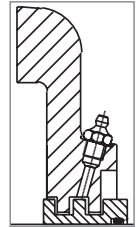
LD
Split two lip radial seal
SNX 209 - SNX 224
SNX 3028 - SNX 3032



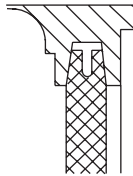
SK LD
Split two lip radial seal
SNX 509 - SNX 532
SNX 608 - SNX 620



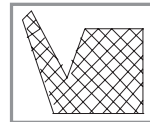
TS - SDX
Labyrinth Seal: Standard
SDX 3040 - SDX 3068
SDX 3134 - SDX 3164
SDXD 3040 - SDXD 3068
SDXD 3134 - SDXD 3164



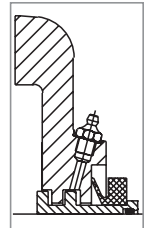
DK
End cover
SNX 209/509 - SNX 232/532
SNX 308/608 - SNX 320/620
SNX 3028 - SNX 3038



Single-lip Radial Seals
available individually



TT - SDX
Triple-Tect / Taconite Seal
SDX 3040 - SDX 3068
SDX 3134 - SDX 3164
SDXD 3040 - SDXD 3068
SDXD 3134 - SDXD 3164



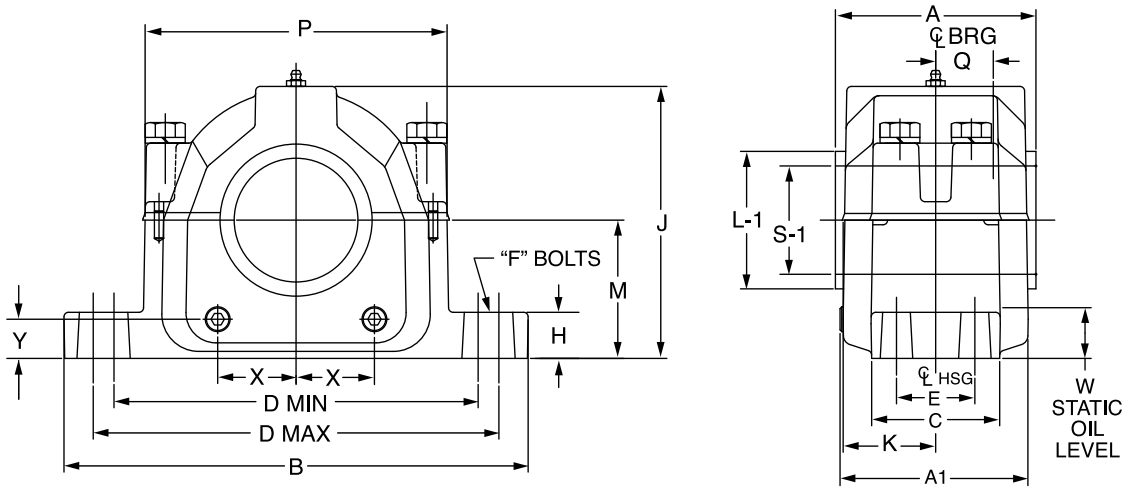
Seal Operating Limits

| | FS | LD | VR & TT | TS | DK |
|-----------------------------|---------|-----------|-----------|----------------|-----------|
| Max. circumferential speeds | 4 m/s | 8 m/s | 4 m/s | brg. RPM limit | - |
| Max temperature | 80-90°C | 100-110°C | 100-110°C | 100-110°C | 100-110°C |

DIMENSIONS

SNX 200 - TS/TT

Plummer Blocks for bearings 22200, 23200



| Housing GC* | | Labyrinth seal | | Triple-Tect seal | |
|-----------------|----------|----------------|----------|------------------|----------|
| Description | Part No. | Description | Part No. | Description | Part No. |
| SNX 209 - TS/TT | 747199 | TS 209 | 747234 | TT 209 | 747217 |
| SNX 210 - TS/TT | 747201 | TS 210 | 747235 | TT 210 | 747218 |
| SNX 211 - TS/TT | 747202 | TS 211 | 747236 | TT 211 | 747219 |
| SNX 212 - TS/TT | 747203 | TS 212 | 747237 | TT 212 | 747220 |
| SNX 213 - TS/TT | 747204 | TS 213 | 747238 | TT 213 | 747221 |
| SNX 215 - TS/TT | 747205 | TS 215 | 747239 | TT 215 | 747222 |
| SNX 216 - TS/TT | 747206 | TS 216 | 747240 | TT 216 | 747223 |
| SNX 217 - TS/TT | 747207 | TS 217 | 747241 | TT 217 | 747224 |
| SNX 218 - TS/TT | 747208 | TS 218 | 747242 | TT 218 | 747225 |
| SNX 219 - TS/TT | 747209 | TS 219 | 747243 | TT 219 | 747226 |
| SNX 220 - TS/TT | 747210 | TS 220 | 747244 | TT 220 | 747227 |
| SNX 222 - TS/TT | 747211 | TS 222 | 747245 | TT 222 | 747228 |
| SNX 224 - TS/TT | 747212 | TS 224 | 747246 | TT 224 | 747229 |
| SNX 226 - TS/TT | 747213 | TS 226 | 747247 | TT 226 | 747230 |
| SNX 228 - TS/TT | 747214 | TS 228 | 747248 | TT 228 | 747231 |
| SNX 230 - TS/TT | 747215 | TS 230 | 747249 | TT 230 | 747232 |
| SNX 232 - TS/TT | 747216 | TS 232 | 747250 | TT 232 | 747233 |

* Housings are for use with TS or TT seals only



DIMENSIONS

SNX 200 - TS/TT

Plummer Blocks for bearings 22200, 23200

| Dimensions in mm | | | | |
|------------------|------|--------------------|-----|-----|
| Description | kg | A (WITH SEALS)* | | L-1 |
| | | TS | TT | |
| SNX 209 TS/TT | 4,3 | 91 | 91 | 59 |
| SNX 210 TS/TT | 5,1 | 95 | 95 | 64 |
| SNX 211 TS/TT | 7,1 | 100 | 100 | 68 |
| SNX 212 TS/TT | 9,5 | 112 | 112 | 75 |
| SNX 213 TS/TT | 9,7 | 110 | 110 | 79 |
| SNX 215 TS/TT | 11,3 | 117 | 117 | 88 |
| SNX 216 TS/TT | 12,7 | 123 | 123 | 93 |
| SNX 217 TS/TT | 15,7 | 125 | 125 | 97 |
| SNX 218 TS/TT | 16,7 | 144 | 144 | 102 |
| SNX 219 TS/TT | 27,0 | 150 | 150 | 113 |
| SNX 220 TS/TT | 27,8 | 160 | 160 | 113 |
| SNX 222 TS/TT | 35,8 | 168 | 168 | 131 |
| SNX 224 TS/TT | 41,1 | 185 | 185 | 131 |
| SNX 226 TS/TT | 55,2 | 191 | 191 | 140 |
| SNX 228 TS/TT | 69,0 | 203 | 203 | 160 |
| SNX 230 TS/TT | 77,3 | 220 | 220 | 400 |
| SNX 232 TS/TT | 99,9 | 235 | 235 | 400 |

All other dimensions on page B7- 15

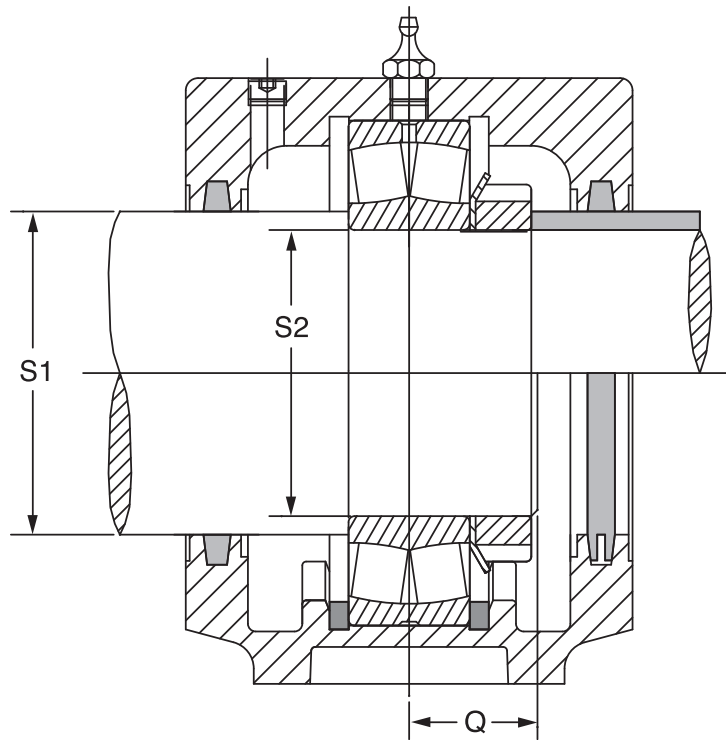
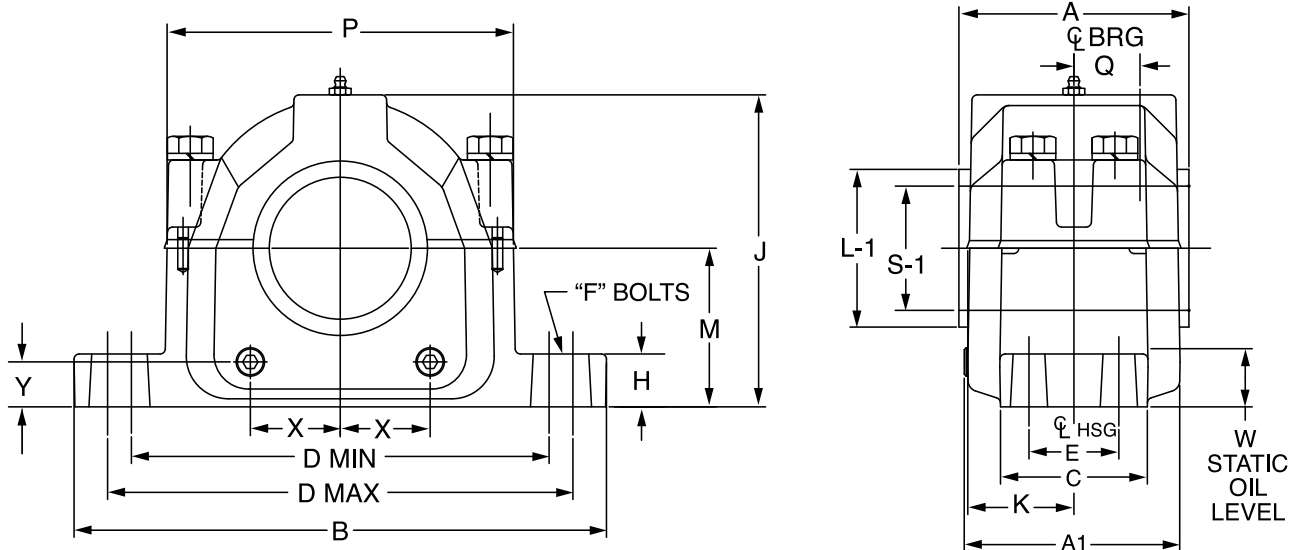
Housings are for use with TS or TT seals only

| | | | |
|----------------------------------|----------------------------|--------------------------|---------------------------|
| FEATURES/BENEFITS PAGE B16-23 | NOMENCLATURE PAGE B16-6 | SELECTION PAGE B16-26 | DIMENSIONS PAGE B16-26 |
|----------------------------------|----------------------------|--------------------------|---------------------------|

DIMENSIONS

SNX 200 - LD/FS/DK

Plummer Blocks for bearings 22200, 23200





DIMENSIONS

SNX 200 - LD/FS/DK

Dimensions in mm

| Description | kg | Shaft Size | | A1 | B | C | D | | F Bolt Dia Bolzen | H | J | K | M | P | Q | W Static Oil Level | X | Y | A (With Seals) | | | | | L-1 |
|-------------|------|------------|-----|-----|-----|-----|-----|-----|-------------------|----|-----|-----|-----|-----|------|--------------------|-----|----|----------------|---------|--------------|-----|-----|-----|
| | | S-1 | S-2 | | | | Min | Max | | | | | | | | | | | LD | Felt FS | End Cover DK | TS | VR | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| SNX 209 | 4,3 | 55 | 45 | 94 | 210 | 60 | 159 | 178 | M12 | 25 | 112 | 45 | 60 | 124 | 11.5 | 24,0 | 29 | 20 | 91 | 91 | 91 | 99 | 100 | 59 |
| SNX 210 | 5,1 | 60 | 50 | 99 | 210 | 60 | 165 | 178 | M12 | 23 | 113 | 48 | 60 | 130 | 11.5 | 29,0 | 31 | 17 | 95 | 95 | 95 | 103 | 105 | 64 |
| SNX 211 | 7,1 | 65 | 55 | 104 | 244 | 70 | 187 | 210 | M16 | 26 | 133 | 50 | 70 | 147 | 12.5 | 28,5 | 33 | 22 | 100 | 100 | 100 | 108 | 110 | 68 |
| SNX 212 | 9,5 | 70 | 60 | 116 | 270 | 70 | 197 | 230 | M16 | 29 | 139 | 56 | 70 | 156 | 14.0 | 32,0 | 38 | 20 | 112 | 112 | 112 | 119 | 125 | 75 |
| SNX 213 | 9,7 | 75 | 65 | 113 | 279 | 80 | 206 | 241 | M16 | 30 | 155 | 55 | 80 | 165 | 15.5 | 27,0 | 41 | 25 | 110 | 110 | 110 | 121 | 123 | 79 |
| SNX 215 | 11,3 | 85 | 75 | 121 | 283 | 80 | 219 | 245 | M16 | 29 | 161 | 59 | 80 | 179 | 15.5 | 38,0 | 44 | 21 | 117 | 117 | 117 | 126 | 128 | 88 |
| SNX 216 | 12,7 | 90 | 80 | 127 | 320 | 90 | 245 | 279 | M20 | 33 | 178 | 62 | 95 | 202 | 16.5 | 34,5 | 49 | 31 | 123 | 123 | 123 | 134 | 136 | 93 |
| SNX 217 | 15,7 | 95 | 85 | 132 | 320 | 90 | 251 | 279 | M20 | 32 | 187 | 63 | 95 | 208 | 18.0 | 35,5 | 53 | 28 | 125 | 125 | 125 | 137 | 139 | 97 |
| SNX 218 | 16,7 | 100 | 90 | 151 | 346 | 98 | 260 | 299 | M20 | 35 | 195 | 72 | 100 | 220 | 20.0 | 47,0 | 57 | 28 | 144 | 144 | 144 | 155 | 157 | 102 |
| SNX 219 | 27,0 | 110 | 95 | 156 | 360 | 98 | 276 | 314 | M20 | 35 | 214 | 75 | 112 | 229 | 21.5 | 39,5 | 60 | 35 | 150 | 150 | 150 | 161 | 165 | 113 |
| SNX 220 | 27,8 | 115 | 100 | 164 | 390 | 110 | 295 | 333 | M24 | 40 | 220 | 80 | 112 | 248 | 23.0 | 45,0 | 67 | 30 | 160 | 160 | 160 | 169 | 174 | 113 |
| SNX 222 | 35,8 | 125 | 110 | 174 | 419 | 121 | 324 | 364 | M24 | 45 | 239 | 84 | 125 | 269 | 26.5 | 53,5 | 73 | 34 | 168 | 168 | 168 | 175 | 180 | 131 |
| SNX 224 | 41,1 | 135 | 120 | 191 | 419 | 120 | 337 | 368 | M24 | 45 | 267 | 93 | 140 | 286 | 29.0 | 57,0 | 81 | 42 | 185 | 185 | 185 | 195 | 199 | 131 |
| SNX 226 | 55,2 | 145 | 130 | 197 | 445 | 130 | 374 | 387 | M24 | 50 | 290 | 95 | 150 | 315 | 32.0 | 49,0 | 84 | 39 | 191 | 191 | 191 | 200 | 204 | 140 |
| SNX 228 | 69,0 | 155 | 140 | 210 | 500 | 150 | 400 | 420 | M30 | 50 | 298 | 102 | 150 | 337 | 34.0 | 51,5 | 92 | 35 | 203 | 203 | 203 | 211 | 218 | 160 |
| SNX 230 | 77,3 | 165 | 150 | 226 | 530 | 160 | 443 | 457 | M30 | 60 | 317 | 110 | 160 | 364 | 36.5 | 53,0 | 91 | 34 | 220 | 220 | 220 | 230 | 237 | 400 |
| SNX 232 | 99,9 | 175 | 160 | 241 | 550 | 160 | 457 | 483 | M30 | 60 | 338 | 118 | 170 | 379 | 40.0 | 53,2 | 102 | 34 | 235 | 235 | 235 | 243 | 250 | 400 |

| | | | |
|----------------------------------|----------------------------|--------------------------|---------------------------|
| FEATURES/BENEFITS PAGE B16-23 | NOMENCLATURE PAGE B16-6 | SELECTION PAGE B16-26 | DIMENSIONS PAGE B16-26 |
|----------------------------------|----------------------------|--------------------------|---------------------------|



SELECTION

SNX 200 - LD/FS/DK

Plummer Blocks

Sleeve Bearings

SLEEVOIL

Take-Up Frames

Engineering

Part Number Index

Keyword Index

| Description | Housing GG | | LD Seal | | FS Seal | | VR Seal | | DK End Cover | |
|-------------|---------------------|---------------|-------------|---------------|-------------|---------------|-------------|---------------|--------------|---------------|
| | Description | Part No. | Description | Part No. | Description | Part No. | Description | Part No. | Description | Part No. |
| SNX 209 | SNX 209/509 | 747025 | LD 55 | 725357 | 6.5X8X200 | 713600 | VS0055 | 738145 | DK 55 | 709137 |
| SNX 210 | SNX 210/510/308/608 | 747026 | LD 60 | 725358 | 6.5X8X230 | 713616 | VS0060 | 738146 | DK 60 | 709140 |
| SNX 211 | SNX 211/511/309/609 | 747027 | LD 65 | 725359 | 6.5X8X230 | 713616 | VS0065 | 738147 | DK 65 | 709143 |
| SNX 212 | SNX 212/512/310/610 | 747028 | LD 70 | 725360 | 7.5X9X260 | 713633 | VS0070 | 738148 | DK 70 | 709146 |
| SNX 213 | SNX 213/513/311/611 | 747029 | LD 75 | 725361 | 7.5X9X260 | 713633 | VS0075 | 738149 | DK 75 | 709152 |
| SNX 215 | SNX 215/515/312/612 | 747030 | LD 85 | 725363 | 7.5X9X155 | 713571 | VS0085 | 738151 | DK 85 | 709162 |
| SNX 216 | SNX 216/516/313/613 | 747031 | LD 90 | 725364 | 8.5X10X165 | 713579 | VS0090 | 738152 | DK 90 | 709166 |
| SNX 217 | SNX 217/517/314 | 747032 | LD 95 | 725366 | 8.5X10X175 | 713586 | VS0095 | 738154 | DK 90 | 709166 |
| SNX 218 | SNX 218/518/315/615 | 747033 | LD 100 | 725341 | 10X12X185 | 713588 | VS0100 | 738155 | DK 100 | 708959 |
| SNX 219 | SNX 219/519/316/616 | 747034 | LD 110 | 725342 | 10X12X200 | 713596 | VS0110 | 738157 | DK 110 | 708966 |
| SNX 220 | SNX 220/520/317/617 | 747035 | LD 115 | 725343 | 10X12X210 | 713603 | VS0115 | 738158 | DK 115 | 708970 |
| SNX 222 | SNX 222/522/319/619 | 747036 | LD 125 | 725344 | 10X12X230 | 713613 | VS0125 | 738161 | DK 125 | 708976 |
| SNX 224 | SNX 224/524/320/620 | 747037 | LD 135 | 725345 | 10X12X245 | 713622 | VS0135 | 738162 | DK 135 | 708983 |
| SNX 226 | SNX 226/526 | 747038 | | | 10X12X265 | 713634 | VS0145 | 738164 | DK 145 | 740381 |
| SNX 228 | SNX 228/528 | 747039 | | | 10X12X280 | 713641 | VS0155 | 738166 | DK 155 | 740382 |
| SNX 230 | SNX 230/530 | 747040 | | | 10X12X300 | 713647 | VS0165 | 738168 | DK 165 | 740383 |
| SNX 232 | SNX 232/532 | 747041 | | | 10X12X300 | 713647 | VS0175 | 738170 | DK 175 | 740384 |



DIMENSIONS

SNX 200 - LD/FS/DK

| Housing GG | Spherical Roller Bearing | | Fixing Rings | | | Spherical Roller Bearing | |
|-------------|--------------------------|----------|--------------|-----|----------|--------------------------|---------|
| Description | Description | Part No. | Description | Qty | Part No. | Description | Part No |
| SNX 209 | 22209E1.C3 | 421260 | SR 85x3.5 | 2 | 747105 | | |
| SNX 210 | 22210E1.C3 | 421261 | SR 90x9 | 2 | 747108 | | |
| SNX 211 | 22211E1.C3 | 421262 | SR 100x9.5 | 2 | 747111 | | |
| SNX 212 | 22212E1.C3 | 421263 | SR 110x10 | 2 | 747115 | | |
| SNX 213 | 22213E1.C3 | 421264 | SR 120x10 | 2 | 747118 | | |
| SNX 215 | 22215E1.C3 | 421265 | SR 130x12.5 | 2 | 747121 | | |
| SNX 216 | 22216E1.C3 | 421266 | SR 140x12.5 | 2 | 747123 | | |
| SNX 217 | 22217E1.C3 | 421267 | SR 150x12.5 | 2 | 747125 | | |
| SNX 218 | 22218E1.C3 | 421268 | SR 160x12.5 | 2 | 747128 | 23218E1.C3 | 421396 |
| SNX 219 | 22219E1.C3 | 422996 | SR 170x12.5 | 2 | 747130 | | |
| SNX 220 | 22220E1.C3 | 421269 | SR 180x12 | 2 | 747132 | 23220E.C3 | 703943 |
| SNX 222 | 22222E1.C3 | 421270 | SR 200x13.5 | 2 | 747137 | 23222.C3 | 740623 |
| SNX 224 | 22224E1.C3 | 421271 | SR 215x14 | 2 | 747141 | 23224.C3 | 703967 |
| SNX 226 | 22226E1.C3 | 421272 | SR 230x13 | 2 | 747143 | 23226.C3 | 703976 |
| SNX 228 | 22228E1.C3 | 421273 | SR 250x15 | 2 | 747146 | 23228.C3 | 741031 |
| SNX 230 | 22230E1.C3 | 421274 | SR 270x16.5 | 2 | 747149 | 23230.C3 | 703990 |
| SNX 232 | 22232E1.C3 | 421275 | SR 290x17 | 2 | 747152 | 23232.C3 | 741550 |

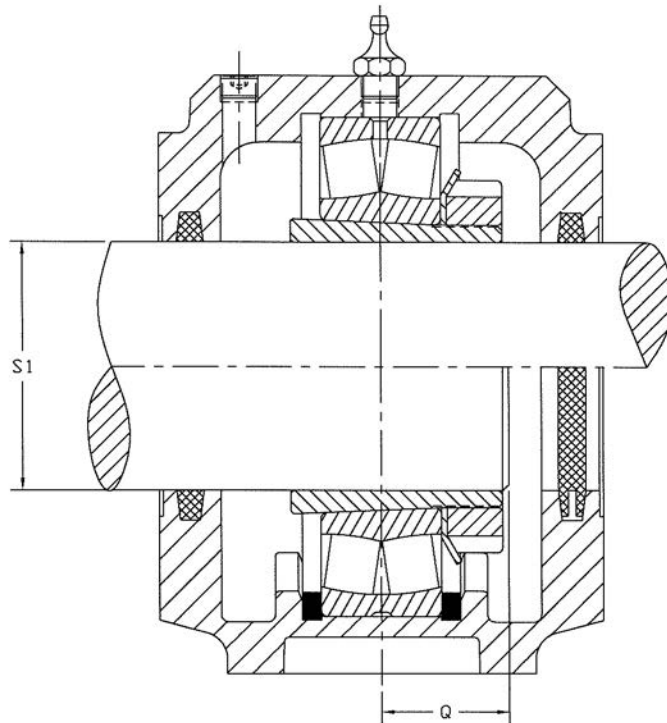
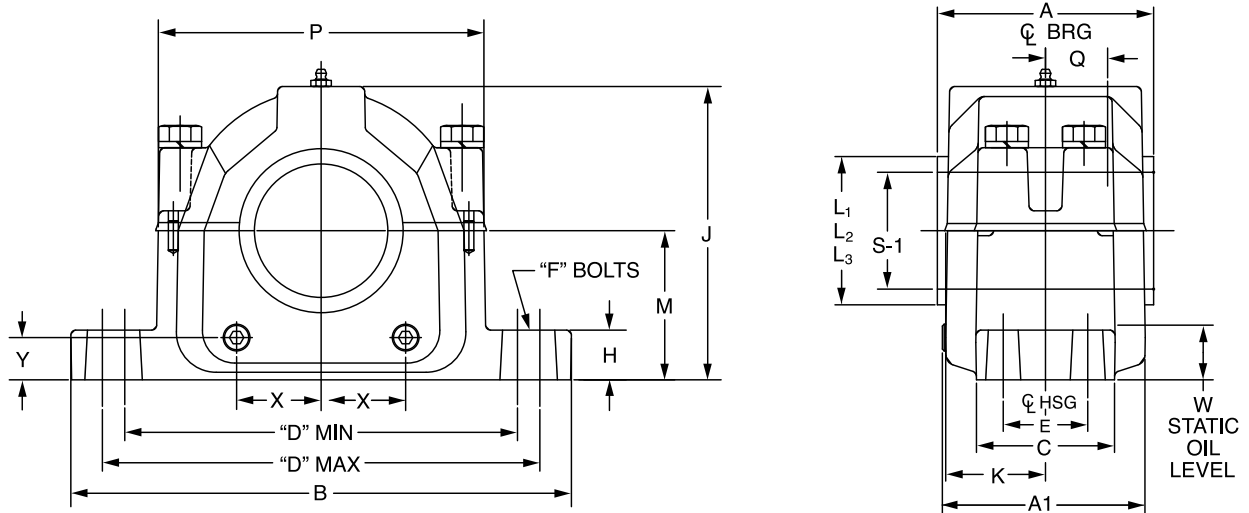
| Housing GG | Fixing Rings | | | Locknut | | Lockwasher | | Sight Glasses | |
|-------------|--------------|-----|----------|-------------|---------|-------------|---------|---------------|----------|
| Description | Description | Qty | Part No. | Description | Part No | Description | Part No | Description | Part No. |
| SNX 209 | | | | KM 9 | 046285 | MB 9 | 046304 | SG 209 | 740452 |
| SNX 210 | | | | KM 10 | 046286 | MB 10 | 046305 | SG 210 | 740452 |
| SNX 211 | | | | KM 11 | 046287 | MB 11 | 046306 | SG 211 | 740452 |
| SNX 212 | | | | KM 12 | 046487 | MB 12 | 046489 | SG 212 | 740452 |
| SNX 213 | | | | KM 13 | 046288 | MB 13 | 046307 | SG 213 | 740452 |
| SNX 215 | | | | KM 15 | 046289 | MB 15 | 046308 | SG 215 | 740452 |
| SNX 216 | | | | KM 16 | 046290 | MB 16 | 046309 | SG 216 | 740452 |
| SNX 217 | | | | KM 17 | 046291 | MB 17 | 046310 | SG 217 | 740453 |
| SNX 218 | SR 160x6.25 | 2 | 747189 | KM 18 | 046292 | MB 18 | 046311 | SG 218 | 740453 |
| SNX 219 | | | | KM 19 | 046488 | MB 19 | 046490 | SG 219 | 740453 |
| SNX 220 | SR 180x4.85 | 2 | 747190 | KM 20 | 046293 | MB 20 | 046312 | SG 220 | 740453 |
| SNX 222 | SR 200x5.1 | 2 | 747191 | KM 22 | 046294 | MB 22 | 046313 | SG 222 | 740453 |
| SNX 224 | SR 215x5 | 2 | 712225 | KM 24 | 046295 | MB 24 | 046314 | SG 224 | 740453 |
| SNX 226 | SR 230x5 | 2 | 747192 | KM 26 | 046296 | MB 26 | 046315 | SG 226 | 740453 |
| SNX 228 | SR 250x5 | 2 | 747193 | KM 28 | 046297 | MB 28 | 046316 | SG 228 | 740453 |
| SNX 230 | SR 270x5 | 2 | 747194 | KM 30 | 046298 | MB 30 | 046317 | SG 230 | 740453 |
| SNX 232 | SR 290x5 | 2 | 747195 | KM 32 | 046299 | MB 32 | 046318 | SG 232 | 740453 |

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DIMENSIONS

SNX 500

Plummer Blocks for bearings 1200K, 2200K, 22200K, 23200K



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DIMENSIONS

SNX 500

Dimensions in mm

| Description | Wt. kg | S-1 Shaft Size | A ₁ | B | C | D | | F Bolt Dia | H | J | K | M | P | Q | W Static Oil Level | X | Y | A (With Seals) | | | | | | L ₁ VR | L ₂ TS | L ₃ TT |
|-------------|--------|----------------|----------------|-----|-----|---------|-----|------------|----|-----|-----|-----|-----|----|--------------------|-----|----|----------------|------|-----|-----|-----|-----|-------------------|-------------------|-------------------|
| | | | | | | Min | Max | | | | | | | | | | | LD | FELT | VR | TS | TT | EC | | | |
| | | | | | | SNX 509 | 4,3 | | | | | | | | | | | 40 | 94 | 210 | 60 | 159 | 178 | | | |
| SNX 510 | 5,1 | 45 | 99 | 210 | 60 | 165 | 178 | M12 | 23 | 113 | 48 | 60 | 130 | 24 | 29,0 | 31 | 17 | 95 | 95 | 105 | 103 | 111 | 95 | 55 | 63 | 70 |
| SNX 511 | 7,1 | 50 | 104 | 244 | 70 | 187 | 210 | M16 | 26 | 133 | 50 | 70 | 147 | 25 | 28,5 | 33 | 22 | 100 | 100 | 110 | 108 | 116 | 100 | 60 | 68 | 75 |
| SNX 512 | 9,5 | 55 | 116 | 270 | 70 | 197 | 230 | M16 | 29 | 139 | 56 | 70 | 156 | 27 | 32,0 | 38 | 20 | 112 | 112 | 121 | 119 | 127 | 112 | 65 | 75 | 82 |
| SNX 513 | 9,7 | 60 | 113 | 279 | 80 | 206 | 241 | M16 | 30 | 155 | 55 | 80 | 165 | 30 | 27,0 | 41 | 25 | 110 | 110 | 119 | 121 | 125 | 110 | 70 | 81 | 92 |
| SNX 515 | 11,3 | 65 | 121 | 283 | 80 | 219 | 245 | M16 | 29 | 161 | 59 | 80 | 179 | 31 | 38,0 | 44 | 21 | 117 | 117 | 124 | 126 | 130 | 117 | 75 | 86 | 97 |
| SNX 516 | 12,7 | 70 | 127 | 320 | 90 | 245 | 279 | M20 | 33 | 178 | 62 | 95 | 202 | 34 | 34,5 | 49 | 31 | 123 | 123 | 136 | 134 | 143 | 123 | 82 | 94 | 102 |
| SNX 517 | 15,7 | 75 | 132 | 320 | 90 | 251 | 279 | M20 | 32 | 187 | 63 | 95 | 208 | 36 | 35,5 | 53 | 28 | 125 | 125 | 139 | 137 | 145 | 125 | 87 | 100 | 107 |
| SNX 518 | 16,7 | 80 | 151 | 346 | 98 | 260 | 299 | M20 | 35 | 195 | 72 | 100 | 220 | 38 | 47,0 | 57 | 28 | 144 | 144 | 157 | 155 | 163 | 144 | 92 | 105 | 112 |
| SNX 519 | 27,0 | 85 | 156 | 360 | 98 | 276 | 314 | M20 | 35 | 214 | 75 | 112 | 229 | 41 | 39,5 | 60 | 35 | 150 | 150 | 162 | 161 | 169 | 150 | 97 | 110 | 124 |
| SNX 520 | 27,8 | 90 | 164 | 390 | 110 | 295 | 333 | M24 | 40 | 220 | 80 | 112 | 248 | 43 | 45,0 | 67 | 30 | 160 | 160 | 171 | 169 | 177 | 160 | 102 | 127 | 124 |
| SNX 522 | 35,8 | 100 | 174 | 419 | 120 | 324 | 364 | M24 | 45 | 238 | 84 | 125 | 269 | 48 | 53,5 | 73 | 34 | 168 | 168 | 177 | 175 | 183 | 168 | 112 | 139 | 144 |
| SNX 524 | 41,1 | 110 | 191 | 419 | 120 | 337 | 368 | M24 | 45 | 267 | 93 | 140 | 286 | 51 | 57,0 | 81 | 42 | 185 | 185 | 199 | 195 | 202 | 185 | 124 | 149 | 154 |
| SNX 526 | 55,2 | 115 | 197 | 445 | 130 | 374 | 387 | M24 | 50 | 290 | 95 | 150 | 315 | 55 | 49,0 | 84 | 39 | 191 | 191 | 204 | 200 | 211 | 191 | 129 | 158 | 154 |
| SNX 528 | 69,0 | 125 | 210 | 500 | 150 | 400 | 420 | M30 | 50 | 298 | 102 | 150 | 337 | 58 | 51,5 | 92 | 35 | 203 | 203 | 215 | 211 | 222 | 203 | 139 | 160 | 164 |
| SNX 530 | 77,3 | 135 | 226 | 530 | 160 | 443 | 457 | M30 | 60 | 317 | 110 | 160 | 364 | 63 | 53,0 | 91 | 34 | 220 | 220 | 233 | 230 | 239 | 220 | 149 | 180 | 176 |
| SNX 532 | 99,9 | 140 | 241 | 550 | 160 | 457 | 483 | M30 | 60 | 338 | 118 | 170 | 379 | 68 | 53,2 | 102 | 34 | 235 | 235 | 247 | 243 | 253 | 235 | 154 | 188 | 186 |

| Description | Housing GG | | SK LD Seal | | SK FS Seal | |
|-------------|---------------------|---------------|---------------|---------------|---------------|---------------|
| | Description | Part No. | Description | Part No. | Description | Part No. |
| SNX 509 | SNX 209/509 | 747025 | SK 509 LD 40 | 496446 | SK 509 FS 40 | 496464 |
| SNX 510 | SNX 210/510/308/608 | 747026 | SK 510 LD 45 | 496447 | SK 510 FS 45 | 496465 |
| SNX 511 | SNX 211/511/309/609 | 747027 | SK 511 LD 50 | 496448 | SK 511 FS 50 | 496466 |
| SNX 512 | SNX 212/512/310/610 | 747028 | SK 512 LD 55 | 496449 | SK 512 FS 55 | 496467 |
| SNX 513 | SNX 213/513/311/611 | 747029 | SK 513 LD 60 | 496450 | SK 513 FS 60 | 496468 |
| SNX 515 | SNX 215/515/312/612 | 747030 | SK 515 LD 65 | 496451 | SK 515 FS 65 | 496469 |
| SNX 516 | SNX 216/516/313/613 | 747031 | SK 516 LD 70 | 496452 | SK 516 FS 70 | 496470 |
| SNX 517 | SNX 217/517/314 | 747032 | SK 517 LD 75 | 496453 | SK 517 FS 75 | 496471 |
| SNX 518 | SNX 218/518/315/615 | 747033 | SK 518 LD 80 | 496454 | SK 518 FS 80 | 496472 |
| SNX 519 | SNX 219/519/316/616 | 747034 | SK 519 LD 85 | 496455 | SK 519 FS 85 | 496473 |
| SNX 520 | SNX 220/520/317/617 | 747035 | SK 520 LD 90 | 496456 | SK 520 FS 90 | 496474 |
| SNX 522 | SNX 222/522/319/619 | 747036 | SK 522 LD 100 | 496457 | SK 522 FS 100 | 496475 |
| SNX 524 | SNX 224/524/320/620 | 747037 | SK 524 LD 110 | 496458 | SK 524 FS 110 | 496476 |
| SNX 526 | SNX 226/526 | 747038 | SK 526 LD 115 | 496459 | SK 526 FS 115 | 496477 |
| SNX 528 | SNX 228/528 | 747039 | SK 528 LD 125 | 496460 | SK 528 FS 125 | 496478 |
| SNX 530 | SNX 230/530 | 747040 | SK 530 LD 135 | 496461 | SK 530 FS 135 | 496479 |
| SNX 532 | SNX 232/532 | 747041 | SK 532 LD 140 | 496462 | SK 532 FS 140 | 496480 |

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DIMENSIONS

SNX 500

| Description | SK VR Seal | | Labyrinth Seal | | Triple-Tect Seal | | EC End Cover | |
|-------------|---------------|---------------|----------------|---------------|------------------|---------------|--------------|---------------|
| | Description | Part No. | Description | Part No. | Description | Part No. | Description | Part No. |
| SNX 509 | SK 509 VR 40 | 496482 | TS 509 | 747328 | TT 509 | 747384 | DK 55 | 709137 |
| SNX 510 | SK 510 VR 45 | 496483 | TS 510 | 747329 | TT 510 | 747385 | DK 60 | 709140 |
| SNX 511 | SK 511 VR 50 | 496484 | TS 511 | 747330 | TT 511 | 747386 | DK 65 | 709143 |
| SNX 512 | SK 512 VR 55 | 496485 | TS 512 | 747331 | TT 512 | 747387 | DK 70 | 709146 |
| SNX 513 | SK 513 VR 60 | 496486 | TS 513 | 747332 | TT 513 | 747388 | DK 75 | 709152 |
| SNX 515 | SK 515 VR 65 | 496487 | TS 515 | 747333 | TT 515 | 747389 | DK 85 | 709162 |
| SNX 516 | SK 516 VR 70 | 496488 | TS 516 | 747334 | TT 516 | 747390 | DK 90 | 709166 |
| SNX 517 | SK 517 VR 75 | 496489 | TS 517 | 747335 | TT 517 | 747391 | DK 90 | 709166 |
| SNX 518 | SK 518 VR 80 | 496490 | TS 518 | 747336 | TT 518 | 747392 | DK 100 | 708959 |
| SNX 519 | SK 519 VR 85 | 496491 | TS 519 | 747337 | TT 519 | 747393 | DK 110 | 708966 |
| SNX 520 | SK 520 VR 90 | 496492 | TS 520 | 747338 | TT 520 | 747394 | DK 115 | 708970 |
| SNX 522 | SK 522 VR 100 | 496493 | TS 522 | 747339 | TT 522 | 747395 | DK 125 | 708976 |
| SNX 524 | SK 524 VR 110 | 496494 | TS 524 | 747340 | TT 524 | 747396 | DK 135 | 708983 |
| SNX 526 | SK 526 VR 115 | 496495 | TS 526 | 747341 | TT 526 | 747397 | DK 145 | 740381 |
| SNX 528 | SK 528 VR 125 | 496496 | TS 528 | 747342 | TT 528 | 747398 | DK 155 | 740382 |
| SNX 530 | SK 530 VR 135 | 496497 | TS 530 | 747343 | TT 530 | 747399 | DK 165 | 740383 |
| SNX 532 | SK 532 VR 140 | 496498 | TS 532 | 747344 | TT 532 | 747400 | DK 175 | 740384 |

| Description | Spherical Roller Bearing | | Fixing Rings | | | Adapters | | Spherical Roller Bearing | |
|-------------|--------------------------|---------------|--------------|----------|---------------|-------------|---------------|--------------------------|---------------|
| | Description | Part No. | Description | Quantity | Part No. | Description | Part No. | Description | Part No. |
| SNX 509 | 22209EK1.C3 | 422134 | SR 85x3.5 | 2 | 747105 | H 309 | 046331 | | |
| SNX 510 | 22210EK1.C3 | 422137 | SR 90x9 | 2 | 747108 | H 310 | 046332 | | |
| SNX 511 | 22211EK1.C3 | 422123 | SR 100x9.5 | 2 | 747111 | H 311 | 046219 | | |
| SNX 512 | 22212EK1.C3 | 422978 | SR 110x10 | 2 | 747115 | H 312 | 046333 | | |
| SNX 513 | 22213EK1.C3 | 422124 | SR 120x10 | 2 | 747118 | H 313 | 046221 | | |
| SNX 515 | 22215EK1.C3 | 422001 | SR 130x12.5 | 2 | 747121 | H 315 | 046222 | | |
| SNX 516 | 22216EK1.C3 | 422003 | SR 140x12.5 | 2 | 747123 | H 316 | 046223 | | |
| SNX 517 | 22217EK1.C3 | 422005 | SR 150x12.5 | 2 | 747125 | H 317 | 046224 | | |
| SNX 518 | 22218EK1.C3 | 422007 | SR 160x12.5 | 2 | 747128 | H 318 | 046225 | 23218K.C3 | 739329 |
| SNX 519 | 22219EK1.C3 | 422979 | SR 170x12.5 | 2 | 747130 | H 319 | 719499 | | |
| SNX 520 | 22220EK1.C3 | 422009 | SR 180x12 | 2 | 747132 | H 320 | 046226 | 23220K.C3 | 703941 |
| SNX 522 | 22222EK1.C3 | 422011 | SR 200x13.5 | 2 | 747137 | H 322 | 046227 | 23222K.C3 | 703951 |
| SNX 524 | 22224EK1.C3 | 422013 | SR 215x14 | 2 | 747141 | H 3124 | 046228 | 23224EASK.M.C3 | 703967 |
| SNX 526 | 22226EK1.C3 | 422015 | SR 230x13 | 2 | 747143 | H 3126 | 046229 | 23226K.C3 | 703971 |
| SNX 528 | 22228EK1.C3 | 422017 | SR 250x15 | 2 | 747146 | H 3128 | 046230 | 23228K.C3 | 703982 |
| SNX 530 | 22230EK1.C3 | 422019 | SR 270x16.5 | 2 | 747149 | H 3130 | 046231 | 23230K.C3 | 703989 |
| SNX 532 | 22232EK1.C3 | 422021 | SR 290x17 | 2 | 747152 | H 3132 | 046232 | 23232K.C3 | 703996 |

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DIMENSIONS

SNX 500

| Description | Fixing Rings | | | Adapters | | Sight Glasses | |
|-------------|--------------|----------|----------|-------------|----------|---------------|----------|
| | Description | Quantity | Part No. | Description | Part No. | Description | Part No. |
| SNX 509 | | | | | | SG 509 | 740452 |
| SNX 510 | | | | | | SG 510 | 740452 |
| SNX 511 | | | | | | SG 511 | 740452 |
| SNX 512 | | | | | | SG 512 | 740452 |
| SNX 513 | | | | | | SG 513 | 740452 |
| SNX 515 | | | | | | SG 515 | 740452 |
| SNX 516 | | | | | | SG 516 | 740452 |
| SNX 517 | | | | | | SG 517 | 740453 |
| SNX 518 | SR 160x6.25 | 2 | 747189 | H 2318 | 719400 | SG 518 | 740453 |
| SNX 519 | | | | H 2319 | 046719 | SG 519 | 740453 |
| SNX 520 | SR 180x4.85 | 2 | 747190 | H 2320 | 046720 | SG 520 | 740453 |
| SNX 522 | SR 200x5.1 | 2 | 747191 | H 2322 | 046721 | SG 522 | 740453 |
| SNX 524 | SR 215x5 | 2 | 712225 | H 2324 | 046722 | SG 524 | 740453 |
| SNX 526 | SR 230x5 | 2 | 747192 | H 2326 | 046723 | SG 526 | 740453 |
| SNX 528 | SR 250x5 | 2 | 747193 | H 2328 | 719406 | SG 528 | 740453 |
| SNX 530 | SR 270x5 | 2 | 747194 | H 2330 | 053201 | SG 530 | 740453 |
| SNX 532 | SR 290x5 | 2 | 747195 | H 2332 | 719408 | SG 532 | 740453 |

| Description | Self-aligning Ball Bearings | | Fixing Rings | | | Adapters | |
|-------------|-----------------------------|----------|--------------|----------|----------|-------------|----------|
| | Description | Part No. | Description | Quantity | Part No. | Description | Part No. |
| SNX 509 | 1209K.C3 | 052637 | SR 85x5.5 | 2 | 747177 | H 209 | 719372 |
| SNX 510 | 1210K.C3 | 052638 | SR 90x10.5 | 2 | 747178 | H 210 | 719373 |
| SNX 511 | 1211K.C3 | 052639 | SR 100x12 | 2 | 747179 | H 211 | 719374 |
| SNX 512 | 1212K.C3 | 739145 | SR 110x13 | 2 | 747180 | H 212 | 719375 |
| SNX 513 | 1213K.C3 | 052640 | SR 120x14 | 2 | 747181 | H 213 | 719376 |
| SNX 515 | 1215K.C3 | 052641 | SR 130x15.5 | 2 | 747182 | H 215 | 719378 |
| SNX 516 | 1216K.C3 | 052642 | SR 140x16 | 2 | 747183 | H 216 | 719379 |
| SNX 517 | 1217K.C3 | 052643 | SR 150x16.5 | 2 | 747184 | H 217 | 719380 |
| SNX 518 | 1218K.C3 | 052570 | SR 160x17.5 | 2 | 747185 | H 218 | 719381 |
| SNX 519 | 1219K.C3 | 701659 | SR 170x18 | 2 | 747186 | H 219 | 719382 |
| SNX 520 | 1220K.C3 | 052644 | SR 180x18 | 2 | 747187 | H 220 | 719383 |
| SNX 522 | 1222K.C3 | 051841 | SR 200x21 | 2 | 747188 | H 222 | 719385 |

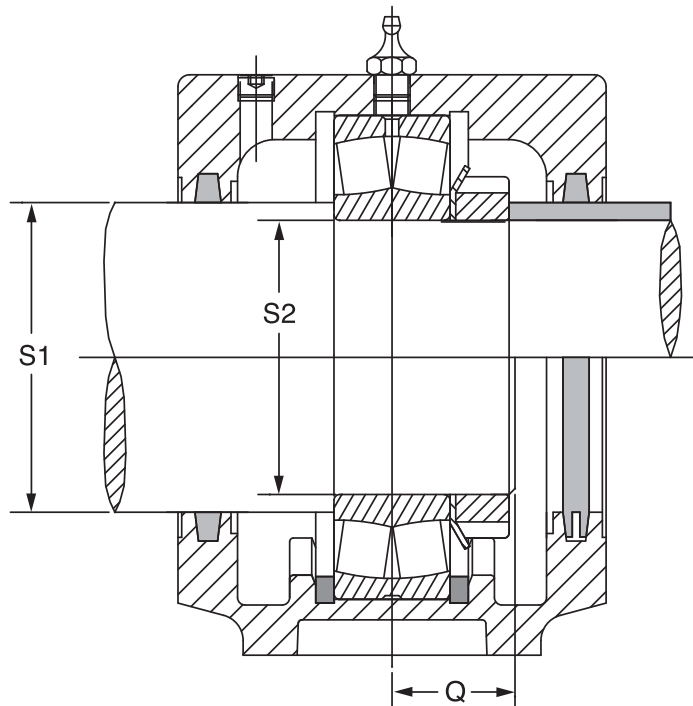
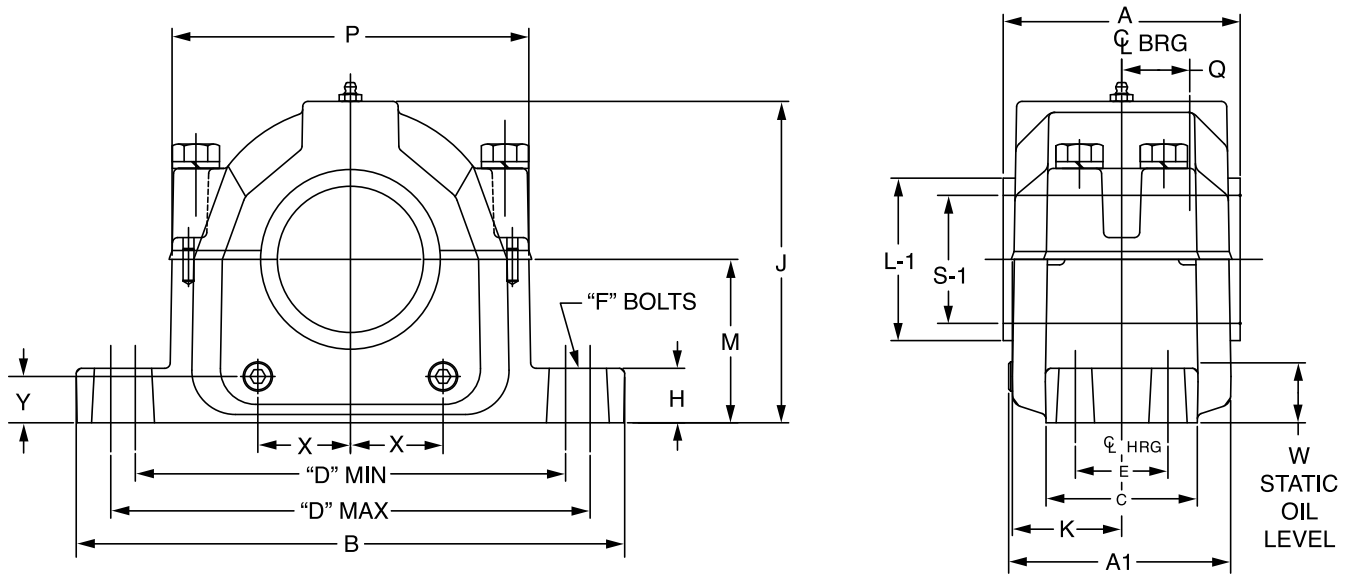
| Description | Self-aligning Ball Bearings | | Fixing Rings | | | Adapters | |
|-------------|-----------------------------|----------|--------------|----------|----------|-------------|----------|
| | Description | Part No. | Description | Quantity | Part No. | Description | Part No. |
| SNX 509 | 2209K.C3 | 739150 | SR 85x3.5 | 2 | 747105 | H 309 | 046331 |
| SNX 510 | 2210K.C3 | 702830 | SR 90x9 | 2 | 747108 | H 310 | 046332 |
| SNX 511 | 2211K.C3 | 702844 | SR 100x9.5 | 2 | 747111 | H 311 | 046219 |
| SNX 512 | 2212K.C3 | 702857 | SR 110x10 | 2 | 747115 | H 312 | 046333 |
| SNX 513 | 2213K.C3 | 702867 | SR 120x10 | 2 | 747118 | H 313 | 046221 |
| SNX 515 | 2215K.C3 | 739153 | SR 130x12.5 | 2 | 747121 | H 315 | 046222 |
| SNX 516 | 2216K.C3 | 702883 | SR 140x12.5 | 2 | 747123 | H 316 | 046223 |
| SNX 517 | 2217K.C3 | 702893 | SR 150x12.5 | 2 | 747125 | H 317 | 046224 |
| SNX 518 | 2218K.C3 | 739154 | SR 160x12.5 | 2 | 747128 | H 318 | 046225 |
| SNX 519 | 2219K.M.C3 | 702904 | SR 170x12.5 | 2 | 747130 | H 319 | 719499 |
| SNX 520 | 2220K.M.C3 | 702907 | SR 180x12 | 2 | 747132 | H 320 | 046226 |
| SNX 522 | 2222K.C3 | 421399 | SR 200x13.5 | 2 | 747137 | H 322 | 046227 |

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DIMENSIONS

SNX 300

Plummer Blocks for bearings 22300



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DIMENSIONS

SNX 300

Dimensions in mm

| Description | kg | S-1 | S-2 | A1 | B | C | D | | F Bolt Dia | H | J | K | M | P | Q ★ | W Static Oil Level | X | Y | A (With Seals) | | L1 |
|-------------|------|------------|-----|-------|-------|-------|-------|-------|------------|------|-------|------|-------|-------|------|--------------------|------|------|----------------|--------------|-------|
| | | Shaft Size | | | | | Min | Max | | | | | | | | | | | Felt FS | End Cover DK | |
| | | | | | | | | | | | | | | | | | | | | | |
| SNX 308 | 5.1 | 50 | 40 | 99.1 | 210 | 59.5 | 165.1 | 177.8 | M12 | 22.6 | 113 | 47.6 | 59.9 | 130.2 | 18 | 26.5 | 30.5 | 17 | 95.3 | 95.3 | 64.3 |
| SNX 309 | 7.1 | 55 | 45 | 103.8 | 244.4 | 69.9 | 187.3 | 209.6 | M16 | 26.2 | 133.4 | 50 | 69.9 | 146.8 | 18 | 32.5 | 33 | 22.1 | 100.0 | 100.0 | 68.1 |
| SNX 310 | 9.5 | 60 | 50 | 115.8 | 269.9 | 69.9 | 196.9 | 229.6 | M16 | 29.4 | 138.9 | 56 | 69.9 | 155.6 | 20 | 28.6 | 38 | 19.5 | 112.0 | 112.0 | 75.2 |
| SNX 311 | 9.7 | 65 | 55 | 113.3 | 279.4 | 80 | 206.4 | 241.3 | M16 | 30.2 | 154.8 | 54.8 | 79.9 | 165.1 | 21.5 | 33.9 | 41.1 | 25 | 109.5 | 109.5 | 79.2 |
| SNX 312 | 11.3 | 70 | 60 | 121.2 | 282.6 | 80 | 219.1 | 244.5 | M16 | 29.4 | 161.1 | 58.7 | 79.9 | 179.4 | 23 | 30.7 | 44 | 20.5 | 117.4 | 117.4 | 88.1 |
| SNX 313 | 12.7 | 75 | 65 | 126.8 | 319.9 | 90 | 244.5 | 279.4 | M20 | 32.9 | 177.6 | 61.5 | 94.9 | 201.6 | 24 | 41.7 | 49 | 30.5 | 123.0 | 123.0 | 93.2 |
| SNX 314 | 15.7 | 80 | 70 | 131.6 | 319.7 | 90 | 250.8 | 279.4 | M20 | 31.8 | 187.4 | 62.7 | 94.9 | 208 | 25.5 | 37.3 | 52.6 | 28 | 125.2 | 125.2 | 97.3 |
| SNX 315 | 16.7 | 85 | 75 | 150.8 | 346.1 | 98.4 | 260.4 | 298.5 | M20 | 34.9 | 195.3 | 72.2 | 99.9 | 219.9 | 27.5 | 38.8 | 56.8 | 27.5 | 144.4 | 144.4 | 102.1 |
| SNX 316 | 27.0 | 90 | 80 | 156.4 | 360 | 98.4 | 276.2 | 314.3 | M20 | 35 | 213.6 | 75 | 111.9 | 229.4 | 29 | 46.9 | 60 | 35 | 150.0 | 150.0 | 113.3 |
| SNX 317 | 27.8 | 95 | 85 | 164.1 | 390 | 110.3 | 295.3 | 333.4 | M24 | 39.7 | 219.9 | 80.2 | 111.9 | 248.4 | 30 | 42.1 | 66.6 | 30 | 160.3 | 160.3 | 113.3 |
| SNX 319 | 35.8 | 110 | 95 | 173.9 | 419.1 | 120.7 | 323.9 | 364.3 | M24 | 44.9 | 238.5 | 83.7 | 124.9 | 269.1 | 33.5 | 50.1 | 73 | 33.8 | 167.5 | 167.5 | 131.3 |
| SNX 320 | 41.1 | 115 | 100 | 191.3 | 419.1 | 119.9 | 336.6 | 368.3 | M24 | 45 | 267 | 92.5 | 139.9 | 285.8 | 36.5 | 58.1 | 81 | 42.1 | 184.9 | 184.9 | 131.3 |

| Description | Housing GG | | SK FS Seal | | End Cover | | Sight Glasses | |
|-------------|---------------------|----------|---------------|----------|-------------|----------|---------------|----------|
| | Description | Part No. | Description | Part No. | Description | Part No. | Description | Part No. |
| SNX 308 | SNX 210/510/308/608 | 747026 | SK 308 FS 50 | 496400 | DK 60 | 709140 | SG 308 | 740452 |
| SNX 309 | SNX 211/511/309/609 | 747027 | SK 309 FS 55 | 496401 | DK 65 | 709143 | SG 309 | 740452 |
| SNX 310 | SNX 212/512/310/610 | 747028 | SK 310 FS 60 | 496402 | DK 70 | 709146 | SG 310 | 740452 |
| SNX 311 | SNX 213/513/311/611 | 747029 | SK 311 FS 65 | 496403 | DK 75 | 709152 | SG 311 | 740452 |
| SNX 312 | SNX 215/515/312/612 | 747030 | SK 312 FS 70 | 496404 | DK 85 | 709162 | SG 312 | 740452 |
| SNX 313 | SNX 216/516/313/613 | 747031 | SK 313 FS 75 | 496405 | DK 90 | 709166 | SG 313 | 740452 |
| SNX 314 | SNX 217/517/314 | 747032 | SK 314 FS 80 | 496406 | DK 90 | 709166 | SG 314 | 740453 |
| SNX 315 | SNX 218/518/315/615 | 747033 | SK 315 FS 85 | 496407 | DK 100 | 708959 | SG 315 | 740453 |
| SNX 316 | SNX 219/519/316/616 | 747034 | SK 316 FS 90 | 496408 | DK 110 | 708966 | SG 316 | 740453 |
| SNX 317 | SNX 220/520/317/617 | 747035 | SK 317 FS 95 | 496409 | DK 115 | 708970 | SG 317 | 740453 |
| SNX 319 | SNX 222/522/319/619 | 747036 | SK 319 FS 110 | 496410 | DK 125 | 708976 | SG 319 | 740453 |
| SNX 320 | SNX 224/524/320/620 | 747037 | SK 320 FS 115 | 496411 | DK 135 | 708983 | SG 320 | 740453 |

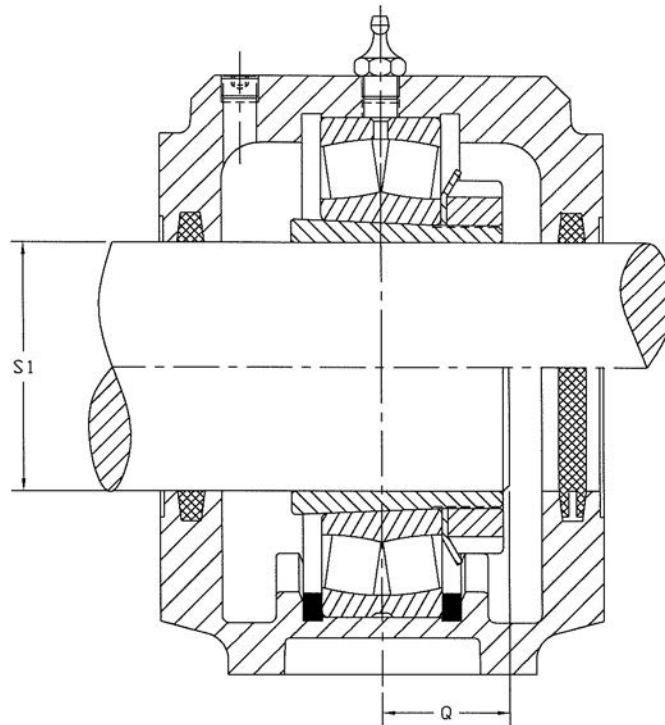
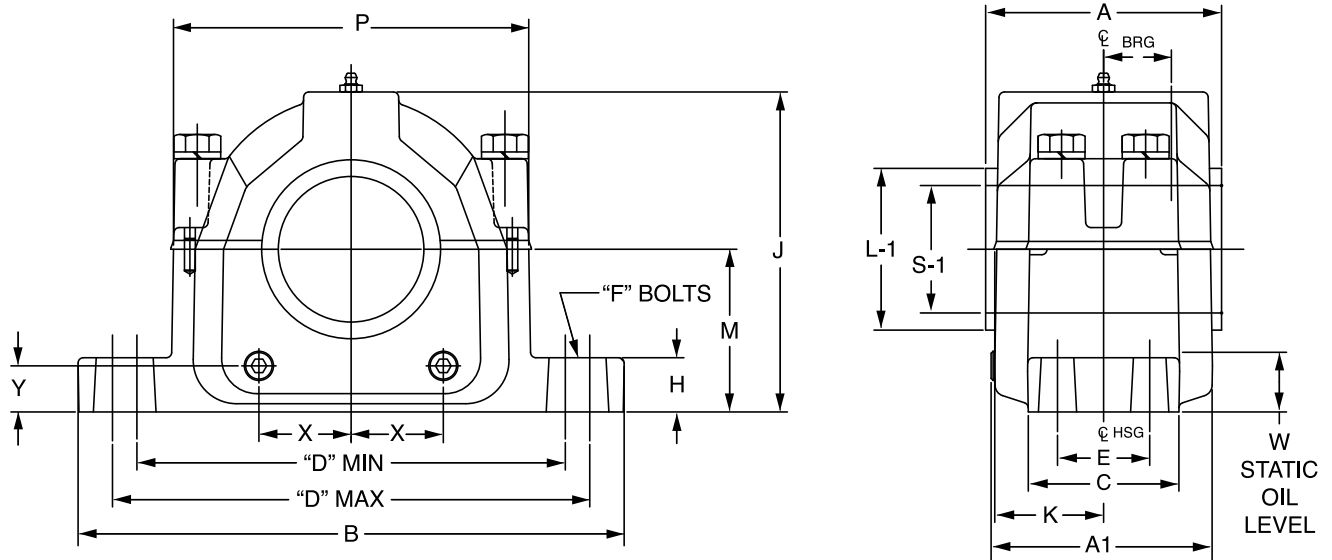
| Description | Spherical Roller Bearing | | Fixing Rings | | | Locknut | | Lockwasher | |
|-------------|--------------------------|----------|--------------|----------|----------|-------------|----------|-------------|----------|
| | Description | Part No. | Description | Quantity | Part No. | Description | Part No. | Description | Part No. |
| SNX 308 | 22308E1.C3 | 423124 | SR 90X4 | 2 | 747107 | KM 8 | 046492 | MB 8 | 046496 |
| SNX 309 | 22309E1.C3 | 423125 | SR 100X4 | 2 | 747110 | KM 9 | 046285 | MB 9 | 046304 |
| SNX 310 | 22310E1.C3 | 423143 | SR 110X4 | 2 | 747114 | KM 10 | 046286 | MB 10 | 046305 |
| SNX 311 | 22311E1.C3 | 423126 | SR 120X4 | 2 | 747117 | KM11 | 046287 | MB11 | 046306 |
| SNX 312 | 22312E1.C3 | 423127 | SR 130X4 | 2 | 747120 | KM 12 | 046487 | MB 12 | 046489 |
| SNX 313 | 22313E1.C3 | 423128 | SR 140X5 | 2 | 747122 | KM13 | 046288 | MB13 | 046307 |
| SNX 314 | 22314E1.C3 | 423129 | SR 150X5 | 2 | 747124 | KM 14 | 046238 | MB 14 | 046239 |
| SNX 315 | 22315E1.C3 | 423130 | SR 160X5 | 2 | 747126 | KM 15 | 046289 | MB 15 | 046308 |
| SNX 316 | 22316E1.C3 | 423144 | SR 170X5 | 2 | 747129 | KM 16 | 046290 | MB 16 | 046309 |
| SNX 317 | 22317E1.C3 | 423131 | SR 180X5 | 2 | 747131 | KM 17 | 046291 | MB 17 | 046310 |
| SNX 319 | 22319E1.C3 | 423145 | SR 200X6.5 | 2 | 747135 | KM 19 | 046488 | MB 19 | 049490 |
| SNX 320 | 22320E1.C3 | 423132 | SR 215X6.5 | 2 | 747139 | KM 20 | 046293 | MB 20 | 046312 |

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DIMENSIONS

SNX 600

Plummer Blocks for bearings 22300K



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DIMENSIONS

SNX 600

Dimensions in mm

| Description | Kg | S-1 Shaft Size | A1 | B | C | D | | F Bolt Dia | H | J | K | M | P | Q | W Static Oil Level | X | Y | A (With Seals) | | | VR | L1 VR |
|-------------|------|----------------|-----|-----|-----|-----|-----|------------|----|-----|----|-----|-----|----|--------------------|----|----|----------------|---------|-----------|-----|-------|
| | | | | | | Min | Max | | | | | | | | | | | LD | Felt FS | End Cover | | |
| SNX 608 | 5.1 | 35 | 99 | 210 | 60 | 165 | 178 | M12 | 23 | 113 | 48 | 60 | 130 | 27 | 26.5 | 31 | 17 | 95 | 95 | 95 | 103 | 43 |
| SNX 609 | 7.1 | 40 | 104 | 244 | 70 | 187 | 210 | M16 | 26 | 133 | 50 | 70 | 147 | 29 | 32.5 | 33 | 22 | 100 | 100 | 100 | 110 | 50 |
| SNX 610 | 9.5 | 45 | 116 | 270 | 70 | 197 | 230 | M16 | 29 | 139 | 56 | 70 | 156 | 32 | 28.6 | 38 | 20 | 112 | 112 | 112 | 121 | 55 |
| SNX 611 | 9.7 | 50 | 113 | 279 | 80 | 206 | 241 | M16 | 30 | 155 | 55 | 80 | 165 | 34 | 33.9 | 41 | 25 | 110 | 110 | 110 | 119 | 60 |
| SNX 612 | 11.3 | 55 | 121 | 283 | 80 | 219 | 245 | M16 | 29 | 161 | 59 | 80 | 179 | 36 | 30.7 | 44 | 21 | 117 | 117 | 117 | 124 | 65 |
| SNX 613 | 12.7 | 60 | 127 | 320 | 90 | 245 | 279 | M20 | 33 | 178 | 62 | 95 | 202 | 35 | 41.7 | 49 | 31 | 123 | 123 | 123 | 132 | 70 |
| SNX 615 | 16.7 | 65 | 151 | 346 | 98 | 260 | 299 | M20 | 35 | 195 | 72 | 100 | 220 | 43 | 38.8 | 57 | 28 | 144 | 144 | 144 | 153 | 75 |
| SNX 616 | 27.0 | 70 | 156 | 360 | 98 | 276 | 314 | M20 | 35 | 214 | 75 | 112 | 229 | 46 | 46.9 | 60 | 35 | 150 | 150 | 150 | 162 | 82 |
| SNX 617 | 27.8 | 75 | 164 | 390 | 110 | 295 | 333 | M24 | 40 | 220 | 80 | 112 | 248 | 48 | 42.1 | 67 | 30 | 160 | 160 | 160 | 171 | 87 |
| SNX 619 | 35.8 | 85 | 174 | 419 | 120 | 324 | 364 | M24 | 45 | 238 | 84 | 125 | 269 | 53 | 50.1 | 73 | 34 | 168 | 168 | 168 | 177 | 97 |
| SNX 620 | 41.1 | 90 | 191 | 419 | 120 | 337 | 368 | M24 | 45 | 267 | 93 | 140 | 286 | 57 | 58.1 | 81 | 42 | 185 | 185 | 185 | 196 | 102 |

| Description | Housing GG | | SK LD Seal | | SK FS Seal | | SK VR Seal | | End Cover | |
|-------------|---------------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|-------------|---------------|
| | Description | Part No. | Description | Part No. | Description | Part No. | Description | Part No. | Description | Part No. |
| SNX 608 | SNX 210/510/308/608 | 747026 | SK 608 LD 35 | 496412 | SK 608 FS 35 | 496423 | SK 608 VR 35 | 496434 | DK 60 | 709140 |
| SNX 609 | SNX 211/511/309/609 | 747027 | SK 609 LD 40 | 496413 | SK 609 FS 40 | 496424 | SK 609 VR 40 | 496435 | DK 65 | 709143 |
| SNX 610 | SNX 212/512/310/610 | 747028 | SK 610 LD 45 | 496414 | SK 610 FS 45 | 496425 | SK 610 VR 45 | 496436 | DK 70 | 709146 |
| SNX 611 | SNX 213/513/311/611 | 747029 | SK 611 LD 50 | 496415 | SK 611 FS 50 | 496426 | SK 611 VR 50 | 496437 | DK 75 | 709152 |
| SNX 612 | SNX 215/515/312/612 | 747030 | SK 612 LD 55 | 496416 | SK 612 FS 55 | 496427 | SK 612 VR 55 | 496438 | DK 85 | 709162 |
| SNX 613 | SNX 216/516/313/613 | 747031 | SK 613 LD 60 | 496417 | SK 613 FS 60 | 496428 | SK 613 VR 60 | 496439 | DK 90 | 709166 |
| SNX 615 | SNX 218/518/315/615 | 747033 | SK 615 LD 65 | 496418 | SK 615 FS 65 | 496429 | SK 615 VR 65 | 496440 | DK 100 | 708959 |
| SNX 616 | SNX 219/519/316/616 | 747034 | SK 616 LD 70 | 496419 | SK 616 FS 70 | 496430 | SK 616 VR 70 | 496421 | DK 110 | 708966 |
| SNX 617 | SNX 220/520/317/617 | 747035 | SK 617 LD 75 | 496420 | SK 617 FS 75 | 496431 | SK 617 VR 75 | 496442 | DK 115 | 708970 |
| SNX 619 | SNX 222/522/319/619 | 747036 | SK 619 LD 85 | 496421 | SK 619 FS 85 | 496432 | SK 619 VR 85 | 496443 | DK 125 | 708976 |
| SNX 620 | SNX 224/524/320/620 | 747037 | SK 620 LD 90 | 496422 | SK 620 FS 90 | 496433 | SK 620 VR 90 | 496444 | DK 135 | 708983 |

| Description | Spherical roller bearing | | Fixing rings | | | Adapters | | Sight Glasses | |
|-------------|--------------------------|---------------|--------------|----------|---------------|-------------|---------------|---------------|---------------|
| | Description | Part No. | Description | Quantity | Part No. | Description | Part No. | Description | Part No. |
| SNX 608 | 22308E1K.C3 | 423375 | SR 90X4 | 2 | 747107 | H 2308 | 046710 | SG 608 | 740452 |
| SNX 609 | 22309E1K.C3 | 423100 | SR 100X4 | 2 | 747110 | H 2309 | 046711 | SG 609 | 740452 |
| SNX 610 | 22310E1K.C3 | 423372 | SR 110X4 | 2 | 747114 | H 2310 | 046712 | SG 610 | 740452 |
| SNX 611 | 22311E1K.C3 | 423102 | SR 120X4 | 2 | 747117 | H 2311 | 046713 | SG 611 | 740452 |
| SNX 612 | 22312E1K.C3 | 423376 | SR 130X5 | 2 | 747120 | H 2312 | 046714 | SG 612 | 740452 |
| SNX 613 | 22313E1K.C3 | 423104 | SR 140X5 | 2 | 747122 | H 2313 | 046715 | SG 613 | 740452 |
| SNX 615 | 22315E1K.C3 | 423106 | SR 160X5 | 2 | 747126 | H 2315 | 719397 | SG 615 | 740453 |
| SNX 616 | 22316E1K.C3 | 423373 | SR 170X5 | 2 | 747129 | H 2316 | 046717 | SG 616 | 740453 |
| SNX 617 | 22317E1K.C3 | 423108 | SR 180X5 | 2 | 747131 | H 2317 | 046718 | SG 617 | 740453 |
| SNX 619 | 22319E1K.C3 | 423374 | SR 200X6.5 | 2 | 747135 | H 2319 | 046719 | SG 619 | 740453 |
| SNX 620 | 22320E1K.C3 | 423110 | SR 215X6.5 | 2 | 747139 | H 2320 | 046720 | SG 620 | 740453 |

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DIMENSIONS

SNX 30

Plummer Blocks for bearings 23000K

Plummer Blocks

Sleeve Bearings

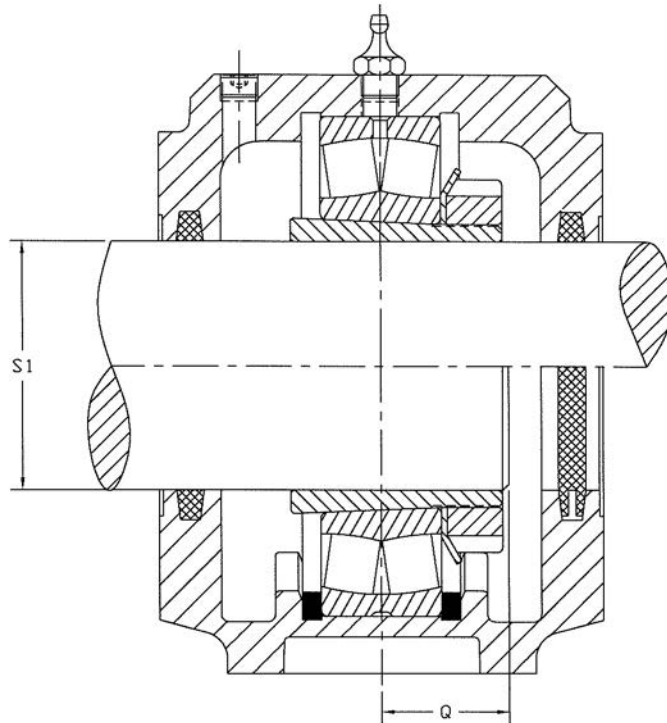
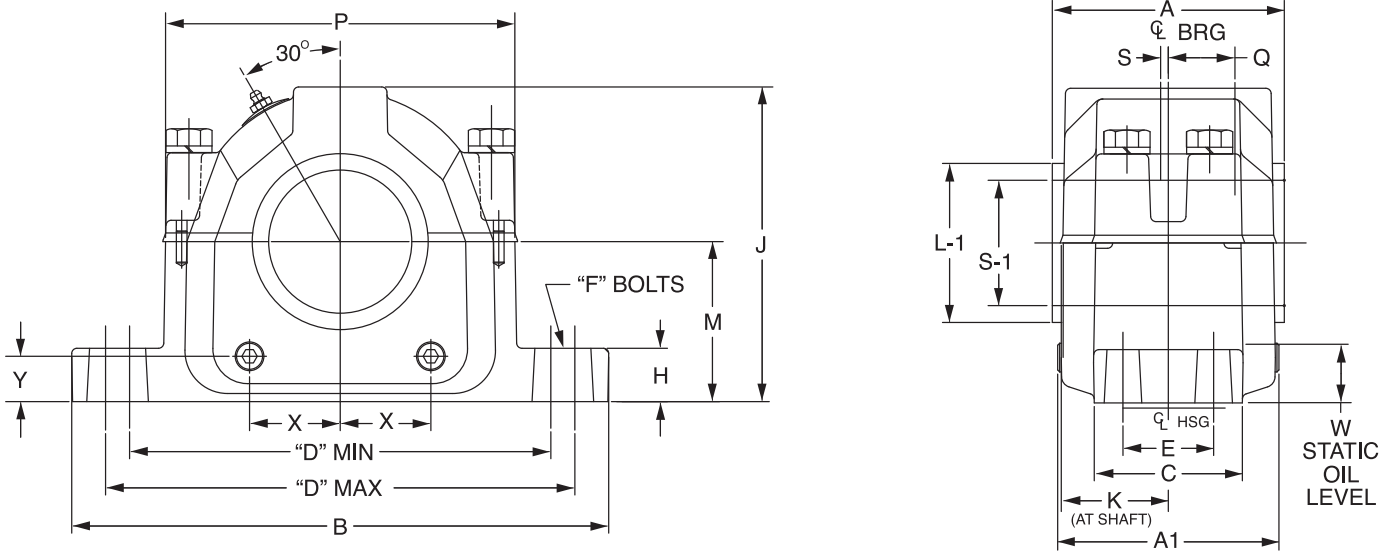
SLEEVOIL

Take-Up Frames

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DIMENSIONS

SNX 30

Dimensions in mm

| Description | kg | S-1 Shaft Welleno | A1 | B | C | D | | F Bolt Dia | H | J | K | M | P | Q | W Static Oil Level | X | Y | A (With Seals) | | | | L1 |
|-------------|-------|-------------------|-----|-----|-----|-----|-----|------------|----|-----|-----|-----|-----|------|--------------------|-------|------|----------------|------|-----------|-----|-----|
| | | | | | | Min | Max | | | | | | | | | | | LD | Felt | End Cover | VR | |
| | | | | | | | | | | | | | | | | | | | | | | |
| SNX 3024 | 81,0 | 110 | 167 | 390 | 110 | 295 | 333 | M24 | 40 | 220 | 80 | 112 | 248 | 38.0 | 37 | 66.5 | 30.0 | 160 | 160 | 160 | 175 | 113 |
| SNX 3026 | 105,0 | 115 | 174 | 419 | 121 | 324 | 364 | M24 | 45 | 239 | 84 | 125 | 269 | 49.0 | 42 | 73.0 | 33.8 | 168 | 168 | 168 | 179 | 118 |
| SNX 3028 | 121,0 | 125 | 191 | 419 | 120 | 337 | 368 | M24 | 45 | 267 | 93 | 140 | 286 | 50.5 | 52 | 81.0 | 42.0 | 185 | 185 | 185 | 199 | 139 |
| SNX 3030 | 161,0 | 135 | 197 | 445 | 130 | 374 | 387 | M24 | 50 | 290 | 95 | 150 | 315 | 54.0 | 56 | 84.1 | 39.0 | 191 | 191 | 191 | 204 | 149 |
| SNX 3032 | 161,0 | 140 | 197 | 445 | 130 | 374 | 387 | M24 | 50 | 290 | 95 | 150 | 315 | 58.0 | 54 | 84.1 | 39.0 | 191 | 191 | 191 | 204 | 154 |
| SNX 3034 | 162,0 | 150 | 226 | 530 | 159 | 426 | 464 | M30 | 60 | 317 | 110 | 160 | 364 | 62.5 | 50 | 91.3 | 33.7 | 220 | 220 | 220 | 234 | 164 |
| SNX 3036 | 235,0 | 160 | 241 | 550 | 159 | 457 | 483 | M30 | 60 | 338 | 118 | 170 | 379 | 67.0 | 52 | 102.4 | 34.0 | 235 | 235 | 235 | 252 | 176 |
| SNX 3038 | 235,0 | 170 | 241 | 550 | 159 | 457 | 483 | M30 | 60 | 338 | 118 | 170 | 379 | 68.5 | 48 | 102.4 | 34.0 | 235 | 235 | 235 | 252 | 186 |

| Housing | | LD Seal | | FS Seal | | VR Seal | | End Cover | |
|-------------|----------|-------------|----------|-------------|----------|-------------|----------|-------------|----------|
| Description | Part No. | Description | Part No. | Description | Part No. | Description | Part No. | Description | Part No. |
| SNX 3024 | 747042 | LD 110 | 725342 | 10X12X200 | 713596 | VS0110 | 738157 | DK 110 | 708966 |
| SNX 3026 | 747043 | LD 115 | 725343 | 10X12X210 | 713603 | VS0115 | 738158 | DK 115 | 708970 |
| SNX 3028 | 747044 | LD 125 | 725344 | 10X12X230 | 713613 | VS0125 | 738160 | DK 125 | 708976 |
| SNX 3030 | 747045 | LD 135 | 725345 | 10X12X245 | 713622 | VS0135 | 738162 | DK 135 | 708983 |
| SNX 3032 | 747046 | LD 140 | 725346 | 10X12X265 | 713634 | VS0140 | 738163 | DK 140 | 708989 |
| SNX 3034 | 747047 | | | 10X12X280 | 713641 | VS0150 | 738165 | DK 165 | 740383 |
| SNX 3036 | 747048 | | | 10X12X300 | 713647 | VS0160 | 738167 | DK 175 | 740384 |
| SNX 3038 | 747049 | | | 10X12X300 | 713647 | VS0170 | 738169 | | |

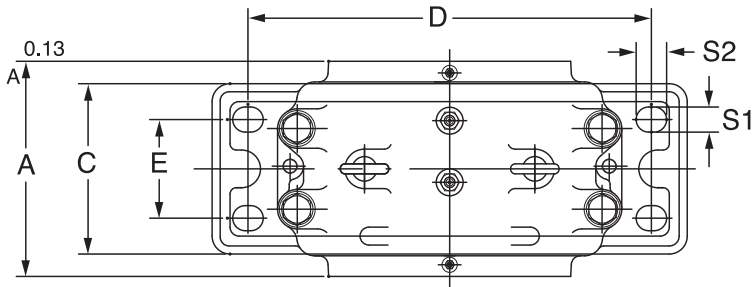
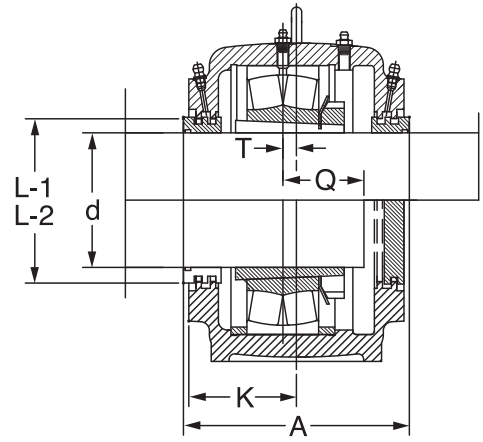
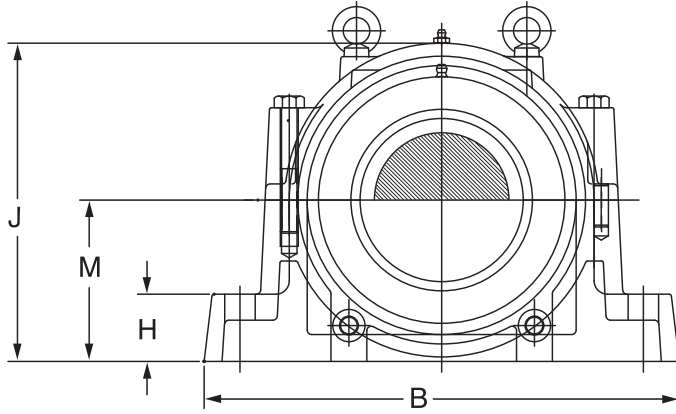
| Description | Spherical roller bearing | | Fixing rings | | | Adapters | |
|-------------|--------------------------|----------|--------------|----------|----------|-------------|----------|
| | Description | Part No. | Description | Quantity | Part No. | Description | Part No. |
| SNX 3024 | 23024EASK.M.C3 | 703619 | SR 180X5 | 2 | 747131 | H 3024 | 719419 |
| SNX 3026 | 23026K.C3 | 703628 | SR 200X10 | 1 | 747136 | H 3026 | 719420 |
| SNX 3028 | 23028EASK.M | 703644 | SR 210X10 | 1 | 747138 | H 3028 | 719421 |
| SNX 3030 | 23030EASK.M.C3 | 703656 | SR 225X10 | 1 | 747142 | H 3030 | 719422 |
| SNX 3032 | 23032K.C3 | 703661 | SR 240X10 | 1 | 747145 | H 3032 | 719423 |
| SNX 3034 | 23034K.C3 | 703670 | SR 260X10 | 1 | 747148 | H 3034 | 719425 |
| SNX 3036 | 23036K.C3 | 703679 | SR 280X10 | 1 | 747150 | H 3036 | 053088 |
| SNX 3038 | 23038EASK.M.C3 | 703689 | SR 290X10 | 1 | 747151 | H 3038 | 719429 |

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DIMENSIONS

SDX 3000

Plummer Blocks for bearings 23000K



Plummer Blocks

Sleeve Bearings

SLEEVOIL

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DIMENSIONS

SDX 3000

Dimensions in mm

| Description | kg | d | A | B | C | H | D | E | J | M | K | S Bolt Size | S1 | S2 | Q ★ | T | A (With Seals) | | | L1 ◆ TS | L2 ◆ TT |
|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------------------|----|----|--------|----|--------------------|------------------|------------------|---------------|---------------|
| | | | | | | | | | | | | | | | | | End Cover DK | TS Seal TT | TT Seal TT | | |
| SDX 3040 | 120 | 180 | 260 | 560 | 210 | 80 | 480 | 120 | 375 | 190 | 130 | 24 | 28 | 34 | 73 | 10 | 260 | 284 | 289 | 215 | 216 |
| SDX 3044 | 135 | 200 | 280 | 610 | 230 | 85 | 510 | 130 | 410 | 210 | 140 | 30 | 35 | 42 | 85 | 10 | 280 | 304 | 309 | 235 | 250 |
| SDX 3048 | 180 | 220 | 290 | 640 | 240 | 90 | 540 | 140 | 435 | 220 | 145 | 30 | 35 | 42 | 86 | 12 | 290 | 314 | 319 | 255 | 270 |
| SDX 3052 | 215 | 240 | 310 | 700 | 260 | 95 | 600 | 150 | 475 | 240 | 155 | 30 | 35 | 42 | 97 | 12 | 310 | 334 | 339 | 275 | 290 |
| SDX 3056 | 250 | 260 | 320 | 770 | 280 | 100 | 650 | 160 | 515 | 260 | 160 | 36 | 42 | 50 | 102 | 13 | 320 | 344 | 349 | 295 | 310 |
| SDX 3060 | 300 | 280 | 320 | 790 | 280 | 105 | 670 | 160 | 550 | 280 | 160 | 36 | 42 | 50 | 112 | 16 | 320 | 344 | 349 | 315 | 330 |
| SDX 3064 | 330 | 300 | 350 | 830 | 310 | 110 | 710 | 190 | 590 | 300 | 175 | 36 | 42 | 50 | 116 | 22 | 350 | 374 | 379 | 335 | 350 |
| SDX 3068 | 420 | 320 | 370 | 880 | 330 | 115 | 750 | 200 | 630 | 320 | 185 | 36 | 42 | 50 | 123.5 | 23 | 370 | 394 | 399 | 355 | 370 |

| Description | Housing | | Labyrinth Seal | | Triple-Tect Seal | | End Cover | |
|-------------|---------------|---------------|----------------|---------------|------------------|---------------|----------------------|---------------|
| | Description | Part No. | Description | Part No. | Description | Part No. | Description | Part No. |
| SDX 3040 | SDX 3040 | 747602 | TS-23040 | 747666 | TT-23040 | 747706 | EC-SDX3040 | 747748 |
| SDX 3044 | SDX 3140/3044 | 747604 | TS-23044 | 747667 | TT-23044 | 747707 | EC-SDX3140/3144/3044 | 747750 |
| SDX 3048 | SDX 3048 | 747605 | TS-23048 | 747668 | TT-23048 | 747708 | EC-SDX3048 | 747751 |
| SDX 3052 | SDX 3148/3052 | 747607 | TS-23052 | 747669 | TT-23052 | 747709 | EC-SDX3148/3152/3052 | 747753 |
| SDX 3056 | SDX 3056 | 747608 | TS-23056 | 747670 | TT-23056 | 747710 | EC-SDX3056 | 747754 |
| SDX 3060 | SDX 3156/3060 | 747610 | TS-23060 | 747671 | TT-23060 | 747711 | EC-SDX3156/3160/3060 | 747756 |
| SDX 3064 | SDX 3064 | 747611 | TS-23064 | 747672 | TT-23064 | 747712 | EC-SDX3064 | 747757 |
| SDX 3068 | SDX 3068 | 747613 | TS-23068 | 747673 | TT-23068 | 747713 | EC-SDX3068 | 747759 |

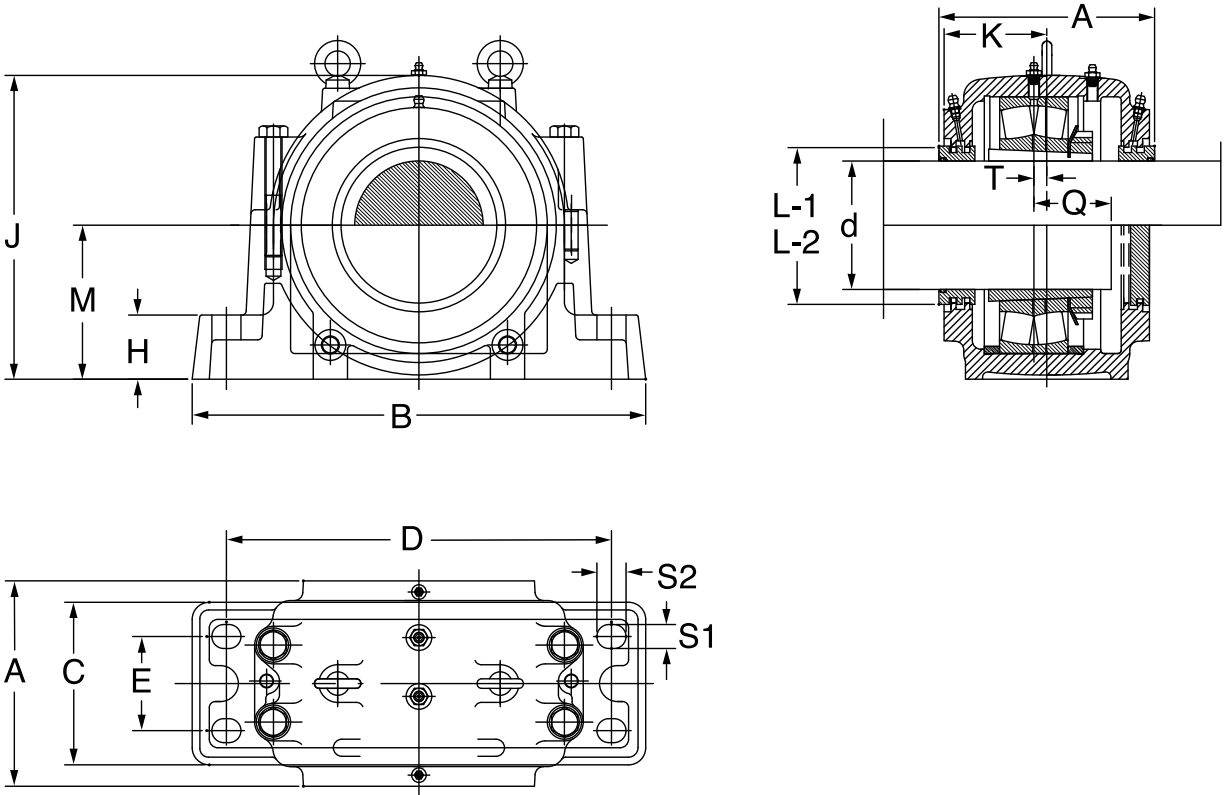
| Description | Spherical roller bearing | | Fixing rings | | | Adapters | |
|-------------|--------------------------|---------------|--------------|----------|---------------|-------------|---------------|
| | Description | Part No. | Description | Quantity | Part No. | Description | Part No. |
| SDX 3040 | 23040EASK.M.C3 | 703694 | SR 310x20 | 2 | 747155 | H 3040 | 719432 |
| SDX 3044 | 23044K.MB.C3 | 703711 | SR 340x21 | 2 | 747159 | H 3044 | 719434 |
| SDX 3048 | 23048K.MB.C3 | 422031 | SR 360x24 | 2 | 747161 | H 3048 | 719437 |
| SDX 3052 | 23052K.C3 | 703725 | SR 400x22 | 2 | 747166 | H 3052 | 719441 |
| SDX 3056 | 23056K.M.C3 | 422030 | SR 420x30 | 2 | 747167 | H 3056 | 719443 |
| SDX 3060 | 23060K.C3 | 703738 | SR 460x24 | 2 | 747171 | H 3060 | 719445 |
| SDX 3064 | 23064K.C3 | 703739 | SR 480x30 | 2 | 747172 | H 3064 | 719446 |
| SDX 3068 | 23068K.C3 | 421282 | SR 520x32 | 2 | 747174 | H 3068 | 719448 |

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DIMENSIONS

SDX 3100

Plummer Blocks for bearings 23100K



Plummer Blocks

Sleeve Bearings

SLEEVOIL

Take-Up Frames

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DIMENSIONS

SDX 3100

Dimensions in mm

| Description | kg | d | A | B | C | H | D | E | J | M | K | S Bolt Size | S1 | S2 | Q ★ | T | A (With Seals) | | | L1 ◆ | L2 ◆ |
|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------------------|----|----|--------|----|--------------------|------------------|------------------|---------|---------|
| | | | | | | | | | | | | | | | | | End Cover DK | TS Seal TS | TT Seal TT | | |
| | | | | | | | | | | | | | | | | | TS | TT | TT | | |
| SDX 3134 | 65 | 150 | 230 | 510 | 180 | 70 | 430 | 100 | 335 | 170 | 115 | 24 | 28 | 34 | 73 | 14 | 230 | 254 | 259 | 185 | 186 |
| SDX 3136 | 75 | 160 | 240 | 530 | 190 | 75 | 450 | 110 | 355 | 180 | 120 | 24 | 28 | 34 | 78 | 15 | 240 | 264 | 269 | 195 | 196 |
| SDX 3138 | 95 | 170 | 260 | 560 | 210 | 80 | 480 | 120 | 375 | 190 | 130 | 24 | 28 | 34 | 83 | 10 | 260 | 284 | 289 | 205 | 206 |
| SDX 3140 | 120 | 180 | 280 | 610 | 230 | 85 | 510 | 130 | 410 | 210 | 140 | 30 | 35 | 42 | 88 | 10 | 280 | 304 | 309 | 235 | 250 |
| SDX 3144 | 135 | 200 | 290 | 640 | 240 | 90 | 540 | 140 | 435 | 220 | 145 | 30 | 35 | 42 | 95 | 12 | 290 | 314 | 319 | 235 | 250 |
| SDX 3148 | 180 | 220 | 310 | 700 | 260 | 95 | 600 | 150 | 475 | 240 | 155 | 30 | 35 | 42 | 101 | 12 | 310 | 334 | 339 | 275 | 290 |
| SDX 3152 | 215 | 240 | 320 | 770 | 280 | 100 | 650 | 160 | 515 | 260 | 160 | 36 | 42 | 50 | 111 | 13 | 320 | 344 | 349 | 275 | 290 |
| SDX 3156 | 250 | 260 | 320 | 790 | 280 | 105 | 670 | 160 | 550 | 280 | 160 | 36 | 42 | 50 | 114 | 16 | 320 | 344 | 349 | 315 | 330 |
| SDX 3160 | 300 | 280 | 350 | 830 | 310 | 110 | 710 | 190 | 590 | 300 | 175 | 36 | 42 | 50 | 120 | 22 | 350 | 374 | 379 | 315 | 330 |
| SDX 3164 | 330 | 300 | 370 | 880 | 330 | 115 | 750 | 200 | 630 | 320 | 185 | 36 | 42 | 50 | 130 | 23 | 370 | 394 | 399 | 375 | 390 |

| Description | Housing | | Labyrinth Seal | | Triple-Tect Seal | | End Cover | |
|-------------|-----------------|---------------|----------------|---------------|------------------|---------------|----------------------|---------------|
| | Description | Part No. | Description | Part No. | Description | Part No. | Description | Part No. |
| SDX 3134 | SDX 3134 | 747600 | TS-23134 | 747681 | TT-23134 | 747721 | EC-SDX3134 | 747746 |
| SDX 3136 | SDX 3136 | 747601 | TS-23136 | 747682 | TT-23136 | 747722 | EC-SDX3136 | 747747 |
| SDX 3138 | SDX 3138 | 747603 | TS-23138 | 747683 | TT-23138 | 747723 | EC-SDX3138 | 747749 |
| SDX 3140 | SDX 3140 / 3044 | 747604 | TS-23140 | 747684 | TT-23140 | 747724 | EC-SDX3140/3144/3044 | 747750 |
| SDX 3144 | SDX 3144 | 747606 | TS-23044 | 747667 | TT-23044 | 747707 | EC-SDX3140/3144/3044 | 747750 |
| SDX 3148 | SDX 3148 | 747607 | TS-23148 | 747686 | TT-23148 | 747726 | EC-SDX3148/3152/3052 | 747753 |
| SDX 3152 | SDX 3152 | 747609 | TS-23052 | 747669 | TT-23052 | 747709 | EC-SDX3148/3152/3052 | 747753 |
| SDX 3156 | SDX 3156 / 3060 | 747610 | TS-23156 | 747688 | TT-23156 | 747728 | EC-SDX3156/3160/3060 | 747756 |
| SDX 3160 | SDX 3160 | 747612 | TS-23060 | 747671 | TT-23060 | 747711 | EC-SDX3156/3160/3060 | 747756 |
| SDX 3164 | SDX 3164 | 747614 | TS-23164 | 747690 | TT-23164 | 747730 | EC-SDX3164 | 747760 |

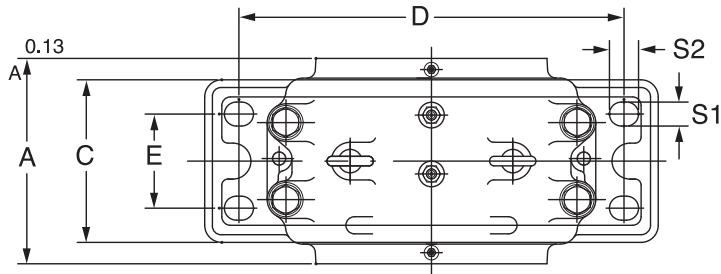
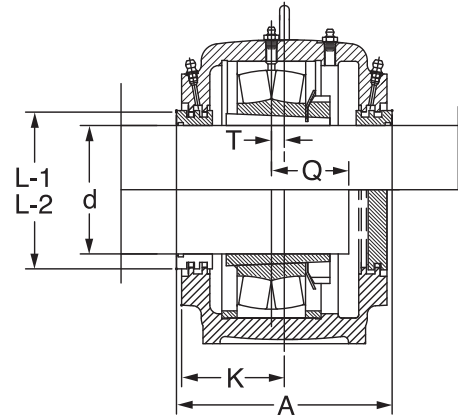
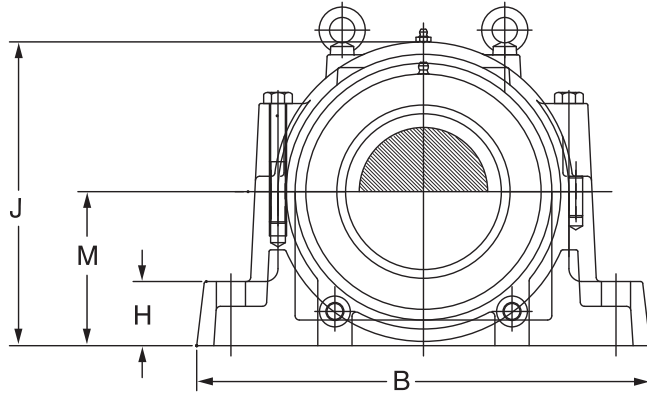
| Description | Spherical roller bearing | | Fixing rings | | | Adapters | |
|-------------|--------------------------|---------------|--------------|----------|---------------|-------------|---------------|
| | Description | Part No. | Description | Quantity | Part No. | Description | Part No. |
| SDX 3134 | 23134K.M.C3 | 703831 | SR 280x10 | 2 | 747150 | H 3134 | 046233 |
| SDX 3136 | 23136ESKTPVB.C3 | 703840 | SR 300x10 | 2 | 747154 | H 3136 | 046234 |
| SDX 3138 | 23138K.C3 | 703850 | SR 320x10 | 2 | 747156 | H 3138 | 046235 |
| SDX 3140 | 23140BK.MB.C3 | 421403 | SR 340x10 | 2 | 747157 | H 3140 | 046236 |
| SDX 3144 | 23144BK.MB.C3 | 703866 | SR 370x10 | 2 | 747162 | H 3144 | 046237 |
| SDX 3148 | 23148BK.MB.C3 | 703873 | SR 400x10 | 2 | 747164 | H 3148 | 719480 |
| SDX 3152 | 23152K.MB.C3 | 703890 | SR 440x10 | 2 | 747168 | H 3152 | 719485 |
| SDX 3156 | 23156BK.MB.C3 | 703892 | SR 460x10 | 2 | 747170 | H 3156 | 719489 |
| SDX 3160 | 23160K.C3 | 703903 | SR 500x10 | 2 | 747173 | H 3160 | 719491 |
| SDX 3164 | 23164K.MB.C3 | 421287 | SR 540x10 | 2 | 747175 | H 3164 | 719492 |

| | | | |
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DIMENSIONS

SDXD 3000

Plummer Blocks for bearings 23000K



Plummer Blocks

Sleeve Bearings

SLEEVOIL

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DIMENSIONS
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DIMENSIONS

SDXD 3000

Dimensions in mm

| Description | kg | d | A | B | C | H | D | E | J | M | K | S Bolt Size | S1 | S2 | Q ★ | T | A | | | L1 TS | L2 ◆ TT |
|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------------------|----|----|--------|----|--------------------|------------------|---------------------|----------|---------------|
| | | | | | | | | | | | | | | | | | End Cover DK | TS Seal TS | TT Seal TS-TT | | |
| SDXD 3040 | 95 | 180 | 260 | 560 | 210 | 80 | 480 | 120 | 375 | 190 | 130 | 24 | 28 | 34 | 83 | 10 | 260 | 284 | 268 | 205 | 206 |
| SDXD 3044 | 135 | 200 | 280 | 610 | 230 | 85 | 510 | 130 | 410 | 210 | 140 | 30 | 35 | 42 | 85 | 10 | 280 | 294 | 299 | 235 | 250 |
| SDXD 3048 | 180 | 220 | 290 | 640 | 240 | 90 | 540 | 140 | 435 | 220 | 145 | 30 | 35 | 42 | 86 | 12 | 290 | 298 | 303 | 255 | 270 |
| SDXD 3052 | 215 | 240 | 310 | 700 | 260 | 95 | 600 | 150 | 475 | 240 | 155 | 30 | 35 | 42 | 97 | 12 | 310 | 318 | 323 | 275 | 290 |
| SDXD 3056 | 250 | 260 | 320 | 770 | 280 | 100 | 650 | 160 | 515 | 260 | 160 | 36 | 42 | 50 | 102 | 13 | 320 | 328 | 333 | 295 | 310 |
| SDXD 3060 | 300 | 280 | 320 | 790 | 280 | 105 | 670 | 160 | 550 | 280 | 160 | 36 | 42 | 50 | 112 | 16 | 320 | 328 | 333 | 315 | 330 |
| SDXD 3064 | 330 | 300 | 350 | 830 | 310 | 110 | 710 | 190 | 590 | 300 | 175 | 36 | 42 | 50 | 116 | 22 | 350 | 358 | 363 | 335 | 350 |
| SDXD 3068 | 420 | 320 | 370 | 880 | 330 | 115 | 750 | 200 | 630 | 320 | 185 | 36 | 42 | 50 | 123.5 | 23 | 370 | 378 | 383 | 355 | 370 |

| Description | Housing | | Labyrinth Seal | | Triple-Tect Seal | | End Cover | |
|-------------|------------------|---------------|----------------|---------------|------------------|---------------|----------------------|---------------|
| | Description | Part No. | Description | Part No. | Description | Part No. | Description | Part No. |
| SDXD 3040 | SDXD 3040 / 3138 | 747624 | TS-23040 | 747666 | TT-23040 | 747706 | EC-SDX3040 | 747748 |
| SDXD 3044 | SDXD 3044 / 3140 | 747626 | TS-23044 | 747667 | TT-23044 | 747707 | EC-SDX3140/3144/3044 | 747750 |
| SDXD 3048 | SDXD 3048 / 3144 | 747627 | TS-23048 | 747668 | TT-23048 | 747708 | EC-SDX3048 | 747751 |
| SDXD 3052 | SDXD 3052 / 3148 | 747629 | TS-23052 | 747669 | TT-23052 | 747709 | EC-SDX3148/3152/3052 | 747753 |
| SDXD 3056 | SDXD 3056 / 3152 | 747630 | TS-23056 | 747670 | TT-23056 | 747710 | EC-SDX3056 | 747754 |
| SDXD 3060 | SDXD 3060 / 3156 | 747632 | TS-23060 | 747671 | TT-23060 | 747711 | EC-SDX3156/3160/3060 | 747756 |
| SDXD 3064 | SDXD 3064 / 3160 | 747633 | TS-23064 | 747672 | TT-23064 | 747712 | EC-SDX3064 | 747757 |
| SDXD 3068 | SDXD 3068 / 3164 | 747635 | TS-23068 | 747673 | TT-23068 | 747713 | EC-SDX3068 | 747759 |

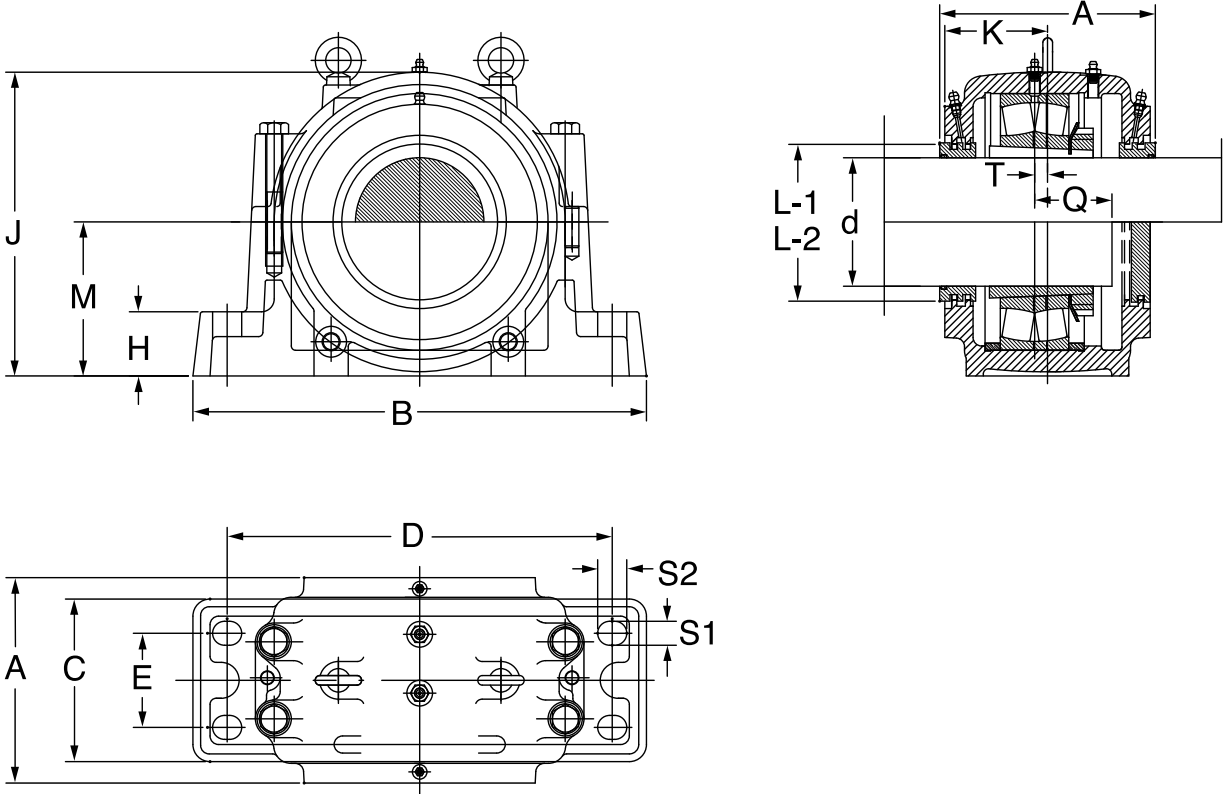
| Description | Spherical roller bearing | | Fixing rings | | | Adapters | |
|-------------|--------------------------|---------------|--------------|----------|---------------|-------------|---------------|
| | Description | Part No. | Description | Quantity | Part No. | Description | Part No. |
| SDXD 3040 | 23040EASK.M.C3 | 703694 | SR 310x20 | 2 | 747155 | H 3040 | 719432 |
| SDXD 3044 | 23044K.MB.C3 | 703711 | SR 340x21 | 2 | 747159 | H 3044 | 719434 |
| SDXD 3048 | 23048K.MB.C3 | 422031 | SR 360x24 | 2 | 747161 | H 3048 | 719437 |
| SDXD 3052 | 23052K.C3 | 703725 | SR 400x22 | 2 | 747166 | H 3052 | 719441 |
| SDXD 3056 | 23056K.M.C3 | 420030 | SR 420x30 | 2 | 747167 | H 3056 | 719443 |
| SDXD 3060 | 23060K.C3 | 703738 | SR 460x24 | 2 | 747171 | H 3060 | 719445 |
| SDXD 3064 | 23064K.C3 | 703739 | SR 480x30 | 2 | 747172 | H 3064 | 719446 |
| SDXD 3068 | | | SR 520x32 | 2 | 747174 | H 3068 | 719448 |

| | | | |
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DIMENSIONS

SDXD 3100

Plummer Blocks for bearings 23100K



Plummer Blocks

Sleeve Bearings

SLEEVOIL

Take-Up Frames

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

DIMENSIONS

SDXD 3100

Dimensions in mm

| Description | kg | d | A | B | C | H | D | E | J | M | K | S Bolt Size | S1 | S2 | Q ★ | T | A | | TT Seal TT | L1 ◆ | L2 ◆ |
|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------------|----|----|-----|----|--------------|------------|------------|---------|---------|
| | | | | | | | | | | | | | | | | | End Cover DK | TS Seal TS | | | |
| SDXD 3134 | 65 | 150 | 230 | 510 | 180 | 70 | 430 | 100 | 335 | 170 | 115 | 24 | 28 | 34 | 73 | 14 | 230 | 238 | 269 | 185 | 186 |
| SDXD 3136 | 75 | 160 | 240 | 530 | 190 | 75 | 450 | 110 | 355 | 180 | 120 | 24 | 28 | 34 | 78 | 15 | 240 | 264 | 289 | 195 | 196 |
| SDXD 3138 | 95 | 170 | 260 | 560 | 210 | 80 | 480 | 120 | 375 | 190 | 130 | 24 | 28 | 34 | 83 | 10 | 260 | 284 | 309 | 205 | 206 |
| SDXD 3140 | 120 | 180 | 280 | 610 | 230 | 85 | 510 | 130 | 410 | 210 | 140 | 30 | 35 | 42 | 88 | 10 | 280 | 304 | 319 | 235 | 250 |
| SDXD 3144 | 135 | 200 | 290 | 640 | 240 | 90 | 540 | 140 | 435 | 220 | 145 | 30 | 35 | 42 | 95 | 12 | 290 | 314 | 339 | 235 | 250 |
| SDXD 3148 | 180 | 220 | 310 | 700 | 260 | 95 | 600 | 150 | 475 | 240 | 155 | 30 | 35 | 42 | 101 | 12 | 310 | 334 | 349 | 275 | 290 |
| SDXD 3152 | 215 | 240 | 320 | 770 | 280 | 100 | 650 | 160 | 515 | 260 | 160 | 36 | 42 | 50 | 111 | 13 | 320 | 344 | 349 | 275 | 290 |
| SDXD 3156 | 250 | 260 | 320 | 790 | 280 | 105 | 670 | 160 | 550 | 280 | 160 | 36 | 42 | 50 | 114 | 16 | 320 | 344 | 379 | 315 | 330 |
| SDXD 3160 | 300 | 280 | 350 | 830 | 310 | 110 | 710 | 190 | 590 | 300 | 175 | 36 | 42 | 50 | 120 | 22 | 350 | 374 | 399 | 315 | 330 |
| SDXD 3164 | 330 | 300 | 370 | 880 | 330 | 115 | 750 | 200 | 630 | 320 | 185 | 36 | 42 | 50 | 130 | 23 | 370 | 394 | | 375 | 390 |

| Description | Housing | | Labyrinth Seal | | Triple-Tect Seal | | End Cover | |
|-------------|------------------|---------------|----------------|---------------|------------------|---------------|----------------------|---------------|
| | Description | Part No. | Description | Part No. | Description | Part No. | Description | Part No. |
| SDXD 3134 | SDXD 3134 | 747622 | TS-23134 | 747681 | TT-23134 | 747721 | EC-SDX3134 | 747746 |
| SDXD 3136 | SDXD 3136 | 747623 | TS-23136 | 747682 | TT-23136 | 747722 | EC-SDX3136 | 747747 |
| SDXD 3138 | SDXD 3138 / 3040 | 747625 | TS-23138 | 747683 | TT-23138 | 747723 | EC-SDX3138 | 747749 |
| SDXD 3140 | SDXD 3140 / 3044 | 747626 | TS-23140 | 747684 | TT-23140 | 747724 | EC-SDX3140/3144/3044 | 747750 |
| SDXD 3144 | SDXD 3144 / 3048 | 747628 | TS-23044 | 747667 | TT-23044 | 747707 | EC-SDX3140/3144/3044 | 747750 |
| SDXD 3148 | SDXD 3148 / 3052 | 747629 | TS-23148 | 747686 | TT-23148 | 747726 | EC-SDX3148/3152/3052 | 747753 |
| SDXD 3152 | SDXD 3152 / 3056 | 747631 | TS-23052 | 747669 | TT-23052 | 747709 | EC-SDX3148/3152/3052 | 747753 |
| SDXD 3156 | SDXD 3156 / 3060 | 747632 | TS-23156 | 747688 | TT-23156 | 747728 | EC-SDX3156/3160/3060 | 747756 |
| SDXD 3160 | SDXD 3160 / 3064 | 747634 | TS-23060 | 747671 | TT-23060 | 747711 | EC-SDX3156/3160/3060 | 747756 |
| SDXD 3164 | SDXD 3164 / 3068 | 747636 | TS-23164 | 747690 | TT-23164 | 747730 | EC-SDX3164 | 747760 |

| Description | Spherical roller bearing | | Fixing rings | | | Adapters | |
|-------------|--------------------------|---------------|--------------|----------|---------------|-------------|---------------|
| | Description | Part No. | Description | Quantity | Part No. | Description | Part No. |
| SDXD 3134 | 23134K.M.C3 | 703831 | SR 280x10 | 2 | 747150 | H 3134 | 046233 |
| SDXD 3136 | 23136ESKTVPB.C3 | 703840 | SR 300x10 | 2 | 747154 | H 3136 | 046234 |
| SDXD 3138 | 23138K.C3 | 703850 | SR 320x10 | 2 | 747156 | H 3138 | 046235 |
| SDXD 3140 | 23140BK.MB.C3 | 421403 | SR 340x10 | 2 | 747157 | H 3140 | 046236 |
| SDXD 3144 | 23144BK.MB.C3 | 703866 | SR 370x10 | 2 | 747162 | H 3144 | 046237 |
| SDXD 3148 | 23148BK.MB.C3 | 703873 | SR 400x10 | 2 | 747164 | H 3148 | 719480 |
| SDXD 3152 | 23152K.MB.C3 | 703890 | SR 440x10 | 2 | 747168 | H 3152 | 719485 |
| SDXD 3156 | 23156BK.MB.C3 | 703892 | SR 460x10 | 2 | 747170 | H 3156 | 719489 |
| SDXD 3160 | 23160K.C3 | 703903 | SR 500x10 | 2 | 747173 | H 3160 | 719491 |
| SDXD 3164 | 23164K.MB.C3 | 421287 | SR 540x10 | 2 | 747175 | H 3164 | 719492 |

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NOTES

Plummer Blocks

Sleeve Bearings

SLEEVOIL

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Sleeve Bearings

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FEATURES/BENEFITS

Sleeve Bearings

SOLIDLUBE

Self-Lubricating, Statically Self-Aligning Bearings for Extreme Industrial Applications

- Good in temperature extremes and inaccessible locations.
- Will function effectively in a vacuum.
- Ideal where bearings are subject to dry cycles or where lube systems would be too costly.
- Usable in many corrosive (chemical) medias.
- Will operate in submersible applications of some low viscosity liquids.
- Recommended for slow speeds and limited shaft movement applications.



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



FEATURES/BENEFITS

Sleeve Bearings BABBITTED AND BRONZE-BUSHED BEARINGS



GOOD FOR SLOW SPEEDS AND SHOCK LOADS

- MPTA LOAD RATINGS
- Cast Iron Housings
- 2 and 4 Bolt Housings

Babbitted

- Solid or Fully Split Housing
- Babbitted Bearing Surface



Bronzed-Bushed

- Fully Split Housing
- Replaceable Split Bronze Bushings
- Brass Locking Spool for Easy Bushing Replacement



Sleeve Bearings

HOW TO ORDER SLEEVE BEARINGS

There are two ways to specify DODGE Sleeve Bearings. Most of the product offering 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 shown on page B17-5 and add any special instructions to the end of the description for options not covered by the nomenclature.

SOLIDLUBE

Statically self-aligning, non-galling, solid-film lubricating for temperature extremes.

- 700 Series: -40° to 700°F
- 1000 Series: -200° to -40°F; 250°F to 1,000°F
- 800 Series: -40° to 800°F

Also suitable for submerged and limited movement applications.

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.

| | | | |
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NOMENCLATURE

Sleeve Bearings SLEEVE BEARING NOMENCLATURE

P2B - LT7 - 108 - SH

MODIFICATIONS/FEATURES:
SH Stainless Steel Housing
(Available with SOLIDLUBE LT Series Only)

HOUSINGS:

| | |
|------|-------------------------------|
| P2B | Pillow Block, 2 Bolt Base |
| P4B | Pillow Block, 4 Bolt Base |
| 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:

| | |
|-------|---|
| BO | BRONZOIL |
| BASO | Babbitted Solid |
| BASP | Babbitted Split |
| BAR | Babbitted Rigid |
| BAA | Babbitted Angle |
| BAP | Babbitted Plate |
| BZSP | Bronze Bushed Split |
| BZR | Bronze Bushed Rigid |
| LT7 | SOLIDLUBE LT700 Series |
| LT10 | SOLIDLUBE LT 1000 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 Digit: Sixteenths Of An Inch
115 Indicates 1-15/16
50M FIRST TWO DIGITS: Bore In Millimeters;
M : Indicates Metric Dimension



SELECTION

Sleeve Bearings - SOLIDLUBE - Inch

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% 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% 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 20μ will lessen bearing life. A finish smoother than 10 will not allow the optimum lubricant film to develop. Shaft tolerance should be +.000/-.002 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 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 1000°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.

Specials

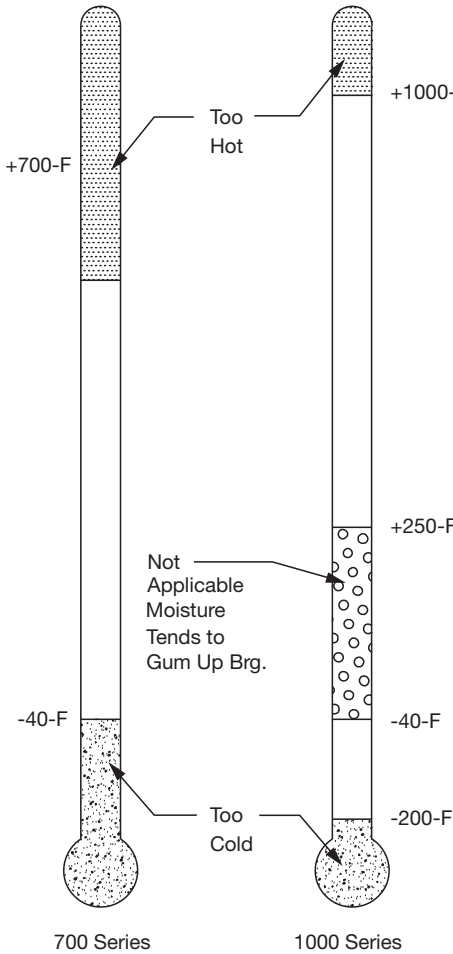
SOLIDLUBE bearings or bearings made from alternate bushing materials such as polymers, fibers, bronze, etc. for unusual operating and load conditions are available on a specially engineered basis by supplying the following:

- Shaft size, material and 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.

End Closures

Ball Bearing End Closures are available (B4-102).

Note: SOLIDLUBE bearings are not designed for rotating housing applications



**SOLIDLUBE
Bearing
Operating
Temperature**

Plummer Blocks

Sleeve Bearings

SLEEVOIL

Take-Up Frames

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SELECTION

Sleeve Bearings - SOLIDLUBE - Inch SOLIDLUBE 700, 1000 and 800 Series

SOLIDLUBE Bearing 700 and 1000 Series Radial Load Ratings in Pounds (Normal Loads)

| Shaft Size | Radial Load Ratings in Pounds at various Revolutions per Minute | | | | | | | | | | | |
|-----------------------------|---|-------|------|------|------|------|------|------|-----|-----|-----|-----|
| | 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 | 750 | 610 | 405 | 315 | 245 | 205 | 175 | 130 |
| 1-1/8, 1-3/16 | 1050 | 1050 | 1050 | 908 | 680 | 450 | 340 | 270 | 225 | 190 | 170 | 150 |
| 1-1/4, 1-3/8, 1-7/16, 1-1/2 | 1610 | 1610 | 1610 | 1140 | 855 | 570 | 430 | 340 | 280 | 245 | 215 | 190 |
| 1-11/16, 1-3/4 | 1980 | 1980 | 1790 | 1190 | 895 | 595 | 440 | 390 | 295 | 255 | 220 | 200 |
| 1-15/16, 2 | 2360 | 2360 | 1860 | 1240 | 930 | 620 | 465 | 370 | 310 | 265 | 235 | 205 |
| 2-3/16 | 2870 | 2870 | 2010 | 1340 | 1000 | 670 | 500 | 400 | 335 | 285 | 250 | 225 |
| 2-7/16, 2-1/2 | 3760 | 3760 | 2360 | 1580 | 1180 | 795 | 590 | 475 | 390 | 340 | 295 | 265 |
| 2-15/16, 3 | 5970 | 5970 | 3120 | 2070 | 1560 | 1040 | 780 | 625 | 515 | 445 | 390 | 345 |
| 3-7/16, 3-1/2 | 9100 | 8010 | 4000 | 2670 | 2000 | 1340 | 1000 | 800 | 670 | 570 | 500 | 445 |
| 3-15/16, 4 | 11800 | 9160 | 4590 | 3060 | 2290 | 1530 | 1150 | 930 | 765 | 665 | 575 | 510 |
| 4-7/16, 4-1/2 | 15200 | 10300 | 5150 | 3440 | 2580 | 1720 | 1290 | 1030 | 860 | 740 | 645 | ... |
| 4-15/16, 5 | 18400 | 11400 | 5710 | 3810 | 2860 | 1910 | 1430 | 1140 | 955 | 815 | ... | ... |

| Shaft Size | 500 | 550 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1300 | 1600 | 1900 | 2200 | 2500 |
|-----------------------------|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|
| 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 Bearing Corrosion (Chemical) Resistance

| Type of Chemical | Chemical | Bearing Series | |
|--------------------------------------|-----------------------------------|----------------|------|
| | | LM800 700 | 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 & 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 | ■ | ▲ |
| Salts | Reducing | ★ | ★ |
| | Acid Salts | ▲ | ▲ |
| | Alkaline Sales | ▲ | ▲ |
| | Metals | ★ | ★ |
| | Neutral Salts | ■ | ▲ |
| Solvents | Neutral Salt Solutions | ★ | ★ |
| | Aliphatic | ★ | ★ |
| | Aromatic | ★ | ★ |
| | Chlorinated, Fluorinated | ★ | ★ |
| Oxygenated, Sulfides | ★ | ★ | |

★ Good. Not known interaction; compatible
 ▲ Questionable (depends on conditions)
 ■ Not recommended

Note: For compatibility or specific chemical, contact Application Engineering

700 and 1000 Series SOLIDLUBE Bearing Radial Load Rating in Pounds (Limited Shaft Movement Applications) ▲

| Shaft Size | Max. Radial Load | | Max. Thrust |
|-----------------------------|------------------|---------------------|-------------|
| | Base Loaded | Cap or Side Loading | |
| 3/4 | 1100 | 775 | 56 |
| 7/8, 15/16, 1 | 1500 | 795 | 75 |
| 1-1/8, 1-3/16 | 2100 | 820 | 105 |
| 1-1/4, 1-3/8, 1-7/16, 1-1/2 | 3200 | 1710 | 161 |
| 1-11/16, 1-3/4 | 4000 | 1905 | 198 |
| 1-15/16, 2 | 4700 | 1920 | 236 |
| 2-3/16 | 5700 | 1900 | 287 |
| 2-7/16, 2-1/2 | 7500 | 2360 | 376 |
| 2-15/16, 3 | 12,000 | 4151 | 597 |

▲ Use only when shaft movement is limited to approx. ±90°. Movement is infrequent as opposed to continuous and maximum bearing temperature is 700°F.

LM800 Radial Load Ratings

| Bearing Size | Max. Radial Base Load | Max. Radial Cap Load |
|--------------|-----------------------|----------------------|
| 3/4 | 560 | 560 |
| 1 | 750 | 600 |
| 1-1/4 | 1610 | 600 |
| 1-1/2 | 1610 | 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 lbs.

| | | | |
|---------------------------------|--|----------------------------|-------------------------------------|
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SELECTION

Sleeve Bearings - SOLIDLUBE - Metric

Plumber Blocks

Sleeve Bearings

SLEEVOIL

Take-Up Frames

Engineering

Part Number Index

Keyword Index

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% 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% 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 .25 to .50 micro-meters. A finish rougher than .50 will lessen bearing life. A finish smoother than R_a . 25 micro-meters will not allow the optimum lubricant film to develop. Shaft tolerance should be +.000/-.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

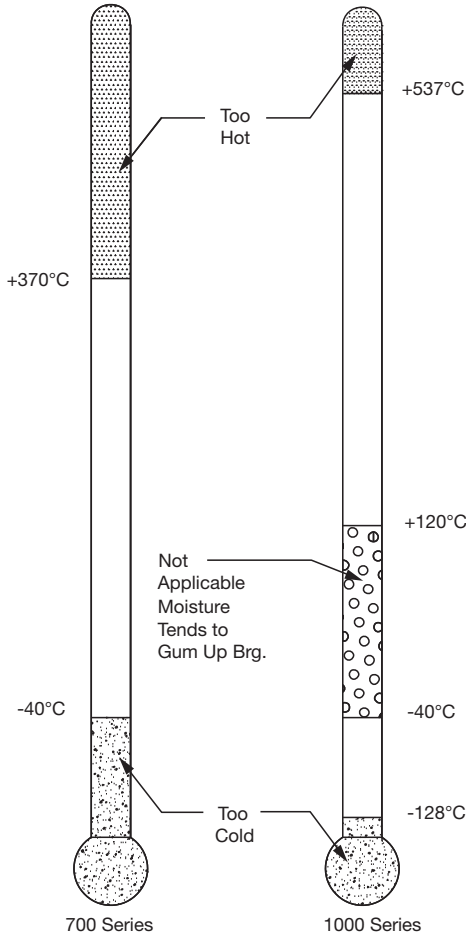
SOLIDLUBE bearings or bearings made from alternate bushing materials such as polymers, fibers, bronze, etc. for unusual operating and load conditions are available on a specially engineered basis by supplying the following:

- Shaft size, material and 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.

End Closures

Ball Bearing End Closures are available (Page B4-102).

Note: SOLIDLUBE bearings are not designed for rotating housing applications



**SOLIDLUBE
Bearing
Operating
Temperature**

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



Sleeve Bearings - SOLIDLUBE - Metric SOLIDLUBE BEARING 700 and 1000 SERIES

SOLIDLUBE Bearing 700 and 1000 Series Radial Load Ratings in Newtons (N) Normal Loads

| Series | Shaft Size | Radial Load Ratings in Newtons at Various Revolutions per Minute | | | | | | | | | | | |
|--------|------------|--|-------|-------|------|------|------|------|------|------|------|------|------|
| | | 10 | 25 | 50 | 75 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 |
| 204 | 20mm | 2490 | 2490 | 2490 | 2490 | 2490 | 1690 | 1270 | 1020 | 840 | 730 | 640 | 560 |
| 205 | 25mm | 3340 | 3340 | 3340 | 3340 | 2710 | 1800 | 1400 | 1090 | 910 | 780 | 690 | 580 |
| 206 | 30mm | 4670 | 4670 | 4670 | 4040 | 3020 | 2000 | 1510 | 1200 | 1000 | 840 | 760 | 670 |
| 207 | 35mm | 7160 | 7160 | 7160 | 5070 | 3800 | 2540 | 1910 | 1510 | 1240 | 1090 | 960 | 840 |
| 209 | 40mm, 45mm | 8800 | 8800 | 7960 | 5290 | 3980 | 2650 | 1960 | 1740 | 1310 | 1130 | 980 | 890 |
| 210 | 50mm | 10500 | 10500 | 8270 | 5520 | 4140 | 2760 | 2070 | 1650 | 1380 | 1180 | 1040 | 910 |
| 212 | 60mm | 16700 | 16700 | 10500 | 7030 | 5250 | 3540 | 2620 | 2110 | 1730 | 1510 | 1310 | 1180 |
| 215 | 70mm, 75mm | 26500 | 26500 | 13900 | 9200 | 6940 | 4630 | 3470 | 2780 | 2290 | 1980 | 1740 | 1540 |

| Series | Shaft Size | Radial Load Ratings in Newtons at Various Revolutions per Minute | | | | | | | | | | | | |
|--------|------------|--|------|------|-----|-----|-----|------|------|------|------|------|------|------|
| | | 500 | 550 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1300 | 1600 | 1900 | 2200 | 2500 |
| 204 | 20mm | 490 | 470 | 430 | 360 | 320 | 200 | 250 | 230 | 200 | 160 | 130 | 120 | 100 |
| 205 | 25mm | 530 | 490 | 470 | 400 | 360 | 310 | 270 | 240 | 210 | 170 | 140 | | .. |
| 206 | 30mm | 600 | 560 | 510 | 430 | 380 | 330 | 300 | 280 | 190 | 190 | | .. | . |
| 207 | 35mm | 760 | 690 | 640 | 530 | 470 | 420 | 380 | 350 | 300 | .. | . | .. | . |
| 209 | 40mm, 45mm | 800 | 730 | 670 | 580 | 490 | 440 | 400 | 360 | ... | .. | . | .. | . |
| 210 | 50mm | 820 | 760 | 690 | 600 | 510 | 470 | ... | ... | ... | .. | . | .. | . |
| 212 | 60mm | 1040 | 960 | 870 | 760 | ... | ... | ... | ... | ... | .. | . | .. | . |
| 215 | 70mm, 75mm | 1530 | 1400 | 1290 | ... | ... | ... | ... | ... | ... | .. | . | .. | . |

NOTE: The above ratings apply to all base loaded pillow blocks, all cylindrical units and 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 Bearings 700 Series and 1000 Series Radial Load Ratings in Newtons (N) (Limited Shaft Movement Applications) ▲

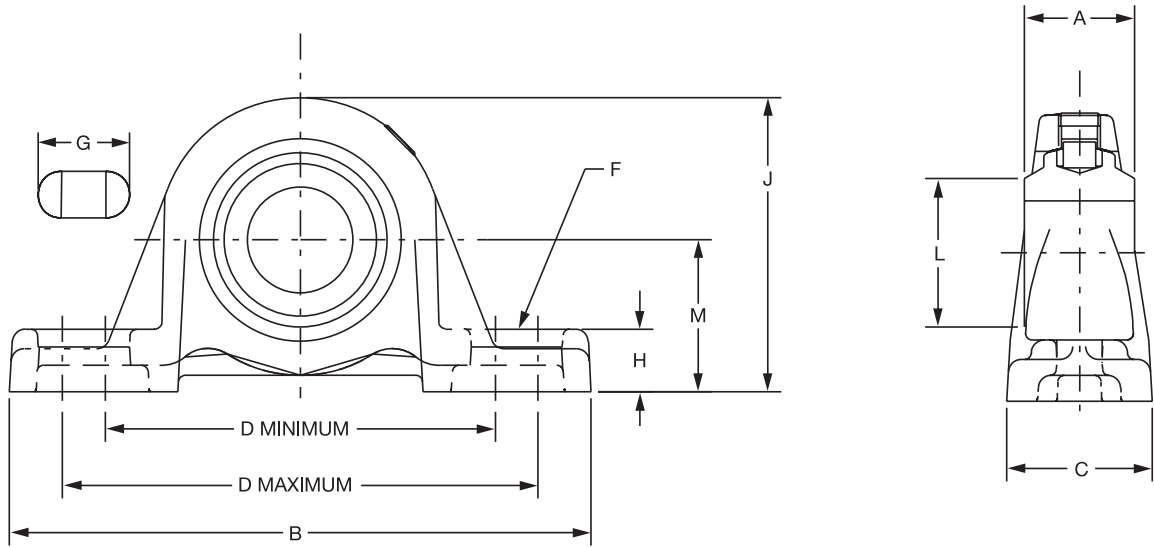
| Series | Shaft Size | Max. Radial Load | | Max. Thrust Load |
|--------|------------|------------------|---------------------|------------------|
| | | Base Loaded | Cap or Side Loading | |
| 204 | 20mm | 4890 | 3450 | 250 |
| 205 | 25mm | 6670 | 3540 | 330 |
| 206 | 30mm | 9340 | 3650 | 470 |
| 207 | 35mm | 14200 | 7600 | 720 |
| 209 | 40mm, 45mm | 17800 | 8470 | 880 |
| 210 | 50mm | 20900 | 8540 | 1050 |
| 212 | 60mm | 33400 | 10500 | 1670 |
| 215 | 70mm, 75mm | 53400 | 18500 | 2660 |

▲ Use only when shaft movement is Limited to approx. ± 90°
Movement is infrequent as opposed to continuous and maximum bearing temperature is 370°C.



SELECTION/DIMENSIONS

Sleeve Bearings - SOLIDLUBE 3/4" THRU 3" SOLIDLUBE LT PILLOW BLOCKS



| Series | Shaft Size | 700 SERIES | | | 1000 SERIES | | | Used on Frame |
|--------|------------|---------------|-------------|-------|---------------|--------------|-------|---------------|
| | | Part Number | Description | Wt. | Part Number | Description | Wt. | |
| 204 | 3/4 | 033667 | P2B-LT7-012 | 1.70 | 033977 | P2B-LT10-012 | 1.70 | LD-10 |
| | 20mm | 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 | LD-10 |
| | 15/16 | 033669 | P2B-LT7-015 | 1.50 | 033979 | P2B-LT10-015 | 1.50 | |
| | 1 | 033670 | P2B-LT7-100 | 1.40 | 033980 | P2B-LT10-100 | 1.40 | LD-10 |
| | 25mm | 034226 | P2B-LT7-25M | 0.64 | 034235 | P2B-LT10-25M | 0.64 | |
| 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 | LD-20 |
| | 30mm | 034227 | P2B-LT7-30M | 1.22 | 034236 | P2B-LT10-30M | 1.22 | |
| 207 | 1-1/4 | 033674 | P2B-LT7-104 | 4.20 | 033984 | P2B-LT10-104 | 4.20 | LD-20 |
| | 1-3/8 | 033676 | P2B-LT7-106 | 3.90 | 033986 | P2B-LT10-106 | 3.90 | |
| | 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 | |
| | 35mm | 034228 | P2B-LT7-35M | 1.77 | 034237 | P2B-LT10-35M | 1.77 | |
| 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 | LD-20 |
| | 40mm | 034229 | P2B-LT7-40M | 2.72 | 034238 | P2B-LT10-40M | 2.72 | |
| | 45mm | 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 | LD-30 |
| | 50mm | 034231 | P2B-LT7-50M | 3.08 | 034240 | P2B-LT10-50M | 3.08 | |
| 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 | |
| | 60mm | 034221 | P2B-LT7-60M | 4.58 | 034241 | P2B-LT10-60M | 4.58 | |
| 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 | |
| | 70mm | 034232 | P2B-LT7-70M | 9.98 | 034242 | P2B-LT10-70M | 9.98 | |
| | 75mm | 034233 | P2B-LT7-75M | 9.62 | 034243 | P2B-LT10-75M | 9.62 | |

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SELECTION/DIMENSIONS

Sleeve Bearings - SOLIDLUBE 3/4" THRU 3" SOLIDLUBE LT PILLOW BLOCKS

| Series | Shaft Size | A | B | C | D | | F Bolt Dia. | G | H | J | L | M | | | | | | | | | | | |
|--------|------------|---------|--------|---------|---------|---------|-------------|--------|-------|---------|---------|--------|------|-------|-------|-------|-------|-------|------|------|-------|-------|-------|
| | | | | | Min. | Max. | | | | | | | | | | | | | | | | | |
| 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 | | | | | | | | | | | |
| | 20mm | 25.4 | 133.4 | 34.1 | 85.7 | 106.4 | 10 | 21.4 | 13.5 | 65.1 | 34.9 | 33.3 | | | | | | | | | | | |
| 205 | 7/8 | 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 | | | | | | | | | | | |
| | 15/16 | | | | | | | | | | | | 27.0 | 139.7 | 35.7 | 93.7 | 114.3 | 10 | 21.4 | 15.1 | 70.6 | 39.7 | 36.5 |
| | 1 | | | | | | | | | | | | 25mm | 30.2 | 158.8 | 44.5 | 108.0 | 127.0 | 12 | 23.8 | 17.5 | 82.6 | 46.0 | 41.3 |
| 206 | 1-1/8 | 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 | | | | | | | | | | | |
| | 1-3/16 | | | | | | | | | | | | 30mm | 33.3 | 165.1 | 44.5 | 119.1 | 138.1 | 12 | 23.8 | 18.3 | 95.3 | 54.0 | 47.6 |
| 207 | 1-1/4 | 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 | | | | | | | | | | | |
| | 1-3/8 | | | | | | | | | | | | 39.7 | 188.9 | 50.8 | 139.7 | 157.2 | 12 | 23.0 | 19.1 | 108.7 | 65.1 | 54.0 |
| 209 | 1-11/16 | 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 | | | | | | | | | | | |
| | 1-3/4 | | | | | | | | | | | | 40mm | 41.3 | 206.4 | 57.1 | 152.4 | 170.0 | 16 | 26.2 | 19.1 | 115.1 | 71.4 | 57.2 |
| 210 | 1-15/16 | 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 | | | | | | | | | | | |
| | 2 | | | | | | | | | | | | 50mm | 46.0 | 241.3 | 60.3 | 174.6 | 201.6 | 16 | 31.0 | 22.2 | 137.3 | 88.9 | 69.9 |
| 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 | 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 | | | | | | | | | | | |
| | 2-1/2 | | | | | | | | | | | | 60mm | 69.1 | 298.5 | 73.0 | 215.9 | 241.3 | 22 | 36.5 | 25.4 | 171.5 | 100.0 | 88.9 |
| 215 | 2-15/16 | 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 | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | 70mm | 69.1 | 298.5 | 73.0 | 215.9 | 241.3 | 22 | 36.5 | 25.4 | 171.5 | 100.0 | 88.9 |
| | 75mm | | | | | | | | | | | | | | | | | | | | | | |

All Dimensions Are In Millimeters Unless Otherwise Specified

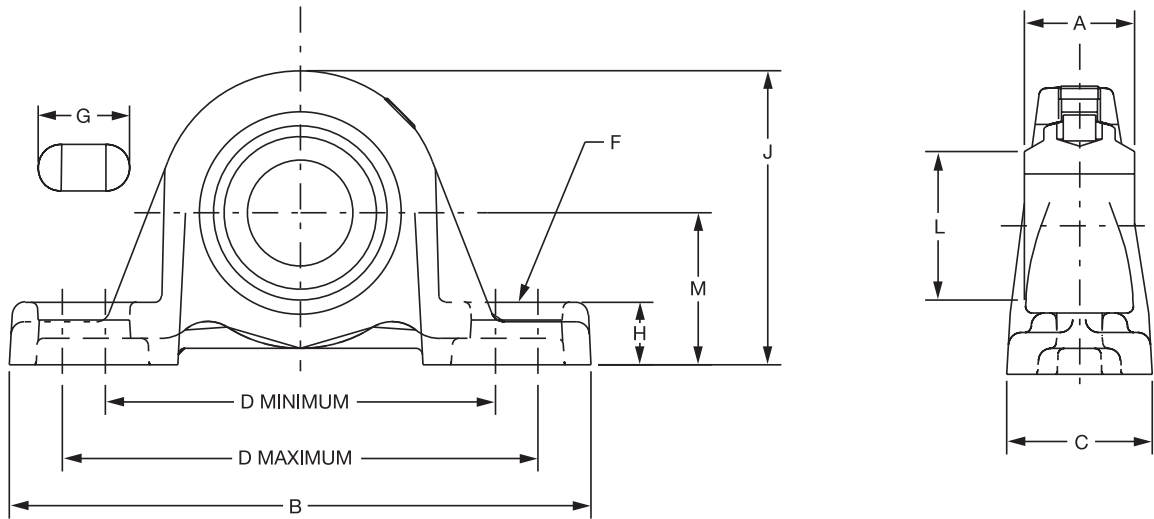
The LT and LTB Pillow Blocks Are Identical Except the LTB Pillow Blocks Have Lower Backing Dimensions

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

SELECTION/DIMENSIONS



Sleeve Bearings - SOLIDLUBE 3/4" THRU 3" SOLIDLUBE LTB PILLOW BLOCKS



| Series | Shaft Size | 700 SERIES | | | 1000 SERIES | | | Used on Frame |
|--------|------------|---------------|--------------|------|---------------|---------------|------|---------------|
| | | Part No. | Description | Wt. | Part No. | Description | Wt. | |
| 204 | 3/4 | 032940 | P2B-LTB7-012 | 1.6 | 032970 | P2B-LTB10-012 | 1.6 | LD-10 |
| | 20mm | 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 | LD-10 |
| | 25mm | 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 | LD-20 |
| | 30mm | 034246 | P2B-LTB7-30M | 1.18 | 034254 | P2B-LTB10-30M | 1.18 | |
| 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 | |
| | 35mm | 034247 | P2B-LTB7-35M | 1.72 | 034255 | P2B-LTB10-35M | 1.72 | |
| 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 | LD-20 |
| | 40mm | 034248 | P2B-LTB7-40M | 2.27 | 034256 | P2B-LTB10-40M | 2.27 | |
| | 45mm | 034249 | P2B-LTB7-45M | 2.18 | 034257 | P2B-LTB10-45M | 2.18 | |
| 210 | 1-15/16 | 032955 | P2B-LTB7-115 | 6 | 032985 | P2B-LTB10-115 | 6 |  | LD-30 |
| | 2 | 032956 | P2B-LTB7-200 | 5.8 | 032986 | P2B-LTB10-200 | 5.8 | LD-30 |
| | 50mm | 034250 | P2B-LTB7-50M | 2.72 | 034258 | P2B-LTB10-50M | 2.72 | |
| 211 | 2-3/16 | 032957 | P2B-LTB7-203 | 6.5 | 032987 | P2B-LTB10-203 | 6.5 | LD-40 |
| | 2-7/16 | 032959 | P2B-LTB7-207 | 8.1 | 032989 | P2B-LTB10-207 | 8.1 | LD-40 |
| 212 | 2-1/2 | 032960 | P2B-LTB7-208 | 7.8 | 032990 | P2B-LTB10-208 | 7.8 |  | LD-40 |
| | 60mm | 034251 | P2B-LTB7-60M | 3.67 | 034259 | P2B-LTB10-60M | 3.67 | |
| 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 | LD-45 |
| | 70mm | | | | | | | |
| | 75mm | | | | | | | |
| | | | | | | | | |

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SELECTION/DIMENSIONS

Sleeve Bearings - SOLIDLUBE 3/4" THRU 3" SOLIDLUBE LTB PILLOW BLOCKS

| Series Size | Shaft | A | B | C | D | | F Bolt Dia. | G | H | J | L | M |
|-------------|---------|---------|--------|---------|---------|---------|-------------|--------|--------|---------|---------|---------|
| | | | | | Min. | Max. | | | | | | |
| 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 |
| | 20mm | 25.4 | 133.4 | 34.1 | 85.7 | 106.4 | 10 | 21.4 | 11.9 | 63.5 | 34.9 | 31.8 |
| 205 | 7/8 | 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 |
| | 15/16 | | | | | | | | | | | |
| 206 | 1 | 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 |
| | 1-3/16 | | | | | | | | | | | |
| 207 | 1-1/8 | 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 |
| | 1-3/8 | | | | | | | | | | | |
| 209 | 1-7/16 | 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 |
| | 1-1/2 | | | | | | | | | | | |
| 210 | 40mm | 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 |
| | 45mm | | | | | | | | | | | |
| 211 | 50mm | 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 | 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 |
| | 2-1/2 | | | | | | | | | | | |
| 215 | 60mm | 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 |
| | 2-15/16 | | | | | | | | | | | |
| | 75mm | | | | | | | | | | | |

All Dimensions Are In Millimeters Unless Otherwise Specified

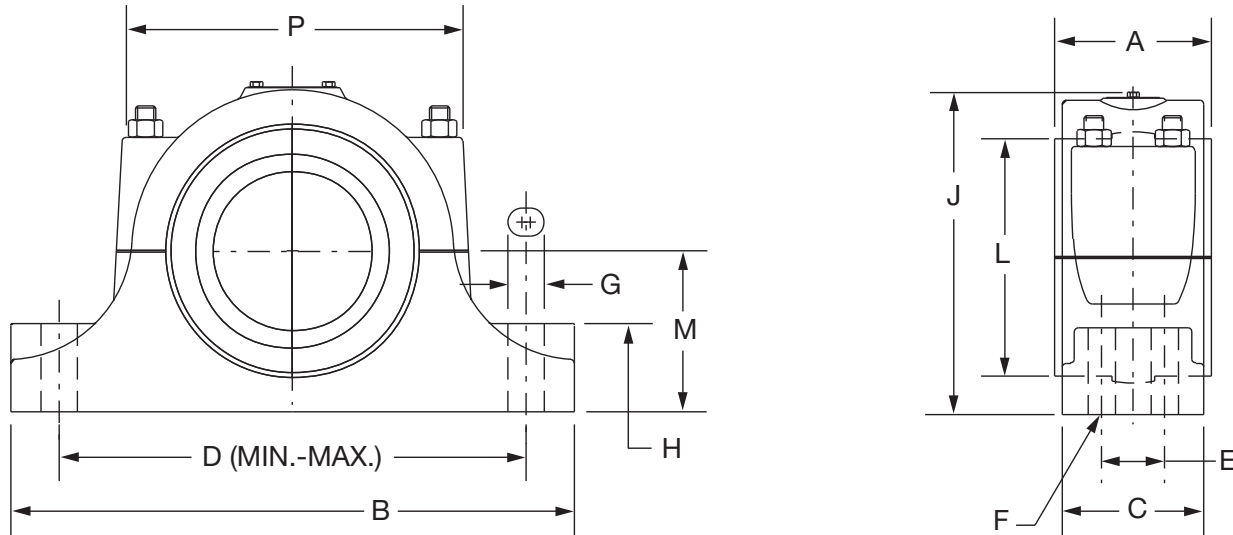
The LT and LTB Pillow Blocks are Identical Except the LTB Pillow Blocks Have Lower backing Dimensions.

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SELECTION/DIMENSIONS

Sleeve Bearings - SOLIDLUBE 3-7/16" THRU 5" SOLIDLUBE MM PILLOW BLOCKS



| Shaft Size | 700 Series | | 1000 Series | | Wt. | Used On Frame | A | B | C |
|------------|---------------|-------------|---------------|--------------|-------|---------------|-------|---------|---------|
| | Part No. | Description | Part No. | 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 | | | | | | | | | | | |

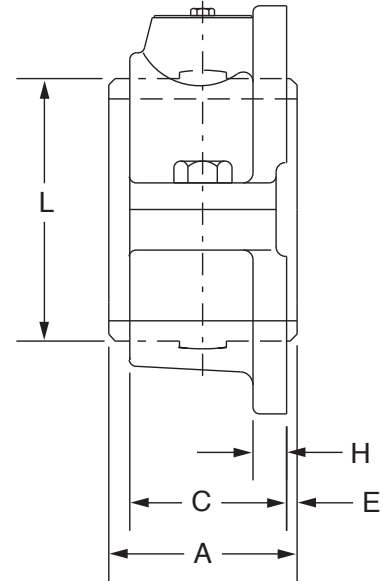
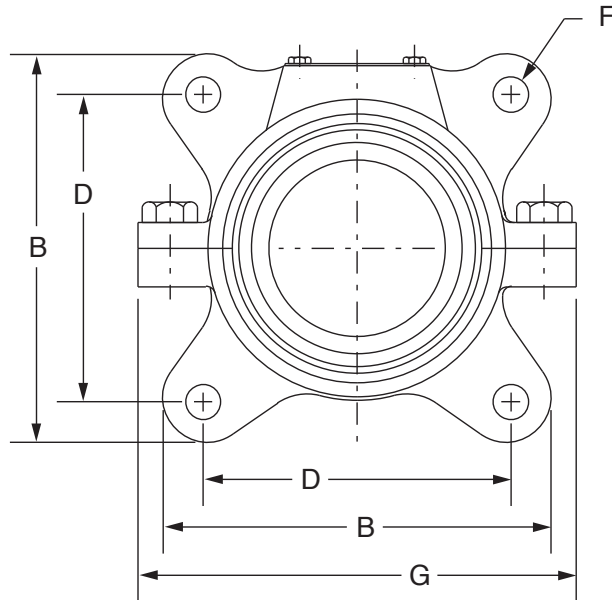
◆ No Published Metric Dimensions For This Product

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SELECTION/DIMENSIONS

Sleeve Bearings - SOLIDLUBE 3-7/16" THRU 5" SOLIDLUBE MM 4-BOLT FLANGE BEARINGS



| Shaft Size | 700 Series | | 1000 Series | | Wt. |
|------------|---------------|-------------|---------------|--------------|-------|
| | Part No. | Description | Part No. | 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 | | | | | | | | | |

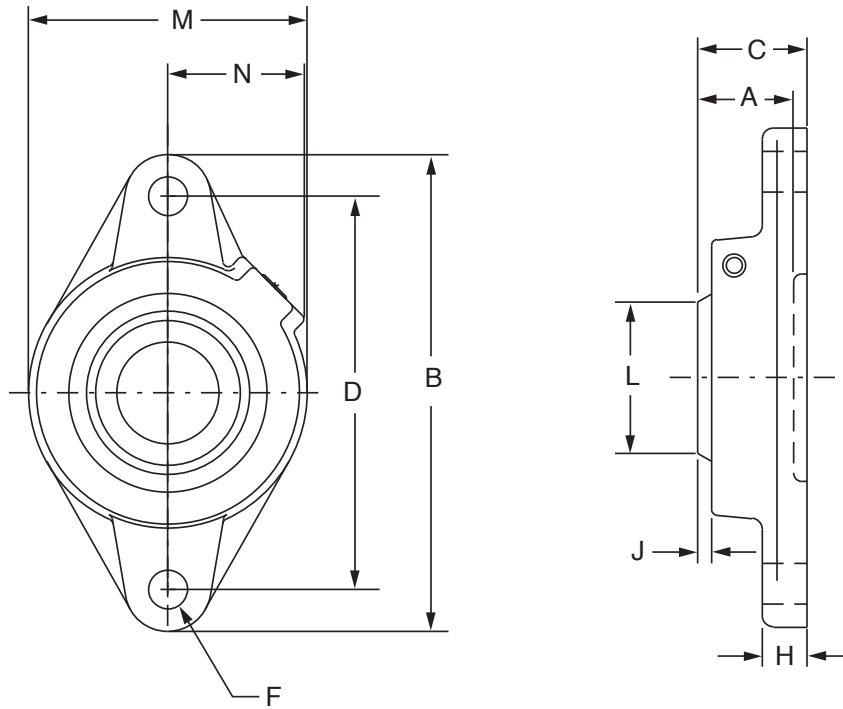
◆ No Published Metric Dimensions For This Product

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SELECTION/DIMENSIONS



Sleeve Bearings - SOLIDLUBE 3/4" THRU 2" SOLIDLUBE LT 2-BOLT FLANGE BEARING



| Series | Shaft Size | 700 Series | | | 1000 Series | | |
|--------|------------|---------------|-------------|------|---------------|--------------|------|
| | | Part No. | Description | Wt. | Part No. | Description | Wt. |
| 204 | 3/4 | 033085 | F2B-LT7-012 | 1.2 | 033185 | F2B-LT10-012 | 1.2 |
| | 20mm | 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 |
| | 25mm | 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 |
| | 30mm | 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-LT10-108 | 3.1 |
| | 35mm | 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 |
| | 40mm | 034218 | F2B-LT7-40M | 2.22 | 034270 | F2B-LT10-40M | 2.22 |
| | 45mm | 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 |
| | 50mm | 034265 | F2B-LT7-50M | 2.36 | 034272 | F2B-LT10-50M | 2.36 |

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SELECTION/DIMENSIONS

Sleeve Bearings - SOLIDLUBE 3/4" THRU 2" SOLIDLUBE LT 2-BOLT FLANGE BEARING

| 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 |
| | 20mm | 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 | | | | | | | | | | |
| 206 | 1 | 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 |
| | 1-1/8 | | | | | | | | | | |
| 207 | 1-3/16 | 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 |
| | 30mm | | | | | | | | | | |
| 209 | 1-1/4 | 1-21/64 | 7-1/16 | 1-19/32 | 5-27/32 | 1/2 | 5/8 | 3/16 | 2-9/16 | 4-3/8 | 1-29/32 |
| | 1-3/8 | | | | | | | | | | |
| 210 | 1-7/16 | 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 |
| | 1-1/2 | | | | | | | | | | |
| | 35mm | | | | | | | | | | |

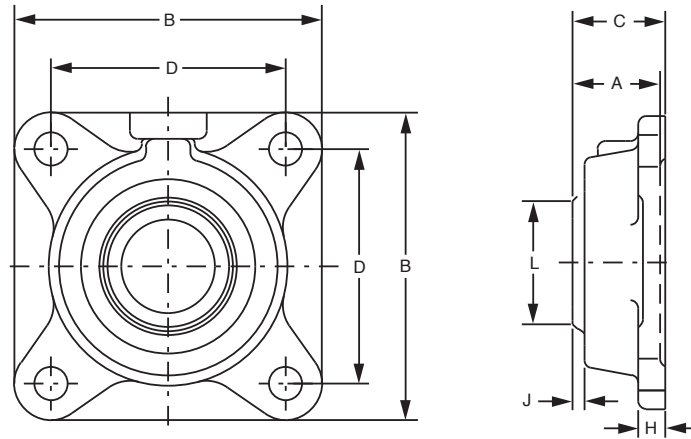
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SELECTION/DIMENSIONS

DODGE®



Sleeve Bearings - SOLIDLUBE 3/4" THRU 3" SOLIDLUBE LT 4-BOLT FLANGE BEARING



| Series | Shaft Size | 700 Series | | | 1000 Series | | |
|--------|------------|---------------|-------------|------|---------------|--------------|------|
| | | Part No. | Description | Wt. | Part No. | Description | Wt. |
| 204 | 3/4 | 033260 | F4B-LT7-012 | 1.5 | 033200 | F4B-LT10-012 | 1.5 |
| | 20mm | 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 | 033203 | F4B-LT10-100 | 2 |
| | 25mm | 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 |
| | 30mm | 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 | 033207 | F4B-LT10-106 | 4 |
| | 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 |
| | 35mm | 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 |
| | 40mm | 034277 | F4B-LT7-40M | 2.63 | 034287 | F4B-LT10-40M | 2.63 |
| | 45mm | 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 |
| | 50mm | 034279 | F4B-LT7-50M | 3 | 034289 | F4B-LT10-50M | 3 |
| 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 | 033215 | F4B-LT10-207 | 11 |
| | 2-1/2 | 033276 | F4B-LT7-208 | 10.8 | 033216 | F4B-LT10-208 | 10.8 |
| | 60mm | 034280 | F4B-LT7-60M | 5 | 034290 | F4B-LT10-60M | 5 |
| 215 | 2-15/16 | 033277 | F4B-LT7-215 | 18 | 033217 | F4B-LT10-215 | 18 |
| | 3 | 033278 | F4B-LT7-300 | 17.7 | 033218 | F4B-LT10-300 | 17.7 |
| | 70mm | 034281 | F4B-LT7-70M | 8.16 | 034291 | F4B-LT10-70M | 8.16 |
| | 75mm | 034282 | F4B-LT7-75M | 8.03 | 034292 | F4B-LT10-75M | 8.03 |

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SELECTION/DIMENSIONS

Sleeve Bearings - SOLIDLUBE 3/4" THRU 3" SOLIDLUBE LT 4-BOLT FLANGE BEARING

| Series | Shaft Size | A | B | C | D | F Bolt | 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 |
| | 20mm | 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 | 25.4 | 95.2 | 28.6 | 69.9 | 10.0 | 12.7 | 4.8 | 39.7 |
| 206 | 25mm | 31/32 | 4-1/4 | 1-7/32 | 3-1/4 | 7/16 | 1/2 | 5/32 | 1-13/16 |
| | 1-1/8 | | | | | | | | |
| | 1-3/16 | 28.2 | 108.0 | 31.0 | 82.6 | 10.0 | 12.7 | 4.0 | 46.0 |
| 207 | 30mm | 1-7/32 | 4-3/4 | 1-3/8 | 3-5/8 | 1/2 | 9/16 | 5/32 | 2-1/8 |
| | 1-1/4 | | | | | | | | |
| | 1-3/8 | 31.0 | 120.7 | 34.9 | 92.1 | 12.0 | 14.3 | 4.0 | 54.0 |
| | 1-7/16 | | | | | | | | |
| 1-1/2 | | | | | | | | | |
| 35mm | 1-11/32 | 5-3/8 | 1-19/32 | 4-1/8 | 1/2 | 5/8 | 13/64 | 2-9/16 | |
| 209 | 1-3/4 | 33.7 | 136.5 | 40.5 | 104.8 | 12.0 | 15.9 | 4.8 | 65.1 |
| | 40mm | | | | | | | | |
| | 45mm | | | | | | | | |
| 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 | | | | | | | | |
| 211 | 50mm | 35.7 | 142.9 | 42.1 | 111.1 | 12.0 | 15.9 | 4.8 | 71.4 |
| | 2-3/16 | | | | | | | | |
| 212 | 2-1/2 | 1-17/32 | 6-1/2 | 1-25/32 | 5-1/8 | 5/8 | 11/16 | 7/32 | 3-1/8 |
| | 2-7/16 | | | | | | | | |
| | 60mm | 1-15/32 | 7 | 1-31/32 | 5-5/8 | 5/8 | 11/16 | 11/64 | 3-1/2 |
| 215 | 75mm | 41.3 | 177.8 | 47.6 | 142.9 | 16.0 | 17.5 | 4.0 | 88.9 |
| | 2-15/16 | | | | | | | | |
| | 3 | 2-23/32 | 7-3/4 | 2-3/4 | 6 | 3/4 | 1 | 17/32 | 3-15/16 |
| | 70mm | 61.1 | 196.9 | 70.6 | 152.4 | 18.0 | 25.4 | 13.5 | 100.0 |
| | 75mm | | | | | | | | |

All Dimensions Are in Millimeters Unless Otherwise Specified.

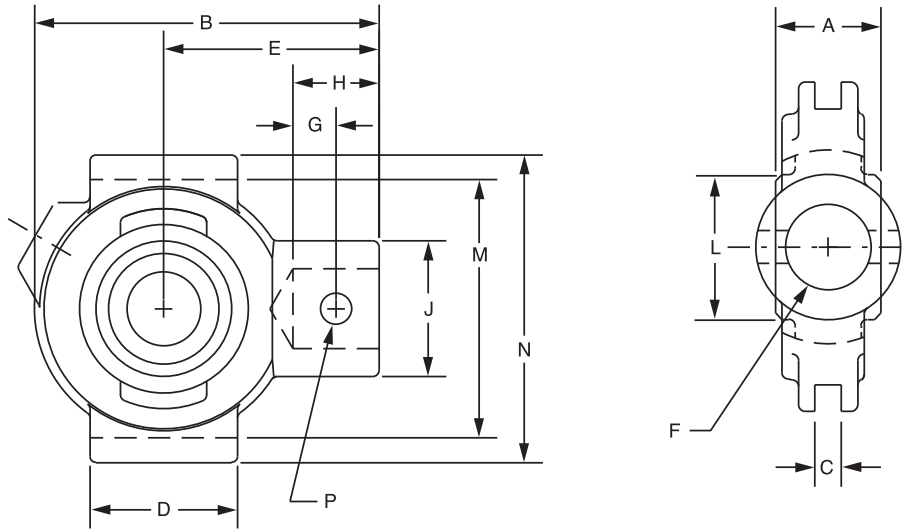
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|---------------------------------|--|----------------------------|-------------------------|
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SELECTION/DIMENSIONS

Sleeve Bearings - SOLIDLUBE

3/4" THRU 2-1/2" SOLIDLUBE LT NARROW SLOT TAKE-UP BEARINGS



| Series | Shaft Size | LT700 | | | LT1000 | | | Used On Frame |
|--------|---------------|---------------|--------------|---------------|---------------|---------------|------|---------------|
| | | Part No. | Description | Wt. | Part No. | Description | Wt. | |
| 204 | 3/4 | 033810 | NSTU-LT7-012 | 1.7 | 033840 | NSTU-LT10-012 | 1.7 | NS-210 |
| | 20mm | 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 | NS-210 |
| | 25mm | 034294 | NSTU-LT7-25M | 0.77 | 034304 | NSTU-LT10-25M | 0.77 | |
| 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 | |
| | 30mm | 034295 | NSTU-LT7-30M | 1.22 | 034305 | NSTU-LT10-30M | 1.22 | |
| 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 | |
| 209 | 35mm | 034296 | NSTU-LT7-35M | 1.36 | 034306 | NSTU-LT10-35M | 1.36 | NS-308 |
| | 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 | |
| 40mm | 034297 | NSTU-LT7-40M | 2.22 | 034307 | NSTU-LT10-40M | 2.22 | | |
| 210 | 45mm | 034298 | NSTU-LT7-45M | 2.18 | 034308 | NSTU-LT10-45M | 2.18 | NS-400 |
| | 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 | |
| 50mm | 034299 | NSTU-LT7-50M | 2.4 | 034309 | NSTU-LT10-50M | 2.4 | | |
| 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 | |
| | 60mm | 034300 | NSTU-LT7-60M | 3.18 | 034310 | NSTU-LT10-60M | 3.18 | |

| | | | |
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SELECTION/DIMENSIONS

Sleeve Bearings - SOLIDLUBE 3/4" THRU 2-1/2" SOLIDLUBE LT NARROW SLOT TAKE-UP BEARINGS

Plummer Blocks

Sleeve Bearings

SLEEVOIL

Take-Up Frames

Engineering

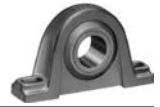
Part Number Index

Keyword Index

| 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 |
| | 20mm | 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 |
| | 25mm | 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 | | | | | | 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 | | | | | | 3/4 | 11.1 |
| 209 | 35mm | 33.3 | 114.3 | 6.4 | 63.5 | 68.3 | 3/4 | 11.1 |
| | 1-11/16, 1-3/4 | 1-9/16 | 5-7/16 | 5/16 | 3 | 3-1/4 | 7/8 | 1/2 |
| 210 | 40mm | 39.7 | 138.1 | 7.9 | 76.2 | 82.6 | 7/8 | 12.7 |
| | 45mm | | | | | | 7/8 | 12.7 |
| 211 | 1-15/16, 2 | 1-5/8 | 5-1/2 | 5/16 | 3 | 3-1/4 | 7/8 | 1/2 |
| | 50mm | 41.3 | 139.7 | 7.9 | 76.2 | 82.6 | 7/8 | 12.7 |
| 212 | 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 |
| | 60mm | 46 | 169.9 | 7.9 | 95.3 | 95.3 | 1 | 15.1 |

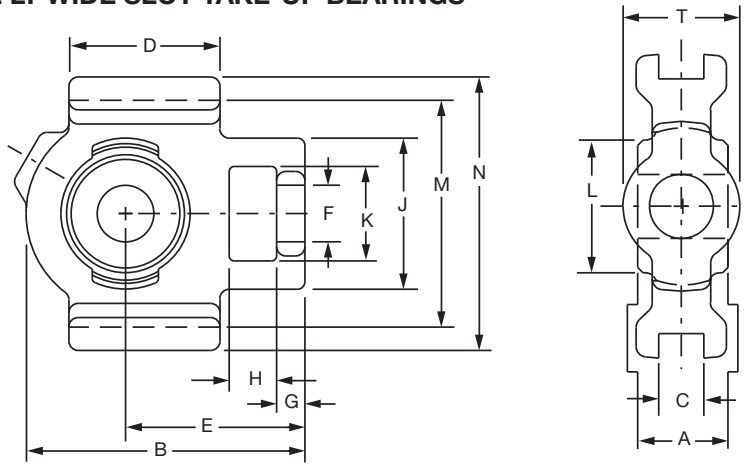
| Series | Shaft Size | H | J | L | M | N | P Pin Dia. |
|--------|----------------|--------|-------|---------|---------|-------|------------|
| 204 | 3/4 | 7/8 | 1-3/8 | 1-3/8 | 2-5/8 | 3-1/8 | 5/16 |
| | 20mm | 22.2 | 34.9 | 34.9 | 66.7 | 79.4 | 5/16 |
| 205 | 7/8, 15/16, 1 | 7/8 | 1-3/8 | 1-9/16 | 2-5/8 | 3-1/8 | 5/16 |
| | 25mm | 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 | | | | | | 5/16 |
| 207 | 30mm | 23.8 | 34.9 | 46.0 | 88.9 | 104.8 | 5/16 |
| | 1-1/4, 1-3/8, | 15/16 | 1-3/8 | 2-1/8 | 3-1/2 | 4-1/8 | 5/16 |
| 209 | 1-7/16, 1-1/2 | | | | | | 5/16 |
| | 35mm | 23.8 | 34.9 | 54.0 | 88.9 | 104.8 | 5/16 |
| 210 | 1-11/16, 1-3/4 | 1-7/32 | 1-5/8 | 2-9/16 | 4 | 4-3/4 | 3/8 |
| | 40mm | 31.0 | 41.3 | 65.1 | 101.6 | 120.7 | 3/8 |
| 211 | 45mm | | | | | | 3/8 |
| | 1-15/16, 2 | 1-3/32 | 1-5/8 | 2-13/16 | 4 | 4-3/4 | 3/8 |
| 212 | 50mm | 27.8 | 41.3 | 71.4 | 101.6 | 120.7 | 3/8 |
| | 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 |
| | 60mm | 32.5 | 41.3 | 88.9 | 125.4 | 146.1 | 7/16 |

| | | | |
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SELECTION/DIMENSIONS

Sleeve Bearings - SOLIDLUBE 3/4" THRU 3" SOLIDLUBE LT WIDE SLOT TAKE-UP BEARINGS



| Series | Shaft Size | LT700 | | | LT1000 | | | Used on Frame |
|--------|------------|---------------|--------------|------|---------------|---------------|------|---------------|
| | | Part No. | Description | Wt. | Part No. | Description | Wt. | |
| 204 | 3/4 | 033870 | WSTU-LT7-012 | 2.4 | 033910 | WSTU-LT10-012 | 2.4 | WS-300 |
| | 20mm | 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 | WS-300 |
| | 25mm | 034314 | WSTU-LT7-25M | 1.09 | 034324 | WSTU-LT10-25M | 1.09 | |
| 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 | |
| | 30mm | 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 | |
| | 35mm | 034316 | WSTU-LT7-35M | 1.77 | 034326 | WSTU-LT10-35M | 1.77 | |
| 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 | |
| | 40mm | 034317 | WSTU-LT7-40M | 2.77 | 034327 | WSTU-LT10-40M | 2.77 | WS-400 |
| | 45mm | 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 | |
| | 50mm | 034319 | WSTU-LT7-50M | 2.95 | 034329 | WSTU-LT10-50M | 2.95 | |
| 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 | |
| | 60mm | 034320 | WSTU-LT7-60M | 4.58 | 034330 | WSTU-LT10-60M | 4.58 | |
| 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 | |
| | 70mm | 034321 | WSTU-LT7-70M | 5.9 | 034331 | WSTU-LT10-70M | 5.9 | WS-515 |
| | 75mm | 034322 | WSTU-LT7-75M | 5.67 | 034332 | WSTU-LT10-75M | 5.67 | |

| | | | |
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SELECTION/DIMENSIONS

Sleeve Bearings - SOLIDLUBE 3/4" THRU 3 SOLIDLUBE LT WIDE SLOT TAKE-UP BEARINGS

| 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 |
| | 20mm | 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 |
| | 25mm | 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 |
| | 30mm | 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 | | | | | | | |
| 209 | 35mm | 33.3 | 123.8 | 13.5 | 63.5 | 77.8 | 7/8 | 23.7 |
| | 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 |
| 210 | 40mm, 45mm | 39.7 | 142.9 | 17.5 | 82.6 | 87.3 | 1-1/8 | 15.9 |
| | 1-15/16, 2 | 1-5/8 | 5-13/16 | 11/16 | 3-3/8 | 3-9/16 | 1-1/8 | 5/8 |
| 211 | 50mm | 41.3 | 147.6 | 17.5 | 85.7 | 90.5 | 1-1/8 | 15.9 |
| | 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 |
| | 60mm | 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 |
| | 70mm, 75mm | 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 |
| | 20mm | 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 |
| | 25mm | 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 |
| | 30mm | 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 | | | | | | | |
| 209 | 35mm | 15.9 | 63.5 | 36.5 | 54.0 | 88.9 | 104.8 | 41.3 |
| | 1-11/16, 1-3/4 | 3/4 | 3-1/4 | 1-15/16 | 2-9/16 | 4 | 4-3/4 | 1-15/16 |
| 210 | 40mm, 45mm | 19.1 | 82.6 | 49.2 | 65.1 | 101.6 | 120.7 | 49.2 |
| | 1-15/16, 2 | 3/4 | 3-1/4 | 1-15/16 | 2-13/16 | 4 | 4-3/4 | 1-15/16 |
| 211 | 50mm | 19.1 | 82.6 | 49.2 | 71.4 | 101.6 | 120.7 | 49.2 |
| | 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 |
| | 60mm | 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 |
| | 70mm, 75mm | 31.8 | 111.1 | 69.9 | 100.0 | 150.8 | 169.9 | 69.9 |

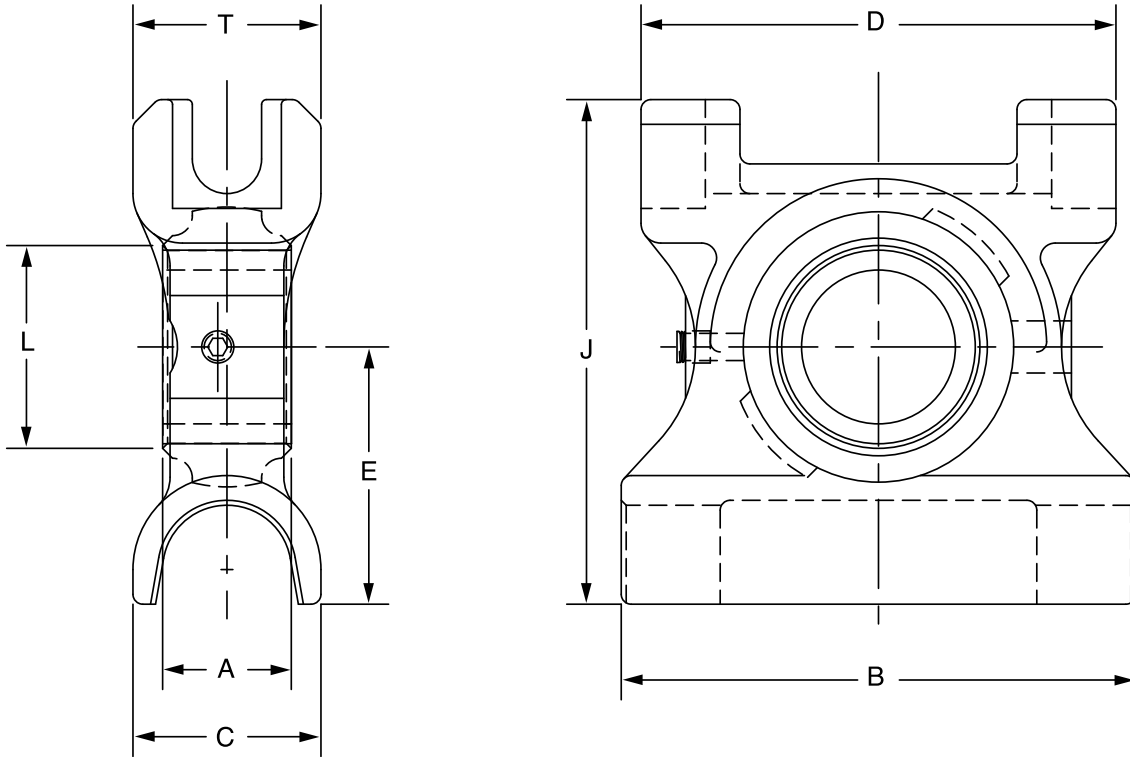
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SELECTION/DIMENSIONS



Sleeve Bearings - SOLIDLUBE

1-15/16" THRU 3" TYPE GLT SOLIDLUBE TAKE-UP BEARINGS



| Shaft Size | 700 Series | | 1000 Series | | Wt. | Frame Size |
|------------|---------------|-------------|---------------|--------------|------|------------|
| | Part No. | Description | Part No. | 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 | | |

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SELECTION/DIMENSIONS

Sleeve Bearings - SOLIDLUBE 1-15/16" THRU 3" TYPE GLT SOLIDLUBE TAKE-UP BEARINGS

Plummer Blocks

Sleeve Bearings

SLEEVOIL

Take-Up Frames

Engineering

Part Number Index

Keyword Index

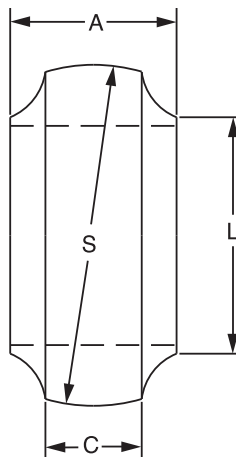
| Shaft Size | A | B | C | D | E | J | L | T |
|-----------------|---------|-------|-------|-------|-------|--------|---------|-------|
| 1-15/16 2 | 1-5/8 | 6-1/2 | 2-3/8 | 6 | 3-1/4 | 6-3/8 | 2-13/16 | 2-3/8 |
| 2-3/16 | 1-3/4 | 7 | 2-1/2 | 6-3/4 | 3-3/8 | 6-7/8 | 3-1/8 | 2-3/8 |
| 2-7/16 2-1/2 | 1-13/16 | 7-1/2 | 2-3/4 | 7 | 3-1/2 | 7-7/16 | 3-1/2 | 2-3/4 |
| 2-15/16 3 | 2-23/32 | 8-1/2 | 2-1/2 | 8 | 4 | 8-5/16 | 3-15/16 | 2-3/4 |

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SELECTION/DIMENSIONS



Sleeve Bearings - SOLIDLUBE 3/4" THRU 3" SOLIDLUBE LT INSERTS



| Series | Shaft Size | 700 Series | | | 1000 Series | | |
|--------|------------|---------------|--------------------------|------|---------------|---------------------------|------|
| | | Part No. | LT700 Series Description | Wt. | Part No. | LT1000 Series Description | Wt. |
| 204 | 3/4 | 033585 | INS-LT7-012 | 0.30 | 033610 | INS-LT10-012 | 0.30 |
| | 20mm | 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 |
| | 25mm | 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 |
| | 30mm | 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 |
| | 35mm | 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 |
| | 40mm | 034462 | INS-LT7-40M | 0.73 | 034463 | INS-LT10-40M | 0.73 |
| 210 | 45mm | 034464 | INS-LT7-45M | 0.64 | 034465 | INS-LT10-45M | 0.64 |
| | 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 |
| 211 | 50mm | 034466 | INS-LT7-50M | 0.73 | 034467 | INS-LT10-50M | 0.73 |
| | 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 |
| | 60mm | 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 |
| | 70mm | 034470 | INS-LT7-70M | | 034471 | INS-LT10-70M | |
| | 75mm | 034472 | INS-LT7-75M | 2.50 | 034473 | INS-LT10-75M | 2.50 |

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SELECTION/DIMENSIONS

Sleeve Bearings - SOLIDLUBE 3/4" THRU 3" SOLIDLUBE LT INSERTS

Plummer Blocks

Sleeve Bearings

SLEEVOIL

Take-Up Frames

Engineering

Part Number Index

Keyword Index

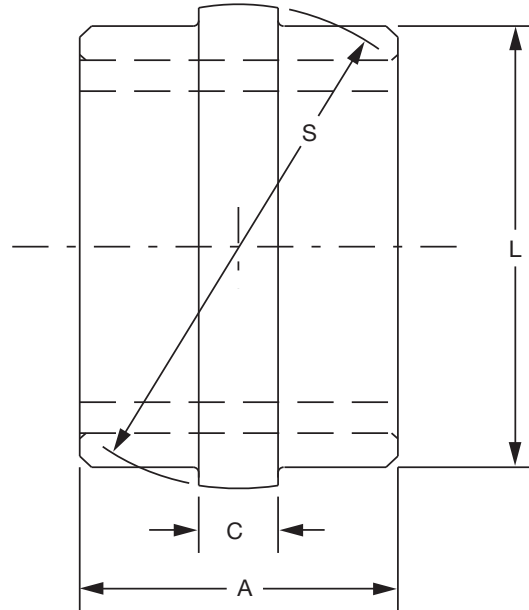
| Series | Shaft Size | A | C | L | S |
|--------|---------------|---------|--------|---------|-------------------|
| 204 | 3/4 | 1 | 5/8 | 1-3/8 | 1.8445/1.8425 |
| | 20mm | 25.4 | 15.9 | 34.9 | 46.850 / 46.800 |
| 205 | 7/8 | 1-1/16 | 5/8 | 1-9/16 | 2.0415/2.0395 |
| | 15/16 | | | | |
| | 1 25mm | 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 | | | | |
| | 30mm | 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 | 33.3 | 20.6 | 54.0 | 71.857 / 71.806 |
| | 1-1/2 35mm | | | | |
| 209 | 1-11/16 | 1-9/16 | 13/16 | 2-9/16 | 3.3415/3.3395 |
| | 1-3/4 | | | | |
| | 40mm 45mm | 39.7 | 20.6 | 65.1 | 84.874 / 84.823 |
| 210 | 1-15/16 | 1-5/8 | 7/8 | 2-13/16 | 3.5375/3.5355 |
| | 2 50mm |  |  |  |  | 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 | | | | |
| | 60mm | 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 | | | | |
| | 70mm 75mm | 69.1 | 30.2 | 100.0 | 129.883 / 129.832 |

| | | | |
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SELECTION/DIMENSIONS

Sleeve Bearings - SOLIDLUBE 3-7/16" THRU 5" SOLIDLUBE MM BEARING INSERTS



| Shaft Size | 700 Series | | 1000 Series | | Wt. |
|------------|---------------|-------------|---------------|--------------|------|
| | Part No. | Description | Part No. | Description | |
| 3-7/16 | 034438 | INS-MM7-307 | 034439 | INS-MM10-307 | 6.4 |
| 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 | 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 | 034448 | INS-MM7-408 | 034449 | INS-MM10-408 | 19.7 |
| 4-15/16 | 034450 | INS-MM7-415 | 034451 | INS-MM10-415 | 27.0 |
| 5 | 034452 | INS-MM7-500 | 034453 | INS-MM10-500 | 26.5 |

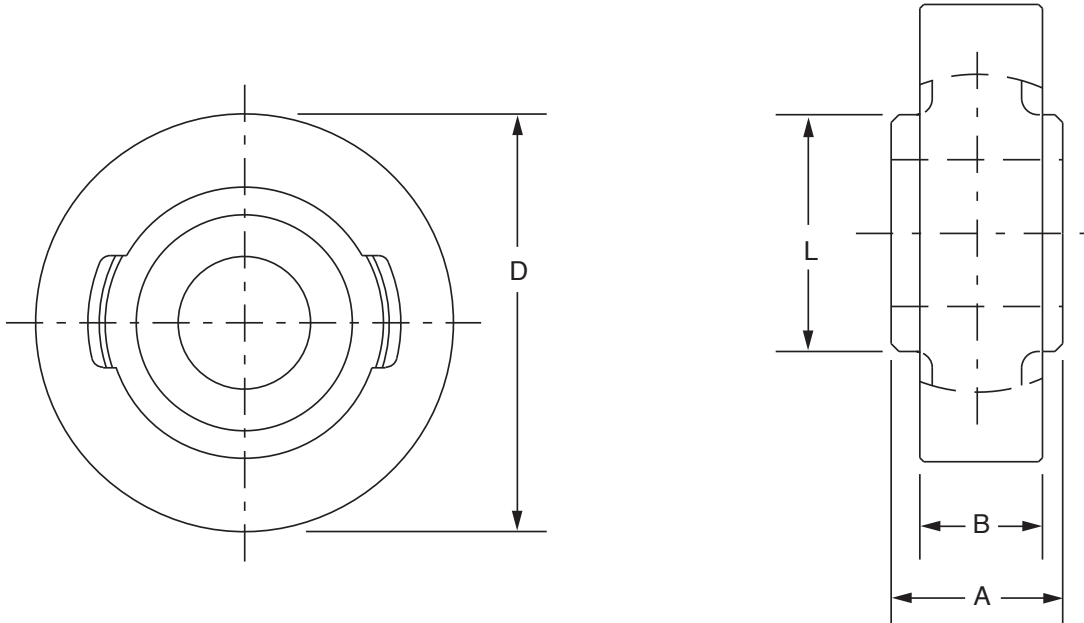
| Shaft Size | Wt. | A | C | L Dia. | S Spherical Dia. |
|------------|------|-------|-------|---------|------------------|
| 3-7/16 | 6.4 | 3-1/2 | 7/8 | 4-7/8 | 5.182/5.180 |
| 3-1/2 | 6.2 | | | | |
| 3-15/16 | 10.0 | 4 | 1-1/8 | 5-5/8 | 6.057/6.055 |
| 4 | 9.8 | | | | |
| 4-7/16 | 20.0 | 4-1/2 | 1-1/4 | 6-15/16 | 7.370/7.367 |
| 4-1/2 | 19.7 | | | | |
| 4-15/16 | 27.0 | 5 | 1-3/8 | 7-9/16 | 7.995/7.992 |
| 5 | 26.5 | | | | |

◆ No Published Metric Dimensions For This Product



SELECTION/DIMENSIONS

Sleeve Bearings - SOLIDLUBE 7/8" THRU 1-1/2" SOLIDLUBE LT CYLINDRICAL UNITS



| Shaft Size | LT700 | | | LT1000 | | |
|------------|---------------|-------------|------|---------------|--------------|-----|
| | Part Number | Description | Wt. | Part Number | Description | Wt. |
| 7/8 | 033961 | CYL-LT7-014 | 1.5 | 422596 | CYL-LT10-014 | 1.5 |
| 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 | 033964 | CYL-LT7-103 | | 422599 | CYL-LT10-103 | |
| 1-1/4 | 033965 | CYL-LT7-104 | 3.0 | 422600 | CYL-LT10-104 | 3.0 |
| 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 | |

| Shaft Size | A | B | D Dia. +.000 -.002 | L |
|------------|---------|--------|--------------------------|---------|
| 7/8 | 1-1/16 | 27/32 | 3-1/8 | 1- 9/16 |
| 15/16 | | | | |
| 1 | | | | |
| 1-1/8 | 1-3/16 | 15/16 | 3-1/2 | 1-13/16 |
| 1-3/16 | | | | |
| 1-1/4 | 1- 5/16 | 1-1/16 | 3-7/8 | 2-1/8 |
| 1-3/8 | | | | |
| 1-7/16 | | | | |
| 1-1/2 | | | | |

◆ No Published Metric Dimensions For This Product

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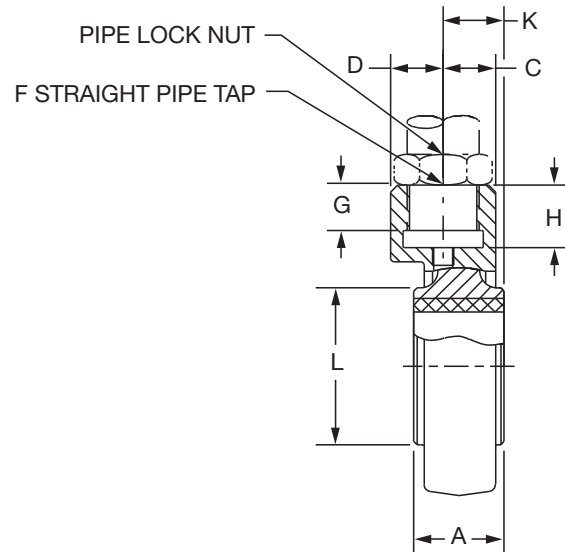
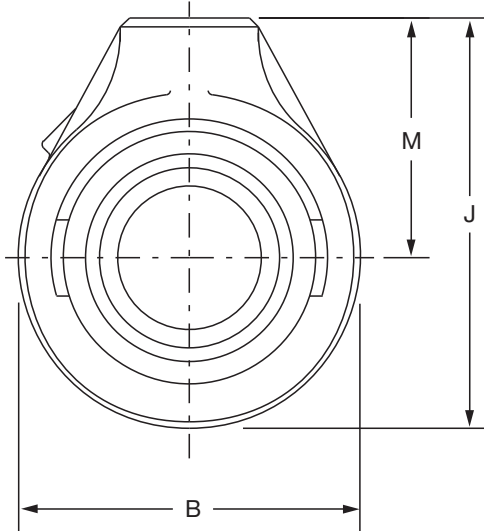


SELECTION/DIMENSIONS

Sleeve Bearings - SOLIDLUBE

1-15/16" THRU 2-1/2"

SOLIDLUBE LT SCREW CONVEYOR HANGER BEARING



| Series | Shaft Size | LT700 Series | | | LT1000 Series | | |
|--------|------------|---------------|--------------|-----|---------------|---------------|-----|
| | | Part No. | Description | Wt. | Part No. | Description | Wt. |
| 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 | | | | | | | | | | | |

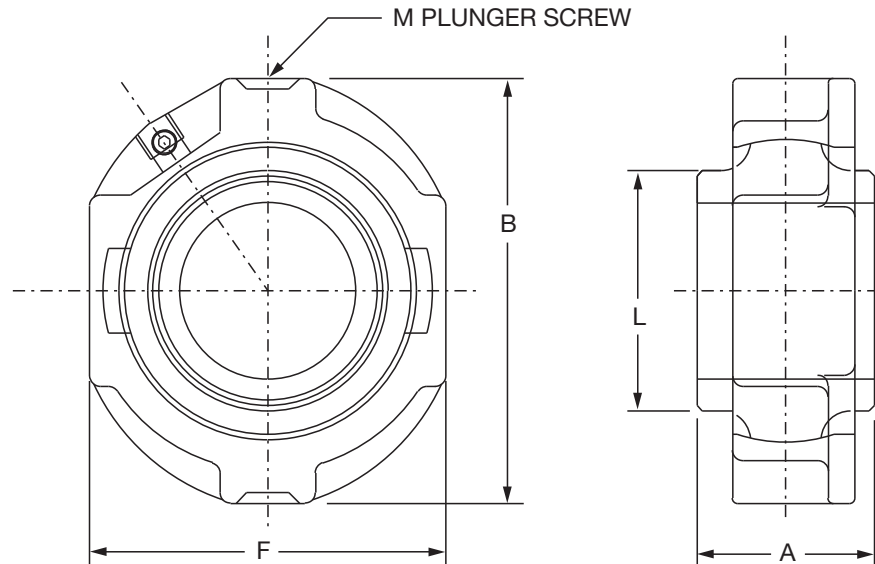
◆ No Published Metric Dimensions For This Product

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SELECTION/DIMENSIONS

Sleeve Bearings - SOLIDLUBE 1-1/8" THRU 2" SOLIDLUBE LT HANGER BEARINGS



| Shaft Size | LT700 | | LT1000 | | Wt. |
|------------|---------------|-------------|---------------|--------------|-----|
| | Part No. | Description | Part No. | Description | |
| 1-1/8 | 033890 | HNG-LT7-102 | 033900 | HNG-LT10-102 | 1.9 |
| 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 |
| 1-3/8 | 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 |
| 2 | 033897 | HNG-LT7-200 | 033907 | HNG-LT10-200 | 4.8 |

| Shaft Size | A | B | F | L | M |
|------------|--------|-------|--------|---------|-----|
| 1-1/8 | 1-3/16 | 3-5/8 | 3 | 1-13/16 | 1/2 |
| 1-3/16 | | | | | |
| 1-1/4 | 1-5/16 | 4-1/4 | 3-1/2 | 2-1/8 | 1/2 |
| 1-3/8 | | | | | |
| 1-7/16 | | | | | |
| 1-1/2 | | | | | |
| 1-15/16 | 1-5/8 | 5 | 4-3/16 | 2-13/16 | 5/8 |
| 2 | | | | | |

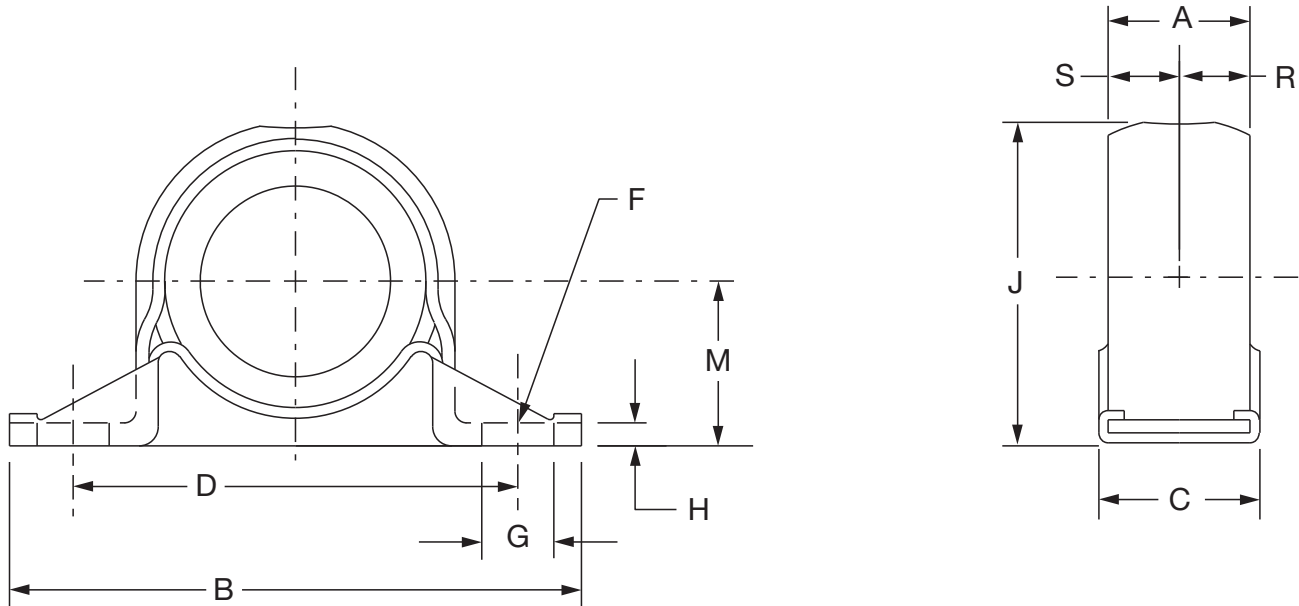
◆ No Published Metric Dimensions For This Product

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SELECTION/DIMENSIONS

Sleeve Bearings - SOLIDLUBE 3/4" THRU 1-1/2" SOLIDLUBE LM800 PILLOW BLOCKS



| Shaft Size | Part No. | Description | Wt. | A | B | C | D |
|------------|---------------|-------------|-----|-------|-------|---------|-------|
| 3/4 | 033692 | P2B-LM8-012 | .70 | | | | |
| 1 | 033693 | P2B-LM8-100 | .22 | 1 | 4 | 1-7/32 | 3 |
| 1-1/4 | 033694 | P2B-LM8-104 | .70 | 1-1/8 | 4-1/2 | 1-11/32 | 3-1/2 |
| 1-1/2 | 033695 | P2B-LM8-108 | .50 | | | | |

| Shaft Size | F Bolt Dia. | G | H | J | M | R | S |
|------------|-------------|------|------|--------|--------|------|------|
| 3/4 | | | | | | | |
| 1 | 3/8 | 9/16 | 5/32 | 2-1/16 | 1-1/16 | 1/2 | 1/2 |
| 1-1/4 | 3/8 | 9/16 | 5/32 | 2-9/16 | 1-5/16 | 9/16 | 9/16 |
| 1-1/2 | | | | | | | |

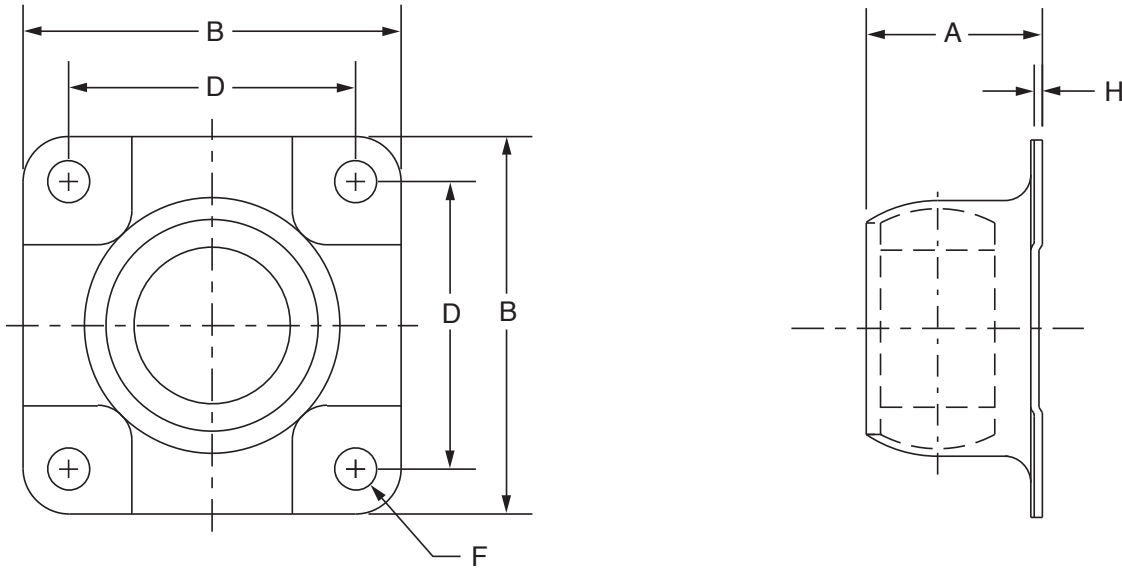
◆ No Published Metric Dimensions For This Product



SELECTION/DIMENSIONS

Sleeve Bearings - SOLIDLUBE

3/4" THRU 1-1/2" SOLIDLUBE LM800 4-BOLT FLANGE BEARING



| Shaft Size | Part No. | Description | Wt. | A |
|------------|---------------|-------------|-----|---------|
| 3/4 | 033696 | F4B-LM8-012 | .50 | 1-9/32 |
| 1 | 033697 | F4B-LM8-100 | .36 | 1-9/32 |
| 1-1/4 | 033698 | F4B-LM8-104 | .50 | 1-11/16 |
| 1-1/2 | 033699 | F4B-LM8-108 | .50 | 1-11/16 |

| Shaft Size | B | D | F Bolt Dia | H |
|------------|-------|-------|------------|------|
| 3/4 | 3-1/8 | 2-1/4 | 3/8 | 1/16 |
| 1 | 3-5/8 | 2-3/4 | 3/8 | 1/16 |
| 1-1/4 | 3-5/8 | 2-3/4 | 3/8 | 1/16 |
| 1-1/2 | 3-5/8 | 2-3/4 | 3/8 | 1/16 |

◆ No Published Metric Dimensions For This Product

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SELECTION

Sleeve Bearings - Babbitted and Bronze-Bushed

General Information

SCOPE-for Stock Babbitted and Bronze Bushed Bearings, Pillow Blocks and Take-Ups of the Rigid, Grease Lubricated Type.

Important-Referring to Table 1 on the opposite page: Table 1 ratings apply to the following DODGE Babbitted Sleeve Bearings:

- Solid Journals
- Split Babbitted Journals
- Rigid Babbitted Pillow Blocks
- Angle Babbitted Pillow Blocks
- Plate Type Flange Bearings
- Type H Take-Ups
- Type A and B Take-Ups

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.

Babbitted and 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 p/n 405015.

| Part No. | 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 thru 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. (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%.
4. Direction of load should not be closer than 30° to grease groove or closer than 30° to the joint between cap and base. If direction of load falls within this area which is not recommended, decrease maximum load by 50%.
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 (+.000 / -.002)
6. Ambient temperature should not exceed 130°F for babbitted polymer 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.

| | | | |
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Sleeve Bearings - Babbitted and Bronze-Bushed

Radial Load Ratings
(Refer To Instructions On Opposite Page)

Table 1: MPTA Radial Load Ratings for Babbitted Sleeve Bearings

| Shaft Sizes | Radial Load Rating in Lbs. at Various Revolutions Per Minute | | | | | | | | | | | | | | | |
|----------------|--|-------|-------|------|---|------|------|-----|-----|-----|-----|-----|-----|-----|-----|------|
| | 10 | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 600 | 700 | 800 | 900 | 1000 |
| 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 | 1150 | 1110 | 1060 | 1010 | 965 | 915 | 865 | 815 | 730 | 335 | ... | ... | ... | ... | ... | ... |
| 2-3/16, 2-1/4 | 1460 | 1400 | 1330 | 1260 | 1190 | 1120 | 1050 | 975 | 410 | ... | ... | ... | ... | ... | ... | ... |
| 2-7/16, 2-1/2 | 1800 | 1730 | 1630 | 1530 | 1430 | 1340 | 1240 | 645 | ... | ... | ... | ... | ... | ... | ... | ... |
| 2-11/16, 2-3/4 | 2190 | 2080 | 1950 | 1820 | 1690 | 1560 | 1150 | 110 | ... | ... | ... | ... | ... | ... | ... | ... |
| 2-15/16, 3 | 2600 | 2470 | 2300 | 2130 | 1960 | 1790 | 675 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 3-7/16, 3-1/2 | 3550 | 3330 | 3060 | 2790 | 2520 | 1200 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 3-15/16, 4 | 4640 | 4310 | 3910 | 3500 | 2760 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 4-7/16, 4-1/2 | 5870 | 5410 | 4830 | 4250 | 1410 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 4-15/16, 5 | 7240 | 6600 | 5810 | 5010 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 5-7/16, 5-12 | 8750 | 7900 | 6840 | 4360 | For speeds lower than 10 rpm consult DODGE. | | | | | | | | | | | |
| 5-15/16, 6 | 10410 | 9300 | 7910 | 2390 | | | | | | | | | | | | |
| 6-7/16, 6-1/2 | 12200 | 10790 | 9020 | ... | | | | | | | | | | | | |
| 6-15/16, 7 | 14120 | 12360 | 10150 | ... | | | | | | | | | | | | |
| 7-7/16, 7-1/2 | 17270 | 14950 | 12050 | ... | | | | | | | | | | | | |
| 7-15/16, 8 | 18390 | 15750 | 10710 | ... | | | | | | | | | | | | |
| 9 | 20750 | 17360 | 4140 | ... | | | | | | | | | | | | |
| 10 | 22950 | 18760 | ... | ... | | | | | | | | | | | | |
| 12 | 30700 | 23190 | ... | ... | | | | | | | | | | | | |

For speeds lower than 10 rpm consult DODGE.

| | | | |
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SELECTION

Sleeve Bearings - Babbitted and Bronze-Bushed

Radial Load Ratings
(Refer To Instructions On Page B17-34)

Table 2: MPTA Radial Load Ratings for Bronze Bushed Sleeve Bearings

| Shaft Sizes | Radial Load Rating in Lbs. at Various Revolutions Per Minute | | | | | | | | | | | | | | | |
|----------------|--|-------|-------|-------|------|---|------|------|------|------|-----|-----|-----|-----|-----|------|
| | 10 | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 600 | 700 | 800 | 900 | 1000 |
| 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 | 1070 | 1050 | 1030 | 1010 | 995 | 975 | 955 | 935 | 915 | 895 | 875 | 635 | 315 | ... | ... | ... |
| 1-11/16, 1-3/4 | 1470 | 1440 | 1410 | 1370 | 1340 | 1310 | 1280 | 1240 | 1210 | 1180 | 930 | 410 | ... | ... | ... | ... |
| 1-15/16, 2 | 1920 | 1880 | 1830 | 1790 | 1740 | 1690 | 1640 | 1590 | 1500 | 1110 | 715 | ... | ... | ... | ... | ... |
| 2-3/16, 2-1/4 | 2440 | 2390 | 2320 | 2240 | 2170 | 2100 | 2030 | 1960 | 1390 | 830 | 265 | ... | ... | ... | ... | ... |
| 2-7/16, 2-1/2 | 3020 | 2940 | 2850 | 2750 | 2650 | 2560 | 2460 | 1860 | 1090 | ... | ... | ... | ... | ... | ... | ... |
| 2-11/16, 2-3/4 | 3660 | 3560 | 3430 | 3300 | 3170 | 3040 | 2620 | 1580 | 545 | ... | ... | ... | ... | ... | ... | ... |
| 2-15/16, 3 | 4370 | 4230 | 4060 | 3890 | 3720 | 3550 | 2440 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 3-7/16, 3-1/2 | 5960 | 5740 | 5470 | 5200 | 4930 | 3610 | 1440 | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 3-15/16, 4 | 7790 | 7460 | 7060 | 6650 | 5910 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 4-7/16, 4-1/2 | 9860 | 9400 | 8820 | 8240 | 5400 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 4-15/16, 5 | 12180 | 11540 | 10740 | 9950 | 4090 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 5-7/16, 5-1/2 | 14740 | 13880 | 12820 | 10340 | 1820 | For speeds lower than 10 rpm consult DODGE. | | | | | | | | | | |
| 5-15/16, 6 | 17530 | 16420 | 15040 | 9520 | ... | | | | | | | | | | | |
| 6-7/16, 6-1/2 | 20560 | 19150 | 17390 | 7900 | ... | | | | | | | | | | | |
| 6-15/16, 7 | 23840 | 22070 | 19870 | 5350 | ... | | | | | | | | | | | |
| 7-7/16, 7-1/2 | 29170 | 26850 | 23950 | 1880 | ... | | | | | | | | | | | |
| 7-15/16, 8 | 31090 | 28450 | 23410 | ... | ... | | | | | | | | | | | |
| 9 | 35150 | 31760 | 18540 | ... | ... | | | | | | | | | | | |
| 10 | 38950 | 34760 | 2220 | ... | ... | | | | | | | | | | | |
| 12 | 52300 | 45520 | ... | ... | ... | | | | | | | | | | | |



SELECTION

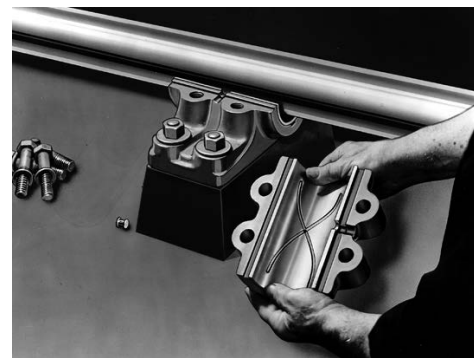
Sleeve Bearings - Bronze Bushings



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.

Bushings made of special alloys can be furnished where especially difficult heat problems may arise. They will be priced on application.

Bronze Bushing Sets ♣

| Shaft Size | Bushings Sets† | | Locking Spools* |
|------------|----------------|------|-----------------|
| | Part No. | Wt. | Part No. |
| 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 | |
| 4-15/16 | 005063 | 15 | |
| 5-7/16 | 005064 | 18 | 005052 |
| 5-15/16 | 005065 | 21 | |
| 6-1/2 | 005066 | 28 | 005053 |
| 7 | 005067 | 33 | |
| 7-1/2 | 005117 | 37 | |
| 8 | 005068 | 42 | |

♣ For other bushing material consult DODGE

† Part number is for one bushing set which includes upper and lower half

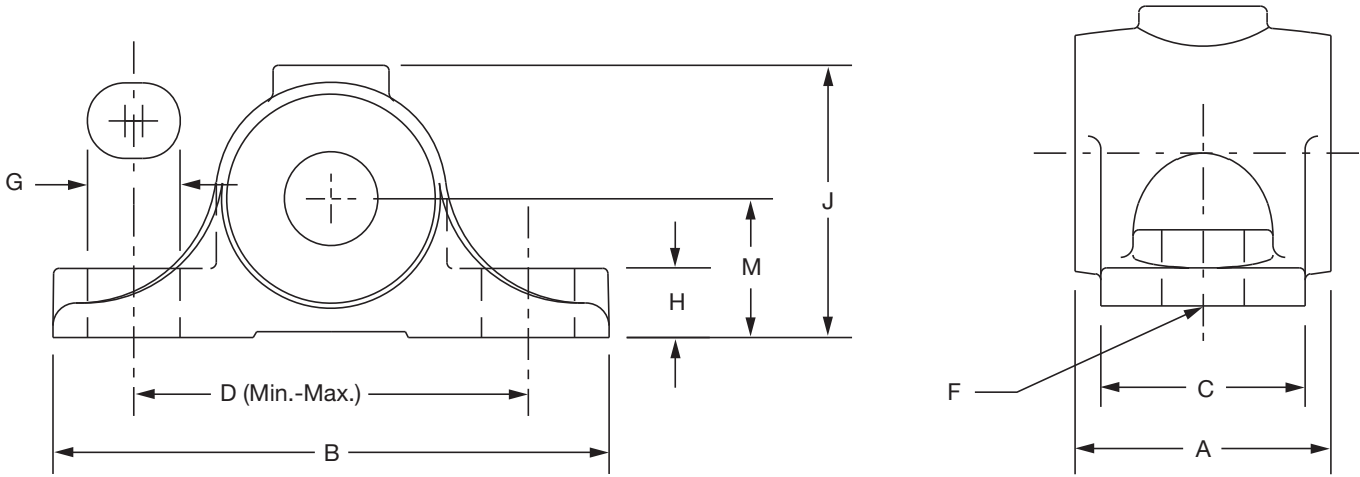
* Order separately if desired

| | | | |
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SELECTION/DIMENSIONS

Sleeve Bearings - Babbitted 1/2" THRU 3-7/16" SOLID BABBITTED JOURNAL BEARINGS



| Shaft Size | Part No. | Description | Wt. | 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 | 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 | | | | | | |

◆ No Published Metric Dimensions For This Product

| | | | |
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SELECTION/DIMENSIONS

Sleeve Bearings - Babbitted 1/2" THRU 3-7/16" SOLID BABBITTED JOURNAL BEARINGS

| Shaft Size | F Bolt | G | H | J | M | Grease Cups # | | |
|------------------------------------|--------|--------|---------|---------|-------|---------------|----------|------|
| | | | | | | Pipe Tap | No. Reqd | Size |
| 1/2 | 5/16 | 1/2 | 3/8 | 1-15/32 | 3/4 | 1/8 | 1 | 0 |
| 5/8 3/4 | 5/16 | 1/2 | 1/2 | 1-23/32 | 7/8 | 1/8 | 1 | 0 |
| 7/8 15/16 1 | 3/8 | 9/16 | 5/8 | 2 | 1 | 1/8 | 1 | 0 |
| 1-1/8 1-3/16 1-1/4 | 7/16 | 21/32 | 11/16 | 2-7/16 | 1-1/4 | 1/8 | 1 | 0 |
| 1-5/16 1-3/8 1-7/16 1-1/2 | 1/2 | 11/16 | 7/8 | 2-3/4 | 1-3/8 | 1/4 | 1 | 0 |
| 1-11/16 1-3/4 | 9/16 | 13/16 | 1 | 3-1/16 | 1-1/2 | 1/4 | 1 | 0 |
| 1-15/16 2 | 5/8 | 13/16 | 1-1/8 | 3-1/2 | 1-3/4 | 1/4 | 1 | 0 |
| 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 3-7/16 | 1 | 1-7/16 | 1-7/8 | 5-7/16 | 2-3/4 | 3/8 | 1 | 2 |

Grease cups or pressure fittings may be obtained thru our distributors; one required per bearing.

See page B17-34 for grease fitting and reducer bushing part numbers

Note: All blocks have two base bolts and are one piece solid housings.

◆ No Published Metric Dimensions For This Product

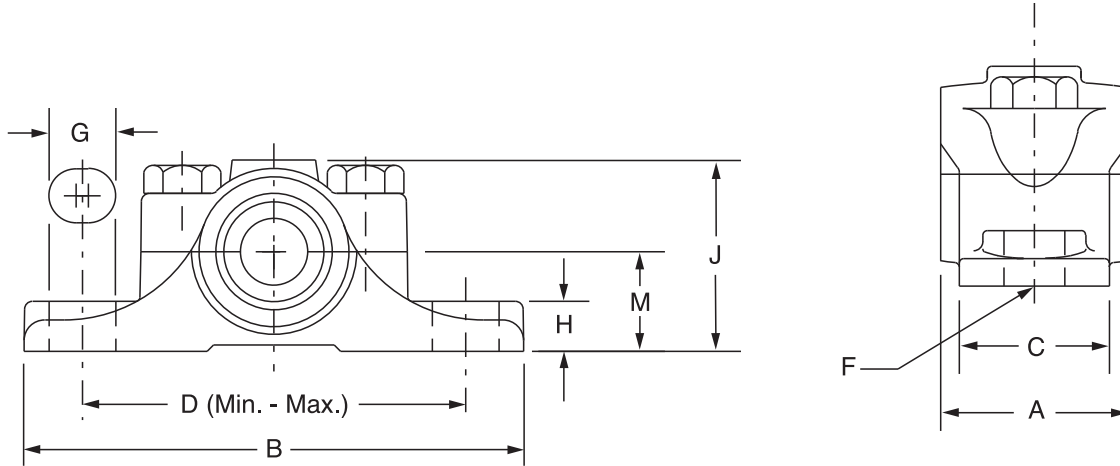
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SELECTION/DIMENSIONS

Sleeve Bearings - Babbitted

1/2" THRU 3-15/16" SPLIT BABBITTED JOURNAL BEARINGS



| Shaft Size | Part No. | Description | Wt. | 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 | | | | | |
| 1-1/8 | 006022 | P2B-BASP-102 | 3.2 | | | | | |
| 1-3/16 | 006025 | P2B-BASP-103 | 3.1 | 2-1/2 | 5-1/4 | 1-3/4 | 4 | 4-1/4 |
| 1-1/4 | 006028 | P2B-BASP-104 | 3.0 | | | | | |
| 1-5/16 | 006031 | P2B-BASP-105 | 5.0 | | | | | |
| 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 | 3 | 6-1/4 | 2 | 4-13/16 | 4-15/16 |
| 1-5/8 | 006043 | P2B-BASP-110 | 6.6 | | | | | |
| 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 | | | | | |
| 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 |

◆ No Published Metric Dimensions For This Product

| | | | |
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SELECTION/DIMENSIONS

Sleeve Bearings - Babbitted 1/2" THRU 3-15/16" SPLIT BABBITTED JOURNAL BEARINGS

Plummer Blocks

Sleeve Bearings

SLEEVOIL

Take-Up Frames

Engineering

Part Number Index

Keyword Index

| Shaft Size | F Bolt | G | H | J | M | Grease Cups # | | |
|------------------------------------|--------|-------|--------|---------|-------|---------------|-----------|------|
| | | | | | | Pipe Tap | No. Req'd | Size |
| 1/2 | 5/16 | 1/2 | 23/64 | 1-15/32 | 3/4 | 1/8 | 1 | 0 |
| 5/8 3/4 | 5/16 | 1/2 | 1/2 | 1-23/32 | 7/8 | 1/8 | 1 | 0 |
| 7/8 15/16 1 | 3/8 | 9/16 | 9/16 | 2 | 1 | 1/8 | 1 | 0 |
| 1-1/16 1-1/8 1-3/16 1-1/4 | 7/16 | 5/8 | 5/8 | 2-7/16 | 1-1/4 | 1/8 | 1 | 0 |
| 1-5/16 1-3/8 1-7/16 1-1/2 | 9/16 | 11/16 | 3/4 | 2-3/4 | 1-3/8 | 1/4 | 1 | 0 |
| 1-5/8 1-11/16 1-3/4 | 9/16 | 25/32 | 13/16 | 3-1/16 | 1-1/2 | 1/4 | 1 | 0 |
| 1-15/16 2 | 11/16 | 13/16 | 15/16 | 3-1/2 | 1-3/4 | 1/4 | 1 | 0 |
| 2-3/16 2-1/4 | 11/16 | 1 | 1 | 3-13/16 | 1-7/8 | 3/8 | 1 | 2 |
| 2-7/16 2-1/2 | 11/16 | 1 | 1-1/8 | 4-1/4 | 2-1/8 | 3/8 | 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 3 | 13/16 | 1-1/8 | 1-5/16 | 5 | 2-1/2 | 3/8 | 1 | 2 |
| 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 thru our distributors; one required per bearing.
See page B17-34 for grease fitting and reducer bushing part numbers

Note: All blocks have 2 base bolts and 2 cap bolts. Housings are split.

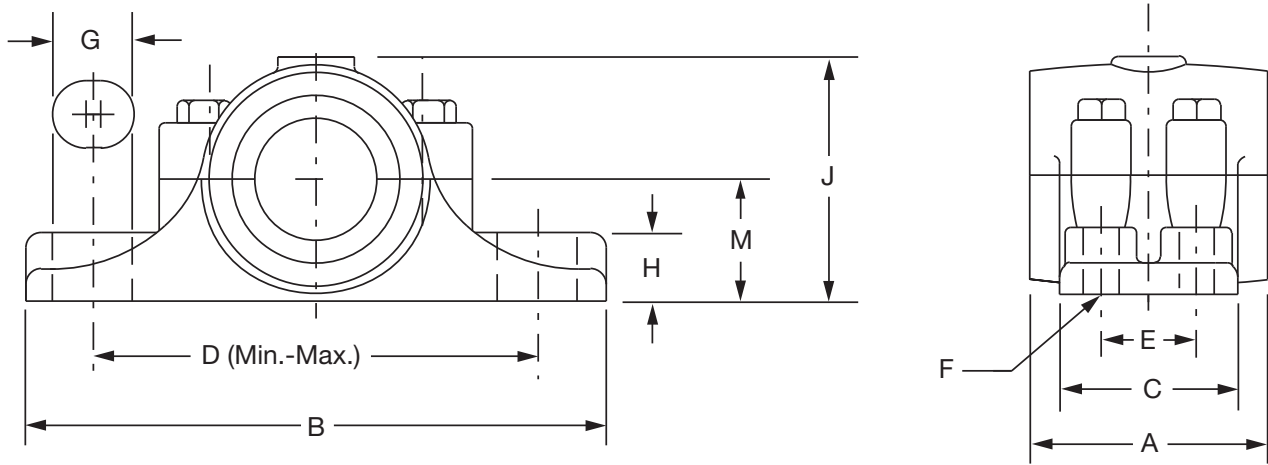
◆ No Published Metric Dimensions For This Product

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SELECTION/DIMENSIONS

Sleeve Bearings - Babbitted 1-15/16" THRU 8" RIGID BABBITTED JOURNAL BEARINGS (SPLIT HOUSING)



| Shaft Size | Part No. | Description | Wt. | 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 | | | | | | |
| 3 | 004084 | P4B-BAR-300 | 30.6 | 6 | 11 | 4-1/2 | 8-1/2 | 9 |
| 3-3/16 | 004087 | P4B-BAR-303 | | | | | | |
| 3-7/16 | 004090 | P4B-BAR-307 | 50.2 | 7 | 13 | 5 | 10-1/8 | 10-7/8 |
| 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 | | | | | | |
| 4-15/16 | 004102 | P4B-BAR-415 | 113 | 10 | 18 | 7 | 14-3/8 | 15-5/8 |
| 5-7/16 | 004105 | P4B-BAR-507 | | | | | | |
| 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 | | | | | | |
| 7 | 004114 | P4B-BAR-700 | 310 | 14 | 23 | 10 | 18-3/8 | 19-5/8 |
| 7-1/2 | 004115 | P4B-BAR-708 | | | | | | |
| 8 | 004116 | P4B-BAR-800 | 430 | 16 | 26 | 11 | 20-3/4 | 22-1/4 |

◆ No Published Metric Dimensions For This Product

| | | | |
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SELECTION/DIMENSIONS

Sleeve Bearings - Babbitted

1-15/16" THRU 8" RIGID BABBITTED JOURNAL BEARINGS (SPLIT HOUSING)

| Shaft Size | E | F Bolt | G | H | J | M | Grease Cups # | | |
|---------------------------|-------|--------|-------|-------|----------|-------|---------------|----------|------|
| | | | | | | | Pipe Tap | No. Reqd | Size |
| 1-15/16 2 | 1-3/4 | 1/2 | 3/4 | 7/8 | 3-1/2 | 1-3/4 | 1/4 | 1 | 1 |
| 2-3/16 2-1/4 | 1-3/4 | 1/2 | 3/4 | 1 | 3-13/16 | 1-7/8 | 3/8 | 1 | 2 |
| 2-7/16 2-1/2 | 2 | 5/8 | 1 | 1-1/8 | 4-1/4 | 2-1/8 | 3/8 | 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 3 | 2-1/2 | 5/8 | 1 | 1-3/8 | 5 | 2-1/2 | 3/8 | 1 | 2 |
| 3-3/16 3-7/16 3-1/2 | 2-3/4 | 3/4 | 1-1/4 | 1-1/2 | 5-29/32 | 3-1/4 | 1/2 | 1 | 3 |
| 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 thru our distributors; one required per bearing up thru 4-15/16" sizes and two required for balance of sizes.

See page B17-34 for grease fitting and reducer bushing part number.

Note: 1-15/16 - 3" sizes have 2 cap bolts. 3-3/16 and larger sizes have 4 cap bolts (shown in diagram). Housings are split.

◆ No Published Metric Dimensions For This Product

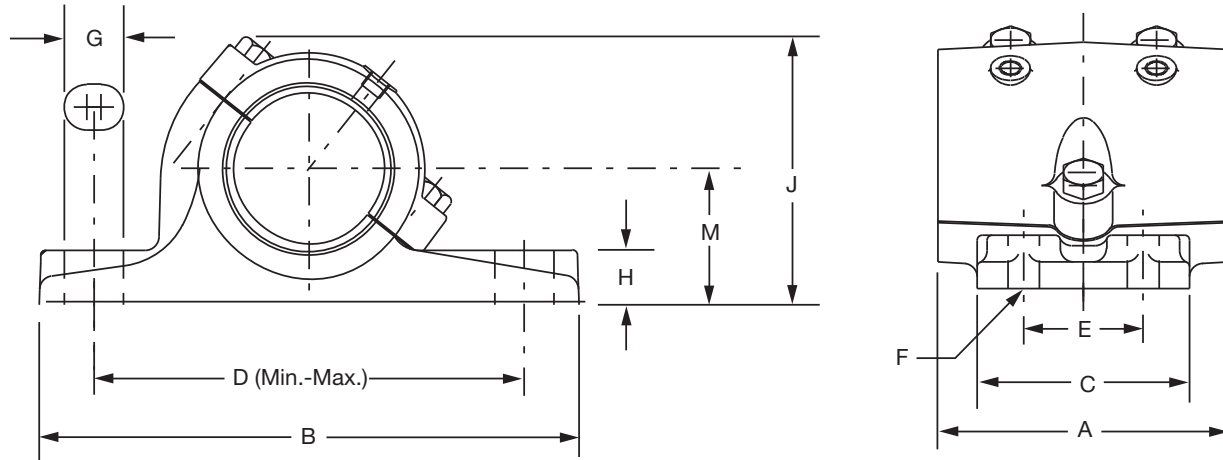
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SELECTION/DIMENSIONS

Sleeve Bearings - Babbitted

1-15/16" THRU 8" ANGLE BABBITTED PILLOW BLOCKS



| Shaft Size | Part No. | Description | Wt. | 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 | HB-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 |

◆ No Published Metric Dimensions For This Product



SELECTION/DIMENSIONS

Sleeve Bearings - Babbitted 1-15/16" THRU 8" ANGLE BABBITTED PILLOW BLOCKS

| Shaft Size | E | F Bolt | G | H | J | M | Grease Cups # | | |
|------------|-------|--------|-------|---------|---------|-------|---------------|----------|------|
| | | | | | | | Pipe Tap | No. Reqd | 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 thru our distributors; one required per bearing up thru 4-15/16, sizes and two required for balance of sizes.

See page B17-34 for grease fitting and reducer bushing part number.

Note: 1-15/16 - 3-7/16" sizes have 2 cap bolts.

3-7/16 - 5-15/16" have 3 cap bolts (shown in diagram).

6-1/2" and larger sizes have 4 cap bolts.

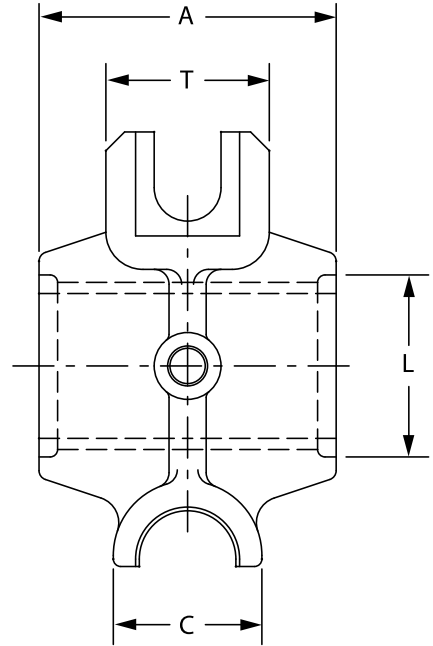
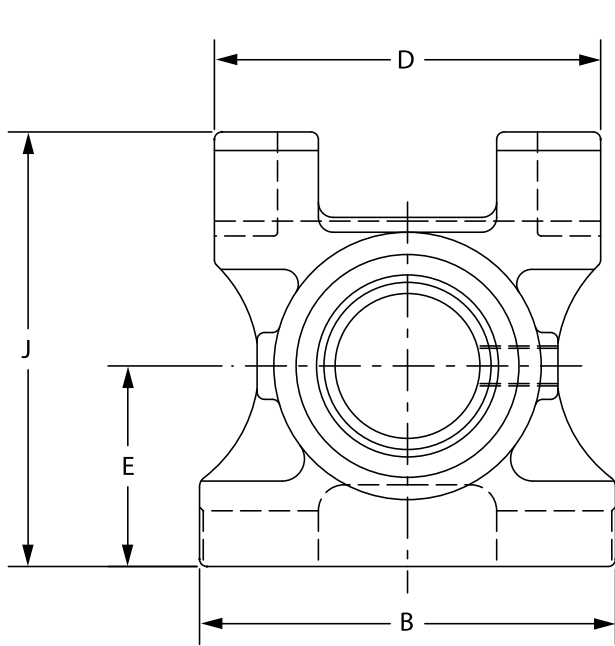
◆ No Published Metric Dimensions For This Product

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SELECTION/DIMENSIONS

Sleeve Bearings - Babbitted TYPE H BABBITTED TAKE-UP BEARINGS



| Shaft Size | Part No. | Description | Frame Size |
|------------|---------------|-------------|------------|
| 1-15/16 | 012215 | TP-H-115 | TP10 |
| 2-3/16 | 012216 | TP-H-203 | TP10 |
| 2-7/16 | 012217 | TP-H-207 | TP30 |
| 2-15/16 | 012218 | TP-H-215 | TP30 |
| 3-7/16 | 012219 | TP-H-307 | TP50 |
| 3-15/16 | 012220 | TP-H-315 | TP50 |

Plummer Blocks

Sleeve Bearings

SLEEVOIL

Take-Up Frames

Engineering

Part Number Index

Keyword Index

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SELECTION/DIMENSIONS

Sleeve Bearings - Babbitted TYPE H BABBITTED TAKE-UP BEARINGS

Plummer Blocks

Sleeve Bearings

SLEEVOIL

Take-Up Frames

Engineering

Part Number Index

Keyword Index

| Shaft Size | Weight lbs. | Frame Size | A | B | C | D | E | J | L | T | Pipe Tap | Cup Size |
|------------|-------------|------------|-------|---|-------|-------|-------|--------|---------|-------|----------|----------|
| 1-15/16 | 12.5 | TP10 | 4 | 6 | 2-3/8 | 5-1/2 | 3 | 6-1/8 | 2-7/16 | 2-3/8 | 1/4 | 0 |
| 2-3/16 | 12.6 | TP10 | 4-1/2 | 6 | 2-3/8 | 5-1/2 | 3 | 6-1/8 | 2-3/4 | 2-3/8 | 3/8 | 2 |
| 2-7/16 | 22.4 | TP30 | 5 | 7 | 2-1/2 | 6-1/2 | 3-3/8 | 7-5/16 | 3-1/16 | 2-3/4 | 3/8 | 2 |
| 2-15/16 | 23.6 | TP30 | 6 | 7 | 2-1/2 | 6-1/2 | 3-3/8 | 7-5/16 | 3-9/16 | 2-3/4 | 3/8 | 2 |
| 3-7/16 | 46.0 | TP50 | 7 | 9 | 3-1/8 | 8-1/2 | 4-1/2 | 9-5/8 | 4-3/16 | 3-1/8 | 3/8 | 2 |
| 3-15/16 | 47.2 | TP50 | 8 | 9 | 3-1/8 | 8-1/2 | 4-1/2 | 9-5/8 | 4-11/16 | 3-1/8 | 3/8 | 2 |

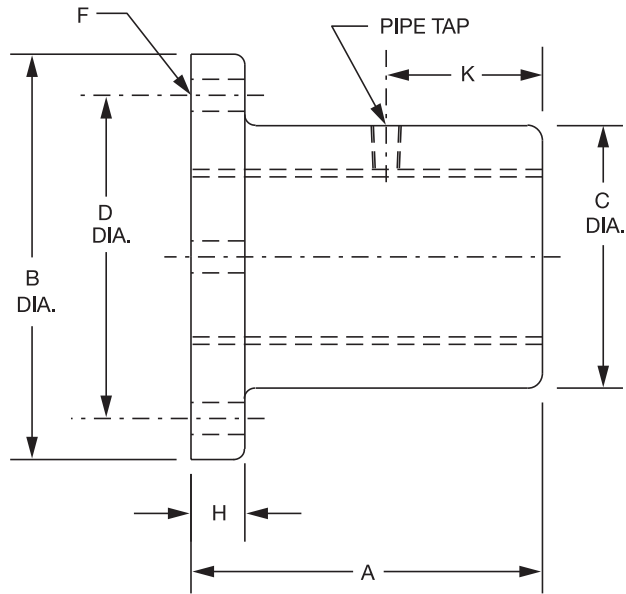
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SELECTION/DIMENSIONS

Sleeve Bearings - Babbitted

1-15/16" THRU 4-15/16" PLATE TYPE BABBITTED FLANGE BEARING



| Shaft | Part No. | Description | Wt. | 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 | | | | | |
| 2 | 037013 | F4B-BAP-200 | 12 | 4 | 6-1/2 | 3-3/4 | 5-1/4 |
| 2-3/16 | 037006 | F4B-BAP-203 | | | | | |
| 2-7/16 | 037007 | F4B-BAP-207 | 22 | 5 | 8 | 4-1/2 | 6-1/4 |
| 2-11/16 | 037017 | F4B-BAP-211 | | | | | |
| 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 | | | | | |
| 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 | | | | | |
| 4-15/16 | 037026 | F4B-BAP-415 | 140 | 10 | 14 | 8-1/2 | 11-1/2 |

◆ No Published Metric Dimensions For This Product



SELECTION/DIMENSIONS

Sleeve Bearings - Babbitted

1-15/16" THRU 4-15/16" PLATE TYPE BABBITTED FLANGE BEARING

| Shaft | F Bolt | | H | K | Grease Cups # | |
|-----------------|--------|------|-------|-------|---------------|------|
| | No. | Size | | | Pipe Tap | Size |
| 15/16 1 | 4 | 3/8 | 3/8 | 3/4 | 1/8 | 0 |
| 1-3/16 1-1/4 | 4 | 3/8 | 7/16 | 1 | 1/8 | 0 |
| 1-7/16 1-1/2 | 4 | 1/2 | 1/2 | 1-1/4 | 1/4 | 0 |
| 1-11/16 | 4 | 1/2 | 5/8 | 1-1/2 | 1/4 | 0 |
| 1-15/16 2 | 4 | 1/2 | 11/16 | 1-5/8 | 1/4 | 1 |
| 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 thru our distributors; one required per bearing.

See page B13-10 for grease fitting and reducer bushing part number.

◆ No Published Metric Dimensions For This Product

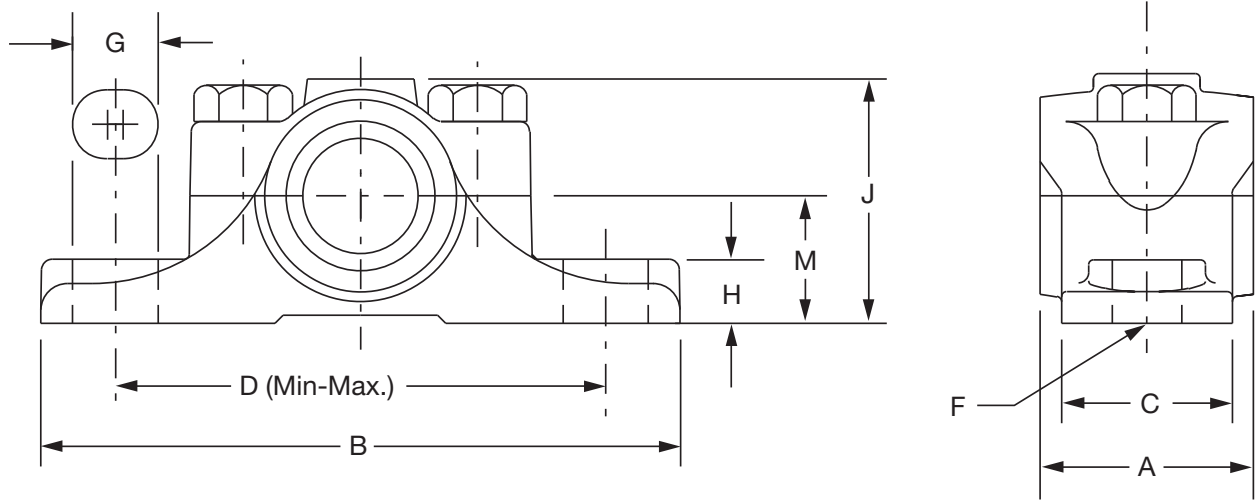
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SELECTION/DIMENSIONS

Sleeve Bearings - Bronze-Bushed

1-15/16" THRU 2-15/16" BRONZE-BUSHED SPLIT JOURNAL BEARING



| Shaft Size | Part No. | Description | Wt. | 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 | No. Req'd | 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 thru our distributors; one required per bearing.

See page B17-34 for grease fitting and reducer bushing part number.

Note: All sizes have 2 bolt base and 2 cap bolts. Housings are split.

◆ No Published Metric Dimensions For This Product

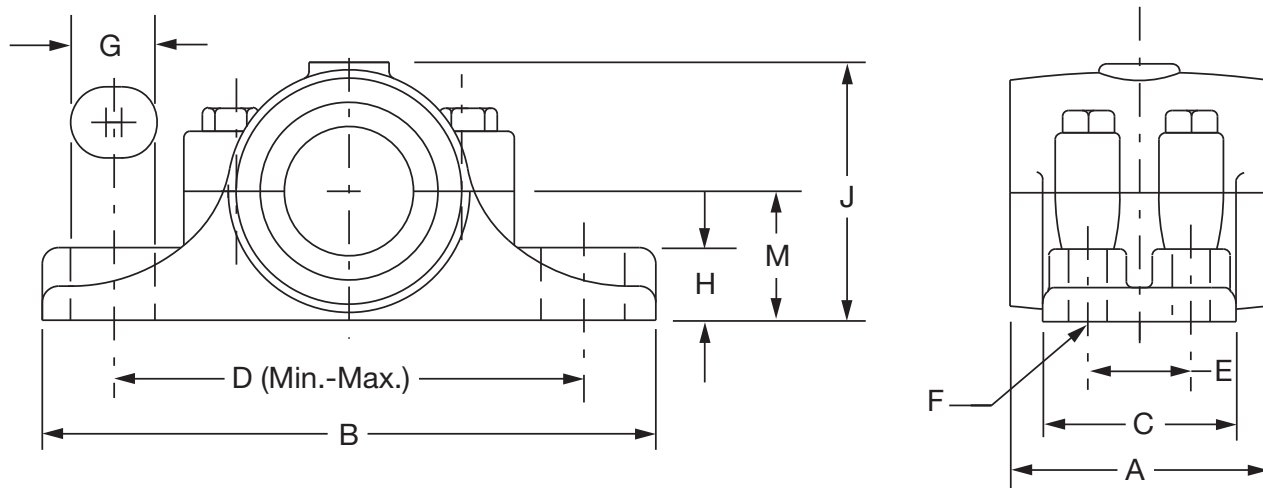
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SELECTION/DIMENSIONS

Sleeve Bearings - Bronze-Bushed

3-7/16" THRU 8" BRONZE-BUSHED RIGID SPLIT JOURNAL BEARING



| Shaft Size | Part No. | Description | Wt. | 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 | No. Reqd | 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 thru our distributors; one required per pillow block u thru 4-15/16" sizes and two required for balance of sizes.

See page B17-34 for grease fitting and reducer bushing part number.

Note: All sizes have 4 base bolts. - 3-7/16" and larger sizes have 4 cap bolts. Housings are split.

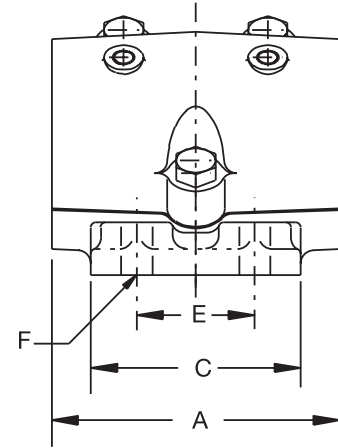
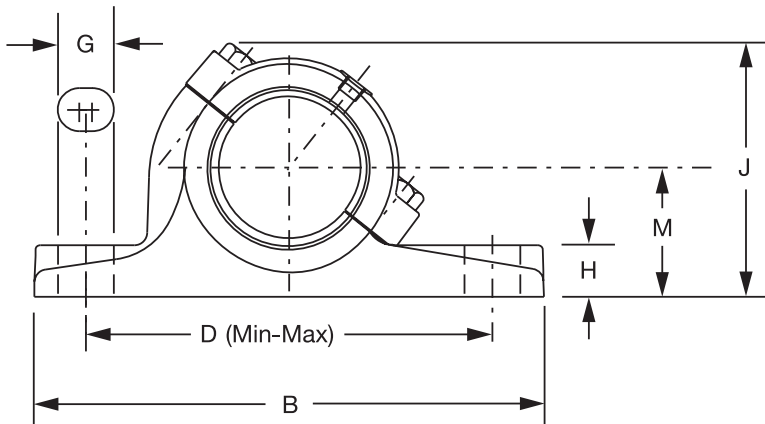
◆ No Published Metric Dimensions For This Product

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SELECTION/DIMENSIONS

Sleeve Bearings - Bronze-Bushed 1-15/16" THRU 8" ANGLE BRONZE-BUSHED PILLOW BLOCKS



| Shaft | Part No. | Description | Wt. | 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 |

◆ No Published Metric Dimensions For This Product

| | | | |
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SELECTION/DIMENSIONS

Sleeve Bearings - Bronze-Bushed 1-15/16" THRU 8" ANGLE BRONZE-BUSHED PILLOW BLOCKS

| Shaft | E | F Bolt | G | H | J | M | Cap Bolts Quantity | Grease Cups # | | |
|---------|-------|--------|-------|--------|---------|-------|--------------------|---------------|------|------|
| | | | | | | | | Pipe Tap | Qty. | 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 thru our distributors; one required per pillows block up thru 4-15/16" sizes and two required for balance of sizes.

See page B13-10 for grease fitting and reducer bushing part number.

Note: 1-15/16 - 3-7/16" sizes have 2 cap bolts

3-15/16 - 5-15/16" sizes have 3 cap bolt (shown in diagram)

6-1/2" and larger have 4 cap bolts

| | | | |
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SELECTION

Sleeve Bearings - BRONZOIL RADIAL LOAD RATINGS FOR BRONZOIL SLEEVE BEARINGS

| Shaft Sizes | Radial Load Rating in Lbs. at Various Revolutions Per Minute | | | | | |
|-------------|--|-----|-----|-----|------|------|
| | 50 | 100 | 200 | 500 | 1000 | 1500 |
| 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 | Radial Load Rating in Lbs. at Various Revolutions Per Minute | | | | |
|-------------|--|------|------|------|------|
| | 2000 | 2500 | 3000 | 3500 | 4000 |
| 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 | ... | ... | ... | ... |

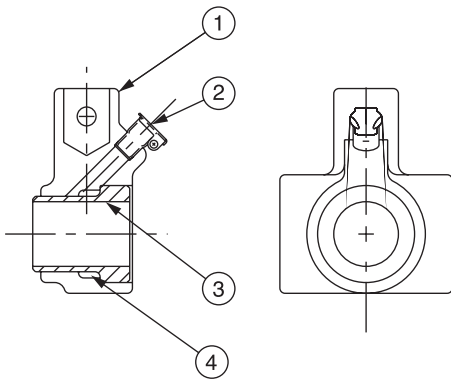
BRONZOIL Take-Up Bearing Assembly

| 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 |
| 15/16 | 034034 | 034002 | 405046 | 034017 | 444010 |
| 1 | 034035 | 034002 | 405046 | 034018 | 444010 |

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 $+.000/-.002$.
8. Maximum operating temperature 180°F.



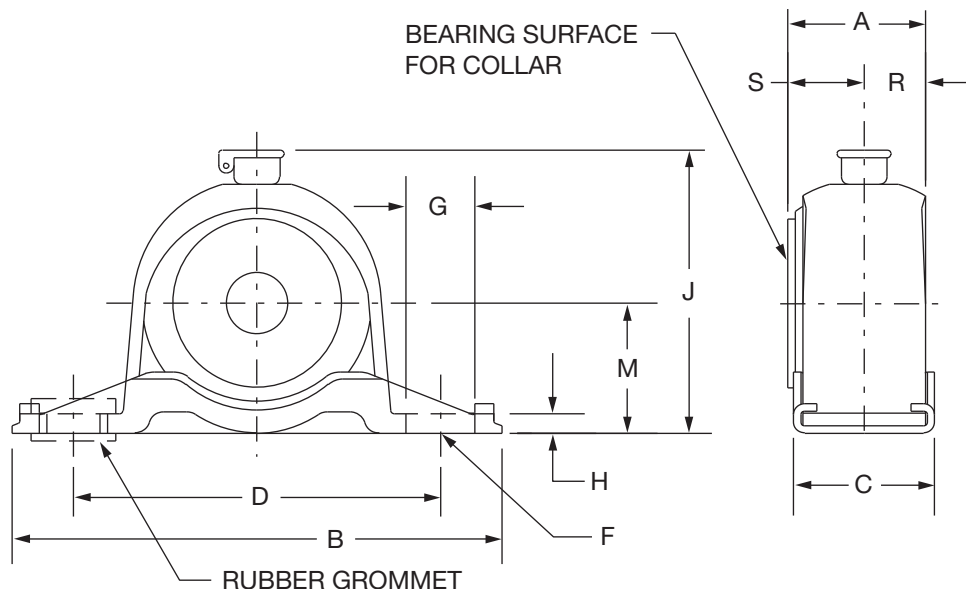
1. BRONZOIL Housing
2. BRONZOIL Take-Up Oil Cup
3. BRONZOIL Bushing
4. BRONZOIL Permawick





SELECTION/DIMENSIONS

Sleeve Bearings - BRONZOIL 1/2" THRU 1-1/4" BRONZOIL PILLOW BLOCKS



| Shaft Size | Part No. | Description | Wt. | A | B | C | D |
|------------|---------------|-------------|-----|-------|-------|--------|-------|
| 1/2 | 035025 | P2B-B0-008 | | | | | |
| 5/8 | 035026 | P2B-B0-010 | 0.6 | 1-1/8 | 4 | 1-3/16 | 3 |
| 3/4 | 035027 | P2B-B0-012 | | | | | |
| 7/8 | 035028 | P2B-B0-014 | | | | | |
| 15/16 | 035029 | P2B-B0-015 | 0.5 | 1-1/8 | 4 | 1-3/16 | 3 |
| 1 | 035030 | P2B-B0-100 | | | | | |
| 1-3/16 | 035107 | P2B-B0-103 | 1.3 | 1-3/4 | 4-1/2 | 1-1/4 | 3-1/2 |
| 1-1/4 | 035108 | P2B-B0-104 | 1.2 | 1-3/4 | 4-1/2 | 1-1/4 | 3-1/2 |

| Shaft Size | F Bolt | G | H | J | M | R | S |
|------------|--------|------|------|---------|--------|-------|-------|
| 1/2 | | | | | | | |
| 5/8 | 3/8 | 9/16 | 5/32 | 2-5/16 | 1-1/16 | 1/2 | 5/8 |
| 3/4 | | | | | | | |
| 7/8 | | | | | | | |
| 15/16 | 3/8 | 9/16 | 5/32 | 2-5/16 | 1-1/16 | 1/2 | 5/8 |
| 1 | | | | | | | |
| 1-3/16 | 3/8 | 9/16 | 5/32 | 2-13/16 | 1-5/16 | 7/8 | 7/8 |
| 1-1/4 | 3/8 | 9/16 | 5/32 | 2-13/16 | 1-5/16 | 27/32 | 29/32 |

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" and the H dimension by 1/8". A 5/16" bolt and a washer must be used with each grommet. Washer part number 035084.

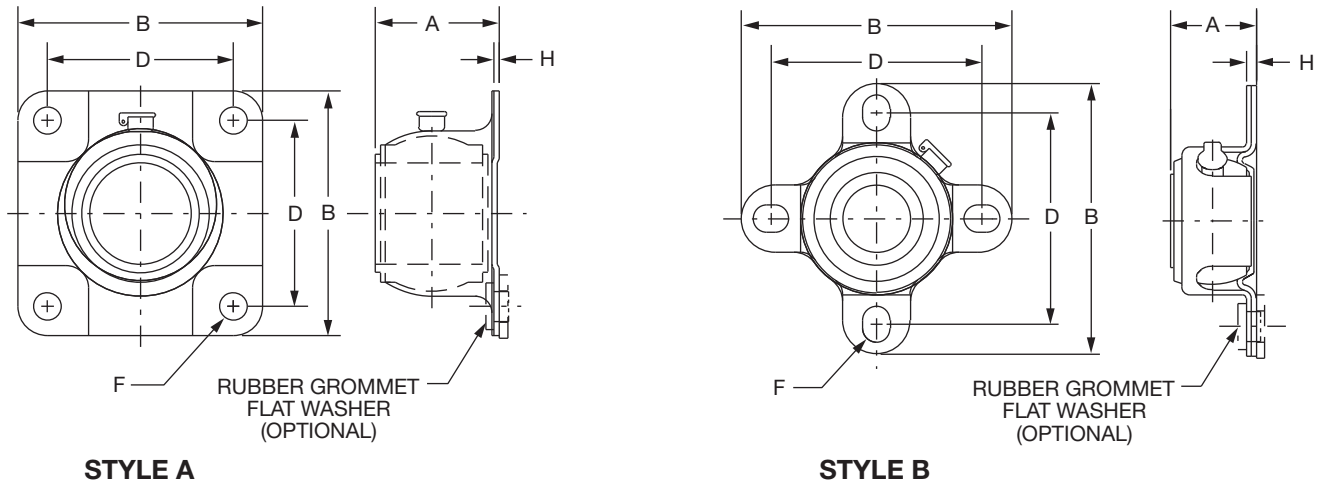
◆ No Published Metric Dimensions For This Product

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SELECTION/DIMENSIONS

Sleeve Bearings - BRONZOIL 1/2" THRU 1-1/4" BRONZOIL 4-BOLT FLANGE BEARING



| Shaft Size | Part No. | Description | Wt. | A | B |
|------------|---------------|-------------|------|---------|-------|
| 1/2 | 035031 | F4B-B0-008 | | | |
| 5/8 | 035032 | F4B-B0-010 | 0.60 | 1-1/4 | 4 |
| 3/4 | 035033 | F4B-B0-012 | | | |
| 7/8 | 035034 | F4B-B0-014 | | | |
| 15/16 | 035035 | F4B-B0-013 | 0.50 | 1-1/4 | 4 |
| 1 | 035036 | F4B-B0-100 | | | |
| 1-3/16 | 035116 | F4B-B0-103 | 1.30 | 1-7/8 | 3-5/8 |
| 1-1/4 | 035117 | F4B-B0-104 | 1.20 | 1-29/32 | 3-5/8 |

| Shaft Size | D | F Bolt | H | STYLE |
|------------|-------|--------|------|-------|
| 1/2 | | | | |
| 5/8 | 3-1/8 | 3/8 | 5/32 | B |
| 3/4 | | | | |
| 7/8 | | | | |
| 15/16 | 3-1/8 | 3/8 | 5/32 | B |
| 1 | | | | |
| 1-3/16 | 2-3/4 | 3/8 | 1/16 | A |
| 1-1/4 | 2-3/4 | 3/8 | 1/16 | A |

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" and the H dimension by 1/8". A 5/16" bolt and a washer must be used with each grommet. Washer part number 035084.

◆ No Published Metric Dimensions For This Product

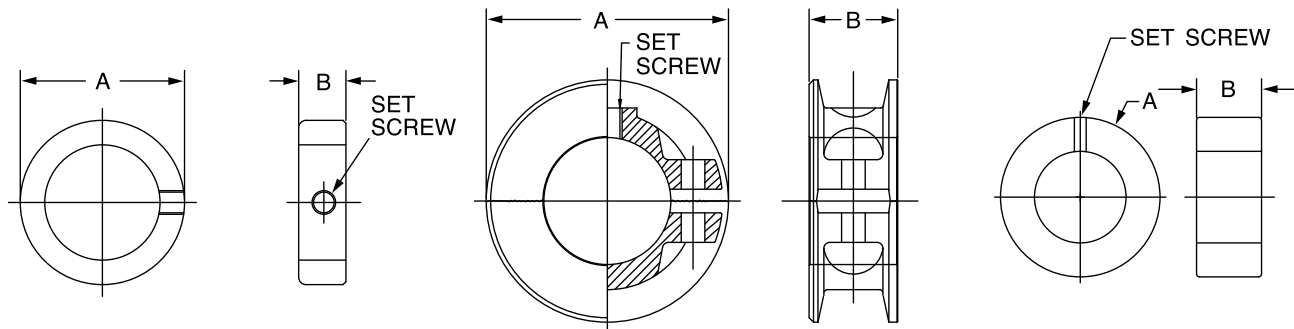
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SELECTION/DIMENSIONS

Shaft Collars



| Shaft Size | Solid Steel | | | | | | Solid Iron | | | | | Split Iron | | | | |
|------------|---------------|-----------|------------|-----------|-------|------|------------|-------------|------------|-----------|------|------------|-------------|------------|-----------|------|
| | Part Number * | | Dimensions | | | | Shaft Size | Part Number | Dimensions | | | Shaft Size | Part Number | Dimensions | | |
| | Steel | Stainless | O.D. (A) | Width (B) | Screw | Wt. | | | O.D. (A) | Width (B) | Wt. | | | O.D. (A) | Width (B) | Wt. |
| 1/8 | ---- | 456225 | 0.36 | 0.25 | #6 | 0.01 | 1-15/16 | 010020 | 3.38 | 1.38 | 2.5 | 1-1/8 | 010075 | 3.13 | 1.25 | 1.3 |
| 3/16 | 040001 | 456226 | 0.44 | 0.25 | #8 | 0.01 | 2 | 010021 | 3.38 | 1.38 | 2.5 | 1-3/16 | 010076 | 3.13 | 1.25 | 1.3 |
| 1/4 | 040002 | 456227 | 0.50 | 0.28 | #10 | 0.01 | 2-3/16 | 010024 | 3.75 | 1.38 | 3.0 | 1-1/4 | 010077 | 3.13 | 1.25 | 1.3 |
| 5/16 | 040003 | 456228 | 0.63 | 0.34 | #10 | 0.01 | 2-7/16 | 010028 | 4.25 | 1.50 | 4.3 | 1-5/16 | 010078 | 3.38 | 1.44 | 1.8 |
| 3/8 | 040004 | 456229 | 0.75 | 0.38 | 1/4 | 0.01 | 2-1/2 | 010029 | 4.25 | 1.50 | 4.3 | 1-7/16 | 010080 | 3.38 | 1.44 | 1.8 |
| 7/16 | 040005 | ---- | 0.88 | 0.44 | 1/4 | 0.05 | 2-11/16 | 010032 | 4.75 | 1.50 | 5.0 | 1-1/2 | 010081 | 3.38 | 1.44 | 1.8 |
| 1/2 | 040006 | 456230 | 1.00 | 0.44 | 1/4 | 0.1 | 2-15/16 | 010036 | 5.00 | 1.63 | 5.6 | 1-11/16 | 010084 | 3.75 | 1.56 | 2.4 |
| 9/16 | 040007 | ---- | 1.00 | 0.44 | 1/4 | 0.1 | 3-3/16 | 010039 | 5.50 | 1.63 | 7.0 | 1-3/4 | 010085 | 3.75 | 1.56 | 2.4 |
| 5/8 | 040008 | 456231 | 1.13 | 0.50 | 5/16 | 0.1 | 3-7/16 | 010043 | 5.75 | 1.75 | 7.6 | 1-15/16 | 010088 | 4.06 | 1.75 | 2.6 |
| 11/16 | 040009 | ---- | 1.25 | 0.56 | 5/16 | 0.1 | 3-15/16 | 010048 | 6.50 | 1.88 | 10.0 | 2 | 010089 | 4.06 | 1.75 | 2.6 |
| 3/4 | 040010 | 456232 | 1.25 | 0.56 | 5/16 | 0.1 | 4-7/16 | 010051 | 7.25 | 2.00 | 12.0 | 2-3/16 | 010092 | 4.50 | 1.88 | 3.4 |
| 13/16 | 040011 | ---- | 1.31 | 0.56 | 5/16 | 0.1 | 4-15/16 | 010054 | 8.00 | 2.13 | 16.3 | 2-1/4 | 010093 | 4.50 | 1.88 | 3.4 |
| 7/8 | 040012 | 456234 | 1.50 | 0.56 | 5/16 | 0.2 | 5-7/16 | 010055 | 8.75 | 2.13 | 18.5 | 2-7/16 | 010096 | 4.44 | 1.88 | 3.8 |
| 15/16 | 040013 | ---- | 1.63 | 0.56 | 5/16 | 0.2 | 5-15/16 | 010056 | 9.25 | 2.25 | 23.0 | 2-1/2 | 010097 | 4.88 | 2.00 | 4.3 |
| 1 | 040014 | 456234 | 1.63 | 0.63 | 5/16 | 0.2 | 6 | 010057 | 9.25 | 2.25 | 23.0 | 2-11/16 | 010100 | 5.31 | 2.06 | 5.4 |
| 1-1/16 | 040015 | ---- | 1.75 | 0.63 | 5/16 | 0.2 | 6-1/2 | 010058 | 10.00 | 2.25 | 25.0 | 2-15/16 | 010104 | 5.50 | 1.88 | 4.6 |
| 1-1/8 | 040016 | 456235 | 1.75 | 0.63 | 5/16 | 0.2 | 7 | 010059 | 10.50 | 3.38 | 32.0 | 3 | 010105 | 5.50 | 1.88 | 4.4 |
| 1-3/16 | 040017 | ---- | 2.00 | 0.69 | 3/8 | 0.4 | 7-1/2 | 010060 | 11.38 | 2.50 | 35.0 | 3-3/16 | 010107 | 6.06 | 2.38 | 8.0 |
| 1-1/4 | 040018 | 456236 | 2.00 | 0.69 | 3/8 | 0.4 | 8 | 010061 | 12.13 | 2.88 | 45.0 | 3-7/16 | 010110 | 6.06 | 2.38 | 6.0 |
| 1-5/16 | 040019 | ---- | 2.13 | 0.69 | 3/8 | 0.4 | | | | | | 3-11/16 | 010112 | 6.81 | 2.63 | 10.6 |
| 1-3/8 | 040020 | ---- | 2.13 | 0.75 | 3/8 | 0.4 | | | | | | 3-15/16 | 010114 | 7.00 | 2.75 | 9.0 |
| 1-7/16 | 040021 | ---- | 2.25 | 0.75 | 3/8 | 0.5 | | | | | | 4-7/16 | 010117 | 8.13 | 3.31 | 17.0 |
| 1-1/2 | 040022 | 456237 | 2.25 | 0.75 | 3/8 | 0.5 | | | | | | 4-15/16 | 010120 | 8.50 | 3.25 | 20.8 |
| 1-9/16 | 040023 | ---- | 2.50 | 0.81 | 3/8 | 0.7 | | | | | | 5-7/16 | 010123 | 9.00 | 3.25 | 23.0 |
| 1-5/8 | 040024 | ---- | 2.50 | 0.81 | 3/8 | 0.6 | | | | | | 5-15/16 | 010126 | 9.50 | 3.25 | 23.7 |
| 1-11/16 | 040025 | ---- | 2.50 | 0.81 | 3/8 | 0.6 | | | | | | 6 | 010127 | 10.13 | 4.06 | 35.0 |
| 1-3/4 | 040026 | 456238 | 2.75 | 0.88 | 1/2 | 0.8 | | | | | | 6-1/2 | 010128 | 11.00 | 4.25 | 41.0 |
| 1-7/8 | 040027 | ---- | 2.75 | 0.88 | 1/2 | 0.8 | | | | | | 7 | 010129 | 12.00 | 4.50 | 46.0 |
| 1-15/16 | 040028 | ---- | 3.00 | 0.88 | 1/2 | 1.0 | | | | | | 7-1/2 | 010130 | 12.94 | 4.69 | 56.0 |
| 2 | 040029 | 456239 | 3.00 | 0.88 | 1/2 | 1.0 | | | | | | 8 | 010131 | 13.50 | 4.88 | 71.0 |
| 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: Solid and Split iron collars have one set screw thru 3-1/4" bore size. 3-3/16" and larger bores have two setscrews.

NOTE: Steel is mild carbon steel.
 Stainless is 300-series stainless.
 All sizes are fitted with one setscrew.

| | | | |
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FEATURES/BENEFITS

GENERAL OPERATING CHARACTERISTICS

Though originally designed for the exacting requirements of the air handling industry, R Series SLEEVOIL pillow blocks are suitable for a wide range of industrial applications where a precision built, split, babbitted, ring-oiled bearing is required which is self aligning and quiet in operation.

SLEEVOIL pillow blocks have good 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.

For standard SLEEVOIL bearings, the shaft tolerance is +0.000" / -0.002" with a surface finish of 32 micro-inches or better.

WHERE SLEEVOIL BEARINGS ARE CURRENTLY USED

- Fans & Blowers
- Generators
- Test Stands
- Pumps
- Motors
- Dynamometers
- Compressors
- Turbines

FEATURES AND BENEFITS SLEEVOIL

- **Fully split housing** for trouble-free assembly and disassembly
- **Rugged construction** using gray iron housing and liner for durability
- **Babbitt lining** offers conformability and shaft protection
- **Completely self-aligning** as a result of ball and socket mounting between liner and base
- **Dependable oil ring lubrication** with self-contained oil supply
- **Convenient oil gage** can be positioned on either side of housing
- **Proven reliability** and dependable performance guard against catastrophic failures.
- **Extended life** is a plus with no metal-to-metal contact during operation. More than ten times the theoretical life of anti-friction bearings
- **High speed capabilities** because of self-pressurized full oil film
- **Adequate vibration dampening** is handled by the hydrodynamic oil film which absorbs shock
- **Effective heat transfer** accomplished by journal surrounded by improved coolant chambers
- **Quiet operation** accomplished by full separation of mating parts

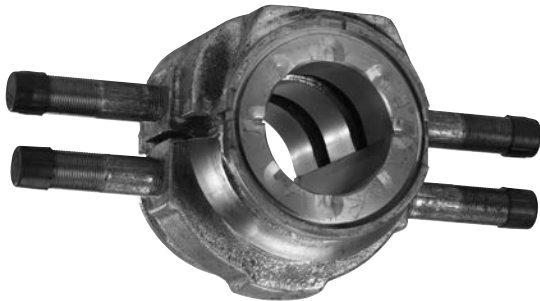


FEATURES/BENEFITS

SLEEVOIL

R Series Pillow Block

- 1-7/16" size is stocked as a Plain pillow block
- 1-11/16" - 3-7/16" sizes are stocked as Plain/Water cooled (PLWC) pillow block
- 3-15/16" - 8" sizes are stocked as Plain/Externally Cooled (PLXC) pillow blocks (standard and short series)
- PLXC Liner Only



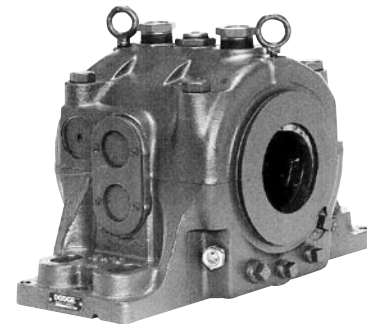
**PLXC Liner Assembly
(Plain/Externally Cooled)**



**PLWC Pillow Block
(Plain/Water Cooled)**



STL (Standard)



SSL (Short Series)

NOTE:

Water Cooled Replacement Liners (WC Repl) are also available for housings made prior to 1973 with smaller coolant pipes.



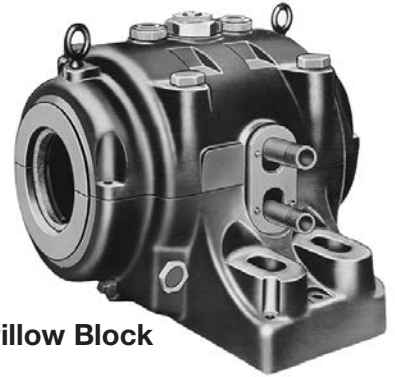
FEATURES/BENEFITS

SLEEVOIL R Series Pillow Block

- 9" - 14" sizes



Plain Pillow Block



XC Pillow Block

SLEEVOIL R Series Pillow Block

- All 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.
- 3-7/16, and larger bore housings are pre-machined for thermocouples, heaters, thermostats, vibration detector adapter kits, auxiliary seal kits, end cap kits and circulating oil kits.
- 3-15/16 - 8, water cooled replacement (WC repl) liners fit in the R series housings. WC repl liners have small pipes.
- PLXC Liners will not fit in old WC housings (prior to 1973); R Series housing is required.

SLEEVOIL RTL Series Pillow Block 3-7/16" - 12" Sizes

General Operating Characteristics

RTL pillow block blocks offer excellent radial and thrust load capacities. 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 the RTL 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. A single thrust collar is required. If a split collar is used, a shaft recess is necessary.

Coolant chambers, which cool both the thrust plates and radial load sections, are of sufficient size to 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.



RTL Series Pillow Block

- Reliable high speed operation.
- 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, heater and thermostat.



FEATURES/BENEFITS

Dodge SLEEVOIL Bearing Isolator RTL AND R-SERIES PILLOW BLOCKS

The Dodge SLEEVOIL bearing isolator is a fully split multi-labyrinth contact sealing system. The stator forms a complex labyrinth with the rotor to isolate the bearing from contamination keeping the lubricating oil clean. The tortuous labyrinth path between the stator and rotor also contains internal non-metallic seals to limit 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.



- ① Setscrew provides additional clamping to the housing
- ② Seal Stator
- ③ Housing O-ring Seals
- ④ Rotor Locating Seals
- ⑤ Shaft O-ring Seals
- ⑥ Seal Rotor
- ⑦ Expulsion port expels contaminants from seals



SLEEVOIL - NOMENCLATURE

SLEEVOIL BEARING NOMENCLATURE - R & RTL SERIES:

| | | | |
|------|-------------------------|-----|----------------------------------|
| STD | Standard Series | PB | Pillow Block |
| PLWC | Plain/Water Cooled | HSG | Housing |
| SSL | Short Series Loaded | LNR | Liner Assembly |
| STL | Standard Series Loaded | TC | Thrust Collar |
| RTL | Radial Thrust Loaded | TPK | Thrust Plate Kit |
| PL | Plain | BTP | Bronze Thrust Plates |
| PLXC | Plain/Externally Cooled | | (BTP1-Type 1 Lower Liner Only; |
| SSH | Short Series | | BTP2-Type 2 Upper & Lower Liner) |
| XC | Externally Cooled | | |

The product offering has 6-digit part numbers with listing shown throughout this catalog. Use of part numbers ensures accurate order processing.

| | | | |
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SELECTION

DODGE®



DODGE®

BALDOR®
MEMBER OF THE ABB GROUP

Dodge SLEEVOIL Application Inquiry Form

Please provide application data by mail, phone or fax:
 SLEEVOIL Bearing Application Engineering
 Germaine Grant - glgrant@baldor.com (864-281-2253 phone)
 Yogi Sharma - ysharma@baldor.com (864-281-2273 phone)

Company Name: _____
 Address: _____
 Contact Name: _____
 Customer Reference: _____
 Installation and Arrangement: _____

Date: _____
 Response Required By: _____
 Phone (_____) _____
 Fax: (_____) _____

Bearing Size in Inches:

Shaft Speed: Constant _____ RPM
 Variable Speed - Max RPM _____ Min RPM _____
 Turning Gear _____

Type of Coolant:

Plain (None) Water Air Plain - Circ Oil Water Cooled - Circ Oil

Preferred Lubricant: SAE10 SAE 20 SAE30 Other _____
 ISO 32 ISO 68 ISO 100

Expected Temperature:

Ambient Max _____ °F Min _____ °F Water Inlet Max _____ °F Min _____ °F
 Air Inlet Max _____ °F Min _____ °F Oil Inlet Max _____ °F Min _____ °F
 Air Velocity over Bearing Housing (FPM): _____


Fixed Bearing (Non-Expansion)

RTL STL RXT
 Loading: Base Cap

Fixed Bearing Radial Load: _____ Lbs
 Fixed Bearing Thrust Load: _____ Lbs

Cooling Wheel: Yes No

External Heat Source (Fan Temperature): _____ °F
 Closest Part of Bearing to Heat Source: Fixed Bearing _____ Inches

Direction of resultant load: Fixed Bearing 

Free Bearing (Expansion)

RTL STL SSL RXT
 Base Cap

Free Bearing Radial Load: _____ Lbs.

 Yes No

Free Bearing _____ Inches

Free Bearing 

Please state any unusual conditions such as shock loads changes in thrust loads, low speed requirements, hot shaft start-ups, environmental conditions (dust, chemicals gases etc):

Dodge / P.O. Box 499 / 6040 Ponders Ct. / Greenville, S.C. 29602 - 0499 / 864-297-4800

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SELECTION



SLEEVOIL

Baldor Electric

P.O. Box 499 Greenville SC 29602 -0499 (864) 297-4800
 SLEEVOIL Program Release 9.0.0 14: 32: 35 03/11/2001
 SLEEVOIL Bearing Selection Program Serial No. Page 1

Filename: Sleeve Bearing Eng / Data Sheets / 2011 / GG110311. UNV

Customer Name GG Fan
 Attention Dean King
 Phone (589) 258-2365
 Email dking@ggfan.com
 Reference Copper Power ID Fan

Selection 1 of 4 Comment:

| | | | | | | |
|---|--|---|----------------------|---|-----------------------|------------|
| ① | 3.4375 inch SLEEVOIL RTL | ② | Oil Ring Lubrication | ③ | Non-Expansion Bearing | |
| | Shaft speed | | | | 1780.0 RPM | 1603.1 FPM |
| | Radial load | | | | 1771.0 Lbs. | 95.9 PSI |
| | Thrust load | | | | 1596.0 Lbs. | 177.3 PSI |
| | Ambient temperature | | | | 100.0 Deg F | |
| | External heat gases with cooling wheel | | | | 752.0 Deg F | |
| | External heat source to bearing face | | | | 6.0 Inches | |
| | Average horizontal clearance | | | | 0.01350 Inches STD | |
| | Average vertical clearance | | | | 0.00600 Inches STD | |

⑤ >>>>>>>> Application satisfactory with ISO VG 68 <<<<<<<<<
 Calculations based on base loading
 With water cooling at 100.0 Deg F and 2.00 GPM.

| | | | | |
|---|-----------------------------------|-------|-------------|-----------------|
| ⑥ | Heat generation | Total | 3.860 HP | 9827.6 BTU / HR |
| | Radial | | 0.657 HP | |
| | Thrust | | 2.460 HP | |
| | Heat gases | | 0.743 HP | |
| | Heat dissipation by water cooling | | 3.226 HP | 8214.9 BTU / HR |
| | Heat dissipation by cooling wheel | | 0.365 HP | 930.4 BTU / HR |
| | Maximum operating temperature | | 165.0 Deg F | |
| | Radial bearing film thickness | | 1.54 Mils | |
| | Thrust bearing film thickness | | 0.72 Mils | |
| | Attitude angle | | 44.1 Deg | |

| | | | | |
|---|---|--------------------|-------|-------------------|
| ⑦ | Dynamic coefficients (X=horizontal direction, Y=vertical direction) | | | |
| | KXX = | 361864.3 LB / IN | CXX = | 1894.2 LB-S / IN |
| | KXY = | 95775.3 LB / IN | CXY = | -1332.8 LB-S / IN |
| | KYX = | -1025270.0 LB / IN | CYX = | -1332.8 LB-S / IN |
| | KYY = | 19400013.0 LB / IN | CYY = | 12178.8 LB-S / IN |

RIGID ROTOR INSTABILITY THRESHOLD IS UNBOUNDED

1. Bore size and name of SLEEVOIL bearing.
2. Method of lubrication.
3. States whether bearing is non-expansion or expansion
4. Application input data
5. Acceptance of performance per input
6. Performance output data
7. Oil film dynamic coefficients

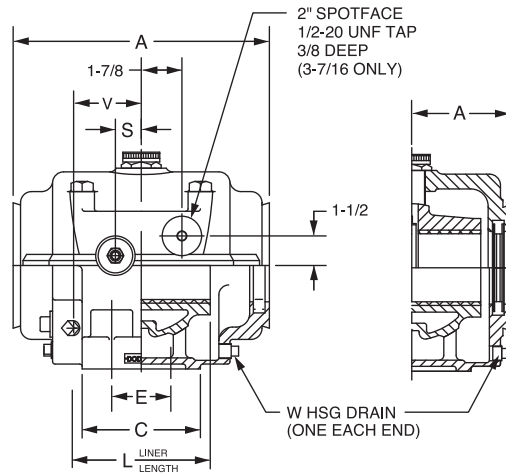
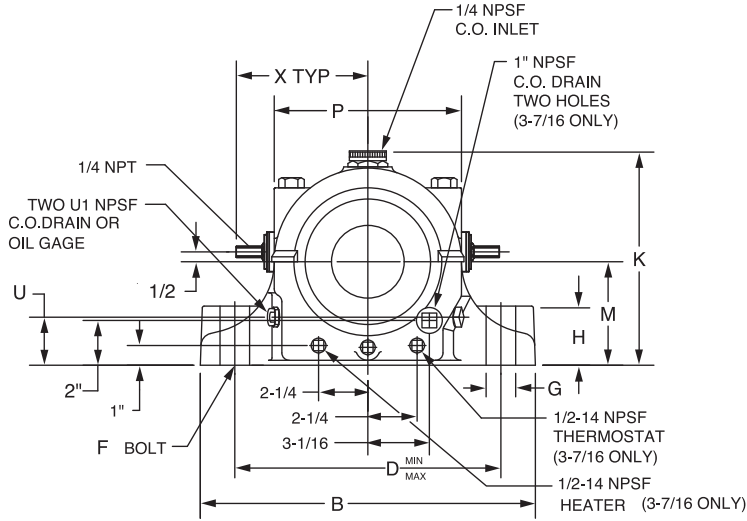
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SELECTION/DIMENSIONS

SLEEVOIL - R Series

1-7/16" THRU 3-7/16" PLAIN-WATER COOLED STANDARD AND SHORT SERIES SLEEVOIL PILLOW BLOCKS



STANDARD SERIES

SHORT SERIES

| Shaft Size | Expansion Pillow Blocks | | Expansion Pillow Blocks | | Split Thrust Collar | | Neoprene End Closure ** | | Hose Kits | | Replacement PL-WC Liner Assemblies | | | |
|------------|-------------------------|-------|-----------------------------------|-------|--|-----|-------------------------|------|-----------|-----|------------------------------------|------|----------|----|
| | STD | | SSH (Short Series Expansion Only) | | 2 Collars Required To Make A Non-Expansion Pillow Blocks | | | | | | | | | |
| | Part No. | Wt. | Part No. | Wt. | Part No. | Wt. | Part No. | Wt. | Part No. | Wt. | Part No. | Wt. | | |
| 1-7/16 | 132983 | 20.5 | .... | .... | 133245 | 0.7 | 133980 | .12 | 133344 | 0.5 | 133203 | 3.6 | | |
| 1-11/16 | 132984 | 30.7 | .... | .... | 133250 | 1.2 | 133981 | .12 | | | 133583 | 6.3 | | |
| 1-15/16 | 132985 | 31.6 | .... | .... | 133255 | 1.0 | 133982 | .12 | | | 133584 | 7.0 | | |
| 2-3/16 | 132986 | 47.8 | .... | .... | 133260 | 1.8 | 133983 | .12 | | | 133585 | 12.0 | | |
| 2-7/16 | 132987 | 65.5 | .... | .... | 133265 | 2.7 | 133984 | .12 | | | 133586 | 11.6 | | |
| 2-11/16 | 132988 ⊗ | 97.0 | .... | .... | 133270 | 4.1 | 133985 | .12 | | | 132959 ⊗ | 27.0 | | |
| 2-15/16 | 132989 ⊗ | 92.4 | 132991 ⊗ | 90.0 | 133275 | 3.8 | 133986 | .18 | | | 132950 ⊗ | 22.0 | | |
| | STL | | SSL | | | | | | | | | | | |
| 3-7/16 | 132990 ⊗ | 144.0 | 132992 ⊗ | 138.0 | 133280 | 6.2 | 133987 | 0.31 | | | | | 132951 ⊗ | 50 |



SELECTION/DIMENSIONS

SLEEVOIL - R Series

1-7/16" THRU 3-7/16" PLAIN-WATER COOLED STANDARD AND SHORT SERIES SLEEVOIL PILLOW BLOCKS

| 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 |

2-bolt base
3-7/16 Heater (434719)

** Used to close one end of pillow block. One required for sizes 1-7/16 thru 2-15/16. Two required for 3-7/16.

⊗ Pillow block and liner are pre-drilled for thermocouple (2 places)
STL & SSL are pre-drilled for accessories: thermocouple, circulating oil, vibration detector, heater and thermostat

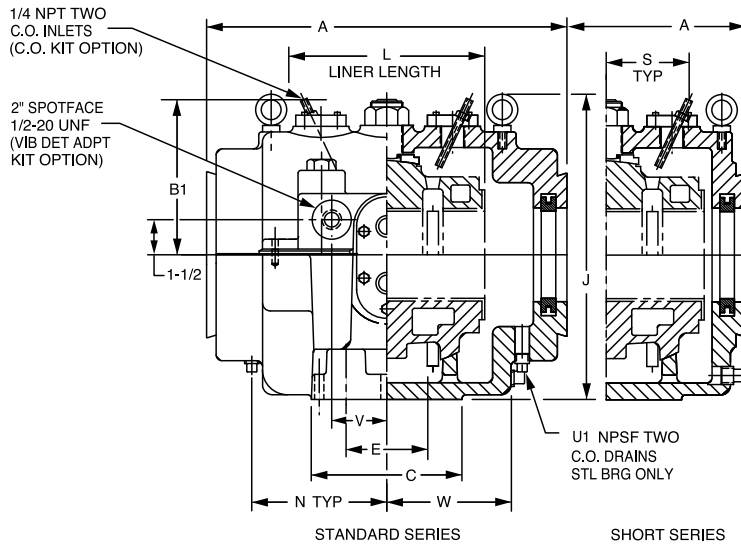
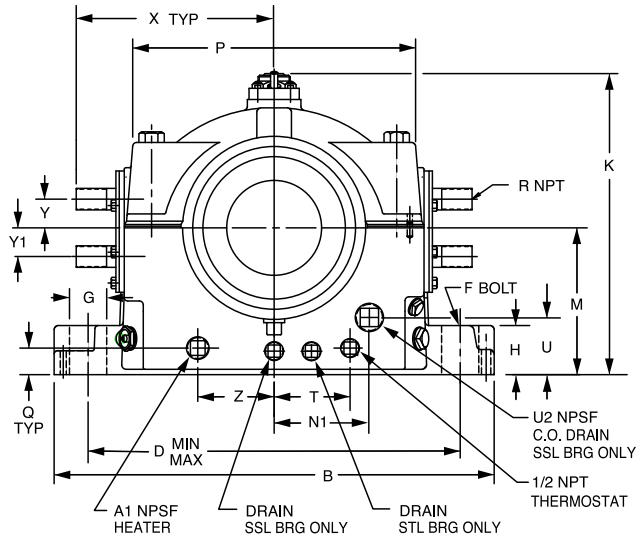
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SELECTION/DIMENSIONS

SLEEVOIL - R Series

3-15/16" THRU 8" PLAIN / EXTERNALLY COOLED STANDARD AND SHORT SERIES
SLEEVOIL PILLOW BLOCKS



| Shaft Size | Pillow Block Assemblies | | | | Split Thrust Collars | | Replacement Liner Assemblies ⊗ | | | |
|------------|-------------------------|------|-----------------------------------|------|---|------|--------------------------------|-----|------------------------------------|-----|
| | Expansion Pillow Blocks | | Expansion Pillow Blocks | | 2 Collars Required To Make A Non-Expansion STL Pillow Block | | PL-XC Externally Cooled | | WC (Prior to 1973 hsg) Replacement | |
| | STL | | SSL (Short Series Expansion Only) | | | | | | | |
| | Part No. | Wt. | Part No. | Wt. | Part No. | Wt. | Part No. | Wt. | Part No. | Wt. |
| 3-15/16 | 134200 | 201 | 134207 | 193 | 133285 | 7.2 | 132952 | 51 | 133590 | 54 |
| 4-7/16 | 134201 | 271 | 134208 | 255 | 133292 | 7.9 | 132953 | 71 | 133591 | 65 |
| 4-15/16 | 134202 | 362 | 134209 | 324 | 133293 | 11.3 | 132954 | 92 | 133592 | 91 |
| 5-7/16 | 134203 | 470 | 134210 | 462 | 133294 | 12.3 | 132955 | 130 | 133593 | 114 |
| 6 | 134204 | 598 | 134211 | 570 | 133295 | 15.3 | 132956 | 158 | 133594 | 158 |
| 7 | 134205 | 882 | 134212 | 845 | 133296 | 31.3 | 132957 | 230 | 133595 | 216 |
| 8 | 134206 | 1298 | 134213 | 1256 | 133297 | 48.7 | 132958 | 372 | 133596 | 375 |

| | | | |
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SELECTION/DIMENSIONS

SLEEVOIL - R Series

3-15/16" THRU 8" PLAIN / EXTERNALLY COOLED STANDARD AND SHORT SERIES
SLEEVOIL PILLOW BLOCKS

| Shaft Size | Optional Accessories | | | | | | | | | | Pipe Grommet Kits > | |
|------------|------------------------|------|----------------------|------|--------------------------------|-----|------------------------------|-----|---------------------------|-----|---------------------|-----|
| | Auxiliary Seal Kits ## | | Housing End Cap Kits | | Heater / Thermostat * 120 Volt | | Circulating Oil Inlet Kits > | | Neoprene End Closures ⊗ ⊗ | | Part No. | Wt. |
| | Part No. | Wt. | Part No. | Wt. | Part No. | Wt. | Part No. | Wt. | Part No. | Wt. | | |
| 3-15/16 | 432181 | 6.4 | 432190 | 6.1 | 434721 | 1.0 | 432153 | 2 | 133988 | .3 | 132192 | 1.6 |
| 4-7/16 | 432184 | 7.0 | 432193 | 6.8 | 434721 | 1.0 | 430198 | 2 | 133989 | .4 | 132192 | 1.6 |
| 4-15/16 | 432187 | 7.5 | 432196 | 7.3 | 434721 | 1.0 | 430198 | 2 | 133990 | .5 | 132193 | 2.4 |
| 5-7/16 | 133932 | 12.4 | 132546 | 11.6 | 434721 | 2.0 | 430155 | 2 | 133991 | .6 | 132193 | 2.4 |
| 6 | 133933 | 14.8 | 132547 | 10.6 | 434725 | 2.5 | 430155 | 2 | 133992 | .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 | | B | C | D (Min.-Max.) | E | F Dia. Bolt | G | H | | J | |
|------------|--------|--------|--------|--------|-----------------|-------|-------------|-------|-------|-------|---------|--------|
| | STL | SSL | | | | | | | STL | SSL | STL | 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 | L | M | N | | P | Q | R Pipe | | T | | U | U1 | | U2 | |
|------------|----------|----|--------|---------|-------|--------|--------|--------|----------|-------|-------|---------|-------|-------|----|--|
| | | | | STL | SSL | | | PLXC | WC Rep't | STL | SSL | | STL | SSL | | |
| | | | | STL | 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 | W | X | Y | | Y1 | | Z | A1 | B1 |
|------------|-------|-------|----------|-------|----------|-------|----------|-------|-------|--------|
| | | | | PLXC | WC Rep't | PLXC | WC Rep't | | | |
| 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

> One required per pillow block

* 220 volt heaters available. See Page B18-26.

** 2-1/4" on STL; 2" on SSL

⊗ To differentiate between XC and water cooled replacement liners see "R" dimensions (pipe size)

⊗ ⊗ Two required per 3-15/16 thru 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

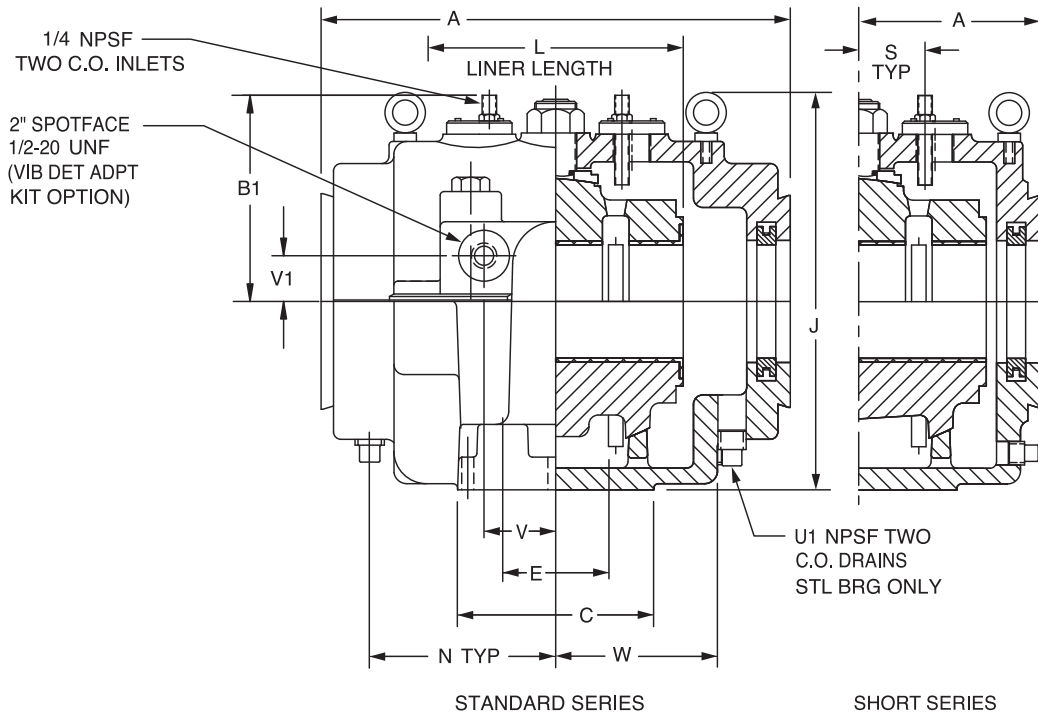
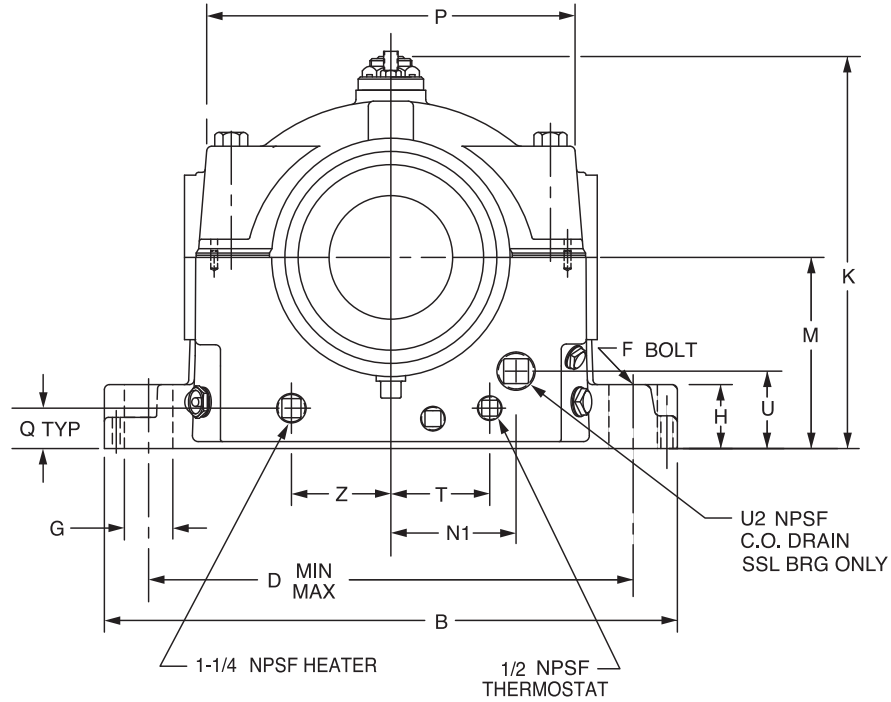
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SELECTION/DIMENSIONS

SLEEVOIL - R Series

9", 10", 12" & 14" PLAIN SLEEVOIL PILLOW BLOCKS





SELECTION/DIMENSIONS

SLEEVOIL - R Series 9", 10", 12" & 14" PLAIN SLEEVOIL PILLOW BLOCKS

| Shaft Size | Plain Expansion Pillow Blocks | | | | Split Thrust Collars | |
|------------|-------------------------------|------|-----------------------------------|------|--|-----|
| | STL | | SSL (Short Series Expansion Only) | | 2 Collars Required To Make A Non-Expansion STL Pillow Blocks | |
| | Part No. | Wt. | Part No. | Wt. | Part No. | Wt. |
| 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 No. | Wt. | Part No. | Wt. | Part No. | Wt. | Part No. | Wt. | Part No. | Wt. | Part No. | Wt. |
| 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 & SSL | STL & SSL | STL & SSL | STL & SSL | STL & SSL | STL & 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 | Wt. (lbs.) | |
|------------|-----------|-----------|-----------|--------|-------|-----------|-----------|-------|------|--------|-------|-------|-----------|------------|------|
| | STL & SSL | STL & SSL | STL & SSL | STL | SSL | STL & SSL | STL & SSL | STL | SSL | SSL | STL | | STL & 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 & SSL | STL & 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 B18-26.

All housings are pre-machined for accessories; thermocouples, circulating oil vibration detector, heater and thermostat

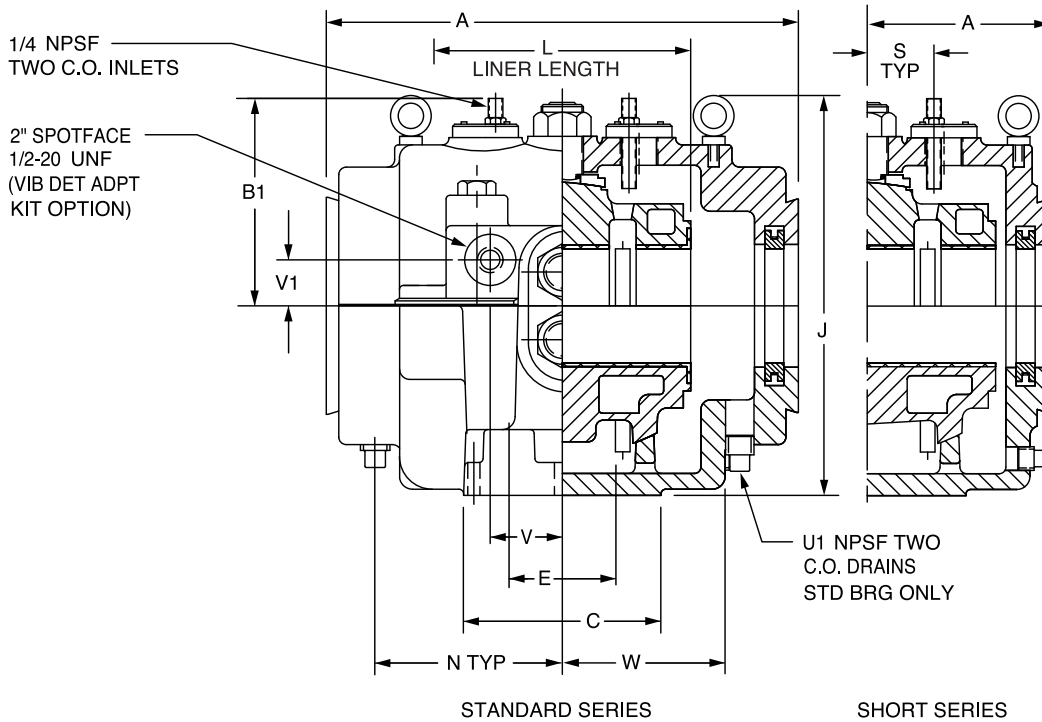
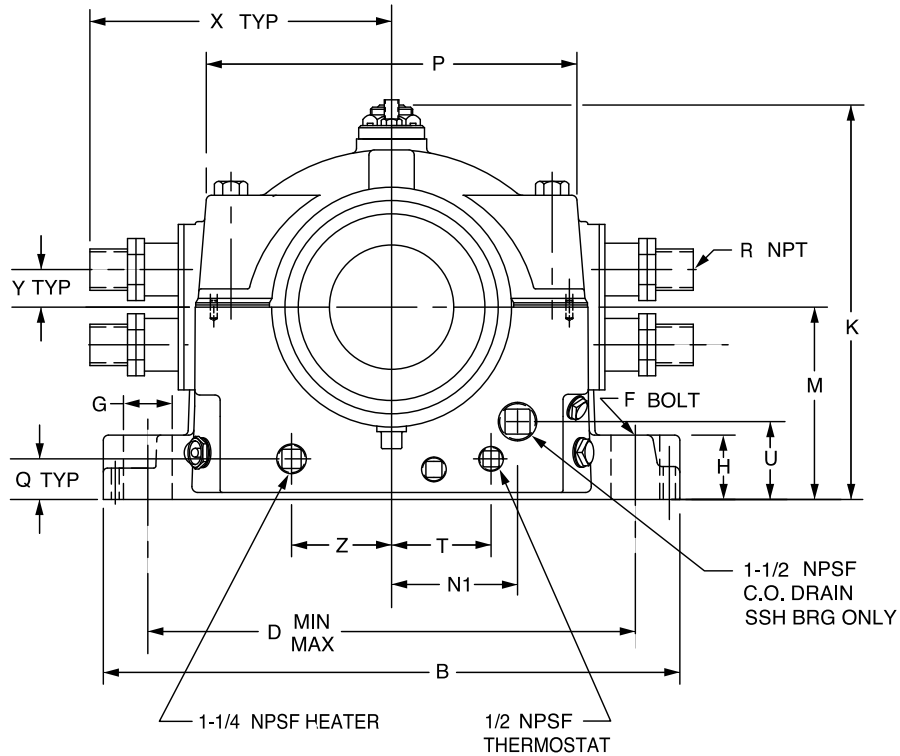
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|---------------------------------|---|-------------------------|----------------------------|
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SELECTION/DIMENSIONS

SLEEVOIL - R Series

9", 10", 12" XC SLEEVOIL PILLOW BLOCKS



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SELECTION/DIMENSIONS

SLEEVOIL - R Series 9", 10", 12" XC SLEEVOIL PILLOW BLOCKS

| Shaft Size | Expansion Pillow Blocks XC (Externally Cooled) (Short Series Expansion Only) | | | | 2 Collars Required To Make A Non-Expansion STL Pillow Block | |
|------------|--|------|----------|------|---|------|
| | STL-XC | | SSL-XC | | XC Split Thrust Collars | |
| | Part No. | Wt. | Part No. | Wt. | Part No. | Wt. |
| 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 No. | Wt. | Part No. | Wt. | Part No. | Wt. | Part No. | Wt. | Part No. | Wt. | Part No. | Wt. |
| 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 & 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 & SSL | XC | STL & SSL | STL & SSL | SSL | STL | STL & SSL | STL & 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 & 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 end
> One required per pillow block

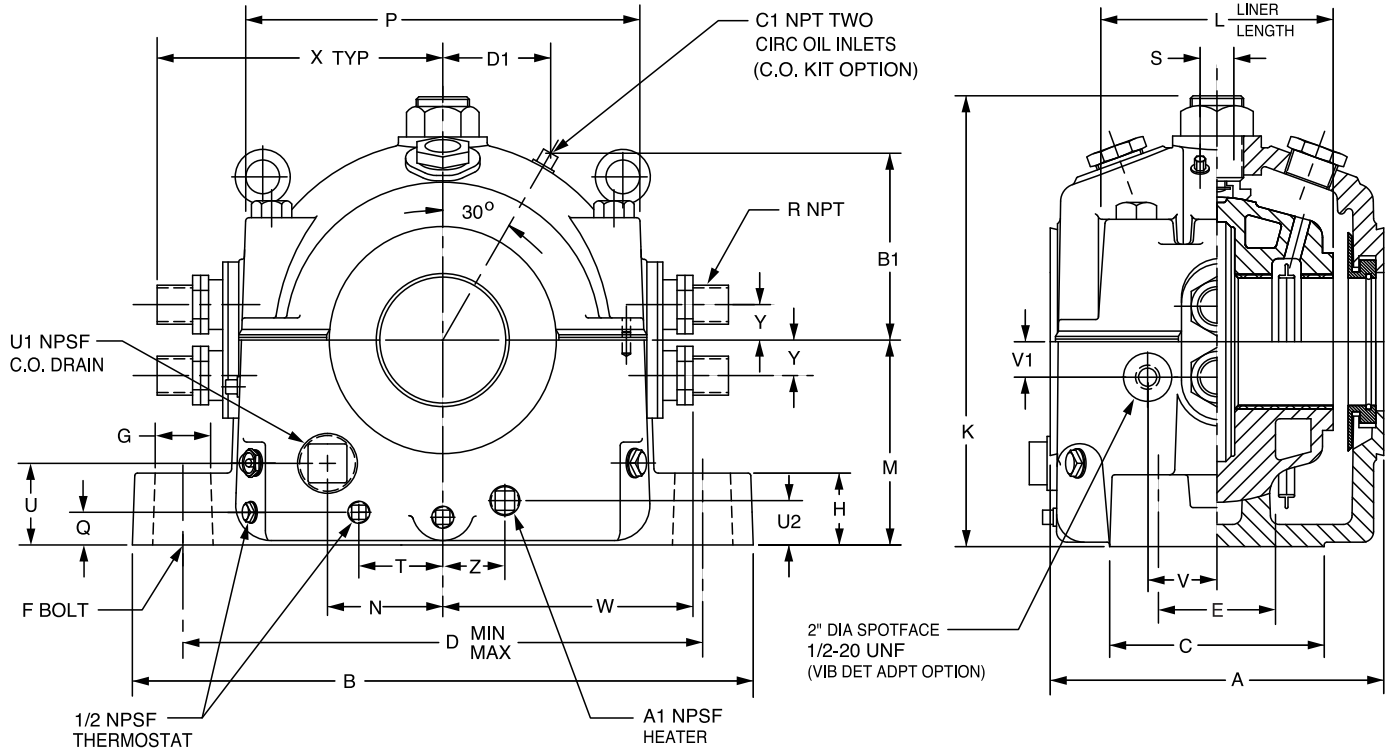
⊗ All housings are pre-machined for accessories; thermocouples, circulating oil vibration detector, heater and thermostat
x Assembled-to-order, Not "L" version
* 220 volt heaters available. See page B18-26.

| | | | |
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SELECTION/DIMENSIONS

SLEEVOIL - RTL Series 3-7/16" THRU 12" RTL SLEEVOIL PILLOW BLOCKS



| 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 * | |
|------------|-------------------------|------|---|------|-------------------------|------|-------------------------|------|----------------------|------|-----------------------|-----|
| | | | Thrust Plate Kits | | Split Thrust Collar ⊗ ⊗ | | | | | | | |
| | Part No. | Wt. | Part No. | Wt. | Part No. | Wt. | Part No. | Wt. | Part No. | Wt. | Part No. | Wt. |
| 3-7/16 | 132474 | 190 | 137101 | 2.5 | 132151 | 2.6 | 132811 | 4.9 | 132542 | 5.3 | 434721 | 1.0 |
| 3-15/16 | 132475 | 230 | 137102 | 4.3 | 132152 | 4.2 | 432181 | 6.4 | 432190 | 6.1 | 434725 | 2.5 |
| 4-7/16 | 132476 | 300 | 137103 | 5.4 | 132153 | 5.6 | 432184 | 7.0 | 432193 | 6.8 | 434725 | 2.5 |
| 4-15/16 | 132477 | 425 | 137104 | 6.9 | 132154 | 8.7 | 432187 | 7.5 | 432196 | 7.3 | 434727 | 3.0 |
| 5-7/16 | 132383 | 500 | 137105 | 10.2 | 132155 | 10.8 | 133932 | 12.4 | 132546 | 11.6 | 434727 | 3.0 |
| 6 | 132384 | 825 | 137106 | 12.7 | 132156 | 15.9 | 133933 | 14.8 | 132547 | 10.6 | 434727 | 3.0 |
| 7 | 132385 | 978 | 137107 | 17.6 | 132157 | 22.4 | 133937 | 19.0 | 132548 | 13.5 | 434729 | 4.0 |
| 8 | 132386 | 1310 | 137108 | 23.1 | 132158 | 34.5 | 133938 | 24.9 | 132549 | 15.5 | 434729 | 4.0 |
| 9 | 132387 | 1650 | 137109 | 42.6 | 132159 | 45.9 | 132814 | 23.1 | 132564 | 15.9 | 434729 | 4.0 |
| 10 | 132388 | 2150 | 137110 | 52.7 | 132160 | 59.8 | 132816 | 24.2 | 132565 | 16.4 | 434729 | 4.0 |
| 12 | 132389 | 3500 | 137111 | 74.1 | 132161 | 96.4 | 132819 | 40.0 | 132566 | 25.0 | 434735 | 7.5 |

* 220 volt heaters available. See page B18-26.

| | | | |
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SELECTION/DIMENSIONS

SLEEVOIL - RTL Series 3-7/16" THRU 12" RTL SLEEVOIL PILLOW BLOCKS

Plummer Blocks

Sleeve Bearings

SLEEVOIL

Take-Up Frames

Engineering

Part Number Index

Keyword Index

| Shaft Size | Circulating Oil Inlet Kits > | | Replacement Liner Assemblies | | A | B | C | D (Max.-Min.) | E | F Dia. Bolt | G | H | K |
|------------|------------------------------|-----|------------------------------|------|--------|--------|--------|-----------------|-------|-------------|-------|-------|----------|
| | Part No. | Wt. | Part No. | Wt. | | | | | | | | | |
| 3-7/16 | 132203 | 2 | 132420 | 47 | 10 | 18-3/4 | 6 | 16-1/8 - 14-7/8 | 3 | 3/4 | 1-1/2 | 2 | 12-9/16 |
| 3-15/16 | | | 132421 | 65 | 10-3/4 | 20-3/4 | 7 | 18 - 16-1/2 | 3-1/2 | 7/8 | 1-3/4 | 2-1/4 | 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 | 2 | 2-1/2 | 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 | 2 | 2-3/4 | 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 | 2-1/4 | 3-1/4 | 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 | 2-1/2 | 3-1/2 | 20-1/8 |
| 7 | | | 132426 | 257 | 18 | 33 | 12-1/2 | 28-7/8 - 26-1/8 | 6-1/2 | 1-1/2 | 3 | 4 | 22-3/8 |
| 8 | | | 132427 | 412 | 19-3/4 | 38 | 14 | 33-1/8 - 29-7/8 | 7-1/2 | 1-3/4 | 3-1/2 | 4-1/2 | 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 | 3-1/2 | 5 | 28-1/4 |
| 10 | | | 132429 | 955 | 24-1/2 | 47-1/2 | 17 | 41-7/8 - 38-1/8 | 9 | 2 | 4 | 6 | 33-7/8 |
| 12 | | | 132430 | 1405 | 29 | 49 | 18 | 43-5/8 - 41-7/8 | 10 | 2 | 3 | 6-1/2 | 37 |

| Shaft Size | L | M | N | P | Q | R | S | T | U | U1 | U2 |
|------------|--------|--------|---------|--------|-------|-------|-------|---------|---------|-------|-------|
| 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 |
|------------|-------|-------|----------|---------|-------|--------|-------|---------|-----|---------|
| 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 end

> One required per pillow block

* 220 volt heaters available. See page B18-26.

⊗⊗ For recessed shaft

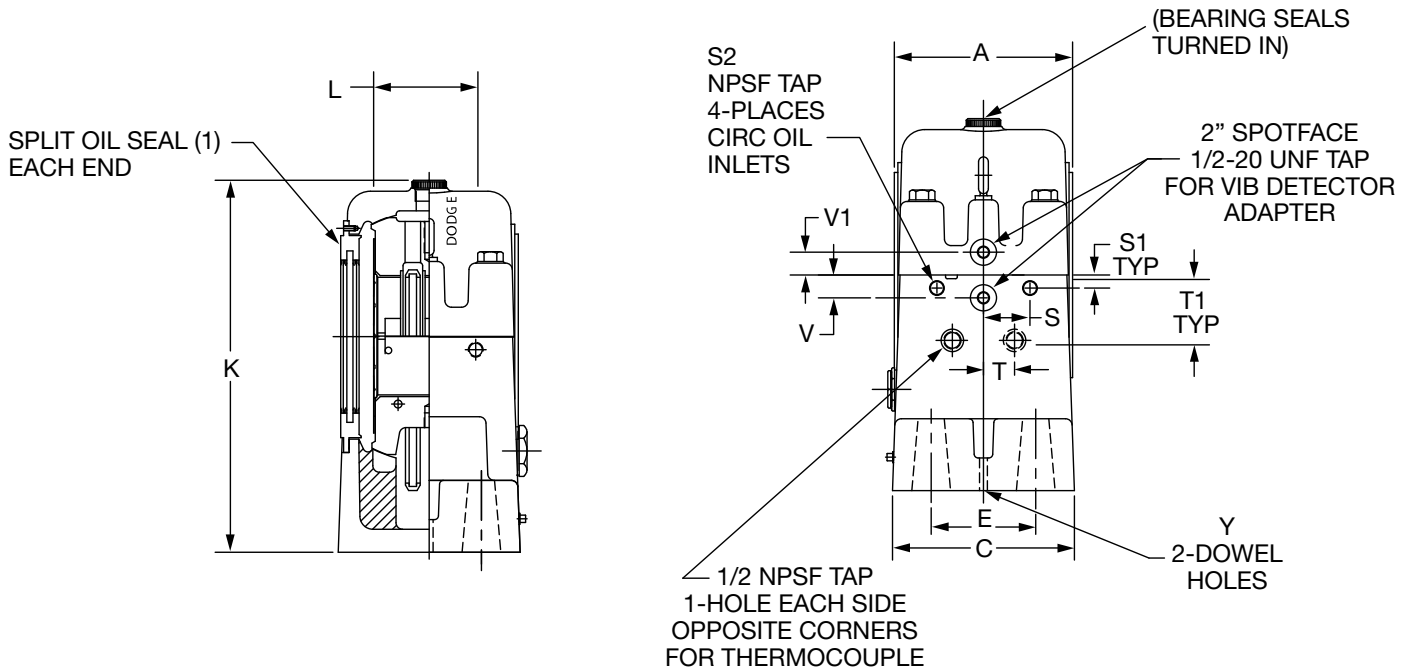
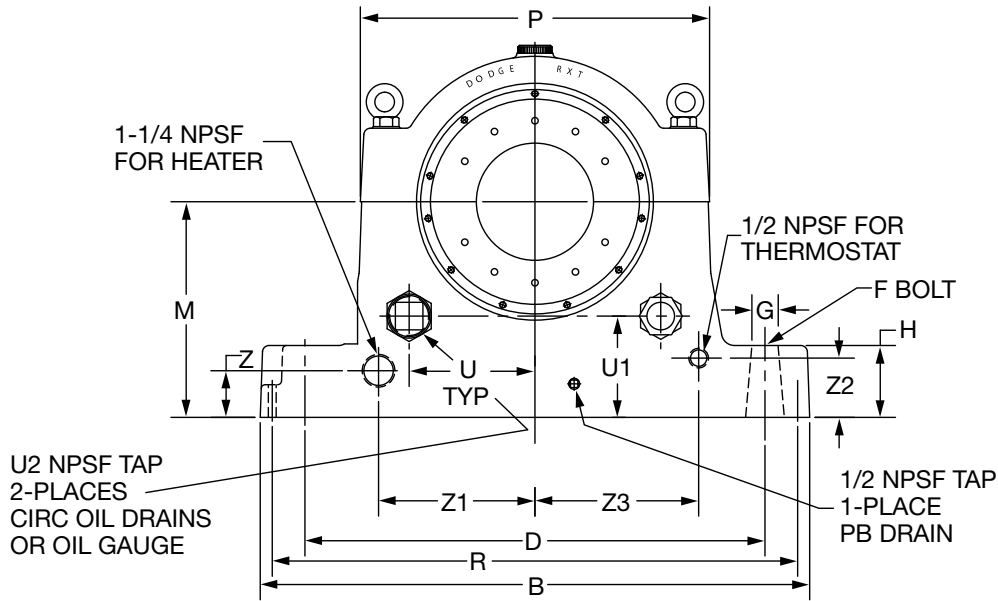
All sizes are pre-machined for accessories; thermocouples, circulating oil, vibration detector, heater and thermostat

| | | | |
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SELECTION/DIMENSIONS

SLEEVOIL - RXT Series 6" THRU 14" RXT SLEEVOIL PILLOW BLOCKS





SELECTION/DIMENSIONS

SLEEVOIL - RXT Series 6" THRU 14" RXT SLEEVOIL PILLOW BLOCKS

| Size | For Shaft | Oil (Gal.) | A | B | C | D | E | F Dia. Bolt | G | H | K | L | M | P | R |
|------|------------|------------|--------|--------|--------|--------|-------|-------------|-------|-------|---------|-------|--------|--------|--------|
| 6 | 6, 7 | 3-1/4 | 12 | 34-1/2 | 12 | 29-1/2 | 6-1/2 | 1-1/2 | 2-5/8 | 4-1/2 | 23-1/16 | 6-1/2 | 13-1/4 | 21-1/2 | 31-1/4 |
| 8 | 8, 9 | 5-1/8 | 14-1/4 | 41-3/4 | 14-5/8 | 36 | 8 | 1-3/4 | 2-7/8 | 4-1/2 | 27-1/4 | 8-1/2 | 15-1/2 | 26-3/4 | 38 |
| 10 | 10, 12, 14 | 7-3/4 | 17-1/4 | 49 | 17-3/4 | 42-3/4 | 10 | 2 | 3-1/8 | 5-3/8 | 31-5/8 | 11 | 17-3/4 | 32 | 44 |

| Size | For Shaft | S | S1 | S2 | T | T1 | U | U1 | U2 | V | V1 | Y | Z | Z1 | Z2 | Z3 |
|------|------------|--------|-------|-----|-------|-------|--------|-------|-------|-------|-----|-------|-------|--------|-------|--------|
| 6 | 6, 7 | 2-7/8 | 15/16 | 3/4 | 2 | 4 | 8-1/4 | 6 | 2-1/2 | 1-3/4 | ... | 23/32 | 2-1/8 | 5-1/4 | 3-1/4 | 9-1/4 |
| 8 | 8, 9 | 3-5/8 | 15/16 | 3/4 | 2-3/8 | 5 | 10-1/8 | 6-1/2 | 2-1/2 | 1-3/4 | ... | 23/32 | 3-1/8 | 11-1/2 | 4 | 11-3/4 |
| 10 | 10, 12, 14 | 4-9/16 | 1-1/4 | 1 | 3 | 6-1/2 | 12 | 7-5/8 | 2-1/2 | 2 | ... | 23/32 | 3 | 14 | 4-1/8 | 14-1/2 |

| Size | For Shaft | Housing ▲▲ | | S Liner Part No. | T Liner Part No. ++ | Liner Wt. | Split Thrust Collar Kit * | Recessed Shaft Split Thrust Collar Kit >> | Split Seal Ring ◆ | |
|------|-----------|------------|------|------------------|---------------------|-----------|---------------------------|---|-------------------|------------|
| | | Part No. | Wt. | | | | | | Part No. | Fits Shaft |
| 6 | 6 | 134503 | 740 | 134716 | 134516 | 195 | 134886 | 432276 | 134869 | 6 |
| | 7 | | | 134717 | 134517 | | 134887 | 432277 | 134870 | 7 |
| | | | | | | | | 134871 | 10 | |
| 8 | 8 | 134504 | 1091 | 134718 | 134518 | 353 | 134888 | 432165 | 134872 | 8 |
| | 9 | | | 134719 | 134519 | | 134889 | 432278 | 134873 | 9 |
| | | | | | | | | 134874 | 12 | |
| 10 | 10 | 134505 | 2126 | 134720 | 134520 | 800 | 134890 | 432279 | 134875 | 10 |
| | 12 | | | 134721 | 134521 | | 134891 | 432448 | 134876 | 12 |
| | 14 | | | 134779 | | | | 134877 | 14-1/2 | |

Order housings, liners, and seals separately.
#6, 8, & 10 bearing sizes have two oil rings.

▲▲ Housings include oil ring(s), sight gauge, pipe plugs, and eye bolts.

++ When ordering the T liner, integral thrust collars are required. Contact Dodge for exact shaft dimensions required per #C14203.

* For use with S liner only.
Back-up shoulders are required. Contact Dodge for shaft dimensions per #C11235.

>> For use with S liner only.
Recessed shaft grooves are required.
Contact Dodge for shaft dimensions per #B48371.

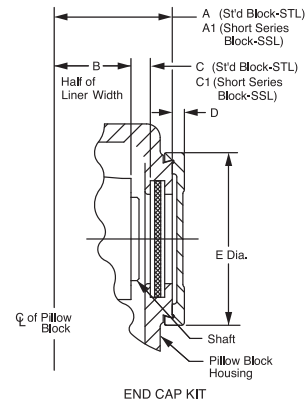
◆ One seal required for each end of housing

| | | | |
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MODIFICATIONS/ACCESSORIES



SLEEVOIL Traditional (Inch) 3-7/16" THRU 14" END CAP KITS SLEEVOIL ACCESSORIES



| Bore Size | Pillow Block Style | End Cap Kits | | | | A STL | A1 SSL | B # | C # STL | C1 # SSL |
|-----------|--------------------------------|---------------|------|-----|---------|--------|--------|-------|---------|----------|
| | | Part Number | Wt. | 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 | PLXC, 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 |  |  |  |  | ..... | 10-1/2 | 8 | ..... | 1-5/32 |
| | Plain |  |  |  |  | ..... | 11-5/8 | 9 | ..... | 1-9/32 |
| | 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 | ..... |

| Bore Size | Pillow Block Style | End Cap Kits | | | | A | B # | C # |
|-----------|--------------------|---------------|------|-----|---------|--------|--------|---------|
| | | Part Number | Wt. | D | E | | | |
| 3-7/16 | RTL | 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 | | 432193 | 6.8 | 1/2 | 8-3/4 | 5-7/8 | 4 | 1-1/32 |
| 4-15/16 | | 432196 | 7.3 | 1/2 | 9-1/8 | 6-3/8 | 4-7/16 | 1-3/32 |
| 5-7/16 | | 132546 | 11.6 | 1/2 | 10-1/2 | 7 | 5 | 1-5/32 |
| 6 | | 132547 | 10.6 | 1/2 | 11-1/2 | 8 | 5-7/16 | 1-11/32 |
| 7 | | 132548 | 13.5 | 1/2 | 12-9/16 | 9 | 6-1/4 | 1-17/32 |
| 8 | | 132549 | 15.5 | 1/2 | 14-1/2 | 9-7/8 | 7-1/16 | 1-19/32 |
| 9 | | 132564 | 15.9 | 1/2 | 14-1/2 | 11-3/8 | 8-1/8 | 2-1/32 |
| 10 | | 132565 | 16.4 | 1/2 | 14-1/2 | 12-1/4 | 8-7/8 | 2-1/32 |
| 12 | | 132566 | 26 | 1/2 | 18-3/4 | | | |

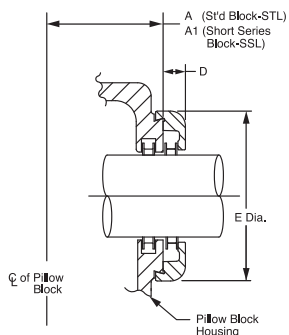
B+C (OR B+C1) = max. shaft penetration from center line of pillow block

| | | | |
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MODIFICATIONS/ACCESSORIES

SLEEVOIL Traditional (Inch) 3-7/16" THRU 14" AUXILIARY SEAL KITS SLEEVOIL ACCESSORIES



AUXILIARY SEAL KIT



| Bore Size | Pillow Block | Auxiliary Seal Kits | | | | A STL | A1 SSL |
|-----------|--------------------------------|---------------------|--------|--------|---------|--------|--------|
| | Style | Part Number | Wt. | 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 | PLXC, 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 | 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 |  |  |  |  | ..... | 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 | ..... |

| Bore Size | Pillow Block | Auxiliary Seal Kits | | | | A |
|-----------|--------------|---------------------|------|--------|---------|--------|
| | Style | Part Number | Wt. | D | E | |
| 3-7/16 | RTL | 132811 | 4.9 | 15/16 | 7-1/8 | 5 |
| 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 |

| | | | |
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MODIFICATIONS/ACCESSORIES

SLEEVOIL - RTL Series 3-7/16" thru 12" RTL Replacement Part Kits

| Shaft Size | Part Number | RTL Seal Kit |
|------------|---------------|--------------------------|
| 3-7/16 | 435001 | 3-7/16 SLV RTL Seal Kit |
| 3-15/16 | 435002 | 3-15/16 SLV RTL Seal Kit |
| 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 Alumimun Clamp Seals, (2) O-Rings & Gasket Eliminator

| Shaft Size | Part Number | 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 |

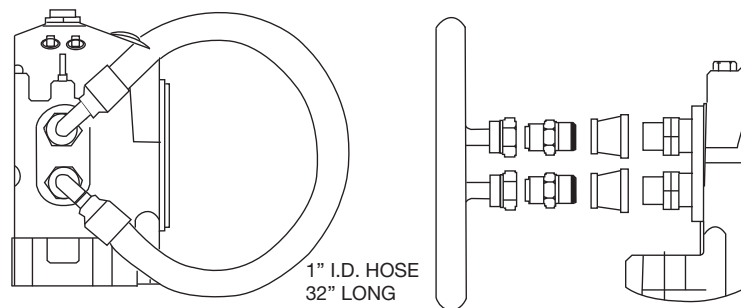
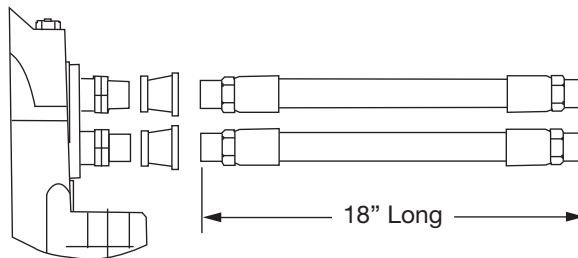
Each kit contains (2) grommets & grommet plates, (4) Lock Tubes, (8) Lock Nuts, (4) Coolant Pipes & Gasket Eliminator

| Shaft Size | Part Number | RTL Plunger Screw Kit |
|------------|---------------|------------------------------------|
| 3-7/16 | 435012 | 3-7/16" SLV RTL Plunger Screw Kit |
| 3-15/16 | 435012 | 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 & Plunger Screw Locknut

| Shaft Size | Part Number | RTL - 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.



Coolant Hose Kit illustrated here.

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MODIFICATIONS/ACCESSORIES

SLEEVOIL - R-Series Replacement Part Kits

| Shaft Size | Part Number | R-Series - SLEEVOIL Dust Seal Kits |
|------------|---------------|------------------------------------|
| 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 Dust Seal Kit |
| 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 & Gasket Eliminator

* Kit contains (4) seal retainers

| Shaft Size | Part Number | R-Series - SLEEVOIL Plunger Screw Kit |
|------------|---------------|---------------------------------------|
| 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 & Plunger Screw Locknut



PL-XC grommets and grommet plates pictured here.

| Shaft Size | Part Number | R-Series - Coolant Hose Kit |
|------------|---------------|---------------------------------------|
| 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.

| Shaft Size | Part Number | R-Series - SLEEVOIL Grommet Kit |
|------------|---------------|---------------------------------|
| 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 & XC Grommet Kits only & Gasket Eliminator

| | | | |
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MODIFICATIONS/ACCESSORIES

SLEEVOIL - Heater / Thermostat

| Shaft Size | Part Number | RTL - Combination Heater / Thermostat - 110V |
|------------|---------------|--|
| 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 | 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

* Requires listed heater part number and thermostat p/n 133116

Heater / thermostat combo includes LED current indicating light and NEMA 4 LB enclosure

2-7/16", 2-11/16" and 2-15/16" heater (132834 or 434835) to be used with thermostat part 133116. Combination heater/thermostat is not available for small bore Sleeveoil bearings.



| Shaft Size | Part Number | RTL - Combination Heater / Thermostat - 220V |
|------------|---------------|--|
| 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 - 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

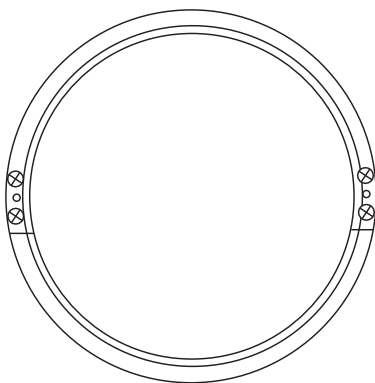
* Requires listed heater part number and thermostat p/n 133116



MODIFICATIONS/ACCESSORIES

SLEEVOIL - R Series and RTL Trapezoidal Oil Ring 1-7/16" Thru 14" Trapezoidal Section Oil Ring

- Lower operating temperatures
- Designed for existing and new Sleeveoil bearings
- Interchangeable with T-section oil ring
- Increases oil delivered to the shaft
- Increases bearing maximum operating speed range
- Increases oil ring life



| Plain | PLXC or WC Repl. | RTL | T-Section Number | Trapezoidal Oil Ring Number |
|---------|------------------|---------|------------------|-----------------------------|
| 1-7/16 | | | 130063 | 135700 |
| 1-11/16 | 1-11/16 | | 130044 | 135704 |
| 1-15/16 | 1-15/16 | | 130045 | 135708 |
| 2-3/16 | 2-3/16 | | 130047 | 135712 |
| 2-7/16 | 2-7/16 | | 130049 | 135716 |
| 2-11/16 | 2-11/16 | | 130050 | 135720 |
| 2-15/16 | 2-15/16 | | 130051 | 135724 |
| 3-7/16 | 3-7/16 | | 130054 | 135728 |
| 3-15/16 | 3-15/16 | 3-7/16 | 130056 | 135290 |
| 4-7/16 | 4-7/16 | 3-15/16 | 130057 | 135291 |
| 4-15/16 | 4-15/16 | 4-7/16 | 130058 | 135292 |
| 5-7/16 | 5-7/16 | 4-15/16 | 130059 | 135293 |
| 6 | 6 | 5-7/16 | 130060 | 135294 |
| | | 6 | 130078 | 135295 |
| 7 | 7 | | 130062 | 135136 |
| 8 | 8 | 7 | 130065 | 135296 |
| 9, 10 | | 8 | 130066 | 135297 |
| | 9 | | 130067 | 135137 |
| | | 9 | 130068 | 135298 |
| | 10 | | 130064 | 135138 |
| 12 | | | 130070 | 135732 |
| | 12 | 10 | 130073 | 135299 |
| 14 | | | 130069 | 135736 |
| | | 12 | 130071 | 135135 |

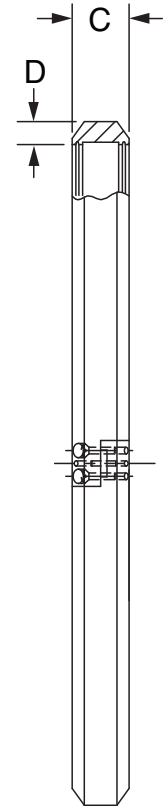
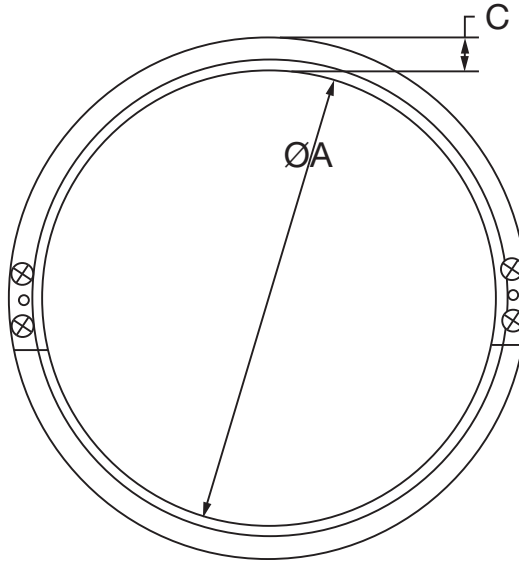
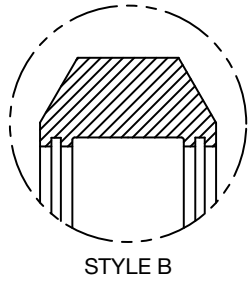
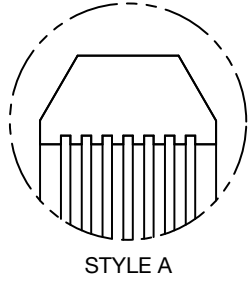
Note: T-section oil rings will be discontinued and superseded to the Trapezoidal oil rings as inventory is depleted.

| | | | |
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MODIFICATIONS/ACCESSORIES

SLEEVOIL RXT Pillow Blocks 2-15/16" THRU 12" Trapezoidal Section Oil Ring SLEEVOIL ACCESSORIES

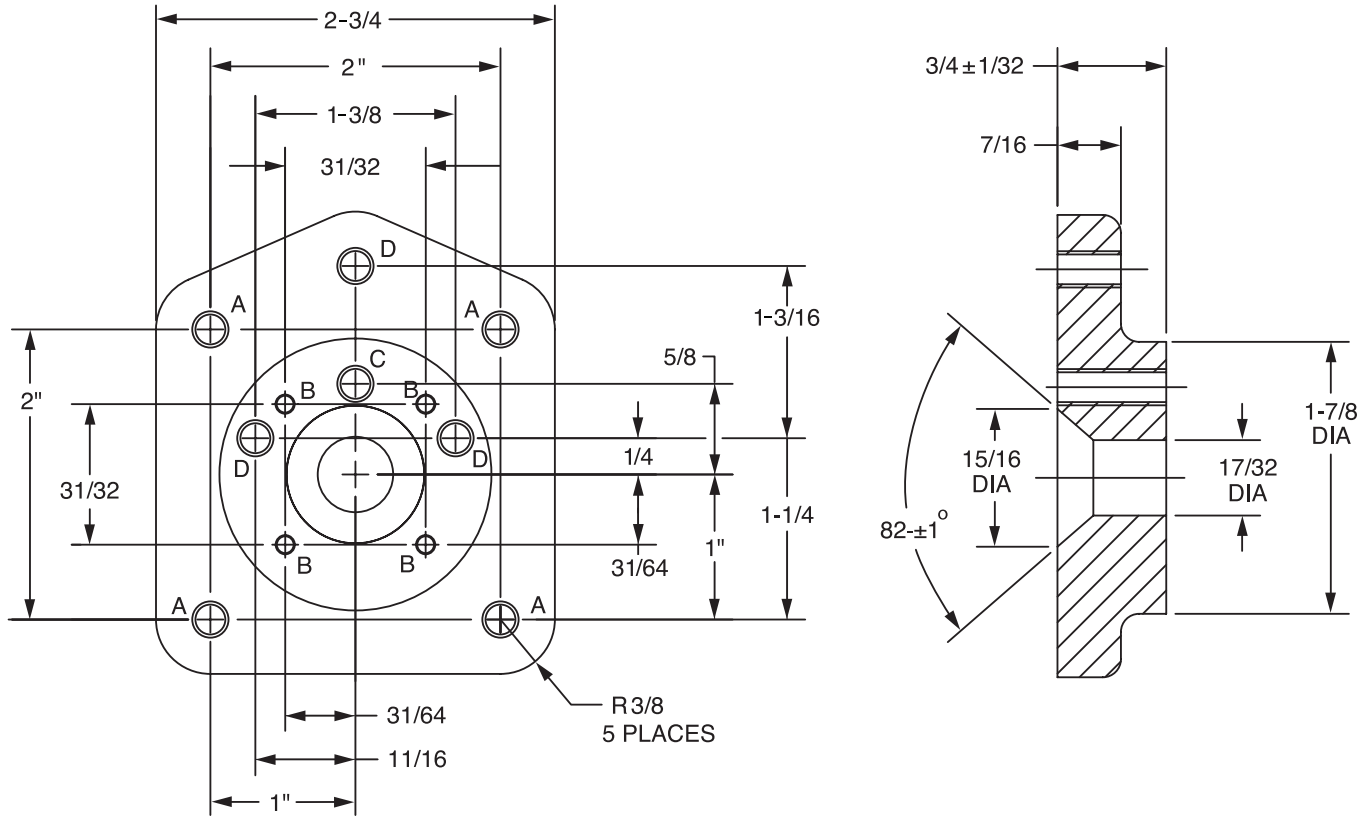


| Ring No. | Shaft Size | Part Number | WT. (Lbs) | Style | Ø A | Ø B | C | D |
|----------|-------------------|-------------|-----------|-------|--------|--------|--------|------|
| 3 | 2-15/16 3-7/16 | 134796 | 3.38 | A | 6-3/4 | 7-3/4 | 1 | 1/2 |
| 4 | 3-15/16 4-7/16 | 134798 | 4.10 | A | 8-1/4 | 9-3/8 | 1-9/64 | 9/16 |
| 5 | 4-15/16 5-7/16 | 134800 | 5.21 | A | 10-5/8 | 11-3/4 | 1-9/64 | 9/16 |
| 6 | 6 7 | 134803 | 5.65 | B | 12-1/2 | 13-5/8 | 1-9/64 | 9/16 |
| 8 | 8 9 | 134806 | 6.89 | B | 15-1/4 | 16-3/8 | 1-9/64 | 9/16 |
| 10 | 10 12 | 134809 | 8.25 | B | 18-1/4 | 19-3/8 | 1-9/64 | 9/16 |



MODIFICATIONS/ACCESSORIES

SLEEVOIL VIBRATION DETECTOR ADAPTER KIT PART NUMBER 430153



Vibration Detector Adapter Kit

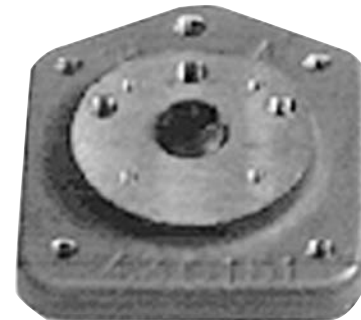
Part Number 430153

SLEEVOIL Accessories

- (A) Hole 5 (.2055) Dia. Drill Thru 1/4-20 Tap Thru - A30935
- (B) Hole #32 (.116) Dia. Drill Thru 6-32 Tap Thru - A30936
- (C) Hole 7/32 Dia. Drill Thru 1/4-28 Tap Thru - A30937
- (D) Hole 5 (.2055) dia. Drill Thru 1/4-20 Tap Thru - A30938

Blank Vibration Detector Adapter Kit

Part Number 433326



Plummer Blocks

Sleeve Bearings

SLEEVOIL

Take-Up Frames

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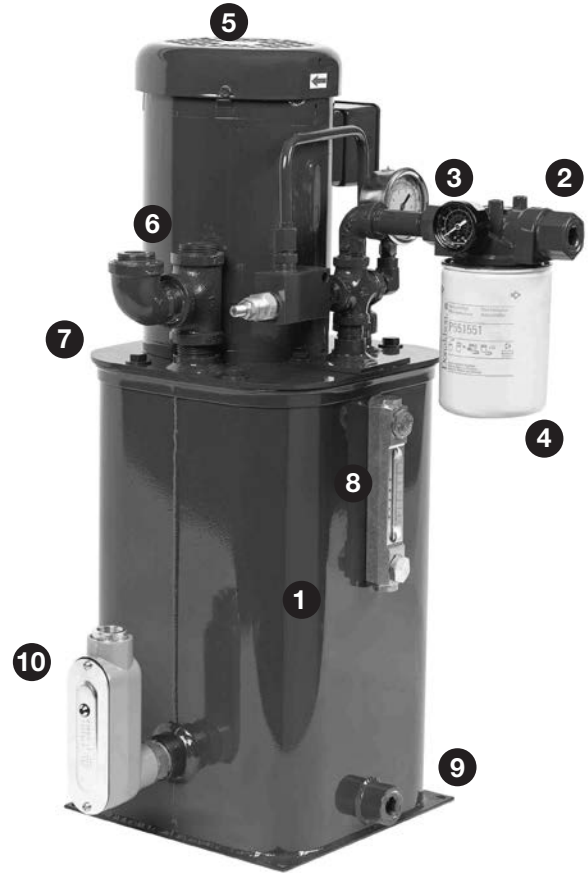


MODIFICATIONS/ACCESSORIES

SLEEVOIL ONE SYSTEM FOR TWO SLEEVOIL BEARINGS

Oil level and filtration system fits all Dodge SLEEVOIL Bearing

- ❶ Five Gallon Tank
- ❷ Oil Pump Supply Line
- ❸ Pressure Gauge
- ❹ Spin on Filter
- ❺ Standard NEMA Motor
- ❻ Return Line Connection—1" NPT coupling with two inlets
- ❼ Removable Tank Cover
- ❽ Oil Level/Temperature Gauge
- ❾ Mounting Bracket
- ❿ Immersion Heater & Thermostat **Option**—1"NPT Port
- ⓫ Filtered Breather (not shown)
- ⓬ Nameplate (not shown)



Oil Level Filtration System Part Numbers:

| 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 (575V) 2.0 GPM Pump | 077484 |

*Single Phase Motor 60 Hz 120 Volt *Three Phase Motor 50/60 Hz 230/460 Volt

Optional Parts¹

| Description | Part Number |
|--|-------------|
| Combination Heater/Thermostat 260 Watt, 120 Volt Heater | 434725 |
| Combination Heater/Thermostat 260 Watt, 240 Volt Heater | 434726 |
| Flow Meter Kit | 079498 |
| Desiccant Filter Kit (to be installed in series with standard filter) | 079754 |

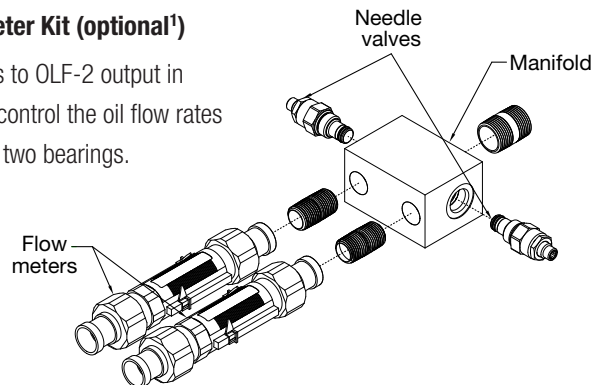
¹Not included with OLF2. Order desired part if required.

Oil Inlet Connections:

| SLEEVOIL Series | Bore Sizes | 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 | 3-7/16" – 5-7/16" | 132203 |
| | 6" – 12" | 132205 |

Flow Meter Kit (optional¹)

Connects to OLF-2 output in order to control the oil flow rates between two bearings.

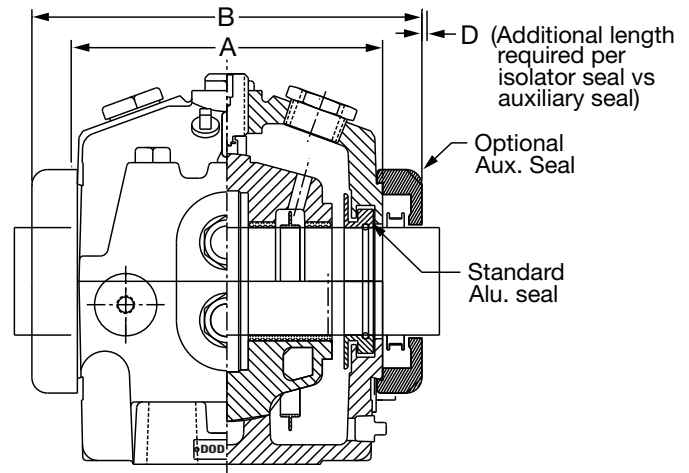
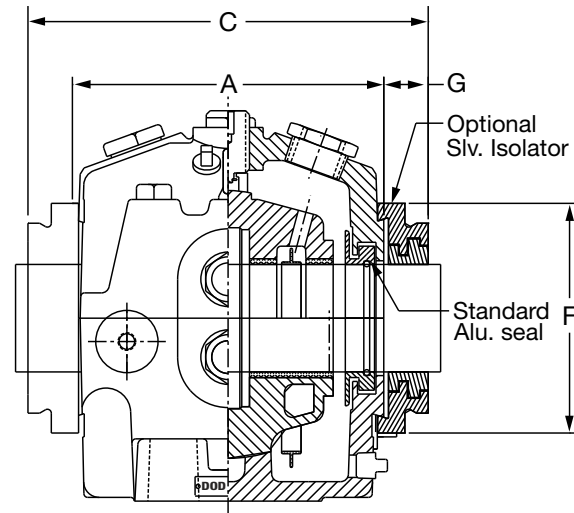


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MODIFICATIONS/ACCESSORIES

Dodge SLEEVOIL Bearing Isolator RTL AND R-SERIES PILLOW BLOCKS



RTL HOUSING LENGTH THRU BORE WITH DODGE SEAL OFFERINGS

| Size (Inches) | Part No | A* | B* | C* | D* | E* | F* | G* |
|---------------|---------------|--------|--------|--------|------|-----|--------|--------|
| 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 thru housing bore with standard aluminum seal
- B - Length thru housing bore with optional auxiliary seals
- C - Length thru 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 Pillow Blocks

NOTE: For further information regarding Dodge SLEEVOIL Bearing Isolator, see page B18-6

| | | | |
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NOTES

Plummer Blocks

Sleeve Bearings

SLEEVOIL

Take-Up Frames

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Take-Up Frames

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Plummer Blocks

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SLEEVOIL

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Take-Up Frames

The flexibility of the ten basic take-up frames allow for the mounting of DODGE Ball, Roller, and Sleeve Bearings to encompass the vast range of conveyor, belt, and chain take-up applications.

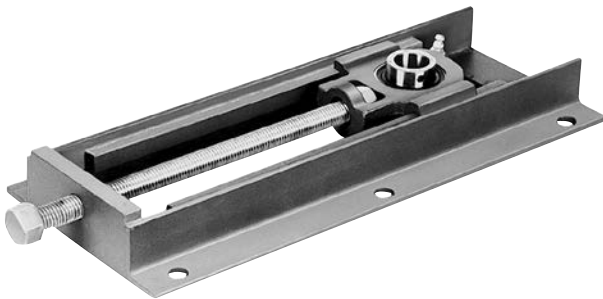
Narrow Slot Take-Up Frame - NS



Five sizes of Narrow Slot Ball Bearing Take-Up Frames-Eleven (11) take-up frames with travels of 6 to 18 inches for:

- GT & GTM Narrow Slot Take-Up Bearings from 3/4" through 2-7/16" shaft size and metric 20mm to 60mm.
- SC, VSC & SCM Ball Bearing Take-Up Bearing from 1/2" through 2-7/16" shaft size, and metric 20 mm to 60 mm.
- SXV and SXR Ball Bearing Take-Up Bearing from 3/4" through 2-7/16" shaft size.
- DL Ball Bearing Take-Up Bearing from 3/4" through 1-7/16" shaft size.
- LT700 and LT1000 SOLIDLUBE Take-Up Bearing from 3/4" through 2-1/2" shaft size.

Wide Slot Take-Up Frame - WS



Six sizes of Wide Slot Ball Bearing Take-Up Frames-Thirty (30) take-up frames with travels of 1-1/2 to 30 inches for:

- GT & GTM Wide Slot Ball Bearings from 3/4" through 3" shaft size and metric 20mm to 75mm.
- SC, VSC and SCM Wide Slot Take-Up Bearings from 1/ 2" through 3" shaft size, and metric 20 mm to 75 mm.
- SXV and SXR Wide Slot Take-Up Bearings from 3/4" through 2-7/16" shaft size.
- DL Ball Bearing Take-Up Bearing from 1-7/16" through 1-15/16" shaft size.
- LT700 and LT1000 SOLIDLUBE Wide Slot Take-Up Bearing from 3/4" through 3" shaft size.

Telescoping Take-Up Frame - TS



Telescoping Take-Up Frames

- 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)



FEATURES/BENEFITS

Take-Up Frames

Top Angle Take-Up Frame - TP



Six sizes of Top Angle Take-Up Frames-Thirty-Six (36) Take-Up frames with travels of 12 to 48 inches for:

- GLT-700 & GLT-1000 Series (SOLIDLUBE Sleeve) Take-Up bearings from 1-15/16" through 3" shaft size.
- Type H (Babbitted Sleeve) Take-Up bearings from 1-15/16" through 3-15/16" shaft size.
- Type G (SC Ball Bearing) Take-Up bearings from 1-15/16" through 2-15/16" shaft size.
- Type GXR (SXR Ball Bearing) Take-Up bearings from 1-15/16" through 2-7/16" shaft size.
- Type GM (SCM Ball Bearing) Take-Up bearings from 1-11/16" through 3-1/2" shaft size.
- Type E (Tapered Roller) Take-Up bearings from 1-3/4" through 4" shaft size.
- Type K (Tapered Roller) Take-Up bearings from 1-3/4" through 3-15/16" shaft size.
- TP S2000 (Spherical Roller) Take-Up bearings from 1-7/8" through 4" shaft size.

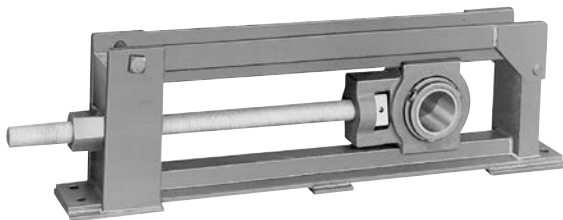
TPHU Take-Up Frame



Six sizes of TPHU Take-Up Frames-Twenty-Four (24) Take-Up frames with travels of 12 to 36 inches for:

- TPHU S-2000 (Spherical Roller) Take-Up Bearings from 1-7/8" through 5" shaft size.

Center Pull Take-Up Frame - CP



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" bore size.
- Type K tapered wide slot bearing from 1-3/8" to 3" bore size.
- S-2000 spherical wide slot bearing from 1-1/8" to 5" bore size.
- Imperial spherical wide slot bearing from 1-7/16" to 4" bore size.
- U.S. Patent No. 4,676,670



FEATURES/BENEFITS

Take-Up Frames

BRONZOIL Take-Up Frame - BOTU



One size of BRONZOIL® Sleeve Bearing Take-Up-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" shaft size with 4 inch travel.

Light Duty Take-Up Frame - LD



Six sizes of LD Protected Screw Take-Up Frames - Forty-Five (45) take-up frames with 6 to 48 inch travel for:

- SC/SCB (Ball Bearing) pillow blocks from 1/2" through 2-15/16" bore size.
- SXR/SXRB & SXV/SXVB (Ball Bearing) pillow blocks from 1/2" through 2-7/16" bore size
- DL/DLB (Ball Bearing) pillow blocks from 3/4" through 2-15/16" bore size.
- SCM (Ball Bearing) pillow blocks from 1-7/16" through 3-1/2" bore size.
- DLM (Ball Bearing) pillow blocks from 1" through 3-7/16" bore size
- Babbitted (Sleeve) Solid Journal bearing from 1/2" through 2-15/16" bore size.
- SOLIDLUBE (Sleeve) LT700 and LT1000 Series pillow blocks from 3/4" through 3" bore size.
- SOLIDLUBE (Sleeve) LTB700 and LTB1000 Series pillow blocks from 3/4" through 2-1/2" bore size.
- UNISPHERE (Spherical Roller) two (2) bolt base pillow block from 1-7/16" through 3-1/2" bore sizes.
- Imperial (Spherical Roller) two (2) bolt base pillow block from 1-7/16" through 3-15/16" bore size.
- SCH, SCH-E SXRH, SXRH-E, DLH, DLH-E SCMH SCMHE, DLMH, DLMH-E.
- GT/GTB (Ball Bearing) pillow blocks from 1/2" through 2-15/16" bore size
- GTM (Ball Bearing) pillow blocks from 1" through 3-7/16" bore size



Take-Up Frames

Heavy Duty Take-Up Frame - HD



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", bore size.
- Angle Bronze Bushed (Sleeve) pillow blocks from 1-15/16" through 5-15/16", bore size.
- Type E (Taper Roller) pillow blocks from 1-1/2" through 6" bore size.
- Type K (Taper Roller) pillow blocks from 1-1/2" through 3-15/16" bore size.
- K/DI (Taper Roller) pillow blocks from 1-1/2" through 5" bore size.
- Type C (Taper Roller) pillow blocks from 1-11/16" through 5" bore size.
- Special Duty (Taper Roller) pillow blocks from 2-11/16" through 6" bore size.
- SOLIDLUBE (Sleeve) MM700 and MM1000 Series pillow blocks from 3-7/16" through 5" bore size.
- SAF-XT, TAF, ISAF, etc. (Spherical and Tapered Roller) pillow blocks from 1-15/16" through 5-1/2" bore size and larger.
- USAF, SAFS spherical pillow blocks, 2-bolt and 4-bolt from 2-7/16" through 5-1/2" bore size.
- S2000 spherical pillow blocks, 2-bolt and 4-bolt from 1-7/8" through 5" bore size.
- UNISPHERE (Spherical Roller) pillow block 2-bolt base from 1-15/16" through 4" bore sizes.
- Imperial (Spherical roller) pillow block 2-bolt and 4-bolt from 1-15/16" through 4-15/16" bore size.
- For larger bore bearings use HD600 or HD650, consult DODGE.



HOW TO ORDER

Take-Up Frames

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 shown on page B19-7 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 two-bolt Pillow Blocks and may be ordered by part numbers. When using four-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 two-or four-bolt style
4. Frame Travel

Modifications:

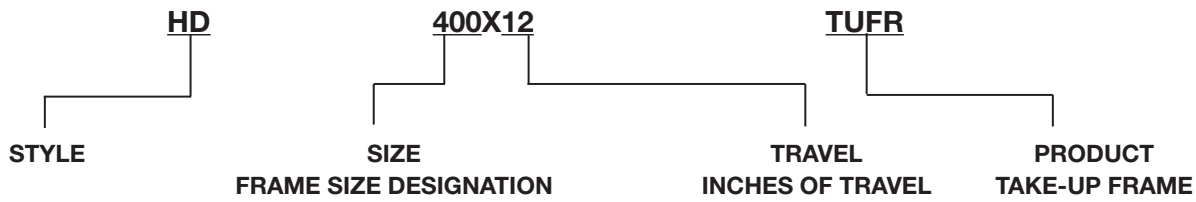
For OEM special Take-Up Frames consult DODGE.

Certain modifications are available such as Stainless Steel Screw and non-standard travel lengths.



NOMENCLATURE

Take-Up Frames



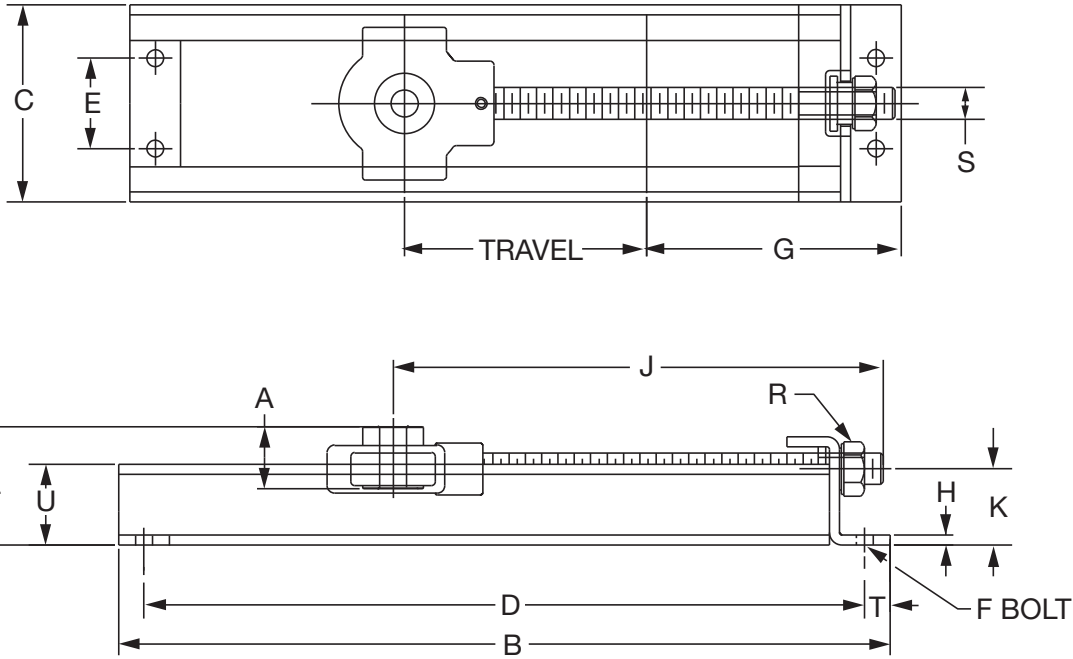
| | |
|------|--|
| CP | Center Pull Wide Slot Take-Up Frame |
| WS | Wide Slot Ball Bearing Take-Up Frame |
| WSEZ | Ultra Kleen Wide Slot Ball Bearing Take-Up Frame |
| NS | Narrow Slot Ball Bearing Take-Up Frame |
| LD | Light Duty Protected Screw Take-Up Frame |
| TU | Take-Up |
| HD | Heavy Duty Protected Screw Take-Up Frame |
| TP | Top Angle Take-Up Frame |
| TPHU | Top Angle Heavy Duty Universal Take-Up Frame |
| TS | Telescoping Take-Up Frame |
| TUA | Type A Babbitted Take-Up Bearing |
| TUB | Type B Babbitted Take-Up Bearing |
| BOTU | BRONZOIL Take-Up |
| FR | Frame |
| SSS | Stainless Steel Screw |

TU = Take-Up When Used As An Abbreviation Through This Section



SELECTION/DIMENSIONS

Take-Up Frames -NS NARROW SLOT BALL BEARING TAKE-UP FRAMES



| Frame Description | Part No. | Wt. (Lbs.) | A | B | C | D | E | F Base Bolt | | G |
|-------------------|---------------|------------|--|---------|---------|--------|-------|-------------|-------|-------|
| | | | | | | | | No. | Dia. | |
| NS-210x6-TUFR | 038109 | 5.5 | See page B19-10 for list of reference pages for Take-Up Bearings | 13-5/8 | 3-13/16 | 12-1/8 | 1-5/8 | 4 | 1/2 | 4-7/8 |
| NS-308x6-TUFR | 038110 | 5.8 | | 13-5/8 | 4-11/16 | 12-1/8 | 2-1/4 | 4 | 1/2 | 5-3/8 |
| NS-308x12-TUFR | 038111 | 8.0 | | 19-5/8 | 18-1/8 | 2-1/4 | 4 | 1/2 | 6 | |
| NS-400x6-TUFR | 038112 | 9.2 | | 14-9/16 | 13-1/16 | 2-1/2 | 4 | 1/2 | 6 | |
| NS-400x9-TUFR | 038113 | 11.3 | | 18-5/8 | 17-1/8 | 2-1/2 | 4 | 1/2 | 6 | |
| NS-400x12-TUFR | 038114 | 12.5 | | 20-9/16 | 19-1/16 | 2-1/2 | 4 | 1/2 | 6 | |
| NS-400x18-TUFR | 038115 | 16.3 | | 27-5/8 | 26-1/8 | 2-3/4 | 4 | 5/8 | 7-1/8 | |
| NS-407x9-TUFR | 038116 | 13.1 | | 19-1/8 | 17-3/8 | 2-3/4 | 4 | 5/8 | 7-1/8 | |
| NS-407x18-TUFR | 038117 | 18.6 | | 28-1/8 | 26-3/8 | 3 | 4 | 5/8 | 7-3/8 | |
| NS-415x9-TUFR | 038118 | 15.5 | | 19-1/8 | 17-3/8 | 3 | 4 | 5/8 | 7-3/8 | |
| NS-415x18-TUFR | 038119 | 19.0 | 28-1/8 | 26-3/8 | 3 | 4 | 5/8 | 7-3/8 | | |

| Frame Description | H | J | K | L | R Hex | S | T | U | Channel |
|-------------------|------|----------|---------|--------------------------------------|--------|--------|-----|--------------|---------------------|
| NS-210x6-TUFR | 1/4 | 11-1/32 | 1-13/32 | See Table on Page B19-9 for "L" Dim. | 1-5/16 | 3/4-10 | 3/4 | 1-1/2 | 1-1/2 x 9/16 x 3/16 |
| NS-308x6-TUFR | 1/4 | 10-13/16 | 1-13/32 | | 1-5/16 | 3/4-10 | 3/4 | 1-1/2 | 1-1/2 x 9/16 x 3/16 |
| NS-308x12-TUFR | | 16-13/16 | 1-13/32 | | 1-5/16 | 3/4-10 | 3/4 | 1-1/2 | 1-1/2 x 9/16 x 3/16 |
| NS-400x6-TUFR | 1/4 | 11-1/16 | 1-7/8 | | 1-1/2 | 7/8-9 | 3/4 | 2 | 2 x 1 x 3/16 |
| NS-400x9-TUFR | | 14-1/16 | | | 1-1/2 | 7/8-9 | 3/4 | 2 | 2 x 1 x 3/16 |
| NS-400x12-TUFR | | 17-1/16 | | | 1-1/2 | 7/8-9 | 3/4 | 2 | 2 x 1 x 3/16 |
| NS-400x18-TUFR | | 23-1/16 | | | 1-1/2 | 7/8-9 | 3/4 | 2 | 2 x 1 x 3/16 |
| NS-407x9-TUFR | 5/16 | 15-19/32 | 1-7/8 | | 1-5/8 | 1-8 | 1 | 2 | 2 x 1 x 3/16 |
| NS-407x18-TUFR | 5/16 | 24-19/32 | 1-7/8 | | 1-5/8 | 1-8 | 1 | 2 | 2 x 1 x 3/16 |
| NS-415x9-TUFR | 5/16 | 15-27/32 | 1-7/8 | | 1-5/8 | 1-8 | 1 | 2 | 2 x 1 x 3/16 |
| NS-415x18-TUFR | | 24-27/32 | | 1-5/8 | 1-8 | 1 | 2 | 2 x 1 x 3/16 | |

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



SELECTION/DIMENSIONS

Take-Up Frames - Narrow Slot Frame

L DIMENSION

| Series | Shaft Size | Take Up Frame No. Ref. | L | | | | | |
|--------|------------|------------------------|------|------|------|------|------|------|
| | | | SC | VSC | SXR | SXV | DL | GT |
| 204 | 1/2 | NS-210 | 2.11 | 2.11 | 2.43 | 2.30 | 2.16 | 2.40 |
| | 5/8 | | | | | | | |
| | 3/4 | | | | | | | |
| 205 | 7/8 | NS-210 | 2.16 | 2.16 | 2.44 | 2.30 | 2.26 | 2.36 |
| | 15/16 | | | | | | | |
| | 1 | | | | | | | |
| 206 | 1-1/16 | NS-308 | 2.32 | 2.32 | 2.57 | 2.43 | 2.36 | 2.97 |
| | 1-1/8 | | | | | | | |
| | 1-3/16 | | | | | | | |
| | 1-1/4 | | | | | | | |
| 207 | 1-1/4 | NS-308 | 2.42 | 2.42 | 2.66 | 2.54 | 2.46 | 2.46 |
| | 1-5/16 | | | | | | | |
| | 1-3/8 | | | | | | | |
| | 1-7/16 | | | | | | | |
| 208 | 1-1/2 | NS-400 | 3.03 | 3.03 | 3.21 | 3.12 | 3.10 | 3.07 |
| | 1-5/8 | | | | | | | |
| 209 | 1-5/8 | NS-400 | 3.03 | 3.03 | 3.22 | 3.10 | 3.10 | 3.07 |
| | 1-11/16 | | | | | | | |
| | 1-3/4 | | | | | | | |
| 210 | 1-15/16 | NS-400 | 3.03 | 3.03 | 3.34 | 3.10 | 3.10 | 3.07 |
| | 2 | | | | | | | |
| 211 | 2 | NS-407 | 3.19 | 3.19 | 3.55 | 3.13 | 3.21 | 3.10 |
| | 2-3/16 | | | | | | | |
| | 2-1/4 | | | | | | | |
| 212 | 2-1/4 | NS-415 | 3.26 | N/A | 3.68 | N/A | 3.32 | 3.23 |
| | 2-7/16 | | | | | | | |

| Series | Shaft Size | Take Up Frame No. Ref. | L | | |
|--------|------------|------------------------|------|------|------|
| | | | SCM | DLM | GTM |
| 206 | 1 | NS-308 | 2.32 | 2.36 | 2.47 |
| 207 | 1-3/16 | NS-308 | 2.42 | 2.46 | 2.46 |
| | 1-1/4 | | | | |
| 208 | 1-7/16 | NS-400 | 3.03 | 3.10 | 3.07 |
| 209 | 1-1/2 | NS-400 | 3.03 | 3.10 | 3.07 |
| | 1-5/8 | | | | |
| 210 | 1-11/16 | NS-400 | 3.03 | 3.10 | 3.07 |
| | 1-3/4 | | | | |
| 211 | 1-15/16 | NS-407 | 3.19 | 3.21 | 3.10 |
| | 2 | | | | |
| 212 | 2-3/16 | NS-415 | 3.26 | 3.32 | 3.23 |
| | 2-1/4 | | | | |



SELECTION/DIMENSIONS

Narrow Slot (NS) Take-Up Frame Bearings

**NORMAL DUTY
SETSCREW - SC, VSC
D-LOK - DL
ECCENTRIC LOCK - SXR, SXV
GRIP TIGHT - GT**

**MEDIUM DUTY
SETSCREW - SCM
D-LOK - DLM
GRIP TIGHT - GTM**

| Series | Shaft Size | Frame Size |
|--------|----------------|------------|
| 204 | 1/2 | NS-210 |
| | 5/8 | |
| | 3/4 | |
| | 20mm | |
| 205 | 7/8 | NS-210 |
| | 15/16 | |
| | 1 25mm | |
| 206 | 1-1/16 | NS-308 |
| | 1-1/8 | |
| | 1-3/16 | |
| | 1-1/4 30mm | |
| 207 | 1-1/4 | NS-308 |
| | 1-5/16 | |
| | 1-3/8 | |
| | 1-7/16 35mm | |
| 208 | 1-1/2 | NS-400 |
| | 1-5/8 40mm | |
| 209 | 1-5/8 | NS-400 |
| | 1-11/16 | |
| | 1-3/4 45mm | |
| 210 | 1-15/16 | NS-400 |
| | 2 50mm | |
| 211 | 2 | NS-407 |
| | 2-3/16 | |
| | 2-1/4 55mm | |
| 212 | 2-1/4 | NS-415 |
| | 2-7/16 60mm | |

- Narrow Slot Take-Up Frames Are Not Supplied With Bearings. First Match The Take-Up Frame With The Bearing Size From This Page. Then Turn To The Page Listed For The Specific Bearing Part Number.
- Ultra Kleen (SC) - B1-32 to B1-33
- E-Z Kleen (SC) - B2-38
- Extreme Duty (SC) - B3-25 to B3-29
- Setscrew (SC, SCM & VSC) - B4-70 to B4-73
- Grip Tight (GT and GTM) - B5-50 to B5-53
- D-LOK (DL and DLM) - B6-42 to B6-45
- Eccentric Lock (SXR and SXV) - B7-32 to B7-33
- See B19-8 For Narrow Slot Take-Up Frame Travel Options And Part Numbers

| Series | Shaft Size | Frame Size |
|--------|---------------|------------|
| 206 | 1 | NS-308 |
| | 25mm | |
| 207 | 1-3/16 | NS-308 |
| | 1-1/4 30mm | |
| 208 | 1-7/16 | NS-400 |
| | 35mm | |
| 209 | 1-1/2 | NS-400 |
| | 40mm | |
| 210 | 1-11/16 | NS-400 |
| | 1-3/4 | |
| | 45mm | |
| 211 | 1-15/16 | NS-407 |
| | 2 50mm | |
| 212 | 2-3/16 | NS-415 |
| | 2-1/4 55mm | |

Plummer Blocks

Sleeve Bearings

SLEEVOIL

Take-Up Frames

Engineering

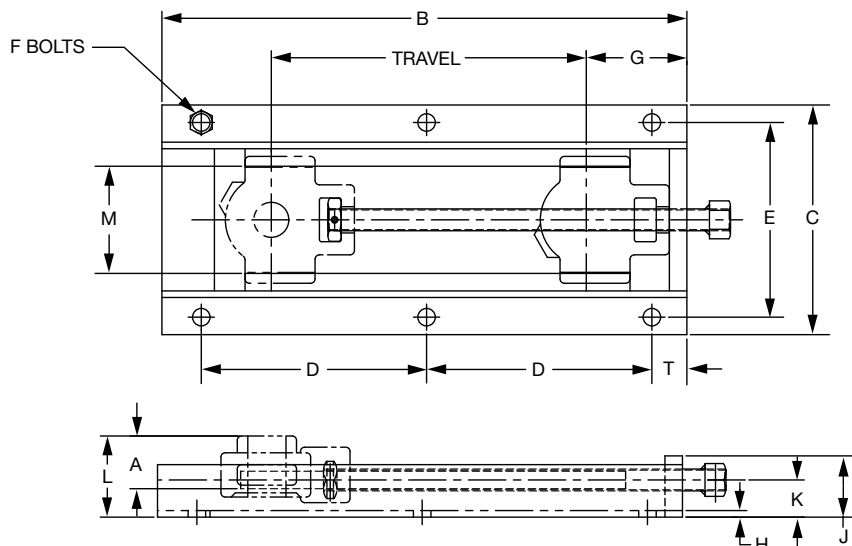
Part Number Index

Keyword Index



SELECTION/DIMENSIONS

Take-Up Frames - WS WIDE SLOT BALL BEARING TAKE-UP FRAMES



| Frame Description | Part No. | Wt. | A | B | C | D | E | F | | G | H | J | K | M | S Screw Dia. | T |
|-------------------|---------------|------|--|--------|---------|----------|----------|-----|------|---------|------|-------|--------|--------|--------------------|-------|
| | | | | | | | | No. | Dia. | | | | | | | |
| WS-300X1-1/2-TUFR | 038200 | 4.8 | See chart on page B19-14 for list of | 7-1/2 | 6-9/16 | 5-3/8 | 5-9/16 | 4 | 7/16 | 2-15/16 | 3/16 | 1-3/4 | 1-1/16 | 3-1/16 | 5/8 | 1 |
| WS-300X3-TUFR | 038201 | 5.5 | | 9 | | 6-7/8 | | 4 | | | | | | | | |
| WS-300X6-TUFR | 038202 | 7 | | 12 | | 6-7/16 | | 6 | | | | | | | | |
| WS-300X9-TUFR | 038203 | 8.5 | | 15 | | 6-7/16 | | 6 | | | | | | | | |
| WS-300X12-TUFR | 038204 | 10 | | 18 | | 7-15/16 | | 6 | | | | | | | | |
| WS-308X3-TUFR | 038205 | 7.5 | reference pages for Take-Up Bearings | 9-1/8 | 7-1/16 | 6-7/16 | 6-1/16 | 4 | 7/16 | 3-11/16 | 3/16 | 2 | 1-1/4 | 3-9/16 | 3/4 | 1 |
| WS-308X6-TUFR | 038206 | 9 | | 12-1/8 | | 9-7/16 | | 4 | | | | | | | | |
| WS-308X9-TUFR | 038207 | 10.5 | | 15-1/8 | | 6-7/32 | | 6 | | | | | | | | |
| WS-308X12-TUFR | 038208 | 12 | | 18-1/8 | | 7-23/32 | | 6 | | | | | | | | |
| WS-308X18-TUFR | 038209 | 15 | | 24-1/8 | | 10-23/32 | | 6 | | | | | | | | |
| WS-400X3-TUFR | 038210 | 11.5 | See Table on Page B19-13 for "L" Dim. | 10-3/4 | 8-13/16 | 8-1/2 | 7-5/16 | 4 | 1/2 | 4-5/16 | 3/16 | 2-1/4 | 1-7/16 | 4-1/16 | 1 | 1-1/8 |
| WS-400X6-TUFR | 038211 | 14 | | 13-3/4 | | 11-1/2 | | 4 | | | | | | | | |
| WS-400X9-TUFR | 038212 | 16.5 | | 16-3/4 | | 7-1/4 | | 6 | | | | | | | | |
| WS-400X12-TUFR | 038213 | 19 | | 19-3/4 | | 8-3/4 | | 6 | | | | | | | | |
| WS-400X18-TUFR | 038214 | 24 | | 25-3/4 | | 11-3/4 | | 6 | | | | | | | | |
| WS-502X6-TUFR | 038215 | 20 | 10-7/16 | 14-3/4 | 10-7/16 | 12-1/2 | 8-5/8 | 4 | 9/16 | 5-11/16 | 3/16 | 2-1/2 | 1-1/2 | 5-3/16 | 1-1/4 | 1-1/8 |
| WS-502X9-TUFR | 038216 | 23.5 | | 17-3/4 | | 15-1/2 | | 4 | | | | | | | | |
| WS-502X12-TUFR | 038217 | 27 | | 20-3/4 | | 9-1/4 | | 6 | | | | | | | | |
| WS-502X15-TUFR | 038218 | 30.5 | | 23-3/4 | | 10-3/4 | | 6 | | | | | | | | |
| WS-502X18-TUFR | 038219 | 34 | | 26-3/4 | | 12-1/4 | | 6 | | | | | | | | |
| WS-502X24-TUFR | 038220 | 41 | 32-3/4 | 15-1/4 | 6 | | | | | | | | | | | |
| WS-515X9-TUFR | 038221 | 36 | 12 | 20-7/8 | 12 | 17-1/2 | 10-1/4 | 4 | 5/8 | 6-1/2 | 1/4 | 3 | 2 | 6 | 1-1/2 | 2-1/2 |
| WS-515X12-TUFR | 038222 | 41 | | 23-7/8 | | 10-1/4 | | 6 | | | | | | | | |
| WS-515X18-TUFR | 038223 | 51 | | 29-7/8 | | 13-1/4 | | 6 | | | | | | | | |
| WS-515X24-TUFR | 038224 | 61 | | 35-7/8 | | 16-1/4 | | 6 | | | | | | | | |
| WS-515X30-TUFR | 038225 | 71 | | 41-7/8 | | 19-1/4 | | 6 | | | | | | | | |
| WS-608X12-TUFR | 038226 | 41 | 12-9/16 | 23-7/8 | 12-9/16 | 10-1/4 | 10-13/16 | 6 | 5/8 | 6-1/2 | 1/4 | 3 | 2 | 6-9/16 | 1-1/2 | 2-1/2 |
| WS-608X18-TUFR | 038227 | 51 | | 29-7/8 | | 13-1/4 | | 6 | | | | | | | | |
| WS-608X24-TUFR | 038228 | 61 | | 35-7/8 | | 16-1/4 | | 6 | | | | | | | | |
| WS-608X30-TUFR | 038229 | 71 | | 41-7/8 | | 19-1/4 | | 6 | | | | | | | | |

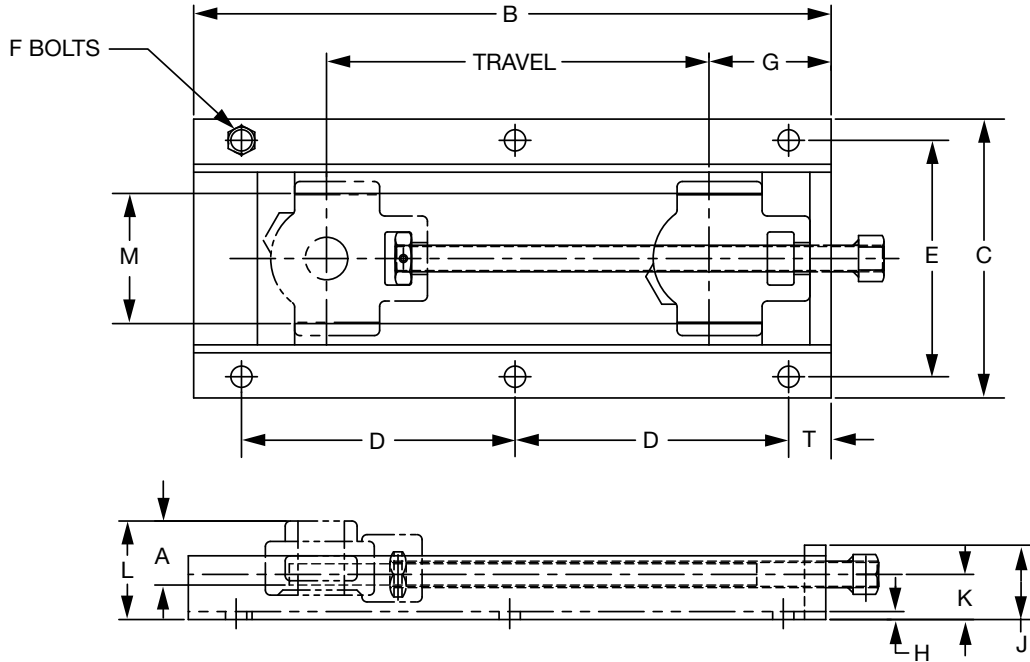
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SELECTION/DIMENSIONS

Take-Up Frames - WS

ULTRA KLEEN (Stainless Steel) WIDE SLOT BALL BEARING TAKE-UP FRAME



| Frame Description | Part No. | Wt. | A | B | C | D | E | F | | G | H | J | K | M | S Screw Dia. | T |
|----------------------|---------------|------|---|----------|---------|---------|--------|-----|---------|---------|------|-------|--------|--------|--------------------|-------|
| | | | | | | | | No. | Dia. | | | | | | | |
| WSEZ-300X3-TUFR-SSS | 038070 | 6 | See page B2-66 to B2-71 for E-Z KLEEN Wide Slot Take-Up Bearings | 9 | 6-9/16 | 6-7/8 | 5-9/16 | 4 | 1/2 | 2-15/16 | 3/16 | 1-3/4 | 1-1/16 | 3-1/16 | 5/8 | 1 |
| WSEZ-300X6-TUFR-SSS | 038071 | 7.9 | | 12 | | 4-15/16 | | 6 | | | | | | | | |
| WSEZ-300X9-TUFR-SSS | 038072 | 9.8 | | 15 | | 6-7/16 | | 6 | | | | | | | | |
| WSEZ-300X12-TUFR-SSS | 038073 | 11.7 | | 18 | | 7-15/16 | | 6 | | | | | | | | |
| WSEZ-308X3-TUFR-SSS | 038074 | 7.3 | 9-1/8 | 7-1/16 | 6-7/16 | 6-1/16 | 4 | 1/2 | 3-11/16 | 3/16 | 2 | 1-1/4 | 3-9/16 | 3/4 | 1 | |
| WSEZ-308X6-TUFR-SSS | 038075 | 9.4 | 12-1/8 | | 9-7/16 | | 4 | | | | | | | | | |
| WSEZ-308X9-TUFR-SSS | 038076 | 11.4 | 15-1/8 | | 6-7/32 | | 6 | | | | | | | | | |
| WSEZ-308X12-TUFR-SSS | 038077 | 13.4 | 18-1/8 | | 7-23/32 | | 6 | | | | | | | | | |
| WSEZ-308X18-TUFR-SSS | 038078 | 17.4 | 24-1/8 | 10-23/32 | 6 | | | | | | | | | | | |
| WSEZ-400X3-TUFR | 038060 | 11.5 | See Table on Page B19-13 for "L" Dim. | 10-3/4 | 8-13/16 | 8-1/2 | 7-5/16 | 4 | 1/2 | 4-5/16 | 3/16 | 2-1/4 | 1-7/16 | 4-1/16 | 1 | 1-1/8 |
| WSEZ-400X6-TUFR | 038061 | 14 | | 13-3/4 | | 11-1/2 | | 4 | | | | | | | | |
| WSEZ-400X9-TUFR | 038062 | 16.5 | | 16-3/4 | | 7-1/4 | | 6 | | | | | | | | |
| WSEZ-400X12-TUFR | 038063 | 19 | | 19-3/4 | | 8-3/4 | | 6 | | | | | | | | |
| WSEZ-400X18-TUFR | 038064 | 24 | | 25-3/4 | | 11-3/4 | | 6 | | | | | | | | |

See table on page B19-13 for "L" dimension.

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



SELECTION/DIMENSIONS

Take-Up Frames - Wide Slot Frame

L DIMENSION

| Series | Shaft Size | Take Up Frame No. Ref. | L | | | | |
|--------|------------|---------------------------|--------|-------|------|------|------|
| | | | VSC SC | SXR | SXV | DL | GT |
| 204 | 1/2 | WS-300 | 1.79 | 2.11 | 1.98 | 1.84 | 2.08 |
| | 5/8 | | | | | | |
| | 3/4 | | | | | | |
| 205 | 7/8 | WS-300 | 1.84 | 2.12 | 1.98 | 1.94 | 2.04 |
| | 15/16 | | | | | | |
| 206 | 1 | WS-308 | 2.19 | 2.44 | 2.30 | 2.23 | 2.34 |
| | 1-1/16 | | | | | | |
| | 1-1/8 | | | | | | |
| | 1-3/16 | | | | | | |
| 207 | 1-1/4 | WS-308 | 2.29 | 2.53 | 2.41 | 2.33 | 2.33 |
| | 1-5/16 | | | | | | |
| | 1-3/8 | | | | | | |
| | 1-7/16 | | | | | | |
| 208 | 1-1/2 | WS-400 | 2.63 | 2.81 | 2.72 | 2.70 | 2.67 |
| | 1-5/8 | | | | | | |
| 209 | 1-5/8 | WS-400 | 2.63 | 2.786 | 2.70 | 2.70 | 3.67 |
| | 1-11/16 | | | | | | |
| | 1-3/4 | | | | | | |
| 210 | 1-15/16 | WS-400 | 2.63 | 2.94 | 2.70 | 2.70 | 2.67 |
| | 2 | | | | | | |
| 211 | 2 | WS-502 | 2.85 | 3.21 | 2.79 | 2.87 | 2.76 |
| | 2-3/16 | | | | | | |
| | 2-1/4 | | | | | | |
| 212 | 2-1/4 | WS-502 | 2.91 | 3.34 | N/A | 2.98 | 2.89 |
| | 2-7/16 | | | | | | |
| 214 | 2-1/2 | WS-515 | 3.48 | N/A | N/A | 3.54 | 3.55 |
| | 2-11/16 | | | | | | |
| 215 | 2-15/16 | WS-515 | 3.47 | 4.16 | N/A | 3.58 | 3.60 |

| Series | Shaft Size | Take Up Frame No. Ref. | L | | |
|--------|------------|---------------------------|------|------|------|
| | | | SCM | DLM | GTM |
| 206 | 1 | WS-308 | 2.19 | 2.23 | 2.34 |
| 207 | 1-3/16 | WS-308 | 2.29 | 2.33 | 2.33 |
| | 1-1/4 | | | | |
| 208 | 1-7/16 | WS-400 | 2.63 | 2.70 | 2.67 |
| 209 | 1-1/2 | WS-400 | 2.63 | 2.70 | 2.67 |
| 210 | 1-11/16 | WS-400 | 2.63 | 2.70 | 2.67 |
| | 1-3/4 | | | | |
| 211 | 1-15/16 | WS-502 | 2.85 | 2.87 | 2.76 |
| | 2 | | | | |
| 212 | 2-3/16 | WS-502 | 2.91 | 2.98 | 2.89 |
| | 2-1/4 | | | | |
| 214 | 2-7/16 | WS-515 | 3.48 | 3.54 | 3.55 |
| | 2-1/2 | | | | |
| 215 | 2-11/16 | WS-515 | 3.47 | 3.58 | 3.60 |
| 216 | 2-15/16 | WS-608 | 3.50 | 3.74 | 3.81 |



SELECTION/DIMENSIONS

Wide Slot (WS) Take-Up Frame Bearings

NORMAL DUTY
SETSCREW - SC, VSC
D-LOK - DL
ECCENTRIC LOCK - SXR, SXV
GRIP TIGHT - GT

| Series | Shaft Size | Frame Size |
|--------|------------|------------|
| 204 | 1/2 | WS-300 |
| | 5/8 | |
| | 3/4 | |
| | 20mm | |
| 205 | 7/8 | WS-300 |
| | 15/16 | |
| | 1 | |
| | 25mm | |
| 206 | 1-1/16 | WS-308 |
| | 1-1/8 | |
| | 1-3/16 | |
| | 1-1/4 | |
| | 30mm | |
| 207 | 1-1/4 | WS-308 |
| | 1-5/16 | |
| | 1-3/8 | |
| | 1-7/16 | |
| 208 | 35mm | WS-400 |
| | 1-1/2 | |
| | 1-5/8 | |
| 209 | 40mm | WS-400 |
| | 1-5/8 | |
| | 1-11/16 | |
| 210 | 1-3/4 | WS-400 |
| | 45mm | |
| | 1-15/16 | |
| 211 | 2 | WS-502 |
| | 50mm | |
| 212 | 2 | WS-502 |
| | 2-3/16 | |
| | 2-1/4 | |
| 214 | 55mm | WS-515 |
| | 2-1/4 | |
| | 2-7/16 | |
| 215 | 60mm | WS-515 |
| | 2-1/2 | |
| | 2-11/16 | |
| 216 | 70mm | WS-515 |
| | 2-15/16 | |
| 217 | 75mm | WS-515 |
| | 3 | |

- Wide Slot Take-Up Frames Are Not Supplied With Bearings. First Match The Take-Up Frame With The Bearing Size From This Page. Then Turn To The Page Listed For The Specific Bearing Part Number.
- Ultra Kleen (SC) - B1-28 to B1-31
- EZ-Kleen Polymer Housing - B2-66 to B2-71 and B2-39
- Extreme Duty (SC) - B3-30 to B3-37
- Setscrew (SC, SCM & VSC) - B4-74 to B4-81
- Grip Tight (GT & GTM) - B5-54 to B5-59
- D-LOK (DL and DLM) - B6-46 to B6-49
- Eccentric Lock (SXR and SXV) - B7-34 to B7-35
- See B19-11 For Wide Slot Take-Up Frame Travel Options And Part Numbers

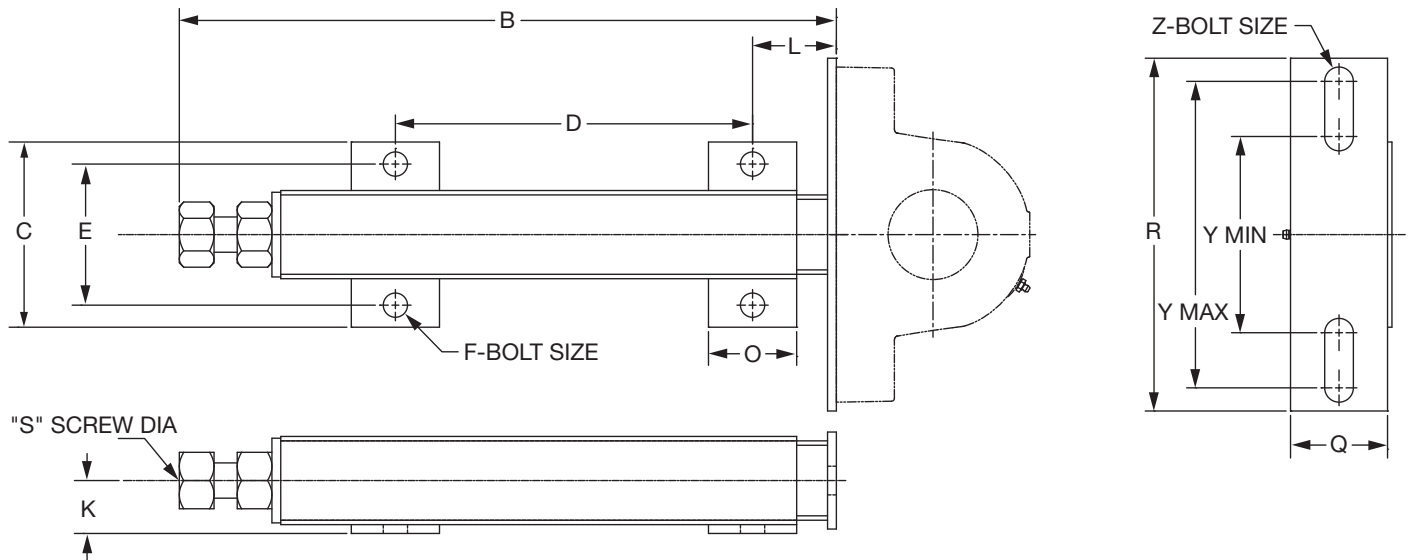
MEDIUM DUTY
SETSCREW - SCM, VSC
D-LOK - DLM
GRIP TIGHT - GTM

| Series | Shaft Size | Frame Size |
|--------|------------|------------|
| 206 | 1 | WS-308 |
| | 25mm | |
| 207 | 1-3/16 | WS-308 |
| | 1-1/4 | |
| 208 | 30mm | WS-400 |
| | 1-7/16 | |
| 209 | 35mm | WS-400 |
| | 1-1/2 | |
| 210 | 40mm | WS-400 |
| | 1-11/16 | |
| | 1-3/4 | |
| 211 | 45mm | WS-502 |
| | 1-15/16 | |
| 212 | 2 | WS-502 |
| | 50mm | |
| | 2-3/16 | |
| 214 | 2-1/4 | WS-515 |
| | 55mm | |
| | 2-7/16 | |
| 215 | 2-1/2 | WS-515 |
| | 2-11/16 | |
| 216 | 70mm | WS-608 |
| | 2-15/16 | |
| | 3 | |
| 217 | 75mm | WS-608 |
| | 3 | |



SELECTION/DIMENSIONS

Telescoping (TS) Take-Up Frame



| Frame Size | Travel | Part No. | Wt. (lbs.) | B | C | D | | E | F Bolt Dia. | K | L | O | Q | R | S Scr. Dia. | Y | | Z Bolt Dia. |
|------------|--------|----------|------------|-------|-------|-------|-------|------|-------------|------|------|------|------|-------|-------------|------------------|------------------|------------------|
| | | | | | | Min. | Max. | | | | | | | | | Min. | Max. | |
| TS-100 | 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 |
| TS-100 | 6 | 089783 | 4 | 11.44 | 3.69 | 7.06 | - | 2.63 | 1/2 | 0.88 | 1.50 | 1.50 | 1.50 | 6.38 | 5/8 | 2.94 | 5.44 | 1/2 |
| TS-100 | 9 | 089784 | 5 | 15.44 | 3.69 | 11.06 | - | 2.63 | 1/2 | 0.88 | 1.50 | 1.50 | 1.50 | 6.38 | 5/8 | 2.94 | 5.44 | 1/2 |
| 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 |
| TS-250 | 6 | 089786 | 7 | 12.75 | 4.00 | 7.38 | - | 3.00 | 1/2 | 1.13 | 1.88 | 2.00 | 2.00 | 7.00 | 3/4 | 3.81 | 5.69 | 5/8 |
| TS-250 | 9 | 089787 | 8 | 15.75 | 4.00 | 10.38 | - | 3.00 | 1/2 | 1.13 | 1.88 | 2.00 | 2.00 | 7.00 | 3/4 | 3.81 | 5.69 | 5/8 |
| TS-250 | 12 | 089788 | 9 | 18.75 | 4.00 | 13.38 | - | 3.00 | 1/2 | 1.13 | 1.88 | 2.00 | 2.00 | 7.00 | 3/4 | 3.81 | 5.69 | 5/8 |
| 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 |
| TS-300 | 9 | 089790 | 18 | 18.63 | 5.25 | 10.13 | - | 4.00 | 5/8 | 1.50 | 2.38 | 2.50 | 2.75 | 10.00 | 1 | 5.56 | 8.69 | 3/4 |
| TS-300 | 12 | 089791 | 21 | 21.63 | 5.25 | 14.13 | - | 4.00 | 5/8 | 1.50 | 2.38 | 2.50 | 2.75 | 10.00 | 1 | 5.56 | 8.69 | 3/4 |
| TS-300 | 18 | 089792 | 26 | 27.63 | 5.25 | 21.13 | - | 4.00 | 5/8 | 1.50 | 2.38 | 2.50 | 2.75 | 10.00 | 1 | 5.56 | 8.69 | 3/4 |
| 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 |
| TS-350 | 12 | 089794 | 28 | 22.56 | 5.75 | 15.63 | 16.00 | 4.50 | 5/8 | 1.75 | 2.50 | 2.50 | 3.00 | 12.00 | 1 | 5.56 | 9.75 | 3/4 |
| TS-350 | 18 | 089795 | 35 | 28.56 | 5.75 | 21.63 | 22.00 | 4.50 | 5/8 | 1.75 | 2.50 | 2.50 | 3.00 | 12.00 | 1 | 5.56 | 9.75 | 3/4 |
| TS-350 | 24 | 089796 | 43 | 34.56 | 5.75 | 27.63 | 28.00 | 4.50 | 5/8 | 1.75 | 2.50 | 2.50 | 3.00 | 12.00 | 1 | 5.56 | 9.75 | 3/4 |
| 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 |
| TS-400 | 18 | 089798 | 60 | 35.75 | 7.50 | 26.00 | - | 5.50 | 3/4 | 2.13 | 3.50 | 3.50 | 3.50 | 14.00 | 1-1/2 | 8.50 | 11.75 | 7/8 |
| TS-400 | 24 | 089799 | 70 | 41.75 | 7.50 | 32.00 | - | 5.50 | 3/4 | 2.13 | 3.50 | 3.50 | 3.50 | 14.00 | 1-1/2 | 8.50 | 11.75 | 7/8 |
| TS-400 | 36 | 089800 | 90 | 53.75 | 7.50 | 44.00 | - | 5.50 | 3/4 | 2.13 | 3.50 | 3.50 | 3.50 | 14.00 | 1-1/2 | 8.50 | 11.75 | 7/8 |
| TS-400 | 48 | 089801 | 110 | 65.75 | 7.50 | 56.00 | - | 5.50 | 3/4 | 2.13 | 3.50 | 3.50 | 3.50 | 14.00 | 1-1/2 | 8.50 | 11.75 | 7/8 |
| TS-500 | 18 | 089802 | 210 | 43.88 | 11.50 | 31.00 | - | 9.00 | 1 | 3.50 | 3.88 | 3.88 | 7.00 | 20.00 | 2 | Drilled to Order | Drilled to Order | Drilled to Order |
| TS-500 | 24 | 089803 | 240 | 49.88 | 11.50 | 37.00 | - | 9.00 | 1 | 3.50 | 3.88 | 3.88 | 7.00 | 20.00 | 2 | Drilled to Order | Drilled to Order | Drilled to Order |
| TS-500 | 36 | 089804 | 290 | 61.88 | 11.50 | 49.00 | - | 9.00 | 1 | 3.50 | 3.88 | 3.88 | 7.00 | 20.00 | 2 | Drilled to Order | Drilled to Order | Drilled to Order |

Dimensions in inches

| | | |
|---------------------------------|---|------------------------------------|
| FEATURES/BENEFITS PAGE B19-2 | HOW TO ORDER/NOMENCLATURE PAGE B19-7 | SELECTION/DIMENSIONS PAGE B19-8 |
|---------------------------------|---|------------------------------------|



SELECTION/DIMENSIONS

Telescoping (TS) Take-Up Frame Bearings

NORMAL DUTY
SETSCREW - SC, VSC
D-LOK - DL
ECCENTRIC LOCK - SXR, SXV
GRIP TIGHT - GT

MEDIUM DUTY
SETSCREW - SCM, VSC
D-LOK - DLM
GRIP TIGHT - GTM

| Series | Shaft Size | Frame Size |
|--------|-----------------|------------------------|
| 204 | 1/2 | TS-100 |
| | 5/8 | |
| | 3/4 | |
| | 20mm | |
| 205 | 7/8 | TS-100 |
| | 15/16 | |
| | 1 25mm | |
| 206 | 1-1/16 | TS-250 |
| | 1-1/8 | |
| | 1-3/16 | |
| | 1-1/4 | |
| | 30mm | |
| 207 | 1-1/4 | TS-250 |
| | 1-5/16 | |
| | 1-3/8 | |
| | 1-7/16 35mm | |
| 208 | 1-1/2 | TS-250 |
| | 1-5/8 40mm | |
| 209 | 1-5/8 | TS-250 |
| | 1-11/16 | |
| | 1-3/4 45mm | |
| 210 | 1-15/16 | TS-300 |
| | 2 50mm | |
| 211 | 2 | TS-300 |
| | 2-3/16 | |
| | 2-1/4 55mm | |
| 212 | 2-1/4 | TS-300 |
| | 2-7/16 60mm | |
| 214 | 2-1/2 | TS-300 |
| | 2-11/16 70mm | |
| 215 | 2-15/16 | TS-350 or TS-400 |
| | 75mm | |

- Telescoping Take-Up Frames Are Not Supplied With Bearings. First Match The Take-Up Frame With The Bearing Size From This Page. Then Turn To The Page Listed For The Specific Bearing Part Number.
- EZ-KLEEN Polymer Housing - B2-66 to B2-71
- Grip Tight (GT & GTM) - B5-54 to B5-59
- Setscrew (SC, SCM & VSC) - B8-20 to B8-23
- Eccentric Lock (SXR and SXV) - B7-34 to B7-35
- D-LOK (DL and DLM) - B6-46 to B6-49
- See B19-15 For Telescoping (TS) Take-Up Frame Travel Options And Part Numbers

| Series | Shaft Size | Frame Size |
|--------|---------------|------------------------|
| 206 | 1 | TS-250 |
| | 25mm | |
| 207 | 1-3/16 | TS-250 |
| | 1-1/4 30mm | |
| 208 | 1-7/16 | TS-250 |
| | 35mm | |
| 209 | 1-1/2 | TS-250 |
| | 40mm | |
| 210 | 1-11/16 | TS-300 |
| | 1-3/4 | |
| | 45mm | |
| 211 | 1-15/16 | TS-300 |
| | 2 50mm | |
| 212 | 2-3/16 | TS-300 |
| | 2-1/4 55mm | |
| 214 | 2-7/16 | TS-300 |
| | 2-1/2 | |
| 215 | 2-11/16 | TS-350 |
| | 70mm | |
| 216 | 2-15/16 | TS-350 or TS-400 |
| | 3 | |
| | 75mm | |



SELECTION/DIMENSIONS

Telescoping (TS) Take-Up Frame Bearings

TAPERED ROLLER BEARINGS

| Type E | | Type K Double Interlock | | TAF | |
|-----------------------|------------|----------------------------|------------|-----------------------|------------|
| Shaft Size | Frame Size | Shaft Size | Frame Size | Shaft Size | Frame Size |
| 1-3/16 to 1-1/4 | TS-250 | 1-1/2 to 2-3/16 | TS-300 | 2-7/16 to 2-1/2 | TS-400 |
| 1-3/8 to 2-3/16 | TS-300 | 2-1/4 to 2-1/2 | TS-350 | 2-15/16 to 3 | TS-400 |
| 1-1/2 to 2-3/16 | TS-300 | 2-11/16 to 3 | TS-400 | 3-7/16 to 4 | TS-500 |
| 2-1/4 to 2-1/2 | TS-350 | 3-3/16 to 3-1/2 | TS-500 | 4-7/16 to 5 | TS-500 |
| 2-11/16 to 3 | TS-400 | 3-15/16 to 4-1/2 | TS-500 | | |
| 3-3/16 to 3-1/2 | TS-400 | 4-15/16 to 5 | TS-500 | | |
| 3-15/16 to 5 | TS-500 | | | | |

- Type K - B10-40
- Type E - B10-22
- DOUBLE INTERLOCK - B10-50
- TAF - B10-58
- See B19-15 For Telescoping (TS) Take-Up Frame Travel Options and Part Numbers



SELECTION/DIMENSIONS

Telescoping (TS) Take-Up Frame Bearings

UNITIZED SPHERICAL ROLLER BEARINGS

Imperial - 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-350 |
| 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 |

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-350 |
| 2-15/16 3 | TS-350 |
| 3-7/16 | TS-400 |
| 3-15/16 4-7/16 | TS-500 |
| 4-15/16 | TS-500 |

UNISPHERE II

| Shaft Size | Frame Size |
|---|------------------------|
| 1-7/16 1-1/2 1-11/16 1-3/4 | |
| 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 |

IMPERIAL & S2000 With Type E Dimensions

| 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 |

- S-2000 - B12-14 to B12-25
- IMPERIAL - B14-30 to B14-37
- UNISPHERE - B13-12 to B3-13
- See B19-15 For Telescoping (TS) Take-Up Frame Travel Options and Part Numbers



SELECTION/DIMENSIONS

Telescoping (TS) Take-Up Frame Bearings

UNIFIED SPHERICAL ROLLER BEARINGS

USAF-500

SAF-XT

SAFS

ISAF

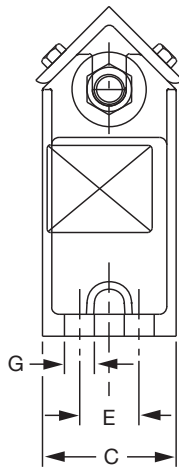
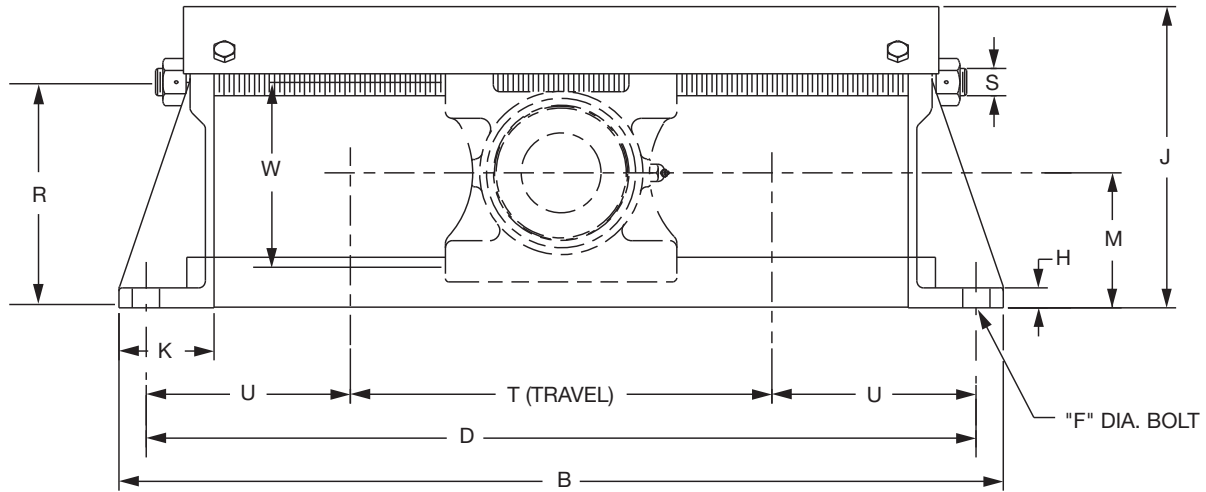
| Shaft Size | Frame Size |
|------------------------|------------------------|
| 1-15/16 | TS-300 or TS-350 |
| 2-3/16 | TS-400 |
| 2-7/16 to 3 | TS-400 |
| 3-3/16 | TS-500 |
| 3-7/16 to 3-1/2 | TS-500 |
| 3-15/16 to 4-1/2 | TS-500 |
| 4-15/16 | TS-500 |

- IMPERIAL - B14-52 to B14-57
- USAF-500 - B15-78 to B15-81
- SAF-XT - B15-64 to B15-74
- SAFS - B15-61 to B15-63
- See B19-15 For Telescoping (TS) Take-Up Frame Travel Options and Part Numbers



SELECTION/DIMENSIONS

Take-Up Frames - TP
TOP ANGLE PROTECTED SCREW TAKE-UP FRAMES



Plummer Blocks

Sleeve Bearings

SLEEVOIL

Take-Up Frames

Engineering

Part Number Index

Keyword Index

FEATURES/BENEFITS
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 PAGE B19-8



SELECTION/DIMENSIONS

Take-Up Frames - TP TOP ANGLE PROTECTED SCREW TAKE-UP FRAMES

| Frame Size | Nominal Travel | Part No. | Wt. | B | C | D | E | F Bolt Dia. | G | H |
|------------|----------------|---------------|-----|--------|-------|--------|-------|-------------|--------|-----|
| TP10 | 12 | 036350 | 32 | 28-1/2 | | 26-1/2 | | | | |
| | 18 | 036351 | 36 | 34-1/2 | 3-1/2 | 32-1/2 | - | 5/8 | 1 | 3/4 |
| | 24 | 036352 | 41 | 40-1/2 | | 38-1/2 | | | | |
| TP20 | 12 | 036353 | 34 | 29-1/2 | | 27-1/2 | | | | |
| | 18 | 036354 | 39 | 35-1/2 | 3-1/2 | 33-1/2 | - | 5/8 | 1 | 3/4 |
| | 24 | 036355 | 43 | 41-1/2 | | 39-1/2 | | | | |
| TP30 | 12 | 036356 | 47 | 30-1/2 | | 28-1/2 | | | | |
| | 18 | 036357 | 54 | 36-1/2 | 4 | 34-1/2 | - | 3/4 | 1-5/16 | 3/4 |
| | 24 | 036358 | 60 | 42-1/2 | | 40-1/2 | | | | |
| TP40 | 12 | 036359 | 52 | 32-1/2 | | 30-1/2 | | | | |
| | 18 | 036360 | 60 | 38-1/2 | 4-1/2 | 36-1/2 | 2 | 5/8 | 1 | 3/4 |
| | 24 | 036361 | 66 | 44-1/2 | | 42-1/2 | | | | |
| TP50 | 12 | 036362 | 63 | 34-1/2 | | 32 | | | | |
| | 18 | 036363 | 70 | 40-1/2 | 4-1/2 | 38 | 2 | 3/4 | 1 | 3/4 |
| | 24 | 036364 | 79 | 46-1/2 | | 44 | | | | |
| TP60 | 12 | 036365 | 84 | 38-1/2 | | 36 | | | | |
| | 18 | 036366 | 92 | 44-1/2 | 5-1/2 | 42 | 2-1/2 | 3/4 | 1 | 3/4 |
| | 24 | 036367 | 102 | 50-1/2 | | 48 | | | | |

| Frame Size | Nominal Travel | Part No. | J | K | M | R | S Screw Dia. | T | U | W |
|------------|----------------|---------------|---------|-------|---------|----------|--------------|--------|-------|---------|
| TP10 | 12 | 036350 | | 3 | | | | 14-1/2 | | |
| | 18 | 036351 | 8-1/2 | 3 | 3-15/16 | 6-11/32 | 3/4 | 20-1/2 | 6 | 5-5/32 |
| | 24 | 036352 | | 3 | | | | 26-1/2 | | |
| TP20 | 12 | 036353 | | 3 | | | | 15 | | |
| | 18 | 036354 | 9-1/8 | 3 | 4-3/16 | 6-31/32 | 3/4 | 21 | 6-1/4 | 5-25/32 |
| | 24 | 036355 | | 3 | | | | 27 | | |
| TP30 | 12 | 036356 | | 3-1/2 | | | | 14-1/2 | | |
| | 18 | 036357 | 10-1/8 | 3-1/2 | 4-3/8 | 7-3/8 | 1 | 20-1/2 | 7 | 6-3/16 |
| | 24 | 036358 | | 3-1/2 | | | | 26-1/2 | | |
| TP40 | 12 | 036359 | | 3-1/2 | | | | 15-1/2 | | |
| | 18 | 036360 | 11-1/16 | 3-1/2 | 4-15/16 | 8-3/8 | 1 | 21-1/2 | 7-1/2 | 7-3/16 |
| | 24 | 036361 | | 3-1/2 | | | | 27-1/2 | | |
| TP50 | 12 | 036362 | | 4 | | | | 15 | | |
| | 18 | 036363 | 12-1/2 | 4 | 5-7/16 | 9-13/32 | 1-1/4 | 21 | 8-1/2 | 8-7/32 |
| | 24 | 036364 | | 4 | | | | 27 | | |
| TP60 | 12 | 036365 | | 4-1/2 | | | | 16-1/2 | | |
| | 18 | 036366 | 14-1/4 | 4-1/2 | 7 | 11-11/32 | 1-1/4 | 22-1/2 | 9-5/8 | 8-29/32 |
| | 24 | 036367 | | 4-1/2 | | | | 28-1/2 | | |

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



SELECTION/DIMENSIONS

Top Angle (TP) Take-Up Frame Bearings

BALL BEARINGS

**NORMAL DUTY
SETSCREW - G
D-LOK - DL
ECCENTRIC LOCK - GXR
GRIP TIGHT-GT**

| Series | Shaft Size | Frame Size |
|--------|-----------------|------------|
| 210 | 1-15/16 2 | TP-10 |
| 211 | 2-3/16 2-1/4 | TP-20 |
| 212 | 2-7/16 | TP-30 |
| 215 | 2-15/16 | TP-40 |

- Top Angle Take-Up Frames Are Not Supplied With Bearings. First Match The Take-Up Frame With The Bearing Size From This Page. Then Turn To The Page Listed For The Specific Bearing Part Number.
- Grip Tight (GT & GTM) - B5-60 to B5-61
- Setscrew (G, & GM) - B4-80 to B4-81
- Eccentric Lock (GXR) - B7-36
- D-LOK (DL and DLM) - B6-50 to B6-51
- See B19-21 For Top Angle Take-Up Frame Travel Options And Part Numbers.

**MEDIUM DUTY
SETSCREW - GM
D-LOK - DLM
GRIP TIGHT - GTM**

| Series | Shaft Size | Frame Size |
|--------|------------------|------------|
| 210 | 1-11/16 1-3/4 | TP-10 |
| 211 | 1-15/16 2 | TP-20 |
| 212 | 2-3/16 2-1/4 | TP-30 |
| 214 | 2-7/16 2-1/2 | TP-40 |
| 215 | 2-11/16 | TP-40 |
| 216 | 2-15/16 3 | TP-50 |
| 218 | 3-7/16 3-1/2 | TP-60 |

TAPERED ROLLER BEARINGS

TYPE E

| Shaft Size | Frame Size |
|--------------|------------|
| 1-3/4 | TP-10 |
| 1-7/8 | |
| 1-15/16 2 | |
| 2-3/16 | TP-20 |
| 2-1/4 | TP-30 |
| 2-7/16 | |
| 2-1/2 | |
| 2-11/16 | TP-40 |
| 2-3/4 | |
| 2-15/16 3 | |
| 3-3/16 | |
| 3-1/4 | TP-50 |
| 3-7/16 | |
| 3-1/2 | |
| 3-15/16 4 | TP-60 |

- Top Angle Take-Up Frames Are Not Supplied With Bearings. First Match The Take-Up Frame With The Bearing Size From This Page. Then Turn To The Page Listed For The Specific Bearing Part Number.
- Type E - B10-73
- Type K - B10-48
- See B19-21 For Top Angle Take-Up Frame Travel Options And Part Numbers.

TYPE K

| Shaft Size | Frame Size |
|--------------|------------|
| 1-3/4 | TP-10 |
| 1-15/16 | |
| 2 | |
| 2-3/16 | TP-20 |
| 2-1/4 | TP-30 |
| 2-7/16 | |
| 2-1/2 | |
| 2-11/16 | TP-40 |
| 2-3/4 | |
| 2-15/16 3 | |
| 3-3/16 | |
| 3-7/16 | TP-50 |
| 3-1/2 | |
| 3-15/16 | |
| 3-15/16 | TP-60 |



SELECTION/DIMENSIONS

Top Angle (TP) Take-Up Frame Bearings

SPHERICAL ROLLER BEARINGS

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 |

- Top Angle Take-Up Frames Are Not Supplied With Bearings. First Match The Take-Up Frame With The Bearing Size From This Page. Then Turn To The Page Listed For The Specific Bearing Part Number.
- S-2000- B12-10
- See B19-21 For Top Angle Take-Up Frame Travel Options And Part Numbers.

SLEEVE BEARINGS

SOLID LUBE BEARING

LT-700

LT-1000

| 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 |

- Top Angle Take-Up Frames Are Not Supplied With Bearings. First Match The Take-Up Frame With The Bearing Size From This Page. Then Turn To The Page Listed For The Specific Bearing Part Number.
- SOLIDLUBE Sleeve Bearing (LT7 & LT10) - B17-10
- Type H Babbitted Bearing - B7-48
- See B19-21 For Top Angle Take-Up Frame Travel Options And Part Numbers.

BABBITTED BEARING

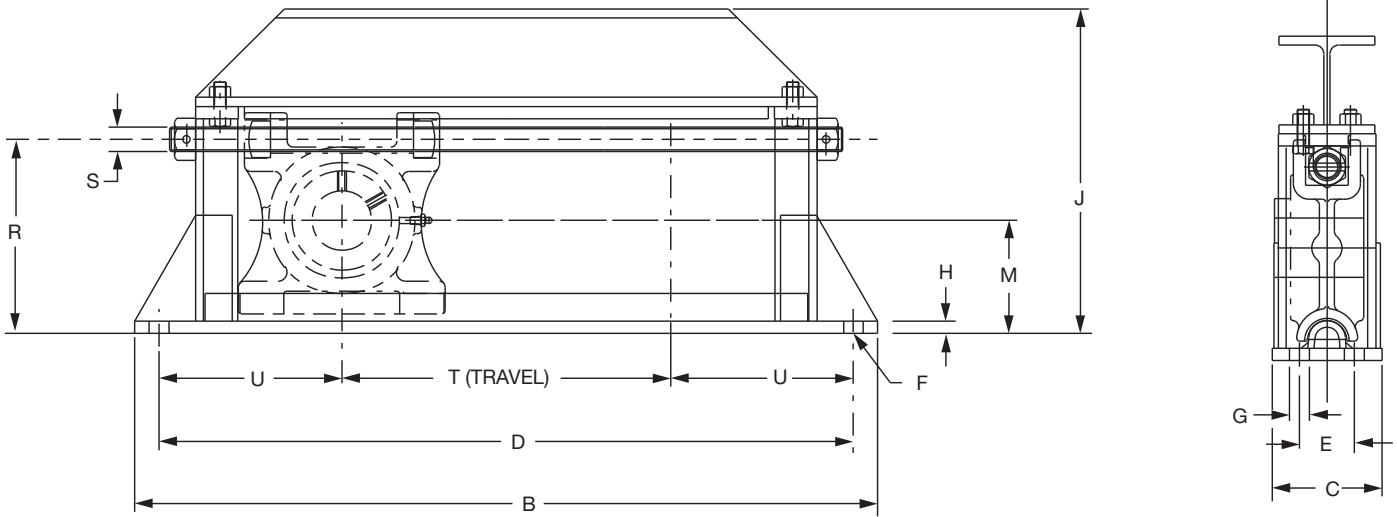
TYPE H

| Shaft Size | Frame Size |
|------------|------------|
| 1-15/16 | TP-10 |
| 2-3/16 | TP-10 |
| 2-7/16 | TP-30 |
| 2-15/16 | TP-30 |
| 3-7/16 | TP-50 |
| 3-15/16 | TP-50 |



SELECTION/DIMENSIONS

Take-Up Frames - TPHU



| Shaft Size | Frame Size | Nom. Travel | Part No. | Wt. | B | C | D | E | F Bolt Dia | G |
|------------|------------|---------------|---------------|--------|--------|-------|--------|-------|------------|-------|
| 1-7/8 | TPHU110 | 12 | 013497 | 58 | 29-1/2 | 3-1/2 | 27-1/2 | - | 5/8 | 11/16 |
| 1-15/16 | | 18 | 013498 | 70 | 35-1/2 | | 33-1/2 | | | |
| 2 | | 24 | 013499 | 82 | 41-1/2 | | 39-1/2 | | | |
| 2-3/16 | TPHU120 | 12 | 013900 | 71 | 29-1/2 | 4-1/2 | 27-1/2 | - | 5/8 | 11/16 |
| 2-1/4 | | 18 | 013901 | 85 | 35-1/2 | | 33-1/2 | | | |
| | | 24 | 013902 | 99 | 41-1/2 | | 39-1/2 | | | |
| 2-3/8 | TPHU130 | 12 | 013903 | 73 | 30-1/2 | 4-1/2 | 28-1/2 | - | 3/4 | 13/16 |
| 2-7/16 | | 18 | 013904 | 86 | 36-1/2 | | 34-1/2 | | | |
| 2-1/2 | | 24 | 013905 | 99 | 42-1/2 | | 40-1/2 | | | |
| 2-11/16 | TPHU140 | 12 | 013906 | 80 | 32-1/2 | 4-1/2 | 30-1/2 | 2 | 5/8 | 11/16 |
| 2-3/4 | | 18 | 013907 | 93 | 38-1/2 | | 36-1/2 | | | |
| 2-15/16 | | 24 | 013908 | 106 | 44-1/2 | | 42-1/2 | | | |
| 3 | | 30 | 013909 | 119 | 50-1/2 | | 48-1/2 | | | |
| | | 36 | 013910 | 132 | 56-1/2 | | 54-1/2 | | | |
| 3-3/16 | TPHU150 | 12 | 013511 | 91 | 34-1/4 | 4-1/2 | 32 | 2 | 3/4 | 13/16 |
| 3-1/4 | | 18 | 013512 | 105 | 40-1/4 | | 38 | | | |
| 3-7/16 | | 24 | 013513 | 119 | 46-1/4 | | 44 | | | |
| 3-1/2 | | 30 | 013514 | 133 | 52-1/4 | | 50 | | | |
| | | 36 | 013515 | 147 | 58-1/4 | | 56 | | | |
| 3-11/16 | TPHU160 | 12 | 013916 | 132 | 38-1/2 | 5-1/2 | 36 | 2-1/2 | 3/4 | 13/16 |
| 3-15/16 | | 18 | 013917 | 150 | 44-1/2 | | 42 | | | |
| | | 24 | 013918 | 168 | 50-1/2 | | 48 | | | |
| | | 30 | 013519 | 186 | 56-1/2 | | 54 | | | |
| 4 | 36 | 013520 | 204 | 62-1/2 | 60 | | | | | |

Plummer Blocks
 Sleeve Bearings
 SLEEVOIL
 Take-Up Frames
 Engineering
 Part Number Index
 Keyword Index



SELECTION/DIMENSIONS

Take-Up Frames - TPHU

| Shaft Size | Frame Size | Nom. Travel | Part No. | H | J | M | R | S Screw Dia. | T Max. Travel | U |
|------------------------------------|------------|---------------|---------------|-----|----------|---------|---------|--------------|---------------|-------|
| 1-7/8 1-15/16 2 | TPHU110 | 12 | 013497 | 1/2 | 10-5/8 | 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 | 1/2 | 11-1/4 | 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 | 1/2 | 11-3/4 | 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 | 3/4 | 12-5/16 | 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 | 3/4 | 13-27/32 | 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 | 1 | 17 | 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 | | | | | | | |

SPHERICAL ROLLER BEARINGS

S-2000

| Shaft Size | Frame Size |
|-------------------------|----------------------|
| 1-15/16 2 | TPHU-110 |
| 2-3/16 2-7/16 | TPHU-120 TPHU-130 |
| 2-11/16 2-15/16 3 | TPHU-140 |
| 3-7/16 3-15/16 | TPHU-150 TPHU-160 |

- TPHU Take-Up Frames Are Not Supplied With Bearings. First Match The Take-Up Frame With The Bearing Size From This Page. Then Turn To The Page Listed For The Specific Bearing Part Number.
- S-2000- B12-9
- See B19-24 and B19-25 For TPHU Take-Up Frame Travel Options And Part Numbers.



SELECTION/DIMENSIONS

Take-Up Frames - CP CENTER PULL (CP)

Plummer Blocks

Sleeve Bearings

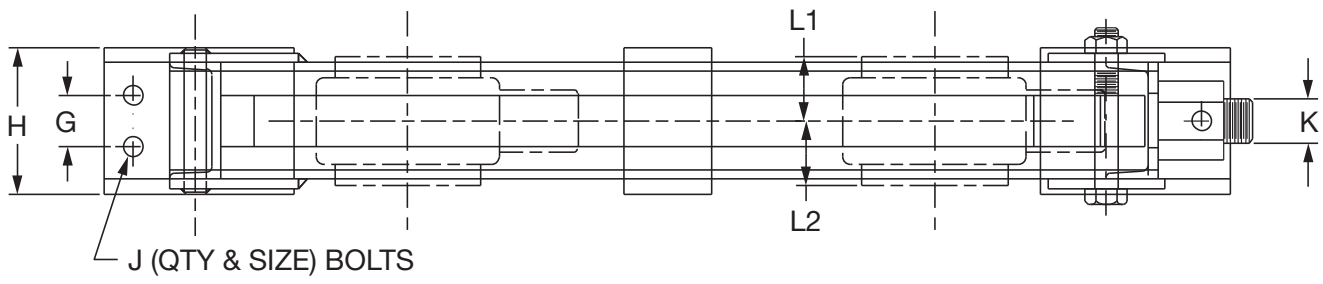
SLEEVOIL

Take-Up Frames

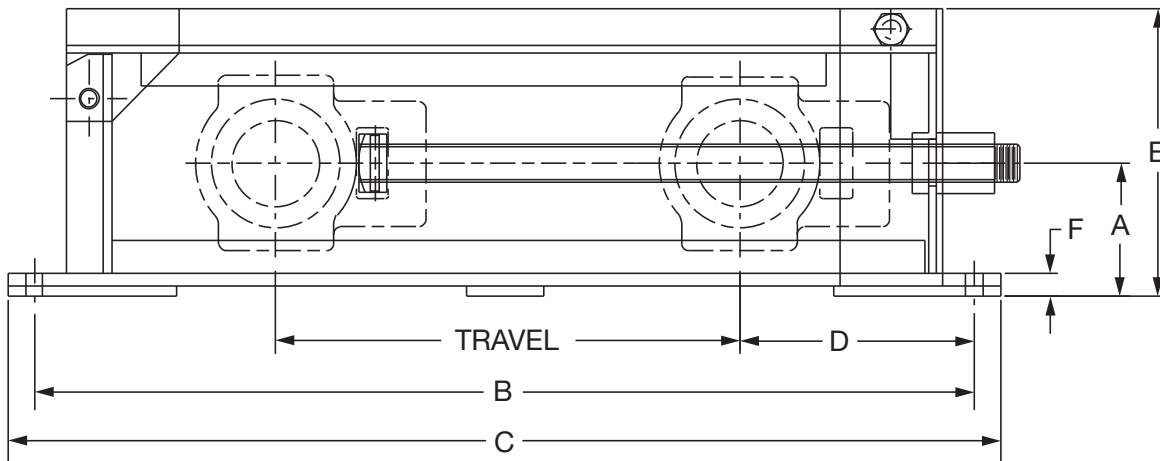
Engineering

Part Number Index

Keyword Index



U.S. Patent No. 4,676,670



| | | |
|---|---|--|
| <p>FEATURES/BENEFITS PAGE B19-2</p> | <p>HOW TO ORDER/NOMENCLATURE PAGE B19-7</p> | <p>SELECTION/DIMENSIONS PAGE B19-8</p> |
|---|---|--|



SELECTION/DIMENSIONS

Take-Up Frames - CP CENTER PULL (CP)

| Frame Size | Travel | Frame Part Number | Frame Weight | Travel | | A | B | C | D | | E | F | G | H | J | | K | L1 & L2 |
|------------|--------|-------------------|--------------|----------|------------|---------|--------|--------|----------------|------------|---------|--------|-------|----|------|-----------|----------------|-----------------|
| | | | | Maximum | | | | | S2000 Imperial | Type K & E | | | | | Qty. | Size Dia. | | |
| | | | | S2 & IP | Type E & K | | | | | | | | | | | | | |
| CP308 | 12 | 019200 | 30 | 15-15/32 | 15-15/32 | 3-7/16 | 26 | 28 | 6 | 6 | 7 | 11/16 | .. | 3 | 2 | 1/2 | 3/4-10NC | |
| CP308 | 18 | 019201 | 34 | 21-15/32 | 21-15/32 | | 32 | 64 | | | | | | | | | 3/4-10NC | |
| CP308 | 24 | 019202 | 38 | 27-15/32 | 27-15/32 | | 38 | 40 | | | | | | | | | 3/4-10NC | |
| CP308 | 30 | 019203 | 42 | 33-15/32 | 33-15/32 | | 44 | 46 | | | | | | | | | 3/4-10NC | |
| CP308 | 36 | 019204 | 46 | 39-15/32 | 39-15/32 | | 50 | 52 | | | | | | | | | 3/4-10NC | |
| CP400 | 12 | 019210 | 55 | 14-27/32 | 14-23/32 | 3-15/16 | 27-1/2 | 29-1/2 | 7-1/4 | 7-1/4 | 8-5/8 | 13/16 | .. | 4 | 2 | 5/8 | 1-8NC | |
| CP400 | 18 | 019211 | 65 | 20-27/32 | 20-23/32 | | 33-1/2 | 35-1/2 | | | | | | | | | 1-8NC | |
| CP400 | 24 | 019212 | 75 | 26-27/32 | 26-23/32 | | 39-1/2 | 41-1/2 | | | | | | | | | 1-8NC | |
| CP400 | 30 | 019213 | 85 | 32-27/32 | 32-23/32 | | 45-1/2 | 47-1/2 | | | | | | | | | 1-8NC | |
| CP400 | 36 | 019214 | 95 | 38-27/32 | 38-23/32 | | 51-1/2 | 53-1/2 | | | | | | | | | 1-8NC | |
| CP408 | 12 | 019220 | 61 | 14-5/32 | 14-3/32 | 4-7/16 | 27-1/2 | 29-1/2 | 7-3/4 | 7-3/4 | 9-1/4 | 11/16 | .. | 4 | 2 | 5/8 | 1-1/8-7NC | |
| CP408 | 18 | 019221 | 71 | 20-5/32 | 20-3/32 | | 33-1/2 | 35-1/2 | | | | | | | | | 1-1/8-7NC | |
| CP408 | 24 | 019222 | 81 | 26-5/32 | 26-3/32 | | 39-1/2 | 41-1/2 | | | | | | | | | 1-1/8-7NC | |
| CP408 | 30 | 019223 | 85 | 32-5/32 | 32-3/32 | | 45-1/2 | 47-1/2 | | | | | | | | | 1-1/8-7NC | |
| CP408 | 36 | 019224 | 95 | 38-5/32 | 38-3/32 | | 51-1/2 | 53-1/2 | | | | | | | | | 1-1/8-7NC | |
| CP502 | 12 | 019230 | 65 | 14-13/32 | 12-31/32 | 4-3/8 | 28-1/2 | 30-1/2 | 8-1/4 | 9-9/16 | 9-1/2 | 13/16 | .. | 4 | 2 | 3/4 | 1-1/4-7NC | |
| CP502 | 18 | 019231 | 75 | 20-13/32 | 18-31/32 | | 34-1/2 | 36-1/2 | | | | | | | | | 1-1/4-7NC | |
| CP502 | 24 | 019232 | 85 | 26-13/32 | 24-31/32 | | 40-1/2 | 42-1/2 | | | | | | | | | 1-1/4-7NC | |
| CP502 | 30 | 019233 | 95 | 32-13/32 | 30-31/32 | | 46-1/2 | 48-1/2 | | | | | | | | | 1-1/4-7NC | |
| CP502 | 36 | 019234 | 105 | 38-13/32 | 36-31/32 | | 52-1/2 | 54-1/2 | | | | | | | | | 1-1/4-7NC | |
| CP515 | 12 | 019240 | 105 | 14-23/32 | 14-15/32 | 5-1/8 | 30-1/2 | 32-1/2 | 9-1/4 | 9-3/8 | 11-5/32 | 7/8 | 2 | 5 | 4 | 5/8 | 1-1/2-6NC | See Page B19-23 |
| CP515 | 18 | 019241 | 120 | 20-23/32 | 20-15/32 | | 36-1/2 | 38-1/2 | | | | | | | | | 1-1/2-6NC | |
| CP515 | 24 | 019242 | 135 | 26-23/32 | 26-15/32 | | 42-1/2 | 44-1/2 | | | | | | | | | 1-1/2-6NC | |
| CP515 | 30 | 019243 | 150 | 32-23/32 | 32-15/32 | | 48-1/2 | 50-1/2 | | | | | | | | | 1-1/2-6NC | |
| CP515 | 36 | 019244 | 165 | 38-23/32 | 38-15/32 | | 54-1/2 | 56-1/2 | | | | | | | | | 1-1/2-6NC | |
| CP613 | 12 | 019250 | 115 | 15-1/32 | - | 5-5/8 | 32 | 34-1/4 | 9-7/8 | - | 12-1/16 | 15/16 | 2 | 5 | 4 | 3/4 | 1-3/4-5NC | |
| CP613 | 18 | 019251 | 135 | 21-1/32 | - | | 38 | 40-1/4 | | | | | | | | | 1-3/4-5NC | |
| CP613 | 24 | 019252 | 155 | 27-1/32 | - | | 44 | 46-1/4 | | | | | | | | | 1-3/4-5NC | |
| CP613 | 30 | 019253 | 175 | 33-1/32 | - | | 50 | 52-1/4 | | | | | | | | | 1-3/4-5NC | |
| CP613 | 36 | 019254 | 195 | 39-1/32 | - | | 56 | 58-1/4 | | | | | | | | | 1-3/4-5NC | |
| CP810 | 12 | 019260 | 185 | 16-9/32 | - | 7 | 36 | 38-1/2 | 12 | - | 14-3/4 | 1-3/16 | 2-1/2 | 6 | 4 | 3/4 | 2-4-1/2-NC | |
| CP810 | 18 | 019261 | 210 | 22-9/32 | - | | 42 | 44-1/2 | | | | | | | | | 2-4-1/2-NC | |
| CP810 | 24 | 019262 | 235 | 28-9/32 | - | | 48 | 50-1/2 | | | | | | | | | 2-4-1/2-NC | |
| CP810 | 30 | 019263 | 260 | 34-9/32 | - | | 54 | 56-1/2 | | | | | | | | | 2-4-1/2-NC | |
| CP810 | 36 | 019264 | 285 | 40-9/32 | - | | 60 | 62-1/2 | | | | | | | | | 2-4-1/2-NC | |
| CP908 | 12 | 019270 | 280 | 17-31/32 | - | 7-1/2 | 40-3/4 | 45-3/4 | 13-1/2 | - | 16-1/16 | 1-1/4 | 5 | 10 | 4 | 1-1/8 | 2-4-1/2-NC | |
| CP908 | 18 | 019271 | 310 | 23-31/32 | - | | 46-3/4 | 51-3/4 | | | | | | | | | 2-4-1/2-NC | |
| CP908 | 24 | 019272 | 340 | 29-31/32 | - | | 52-3/4 | 57-3/4 | | | | | | | | | 2-4-1/2-NC | |
| CP908 | 30 | 019273 | 370 | 35-31/32 | - | | 58-3/4 | 63-3/4 | | | | | | | | | 2-4-1/2-NC | |
| CP908 | 36 | 019274 | 400 | 41-31/32 | - | | 64-3/4 | 69-3/4 | | | | | | | | | 2-4-1/2-NC | |
| CP1004 | 12 | 019280 | 370 | 18-29/32 | - | 8-1/8 | 44-1/2 | 49-1/2 | 15-3/8 | - | 17-5/16 | 1-1/2 | 5-1/2 | 10 | 4 | 1-1/8 | 2-1/4-4-1/2-NC | |
| CP1004 | 18 | 019281 | 400 | 24-29/32 | - | | 50-1/2 | 55-1/2 | | | | | | | | | 2-1/4-4-1/2-NC | |
| CP1004 | 24 | 019282 | 430 | 30-29/32 | - | | 56-1/2 | 61-1/2 | | | | | | | | | 2-1/4-4-1/2-NC | |
| CP1004 | 30 | 019283 | 460 | 36-29/32 | - | | 62-1/2 | 67-1/2 | | | | | | | | | 2-1/4-4-1/2-NC | |
| CP1004 | 36 | 019284 | 490 | 42-29/32 | - | | 68-1/2 | 73-1/2 | | | | | | | | | 2-1/4-4-1/2-NC | |



SELECTION/DIMENSIONS

Take-Up Frames - CP CENTER PULL (CP)

| Frame Size | Travel | Frame Part Number | Frame Weight | Travel | | Imperial | | S2000 | | Type K | | Type E | |
|------------|--------|-------------------|--------------|----------|------------|----------|---------|---------|---------|--------|-------|--------|-------|
| | | | | Maximum | | L1 | L2 | L1 | L2 | L1 | L2 | L1 | L2 |
| | | | | S2 & IP | Type E & K | | | | | | | | |
| CP308 | 12 | 019200 | 30 | 15-15/32 | 15-15/32 | | | | | | | | |
| CP308 | 18 | 019201 | 34 | 21-15/32 | 21-15/32 | | | | | | | | |
| CP308 | 24 | 019202 | 38 | 27-15/32 | 27-15/32 | 57/64 | 1-47/64 | 53/64 | 1-45/64 | 1-1/32 | 1-1/2 | 1-1/2 | 1-1/2 |
| CP308 | 30 | 019203 | 42 | 33-15/32 | 33-15/32 | | | | | | | | |
| CP308 | 36 | 019204 | 46 | 39-15/32 | 39-15/32 | | | | | | | | |
| CP400 | 12 | 019210 | 55 | 14-27/32 | 14-23/32 | | | | | | | | |
| CP400 | 18 | 019211 | 65 | 20-27/32 | 20-23/32 | | | | | | | | |
| CP400 | 24 | 019212 | 75 | 26-27/32 | 26-23/32 | 53/64 | 1-63/64 | 55/64 | 1-13/16 | 1-7/32 | 1-3/4 | 1-3/4 | 1-3/4 |
| CP400 | 30 | 019213 | 85 | 32-27/32 | 32-23/32 | | | | | | | | |
| CP400 | 36 | 019214 | 95 | 38-27/32 | 38-23/32 | | | | | | | | |
| CP408 | 12 | 019220 | 61 | 14-5/32 | 14-3/32 | | | | | | | | |
| CP408 | 18 | 019221 | 71 | 20-5/32 | 20-3/32 | | | | | | | | |
| CP408 | 24 | 019222 | 81 | 26-5/32 | 26-3/32 | 59/64 | 2-7/64 | 29/32 | 1-63/64 | 1-9/32 | 1-7/8 | 1-7/8 | 1-7/8 |
| CP408 | 30 | 019223 | 85 | 32-5/32 | 32-3/32 | | | | | | | | |
| CP408 | 36 | 019224 | 95 | 38-5/32 | 38-3/32 | | | | | | | | |
| CP502 | 12 | 019230 | 65 | 14-13/32 | 12-31/32 | | | | | | | | |
| CP502 | 18 | 019231 | 75 | 20-13/32 | 18-31/32 | | | | | | | | |
| CP502 | 24 | 019232 | 85 | 26-13/32 | 24-31/32 | 1-13/64 | 2-7/32 | 1-13/64 | 2 | 1-5/8 | 2 | 2 | 2 |
| CP502 | 30 | 019233 | 95 | 32-13/32 | 30-31/32 | | | | | | | | |
| CP502 | 36 | 019234 | 105 | 38-13/32 | 36-31/32 | | | | | | | | |
| CP515 | 12 | 019240 | 105 | 14-23/32 | 14-15/32 | | | | | | | | |
| CP515 | 18 | 019241 | 120 | 20-23/32 | 20-15/32 | | | | | | | | |
| CP515 | 24 | 019242 | 135 | 26-23/32 | 26-15/32 | 1-7/32 | 2-9/32 | 1-3/16 | 2-13/32 | 1-5/8 | 2-1/4 | 2-1/4 | 2-1/4 |
| CP515 | 30 | 019243 | 150 | 32-23/32 | 32-15/32 | | | | | | | | |
| CP515 | 36 | 019244 | 165 | 38-23/32 | 38-15/32 | | | | | | | | |
| CP613 | 12 | 019250 | 115 | 15-1/32 | - | | | | | | | | |
| CP613 | 18 | 019251 | 135 | 21-1/32 | - | | | | | | | | |
| CP613 | 24 | 019252 | 155 | 27-1/32 | - | 1-15/32 | 2-11/16 | 1-31/64 | 2-33/64 | - | - | - | - |
| CP613 | 30 | 019253 | 175 | 33-1/32 | - | | | | | | | | |
| CP613 | 36 | 019254 | 195 | 39-1/32 | - | | | | | | | | |
| CP810 | 12 | 019260 | 185 | 16-9/32 | - | | | | | | | | |
| CP810 | 18 | 019261 | 210 | 22-9/32 | - | | | | | | | | |
| CP810 | 24 | 019262 | 235 | 28-9/32 | - | 1-21/32 | 3-3/64 | 1-39/64 | 2-55/64 | - | - | - | - |
| CP810 | 30 | 019263 | 260 | 34-9/32 | - | | | | | | | | |
| CP810 | 36 | 019264 | 285 | 40-9/32 | - | | | | | | | | |
| CP908 | 12 | 019270 | 280 | 17-31/32 | - | | | | | | | | |
| CP908 | 18 | 019271 | 310 | 23-31/32 | - | | | | | | | | |
| CP908 | 24 | 019272 | 340 | 29-31/32 | - | | | 3-1/16 | 3-15/32 | - | - | - | - |
| CP908 | 30 | 019273 | 370 | 35-31/32 | - | | | | | | | | |
| CP908 | 36 | 019274 | 400 | 41-31/32 | - | | | | | | | | |
| CP1004 | 12 | 019280 | 370 | 18-29/32 | - | | | | | | | | |
| CP1004 | 18 | 019281 | 400 | 24-29/32 | - | | | | | | | | |
| CP1004 | 24 | 019282 | 430 | 30-29/32 | - | | | 3-17/64 | 3-41/64 | - | - | - | - |
| CP1004 | 30 | 019283 | 460 | 36-29/32 | - | | | | | | | | |
| CP1004 | 36 | 019284 | 490 | 42-29/32 | - | | | | | | | | |



SELECTION/DIMENSIONS

Center Pull Take-Up Frame Bearings

TAPERED 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 |

- Center Pull Take-Up Frames Are Not Supplied With Bearings. First Match The Take-Up Frame With The Bearing Size From This Page. Then Turn To The Page Listed For The Specific Bearing Part Number
- Type E - B10-30
- Type K - B10-46
- See B19-27 and B19-28 For Center Pull Take-Up Frame Travel Options And Part Numbers

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 |

SPHERICAL ROLLER BEARINGS

S-2000

| Shaft Size | Frame Size |
|--------------------------|------------|
| 1-3/8 1-7/16 1-1/2 | CP-308 |
| 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 |

- Center Pull Take-Up Frames Are Not Supplied With Bearings. First Match The Take-Up Frame With The Bearing Size From This Page. Then Turn To The Page Listed For The Specific Bearing Part Number
- S-2000 - B12-36 to B12-39
- IMPERIAL - B14-18 to B14-22
- See B19-27 and B19-28 For Center Pull Take-Up Frame Travel Options And Part Numbers

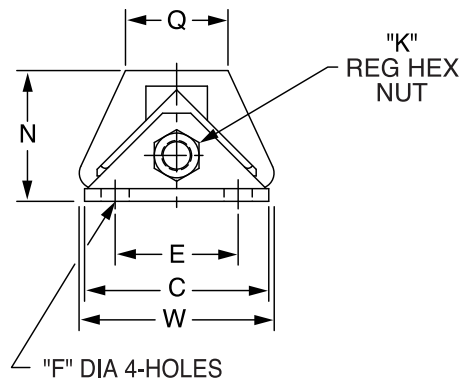
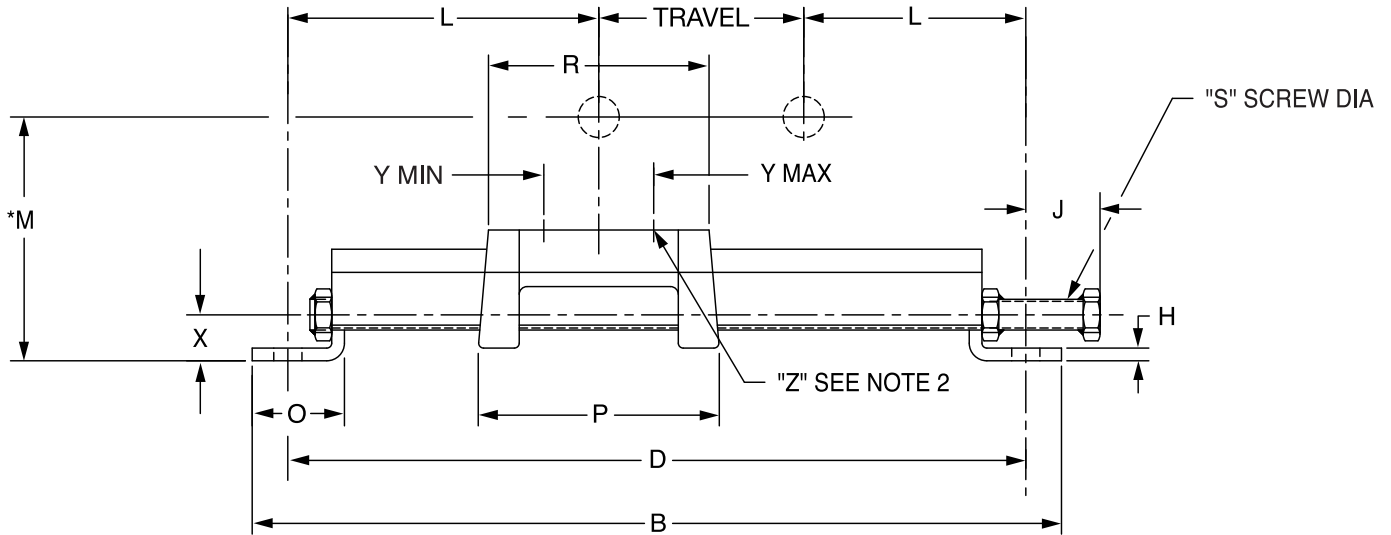
IMPERIAL - IP

| Shaft Size | Frame Size |
|------------------------------------|------------|
| 1-1/8 1-3/16 | CP308 |
| 1-1/4 | |
| 1-3/8 | |
| 1-7/16 1-1/2 | CP-400 |
| 1-5/8 | |
| 1-11/16 | |
| 1-3/4 1-7/8 | CP-400 |
| 1-15/16 | |
| 2 | |
| 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 |



SELECTION/DIMENSIONS

Take-Up Frames - LD LD PROTECTED SCREW TAKE-UP FRAMES



Plummer Blocks

Sleeve Bearings

SLEEVOIL

Take-Up Frames

Engineering

Part Number Index

Keyword Index

| | | |
|---------------------------------|---|------------------------------------|
| FEATURES/BENEFITS PAGE B19-2 | HOW TO ORDER/NOMENCLATURE PAGE B19-7 | SELECTION/DIMENSIONS PAGE B19-8 |
|---------------------------------|---|------------------------------------|



SELECTION/DIMENSIONS

Take-Up Frames - LD LD PROTECTED SCREW TAKE-UP FRAMES

| Frame Size x Travel | Part No. | Wt. | 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 | | 20-1/2 | | | | | | 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 | 3-3/4 | 26-3/4 | 2-1/2 | 1/2 | 1/4 | 1-3/4 | 9/16 | 7-3/8 | 2-11/16 | 2-1/8 |
| 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 | | 44-3/4 | | | | | | 7-3/8 | | |
| 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 | 5 | 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 | | 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 | 5 | 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-50x42 | 038931 | 83 | 63-1/4 | | 61-1/2 | | | | | | 9-3/4 | | |
| LD-50x48 | 038932 | 90 | 69-1/4 | | 67-1/2 | | | | | | 9-3/4 | | |



SELECTION/DIMENSIONS

Take-Up Frames - LD LD PROTECTED SCREW TAKE-UP FRAMES

| Frame Size x Travel | Part No. | Wt. | P | Q | R | S Screw Dia. | W | X | Y Bolt Centers | | Z Bolt Dia. | Angle |
|---------------------|----------|-----|--------|-------|-------|--------------|-------|--------|----------------|--------|-------------|----------------------|
| | | | | | | | | | Max. | Min. | | |
| 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 | 13-1/2 | 3-1/2 | 13 | 1 | 5-7/8 | | | | | |
| LD-50x48 | 038932 | 90 | | | | | | | | | | |



SELECTION/DIMENSIONS

Light Duty Take-Up Frame Bearings

BALL BEARINGS

NORMAL DUTY

SETSCREW - SC, SCU, SCB, VSC, VSCB

D-LOK - DL, DLB

ECCENTRIC LOCK - SXR, SXRU, SXRb, SXV, SXVU, SXVB

GRIP TIGHT - GT

| Series | Shaft Size | Frame Size |
|--------|------------|------------|
| 203 | 1/2 | LD-10 |
| | 5/8 | |
| 204 | 1/2 | LD-10 |
| | 5/8 | |
| | 3/4 | |
| 205 | 20mm | LD-10 |
| | 7/8 | |
| | 15/16 | |
| 206 | 25mm | LD-20 |
| | 1-1/16 | |
| | 1-1/8 | |
| | 1-3/16 | |
| 207 | 1-1/4 | LD-20 |
| | 30mm | |
| | 1-1/4 | |
| | 1-5/16 | |
| 208 | 1-3/8 | LD-20 |
| | 1-7/16 | |
| | 35mm | |
| 209 | 1-1/2 | LD-20 |
| | 1-5/8 | |
| | 40mm | |
| 210 | 1-5/8 | LD-20 |
| | 1-11/16 | |
| | 1-3/4 | |
| 211 | 45mm | LD-30 |
| | 1-15/16 | |
| | 2 | |
| 212 | 50mm | LD-40 |
| | 2 | |
| | 2-3/16 | |
| 214 | 2-1/4 | LD-40 |
| | 55mm | |
| | 2-1/4 | |
| 215 | 2-7/16 | LD-45 |
| | 60mm | |
| | 2-1/2 | |
| 218 | 2-11/16 | LD-50 |
| | 70mm | |
| | 2-15/16 | |
| 219 | 75mm | LD-50 |
| | 3 | |
| | 3-7/16 | |
| 220 | 85mm | LD-50 |
| | 3-1/2 | |
| | 85mm | |

- Light Duty Take-Up Frames Are Not Supplied With Bearings. First Match The Take-Up Frame With The Bearing Size From This Page. Then Turn To The Page Listed For The Specific Bearing Part Number.
- EZ-KLEEN Polymer Housing - B1-14 to B1-29
- Grip Tight (GT & GTM)- B2-8 to B2-19
- Setscrew (SC, SCM & VSC) - B12-12 to B12-15
- Eccentric Lock (SXR & SXV) - B7-12 to B7-15
- D-LOK (DL & DLM) - B6-10 to B10-22
- See B19-32 For Light Duty Take-Up Frame Travel Options And Part Numbers.

MEDIUM DUTY SETSCREW - SCM, SCH

D-LOK - DLM, DLH

GRIP TIGHT - GTM

| Series | Shaft Size | Frame Size |
|--------|------------|------------|
| 206 | 1 | LD-20 |
| | 25mm | |
| 207 | 1-3/16 | LD-20 |
| | 1-1/4 | |
| 208 | 30mm | LD-20 |
| | 1-7/16 | |
| 209 | 35mm | LD-20 |
| | 1-1/2 | |
| 210 | 40mm | LD-30 |
| | 1-11/16 | |
| 211 | 1-3/4 | LD-40 |
| | 45mm | |
| 212 | 1-15/16 | LD-40 |
| | 2 | |
| 214 | 50mm | LD-45 |
| | 2-3/16 | |
| 215 | 2-1/4 | LD-50 |
| | 55mm | |
| 216 | 2-7/16 | LD-50 |
| | 2-1/2 | |
| 218 | 65mm | LD-50 |
| | 2-11/16 | |
| 219 | 70mm | LD-50 |
| | 2-15/16 | |
| 220 | 75mm | LD-50 |
| | 3 | |
| 221 | 3-7/16 | LD-50 |
| | 85mm | |
| 222 | 3-1/2 | LD-50 |
| | 85mm | |



SELECTION/DIMENSIONS

Light Duty Take-Up Frame Bearings

SPHERICAL ROLLER BEARINGS

IMPERIAL - IP

| Shaft Size | Frame Size |
|------------|------------|
| 1-1/8 | LD-20 |
| 1-3/16 | |
| 1-1/4 | |
| 1-3/8 | |
| 1-7/16 | |
| 1-1/2 | |
| 1-5/8 | LD-20 |
| 1 | |
| 11/16 | |
| 1-3/4 | |
| 1-7/8 | |
| 1 | LD-30 |
| 15/16 | |
| 2 | |
| 2-3/16 | |
| 2-1/4 | LD-40 |
| 2-3/8 | |
| 2-7/16 | |
| 2-1/2 | LD-45 |
| 2-11/16 | |
| 2-3/4 | |
| 2-15/16 | |
| 3 | LD-50 |
| 3-3/16 | |
| 3-1/4 | |
| 3-7/16 | |
| 3-1/2 | |

S-2000

| Shaft Size | Frame Size |
|------------|------------|
| 1-3/8 | LD-20 |
| 1-7/16 | |
| 1-1/2 | |
| 1-11/16 | LD-20 |
| 1-3/4 | |
| 1-15/16 | LD-30 |
| 2 | |
| 2-3/16 | LD-40 |
| 2-7/16 | |
| 2-11/16 | LD-45 |
| 2-15/16 | |
| 3 | |
| 3-7/16 | LD-50 |

UNISPHERE II

| Shaft Size | Frame Size |
|------------|------------|
| 1-7/16 | LD-20 |
| 1-1/2 | |
| 1-11/16 | |
| 1-3/4 | LD-30 |
| 1-15/16 | |
| 2 | LD-40 |
| 2-3/16 | |
| 2-7/16 | |
| 2-1/2 | LD-45 |
| 2-11/16 | |
| 2-3/4 | |
| 2-15/16 | |
| 3 | LD-50 |
| 3-7/16 | |
| 3-1/2 | |

- Light Duty Take-Up Frames Are Not Supplied With Bearings. First Match The Take-Up Frame With The Bearing Size From This Page. Then Turn To The Page Listed For The Specific Bearing Part Number
- S-2000 - B12-14 to B12-17
- Unisphere II - B13-12 to B13-13
- IMPERIAL - B114-30 to B14-31
- See B19-32 For Light Duty Take-Up Frame Travel Options And Part Numbers.

| Frame Size | Max Recommended Housing Cap Load (90° Load Angle) |
|------------|---|
| LD-10 | 2100 |
| LD-20 | 3900 |
| LD-30 | 6200 |
| LD-40 | 6200 |
| LD-45 | 9100 |
| LD-50 | 12500 |

* Consult the Application Engineering Department for loads greater than listed. In all cases, when loads are heavy, the L10 life of the bearing should be checked for proper selection and life requirements.

* LD Frames are drilled for two bolt pillow blocks

Plummer Blocks

Sleeve Bearings

SLEEVOIL

Take-Up Frames

Engineering

Part Number Index

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SELECTION/DIMENSIONS

Light Duty Take-Up Frame Bearings

SLEEVE BEARING

LT-700
LT-1000

| Series | Shaft Size | Frame Size |
|--------|---------------|------------|
| 204 | 3/4 | LD-10 |
| 205 | 7/8 | LD-10 |
| | 15/16 | |
| | 1 25mm | |
| 206 | 1-1/8 | LD-20 |
| | 1-3/16 | |
| | 30mm | |
| 207 | 1-1/4 | LD-20 |
| | 1-3/8 | |
| | 1-7/16 | |
| | 35mm | |
| 209 | 1-11/16 | LD-20 |
| | 1-3/4 | |
| | 45mm | |
| 210 | 1-15/16 | LD-30 |
| | 2 50mm | |
| 211 | 2-3/16 | LD-40 |
| | 55mm | |
| 212 | 2-7/16 | LD-40 |
| | 2-1/2 55mm | |
| 215 | 2-15/16 | LD-50 |
| | 3 | |

- Light Duty Take-Up Frames Are Not Supplied With Bearings. First Match The Take-Up Frame With The Bearing Size From This Page. Then Turn To The Page Listed For The Specific Bearing Part Number
- LT-700 - B17-10 to B17-13
- LT-1000 - B17-10 to B17-13
- Babbitt Sleeve - B17-38 to B17-39
- See B19-32 For Light Duty Take-Up Frame Travel Options And Part Numbers

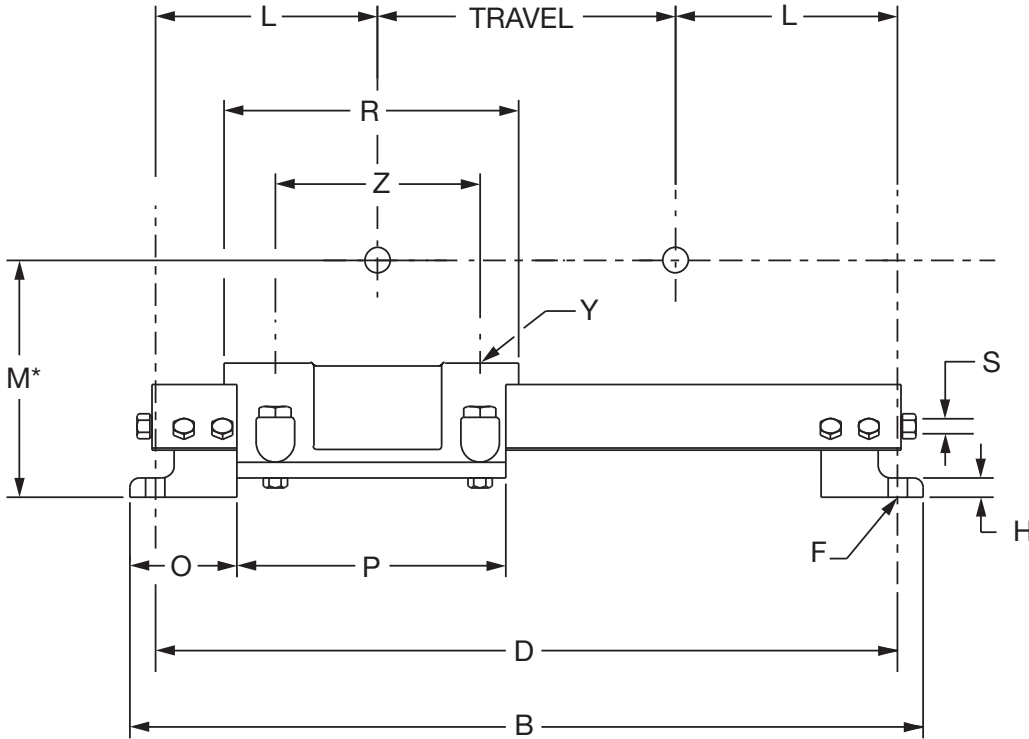
Babbitted Solid Journal Bearing

| 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 |



SELECTION/DIMENSIONS

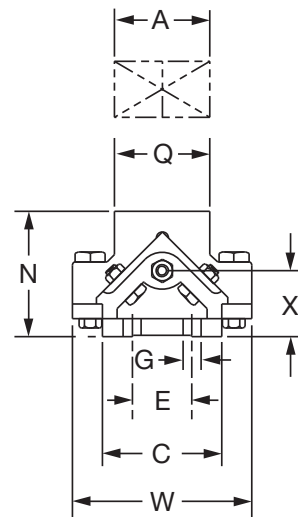
Take-Up Frames - HD
HD PROTECTED SCREW TAKE-UP FRAMES



*M = N + Pillow Block Base to Center Dimension

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 two-bolt Pillow Blocks and may be ordered by part numbers. When using four-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, USAF, etc.)
3. Whether pillow block is two-or four-bolt style
4. Frame Travel





SELECTION/DIMENSIONS

Take-Up Frames - HD HD PROTECTED SCREW TAKE-UP FRAMES

| Frame Size | Travel | Part No. ** | Frame Wt. | B | C | D |
|------------|--------|-------------|-----------|--------|-------|--------|
| HD-200* | 12 | 089020 | 79 | 31 | 5 | 29 |
| | 18 | 089021 | 82 | 37 | 5 | 35 |
| | 24 | 089022 | 90 | 43 | 5 | 41 |
| | 30 | 089023 | 95 | 47 | 5 | 47 |
| | 36 | 089024 | 100 | 55 | 5 | 53 |
| | 48 | 089150 | 110 | 67 | 5 | 65 |
| HD-250* | 12 | 089151 | 115 | 35-1/4 | 6 | 32-3/4 |
| | 18 | 089025 | 125 | 41-1/4 | 6 | 38-3/4 |
| | 24 | 089026 | 135 | 47-1/4 | 6 | 44-3/4 |
| | 30 | 089027 | 137 | 53-1/4 | 6 | 50-3/4 |
| | 36 | 089028 | 143 | 59-1/4 | 6 | 56-3/4 |
| | 48 | 089152 | 153 | 71-1/4 | 6 | 68-3/4 |
| HD-300* | 12 | 089153 | 175 | 38-1/4 | 6-1/2 | 35-1/2 |
| | 18 | 089029 | 184 | 44-1/4 | 6-1/2 | 41-1/2 |
| | 24 | 089030 | 194 | 50-1/4 | 6-1/2 | 47-1/2 |
| | 30 | 089031 | 206 | 56-1/4 | 6-1/2 | 53-1/2 |
| | 36 | 089032 | 214 | 62-1/4 | 6-1/2 | 59-1/2 |
| | 48 | 089033 | 240 | 74-1/4 | 6-1/2 | 71-1/2 |
| HD-350* | 12 | 089154 | 195 | 40 | 6-1/2 | 37-1/4 |
| | 18 | 089034 | 204 | 46 | 6-1/2 | 43-1/4 |
| | 24 | 089035 | 212 | 52 | 6-1/2 | 49-1/4 |
| | 30 | 089036 | 220 | 58 | 6-1/2 | 55-1/4 |
| | 36 | 089037 | 234 | 64 | 6-1/2 | 61-1/4 |
| | 48 | 089038 | 250 | 76 | 6-1/2 | 73-1/4 |
| HD-400** | 12 | 089155 | 340 | 44 | 6-1/2 | 41-1/4 |
| | 18 | 089039 | 350 | 50 | 6-1/2 | 47-1/4 |
| | 24 | 089040 | 360 | 56 | 6-1/2 | 53-1/4 |
| | 30 | 089041 | 370 | 62 | 6-1/2 | 59-1/4 |
| | 36 | 089042 | 380 | 68 | 6-1/2 | 65-1/4 |
| | 48 | 089043 | 400 | 80 | 6-1/2 | 77-1/4 |
| HD-500** | 12 | 089156 | 420 | 49-1/2 | 7 | 47 |
| | 18 | 089044 | 440 | 55-1/2 | 7 | 53 |
| | 24 | 089045 | 460 | 61-1/2 | 7 | 59 |
| | 30 | 089046 | 480 | 67-1/2 | 7 | 65 |
| | 36 | 089047 | 500 | 73-1/2 | 7 | 71 |
| | 48 | 089048 | 530 | 85-1/2 | 7 | 83 |
| | 60 | 089604 | 560 | 97-1/2 | 7 | 95 |

| Frame Size | E | F Bolt Dia. | G Dia. | H | L | N | O | P | Saddle *Dimensions | | S Scr. Dia. | W | X | Y Bolt Dia. | Z | |
|------------|---|-------------|--------|-----|--------|-------|-------|--------|--------------------|--------|-------------|--------|---------|-------------|----------|--------|
| | | | | | | | | | Q | R | | | | | Max. | 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 | ◆ | ◆ | ◆ |

Consult DODGE for HD600 and HD650 Take-Up Frames, for large bore bearings.

◆ Solid saddle must be drilled and tapped per order (HD-400 & HD500 frames)

* Saddle is slotted to receive 2-bolt blocks.

** For 4-bolt pillow blocks, all HD frames must be drilled and tapped per order. Refer to Page B19-36

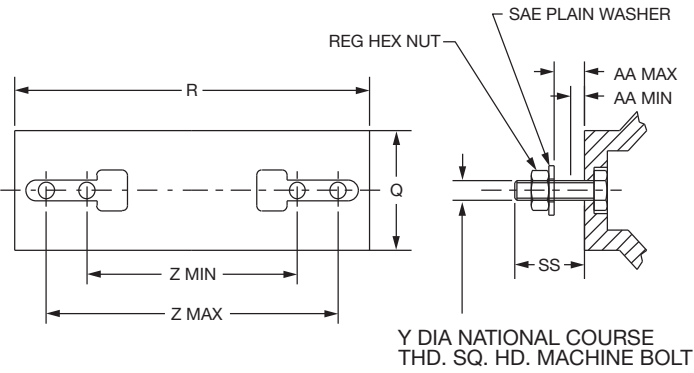
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SELECTION/DIMENSIONS

Take-Up Frames - HD

USING HD PROTECTED SCREW TAKE-UP FRAMES FOR BEARINGS OTHER THAN DODGE



Slotted saddle type HD frames (200 through 350 sizes) may be used with 2-bolt pillow blocks other than DODGE pillow blocks listed in tables on previous pages. 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 |

| Frame Size | Y Bearing Hold Down Bolts | | | SS | Z Bolt Centers | |
|------------|------------------------------|---------------|-------------------|---------|-------------------|--------|
| | Diameter | Part Number | Length Under Head | | Max. | Min. |
| | | | | | | |
| 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.



SELECTION/DIMENSIONS

Heavy Duty Take-Up Frame Bearings

TAPERED ROLLER BEARINGS

| Type E | | Type K Double Interlock | | TAF | |
|-----------------------|------------|----------------------------|------------|-----------------------|------------|
| Shaft Size | Frame Size | Shaft Size | Frame Size | Shaft Size | Frame Size |
| 1-1/2 to 2-1/2 | HD-200* | 1-1/2 to 2-3/16 | HD-200* | 2-7/16 to 2-1/2 | HD-200* |
| 2-11/16 to 3 | HD-250* | 2-1/4 to 2-1/2 | HD-250* | 2-15/16 to 3 | HD-250* |
| 3-3/16 to 3-1/2 | HD-350* | 2-11/16 to 3 | HD-300* | 3-7/16 to 4 | HD-350* |
| 3-15/16 to 5 | HD-400** | 3-3/16 to 3-1/2 | HD-350* | 4-7/16 to 5 | HD-400** |
| 5-7/16 to 6 | HD-500** | 3-15/16 to 4-1/2 | HD-400** | 5-7/16 | HD-500** |
| | | 4-15/16 to 5 | HD-500** | | |

- Heavy Duty Take-Up Frames Are Not Supplied With Bearings. First Match The Take-Up Frame With The Bearing Size From This Page. Then Turn To The Page Listed For The Specific Bearing Part Number

- Type K - B10-40
- Type E - B10-22
- DOUBLE INTERLOCK - B10-50
- TAF - B10-58
- See B19-37 For Heavy Duty Take-Up Frame Travel Options and Part Numbers

* HD-200, HD-250, HD-300 and HD 350 Frames Are Drilled For Two Bolt Base Pillow Blocks. For 4-bolt pillow blocks, refer to note on page B19-36.

**HD-400 And Larger Are Drilled And Tapped Per Order. Specify Bearing Type When Ordering.



SELECTION/DIMENSIONS

Heavy Duty Take-Up Frame Bearings

SPECIALITY TAPERED ROLLER BEARINGS

| Special Duty | | Type C | | All-Steel | |
|-----------------------|------------|------------------------|------------|-----------------------|------------|
| Shaft Size | Frame Size | Shaft Size | Frame Size | Shaft Size | Frame Size |
| 1-3/8 to 2 | HD-200 | 1-3/8 to 1-15/16 | HD-200 | 2-11/16 to 3 | HD-250* |
| 2-1/8 to 2-1/2 | HD-250 | 2 to 2-7/16 | HD-250 | 3-7/16 to 3-1/2 | HD-300* |
| 2-3/8 to 3 | HD-300 | 2-3/8 to 2-15/16 | HD-300 | 3-15/16 to 4 | HD-350* |
| 3-3/16 to 3-1/2 | HD-350 | 3 to 3-7/16 | HD-350 | 4-7/17 to 5 | HD-400** |
| 3-11/16 to 4 | HD-400** | 3-1/2 to 4 | HD-400** | | |
| 4-7/16 to 5 | HD-500** | 4-7/16 to 5 | HD-500** | | |

- Heavy Duty Take-Up Frames Are Not Supplied With Bearings. First Match The Take-Up Frame With The Bearing Size From This Page. Then Turn To The Page Listed For The Specific Bearing Part Number

- Specialty Duty - B11-30
- Type C - B11-8
- All Steel - B11-54
- See B19-37 For Heavy Duty Take-Up Frame Travel Options and Part Numbers

*HD-200, HD-250, HD-300 and HD 350 Frames Are Drilled For Two Bolt Base Pillow Blocks. For 4-bolt pillow blocks, refer to note on page B19-36.

**HD-400 And Larger Are Drilled And Tapped Per Order. Specify Bearing Type When Ordering.

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SELECTION/DIMENSIONS

Heavy Duty Take-Up Frame Bearings

UNITIZED SPHERICAL ROLLER BEARINGS

| Imperial - IP | | S-2000 | | UNISPHERE II | | |
|--|------------|---|------------|---|------------|---------|
| Shaft Size | Frame Size | Shaft Size | Frame Size | Shaft Size | Frame Size | |
| 1-1/8 to 2-1/2 | HD-200* | 1-3/8 1-7/16 1-1/2 1-11/16 1-3/4 1-15/16 | HD-200* | 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* | 2 2-3/16 2-7/16 2-11/16 | | HD-250 | | |
| 3-3/16 3-1/4 3-7/16 3-1/2 | HD-300* | 2-15/16 3 | | | | HD-300 |
| 3-11/16 3-15/16 4 4-7/16 4-1/2 | HD-350* | 3-7/16 3-15/16 4-7/16 | | | | |
| 4-15/16 5 | | HD-400** | | | | 4-15/16 | HD-400** | 4 HD-350 |

- Heavy Duty Take-Up Frames Are Not Supplied With Bearings. First Match The Take-Up Frame With The Bearing Size From This Page. Then Turn To The Page Listed For The Specific Bearing Part Number
- S-2000 - B12-14 to B12-29
- IMPERIAL - B14-30 to B14-37
- UNISPHERE - B13-12 to B13-13
- See B19-37 For Heavy Duty Take-Up Frame Travel Options and Part Numbers

*HD-200, HD-250, HD-300 and HD 350 Frames Are Drilled For Two Bolt Base Pillow Blocks. For 4-bolt pillow blocks, refer to note on page B19-36.

**HD-400 And Larger Are Drilled And Tapped Per Order. Specify Bearing Type When Ordering.



SELECTION/DIMENSIONS

Heavy Duty Take-Up Frame Bearings

UNIFIED SPHERICAL ROLLER BEARINGS

USAF-500

SAF-XT

SAFS

ISAF

| 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** |

| Take-Up Frame Size | Maximum Recommended Housing Cap. Loads ** (at 90° load angle) |
|--------------------|--|
| HD-200 | 2800 |
| HD-250 | 4200 |
| HD-300 | 4200 |
| HD-350 | 3500 |
| HD-400 | *** |
| HD-500 | *** |

- Heavy Duty Take-Up Frames Are Not Supplied With Bearings. First Match The Take-Up Frame With The Bearing Size From This Page. Then Turn To The Page Listed For The Specific Bearing Part Number
- IMPERIAL - B14-52 to B14-57
- USAF-500 - B14-26 to B14-29
- SAF-XT - B15-56 to B15-59
- SAFS - B15-61 to B15-63
- See B19-37 For Heavy Duty Take-Up Frame Travel Options and Part Numbers

*HD-200, HD-250, HD-300 and HD 350 Frames Are Drilled For Two Bolt Base Pillow Blocks. For 4-bolt pillow blocks, refer to note on page B19-36.

**HD-400 And Larger Are Drilled And Tapped Per Order. Specify Bearing Type When Ordering.

| | | |
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SELECTION/DIMENSIONS

Heavy Duty Take-Up Frame Bearings

SLEEVE BEARINGS

MM-700
MM-1000

| 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** |

- Heavy Duty Take-Up Frames Are Not Supplied With Bearings. First Match The Take-Up Frame With The Bearing Size From This Page. Then Turn To The Page Listed For The Specific Bearing Part Number
- MM 700 - B17-14
- MM 1000 - B17-14
- Angle Babbitt - B17-42 to B17-43
- Bronze B17-50 to B17-53
- See B19-37 For Heavy Duty Take-Up Frame Travel Options and Part Numbers

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** |

*HD-200, HD-250, HD-300 and HD 350 Frames Are Drilled For Two Bolt Base Pillow Blocks. For 4-bolt pillow blocks, refer to note on page B19-36.

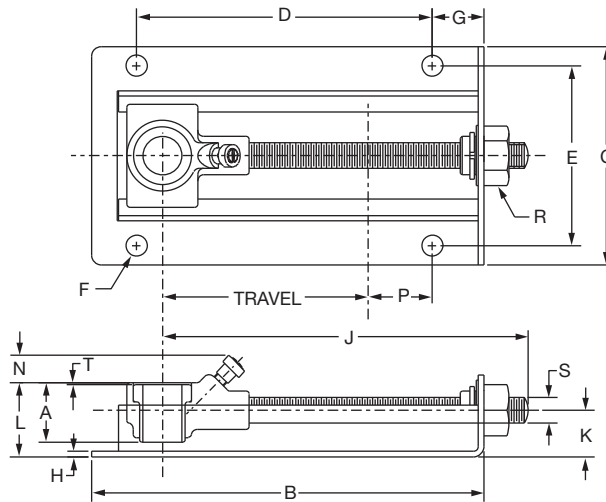
**HD-400 And Larger Are Drilled And Tapped Per Order. Specify Bearing Type When Ordering.

| | | |
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SELECTION/DIMENSIONS

Take-Up Frames - BRONZOIL

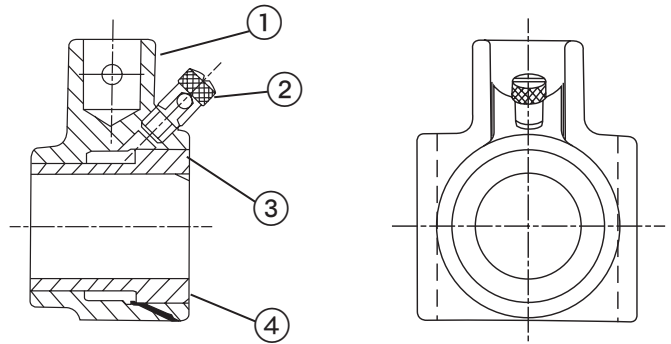


| Shaft Size X Travel | Part Number | Description | Wt. | A | B | C | D | E |
|---------------------|-------------|-------------|-----|--------|-------|-------|-------|-------|
| 1/2 x 4 | 034020 | BOTU-008X4 | 1.9 | | | | | |
| 5/8 x 4 | 034021 | BOTU-010X4 | 1.8 | 1-3/16 | 7-5/8 | 4-1/4 | 5-3/4 | 3-1/2 |
| 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 |

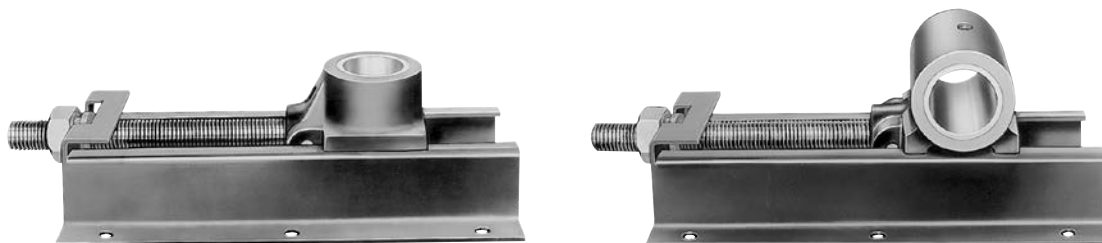


1. BRONZOIL Housing
2. BRONZOIL Take-Up Oil Cup
3. BRONZOIL Bushing
4. BRONZOIL Permawick



SELECTION/DIMENSIONS

Take-Up Bearings - Type A & B



TYPE A & B TAKE-UP BEARINGS (Only) TYPE A & B TAKE-UP FRAMES DISCONTINUED

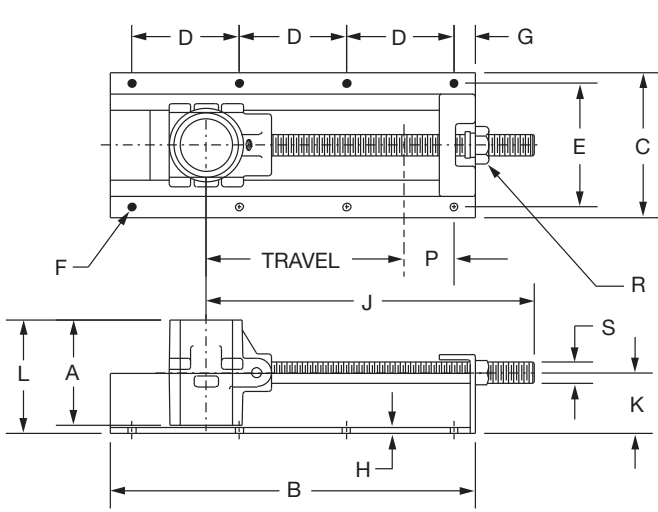
| Shaft Size x Travel | Type A Take-Up Bearing | | |
|------------------------|------------------------|---------------|------|
| | Part Number | Description | Wt. |
| 15/16 x 5 | 036180 | TUA-015-TUBRG | 2.6 |
| 1 x 5 | 036181 | TUA-100-TUBRG | 2.5 |
| 1-3/15 x 5 | 036182 | TUA-103-TUBRG | 2.3 |
| 1-1/4 x 5 | 036183 | TUA-104-TUBRG | 2.2 |
| 1-7/16 x 6 | 036184 | TUA-107-TUBRG | 3.5 |
| 1-7/16 x 12 | | | |
| 1-11/16 x 6 | 036185 | TUA-111-TUBRG | 4.1 |
| 1-11/16 x 12 | | | |
| 1-15/16 x 9 | 036186 | TUA-115-TUBRG | 6.7 |
| 1-15/16 x 18 | | | |
| 2-3/16 x 9 | 036187 | TUA-203-TUBRG | 10.1 |
| 2-3/16 x 18 | | | |
| 2-7/16 x 9 | 036188 | TUA-207-TUBRG | 8.8 |
| 2-7/16 x 18 | | | |

| Shaft Size x Travel | Type B Take-Up Bearing | | |
|------------------------|------------------------|---------------|------|
| | Part Number | Description | Wt. |
| 15/16 x 5 | 036270 | TUB-015-TUBRG | 3.6 |
| 1 x 5 | 036193 | TUB-100-TUBRG | 3.5 |
| 1-3/15 x 5 | 036194 | TUB-103-TUBRG | 3.3 |
| 1-1/4 x 5 | 036274 | TUB-104-TUBRG | 3.2 |
| 1-7/16 x 6 | 036196 | TUB-107-TUBRG | 4.7 |
| 1-7/16 x 12 | | | |
| 1-11/16 x 6 | 036197 | TUB-111-TUBRG | 5.4 |
| 1-11/16 x 12 | | | |
| 1-15/16 x 9 | 036198 | TUB-115-TUBRG | 8.6 |
| 1-15/16 x 18 | | | |
| 2-3/16 x 9 | 036199 | TUB-203-TUBRG | 12.7 |
| 2-3/16 x 18 | | | |
| 2-7/16 x 9 | 036200 | TUB-207-TUBRG | 11.4 |
| 2-7/16 x 18 | | | |

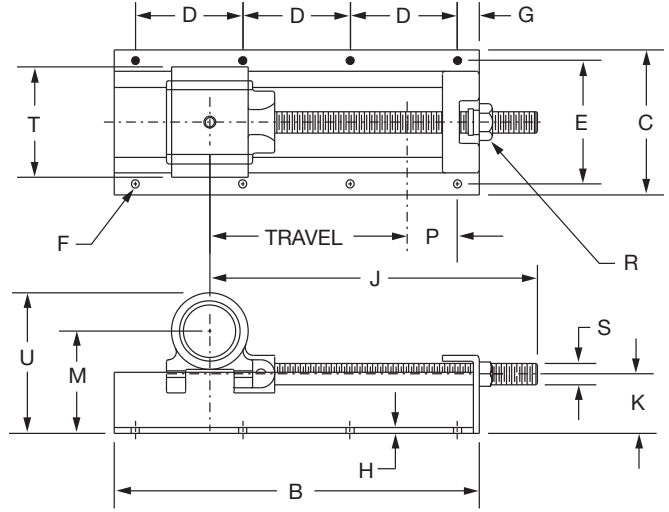


SELECTION/DIMENSIONS

Take-Up Bearings - Type A & B



TYPE TUA



TYPE TUB

| Shaft Size x Travel | A | B | C | D | E | F Bolt | | G | H | J | K |
|--|-------|-------|------------|--------|------------|--------|--------|-------|----------|--------------|------------|
| | | | | | | No. | Dia. | | | | |
| 15/16 x 5 1 x 5 1-3/16 x 5 1- 1/4 x 5 | 2-5/8 | 9-3/4 | 4-3/4 | 3-1/2 | 4 | 6 | 5/16 | 1-3/8 | 1/8 | 8-3/4 | 1-5/8 |
| 1-7/16 x 6 1-7/16 x 12 | 3-1/8 | 1218 | 5-3/45-3/4 | 55-1/4 | 4-3/44-3/4 | 68 | 3/33/8 | 11 | 3/163/16 | 10-1/216-1/2 | 22 |
| 1-11/16 x 6 1-11/16 x 12 | 3-3/8 | 1218 | 5-3/45-3/4 | 55-1/4 | 4-3/44-3/4 | 68 | 3/83/8 | 11 | 3/163/16 | 10-1/216-1/2 | 22 |
| 1-15/16 x 9 1-15/16 x 18 | 4-1/8 | 1726 | 6-3/46-3/4 | 56 | 5-3/45-3/4 | 810 | 3/83/8 | 11 | 1/41/4 | 14-1/223-1/2 | 2-3/42-3/4 |
| 2-3/16 x 9 2-3/16 x 18 | 4-7/8 | 1726 | 6-3/46-3/4 | 56 | 5-3/45-3/4 | 810 | 3/83/8 | 11 | 1/41/4 | 14-1/223-1/2 | 2-3/42-3/4 |
| 2-7/16 x 9 2-7/16 x 18 | 4-7/8 | 1726 | 6-3/46-3/4 | 56 | 5-3/45-3/4 | 810 | 3/83/8 | 11 | 1/41/4 | 14-1/223-1/2 | 2-3/42-3/4 |

| Shaft Size x Travel | L | M | P | R Hex. | S | T | U | Grease Cup | |
|--|-------|------------|------------|-----------|-----|-------|---------|------------|------|
| | | | | | | | | Pipe Tap | Size |
| 15/16 x 5 1 x 5 1-3/16 x 5 1- 1/4 x 5 | 3 | 2-3/4 | 1-5/8 | 1-5/16 | 3/4 | 2-7/8 | 3-27/32 | 1/8 | 0 |
| 1-7/16 x 6 1-7/16 x 12 | 3-5/8 | 3-3/83-3/8 | 2-1/22-1/2 | 1-1/2 | 7/8 | 3-3/8 | 4-19/32 | 1/4 | 0 |
| 1-11/16 x 6 1-11/16 x 12 | 3-3/4 | 3-5/83-5/8 | 2-1/22-1/2 | 1-1/2 | 7/8 | 3-5/8 | 4-31/32 | 1/4 | 0 |
| 1-15/16 x 9 1-15/16 x 18 | 4-7/8 | 4-1/24-1/2 | 3-3/83-3/8 | 1-5/8 | 1 | 4-3/8 | 6-1/32 | 1/4 | 1 |
| 2-3/16 x 9 2-3/16 x 18 | 5-1/4 | 4-3/44-3/4 | 3-1/83-1/8 | 1-5/8 | 1 | 5-1/8 | 6-17/32 | 1/4 | 1 |
| 2-7/16 x 9 2-7/16 x 18 | 5-1/4 | 4-3/44-3/4 | 3-3/83-3/8 | | | | | | |

| | | |
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Vibration Frequencies of DODGE 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 1 - 10 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 Type E pillow block is rotating at 1000 RPM, the vibration due to a failed component will show up at the following frequencies: (Table 3, Line 6)

Frequency

| | | |
|---|--------------------|------------|
| Cup Nick or Spall | = 1000 x 9.251 | = 9251 RPM |
| Cone Nick or Spall | = 1000 x 11.749 | = 11749 PM |
| *Roller Nick or Spall | = 1000 x 4.011 x 2 | = 8022 RPM |
| Cage (Train) Frequency (Inner Ring Rotation) | = 1000 x 0.441 | = 441 RPM |

Since all the values in Tables 1 - 10 are based on unity inner ring or cone rotation, the vibration due to flaws will show up at the frequencies obtained by multiplying the RPM times the factors found on the appropriate table. The resulting product will have units of RPM.

Table 1: All Setscrew, Eccentric, D-LOK & GT Ball Bearing Parameters For Vibration Analysis (1-RPS)

| Series | SC Bore | SCM Bore | # Balls | Diameter of Balls | Pitch Diameter | Outer Ring Frequency Hz | Inner Ring Frequency Hz | * Ball Spin Frequency Hz | Cage Frequency Hz |
|--------|-----------------|-----------------|---------|-------------------|----------------|-------------------------|-------------------------|--------------------------|-------------------|
| 203 | 1/2 - 5/8 | | 8 | 17/64 | 1.151 | 3.078 | 4.923 | 2.050 | 0.385 |
| 204 | 1/2 - 3/4 | | 8 | 5/16 | 1.325 | 3.057 | 4.943 | 2.002 | 0.382 |
| 205 | 7/8 - 1 | | 9 | 5/16 | 1.533 | 3.582 | 5.418 | 2.350 | 0.398 |
| 206 | 1-1/6 - 1-1/4 | 1 | 9 | 3/8 | 1.823 | 3.575 | 5.426 | 2.328 | 0.397 |
| 207 | 1-1/4 - 1-7/16 | 1-3/16 | 9 | 7/16 | 2.136 | 3.579 | 5.422 | 2.339 | 0.398 |
| 208 | 1-1/2 - 1-5/8 | 1-7/16 - 1-1/2 | 9 | 1/2 | 2.387 | 3.558 | 5.443 | 2.283 | 0.395 |
| 209 | 1-11/16 - 1-3/4 | 1-1/2 | 9 | 13/25 | 2.559 | 3.586 | 5.414 | 2.360 | 0.398 |
| 210 | 1-15/16 - 2 | 1-11/16 - 1-3/4 | 10 | 1/2 | 2.765 | 4.056 | 5.904 | 2.674 | 0.410 |
| 211 | 2-2-1/4 | 1-15/16 - 2 | 10 | 9/16 | 3.092 | 4.090 | 5.910 | 2.657 | 0.410 |
| 212 | 2-1/4 - 2-7/16 | 2-3/16 - 2-1/4 | 10 | 5/8 | 3.385 | 4.077 | 5.923 | 2.616 | 0.408 |
| 214 | 2-11/16 | 2-7/16 - 2-1/2 | 10 | 11/16 | 3.775 | 4.089 | 5.911 | 2.654 | 0.409 |
| 215 | 2-15/16 | 2-11/16 | 11 | 11/16 | 4.085 | 4.574 | 6.456 | 2.887 | 0.416 |
| 216 | | 2-15/16 - 3 | 11 | 3/4 | 4.330 | 4.547 | 6.453 | 2.800 | 0.413 |
| 218 | | 3-7/16 - 3-1/2 | 11 | 27/32 | 4.920 | 4.557 | 6.443 | 2.830 | 0.414 |

Table 2: Type E, K, DI, and TAF Tapered Roller Bearing Parameters For Vibration Analysis (1-RPS)

| Bore Size | # Rollers Per Row | Mean Diameter of Rollers | Pitch Diameter | 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 |

$$\text{Cup Frequency} = N * \text{RPM} * (1 - (\text{Bd} * \cos a / \text{Pd})) / 120$$

$$\text{Cone Frequency} = N * \text{RPM} * (1 + (\text{Bd} * \cos a / \text{Pd})) / 120$$

$$\text{Roller Spin Frequency} = \text{Pd} * \text{RPM} * (1 - (\text{Bd} * \cos a / \text{Pd})^2) / (120 * \text{Bd})$$

$$\text{Cage Frequency} = \text{RPM} * (1 - (\text{Bd} * \cos a / \text{Pd})) / 120$$

Pd = Pitch Diameter

N = Number of rollers

Bd = Roller Diameter

a = Cup Angle (contact angle)

Table 3: Type C Tapered Roller Bearing Parameters For Vibration Analysis (1-RPS)

| Bore Size | # Rollers Per Row | Mean Diameter of Rollers | Pitch Diameter | 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 |

$$\text{Cup Frequency} = N * \text{RPM} * (1 - (\text{Bd} * \cos a / \text{Pd})) / 120$$

$$\text{Cone Frequency} = N * \text{RPM} * (1 + (\text{Bd} * \cos a / \text{Pd})) / 120$$

$$\text{Roller Spin Frequency} = \text{Pd} * \text{RPM} * (1 - (\text{Bd} * \cos a / \text{Pd})^2) / (120 * \text{Bd})$$

$$\text{Cage Frequency} = \text{RPM} * (1 - (\text{Bd} * \cos a / \text{Pd})) / 120$$

Pd = Pitch Diameter

N = Number of rollers

Bd = Roller Diameter

a = Cup Angle (contact angle)

*** Note:** Ball and Roller Spin Frequencies are listed at one (1X) roller spin frequency. For thorough analysis it is important to check frequency level at two (2X) rotational speed of balls or rollers as this is the frequency that a single ball/roller defect will contact the raceways of the bearing. In other words, a ball/roller defect will strike both inner and outer ring in one revolution of the roller.

Type 4: Special Duty Tapered Roller Bearing Parameters For Vibration Analysis (1-RPS)

| Bore Size | # Rollers Per Row | Mean Diameter of Rollers | Pitch Diameter | 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 |

$$\text{Cup Frequency} = N * \text{RPM} * (1 - (\text{Bd} * \cos a / \text{Pd})) / 2$$

$$\text{Cone Frequency} = N * \text{RPM} * (1 + (\text{Bd} * \cos a / \text{Pd})) / 2$$

$$\text{Roller Spin Frequency} = \text{Pd} * \text{RPM} * (1 - (\text{Bd} * \cos a / \text{Pd})^2) / (2 * \text{Bd})$$

$$\text{Cage Frequency} = \text{RPM} * (1 - (\text{Bd} * \cos a / \text{Pd})) / 2$$

Pd = Pitch Diameter

N = Number of rollers

Bd = Roller Diameter

a = Cup Angle (contact angle)

Table 5: All Steel Tapered Roller Bearing Parameters For Vibration Analysis (1-RPS)

| Bore Size | # Rollers Per Row | Mean Diameter of Rollers | Pitch Diameter | Contact Angle | Cup Frequency Hz | Cone Frequency Hz | * Roller Spin Frequency Hz | Cage Frequency Hz |
|----------------|-------------------|--------------------------|----------------|---------------|------------------|-------------------|----------------------------|-------------------|
| 2-11/16 - 3 | 27 | 0.36 | 4.114 | 15.50 | 12.362 | 14.638 | 5.673 | 0.458 |
| 3-1/4 - 3-1/2 | 26 | 0.51 | 5.120 | 17.57 | 11.766 | 14.235 | 4.974 | 0.453 |
| 3-15/16 - 4 | 33 | 0.48 | 5.814 | 12.50 | 15.170 | 17.830 | 6.017 | 0.460 |
| 4-7/16 - 4-1/2 | 29 | 0.60 | 6.503 | 12.92 | 13.196 | 15.804 | 5.375 | 0.455 |
| 4-15/16 - 5 | 32 | 0.61 | 7.355 | 12.50 | 14.705 | 17.296 | 5.989 | 0.460 |
| 5-7/16 | 27 | 0.84 | 8.272 | 12.00 | 12.159 | 14.841 | 4.875 | 0.450 |
| 5-15/16 - 6 | 26 | 0.85 | 8.323 | 12.00 | 11.701 | 14.300 | 4.847 | 0.450 |
| 6-7/16 - 7 | 32 | 0.81 | 9.748 | 12.50 | 14.702 | 17.300 | 5.978 | 0.459 |
| 7-1/2 - 8 | 27 | 1.12 | 11.471 | 12.42 | 12.213 | 14.787 | 5.074 | 0.452 |
| 9 - 10 | 32 | 1.28 | 14.026 | 12.03 | 14.572 | 17.428 | 5.435 | 0.455 |

$$\text{Cup Frequency} = N * \text{RPM} * (1 - (\text{Bd} * \cos a / \text{Pd})) / 120$$

$$\text{Cone Frequency} = N * \text{RPM} * (1 + (\text{Bd} * \cos a / \text{Pd})) / 120$$

$$\text{Roller Spin Frequency} = \text{Pd} * \text{RPM} * (1 - (\text{Bd} * \cos a / \text{Pd})^2) / (120 * \text{Bd})$$

$$\text{Cage Frequency} = \text{RPM} * (1 - (\text{Bd} * \cos a / \text{Pd})) / 120$$

Pd = Pitch Diameter

N = Number of rollers

Bd = Roller Diameter

a = Cup Angle (contact angle)

*** Note:** Ball and Roller Spin Frequencies are listed at one (1X) roller spin frequency. For thorough analysis it is important to check frequency level at two (2X) rotational speed of balls or rollers as this is the frequency that a single ball/roller defect will contact the raceways of the bearing. In other words, a ball/roller defect will strike both inner and outer ring in one revolution of the roller.

Table 6: S-2000, UNISPHERE II and Imperial Spherical Roller Bearing Parameters for Vibration Analysis (1-RPS)

| Basic Bearing Series | S-2000 Bore Size (in) | UNISPHERE II Bore Size (in) | Imperial Bore Size (in) | No. of Rollers | Mean Dia. Of Rollers | Pitch Dia. | Contact Angle | Outer Ring Frequency Hz | Inner Ring Frequency Hz | * Roller Spin Frequency Hz | Cage Frequency Hz |
|----------------------|-----------------------|-----------------------------|-------------------------|----------------|----------------------|------------|---------------|-------------------------|-------------------------|----------------------------|-------------------|
| 22208 | 1-3/8 - 1-1/2 | 1-7/16 - 1-1/2 | 1-1/8 - 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 | 1-11/16 - 1-3/4 | 1-5/8 - 1-3/4 | 17 | 0.429 | 2.665 | 9.750 | 7.151 | 9.849 | 3.027 | 0.421 |
| 22210 | 1-15/16 - 2 | 1-15/16 - 2 | 1-7/8 - 2 | 18 | 0.433 | 2.858 | 9.083 | 7.653 | 10.347 | 3.226 | 0.425 |
| 22211 | 2-3/16 | 2-3/16 | 2-3/16 - 2-1/4 | 19 | 0.465 | 3.189 | 8.750 | 8.132 | 10.868 | 3.361 | 0.428 |
| 22213 | 2-7/16 | 2-7/16 - 2-1/2 | 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 | 2-11/16 - 3 | 2-11/16 - 3 | 20 | 0.575 | 4.197 | 8.250 | 8.645 | 11.355 | 3.584 | 0.432 |
| 22218 | 3-7/16 | 3-7/16 - 3-1/2 | 3-3/16 - 3-1/2 | 18 | 0.780 | 5.079 | 8.833 | 7.635 | 10.365 | 3.183 | 0.424 |
| 22220 | 3-15/16 - 4 | 3-15/16 - 4 | 3-11/16 - 4 | 18 | 0.878 | 5.705 | 9.000 | 7.632 | 10.368 | 3.174 | 0.424 |
| 22222 | 4-7/16 | | 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 | | 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 |

Table 7: USAF and SAF-XT Spherical Roller Bearing Parameters for Vibration Analysis (1-RPS)

| Basic Bearing Series | USAF/SAF-XT Bore Sizes (in) | No. Of Rollers | Mean Dia. Of Rollers | Pitch Dia. | 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 |

* **Note:** Ball and Roller Spin Frequencies are listed at one (1X) roller spin frequency. For thorough analysis it is important to check frequency level at two (2X) rotational speed of balls or rollers as this is the frequency that a single ball/roller defect will contact the raceways of the bearing. In other words, a ball/roller defect will strike both inner and outer ring in one revolution of the roller.

Table 8: DODGE USAF Air Handling Spherical Roller Bearing Parameters For Vibration Analysis (1-RPS)

| Bore Size | Basic Bearing Series | # Rollers Per Row | Diameter of Rollers | Pitch Diameter | 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 = $N * RPM * (1 - (Bd * \cos a / Pd)) / 120$

 Inner Ring Frequency = $N * RPM * (1 + (Bd * \cos a / Pd)) / 120$

 Roller Spin Frequency = $Pd * RPM * (1 - (Bd * \cos a / Pd)^2) / (120 * Bd)$

 Cage Frequency = $RPM * (1 - (Bd * \cos a / Pd)) / 120$

Pd = Pitch Diameter

N = Number of rollers

Bd = Roller Diameter

a = Contact Angle

Table 9: Split-Spherical Roller Bearing Parameters For Vibration Analysis

| Bore Size | Basic Bearing Series | # Rollers Per Row | Diameter Of Rollers | Pitch Diameter | 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 = $N * RPM * (1 - (Bd * \cos a / Pd)) / 12$

 Inner Ring Frequency = $N * RPM * (1 + (Bd * \cos a / Pd)) / 120$

 Roller Spin Frequency = $Pd * RPM * (1 - (Bd * \cos a / Pd)^2) / (120 * Bd)$

 Cage Frequency = $RPM * (1 - (Bd * \cos a / Pd)) / 120$

Pd = Pitch Diameter

N = Number of rollers

Bd = Roller Diameter

a = Contact Angle

*** Note:** Ball and Roller Spin Frequencies are listed at one (1X) roller spin frequency. For thorough analysis it is important to check frequency level at two (2X) rotational speed of balls or rollers as this is the frequency that a single ball/roller defect will contact the raceways of the bearing. In other words, a ball/roller defect will strike both inner and outer ring in one revolution of the roller.

Table 10: USDAF Spherical Roller Bearing Parameters For Vibration Analysis (1-RPS)

| Bore Size | Basic Bearing Series | # Rollers Per Row | Diameter of Rollers | Pitch Diameter | 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 |
| <hr/> | | | | | | | | | |
| 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 |
| <hr/> | | | | | | | | | |
| 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 = $N * RPM * (1 - (Bd * \cos a / Pd)) / 120$
 Inner Ring Frequency = $N * RPM * (1 + (Bd * \cos a / Pd)) / 120$
 Roller Spin Frequency = $Pd * RPM * (1 - (Bd * \cos a / Pd)^2) / (120 * Bd)$
 Cage Frequency = $RPM * (1 - (Bd * \cos a / Pd)) / 120$

Pd = Pitch Diameter
 N = Number of rollers
 Bd = Roller Diameter
 a = Contact Angle

*** Note:** Ball and Roller Spin Frequencies are listed at one (1X) roller spin frequency. For thorough analysis it is important to check frequency level at two (2X) rotational speed of balls or rollers as this is the frequency that a single ball/roller defect will contact the raceways of the bearing. In other words, a ball/roller defect will strike both inner and outer ring in one revolution of the roller.

Mounted Bearings Life Adjustment Factor

1.1 GENERAL. For certain applications, it is desirable to specify life for reliability other than 90%. In such cases a life adjustment factor for reliability may be applied to the RATING LIFE. Section 1.2 discusses life adjustment factors for reliability.

Some bearing steels; e.g., vacuum-melted steels, and improved processing techniques, permit manufacture of bearings which offer endurance greater than that calculated by the RATING LIFE formula. Section 1.3 recommends methods to incorporate life adjustment factors for bearing materials into the life formula.

Bearing life calculated according to the RATING LIFE formula assumes proper application conditions. If lubrication is not adequate, loading unusual, or temperatures extreme, the ability of the bearing to attain or exceed the RATING LIFE is seriously impaired. Section 1.4 contains some basic recommendations concerning the effect of unusual application conditions on bearing life.

1.2 LIFE ADJUSTMENT FACTOR FOR RELIABILITY. Bearing life estimated in accordance with this standard is RATING LIFE; i.e., the life associated With 90% reliability or the life which 90% of a group of apparently identical bearings in a given application under similar conditions of load and speed will complete or exceed. While RATING LIFE has proven useful over a period of years as a criterion of performance, some applications require definition of life at reliabilities greater than 90%.

To determine bearing life with reliabilities other than 90% (as previously calculated in the Selection Procedure) the L_{10} must be adjusted by factor a_1 , such that $L_n = a_1 \times L_{10}$.

The life adjustment factors for reliability from Table 11 are recommended.

Table 11: Life Adjustment Factors For Reliability

| Reliability % | L_n | Life Adjustment Factor for Reliability a_1 |
|---------------|----------|--|
| 90 | L_{10} | 1 |
| 95 | L_5 | 0.62 |
| 96 | L_4 | 0.53 |
| 97 | L_3 | 0.44 |
| 98 | L_2 | 0.33 |
| 99 | L_1 | 0.21 |

1.3 LIFE ADJUSTMENT FACTOR FOR MATERIAL. For bearings, which incorporate improved materials and processing, the L_{10} (as previously calculated in the Selection Procedure) must be adjusted by factor a_2 . Factor a_2 depends upon steel analysis, metallurgical processing, forming methods, heat treatment and manufacturing methods in general.

Bearings fabricated from consumable vacuum remelted steels and certain other special analysis steels have demonstrated extraordinarily long endurance. These steels are of exceptionally high quality, and bearings fabricated from these are usually considered special manufacture. As such, a_2 values will not be specified for such steels in this discussion. Generally, a_2 values for such steels can be obtained from the bearing manufacturer.

Mounted Bearings Life Adjustment Factor

1.4 LIFE ADJUSTMENT FACTOR FOR APPLICATION CONDITIONS. Application conditions which affect bearing life include:

1. Lubrication.
2. Load distribution (including effects of clearance, misalignment, housing, and shaft stiffness, type of loading and thermal gradients).
3. Temperature.
Consideration of (1.2) and (1.3) above requires analytical and experimental techniques beyond the scope of this discussion, therefore, the user should consult the bearing manufacturer for evaluations and recommendations.

In most bearing applications, lubrication serves to separate the rolling surfaces; i.e., rolling elements and raceways; to reduce retainer-rolling elements and retainer-land friction and sometimes to act as a coolant to remove frictional heat generated by the bearing.

If all limitations and qualifications specified by this discussion are observed, then the life adjustment application factor for bearings which are adequately lubricated is 1; i.e., $a_3=1$. Operating conditions where a_3 might be less than 1 include:

- a) Exceptionally low values of N_{dm} (rpm times bore diameter in mm); e.g., N_{dm} 1000.
- b) Lubricant viscosity less than 20.4 centistokes (100 SUS) at operating temperature.
- c) Excessively high operating temperatures.
When a_3 is less than 1, it may not be assumed that the deficiency in lubrication can be overcome by using an improved steel.

1.5 FACTOR COMBINATIONS. A fatigue life formula including the life adjustment factors is:

Ball Bearings:

$$L_n = a_1 \times a_2 \times a_3 \left(\frac{C^*}{P} \right)^3 \times \frac{(16.667)}{\text{RPM}}$$

Tapered Roller Bearings:

$$L_n = a_1 \times a_2 \times a_3 \left(\frac{C_{90}^*}{P} \right)^{10/3} \times \frac{(1,500,000)}{\text{RPM}}$$

Spherical Roller Bearings:

$$L_n = a_1 \times a_2 \times a_3 \left(\frac{C^*}{P} \right)^{10/3} \times \frac{(16.667)}{\text{RPM}}$$

Indiscriminate application of the life adjustment factors in this formula may lead to serious over-estimation of bearing endurance, since fatigue life is only one criterion for bearing selection.

Care must be exercised to select bearings which are of sufficient size for the application. Undersizing of shaft and housing structures by using bearings which appear adequate from a life standpoint could lead to misalignment and fitting problems which could invalidate the formulas in this discussion.

* C = Basic Load Rating computed in accordance with ABMA-ANSI Standards. $C_{90} = C \times .259$

V-Belt Drive Formulas

V-belt tensioning In cases where tensioning of a drive effects belt pull and bearing loads, the following formulas may be used.

$$T_1 - T_2 = 33,000 \left(\frac{HP}{V} \right)$$

where: T_1 = tight side tension, pounds
 T_2 = slack side tension, pounds
 HP = design horsepower
 V = belt speed, feet per minute

$$T_1 + T_2 = 33,000 (2.5 - G) \left(\frac{HP}{GV} \right)$$

where: T_1 = tight side tension, pounds
 T_2 = slack side tension, pounds
 HP = design horsepower
 V = belt speed, feet per minute
 G = arc of contact correction factor*

$$T_1/T_2 = \frac{1}{1 - 0.8G} \quad (\text{Also } T_1/T_2 = e^{K\phi})$$

where: T_1 = tight side tension, pounds
 T_2 = slack side tension, pounds
 G = arc of contact correction factor*
 e = base of natural logarithms
 K = .51230, a constant for V-belt drive design
 ϕ = arc of contact in radians

$$T_1 = 41,250 (HP/GV)$$

where: T_1 = tight side tension, pounds
 HP = design horsepower
 V = belt speed, feet per minute
 G = arc of contact correction factor

$$T_2 = 33,000 (1.25 - G) (HP/GV)$$

where: T_2 = slack side tension, pounds
 HP = design horsepower
 V = belt speed, feet per minute
 G = arc of contact correction factor

Belt Speed

$$V = \frac{(PD) (RPM)}{3.82} = (PD) (rpm) (.262)$$

where: V = belt speed, feet per minute
 PD = pitch diameter of sheave or pulley
 rpm = revolutions per minute of the same sheave or pulley

* See Table 12 at left

Table 12: Arc of Contact Correction Factor G

| D-d C | Small Sheave Arc of Contact | Factor G | D-d C | Small Sheave Arc of Contact | Factor G |
|----------|-----------------------------|----------|----------|-----------------------------|----------|
| .00 | 180° | 1.00 | .80 | 133° | .87 |
| .10 | 174° | .99 | .90 | 127° | .85 |
| .20 | 169° | .97 | 1.00 | 120° | .82 |
| .30 | 163° | .96 | 1.10 | 130° | .80 |
| .40 | 157° | .94 | 1.20 | 106° | .77 |
| .50 | 151° | .93 | 1.30 | 99° | .73 |
| .60 | 145° | .91 | 1.40 | 91° | .70 |
| .70 | 139° | .89 | 1.50 | 83° | .65 |

D = Diam. of large sheave. d = Diam. of small sheave
 C = Center distance

Table 13: Allowable Sheave Rim Speed

| Sheave Material | Rim Speed in Feet per Minute |
|-----------------|------------------------------|
| Cast Iron | 6,500 |
| Ductile Iron | 8,000 |
| Steel | 10,000 |

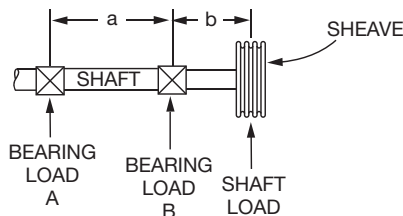
NOTE: Above rim speed values are maximum for normal considerations. In some cases these values may be exceeded. Consult factory and include complete details of proposed application.

$$\text{Dynamic balance RPM for Sheave/Sprocket } \phi = \frac{15600}{\sqrt{\text{Dia} \times \text{Face Width}}}$$

⚡ **Note:** MPTA recommends Dynamic balance when application RPM exceeds this value.

Bearing Load Calculations

To find actual bearing loads, it is necessary to know machine component weights and values of all other forces contributing to the load. Sometimes it becomes desirable to know the bearing load imposed by the V-belt drive

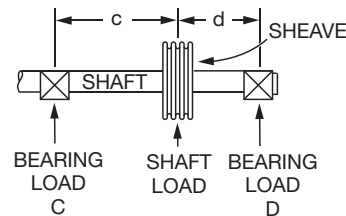


Overhung Sheave

$$\text{Load at B, lbs.} = \frac{\text{Shaft Load} \times (a + b)}{a}$$

$$\text{Load at A, lbs.} = \text{Shaft Load} \times \frac{b}{a}$$

Where: a and b = Spacing, inches



Sheave Between Bearings

$$\text{Load at D, lbs.} = \frac{\text{Shaft Load} \times c}{c + d}$$

$$\text{Load at C, lbs.} = \frac{\text{Shaft Load} \times d}{c + d}$$

Where: c and d = Spacing, inches

Nominal V-Belt Cross Sections

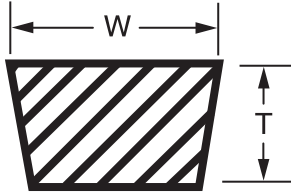


Table 14: Nominal V-Belt Cross Sections

| Belt Section | Industry Standard Description | Width W, in Inches | Thickness T, in Inches |
|--------------|-------------------------------|--------------------|------------------------|
| 3L | FHP, Single | 3/8 | 7/32 |
| 4L | | 1/2 | 5/16 |
| 5L | | 21/32 | 3/8 |
| 3V | Narrow | 3/8 | 5/16 |
| 5V | | 5/8 | 17/32 |
| 8V | | 1 | 29/32 |
| A | Classical Multiple | 1/2 | 5/16 |
| B | | 21/32 | 13/32 |
| C | | 7/8 | 17/32 |
| D | | 1-1/4 | 3/4 |

Table 15: Maximum Pulley RPM*

| Pulley Dia. Inches | FPM | | | | | | | | | | | | | |
|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|--|
| | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | |
| 6 | 64 | 95 | 127 | 159 | 191 | 223 | 254 | 318 | 382 | 445 | 509 | 573 | 636 | |
| 8 | 48 | 72 | 95 | 119 | 143 | 167 | 191 | 239 | 286 | 334 | 382 | 429 | 477 | |
| 10 | 38 | 57 | 76 | 95 | 115 | 134 | 153 | 191 | 229 | 267 | 305 | 344 | 382 | |
| 12 | 32 | 48 | 64 | 80 | 95 | 111 | 127 | 159 | 191 | 223 | 254 | 286 | 318 | |
| 14 | 27 | 41 | 55 | 68 | 82 | 95 | 109 | 136 | 164 | 191 | 218 | 245 | 273 | |
| 16 | 24 | 36 | 48 | 60 | 72 | 83 | 95 | 119 | 143 | 167 | 191 | 215 | 239 | |
| 18 | 21 | 32 | 42 | 53 | 64 | 74 | 85 | 106 | 127 | 148 | 170 | 191 | 212 | |
| 20 | 19 | 29 | 38 | 48 | 57 | 67 | 76 | 95 | 115 | 134 | 153 | 172 | 191 | |
| 24 | 16 | 24 | 32 | 40 | 48 | 56 | 64 | 80 | 95 | 111 | 127 | 143 | 159 | |
| 30 | 13 | 19 | 25 | 32 | 38 | 45 | 51 | 64 | 76 | 89 | 102 | 115 | 127 | |
| 36 | 11 | 16 | 21 | 27 | 32 | 37 | 42 | 53 | 64 | 74 | 85 | 95 | 106 | |
| 42 | 9 | 14 | 18 | 23 | 27 | 32 | 36 | 45 | 55 | 64 | 73 | 82 | 91 | |
| 48 | 8 | 12 | 16 | 20 | 24 | 28 | 32 | 40 | 48 | 56 | 64 | 72 | 80 | |
| 54 | 7 | 11 | 14 | 18 | 21 | 25 | 28 | 35 | 42 | 49 | 57 | 64 | 71 | |
| 60 | 6 | 10 | 13 | 16 | 19 | 22 | 25 | 32 | 38 | 45 | 51 | 57 | 64 | |

* Maximum RPM values shown are based on 6,500 feet per minute for standard cast iron products. For higher rim speeds, contact Dodge Technical Support at 1-864-284-5700
For values not shown use formula below:

$$\text{Max RPM} = \frac{6,500}{.2618 \times D}$$

D = Pulley Diameter, Inches

Table 16: Material Characteristics

| MATERIAL | DENSITY (LB/FT ³) | ANGLE OF REPOSE (DEG) | RECOMMENDED MAXIMUM INCLINATION | MATERIAL | DENSITY (LB/FT ³) | ANGLE OF REPOSE (DEG) | RECOMMENDED MAXIMUM INCLINATION |
|----------------------------|-------------------------------|-----------------------|---------------------------------|--------------------------------|-------------------------------|-----------------------|---------------------------------|
| Alfalfa, Ground | 16 | 45° | | Corn, Shelled | 45 | 25° | 10 |
| Alum, Lumpy | 50 - 60 | 35° | | Corn Sugar | 30 | 35° | |
| Alum, Pulverized | 45 - 50 | 35° | | Corn Grits | 40 - 45 | 35° | |
| Alumina | 60 | 30° | 10-12 | Cornmeal | 32- 40 | 35° | 22 |
| Aluminum Oxide | 70 - 120 | 30° | | Cottonseed, Dry, De-Linted | 35 | 35° | 16 |
| Ammonium Sulphate | 45 - 60 | 45° | | Cottonseed, Dry, Not De-Linted | 18- 25 | 45° | 19 |
| Asbestos, Shredded | 20 - 25 | 45° | | Cottonseed, Cake, Lumpy | 40- 45 | 35° | |
| Ashes, Dry | 35 - 40 | 45° | | Cottonseed, Hulls | 12 | 45° | |
| Ashes, Wet | 45 - 50 | 45° | | Cottonseed, Meal | 35- 40 | 35° | 22 |
| Ashes, Soft Coal | 35 - 45 | 40° | | Cottonseed, Meats | 40 | 35° | |
| Asphalt, Crushed | 45 | 35° | | Cryolite | 90-110 | 35° | |
| Bagasse | 7.50 | 45° | | Cullet | 80-120 | 35° | 20 |
| Bakelite, Powder | 30 - 40 | 45° | | Diatomaceous Earth | 11 - 14 | 35° | |
| Baking Powder | 40 - 50 | 35° | | Dolomite, Lumpy | 90-100 | 35° | 22 |
| Bark, Wood Refuse | 10 - 20 | 45° | | Dolomite, Pulverized | 46 | 40° | |
| Barley | 38 | 25° | 10-15 | Earth, Dry" | 70 - 80 | 35° | 20 |
| Basalt | 80 - 120 | 25° | | Earth, Moist | 75-110 | 40° | 23 |
| Bauxite, Crushed | 75 - 85 | 35° | 20 | Earth, Fullers Dry | 30- 35 | 23° | 20 |
| Beans, Castor, Whole | 30 - 45 | 25° | 8-10 | Emery | 225 | 25° | |
| Beans, Cocoa | 30 - 45 | 35° | | Epsom Salt | 40- 50 | 35° | |
| Beans, Navy | 50 | 25° | | Feldspar, Lumps | 70-100 | 35° | 17 |
| Beans, Whole | 45 | 45° | | Feldspar, Dust | 80-100 | 40° | |
| Bentonite, Crude | 35 - 40 | 45° | | Fish, Meal | 35- 40 | 40° | |
| Bentonite, Fine | 50 - 60 | 45° | | Fish, Scrap | 40- 50 | 0° | |
| Bones, Pulverized | 50 - 60 | 45° | | Flaxseed, Whole | 45 | 25° | 12 |
| Borax, Fine | 50 - 55 | 35° | | Flaxseed, Meal | 25 | 35° | |
| Borax Coarse | 60 - 70 | 35° | | Flour, Wheat | 35- 40 | 45° | 21 |
| Bran | 16 | 35° | | Flue Dust, Dry | 30- 40 | 20° | |
| Brewers Grain, Dry | 25 - 35 | 45° | | Fluorspar, Dust | 85- 95 | 45° | |
| Brewers Grain, Wet | 55 - 60 | 45° | | Fluorspar, Lumps | 80-110 | 45° | |
| Buck Wheat | 40 | 25° | 11-13 | Foundry, Refuse | 60- 80 | 35° | |
| Calcium, Carbide | 70 - 80 | 35° | | Foundry Sand, Loose | 80- 90 | 35° | |
| Carbon Black, Pellets | 25 | 25° | | Foundry Sand, Rammed | 100-110 | 0° | |
| Carbon Black, Powder | 5 | 35° | | Galena | 250 | 35° | |
| Cast Iron Chips | 100 -120 | 45° | | Garbage, Average | 30 | 25° | |
| Cement, Clinker | 75 - 90 | 35° | | Glass, Batch Fiber | 45 - 55 | 10° | |
| Cement, Portland | 80 -100 | 35° | 20-23 | Glass, Batch Wool | 80-100 | 35° | 20-22 |
| Chalk, Fine | 65 - 75 | 45° | | Glass, Broken | 80-100 | 10° | |
| Chalk, Lumpy | 80 - 95 | 45° | | Glue, Animal, Flaked | 35 | 25° | |
| Charcoal, Wood | 15 - 30 | 35° | 20-25 | Glue, Vegetable, Powdered | 40 | 35° | |
| Chromium Ore | 125 - 140 | 35° | | Gluten, Meal | 39 | 35° | |
| Cinders, Coal | 40 | 35° | 20 | Granite, Lumps | 150 -170 | 25° | |
| Clay, Dry, Fine | 100 - 120 | 35° | 20-22 | Graphite, Flakes | 40 | 35° | |
| Clay, Dry, Lumpy | 60 - 75 | 35° | 18-20 | Graphite, Powder | 30 | 25° | |
| Coal, Anthracite, Coarse | 60 - 70 | 35° | 18 | Graphite, Ore | 65 - 75 | 35° | |
| Coal, Anthracite, Loose | 50 - 60 | 30° | 16 | Grass Seed | 10 | 35° | |
| Coal, Bituminous, Coarse | 50 - 60 | 35° | 18 | Gravel, Dry | 90-100 | 35° | 15-17 |
| Coal, Bituminous, Loose | 45 - 50 | 35° | 16 | Gravel, Wet | 100-120 | 35° | |
| Cocoa Nibs | 35 - 40 | 35° | | Gypsum, Lumps | 90-100 | 35° | 15 |
| Coconut, Shredded | 20 - 25 | 45° | | Gypsum, Ground | 75 - 80 | 35° | 21 |
| Coffee, Fresh Beans | 30 - 40 | 35° | 10-15 | Hay, Loose | 5 | 0° | |
| Coffee, Roasted Beans | 22 - 30 | 25° | | Hay, Pressed | 25 | 0° | |
| Coke, Loose | 23 - 32 | 35° | 18 | Hominy | 35- 50 | 35° | |
| Coke Pulverized | 25 - 35 | 45° | 20-22 | Hops, Spent, Dry | 25- 35 | 45° | |
| Coke, Petroleum Calcinated | 35 - 45 | 35° | 20 | Hops, Spent, Wet | 55- 60 | 45° | |
| Concrete, Cinder | 112 | 0° | 12-30 | Ice, Crushed | 35- 40 | 20- | |
| Concrete, Gravel & Sand | 150 | 0° | | Ilmenite Ore | 140-160 | 35° | |
| Copper Ore | 120 - 150 | 35° | 20 | Iron Ore | 120-180 | 35° | 18-20 |
| Copper Sulfate | 75 - 85 | 30° | 17 | Iron Ore, Pellets | 120-140 | 35° | 13-15 |
| Cork, Ground | 5 - 15 | 45° | | Iron Sulphate | 50- 75 | 35° | |
| Corn, On Cob | 45 | 0° | | Iron Sulfide | 120-140 | 35° | |

Table 16: Material Characteristics (Continued)

| MATERIAL | DENSITY (LB/FT ³) | ANGLE OF REPOSE (DEG) | RECOMMENDED MAXIMUM INCLINATION | MATERIAL | DENSITY (LB/FT ³) | ANGLE OF REPOSE (DEG) | RECOMMENDED MAXIMUM INCLINATION |
|---------------------------|-------------------------------|-----------------------|---------------------------------|-------------------------|-------------------------------|-----------------------|---------------------------------|
| Kaolin, Clay | 60 | 35° | 19 | Rubber, Pellets | 50 - 55 | 35° | 22 |
| Lactose | 30 | 35° | | Rubber, Ground Scrap | 25 - 35 | 45° | 18 |
| Lead Ore, Crushed | 180 - 270 | 30° | | Rye | 42 - 45 | 25° | 8 |
| Lead Oxides | 60 - 150 | 40° | | Rye Meal | 35 - 40 | 20° | |
| Lead Sulfate | 170 - 190 | 45° | | Salt Cake | 80 - 95 | 30° | 21 |
| Lead Sulfide | 240 - 260 | 35° | | Salt, Coarse" | 45 - 55 | 35° | 18-22 |
| Lignite, Air Dried | 45 - 55 | 35° | | Salt, Fine" | 70 - 80 | 35° | 11 |
| Lime, Ground | 60 - 65 | 40° | 23 | Sand, Wet | 110 - 130 | 45° | 20-22 |
| Lime, Hydrated | 40 | 40° | 21 | Sand, Dry | 90 - 110 | 35° | 16-18 |
| Lime, Pebble | 30 - 40 | 40° | 17 | Sand, Loose, Foundry | 80 - 100 | 35° | 22 |
| Limestone, Loose | 80 - 100 | 35° | 20 | Sand, Foundry, Rammed | 100 - 110 | 0° | 24 |
| Limestone, Pulverized | 85 - 90 | 45° | 18 | Sandstone | 80 - 90 | 35° | |
| Linseed, Whole | 45 - 50 | 25° | | Sawdust | 10 - 25 | 30° | 22 |
| Linseed, Meal | 30 - 40 | 35° | 20 | Scale, Rolling Mill | 125 - 160 | 45° | |
| Magnesium Chloride | 30 - 35 | 40° | | Sewage Sludge, Dry | 45 - 55 | 35° | |
| Magnesium Sulfate | 40 - 60 | 35° | | Sewage Sludge, Wet | 50 - 60 | 35° | |
| Malt, Dry | 25 - 30 | 30° | | Shale, Broken | 90 - 100 | 25° | |
| Malt, Wet | 60 - 65 | 45° | | Shale, Crushed | 85 - 90 | 40° | 22 |
| Malt, Meal | 35 - 40 | 35° | | Silica Gel, Dry | 45 | 35° | |
| Manganese Ore | 125 - 140 | 40° | | Slag, Blast Furnace | 80 - 90 | 25° | 10 |
| Manganese Oxide | 120 | 35° | | Slag, Granular, Dry | 60 - 65 | 25° | 13-16 |
| Manganese Sulfate | 70 | 35° | | Slag, Granular, Wet | 90 - 100 | 45° | 20-22 |
| Manure | 25 | 0° | | Slate, Ground | 80 - 90 | 30° | 15 |
| Marble, Crushed | 80 - 95 | 35° | | Slate, Lumps | 85 - 95 | 0° | |
| Marl | 80 | 35° | | Snow, Compacted | 15 - 50 | 0° | |
| Mica, Flakes | 20 | 20° | | Soap | 10 - 25 | 35° | |
| Mica, Ground | 15 | 35° | 23 | Soda Ash, Briquettes | 50 | 20° | 7 |
| Milk, Dried, Flaked | 5 | 35° | | Soda Ash, Heavy | 55 - 65 | 30° | 19 |
| Milk, Malted | 25 - 35 | 45° | | Soda Ash, Light | 20 - 35 | 35° | 22 |
| Milk, Powdered | 20 - 30 | 40° | | Sodium Aluminum, Ground | 72 | 35° | |
| Milo Maize | 55 - 60 | 35° | | Sodium Nitrate, Ground | 70 - 80 | 24° | 11 |
| Molybdenum Ore | 100 - 110 | 40° | | Sodium Phosphate | 50 - 65 | 35° | |
| Mortar, Wet | 150 | 0° | | Soybeans, Cracked | 30 - 40 | 35° | 15-18 |
| Niacin | 35 | 35° | | Soybeans, Whole" | 45 - 50 | 25° | 12-16 |
| Nickel-Cobalt Sulfate Ore | 80 - 150 | 35° | | Starch, Powdered | 25 - 45 | 25° | 12 |
| Oats | 25 - 35 | 25° | 10 | Steel, Chips | 100 - 150 | 35° | 18 |
| Oats, Rolled | 20 | 35° | | Steel, Turnings | 60 - 120 | 45° | |
| Oil Cake | 50 | 45° | | Sugar, Cane, Raw | 55 - 65 | 45° | |
| Oxalic Acid Crystals | 60 | 35° | | Sugar, Granulated, Dry | 50 - 55 | 35° | |
| Oyster Shells, Ground | 50 - 60 | 35° | | Sugar, Granulated, Wet | 55 - 65 | 40° | |
| Oyster Shells, Whole | 80 | 35° | | Sugar Cane, Knifed | 15 - 18 | 45° | |
| Paper Pulp Stock | 40 - 60 | 20° | | Sulphur, Lumps | 80 - 85 | 35° | |
| Peanuts, Shelled | 35 - 45 | 35° | | Sulphur, Dust | 50 - 70 | 35° | |
| Peanuts, Not Shelled | 15 - 20 | 35° | | Saconite, Pellets | 120 - 140 | 35° | 13-15 |
| Peas, Dried | 45 - 50 | 0° | | Salc, Granulated | 50 - 70 | 20° | |
| Phosphate, Fertilizer | 50 - 60 | 35° | 30 | Titanium Dioxide | 140 | 35° | |
| Phosphate, Rock, Crushed | 60 - 100 | 35° | 25 | Titanium Sponge | 60 - 70 | 45° | |
| Potash | 70 - 80 | 30° | | Tobacco, Leaves | 14 | 45° | |
| Potassium Chloride | 120 - 130 | 35° | | Tobacco, Scraps | 15 - 25 | 45° | |
| Potassium Nitrate | 75 - 80 | 25° | | Tobacco, Stems | 15 | 45° | |
| Potassium Sulfate | 45 | 45° | | Traprock, Crushed | 95 - 110 | 35° | |
| Potatoes, White" | 48 | 0° | | Traprock, Lumps | 100 - 110 | 35° | |
| Pumice, Ground | 40 - 45 | 45° | | Turf | 20 - 30 | 0° | |
| Pyrites, Lumps | 135 - 145 | 25° | | Walnut, Shells | 35 - 45 | 35° | |
| Pyrites, Pellets | 120 - 130 | 35° | | Wheat | 48 | 25° | 12 |
| Quartz, Lumps | 95 - 100 | 25° | | Wheat, Cracked | 40 - 45 | 35° | |
| Quartz, Sand | 70 - 80 | 25° | | Wheat Germ, Dry | 20 - 30 | 25° | 27 |
| Rice, Hulled | 45 - 50 | 20° | 8 | Wood Chips | 10 - 30 | 45° | 22 |
| Rice, Rough | 35 | 35° | | Zinc Ore, Granular | 160 | 35° | |
| Rice, Grits | 40 - 45 | 35° | | Zinc Oxide | 10 - 35 | 45° | |
| Rock, Crushed | 100 - 150 | 30° | | | | | |

Shafting

Table 17: Typical Commercial Shaft Tolerances

| Shaft Size | Plus | Minus |
|----------------------|------|-------|
| Up to 1-1/2" | .000 | .002 |
| Over 1-1/2 to 2-1/2" | .000 | .003 |
| Over 2-1/2 to 4" | .000 | .004 |
| Over 4 to 6" | .000 | .005 |
| Over 6 to 8" | .000 | .006 |
| Over 8 to 9" | .000 | .007 |
| Over 9" | .000 | .008 |

Table 18: Shaft Tolerances

| Shaft Size | Tolerance, Inches |
|--------------|-------------------|
| Up to 1-1/2" | + .0000 - .0005" |
| 1-5/8 to 4" | + .000 - .001" |
| 4-7/16 to 6" | + .000 - .0015" |
| 6-7/16 to 8" | + .000 - .002" |

Table 18 lists the recommended tolerances for all setscrew locking, eccentric locking and D-LOK locking ball and roller bearings

Table 19: Shaft Tolerances

| Shaft Size | Tolerance, Inches |
|-------------------|-------------------|
| Up to 1-1/2" | + .000 - .002" |
| 1-9/16 to 2-1/2" | + .000 - .003" |
| 2-5/8 to 4" | + .000 - .004" |
| 4-3/16 to 6" | + .000 - .005" |
| 6-7/16" and above | + .000 - .006" |

Table 19 list the recommended tolerances for all tapered adapter sleeve ball and roller bearings

Standard Shafting-Table 17 indicates standard shafting is cold drawn in the smaller sizes and turned and polished in the larger diameters. It has a smooth surface, is commercially straight and is readily machinable; suitable and recommended for general power transmission and material handling service.

Special Shafting-While standard shafting is suitable for most installations, special shafting is sometimes required for certain chemical, temperature or physical requirements. Such materials as high carbon steel, alloy steel, stainless steel, brass, Monel metal, etc., can be furnished plain or heat treated. Stepped, flanged, hollow or other special forms are available.

Special shafting should be avoided in favor of standard shafting wherever possible because special shafting is usually considerably more expensive and requires a greater length of time to obtain, which is an especially important consideration should quick replacement ever become necessary.

Ordering Shafting-Standard shafting can be obtained from most supply houses and dealers who handle power transmission material.

Turning Down Shaft Ends-When necessary to turn down shaft ends, use as large a fillet as possible to keep the stress concentration to a minimum. The radius of this fillet should preferably be not less than the difference in the two diameters joined by the fillet. The fillet should be finished and polished as smoothly as possible to avoid scratches which might start cracks and lead to failure of the shaft by fatigue.

Selection of Shaft Diameters

Tables 21 - 24 inclusive can be used to find approximate shaft diameter for various service conditions For greater accuracy use chart under heading "Combined Torsion and Bending of Standard Shafts" (B20-17).

Tables and chart are based upon a safe shear stress of 6,000 pounds per square inch for standard keyseated shafting. Be generous in the selection of shaft diameters as liberal diameters

not only reduce deflection and vibration but also generally increase bearing life.

When necessary to use other than standard shafting, find the required diameter for standard shafting as outlined above and multiply by proper factor shown in Table 25, under heading "Factors for Shafting Other than Standard Shafting, "(B20-16).

Table 20: No Bending Moment (Shafts without pulleys, sprockets or gears - Torsion only)

| Shaft Size | Horse Power at Various Revolutions per Minute | | | | | | | | | | | | | | | | | | |
|------------|---|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|
| | 25 | 50 | 75 | 100 | 125 | 150 | 175 | 200 | 225 | 250 | 275 | 300 | 350 | 400 | 500 | 600 | 700 | 800 | 900 |
| 15/16 | 0.30 | 0.70 | 1.10 | 1.50 | 1.90 | 2.30 | 2.60 | 3.00 | 3.40 | 3.80 | 4.20 | 4.60 | 5.30 | 6.10 | 7.70 | 9.20 | 10.70 | 12.30 | 13.80 |
| 1-3/16 | 0.70 | 1.50 | 2.30 | 3.10 | 3.90 | 4.60 | 5.40 | 6.20 | 7.00 | 7.80 | 8.60 | 9.30 | 10.90 | 12.50 | 15.60 | 18.70 | 21.90 | 25.00 | 28.10 |
| 1-7/16 | 1.30 | 2.70 | 4.10 | 5.50 | 6.90 | 8.30 | 9.70 | 11.10 | 12.40 | 13.80 | 15.20 | 16.60 | 19.40 | 22.20 | 27.70 | 33.30 | 38.80 | 44.40 | 49.90 |
| 1-11/16 | 2.20 | 4.40 | 6.60 | 8.90 | 11.20 | 13.40 | 15.70 | 17.90 | 20.20 | 22.40 | 24.70 | 26.90 | 31.40 | 35.90 | 44.90 | 53.80 | 62.80 | 71.80 | 80.80 |
| 1-15/16 | 3.30 | 6.70 | 10.10 | 13.50 | 16.90 | 20.30 | 23.70 | 27.10 | 30.50 | 33.90 | 37.30 | 40.70 | 47.50 | 54.30 | 67.90 | 81.50 | 95.10 | 108.00 | 122.00 |
| 2-3/16 | 4.90 | 9.80 | 14.60 | 19.50 | 24.40 | 29.30 | 34.20 | 39.10 | 44.00 | 48.90 | 53.80 | 58.60 | 68.40 | 78.20 | 97.80 | 117.00 | 136.00 | 156.00 | 176.00 |
| 2-7/16 | 6.70 | 13.50 | 20.20 | 27.00 | 33.80 | 40.60 | 47.30 | 54.10 | 60.90 | 67.60 | 74.40 | 81.20 | 94.70 | 108.00 | 135.00 | 162.00 | 189.00 | 216.00 | 243.00 |
| 2-11/16 | 9.00 | 18.10 | 27.10 | 36.20 | 45.30 | 54.40 | 63.40 | 72.50 | 81.60 | 90.70 | 99.70 | 108.00 | 126.00 | 145.00 | 181.00 | 217.00 | 253.00 | 290.00 | 326.00 |
| 2-15/16 | 11.80 | 23.60 | 35.40 | 47.30 | 59.20 | 71.00 | 82.90 | 94.70 | 106.00 | 118.00 | 130.00 | 142.00 | 165.00 | 189.00 | 236.00 | 284.00 | 331.00 | 379.00 | 426.00 |
| 3-7/16 | 19.00 | 37.90 | 57.00 | 75.90 | 94.90 | 113.00 | 132.00 | 151.00 | 170.00 | 189.00 | 208.00 | 227.00 | 265.00 | 303.00 | 379.00 | 455.00 | 531.00 | 607.00 | 683.00 |
| 3-15/16 | 28.50 | 57.00 | 85.50 | 114.00 | 142.00 | 171.00 | 199.00 | 228.00 | 256.00 | 285.00 | 313.00 | 342.00 | 399.00 | 456.00 | 570.00 | 684.00 | 798.00 | 912.00 | 1026.00 |
| 4-7/16 | 40.80 | 81.60 | 122.00 | 163.00 | 204.00 | 245.00 | 286.00 | 327.00 | 367.00 | 408.00 | 449.00 | 490.00 | 572.00 | 653.00 | 816.00 | 980.00 | 1143.00 | 1306.00 | 1470.00 |

Table 21: Limited Bending Moment (Pulleys, sprockets or gears near bearings. Ordinary line shafts.)

| Shaft Size | Horse Power at Various Revolutions per Minute | | | | | | | | | | | | | | | | | | |
|------------|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|---------|---------|---------|---------|
| | 25 | 50 | 75 | 100 | 125 | 150 | 175 | 200 | 225 | 250 | 275 | 300 | 350 | 400 | 500 | 600 | 700 | 800 | 900 |
| 15/16 | 0.20 | 0.50 | 0.70 | 1.00 | 1.20 | 1.50 | 1.70 | 2.00 | 2.30 | 2.50 | 2.80 | 3.00 | 3.50 | 4.10 | 5.10 | 6.10 | 7.10 | 8.20 | 9.20 |
| 1-3/16 | 0.50 | 1.00 | 1.50 | 2.00 | 2.60 | 3.10 | 3.60 | 4.10 | 4.70 | 5.20 | 5.70 | 6.20 | 7.30 | 8.30 | 10.40 | 12.50 | 14.60 | 16.70 | 18.80 |
| 1-7/16 | 0.90 | 1.80 | 2.70 | 3.70 | 4.60 | 5.50 | 6.40 | 7.40 | 8.30 | 9.20 | 10.10 | 11.10 | 12.90 | 14.80 | 18.50 | 22.20 | 25.90 | 29.60 | 33.30 |
| 1-11/16 | 1.40 | 2.90 | 4.30 | 5.90 | 7.40 | 8.90 | 10.40 | 11.90 | 13.40 | 14.90 | 16.40 | 17.90 | 20.90 | 23.90 | 29.90 | 35.90 | 41.90 | 47.90 | 53.90 |
| 1-15/16 | 2.20 | 4.50 | 6.70 | 9.00 | 11.30 | 13.60 | 15.80 | 18.10 | 20.40 | 22.60 | 24.90 | 27.20 | 31.70 | 36.20 | 45.30 | 54.40 | 63.40 | 72.50 | 81.60 |
| 2-3/16 | 3.20 | 6.50 | 9.70 | 13.00 | 16.30 | 19.50 | 22.80 | 26.10 | 29.30 | 32.60 | 35.80 | 39.10 | 45.60 | 52.20 | 65.20 | 78.30 | 91.30 | 104.00 | 117.00 |
| 2-7/16 | 4.50 | 9.00 | 13.50 | 18.00 | 22.50 | 27.00 | 31.60 | 36.10 | 40.60 | 45.10 | 49.60 | 54.10 | 63.20 | 72.20 | 90.20 | 108.00 | 126.00 | 144.00 | 162.00 |
| 2-11/16 | 6.00 | 12.10 | 18.10 | 24.20 | 30.20 | 36.30 | 42.30 | 48.40 | 54.40 | 60.50 | 66.50 | 72.60 | 84.70 | 96.80 | 121.00 | 145.00 | 169.00 | 193.00 | 217.00 |
| 2-15/16 | 7.90 | 15.80 | 23.70 | 31.60 | 39.50 | 47.40 | 55.30 | 63.20 | 71.10 | 79.00 | 86.90 | 94.80 | 110.00 | 126.00 | 158.00 | 189.00 | 221.00 | 252.00 | 284.00 |
| 3-7/16 | 12.60 | 25.30 | 37.90 | 50.60 | 63.30 | 75.90 | 88.60 | 101.00 | 113.00 | 126.00 | 139.00 | 151.00 | 177.00 | 202.00 | 253.00 | 303.00 | 354.00 | 405.00 | 455.00 |
| 3-15/16 | 19.00 | 38.00 | 57.00 | 76.10 | 94.10 | 114.00 | 133.00 | 152.00 | 171.00 | 190.00 | 209.00 | 228.00 | 266.00 | 304.00 | 380.00 | 456.00 | 532.00 | 608.00 | 685.00 |
| 4-7/16 | 27.00 | 54.00 | 81.00 | 108.00 | 136.00 | 163.00 | 190.00 | 217.00 | 245.00 | 272.00 | 299.00 | 326.00 | 381.00 | 435.00 | 544.00 | 653.00 | 762.00 | 871.00 | 980.00 |
| 4-15/16 | 37.00 | 75.00 | 112.00 | 150.00 | 187.00 | 225.00 | 262.00 | 300.00 | 337.00 | 375.00 | 412.00 | 450.00 | 525.00 | 600.00 | 750.00 | 900.00 | 1050.00 | 1200.00 | 1350.00 |
| 5-7/16 | 50.00 | 100.00 | 150.00 | 200.00 | 250.00 | 300.00 | 350.00 | 400.00 | 451.00 | 501.00 | 551.00 | 601.00 | 701.00 | 801.00 | 1002.00 | 1202.00 | 1403.00 | 1603.00 | 1804.00 |
| 5-15/16 | 65.00 | 130.00 | 195.00 | 261.00 | 326.00 | 391.00 | 456.00 | 522.00 | 587.00 | 652.00 | 717.00 | 783.00 | 913.00 | 1044.00 | 1305.00 | 1566.00 | 1827.00 | 2088.00 | 2349.00 |
| 6-1/2 | 85.00 | 171.00 | 256.00 | 342.00 | 427.00 | 513.00 | 598.00 | 684.00 | 769.00 | 855.00 | 940.00 | 1026.00 | 1197.00 | 1368.00 | 1710.00 | 2052.00 | 2394.00 | 2736.00 | 3078.00 |

Selection of Shaft Diameters (Continued)

Table 22: Heavy Bending Moment. (Use for main or important shafts.)

| Shaft Size | Horse Power at Various Revolutions per Minute | | | | | | | | | | | | | | | | | | |
|------------|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 25 | 50 | 75 | 100 | 125 | 150 | 175 | 200 | 225 | 250 | 275 | 300 | 350 | 400 | 500 | 600 | 700 | 800 | 900 |
| 1-11/16 | 0.80 | 1.70 | 2.50 | 3.50 | 4.40 | 5.30 | 6.20 | 7.10 | 8.00 | 8.90 | 9.80 | 10.70 | 12.50 | 14.30 | 17.90 | 21.50 | 25.10 | 28.70 | 32.30 |
| 1-15/16 | 1.30 | 2.70 | 4.00 | 5.40 | 6.70 | 8.10 | 9.50 | 10.80 | 12.20 | 13.50 | 14.90 | 16.30 | 19.00 | 21.70 | 27.10 | 32.60 | 38.00 | 43.50 | 48.90 |
| 2-3/16 | 1.90 | 3.90 | 5.80 | 7.80 | 9.70 | 11.70 | 13.70 | 15.60 | 17.60 | 19.50 | 21.50 | 23.40 | 27.40 | 31.30 | 39.10 | 46.90 | 54.80 | 62.60 | 70.40 |
| 2-7/16 | 2.70 | 5.40 | 8.10 | 10.80 | 13.50 | 16.20 | 18.90 | 21.60 | 24.30 | 27.00 | 29.70 | 32.40 | 37.90 | 43.30 | 54.10 | 64.90 | 75.80 | 86.60 | 97.40 |
| 2-11/16 | 3.60 | 7.20 | 10.80 | 14.50 | 18.10 | 21.70 | 25.40 | 29.00 | 32.60 | 36.20 | 39.90 | 43.50 | 50.80 | 58.00 | 72.50 | 87.10 | 101 | 116 | 130 |
| 2-15/16 | 4.70 | 9.40 | 14.10 | 18.90 | 23.60 | 28.40 | 33.10 | 37.90 | 42.60 | 47.30 | 52.10 | 56.80 | 66.30 | 75.80 | 94.70 | 113 | 132 | 151 | 170 |
| 3-7/16 | 7.50 | 15.10 | 22.60 | 30.30 | 37.90 | 45.50 | 53.10 | 60.70 | 68.30 | 75.90 | 83.50 | 91.10 | 106 | 121 | 151 | 182 | 212 | 243 | 273 |
| 3-15/16 | 11.40 | 22.80 | 34.20 | 45.60 | 57.00 | 68.40 | 79.90 | 91.30 | 102 | 114 | 125 | 136 | 159 | 182 | 228 | 273 | 319 | 365 | 410 |
| 4-7/16 | 16.30 | 32.60 | 48.90 | 65.30 | 81.60 | 98.00 | 114 | 130 | 147 | 163 | 179 | 196 | 228 | 261 | 326 | 392 | 457 | 522 | 588 |
| 4-15/16 | 22.50 | 45.00 | 67.50 | 90.00 | 112 | 135 | 157 | 180 | 202 | 225 | 247 | 270 | 315 | 360 | 450 | 540 | 630 | 720 | 810 |
| 5-7/16 | 30.00 | 60.00 | 90.00 | 120 | 150 | 180 | 210 | 240 | 270 | 300 | 330 | 360 | 420 | 480 | 601 | 721 | 841 | 961 | 1082 |
| 5-15/16 | 39.00 | 78.00 | 117 | 156 | 195 | 234 | 273 | 313 | 352 | 391 | 430 | 469 | 547 | 626 | 782 | 939 | 1095 | 1252 | 1409 |
| 6-1/2 | 51.00 | 102 | 153 | 205 | 256 | 308 | 359 | 410 | 462 | 513 | 564 | 616 | 718 | 821 | 1027 | 1232 | 1437 | 1643 | 1848 |
| 7 | 64.00 | 128 | 192 | 256 | 320 | 384 | 448 | 513 | 577 | 641 | 705 | 769 | 897 | 1026 | 1282 | 1539 | 1795 | 2052 | 2308 |
| 7-1/2 | 78.50 | 157 | 235 | 315 | 394 | 473 | 552 | 631 | 709 | 788 | 867 | 946 | 1104 | 1262 | 1577 | 1893 | 2208 | 2524 | 2839 |
| 8 | 95.50 | 191 | 286 | 382 | 478 | 574 | 670 | 765 | 861 | 957 | 1053 | 1148 | 1340 | 1531 | 1914 | 2297 | 2680 | 3063 | 3446 |
| 8-1/2 | 114 | 229 | 343 | 459 | 574 | 688 | 803 | 918 | 1033 | 1148 | 1263 | 1377 | 1607 | 1837 | 2296 | 2755 | 3215 | 3674 | 4133 |
| 9 | 136 | 272 | 408 | 545 | 681 | 817 | 954 | 1090 | 1226 | 1363 | 1499 | 1635 | 1908 | 2181 | 2726 | 3271 | 3816 | 4362 | 4907 |
| 9-1/2 | 160 | 320 | 480 | 641 | 801 | 961 | 1122 | 1282 | 1442 | 1603 | 1763 | 1923 | 2244 | 2565 | 3206 | 3847 | 4488 | 5130 | 5771 |
| 10 | 186 | 373 | 559 | 747 | 934 | 1121 | 1308 | 1495 | 1682 | 1869 | 2056 | 2243 | 2617 | 2991 | 3739 | 4487 | 5235 | 5983 | 6731 |

Table 23: Severe Conditions (Heavy shock loads. Excessively tight belts, long clutch sleeves.)

| Shaft Size | Horse Power at Various Revolutions per Minute | | | | | | | | | | | | | | | | | | |
|------------|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 25 | 50 | 75 | 100 | 125 | 150 | 175 | 200 | 225 | 250 | 275 | 300 | 350 | 400 | 500 | 600 | 700 | 800 | 900 |
| 1-11/16 | 0.4 | 0.89 | 1.20 | 1.70 | 2.20 | 2.60 | 3.10 | 3.50 | 4.00 | 4.40 | 4.90 | 5.30 | 6.20 | 7.10 | 8.90 | 10.70 | 12.50 | 14.30 | 16.10 |
| 1-15/16 | 0.6 | 1.39 | 2.00 | 2.70 | 3.30 | 4.00 | 4.70 | 5.40 | 6.10 | 6.70 | 7.40 | 8.10 | 9.50 | 10.80 | 13.50 | 16.30 | 19.00 | 21.70 | 24.40 |
| 2-3/16 | 0.90 | 1.90 | 2.90 | 3.90 | 4.80 | 5.80 | 6.80 | 7.80 | 8.80 | 9.70 | 10.70 | 11.70 | 13.70 | 15.60 | 19.50 | 23.40 | 27.40 | 31.30 | 35.20 |
| 2-7/16 | 1.30 | 2.70 | 4.00 | 5.40 | 6.70 | 8.10 | 9.40 | 10.80 | 12.10 | 13.50 | 14.80 | 16.20 | 18.90 | 21.60 | 27.00 | 32.40 | 37.90 | 43.30 | 48.70 |
| 2-11/16 | 1.80 | 3.60 | 5.40 | 7.20 | 9.00 | 10.80 | 12.70 | 14.50 | 16.30 | 18.10 | 19.90 | 21.70 | 25.40 | 29.00 | 36.20 | 43.50 | 50.80 | 58.00 | 65.00 |
| 2-15/16 | 2.30 | 4.70 | 7.00 | 9.40 | 11.80 | 14.20 | 16.50 | 18.90 | 21.30 | 23.60 | 26.00 | 28.40 | 33.10 | 37.90 | 47.30 | 56.80 | 66.00 | 75.50 | 85.00 |
| 3-7/16 | 3.70 | 7.50 | 11.30 | 15.10 | 18.90 | 22.70 | 26.50 | 30.30 | 34.10 | 37.90 | 41.70 | 45.50 | 53.00 | 60.50 | 75.50 | 91.00 | 106 | 121 | 136 |
| 3-15/16 | 5.70 | 11.40 | 17.10 | 22.80 | 28.50 | 34.20 | 39.90 | 45.60 | 51.00 | 57.00 | 62.50 | 68.00 | 79.50 | 91.00 | 114 | 136 | 159 | 182 | 205 |
| 4-7/16 | 8.10 | 16.30 | 24.40 | 32.60 | 40.80 | 49.00 | 57.00 | 65.00 | 73.50 | 81.50 | 89.50 | 98.00 | 114 | 130 | 163 | 196 | 228 | 261 | 294 |
| 4-15/16 | 11.20 | 22.50 | 33.70 | 45.00 | 56.00 | 67.50 | 78.50 | 90.00 | 101 | 112 | 123 | 135 | 157 | 180 | 225 | 270 | 315 | 360 | 405 |
| 5-7/16 | 15.00 | 30.00 | 45.00 | 60.00 | 75.00 | 90.00 | 105 | 120 | 135 | 150 | 165 | 180 | 210 | 240 | 300 | 360 | 420 | 480 | 541 |
| 5-15/16 | 19.50 | 39.00 | 58.50 | 78.00 | 97.10 | 117 | 136 | 156 | 171 | 195 | 215 | 234 | 273 | 313 | 391 | 469 | 547 | 626 | 704 |
| 6-1/2 | 25.50 | 51.00 | 76.50 | 102.5 | 128 | 154 | 179 | 205 | 231 | 256 | 282 | 308 | 359 | 410 | 513 | 616 | 718 | 821 | 924 |
| 7 | 32.00 | 64.90 | 96.00 | 128 | 160 | 192 | 224 | 256 | 288 | 320 | 352 | 384 | 448 | 513 | 641 | 769 | 897 | 1026 | 1154 |
| 7-1/2 | 39.20 | 78.50 | 117 | 157 | 197 | 236 | 276 | 315 | 354 | 394 | 433 | 473 | 552 | 631 | 788 | 946 | 1104 | 1262 | 1419 |
| 8 | 47.70 | 95.50 | 143 | 191 | 239 | 287 | 335 | 382 | 430 | 478 | 526 | 574 | 670 | 765 | 957 | 1148 | 1340 | 1531 | 1723 |
| 8-1/2 | 57.00 | 114 | 171 | 229 | 287 | 344 | 401 | 459 | 516 | 574 | 631 | 688 | 803 | 918 | 1148 | 1377 | 1607 | 1837 | 2066 |
| 9 | 68.00 | 136 | 204 | 272 | 340 | 408 | 477 | 545 | 613 | 681 | 749 | 817 | 954 | 1090 | 1363 | 1635 | 1908 | 2181 | 2453 |
| 9-1/2 | 80.00 | 160 | 240 | 320 | 400 | 480 | 561 | 641 | 721 | 801 | 881 | 961 | 1122 | 1282 | 1603 | 1923 | 2244 | 2565 | 2885 |
| 10 | 93.00 | 186 | 279 | 373 | 467 | 560 | 654 | 747 | 841 | 934 | 1028 | 1121 | 1308 | 1495 | 1869 | 2243 | 2617 | 2991 | 3365 |

Caution: Be generous in the selection of shaft diameters as liberal diameters not only reduce deflection and vibration but also generally increase bearing life. See notes on next page.

Selection of Shaft Diameters (Continued)

Shaft Stiffness, Shaft Deflection-Standard shafting of adequate strength usually has a sufficiently large diameter to prevent excessive deflection in ordinary installations. It is wise to select shafting of generous diameter, as the greater the diameter, the greater the stiffness. A high tensile strength alloy shaft, although stronger, is no stiffer than a standard shaft of the same diameter.

While it is sometimes possible to use an alloy shaft of less diameter than a standard shaft of equal strength, this practice is usually inadvisable, as the deflection is increased.

Shafts carrying medium or long clutch sleeves should be especially generous.

High Speed Shafts - High speed sometimes causes shaft whipping or vibration. This can be prevented by making the shaft diameter generous and the distance between bearing centers short.

Location of the bearings close to wheels and couplings is advisable whether the shaft is transmitting heavy or light loads.

The use of high tensile strength alloy shafting instead of standard shafting is of no help in preventing vibration as this will not improve the stiffness nor deflection characteristics of the shaft.

Stepped Shafts - For a heavily loaded wheel, a shaft with a boss or enlarged section under the wheel and turned to a smaller diameter at the bearings often provides the most economical installation. The two different diameters should be joined by a very generous fillet, otherwise a dangerous concentration of stress will occur at the fillet. See heading -

“Turning Down Shaft Ends.” (B16-15).

Shaft Keyseats - Plain keyseats are preferable to round end keyseats in respect to causing the least concentration of stress. However, round end keyseats are often used because of design and assembly requirements. Ends left by the milling cutter should not project into babbitted or bronze bushed bearing, but may project under the sleeve of any DODGE anti-friction bearing.

Shaft diameters obtained from the tables or chart allow for the use of keyseats.

Shaft Bearings - On ordinary line shafting, bearings are commonly spaced about eight feet centers. On large diameter shafts, the spacing may be somewhat greater.

Wheels and clutches should be located near bearings to avoid dangerous bending, deflection and vibration.

Bearings should be mounted on adequate supports so that accurate alignment may be maintained. Shaft misalignment may cause shaft or bearing failure.

Shaft Couplings - Where a rigid coupling is used, it is preferable to have a bearing fairly close. Where a cutoff coupling or a flexible coupling is used, locate bearings close to each end of the coupling.

Expansion of Shafting - Where changes in the length of the shaft due to changes in temperature are to be expected and the bearings are mounted on supporting structures other than steel, consideration must be given to expansion. For more detailed information see B16-20, headed: “Expansion of Shafting.”

Factors for Shafting Other Than Standard Shafting

When it is necessary to use other than standard shafting, multiply required diameter for standard shafting as found in the tables or chart by proper factor from Table 24 below.

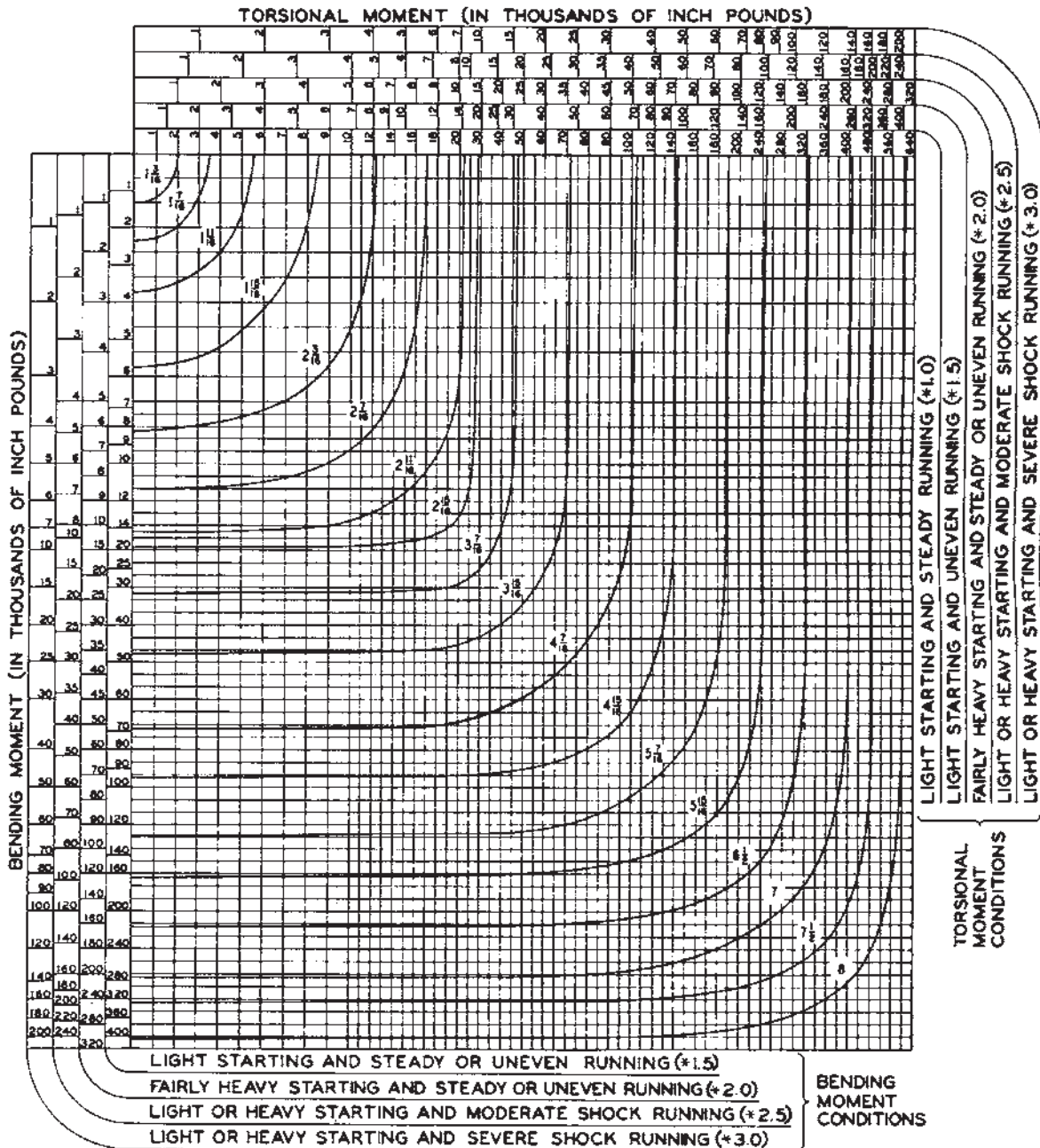
Standard keyseated shafting, using a safe shear stress of 6,000 PSI is the basis of shafting tables and chart. For safe shear stress of other materials, use 1/10 of nominal ultimate tensile strength. For example, use 8,000 for C1045 and 10,000 for 4140 keyseated shafting. When definite physical specifications are known the least of 13.5% of minimum ultimate tensile strength and 22.5% of minimum elastic limit in tension may be used for keyseated shafting; 18% and 30% respectively if not keyseated.

Caution - As the deflection of steel shafting depends upon the diameter and not upon the analysis of the steel, care should be exercised in the use of alloy shafting not to reduce the diameter unduly. Deflection should not be excessive and bearing capacities should be adequate. It is usually best to use standard shafting instead of a smaller diameter alloy shaft. The smaller alloy shaft may safely transmit the torque but often is undesirable in respect to deflection, vibration and bearing life

Table 24: Shear Stress Factors

| Safe Shear Stress | Factor | Safe Shear Stress | Factor | Safe Shear Stress | Factor | Safe Shear Stress | Factor | Safe Shear Stress | Factor |
|-------------------|--------|-------------------|--------|-------------------|--------|-------------------|--------|-------------------|--------|
| 500 | 2.289 | 3,000 | 1.260 | 5,500 | 1.029 | 9,000 | .874 | 14,000 | .754 |
| 1,000 | 1.817 | 3,500 | 1.197 | 6,000 | 1.000 | 10,000 | .843 | 15,000 | .737 |
| 1,500 | 1.587 | 4,000 | 1.145 | 6,500 | .974 | 11,000 | .817 | 16,000 | .721 |
| 2,000 | 1.442 | 4,500 | 1.101 | 7,000 | .950 | 12,000 | .794 | 17,000 | .707 |
| 2,500 | 1.339 | 5,000 | 1.063 | 8,000 | .909 | 13,000 | .773 | 18,000 | .693 |

Combine Torsion and Bending of Standard Shaft (Based on a Safe Shear Stress of 6,000 PS for Keyseated Shafting)



Example: Engine extension shaft driving single cylinder compressor, 15,000 pound-inches torsional moment, 14,000 pound-inches bending moment. Because of the heavy shock running load conditions use scales designated "Light or Heavy Starting and Severe Shock Running". Project a line down from 15,000 torsional moment. Project a line to the right from 14,000 bending moment. The two lines intersect between 3-7/16 and 3-15/16 curves. Use 3-15/16 standard shafting.

Note: The above chart is based on ASME approved standard ASA-B17C-1927 withdrawn in 1954. If the latest shaft selection analysis is required refer to ANSI/ASME B106.1M-1985.

Note: If considering use of other shafting material refer to "Selection of Shaft Diameters" on page B16-18.

Expansion of Shafting

Provision should be made to permit the free movement of shafting endwise due to temperature changes. One bearing should serve as an anchor bearing to locate the shaft endwise. All other bearings should permit the shaft to move freely endwise.

The anchor bearing is often located near an important wheel. On long shafts it should preferably be located near the center of the shaft to keep the expansion of the two ends to a minimum. If the anchor bearing is babbitted it should be fitted with collars. If it is an anti-friction bearing it should be of the non-expansion type, which is the designation of DODGE roller and ball bearings for use as anchor bearings.

All bearings on the shafting other than the anchor bearing should permit the shaft to move freely endwise. If babbitted there should be no thrust collars. If anti-friction these bearings should be of the expansion type.

Several shafts firmly fastened together expand as if one continuous shaft. An example of this is line shafting with flange couplings. If the expansion is considered excessive a long line shaft may be split into two or more sections, the sections being connected with expansion couplings.

Amount of Expansion to be provided for-

The amount of shaft expansion is given in Table 25 below. For example, with a 100°F temperature rise on a 150 ft. line shaft with the anchor bearing located 70 ft. from one end and 80 ft. from the other end the ends will move .529" and .605"

respectively away from the anchor bearing. The structure supporting the bearings may also expand depending on heat exposure. Several cases follow:

Case 1 - Bearings supported on steel structures, where the shaft and structure are exposed to the same temperatures, will expand at the same rate. Expansion allowance is usually not required. If the shaft is exposed to a higher temperature than the support, allowances should be made. For example, if the shaft temperature is expected to change 80°, and the temperature of the structure 60°, the resulting movement between shafting and support ends will be equivalent to a 20° change.

Case 2 - For bearings supported on wood, brick, or concrete walls, or on piers with foundations in the ground, the amount of expansion is usually considered negligible. Therefore, the full amount of shafting expansion as calculated in Table 25 below, may be accommodated.

Case 3 - Certain structural designs have built-in flexibility. Where this is the case, expansion type bearings are not necessary.

Case 4 - Short shafts with only two bearings are usually designed without compensation for expansion, if temperature variations are not excessive.

Advice on Expansion Problems-

DODGE power transmission engineers will gladly make recommendations concerning shaft expansion problems and the use of suitable bearings.

Table 25: Linear Expansion of Steel Shafting

Base on Expansion In Inches = 0.000063 x 12 x Length in Feet x Temp. Increase in Degrees Fahrenheit

| Length (Feet) | Temperature Increase-Degrees F. | | | | | Length (Feet) | Temperature Increase-Degrees F. | | | | |
|------------------|---------------------------------|-------|-------|-------|-------|------------------|---------------------------------|------|------|------|-------|
| | 20° | 40° | 60° | 80° | 100° | | 20° | 40° | 60° | 80° | 100° |
| 1 | .0015 | .0030 | .0045 | .0060 | .0075 | 40 | .060 | .121 | .181 | .242 | .302 |
| 2 | .0030 | .0060 | .0091 | .0121 | .0151 | 45 | .068 | .136 | .204 | .272 | .340 |
| 3 | .0045 | .0091 | .0136 | .0181 | .0227 | 50 | .076 | .151 | .227 | .302 | .378 |
| 4 | .0060 | .0121 | .0181 | .0242 | .0302 | 55 | .083 | .166 | .249 | .333 | .416 |
| 5 | .0076 | .0151 | .0227 | .0302 | .0378 | 60 | .091 | .181 | .272 | .363 | .454 |
| 6 | .0091 | .0181 | .0272 | .0363 | .0454 | 65 | .098 | .197 | .295 | .393 | .491 |
| 7 | .0106 | .0212 | .0318 | .0423 | .0529 | 70 | .106 | .212 | .317 | .423 | .529 |
| 8 | .0121 | .0242 | .0363 | .0484 | .0605 | 75 | .113 | .227 | .340 | .454 | .567 |
| 9 | .0136 | .0272 | .0408 | .0544 | .0680 | 80 | .121 | .242 | .363 | .484 | .605 |
| 10 | .0151 | .0302 | .0454 | .0605 | .0756 | 85 | .129 | .257 | .386 | .514 | .643 |
| 12 | .0181 | .0363 | .0544 | .0726 | .0907 | 90 | .136 | .272 | .408 | .544 | .680 |
| 14 | .0212 | .0423 | .0635 | .0847 | .1058 | 95 | .144 | .287 | .431 | .575 | .718 |
| 16 | .024 | .048 | .073 | .097 | .121 | 100 | .151 | .302 | .454 | .605 | .756 |
| 18 | .027 | .054 | .082 | .109 | .136 | 110 | .166 | .333 | .499 | .665 | .832 |
| 20 | .030 | .060 | .091 | .121 | .151 | 120 | .181 | .363 | .544 | .726 | .907 |
| 25 | .038 | .076 | .113 | .151 | .189 | 130 | .197 | .393 | .590 | .786 | .983 |
| 30 | .045 | .091 | .136 | .181 | .227 | 140 | .212 | .423 | .635 | .847 | 1.058 |
| 35 | .053 | .106 | .158 | .212 | .265 | 150 | .227 | .454 | .680 | .907 | 1.134 |



ENGINEERING

Weights and Properties of Steel Shafting

Table 26: Weight of Round Steel Shafting

| Shaft Size | Weight of Shafting for Various Lengths in feet | | | | | | | | | | | | | | | | | Weight Per Inc. |
|------------|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----------------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 | |
| 3/4 | 1.50 | 3.00 | 4.50 | 6.00 | 7.50 | 9.00 | 10.50 | 12.00 | 13.50 | 15.00 | 18.00 | 21.00 | 24.00 | 27.00 | 30.00 | 33.00 | 36.00 | .125 |
| 7/8 | 2.00 | 4.00 | 6.10 | 8.10 | 10.20 | 12.20 | 14.30 | 16.30 | 18.40 | 20.00 | 25.00 | 29.00 | 33.00 | 37.00 | 41.00 | 45.00 | 49.00 | .170 |
| *15/16 | 2.30 | 4.70 | 7.00 | 9.40 | 11.70 | 14.10 | 16.50 | 18.80 | 21.20 | 23.00 | 28.00 | 33.00 | 38.00 | 42.00 | 47.00 | 52.00 | 56.00 | .195 |
| 1 | 2.70 | 5.30 | 8.00 | 10.60 | 13.30 | 16.00 | 18.60 | 21.30 | 24.00 | 27.00 | 32.00 | 37.00 | 43.00 | 48.00 | 53.00 | 59.00 | 64.00 | .223 |
| 1-1/8 | 3.40 | 6.80 | 10.00 | 13.40 | 16.70 | 20.10 | 23.40 | 26.70 | 30.10 | 34.00 | 41.00 | 47.00 | 54.00 | 61.00 | 68.00 | 74.00 | 81.00 | .281 |
| *1-3/16 | 3.80 | 7.60 | 11.30 | 15.10 | 18.90 | 22.60 | 26.40 | 30.10 | 34.00 | 38.00 | 45.00 | 53.00 | 60.00 | 68.00 | 75.00 | 83.00 | 90.00 | .314 |
| 1-1/4 | 4.20 | 8.30 | 12.50 | 16.70 | 20.80 | 25.00 | 29.20 | 33.30 | 37.50 | 42.00 | 50.00 | 58.00 | 67.00 | 75.00 | 83.00 | 92.00 | 100 | .348 |
| 1-3/8 | 5.00 | 10.10 | 15.30 | 20.20 | 25.30 | 30.30 | 35.40 | 40.40 | 45.40 | 50.00 | 60.00 | 71.00 | 81.00 | 91.00 | 101 | 111 | 121 | .420 |
| *1-7/16 | 5.50 | 11.00 | 17.00 | 22.00 | 28.00 | 33.00 | 39.00 | 44.00 | 50.00 | 55.00 | 66.00 | 77.00 | 88.00 | 99.00 | 110 | 121 | 133 | .460 |
| 1-1/2 | 6.00 | 12.00 | 18.00 | 24.00 | 30.00 | 36.00 | 42.00 | 48.00 | 54.00 | 60.00 | 72.00 | 84.00 | 96.00 | 108 | 120 | 132 | 144 | .500 |
| *1-11/16 | 7.60 | 15.00 | 23.00 | 30.00 | 38.00 | 46.00 | 53.00 | 61.00 | 68.00 | 76.00 | 91.00 | 107 | 122 | 137 | 152 | 167 | 183 | .634 |
| *1-15/16 | 10.00 | 20.00 | 30.00 | 40.00 | 50.00 | 60.00 | 70.00 | 80.00 | 90.00 | 100 | 120 | 140 | 161 | 181 | 201 | 221 | 241 | .835 |
| 2 | 10.70 | 21.00 | 32.00 | 43.00 | 53.00 | 64.00 | 75.00 | 85.00 | 96.00 | 107 | 128 | 150 | 171 | 192 | 214 | 235 | 256 | .890 |
| *2-3/16 | 12.80 | 26.00 | 38.00 | 51.00 | 64.00 | 77.00 | 90.00 | 102 | 115 | 128 | 153 | 179 | 205 | 230 | 256 | 281 | 307 | 1.06 |
| *2-7/16 | 15.90 | 32.00 | 48.00 | 63.00 | 79.00 | 95.00 | 111 | 127 | 143 | 159 | 190 | 222 | 254 | 286 | 317 | 349 | 381 | 1.32 |
| 2-1/2 | 16.70 | 34.00 | 50.00 | 67.00 | 83.00 | 100 | 117 | 134 | 150 | 167 | 200 | 234 | 267 | 301 | 334 | 367 | 401 | 1.39 |
| *2-11/16 | 19.30 | 39.00 | 58.00 | 77.00 | 97.00 | 116 | 135 | 154 | 174 | 193 | 232 | 270 | 309 | 348 | 386 | 425 | 463 | 1.61 |
| *2-15/16 | 23.00 | 46.00 | 69.00 | 92.00 | 115 | 138 | 161 | 184 | 208 | 231 | 277 | 323 | 369 | 415 | 461 | 507 | 553 | 1.92 |
| *3-7/16 | 31.60 | 63.00 | 95.00 | 126 | 158 | 189 | 221 | 253 | 284 | 316 | 379 | 442 | 505 | 568 | 631 | 695 | 758 | 2.63 |
| *3-15/16 | 41.40 | 83.00 | 124 | 166 | 207 | 248 | 290 | 331 | 373 | 414 | 497 | 580 | 662 | 745 | 828 | 911 | 994 | 3.45 |
| *4-7/16 | 52.60 | 105 | 158 | 210 | 263 | 315 | 368 | 421 | 473 | 526 | 631 | 736 | 841 | 946 | 1052 | 1157 | 1262 | 4.38 |
| *4-15/16 | 65.10 | 130 | 195 | 260 | 326 | 391 | 456 | 521 | 586 | 651 | 781 | 911 | 1041 | 1172 | 1302 | 1432 | 1562 | 5.42 |
| *5-7/16 | 79.00 | 158 | 237 | 316 | 395 | 474 | 553 | 632 | 711 | 790 | 947 | 1105 | 1263 | 1421 | 1579 | 1737 | 1894 | 6.58 |
| *6 | 96.00 | 192 | 288 | 384 | 481 | 577 | 673 | 769 | 865 | 961 | 1154 | 1346 | 1538 | 1730 | 1923 | 2115 | 2307 | 8.01 |

* **Recommended Diameters** These shaft diameters are recommended for use whenever possible as various transmission items such as couplings, collars, clutches, pulleys, etc., are carried in stock in these sizes, at least up to 3-15/16", in the principal cities throughout the United States.

Table 27: Weight and Properties of Round Steel Shafting

| Shaft Size | Weight per Inch | Section Modulus | | Moment of Inertia | | Shaft Size | Weight per Inch | Section Modulus | | Moment of Inertia | |
|------------|-----------------|-----------------|---------|-------------------|---------|------------|-----------------|-----------------|---------|-------------------|---------|
| | | Bending | Torsion | Bending | Torsion | | | Bending | Torsion | Bending | Torsion |
| 1/16 | .00087 | .000024 | .000048 | .000001 | .000002 | 2-7/16 | 1.32 | 1.422 | 2.844 | 1.733 | 3.466 |
| 1/8 | .0035 | .000192 | .000383 | .000012 | .000024 | 2-1/2 | 1.39 | 1.534 | 3.068 | 1.918 | 3.835 |
| 3/16 | .0078 | .000647 | .001294 | .000061 | .000121 | 2-9/16 | 1.46 | 1.652 | 3.304 | 2.117 | 4.233 |
| 1/4 | .0139 | .001534 | .003068 | .000192 | .000383 | 2-5/8 | 1.53 | 1.776 | 3.552 | 2.331 | 4.661 |
| 5/16 | .0217 | .002996 | .005992 | .000468 | .000936 | 2-11/16 | 1.61 | 1.906 | 3.811 | 2.561 | 5.122 |
| 3/8 | .0313 | .005177 | .010354 | .000971 | .001941 | 2-3/4 | 1.68 | 2.042 | 4.084 | 2.807 | 5.615 |
| 7/16 | .0425 | .008221 | .016442 | .001798 | .003597 | 2-13/16 | 1.76 | 2.184 | 4.368 | 3.071 | 6.143 |
| 1/2 | .0556 | .0123 | .0245 | .0031 | .0061 | 2-7/8 | 1.84 | 2.333 | 4.666 | 3.354 | 6.707 |
| 9/16 | .0703 | .0175 | .0349 | .0049 | .0098 | 2-15/16 | 1.92 | 2.489 | 4.977 | 3.655 | 7.310 |
| 5/8 | .0868 | .0240 | .0479 | .0075 | .0150 | 3 | 2.00 | 2.651 | 5.301 | 3.976 | 7.952 |
| 11/16 | .1051 | .0319 | .0638 | .0110 | .0219 | 3-1/16 | 2.08 | 2.820 | 5.640 | 4.318 | 8.636 |
| 3/4 | .125 | .0414 | .0828 | .0155 | .0311 | 3-1/8 | 2.17 | 2.996 | 5.992 | 4.681 | 9.363 |
| 13/16 | .1467 | .0527 | .1053 | .0214 | .0428 | 3-3/16 | 2.26 | 3.179 | 6.359 | 5.067 | 10.13 |
| 7/8 | .1701 | .0658 | .1315 | .0288 | .0575 | 3-1/4 | 2.35 | 3.370 | 6.740 | 5.477 | 10.95 |
| 15/16 | .1954 | .0809 | .1618 | .0379 | .0758 | 3-5/16 | 2.44 | 3.568 | 7.137 | 5.910 | 11.82 |
| 1 | .22 | .0982 | .1963 | .0491 | .0982 | 3-3/8 | 2.53 | 3.774 | 7.548 | 6.369 | 12.74 |
| 1-1/16 | .25 | .1178 | .2355 | .0626 | .1251 | 3-7/16 | 2.63 | 3.988 | 7.976 | 6.854 | 13.71 |
| 1-1/8 | .28 | .1398 | .2796 | .0786 | .1573 | 3-1/2 | 2.72 | 4.209 | 8.419 | 7.366 | 14.73 |
| 1-3/16 | .31 | .1644 | .3288 | .0976 | .1952 | 3-9/16 | 2.82 | 4.439 | 8.878 | 7.907 | 15.81 |
| 1-1/4 | .35 | .1917 | .3835 | .1198 | .2397 | 3-5/8 | 2.92 | 4.677 | 9.353 | 8.476 | 16.95 |
| 1-5/16 | .38 | .2220 | .4439 | .1457 | .2913 | 3-11/16 | 3.02 | 4.923 | 9.845 | 9.076 | 18.15 |
| 1-3/8 | .42 | .2552 | .5104 | .1755 | .3509 | 3-3/4 | 3.13 | 5.177 | 10.35 | 9.707 | 19.41 |
| 1-7/16 | .46 | .2916 | .5832 | .2096 | .4192 | 3-13/16 | 3.23 | 5.440 | 10.88 | 10.37 | 20.74 |
| 1-1/2 | .50 | .3313 | .6627 | .2485 | .4970 | 3-7/8 | 3.34 | 5.712 | 11.42 | 11.07 | 22.14 |
| 1-9/16 | .54 | .3745 | .7490 | .2926 | .5852 | 3-15/16 | 3.45 | 5.993 | 11.99 | 11.80 | 23.60 |
| 1-5/8 | .59 | .4213 | .8425 | .3423 | .6846 | 4 | 3.56 | 6.283 | 12.57 | 12.57 | 25.13 |
| 1-11/16 | .63 | .4718 | .9435 | .3981 | .7961 | 4-1/16 | 3.67 | 6.582 | 13.16 | 13.37 | 26.74 |
| 1-3/4 | .68 | .5262 | 1.052 | .4604 | .9208 | 4-1/8 | 3.78 | 6.891 | 13.78 | 14.21 | 28.42 |
| 1-13/16 | .73 | .5846 | 1.169 | .5298 | 1.060 | 4-3/16 | 3.90 | 7.209 | 14.42 | 15.09 | 30.19 |
| 1-7/8 | .78 | .6471 | 1.294 | .6067 | 1.213 | 4-1/4 | 4.01 | 7.536 | 15.07 | 16.01 | 32.03 |
| 1-15/16 | .83 | .7140 | 1.428 | .6917 | 1.384 | 4-5/16 | 4.13 | 7.874 | 15.75 | 16.98 | 33.96 |
| 2 | .89 | .7854 | 1.571 | .7854 | 1.571 | 4-3/8 | 4.25 | 8.221 | 16.44 | 17.98 | 35.97 |
| 2-1/16 | .94 | .8614 | 1.723 | .8614 | 1.723 | 4-7/16 | 4.38 | 8.579 | 17.16 | 19.03 | 38.07 |
| 2-1/8 | 1.00 | .9421 | 1.884 | 1.001 | 2.002 | 4-1/2 | 4.50 | 8.946 | 17.89 | 20.13 | 40.26 |
| 2-3/16 | 1.06 | 1.028 | 2.055 | 1.124 | 2.248 | 4-9/16 | 4.63 | 9.324 | 18.65 | 21.27 | 42.54 |
| 2-1/4 | 1.13 | 1.118 | 2.237 | 1.258 | 2.516 | 4-5/8 | 4.75 | 9.713 | 19.43 | 22.46 | 44.92 |
| 2-5/16 | 1.19 | 1.214 | 2.428 | 1.404 | 2.808 | 4-11/16 | 4.88 | 10.11 | 20.22 | 23.70 | 47.40 |
| 2-3/8 | 1.25 | 1.315 | 2.630 | 1.562 | 3.124 | 4-3/4 | 5.01 | 10.52 | 21.04 | 24.99 | 49.98 |

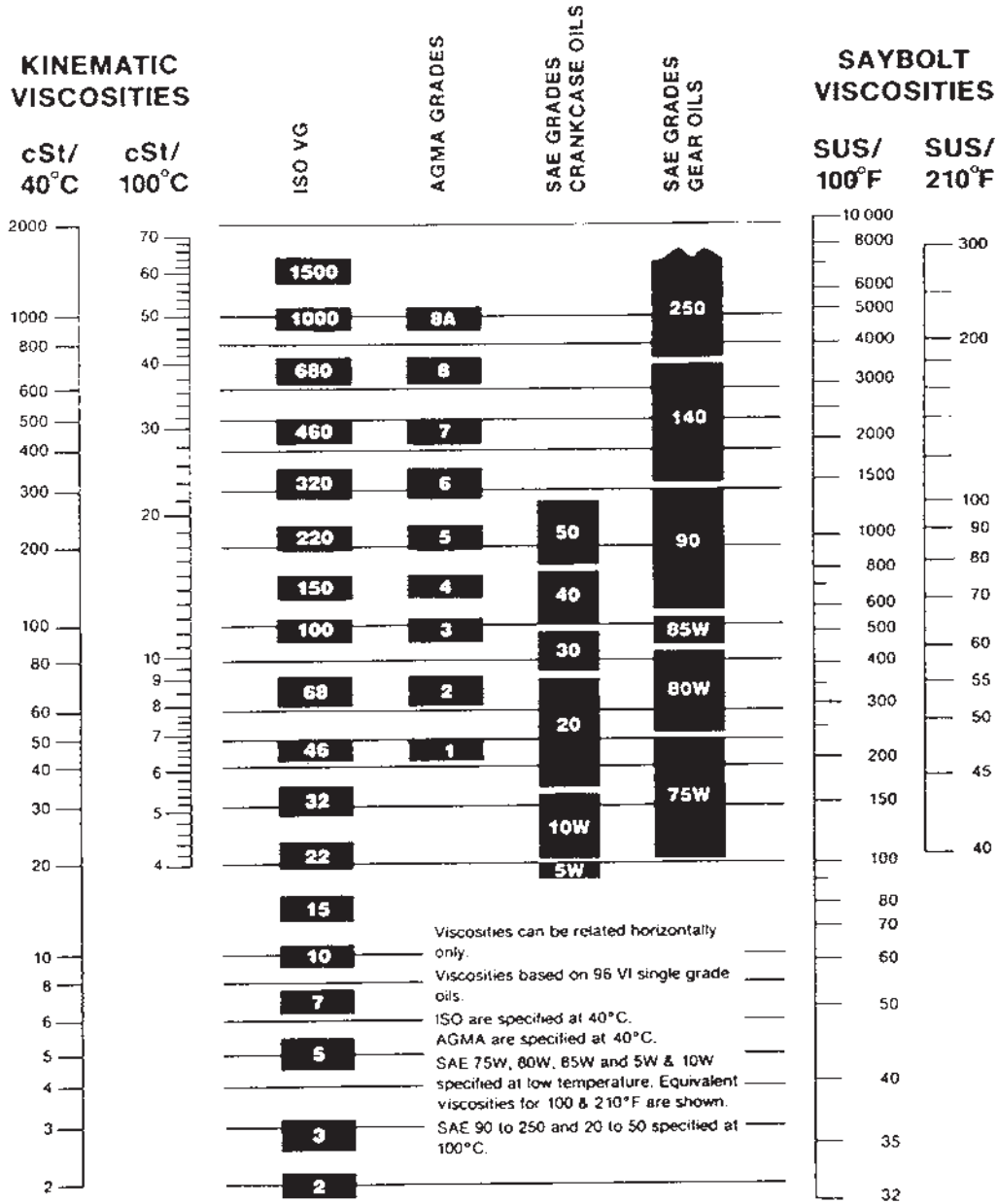
Weights and Properties of Steel Shafting (Continued)

Table 28: Weight and Properties of Round Steel Shafting

| Shaft Size | Weight per Inch | Section Modulus | | Moment of Inertia | | Shaft Size | Weight per Inch | Section Modulus | | Moment of Inertia | |
|------------|-----------------|-----------------|---------|-------------------|---------|------------|-----------------|-----------------|---------|-------------------|---------|
| | | Bending | Torsion | Bending | Torsion | | | Bending | Torsion | Bending | Torsion |
| 4-13/16 | 5.15 | 10.94 | 21.88 | 26.33 | 52.66 | 13-1/2 | 40.50 | 241.50 | 483.10 | 1630 | 3261 |
| 4-7/8 | 5.28 | 11.37 | 22.75 | 27.72 | 55.45 | 13-3/4 | 42.00 | 255.20 | 510.40 | 1755 | 3509 |
| 4-15/16 | 5.42 | 11.82 | 23.63 | 29.17 | 58.35 | 14 | 43.60 | 269.40 | 538.80 | 1886 | 3771 |
| 5 | 5.56 | 12.27 | 24.54 | 30.68 | 61.36 | 14-1/4 | 45.10 | 284.10 | 568.20 | 2024 | 4048 |
| 5-1/16 | 5.70 | 12.74 | 25.48 | 32.24 | 64.49 | 14-1/2 | 46.70 | 299.30 | 598.60 | 2170 | 4340 |
| 5-1/8 | 5.84 | 13.22 | 26.43 | 33.86 | 67.73 | 14-3/4 | 48.40 | 315.00 | 630.10 | 2324 | 4647 |
| 5-3/16 | 5.98 | 13.70 | 27.41 | 35.55 | 71.09 | 15 | 50.00 | 331.30 | 662.70 | 2485 | 4970 |
| 5-1/4 | 6.13 | 14.21 | 28.41 | 37.29 | 74.58 | 15-1/4 | 51.70 | 348.20 | 696.40 | 2655 | 5310 |
| 5-5/16 | 6.27 | 14.72 | 29.44 | 39.10 | 78.20 | 15-1/2 | 53.40 | 365.60 | 731.20 | 2833 | 5667 |
| 5-3/8 | 6.42 | 15.25 | 30.49 | 40.97 | 81.94 | 15-3/4 | 55.10 | 383.60 | 767.10 | 3021 | 6041 |
| 5-7/16 | 6.58 | 15.78 | 31.57 | 42.91 | 85.82 | 16 | 56.90 | 402.10 | 804.20 | 3217 | 6434 |
| 5-1/2 | 6.72 | 16.33 | 32.67 | 44.92 | 89.84 | 16-1/4 | 58.70 | 421.30 | 842.50 | 3422 | 6846 |
| 5-9/16 | 6.88 | 16.90 | 33.79 | 46.99 | 93.99 | 16-1/2 | 60.50 | 441.00 | 882.00 | 3638 | 7277 |
| 5-5/8 | 7.03 | 17.47 | 34.95 | 49.14 | 98.29 | 16-3/4 | 62.40 | 461.40 | 922.70 | 3864 | 7728 |
| 5-11/16 | 7.19 | 18.06 | 36.12 | 51.36 | 102.70 | 17 | 64.20 | 482.30 | 964.70 | 4100 | 8200 |
| 5-3/4 | 7.35 | 18.66 | 37.33 | 53.66 | 107.30 | 17-1/4 | 66.10 | 503.90 | 1008 | 4346 | 8693 |
| 5-13/16 | 7.51 | 19.28 | 38.56 | 56.03 | 112.10 | 17-1/2 | 68.10 | 526.20 | 1052 | 4604 | 9208 |
| 5-7/8 | 7.67 | 19.91 | 39.82 | 58.48 | 117.00 | 17-3/4 | 70.00 | 549.10 | 1098 | 4873 | 9745 |
| 5-15/16 | 7.84 | 20.55 | 41.10 | 61.01 | 122.00 | 18 | 72.00 | 572.60 | 1145 | 5153 | 10306 |
| 6 | 8.00 | 21.21 | 42.41 | 63.62 | 127.20 | 18-1/4 | 74.00 | 596.70 | 1193 | 5445 | 10891 |
| 6-1/16 | 8.17 | 21.88 | 43.75 | 66.31 | 132.60 | 18-1/2 | 76.10 | 621.60 | 1243 | 5750 | 11500 |
| 6-1/8 | 8.34 | 22.56 | 45.12 | 69.09 | 138.20 | 18-3/4 | 78.10 | 647.10 | 1294 | 6067 | 12134 |
| 6-3/16 | 8.51 | 23.26 | 46.51 | 71.95 | 143.90 | 19 | 80.20 | 673.40 | 1347 | 6397 | 12794 |
| 6-1/4 | 8.68 | 23.97 | 47.94 | 74.90 | 149.80 | 19-1/4 | 82.40 | 700.30 | 1401 | 6741 | 13481 |
| 6-5/16 | 8.86 | 24.69 | 49.39 | 77.94 | 155.90 | 19-1/2 | 84.50 | 728.00 | 1456 | 7098 | 14195 |
| 6-3/8 | 9.03 | 25.44 | 50.87 | 81.08 | 162.20 | 19-3/4 | 86.70 | 756.30 | 1513 | 7469 | 14937 |
| 6-7/16 | 9.21 | 26.19 | 52.38 | 84.30 | 168.60 | 20 | 88.90 | 785.40 | 1571 | 7854 | 15708 |
| 6-1/2 | 9.39 | 26.96 | 53.92 | 87.62 | 175.20 | 20-1/4 | 91.10 | 815.20 | 1630 | 8254 | 16508 |
| 6-5/8 | 9.76 | 28.55 | 57.09 | 94.56 | 189.10 | 20-1/2 | 93.40 | 845.80 | 1692 | 8669 | 17339 |
| 6-3/4 | 10.10 | 30.19 | 60.39 | 101.90 | 203.80 | 20-3/4 | 95.70 | 877.10 | 1754 | 9100 | 18200 |
| 6-7/8 | 10.50 | 31.90 | 63.80 | 109.70 | 219.30 | 21 | 98.00 | 909.20 | 1818 | 9547 | 19093 |
| 7 | 10.90 | 33.67 | 67.35 | 117.90 | 235.70 | 21-1/4 | 100.40 | 942.10 | 1884 | 10009 | 20019 |
| 7-1/8 | 11.30 | 35.51 | 71.02 | 126.50 | 253.00 | 21-1/2 | 102.70 | 975.70 | 1951 | 10489 | 20978 |
| 7-1/4 | 11.70 | 37.41 | 74.82 | 135.60 | 271.20 | 21-3/4 | 105.10 | 1010 | 2020 | 10985 | 21970 |
| 7-3/8 | 12.10 | 39.38 | 78.76 | 145.20 | 290.40 | 22 | 107.60 | 1045 | 2091 | 11499 | 22998 |
| 7-1/2 | 12.50 | 41.42 | 82.84 | 155.30 | 310.60 | 22-1/4 | 110.00 | 1081 | 2163 | 12031 | 24061 |
| 7-5/8 | 12.90 | 43.52 | 87.05 | 165.90 | 331.90 | 22-1/2 | 112.50 | 1118 | 2237 | 12581 | 25161 |
| 7-3/4 | 13.30 | 45.70 | 91.40 | 177.10 | 354.20 | 22-3/4 | 115.00 | 1156 | 2312 | 13149 | 26298 |
| 7-7/8 | 13.80 | 47.95 | 95.89 | 188.80 | 377.60 | 23 | 117.60 | 1194 | 2389 | 13737 | 27473 |
| 8 | 14.30 | 50.27 | 100.50 | 201.10 | 402.10 | 23-1/4 | 120.10 | 1234 | 2468 | 14344 | 28687 |
| 8-1/8 | 14.70 | 52.66 | 105.30 | 213.90 | 427.90 | 23-1/2 | 122.70 | 1274 | 2548 | 14971 | 29941 |
| 8-1/4 | 15.10 | 55.13 | 110.30 | 227.40 | 454.80 | 23-3/4 | 125.40 | 1315 | 2630 | 15618 | 31236 |
| 8-3/8 | 15.60 | 57.67 | 115.30 | 241.50 | 483.00 | 24 | 128.00 | 1357 | 2714 | 16286 | 32572 |
| 8-1/2 | 16.10 | 60.29 | 120.60 | 256.20 | 512.50 | 24-1/4 | 130.70 | 1400 | 2800 | 16975 | 33951 |
| 8-5/8 | 16.50 | 62.99 | 126.00 | 271.60 | 543.30 | 24-1/2 | 133.40 | 1444 | 2888 | 17686 | 35372 |
| 8-3/4 | 17.00 | 65.77 | 131.60 | 287.70 | 575.50 | 24-1/4 | 136.20 | 1488 | 2977 | 18419 | 36838 |
| 8-7/8 | 17.50 | 68.63 | 137.30 | 304.50 | 609.10 | 25 | 138.90 | 1534 | 3068 | 19175 | 38350 |
| 9 | 18.00 | 71.57 | 143.10 | 322.10 | 644.10 | 25-1/4 | 141.70 | 1580 | 3161 | 19954 | 39907 |
| 9-1/8 | 18.50 | 74.59 | 149.20 | 340.30 | 680.70 | 25-1/2 | 144.50 | 1628 | 3256 | 20755 | 41511 |
| 9-1/4 | 19.00 | 77.70 | 155.40 | 359.40 | 718.70 | 25-3/4 | 147.40 | 1676 | 3352 | 21581 | 43163 |
| 9-3/8 | 19.50 | 80.89 | 161.80 | 379.20 | 758.40 | 26 | 150.30 | 1726 | 3451 | 22432 | 44864 |
| 9-1/2 | 20.10 | 84.17 | 168.30 | 399.80 | 799.60 | 26-1/4 | 153.20 | 1776 | 3552 | 23307 | 46614 |
| 9-5/8 | 20.60 | 87.54 | 175.10 | 421.30 | 842.60 | 26-1/2 | 156.10 | 1827 | 3654 | 24208 | 48415 |
| 9-3/4 | 21.10 | 90.99 | 182.00 | 443.60 | 887.20 | 26-3/4 | 159.00 | 1879 | 3758 | 25134 | 50268 |
| 9-7/8 | 21.70 | 94.54 | 189.10 | 466.80 | 933.60 | 27 | 162.00 | 1932 | 3865 | 26087 | 52174 |
| 10 | 22.20 | 98.17 | 196.30 | 490.90 | 981.70 | 27-1/2 | 168.10 | 2042 | 4083 | 28074 | 56148 |
| 10-1/4 | 23.40 | 105.72 | 211.40 | 541.80 | 1084 | 28 | 174.30 | 2155 | 4310 | 30172 | 60344 |
| 10-1/2 | 24.50 | 113.65 | 227.30 | 596.70 | 1193 | 28-1/2 | 180.50 | 2273 | 4545 | 32385 | 64771 |
| 10-3/4 | 25.70 | 121.96 | 243.90 | 655.50 | 1311 | 29 | 186.90 | 2394 | 4789 | 34719 | 69437 |
| 11 | 26.90 | 130.67 | 261.30 | 718.70 | 1437 | 29-1/2 | 193.40 | 2520 | 5041 | 37176 | 74351 |
| 11-1/4 | 28.10 | 139.78 | 279.60 | 786.30 | 1573 | 30 | 200.00 | 2651 | 5301 | 39761 | 79522 |
| 11-1/2 | 29.40 | 149.31 | 298.60 | 858.50 | 1717 | 30-1/2 | 206.80 | 2785 | 5571 | 42479 | 84957 |
| 11-3/4 | 30.70 | 159.26 | 318.50 | 935.70 | 1871 | 31 | 213.60 | 2925 | 5849 | 45333 | 90666 |
| 12 | 32.00 | 169.65 | 339.30 | 1018 | 2036 | 31-1/2 | 220.50 | 3069 | 6137 | 48329 | 96659 |
| 12-1/4 | 33.40 | 180.47 | 360.90 | 1105 | 2211 | 32 | 227.60 | 3217 | 6434 | 51472 | 102944 |
| 12-1/2 | 34.70 | 191.75 | 383.50 | 1198 | 2397 | 32-1/2 | 234.80 | 3370 | 6740 | 54765 | 109530 |
| 12-3/4 | 36.10 | 203.48 | 407.00 | 1297 | 2594 | 33 | 242.10 | 3528 | 7056 | 58214 | 116428 |
| 13 | 37.60 | 215.69 | 431.40 | 1402 | 2804 | 34 | 256.90 | 3859 | 7717 | 65597 | 131194 |
| 13-1/4 | 39.00 | 228.37 | 456.70 | 1513 | 3026 | 35 | 272.30 | 4209 | 8418 | 73662 | 147324 |

Viscosity Classification Equivalents

OIL VISCOSITY EQUIVALENCY CHART



ISO VISCOSITY CLASSIFICATION SYSTEM

All industrial oils are graded according to the ISO Viscosity Classification System, approved by the International Standards Organizations (ISO). Each ISO viscosity grade number corresponds to the mid-point of viscosity range expressed in centistokes (cSt) at 40°C. For example, a lubricant with an ISO grade of 32 has a viscosity within the range of 28.80-35.2, the midpoint of which is 32.

Rule-of-Thumb: The comparable ISO grade of a competitive product whose viscosity in SUS at 100°F is known can be determined by using the following conversion formula:

$$\text{SUS @ 100° F} \div 5 = \text{cSt @ 40° C}$$

English Standard Measures

Long Measure

1 mile = 1760 yards = 5280 feet.
 1 yard = 3 feet = 36 inches.
 1 foot = 12 inches.

Surveyor's Measure

1 mile = 8 furlongs = 80 chains.
 1 furlong = 10 chains = 220 yards.
 1 chain = 4 rods = 22 yards = 66 feet = 100 links.
 1 link = 7.92 inches.

Square Measure

1 square mile = 640 acres = 6400 square chains.
 1 acre = 10 square chains = 4840 square yards = 43,560 square feet.
 1 square chain = 16 square rods = 484 square yards = 4356 square feet.
 1 square rod = 30.25 square yards = 272.25 square feet = 625 square links.
 1 square yard = 9 square feet.
 1 square foot = 144 square inches.
 An acre is equal to a square, the side of which is 208.7 feet.

Dry Measure

1 bushel (U.S. or Winchester struck bushel) = 1.2445 cubic foot = 2150.42 cubic inches.
 1 bushel = 4 pecks = 32 quarts = 64 pints.
 1 peck = 8 quarts = 16 pints.
 1 quart = 2 pints.
 1 heaped bushel = 1 1/4 struck bushel.
 1 cubic foot = 0.8036 struck bushel.
 1 British Imperial bushel = 8 Imperial gallons = 1.2837 cubic foot = 2218.19 cubic inches.

Liquid Measure

1 U.S. gallon = 0.1337 cubic foot = 231 cubic inches = 4 quarts = 8 pints.
 1 quart = 2 pints = 8 gills.
 1 pint = 4 gills.
 1 British Imperial gallon = 1.2003 U.S. gallon = 277.27 cubic inches.
 1 cubic foot = 7.48 U.S. gallons.

Circular and Angular Measure

60 seconds (") = 1 minute (')
 60 minutes = 1 degree (-)
 360 degrees = 1 circumference (C)
 57.3 degrees = 1 radian
 2 π radians = 1 circumference (C)

Specific Gravity

The specific gravity of a substance is its weight as compared with the weight of an equal bulk of pure water.
 For making specific gravity determinations the temperature of the water is usually taken at 62° F. when 1 cubic foot of water weighs 62.355 lbs. Water is at its greatest density at 39.20° F. or 4° Centigrade.

Temperature

The following equation will be found convenient for transforming temperature from one system to another:

Let F = degrees Fahrenheit; C = degrees Centigrade; R = degrees Reamur.

$$F - 32 = \frac{C}{9} \times \frac{5}{4}$$

180 100 80

Avoirdupois or Commercial Weight

1 gross or long ton = 2240 pounds.
 1 net or short ton = 2000 pounds.
 1 pound = 16 ounces = 7000 grains.
 1 ounce = 16 drams = 437.5 grains.

Measures of Pressure

1 pound per square inch = 144 pounds per square foot = 0.068 atmosphere = 2.042 inches of mercury at 62 degrees F. = 27.7 inches of water at 62 degrees F. = 2.31 feet of water at 62 degrees F.
 1 atmosphere = 30 inches of mercury at 62 degrees F. = 14.7 pounds per square inch = 2116.3 pounds per square foot = 33.95 feet of water at 62 degrees F.
 1 foot of water at 62 degrees F. = 62.355 pounds per square foot = 0.433 pound per square inch.
 1 inch of mercury at 62 degrees F. = 1.132 foot of water = 13.58 inches of water = 0.491 pound per square inch.
 Column of water 12 in. high, 1 in. dia. = .341 lbs.

Cubic Measure

1 cubic yard = 27 cubic feet.
 1 cubic foot = 1728 cubic inches.
 The following measures are also used for wood and masonry:
 1 cord of wood = 4 X 4 X 8 feet = 128 cubic feet.
 1 perch of masonry = 16-1/2 X 1-1/2 X 1 foot = 24-3/4 cubic feet.

Shipping Measure

For measuring entire internal capacity of a vessel: 1 register ton = 100 cubic feet.
 For measurement of cargo:
 1 U.S. shipping ton = 40 cubic feet = 32.143 U.S. bushels = 31.16 Imperial bushels.
 British shipping ton = 42 cubic feet = 33.75 U.S. bushels = 32.72 Imperial bushels.

Troy Weight, Used for Weighing Gold and Silver

1 pound = 12 ounces = 5760 grains.
 1 ounce = 20 pennyweights = 480 grains.
 1 pennyweight = 24 grains.
 1 carat (used in weighing diamonds) = 3.086 grains.
 1 grain Troy = 1 grain avoirdupois = 1 grain apothecaries' weight.

Measure Used for Diameters and Areas of Electric Wires

1 circular inch = area of circle 1 inch in diameter = 0.7854 square inch.
 1 circular inch = 1,000,000 circular mils.
 1 square inch = 1.2732 circular inch = 1,273,239 circular mils.
 A circular mil is the area of a circle 0.001 inch in diameter.

Board Measure

One foot board measure is a piece of wood 12 inches square by 1 inch thick, or 144 cubic inches. 1 cubic foot therefore equals 12 feet board measure

TABLE 29: Decimal and Millimeter Equivalents of Fractions

| Inches | | Milli- meters | Inches | | Milli- meters | Inches | | Milli- meters | | | |
|-----------|----------|------------------|-----------|----------|------------------|-----------|----------|------------------|---------|--------|--------|
| Fractions | Decimals | | Fractions | Decimals | | Fractions | Decimals | | | | |
| 1/64 | | .015625 | .397 | | | | | | | | |
| | 1/32 | .03125 | .794 | 23/64 | 11/32 | .34375 | 8.7319 | 11/16 | .6875 | 17.463 | |
| 3/64 | | .046875 | 1.191 | | 3/8 | .375 | 9.525 | 45/64 | .703125 | 17.859 | |
| | 1/16 | .0625 | 1.588 | 25/64 | | .390625 | 9.922 | 47/64 | .734375 | 18.653 | |
| 5/64 | | .078125 | 1.984 | | 13/32 | .40625 | 10.319 | | 3/4 | .750 | 19.050 |
| | 3/32 | .09375 | 2.381 | 27/64 | | 4.21875 | 10.716 | 49/64 | .765625 | 19.447 | |
| 7/64 | | .109375 | 2.778 | | 7/16 | 4.375 | 11.113 | | 25/32 | .78125 | 19.844 |
| | 1/8 | .125 | 3.175 | 29/64 | | 4.53125 | 11.509 | 51/64 | .796875 | 20.241 | |
| 9/64 | | .140625 | 3.582 | | 15/32 | .46875 | 11.906 | | 13/16 | .8125 | 20.638 |
| | 5/32 | .15625 | 3.969 | 31/64 | | .48376 | 12.303 | 53/64 | .828125 | 21.034 | |
| 11/64 | | .171875 | 4.366 | | 1/2 | .500 | 12.700 | | 27/32 | .84375 | 21.431 |
| | 3/16 | .1875 | 4.763 | 33/64 | | .515625 | 13.097 | 55/64 | .859375 | 21.828 | |
| 13/64 | | .203125 | 5.159 | | 17/32 | .53125 | 13.494 | | 7/8 | .875 | 22.225 |
| | 7/32 | .21875 | 5.556 | 35/64 | | .546875 | 13.891 | 57/64 | .890625 | 22.622 | |
| 15/64 | | .234375 | 5.953 | | 9/16 | .5625 | 14.288 | | 29/32 | .90524 | 23.019 |
| | 1/41 | .250 | 6.350 | 37/64 | | .578125 | 14.684 | 59/64 | .921875 | 23.416 | |
| 7/64 | | .265625 | 6.747 | | 19/32 | .59375 | 14.081 | | 15/16 | .9375 | 23.813 |
| | 9/32 | .28125 | 7.144 | 39/64 | | .609375 | 15.478 | 61/64 | .953125 | 24.209 | |
| 19/64 | | .296875 | 7.541 | | 5/8 | .625 | 15.875 | | 31/32 | .96875 | 24.606 |
| | 5/16 | .3125 | 7.938 | 41/64 | | .60625 | 16.272 | 63/64 | .984375 | 25.003 | |
| 21/64 | | .328125 | 8.334 | | 21/32 | .65625 | 16.669 | | 1 | 1.000 | 25.400 |
| | | | | 43/64 | | .671875 | 17.066 | | | | |

Table 30: Millimeter-Inch Equivalents: 1" = 25.4mm (.03937" = 1mm)

| Millimeter | Decimal | Millimeter | Decimal | Millimeter | Decimal | Millimeter | Decimal | Millimeter | Decimal |
|------------|---------|------------|---------|------------|---------|------------|---------|------------|----------|
| 1 | .03937 | 52 | 2.04724 | 103 | 4.05511 | 154 | 6.06299 | 205 | 8.07086 |
| 2 | .07874 | 53 | 2.08661 | 104 | 4.09448 | 155 | 6.10236 | 206 | 8.11023 |
| 3 | .11811 | 54 | 2.12598 | 105 | 4.13385 | 156 | 6.14173 | 207 | 8.14960 |
| 4 | .15748 | 55 | 2.16535 | 106 | 4.17322 | 157 | 6.18110 | 208 | 8.18897 |
| 5 | .19685 | 56 | 2.20472 | 107 | 4.21259 | 158 | 6.22047 | 209 | 8.22834 |
| 6 | .23622 | 57 | 2.24409 | 108 | 4.25196 | 159 | 6.25984 | 210 | 8.26771 |
| 7 | .27559 | 58 | 2.28346 | 109 | 4.29133 | 160 | 6.29921 | 211 | 8.30708 |
| 8 | .31496 | 59 | 2.32283 | 110 | 4.33070 | 161 | 6.33858 | 212 | 8.34645 |
| 9 | .35433 | 60 | 2.36220 | 111 | 4.37007 | 162 | 6.37795 | 213 | 8.38582 |
| 10 | .39370 | 61 | 2.40157 | 112 | 4.40944 | 163 | 6.41732 | 214 | 8.42519 |
| 11 | .43307 | 62 | 2.44094 | 113 | 4.44881 | 164 | 6.45669 | 215 | 8.46456 |
| 12 | .47244 | 63 | 2.48031 | 114 | 4.48818 | 165 | 6.49606 | 216 | 8.50393 |
| 13 | .51181 | 64 | 2.51968 | 115 | 4.52755 | 166 | 6.53543 | 217 | 8.54330 |
| 14 | .55118 | 65 | 2.55905 | 116 | 4.56692 | 167 | 6.57480 | 218 | 8.58267 |
| 15 | .59055 | 66 | 2.59842 | 117 | 4.60629 | 168 | 6.61417 | 219 | 8.62204 |
| 16 | .62992 | 67 | 2.63779 | 118 | 4.64566 | 169 | 6.65354 | 220 | 8.66141 |
| 17 | .66929 | 68 | 2.67716 | 119 | 4.68503 | 170 | 6.69291 | 221 | 8.70078 |
| 18 | .70866 | 69 | 2.71653 | 120 | 4.72440 | 171 | 6.73228 | 222 | 8.74015 |
| 19 | .74803 | 70 | 2.75590 | 121 | 4.76378 | 172 | 6.77165 | 223 | 8.77952 |
| 20 | .78740 | 71 | 2.79527 | 122 | 4.80315 | 173 | 6.81102 | 224 | 8.81889 |
| 21 | .82677 | 72 | 2.83464 | 123 | 4.84252 | 174 | .685039 | 225 | 8.85826 |
| 22 | .86614 | 73 | 2.87401 | 124 | 4.88189 | 175 | 6.88976 | 226 | 8.897.63 |
| 23 | .90551 | 74 | 2.91338 | 125 | 4.92126 | 176 | 6.92913 | 227 | 8.93700 |
| 24 | .94488 | 75 | 2.95275 | 126 | 4.96063 | 177 | .696850 | 228 | 8.97637 |
| 25 | .98425 | 76 | 2.99212 | 127 | 5.00000 | 178 | 7.00787 | 229 | 9.01574 |
| 26 | 1.02362 | 77 | 3.03149 | 128 | 5.03937 | 179 | 7.04724 | 230 | 9.05511 |
| 27 | 1.06299 | 78 | 3.07086 | 129 | 5.07875 | 180 | 7.08661 | 231 | 9.09448 |
| 28 | 1.10236 | 79 | 3.11023 | 130 | 5.11811 | 181 | 7.12598 | 232 | 9.13385 |
| 29 | 1.14173 | 80 | 3.14960 | 131 | 5.15749 | 182 | 7.16535 | 233 | 9.17322 |
| 30 | 1.18110 | 81 | 3.18897 | 132 | 5.19685 | 183 | 7.20472 | 234 | 9.21259 |
| 31 | 1.22047 | 82 | 3.22834 | 133 | 5.23622 | 184 | 7.24409 | 235 | 9.25196 |
| 32 | 1.25984 | 83 | 3.26771 | 134 | 5.27559 | 185 | 7.28346 | 236 | 9.29133 |
| 33 | 1.29921 | 84 | .303708 | 135 | 5.31496 | 186 | 7.32283 | 237 | 9.33070 |
| 34 | 1.33858 | 85 | 3.34645 | 136 | 5.35433 | 187 | 7.36220 | 238 | 9.37007 |
| 35 | 1.37795 | 86 | 3.38582 | 137 | 5.39370 | 188 | 7.40157 | 239 | 9.40944 |
| 36 | 1.41732 | 87 | .342519 | 138 | .543307 | 189 | 7.44094 | 240 | 9.44881 |
| 37 | 1.45669 | 88 | 3.46456 | 139 | .547244 | 190 | 7.48031 | 241 | 9.48818 |
| 38 | 1.49606 | 89 | 3.50393 | 140 | 5.51181 | 191 | 7.51968 | 242 | 9.52755 |
| 39 | 1.53543 | 90 | 3.54330 | 141 | 5.55118 | 192 | 7.55905 | 243 | 9.56692 |
| 40 | 1.57480 | 91 | .358267 | 142 | 5.59055 | 193 | 7.59842 | 244 | 9.60629 |
| 41 | 1.61417 | 92 | 3.62204 | 143 | 5.62992 | 194 | 7.63779 | 245 | 9.64566 |
| 42 | 1.65354 | 93 | 3.66141 | 144 | 5.66929 | 195 | 7.67716 | 246 | 9.68503 |
| 43 | 1.69291 | 94 | 3.70078 | 145 | 5.70866 | 196 | 7.71653 | 247 | 9.72440 |
| 44 | 1.73228 | 95 | 3.74015 | 146 | 5.748.4 | 197 | 7.75590 | 248 | 9.76378 |
| 45 | 1.77165 | 96 | 3.77952 | 147 | 5.78740 | 198 | 7.79527 | 249 | 9.80315 |
| 46 | 1.81102 | 97 | 3.81899 | 148 | 5.82677 | 199 | 7.83464 | 250 | 9.84252 |
| 47 | 1.85039 | 98 | 3.85826 | 149 | 5.86614 | 200 | 7.87401 | 251 | 9.88189 |
| 48 | 1.88976 | 99 | 3.89763 | 150 | 5.90551 | 201 | 7.91338 | 252 | 9.92126 |
| 49 | 1.92913 | 100 | 3.93710 | 151 | 5.94488 | 202 | 7.95275 | 253 | 9.96063 |
| 50 | 1.96850 | 101 | 3.97637 | 152 | 5.98425 | 203 | 7.99221 | 254 | 10.00000 |
| 51 | 2.00787 | 102 | 4.01574 | 153 | 6.02362 | 204 | 8.03149 | - | - |

Plumber Blocks

Sleeve Bearings

SLEEVOIL

Take-Up Frames

Engineering

Part Number Index

Keyword Index

Metric System of Measurements

Measures of Length

| | | | |
|------|-------------------|---|--------------------|
| 10 | millimeters (mm.) | = | 1 centimeter (cm.) |
| 10 | centimeters | = | 1 decimeter (dm.) |
| 10 | decimeters | = | 1 meter (m.) |
| 1000 | meter | = | 1 kilometer (km.) |

Measure of Weight

| | | | |
|------|------------------|---|---------------------|
| 10 | milligrams (mg.) | = | 1 centigram (cg.) |
| 10 | centigrams | = | 1 decigram (dg.) |
| 10 | decigrams | = | 1 gram (g.) |
| 10 | grams | = | 1 decagram (Dg.) |
| 10 | decagrams | = | 1 hectogram (Hg.) |
| 10 | hectograms | = | 1 Kilogram (Kg.) |
| 1000 | kilograms | = | 1 (metric) ton (T.) |

Surveyor's Square Measure

| | | | |
|-----|---------------------|---|------------------------|
| 100 | square meters (m.2) | = | 1 are (ar.) |
| 100 | acres | = | 1 hectare (har.) |
| 100 | hectares | = | 1 sq. kilometer (Km.2) |

Square Measure

| | | | |
|-----|------------------------|---|-------------------------|
| 100 | sq. millimeters (mm.2) | = | 1 sq. centimeter (cm.2) |
| 100 | sq. centimeters | = | 1 sq. decimeter (dm.2) |
| 100 | sq. decimeters | = | 1 sq. meter (m.2) |

Cubic Measure

| | | | |
|------|------------------------|---|-------------------------|
| 1000 | cu. millimeters (mm.3) | = | 1 cu. centimeter (cm.3) |
| 1000 | cu. centimeters | = | 1 cu. decimeter (dm.3) |
| 1000 | cu. decimeters | = | 1 cu. meter (m.3) |

Dry and Liquid Measure

| | | | |
|-----|-------------------|---|--------------------|
| 10 | milliliters (ml.) | = | 1 centiliter (cl.) |
| 10 | centiliters | = | 1 deciliter (dl.) |
| 10 | deciliters | = | 1 liter (l.) |
| 100 | liters | = | 1 hectoliter (hl.) |

1 liter = 1 cubic decimeter = the volume of 1 kilogram of pure water at a temperature of 39.2 degrees F.

Metric System of Measurements (Continued)

Length Conversion Constants for Metric and U.S. Units

Millimeters X.039370 = inches.
 Meters x 39.370 = inches.
 Meters X 3.2808 = feet.
 Meters X 1.09361 = yards.
 Kilometers X 3,280.8 = feet.
 Kilometers X.62137 = Statute Miles.
 Kilometers x.53959 = Nautical Miles.

Inches X 25.4001 = millimeters.
 Inches X.0254 = meters.
 Feet x.30480 = meters.
 Yards X.91440 = meters.
 Feet x.0003048 = kilometers.
 Statute Miles X 1.60935 = kilometers.
 Nautical Miles x 1.85325 = kilometers.

Weight Conversion Constants for Metric and U.S. Units

Grams X 981 = dynes.
 Grams X 15.432 = grains.
 Grams X.03527 = ounces (Avd.).
 Grams x.033818 = fluid ounces (water).
 Kilograms X 35.27 = ounces (Avd.).
 Kilograms X 2.20462 = pounds (Avd.).
 Metric Tons (1000 Kg.) X 1.10231 = Net Ton (2000 lbs.).
 Metric Tons (1000 Kg.) X.98421 = Gross Ton (2240 lbs.).

Dynes X.0010193 = grams.
 Grains X.0648 = grams.
 Ounces (Avd.) X 28.35 = grams.
 Fluid Ounces (Water) X 29.57 = grams.
 Ounces (Avd.) X.02835 = kilograms.
 Pounds (Avd.) X.45359 = kilograms.
 Net Ton (2000 lbs.) X.90719 = Metric Tons (1000 Kg.).
 Gross Ton (2240 lbs.) X 1.01605 = Metric Tons (1000 Kg.).

Area Conversion Constants for Metric and U.S. Units

Square Millimeters X.00155 = square inches.
 Square centimeters X.155 = square inches.
 Square Meters X 10.76387 = square feet.
 Square Meters X 1.19599 = square yards.
 Hectares X 2.47104 = acres.
 Square Kilometers X 247.104 = acres.
 Square Kilometers X.3861 = square miles.

Square Inches X 645.163 = square millimeters.
 Square Inches x 6.45163 = square centimeters.
 Square Feet x.0929 = square meters.
 Square Yards X.83613 = square meters.
 Acres X.40469 = hectares.
 Acres X.0040469 = square kilometers.
 Square Miles X 2.5899 = square kilometers.

Volume Conversion Constants for Metric and U.S. Units

Cubic centimeters X.033818 = fluid ounces.
 Cubic centimeters X.061023 = cubic inches.
 Cubic centimeters X.271 = fluid drams.
 Liters X 61.023 = cubic inches.
 Liters X 1.05668 = quarts.
 Liters X .26417 = gallons.
 Liters X.035317 = cubic feet.
 Hectoliters X 26.417 = gallons.
 Hectoliters X 3.5317 = cubic feet.
 Hectoliters X 2.83794 = bushel (2150.42 cu. in.).
 Hectoliters X.1308 = cubic yards.
 Cubic Meters x 264.17 = gallons.
 Cubic Meters x 35.317 = cubic feet.
 Cubic Meters X 1.308 = cubic yards.

Fluid Ounces X 29.57 = cubic centimeters.
 Cubic Inches X 16.387 = cubic centimeters.
 Fluid Drams x 3.69 = cubic centimeters.
 Cubic Inches X.016387 = liters.
 Quarts x.94636 = liters.
 Gallons x 3.78543 = liters.
 Cubic Feet x 28.316 = liters.
 Gallons x.0378543 = hectoliters.
 Cubic Feet x.28316 = hectoliters.
 Bushels (2150.42 cu. in.) X.352379 = hectoliters.
 Cubic Yards x 7.645 = hectoliters.
 Gallons x.00378543 = cubic meters.
 Cubic Feet x.028316 = cubic meters.
 Cubic Yards x.7645 = cubic meters.

Power and Heat Conversion Constants for Metric and U.S. Units

Calorie x 0.003968 = B.T.U.
 Joules X.7373 = pound-feet.
 Newton-Meters X 8.851 = pound-inches
 Cheval Vapeur X.9863 = Horsepower.
 Kilowatts X 1.34 = Horsepower.
 Kilowatt Hours X 3415 = B.T.U.
 (Degrees Cent. X 1.8) +32 = degrees Fahr.
 (Degrees Reamur X 2.25) + 32 = degrees Fahr.

B.T.U. X 252 = calories.
 Pound-Feet X 1.3563 = joules.
 Pound-inches X.11298 = Newton-meters.
 Horsepower X 1.014 = Cheval Vapeur.
 Horsepower X.746 = kilowatts.
 B.T.U. X.00029282 = kilowatt hours.
 (Degrees Fahr. - 32) x.555 = degrees Cent.
 (Degrees Fahr. - 32) x.444 = degrees Reamur.

COMMON CONVERSION FACTORS USEFUL IN MECHANICAL POWER TRANSMISSION

Symbols and Abbreviations Used in Conversion Factors

Symbols and abbreviations found in this section are those currently used in many texts and product publications. Considerable effort is underway to standardize on abbreviations for metric and English units of measurement. Recently, ASTM (American Society for Testing and Materials) and IEEE (Institute of Electrical and Electronic Engineers) published a standard practice on the metric system. † This publication consolidates a great deal of the current thinking and provides a system of abbreviations and symbols that differ somewhat from those used here.

This Handbook has retained use of familiar abbreviations consistent with existing product and trade literature rather than the abbreviations found in current publications of technical and scientific societies.

Prefixes Used in the Metric System

Common prefixes and symbols used in the metric system are listed below. An example of use is 1000 meters is equivalent to 1 kilometer, and 1/1000 of one meter is equivalent to 1 millimeter.

| Prefix | Symbol | Multiplication Factor-Decimal and Power of 10 |
|---|--------|--|
| exa | E | 1,000,000,000,000,000,000 or 10^{18} or one quintillion |
| peta | P | 1,000,000,000,000,000 or 10^{15} or one quadrillion |
| tera | T | 1,000,000,000,000 or 10^{12} or one trillion |
| giga | G | 1,000,000,000 or 10^9 or one billion |
| mega | M | 1,000,000 or 10^6 or one million |
| kilo | k | 1,000 or 10^3 or one thousand |
| *hecto | h | 100 or 10^2 or one hundred |
| *deka | da | 10 or 10^1 or ten |
| **deci | d | 0.1 or 10^{-1} or one tenth |
| **centi | c | 0.01 or 10^{-2} or one hundredth |
| mill | m | 0.001 or 10^{-3} or one thousandth |
| micro | μ | 0.000,001 or 10^{-6} or one millionth |
| nano | n | 0.000,000,001 or 10^{-9} or one billionth |
| pico | p | 0.000,000,000,001 or 10^{-12} or one trillionth |
| femto | f | 0.000,000,000,000,001 or 10^{-15} or one quadrillionth |
| atto | a | 0.000,000,000,000,000,001 or 10^{-18} or one quintillionth |
| * Not commonly used. | | |
| ** Not commonly used except for special situations. | | |
| The centimeter as a unit of length is in common use. | | |
| The decibel is a unit in both electrical and acoustical work. | | |

† ASTM/IEEE Standard Metric Practice, ASTM E 380-75, IEEE Std. 268-1976.
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| Symbol or Abbreviation | Term |
|-------------------------|-------------------------------|
| atm | atmosphere |
| avdp | avoirdupois |
| bbl | barrels |
| bu | bushels |
| C | degrees Centigrade or Celsius |
| cc | cubic centimeters |
| cfm | cubic feet per minute |
| cfs | cubic feet per second |
| cm | centimeter |
| cu | cubic |
| deg | degrees |
| F | degrees Fahrenheit |
| fps | feet per second |
| ft | feet |
| ft-lb | foot-pounds (work or energy) |
| ft per sec | feet per second (alternate) |
| ft per sec ² | feet per second per second |
| g | acceleration due to gravity |
| g | grams |
| gal | gallons |
| gpm | gallons per minute |
| hp | horsepower |
| hr | hour |
| in | inches |
| in-lb | inch-pounds (work or energy) |
| K | degrees Kelvin |
| kg | kilograms |
| km | kilometers |
| kn | knots |
| kW | kilowatts |

| Symbol or Abbreviation | Term |
|------------------------|---|
| l | liters |
| lb | pounds |
| lb-ft | pound-feet (torque) |
| m | meters |
| m per sec ² | meters per second per second |
| mi | miles |
| mm | millimeters |
| mph | miles per hour |
| MGD | millions of gallons per day |
| N | Newtons |
| oz | ounces |
| oz-in | ounce-inches (torque) |
| Pa | Pascals |
| psi | pounds per square inch |
| psia or psig | pounds per square inch "absolute" or gauge |
| pt | pint |
| qt | quart |
| R | degrees Rankine (Fahrenheit, absolute) |
| rad | radians |
| rev | revolutions |
| rpm | revolutions per minute |
| sec | seconds |
| sq | square |
| std | standard |
| temp | temperature |
| wt | weight |
| yd | yard |
| yr | year |

Rounding of Numbers

A minimum of four significant figures are used in conversion factors presented here. Where the conversion factor is exact (for example, 1 foot contains 12 inches), decimal fractions are not necessary. Also, where large whole numbers are used (for example, 1 square kilometer contains 1195990 square yards), decimal fractions are not used unless justified by the accuracy of ordinary computations.

| | |
|---------|--------------------------|
| 1195990 | (sq yd in a sq km) |
| 4389.12 | (cc in a cu ft) |
| 448.86 | (gpm in a liter per sec) |
| 14.70 | (psi in an atmosphere) |
| 0.4331 | (psi in a ft of water) |
| 0.0625 | (lb-in in an oz-in) |

ENGINEERING

VELOCITY

| | | |
|---|---|--------|
| centimeters per second (cm per sec) | feet per second (fps or ft per sec) | 0.3281 |
| feet per second (fps) | centimeters per second (cm per sec) | 30.48 |
| | meters per second (m per sec) | 0.3048 |
| | kilometers per hour (km per hr) | 1.097 |
| | miles per hour (mph) | 0.6818 |
| kilometers per hour (km per hr) | knots (kn) | 0.5396 |
| | feet per second (fps) | 1.467 |
| | kilometers per hour (km per hr) | 1.609 |
| | feet per minute (ft per min.) | 88 |
| knots (kn) | miles per hour (mph) | 1.152 |
| | kilometers per hour (km per hr) | 1.853 |
| radians per second (rad per sec) | revolutions per minute (rpm) | 9.55 |
| | degrees per minute (deg per min.) | 3437.7 |
| revolutions per minute (rpm) | radians per second (rad per sec) | 0.1047 |
| | degrees per minute (deg per min.) | 360 |

ACCELERATION COLUMN A

| To Convert From... | To... | Multiply Col. A by |
|---|---|-----------------------|
| feet per second per second (ft per sec ²) | meters per second per second (m per sec ²) | 0.3048 |
| m per sec ² | ft per sec ² | 3.281 |
| revolutions per minute per second (rpm per sec) | radians per second per second (rad per sec ²) | 0.1047 |
| rad per sec ² | rpm per sec. | 9.55 |

ENGINEERING

VOLUMETRIC FLOW RATES

| | | |
|--|------------------------------------|----------|
| gallons per minute, US (gpm) | liters per second (l per sec) | 0.008434 |
| | cubic feet per minute (cfm) | 0.1337 |
| | cubic feet per hour (cu ft per hr) | 8.022 |
| gallons per minute, UK or Canadian (gpm) | liters per second (l per sec) | 0.0101 |
| | cubic feet per minute (cfm) | 0.1606 |
| | cubic feet per hour (cu ft per hr) | 9.634 |
| cubic feet per second (cfs) | gpm (UK or Canadian) | 373.77 |
| | gpm (US) | 448.86 |
| | liters per second (l per sec) | 1699.2 |
| liters per second (l per sec) | cubic feet per minute (cfm) | 2.119 |
| | gpm (UK or Canadian) | 13.20 |
| | gpm (US) | 15.85 |
| millions of gallons per day, US (MGD) | liters per second (l per sec) | 43.81 |
| | cubic feet per minute (cfm) | 92.85 |
| | gallons per minute, US (gpm) | 694.44 |

PRESSURE

| | | |
|---|--|-----------|
| pascals (Pa) | pounds per square inch (psi) | 0.0001450 |
| | pounds per square foot (lb per ft ²) | 0.02089 |
| | newtons per square meter | 1 |
| pounds per square inch (psi) | atmospheres, std. (atm) | 0.0680 |
| | pounds per square foot (lb per ft ²) | 144 |
| | pascals (Pa) | 6894.8 |
| | foot of water (ft of H ₂ O) 60F | 2.301 |
| atmospheres (atm), standard | psi | 14.70 |
| | lb per ft ² | 2116.8 |
| | Pa | 101325 |
| inch of water, 60F (in of H ₂ O) | psi | 0.03609 |
| | lb per ft ² | 5.197 |
| | Pa | 248.84 |
| foot of water, 60F (ft of H ₂ O) | psi | 0.4331 |
| | lb per ft ² | 62.36 |
| | Pa | 2985.9 |

WEIGHT, MASS, INERTIA

| | | |
|----------------|----------------|--------|
| pounds (lb)* | kilograms (kg) | 0.4536 |
| | ounces (oz) | 16 |
| kilograms (kg) | pounds (lb) | 2.205 |
| | ounces (oz) | 35.27 |

ENGINEERING

WEIGHT, MASS, INERTIA, (Continued)

COLUMN A

| Convert From | To | Multiply Col A By This Factor |
|---|---|-------------------------------|
| tons (short) | metric tons | 0.9072 |
| | kilograms (kg) | 907.2 |
| | pounds (lb) | 2000 |
| metric tons | tons (short) | 1.102 |
| | kilograms | 1000 |
| | pounds | 2205 |
| pounds, weight (lb) | slugs, mass (lb-sec ² per ft) | 0.03106 |
| pound-foot ² (lb-ft ²) | kilogram-meters ² (kg-m ²) | 0.04214 |

*pounds and ounces are avoirdupois

FORCE AND TORQUE

| | | |
|----------------------|----------------------|----------|
| pounds (lb) | newtons(N) | 4.448 |
| newtons (N) | pounds (lb) | 0.2248 |
| newton-meters (N-m) | pound-feet (lb-ft) | 0.7376 |
| | pound-inches (lb-in) | 8.851 |
| | ounce-inches (oz-in) | 141.60 |
| ounce-inches (oz-in) | lb-ft | 0.005208 |
| | N-m | 0.007062 |
| | lb-in | 0.0625 |
| pound-inches (lb-in) | lb-ft | 0.0833 |
| | N-m | 0.1298 |
| | oz-ln | 16 |
| pound-feet (lb-ft) | N-m | 1.356 |
| | lb-in | 12 |
| | oz-ln | 192 |

POWER

| | | |
|-----------------|---|--------|
| horsepower (hp) | kilowatts (kW) | 0.7457 |
| | foot-pounds per second (ft-lb per sec) | 550 |
| | foot-pounds per minute (ft-lb per min.) | 33000 |
| kilowatts (kW) | horsepower (hp) | 1.341 |

TEMPERATURE

| | | Use This Relationship |
|------------------------|------------------------|-----------------------|
| degrees Fahrenheit (F) | degrees Celsius (C) | $C = 5/9 (F - 32)$ |
| degrees Celsius (C) | degrees Fahrenheit (F) | $F = 9/5C + 32$ |
| degrees Fahrenheit (F) | degrees Rankine (R) | $R = F + 459.69$ |
| degrees Celsius (C) | degrees Kelvin (K) | $K = C + 273.16$ |

Examples:

- Convert 12F to C. $C = 5/9 (F - 32) = 5/9 (12 - 32) = 5/9 (-20)$
Answer = -11.1C
- Convert 40C to F. $F = 9/5C + 32 = 9/5 (40) + 32 = 72 + 32$
Answer = 104F

GRAVITATIONAL CONSTANT

g = 32.174 feet per second per second (ft per sec²)
 = 9.8067 meters per second per second (m per sec²)

APPROXIMATE DENSITIES OF COMMON MATERIALS

| | REPRESENTATIVE DENSITIES | |
|---|--------------------------------|--------------|
| | Grams per cc | lb per cu ft |
| GASES @ 68F, std atm | | |
| Air | 1.30 grams per liter | 0.07528 |
| Oxygen | 1.45 grams per liter | 0.08305 |
| Hydrogen | 0.09 grams per liter | 0.005234 |
| Nitrogen | 1.25 grams per liter | 0.07274 |
| | All Other Materials | |
| | grams per cc | |
| LIQUIDS | | |
| Water @ 4C | 1.000 grams per cc | 62.43 |
| 20C | 0.998 | 62.32 |
| 40C | 0.992 | 61.94 |
| SeaWater | 1.02-1.03 | 64.00 |
| Ethyl alcohol 100% | 0.789 | 49.2 |
| Kerosene | 0.78-0.82 | 50 |
| Gasoline | 0.70-0.75 | 45 |
| METALS | | |
| Aluminum (95% Al) | 2.70 | 169 |
| Bronze (90% Cu, 10% Zn) | 8.80 | 549 |
| Copper (Annealed, ACS) | 8.89 | 555 |
| Gold | 19.32 | 1206 |
| Iron, gray cast | 7.10 | 443 |
| Lead | 11.36 | 709 |
| Magnesium | 1.74 | 109 |
| Steel (0.4-0.5% Carbon) | 7.80 | 487 |
| Steel, 410 stainless | 7.70 | 480 |
| ENGINEERING PLASTICS | | |
| ABS, general purpose | 1.01-1.05 | 64 |
| Acrylics, cast sheet | 1.19 | 74 |
| Nylon 6/6 | 1.13-1.15 | 71 |
| Phenolic, general purpose | 1.35-1.46 | 87 |
| Polycarbonates, general purpose | 1.2 | 75 |
| Polyesters, thermoplastic, unreinforced | 1.31 - 1.43 | 86 |
| Polyethylene, medium density | 0.926-0.940 | 58 |
| Polyvinyl Chloride | 1.30-1.58 | 89 |

Flywheel Formulas

Flywheels are used on some machines, for example air compressors, to even out load pulsations. The following formulas are useful in designing entire flywheels and flywheel rims. A V-belt sheave may also be used as a flywheel eliminating the need for a separate flywheel in the system.

Formulas for Entire Flywheel

Kinetic energy of rotation of a flywheel (foot pounds)
 $= .0001705 N^2(WR^2)^*$.

Torque to uniformly accelerate or decelerate a flywheel

$$= \frac{.03908 (N_2 - N_1) (WR^2), * \text{ pound-inches}}{t}$$

where N_2 = final R.P.M. and N_1 = initial R.P.M.

Velocity at outside diameter (feet per minute) = $0.2618 ND$.

W = weight (pounds).

R = radius of gyration (feet).

N = speed (R.P.M.)

t = time to change from N_1 to N_2 (seconds).

F = face of rim (inches).

D = outside diameter of rim (inches).

d = inside diameter of rim (inches).

K = weight per cubic inch of material (pounds).

* WR^2 = flywheel effect (pounds X feet²). See table to the right for WR^2 of rims. Ordinarily the WR^2 of the rim only is considered. In unusual instances the relatively small WR^2 values of the hub

and arms or web can be added directly to the WR^2 of the rim if desired. To find the WR^2 of a hub or web use the WR^2 formula for rims, substituting the hub or web outside diameter, inside diameter, and width for D, d and F respectively. When arms are used instead of a web an approximate WR^2 value of the arms is the total weight of the arms in pounds times the square of the radius in feet from the shaft center line to the mid point of the arms between hub and rim.

Table 31: Formulas for Flywheel Rims

| Property | Cast Iron Rim (Based on .26 lbs. per cu. in.) | Steel Rim (Based on .283 lbs. per cu. in.) | Rim of any material weighing K pounds per cubic inch |
|--|---|---|--|
| Volume (Cubic Inches) | $.7854F(D^2-d^2)$ | $.7854F(D^2-d^2)$ | $.7854F(D^2-d^2)$ |
| W Weight (Pounds) | $.2042F(D^2-d^2)$ | $.2223F(D^2-d^2)$ | $.7854FK(D^2-d^2)$ |
| R Radius of Gyration (Feet) | $\sqrt{\frac{.8681 (D^2-d^2)}{1000}}$ | $\sqrt{\frac{0.8681 (D^2-d^2)}{1000}}$ | $\sqrt{\frac{.8681 (D^2-d^2)}{1000}}$ |
| WR^2 Wt X Sq. of Radius of Gyration (Lbs. X Ft. ²) | $\frac{.1773F(D^4-d^4)}{1000}$ | $\frac{.1929F(D^4-d^4)}{1000}$ | $\frac{.6818FK(D^4-d^4)}{1000}$ |
| T ▲ Tensile Load in rim (Lbs.) | $\frac{.3078FN2(D^3-d^3)}{1000000}$ | $\frac{.3350FN2(D^3-d^3)}{1000000}$ | $\frac{1,184FKN2(D^3-d^3)}{1000000}$ |

▲ Centrifugal force causes this tensile load at each and every section of the rim. Hence, on rims split into two or more sections the fastening at each joint should be designed to take the full load as calculated from the formula here given.

Centrifugal Force

R = Distance from the axis of rotation to the center of gravity of the body (feet).

N = Revolutions per minute.

v = Velocity of the center of gravity of the body (feet per second).

g = Acceleration due to gravity (32.16 commonly).

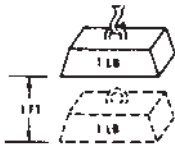
$$F = \frac{Wv^2}{gR} = \frac{WRN^2}{2933} = .000341 WRN^2$$

F = Centrifugal force tending to move the body outward from the axis of rotation (pounds).

W = Weight of body (pounds).

ENGINEERING

Torque and Horsepower Equivalents

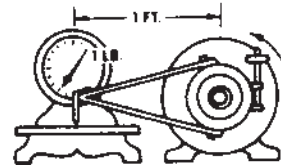


A foot-pound is the amount of energy expended in lifting a one-pound mass a distance of one foot against the pull of gravity

FOOT-POUNDS INDICATE ENERGY

TORQUE

It is: a turning moment or twisting effort.
Is it expressed in foot-pounds? or pound-feet?



A pound-foot is the moment created by a force of one pound applied to the end of a lever arm one

POUND-FEET INDICATE TORQUE

$$\begin{aligned} \text{Torque (in Pound-Inches)} &= \frac{63025 \times \text{HP}}{\text{RPM}} \\ &= \text{Force} \times \text{Lever Arm (In Inches)} \\ \text{Torque (in Pound-Feet)} &= \frac{5252 \times \text{HP}}{\text{RPM}} \\ &= \text{Force} \times \text{Lever Arm (In Feet)} \end{aligned}$$

Example:

$$\begin{aligned} 25 \text{ HP at } 150 \text{ RPM} &= 10504 \text{ Pound-Inches Torque} \\ 2.5 \text{ HP at } 150 \text{ RPM} &= 1050.4 \text{ Pound-Inches Torque} \end{aligned}$$

For other values of RPM move decimal point in RPM values to the left or right as desired, and in Torque values move to the right or left (opposite way) the same number of places.

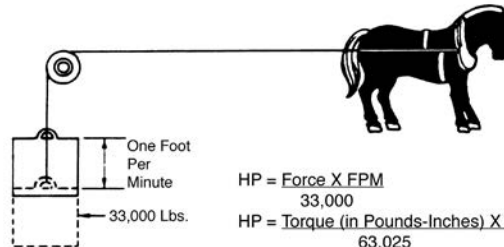
Example:

$$\begin{aligned} 25 \text{ HP at } 150 \text{ RPM} &= 10504 \text{ Pound-Inches Torque} \\ 25 \text{ HP at } 1.50 \text{ RPM} &= 1050400 \text{ Pound-Inches Torque} \\ 2.5 \text{ HP at } 1.50 \text{ RPM} &= 105040 \text{ Pound-Inches Torque} \end{aligned}$$

Force = Working Load in Pounds.
FPM = Feet Per Minute.
RPM = Revolutions Per Minute.
Lever Arm = Distance from the Force to the center of rotation in Inches or Feet.

HORSEPOWER

Common Unit of Mechanical power - (HP)
One HP is the rate of work required to raise 33,000 pounds one foot in one minute



$$\begin{aligned} \text{HP} &= \frac{\text{Force} \times \text{FPM}}{33,000} \\ \text{HP} &= \frac{\text{Torque (in Pounds-Inches)} \times \text{RPM}}{63,025} \\ \text{HP} &= \frac{\text{Torque (in Pounds-Feet)} \times \text{RPM}}{5,252} \end{aligned}$$

Overhung Loads

An overhung load is a bending force imposed on a shaft due to the torque transmitted by V-drives, chain drives and other power transmission devices, other than flexible couplings.

Most motor and reducer manufacturers list the maximum values allowable for overhung loads. It is desirable that these figures be compared with the load actually imposed by the connected drive.

Overhung loads may be calculated as follows:

$$\text{O.H.L.} = \frac{63,000 \times \text{HP} \times \text{F}}{\text{N} \times \text{R}}$$

Where HP = Transmitted hp X service factor
N = RPM of shaft
R = Radius of sprocket, pulley, etc. (inches)
F = Factor (See chart to right)

Weights of the drive components are usually negligible. The formula is based on the assumption that the load is applied at a point equal to one shaft diameter from the bearing face. Factor F depends on the type of drive used:

$$F = \begin{cases} 1.00 & \text{for single chain drives.} \\ 1.3 & \text{for TIMING Belt Drives and Sync belt Drives.} \\ 1.25 & \text{for spur or helical gear or double chain drives.} \\ 1.50 & \text{for V-belt drives.} \\ 2.50 & \text{for flat belt drives.} \end{cases}$$

Example: Find the overhung load imposed on a reducer by a double chain drive transmitting 7 hp @ 30 RPM. The pitch diameter of the sprocket is 10"; service factor is 1.3.

Solution:

$$\text{O.H.L.} = \frac{(63,000) (7 \times 1.3) (1.25)}{(30) (5)} = 4,780 \text{ lbs.}$$

Mathematical Equations

To find circumference of a circle, multiply diameter by 3.1416.
To find diameter of a circle, multiply circumference by .31831.
To find area of a circle, multiply square of diameter by .7854.
To find area of a rectangle, multiply length by breadth.
To find area of a triangle, multiply base by 1/2 perpendicular height.
To find area of ellipse, multiply product of both diameters by .7854.
To find area of parallelogram, multiply base by altitude.
To find side of an inscribed square, multiply diameter by 0.7071 or multiply circumference by 0.2251 or divide circumference by 4.4428.

To find side of inscribed cube, multiply radius of sphere by 1.1547.
To find side of an equal square, multiply diameter by .8862.
To find the surface of a sphere, square the diameter and multiply by 3.1416.
To find the volume of a sphere, cube the diameter and multiply by .5236.
A side of a square multiplied by 1.4142 equals diameter of its circumscribing circle.
A side of a square multiplied by 4.443 equals circumference of its circumscribing circle.

Table 32: Strength and Physical Properties of Various Metals

| Metals and Alloys | Stress in Thousands of Pounds per Sq. Inch | | | | Modulus of Elasticity Millions | Elongation% |
|--|--|---------------------|----------------------|----------------|--------------------------------|-------------|
| | Tension Ultimate | Tension Yield Point | Compression Ultimate | Shear Ultimate | | |
| Aluminum, Type 1100.0, Annealed | 13 | 5 | ..... | 9 | 10 | 45 |
| Aluminum, Type 1100-H18, Hard | 24 | 22 | ..... | 13 | 10 | 15 |
| Aluminum, Type 3003-0, Annealed | 16 | 6 | ..... | 11 | 10 | 40 |
| Aluminum, Type 3003-H18, Hard | 29 | 27 | ..... | 16 | 10 | 10 |
| Aluminum, Type 5052-0, Annealed | 28 | 13 | ..... | 18 | 10.20 | 30 |
| Aluminum, Type 5052-H38, Hard | 42 | 37 | ..... | 24 | 10.20 | 8 |
| Aluminum, Type 5056-0, Annealed | 42 | 22 | ..... | 26 | 10.30 | 35 |
| Aluminum, Type 2014-0, Annealed | 27 | 14 | ..... | 18 | 10.60 | 18 |
| Aluminum, Type 2014-T4, Heat Treated | 62 | 42 | ..... | 38 | 10.60 | 20 |
| Aluminum, Type C4A, Casting. Solution Heat Treat | 32 | 16 | 16▲ | 24 | ..... | 8.50 |
| Aluminum, Type S5C, As Die Cast | 30 | 16 | 16▲ | 19 | ..... | 9 |
| Brass, Admiralty, Annealed | 53 | 22 | ..... | ..... | 16 | 65 |
| Brass, Aluminum, Annealed | 60 | 27 | ..... | ..... | 16 | 55 |
| Brass, Cartridge, 30% Zn, Annealed | 44 | 11 | ..... | 32 | 16 | 66 |
| Brass, Cartridge, 30% Zn, Hard | 76 | 63 | ..... | 44 | 16 | 8 |
| Brass, Naval, Annealed | 57† | 25† | ..... | 40 † | 15 | 47† |
| Brass, Naval, Leaded, Annealed | 57† | 25† | ..... | 36 † | 15 | 40† |
| Brass, Red, 15% Zn, Annealed | 39 | 10 | ..... | 31 | 17 | 48 |
| Brass, Red, 15% Zn, Hard | 70 | 57 | ..... | 42 | 17 | 5 |
| Brass, Red, Leaded, Cast, Grade 4A | 33-46 | 17-24 | 10-12▲ | ..... | 9.1-14.8 | 20-35 |
| Brass, Red, Leaded, Cast, Grade 4B | 30-38 | 12-17 | 11-12▲ | ..... | ..... | 15-27 |
| Brass, Semi-Red, Leaded, Cast, Grade 5A | 29-39 | 13-17 | ..... | ..... | 7.7-14.3 | 18-30 |
| Brass, Semi-Red, Leaded, Cast, Grade 5B | 30-40 | 12-16 | 8-10▲ | ..... | 10-14 | 20-35 |
| Brass, Yellow, 35% Zn, Annealed | 46 | 14 | ..... | 32 | 15 | 65 |
| Brass, Yellow, 35% Zn, Hard | 74 | 60 | ..... | 43 | 15 | 8 |
| Bronze, Aluminum, As Cast | 67-95 | 27-45 | ..... | ..... | 15-18 | 5-35 |
| Bronze, Commercial, 10% Zn, Annealed | 37† | 10† | ..... | 28 † | 17 | 45= |
| Bronze, Manganese, Annealed | 65† | 30† | ..... | 42 v | 15 | 33= |
| Bronze, Phosphor, Annealed | 40-66 | 14-24 | ..... | ..... | 16-17 | 48-70 |
| Bronze, Tin, High Leaded, Cast | 23-38 | 11-22 | 12-16▲ | ..... | 8.5-13 | 7-20 |
| Bronze, Tin, Leaded, Cast | 33-48 | 16-26 | 9-15▲ | ..... | 10.6-16 | 15-40 |
| Copper, Beryllium, Annealed | 60-80 | 25-35v | ..... | 50-60 † | 19 | 35-50† |
| Copper, Electrolytic, Tough Pitch, Annealed | 32† | 10† | ..... | 22 † | 17 | 45† |
| Inconel, Cast | 65-90 | ..... | ..... | ..... | 23 | 10-20 |
| Inconel, S, Cast | 90-120 | 80-100 | ..... | ..... | 25 | 1-3 |
| Inconel, Shapes, Plate, Etc., Annealed | 80-100† | 30-45† | ..... | ..... | 31 | 35-55† |
| Inconel, X, Shapes, Plate, Etc., Annealed | 110-130† | 45-65† | ..... | ..... | 31 | 40-55† |
| Iron, Cast, Class 30 | 30-34 | ..... | 115 | 44 | 15 | ..... |
| Iron, Cast, Class 35 | 35-40 | ..... | 125 | 43 | 16 | ..... |
| Iron, Ingot, Hot Rolled | 44 | 23 | ..... | ..... | 29.80 | 47 |
| Iron, Malleable, Class 32510 | 50 | 33 | 90 | 46 | 25 | 10-18 |
| Iron, Malleable, Class 35018 | 55 | 37 | 90 | 51 | 25 | 18-25 |
| Iron, Nodular (Ductile) Class 60-45-10 | 60 | 45 | 120 | ..... | 22-25 | 10-25 |
| Iron, Nodular (Ductile) Class 80-60-3 | 80 | 60 | 160 | ..... | 22-25 | 3-10 |
| Iron, Pearlitic, Malleable | 60-90 | 40-70 | ..... | ..... | 28 | 3-12 |
| Iron, Wrought, Hot Rolled | 34-47 | 23-24 | ..... | ..... | 29 | 7-35 |
| Lead, Hard, Rolled | 4.0-4.6 | ..... | ..... | ..... | ..... | 31-48 |
| Magnesium Alloy, Extruded, ASTM MIA | 26-28 | 23-28 | 10-13 | 16 | 6.50 | 8-11 |
| Magnesium Alloy, Extruded, ASTM AZ61A-F | 40-45 | 22-32 | 15-21 | 21 | 6.50 | 15-16 |
| Magnesium Alloy, Cast, ASTM MIB | 14 | 4.50 | ..... | 11 | 6.50 | 5 |
| Magnesium Alloy, Cast, ASTM AZ92A | 24 | 14 | ..... | 19 | 6.50 | 2 |
| Magnesium Alloy, Cast, ASTM AZ91A | 36 | 23 | ..... | 20 | 6.50 | 4 |

Table 32: Strength and Physical Properties of Various Metals

| Metals and Alloys | Stress in Thousands of Pounds per Sq. Inch | | | | Modulus of Elasticity Millions | Elongation% |
|---|--|---------------------|----------------------|----------------|--------------------------------|-------------|
| | Tension Ultimate | Tension Yield Point | Compression Ultimate | Shear Ultimate | | |
| Monel, Cast | 65-90 | 32-45 | ..... | ..... | 23 | 20-50 |
| Monel, S, Cast | 120-145 | 80-130 | ..... | ..... | 24.20 | 1-4 |
| Monel, Shapes, Plate, Etc., Annealed | 70-85† | 25-45† | ..... | ..... | 26 | 35-50† |
| Monel, K, Shapes, Plate, Etc., Annealed | 90-105† | 40-65† | ..... | 26 | 25-45 | 35-55† |
| Muntz Metal, Cu 59.63%, Zn balance | 54 | 21 | ..... | 40 | 15 | 45 |
| Nickel, Cast | 50-65 | 15-30 | ..... | ..... | 21.50 | 15-30 |
| Nickel, Silver, Annealed | 49-63† | 18-30† | ..... | ..... | 17-18 | 35-60† |
| Steel, Cast Carbon, Class 70,000 Normalized | 70 | 38 | ..... | ..... | 30 | 28 |
| Steel, Cast Low Alloy, Class 100,000, Normalized and Tempered | 100 | 68 | ..... | ..... | 29-30 | 20 |
| Steel, Cast Low Alloy, Class 120,000, Quenched and Tempered | 120 | 95 | ..... | ..... | 29-30 | 16 |
| Steel, Cast Low Alloy, Class 200,000, Quenched and Tempered | 200 | 170 | ..... | ..... | 29-30 | 5 |
| Steel, Sheets | 48 | 25 | ..... | ..... | 29-30 | 18-27 |
| Steel, Stainless, Austenitic, Types 304, 316 | 85 | 35 | ..... | ..... | 28 | 55-60 |
| Steel, Stainless, Martensitic, Type 416 | 75 | 40 | ..... | ..... | 29 | 30 |
| Steel, Structural, Bridge and Building, ASTM A7 | 60-72 | 33 | 33▲ | 45-54 | 29-30 | 21 |
| Steel, Structural, High Strength, Low Alloy, ASTM A242 | 63-70 | 42-50 | 42-50▲ | 47-53 | 29-30 | 18-24 |
| Zinc, Die Cast Alloy XXIII | 41 | ..... | 60▲ | 31 | ..... | 10 |

† When hardened, strength values are higher, elongation less

▲ Compression yield point

Table 33: Properties of Sections

A = area

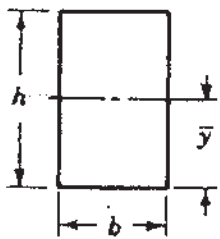
I = moment of inertia

J = polar moment of inertia

 Z = section modulus π

k = radius of gyration

y = centroidal distance

Rectangle


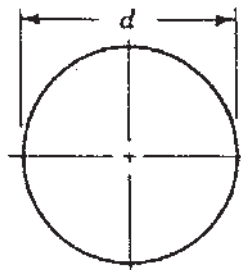
$$A = bh$$

$$k = 0.289h$$

$$I = \frac{bh^3}{12}$$

$$\bar{y} = \frac{h}{2}$$

$$Z = \frac{bh^2}{6}$$

Circle


$$A = \frac{\pi d^2}{4}$$

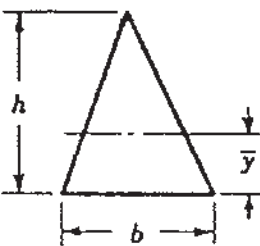
$$J = \frac{\pi d^4}{32}$$

$$I = \frac{\pi d^4}{64}$$

$$k = \frac{d}{4}$$

$$Z = \frac{\pi d^3}{32}$$

$$\bar{y} = \frac{d}{2}$$

Triangle


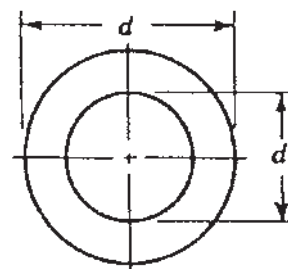
$$A = \frac{bh}{2}$$

$$k = 0.236h$$

$$I = \frac{bh^3}{36}$$

$$\bar{y} = \frac{h}{3}$$

$$Z = \frac{bh^2}{24}$$

Hollow Circle


$$A = \frac{\pi d}{4} (d^2 - d_i^2) \quad J = \frac{\pi}{32} (d^4 - d_i^4)$$

$$I = \frac{\pi}{64} (d^4 - d_i^4) \quad k = \sqrt{\frac{d^2 - d_i^2}{16}}$$

$$Z = \frac{\pi}{32d} (d^4 - d_i^4) \quad \bar{y} = \frac{d}{2}$$

Table 34: Coefficients of Friction "f"

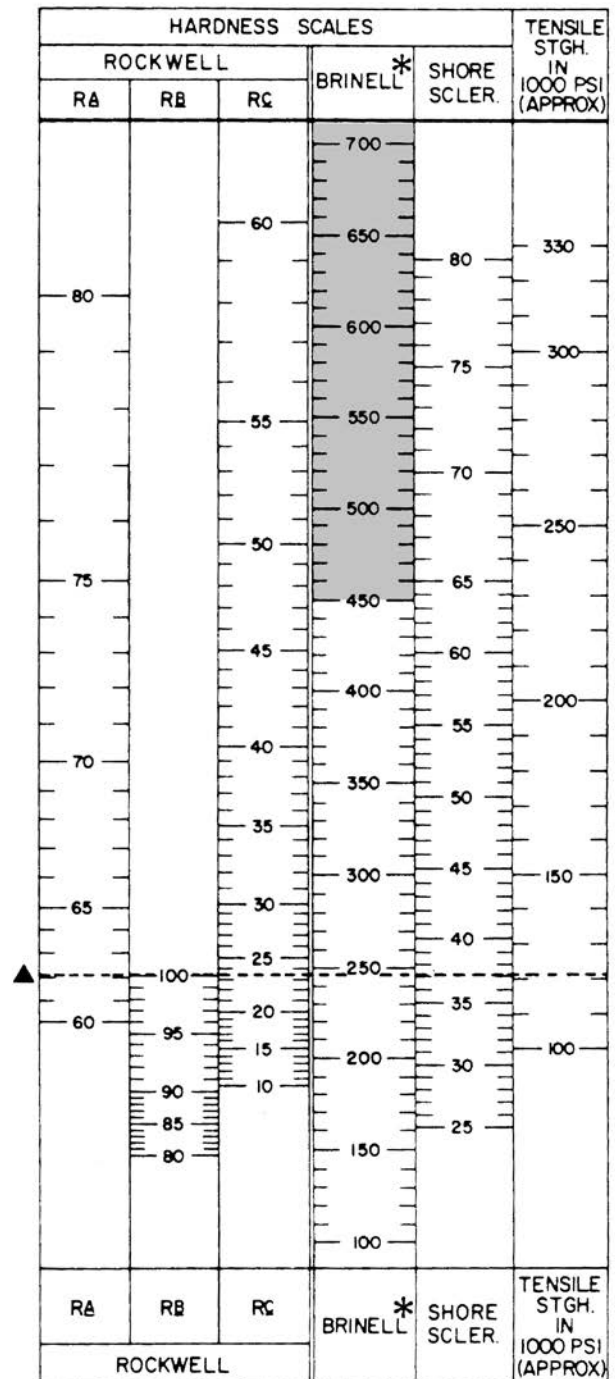
| Material | Static | | Sliding | |
|---------------------------------|-----------|------------|-----------|-------------|
| | Dry | Lubricated | Dry | Lubricated |
| Aluminum on aluminum | 1.35 | .... | .... | .... |
| Canvas belt on rubber lagging | 0.30 | .... | .... | .... |
| Canvas belt, stitched, on steel | .... | .... | 0.20 | 0.10 |
| Canvas belt, woven, on steel | .... | .... | 0.22 | 0.10 |
| Cast iron on asbestos, fabric | .... | .... | .... | .... |
| brake material | .... | .... | 0.35-0.40 | .... |
| Cast iron on brass | .... | .... | 0.30 | .... |
| Cast iron on bronze | .... | .... | 0.22 | 0.07-0.08 |
| Cast iron on cast iron | 1.10 | .... | 0.15 | 0.06-0.10 |
| Cast iron on copper | 1.05 | .... | 0.29 | .... |
| Cast iron on lead | .... | .... | 0.43 | .... |
| Cast iron on leather | 0.60 | .... | .... | 0.13-0.36 |
| Cast iron on oak (parallel) | .... | .... | 0.30-0.50 | 0.07-0.20 |
| Cast iron on magnesium | .... | .... | 0.25 | .... |
| Cast iron on steel, mild | .... | 0.18 | 0.23 | 1/0/00 3:11 |
| Cast iron on tin | .... | .... | 0.32 | .... |
| Cast iron on zinc | 0.85 | .... | 0.21 | .... |
| Earth on earth | 0.25-1.0 | .... | .... | .... |
| Glass on glass | 0.94 | .... | 0.40 | .... |
| Hemp rope on wood | 0.50-0.80 | .... | 0.40-0.70 | .... |
| Nickel on nickel | 1.10 | .... | 0.53 | 0.12 |
| Oak on leather (parallel) | 0.50-0.60 | .... | 0.30-0.50 | .... |
| Oak on oak (parallel) | 0.62 | .... | 0.48 | 0.16 |
| Oak on oak (perpendicular) | 0.54 | .... | 0.32 | 0.07 |
| Rubber tire on pavement | 0.8-0.9 | 0.6-0.7 * | 0.75-0.85 | 0.5-0.7* |
| Steel on ice | 0.03 | .... | 0.01 | .... |
| Steel, hard, on babbit | 0.42-0.70 | 0.08-0.25 | 0.33-0.35 | 0.05-0.16 |
| Steel, hard, on steel, hard | 0.78 | 0.11-0.23 | 0.42 | 0.03-0.12 |
| Steel, mild, on aluminum | 0.61 | .... | 0.47 | .... |
| Steel, mild, on brass | 0.51 | .... | 0.44 | .... |
| Steel, mild, on bronze | .... | .... | 0.34 | 0.17 |
| Steel, mild, on copper | 0.53 | .... | 0.36 | 0.18 |
| Steel, mild, on steel, mild | 0.74 | .... | 0.57 | 0.09-0.19 |
| Stone masonry on concrete | 0.76 | .... | .... | .... |
| Stone masonry on ground | 0.65 | .... | .... | .... |
| Wrought iron on bronze | 0.19 | 0.07-0.08 | 0.18 | .... |
| Wrought iron on wrought iron | .... | 0.11 | 0.44 | 0.08-0.10 |

* Wet pavement

Table 35: U.S. Standard Sheet Metal Gages

| Gage No. | Thickness in Decimal Parts of an Inch | Gage No. | Thickness in Decimal Parts of an Inch |
|----------|---------------------------------------|----------|---------------------------------------|
| 1 | .2813 | 20 | .0359 |
| 2 | .2656 | 21 | .0329 |
| 3 | .2391 | 22 | .0299 |
| 4 | .2242 | 23 | .0269 |
| 5 | .2092 | 24 | .0239 |
| 6 | .1943 | 25 | .0209 |
| 7 | .1793 | 26 | .0179 |
| 8 | .1644 | 27 | .0164 |
| 9 | .1495 | 28 | .0149 |
| 10 | .1345 | 29 | .0135 |
| 11 | .1196 | 30 | .0120 |
| 12 | .1046 | 31 | .0109 |
| 13 | .0897 | 32 | .0102 |
| 14 | .0747 | 33 | .0094 |
| 15 | .0673 | 34 | .0086 |
| 16 | .0598 | 35 | .0078 |
| 17 | .0538 | 36 | .0070 |
| 18 | .0478 | 37 | .0066 |
| 19 | .0418 | 38 | .0063 |

Hardness Comparison Chart



* Shaded area indicates values may vary depending on type of ball used.

▲ Example: A Brinell number of 245 is equal to 62 Rockwell "A", 100 Rockwell "B", 23 Rockwell "C", 37 Shore with a tensile of approximately 120,000 psi.

Trigonometric Formula

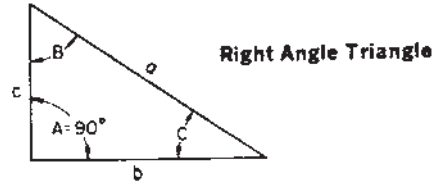
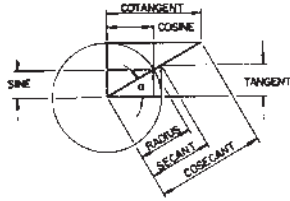


Table 36: Formulas for Finding Functions of Angles

| | | |
|---|---|-----------|
| $\frac{\text{Side opposite}}{\text{Hypotenuse}}$ | = | SINE |
| $\frac{\text{Side adjacent}}{\text{Hypotenuse}}$ | = | COSINE |
| $\frac{\text{Side opposite}}{\text{Side adjacent}}$ | = | TANGENT |
| $\frac{\text{Side adjacent}}{\text{Side opposite}}$ | = | COTANGENT |
| $\frac{\text{Hypotenuse}}{\text{Side adjacent}}$ | = | SECANT |
| $\frac{\text{Hypotenuse}}{\text{Side opposite}}$ | = | COSECANT |

Table 38: To Find Angles and Sides of Right Angle Triangles

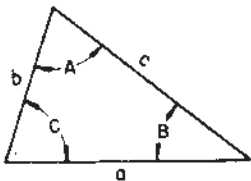
| To Find Angles | | | | To Find Angles | | | |
|----------------|---------------|------------|----------|----------------------------|--------------------------------|--|--|
| To Find: | | Formulas | To Find: | Formulas | | | |
| C | $\frac{c}{a}$ | = Sine C | a | $\sqrt{b^2 + c^2}$ | --- | | |
| C | $\frac{b}{a}$ | = Cosine C | a | $c \times \text{Cosec. C}$ | $\frac{c}{\text{Sine C}}$ | | |
| C | $\frac{c}{b}$ | = Tan. C | a | $c \times \text{Secant B}$ | $\frac{c}{\text{Cosine B}}$ | | |
| C | $\frac{b}{c}$ | = Cotan C | a | $b \times \text{Cosec. B}$ | $\frac{b}{\text{Sine B}}$ | | |
| C | $\frac{a}{b}$ | = Secant C | a | $b \times \text{Secant C}$ | $\frac{b}{\text{Cosine C}}$ | | |
| C | $\frac{a}{c}$ | = Cosec. C | b | $\sqrt{a^2 - c^2}$ | --- | | |
| B | $\frac{c}{a}$ | = Sine B | b | $a \times \text{Sine B}$ | $\frac{a}{\text{Cosecant B}}$ | | |
| B | $\frac{c}{a}$ | = Cosine B | b | $a \times \text{Cos. C}$ | $\frac{a}{\text{Secant C}}$ | | |
| B | $\frac{b}{c}$ | = Tan. B | b | $c \times \text{Tan. B}$ | $\frac{c}{\text{Cotangent B}}$ | | |
| B | $\frac{c}{d}$ | = Cotan. B | b | $c \times \text{Cot. C}$ | $\frac{c}{\text{Tangent C}}$ | | |
| B | $\frac{a}{c}$ | = Secant B | c | $\sqrt{a^2 - b^2}$ | --- | | |
| B | $\frac{a}{b}$ | = Cosec. B | c | $a \times \text{Cos. B}$ | $\frac{a}{\text{Secant B}}$ | | |
| | | | c | $a \times \text{Sine C}$ | $\frac{a}{\text{Cosecant C}}$ | | |
| | | | c | $b \times \text{Cot. B}$ | $\frac{b}{\text{Tangent B}}$ | | |
| | | | c | $b \times \text{Tan. C}$ | $\frac{b}{\text{Cotangent C}}$ | | |

Table 37: Formulas for Finding Sides of Right Angle Triangles with an Angle and Side Known

| | |
|-------------------------------------|---|
| To find: Length of side opposite | $\left\{ \begin{array}{l} \text{Hypotenuse} \times \text{Sine} \\ \text{Hypotenuse} \div \text{Cosecant} \\ \text{Side adjacent} \times \text{Tangent} \\ \text{Side adjacent} \div \text{Cotangent} \end{array} \right.$ |
| To find: Length of side adjacent | $\left\{ \begin{array}{l} \text{Hypotenuse} \times \text{Cosine} \\ \text{Hypotenuse} \div \text{Secant} \\ \text{Side opposite} \times \text{Cotangent} \\ \text{Side opposite} \div \text{Tangent} \end{array} \right.$ |
| To find: Length of Hypotenuse | $\left\{ \begin{array}{l} \text{Side opposite} \times \text{Cosecant} \\ \text{Side opposite} \div \text{Sine} \\ \text{Side adjacent} \times \text{Secant} \\ \text{Side adjacent} \div \text{Cosine} \end{array} \right.$ |

Table 39: To Find Angles and Sides of Oblique Angle Triangle

Oblique Angle Triangle

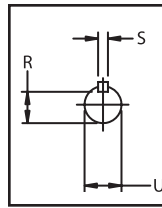


| To Find Angles and Sides of Oblique Angle Triangle | | | | | |
|--|---------|---|----------|---------|---|
| To find: | Known | Formulas | To Find: | Known | Formulas |
| C | A, B | $180^\circ - (A + B)$ | A | B, C | $180^\circ - (B + C)$ |
| b | a, B, A | $\frac{a \times \text{Sin. B}}{\text{Sin. A}}$ | Cos. A | a, b, c | $\frac{b^2 + c^2 - a^2}{2bc}$ |
| c | a, A, C | $\frac{a \times \text{Sin. C}}{\text{Sin. A}}$ | Sin. C | c, A, a | $\frac{c \times \text{Sin. A}}{a}$ |
| Tan. A | a, C, b | $\frac{a \times \text{Sin. C}}{b - (a \times \text{Cos. C})}$ | Cot. B | a, C, b | $\frac{a \times \text{Cosec. C}}{b}$ |
| B | A, C | $180^\circ - (A + C)$ | c | b, C, B | $b \times \text{Sin. C} \times \text{Cosec. B}$ |
| Sin. B | b, A, a | $\frac{b \times \text{Sin. A}}{a}$ | --- | --- | ----- |

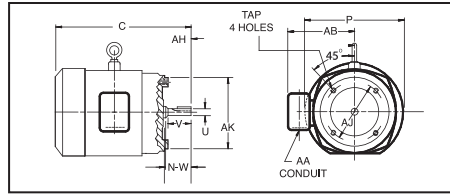
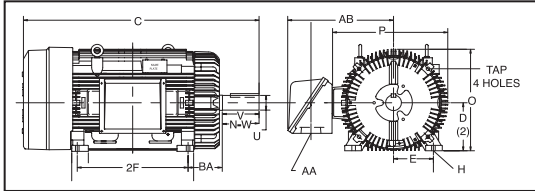
NEMA QUICK REFERENCE CHART

- Dimensions are for reference only
- Drawings represent standard TEFC general purpose motors

Contact your local DODGE/Reliance Sales Office at 1-864-284-5700 for "C" dimensions.



| FRAME | | NEMA SHAFT | KEYSEAT DIMENSIONS | | | FRAME | | NEMA SHAFT | KEYSEAT DIMENSIONS | | |
|-------|------|------------|--------------------|------|------|-------|-------|------------|--------------------|---|--|
| | | U | R | S | | | | U | R | S | |
| 48 | 48 | 1/2 | 29/64 | FLAT | 284T | 286T | 1-7/8 | 1-19/32 | 1/2 | | |
| 56 | 56 | 5/8 | 33/64 | 3/16 | 324T | 326T | 2-1/8 | 1-27/32 | 1/2 | | |
| 143T | 145T | 7/8 | 49/64 | 3/16 | 364T | 365T | 2-3/8 | 2-1/64 | 5/8 | | |
| 182T | 184T | 1-1/8 | 63/64 | 1/4 | 404T | 405T | 2-7/8 | 2-29/64 | 3/4 | | |
| 213T | 215T | 1-3/8 | 1-13/64 | 5/16 | 444T | 445T | 3-3/8 | 2-7/8 | 7/8 | | |
| 254T | 256T | 1-5/8 | 1-13/32 | 3/8 | 447T | 449T | 3-3/8 | 2-7/8 | 7/8 | | |



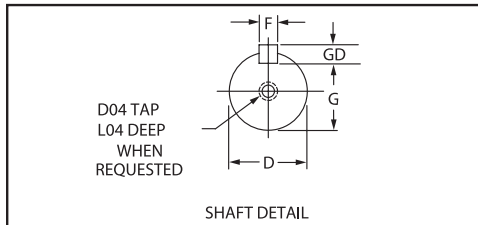
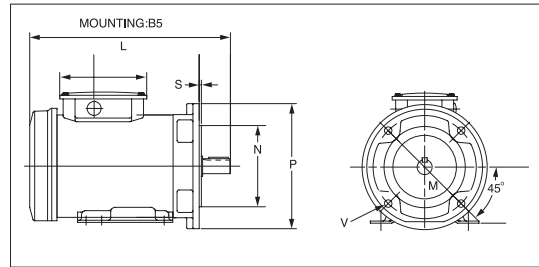
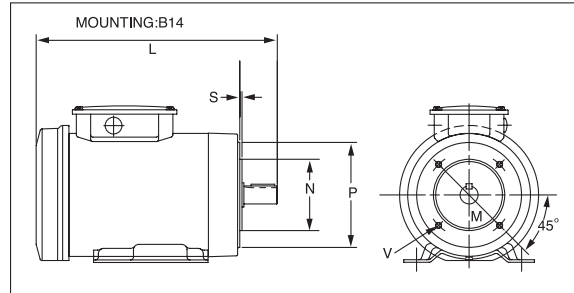
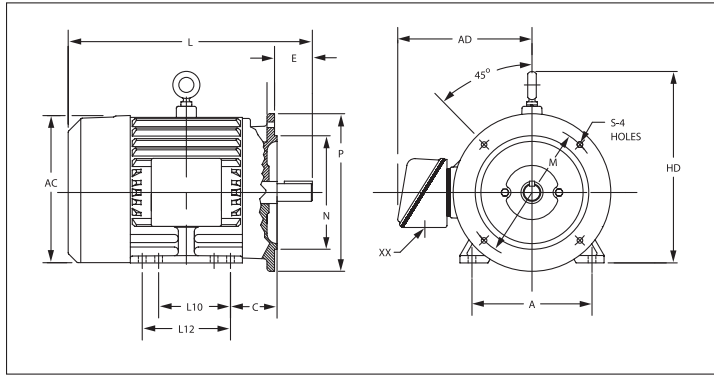
| NEMA C-FACE | BA Dimensions |
|---------------|---------------|
| 143TC - 145TC | 2-3/4 |
| 182TC - 184TC | 3-1/2 |
| 213TC - 215TC | 4-1/4 |
| 254TC - 256TC | 4-3/4 |

| NEMA Frame | D | E | 2F | H | N-W | O | P | U | Keyway | V | AA | AB | AH | AJ | AK | BA | Tap Size |
|------------|-------|--------|--------|------------|-------|----------|--------|-------|-----------|-------|-------|----------|---------|-------|--------|-------|----------|
| 48 | 3 | 2-1/8 | 2-3/4 | 11/32 SLOT | 1-1/2 | 5-13/16 | 5-5/8 | 1/2 | | 1-1/2 | 1/2 | - | 1-11/16 | 3-3/4 | 3 | 2-1/2 | 1/4-20 |
| 56 | 3-1/2 | 2-7/16 | 3 | 11/32 | 1-7/8 | 8-9/16 | 7-9/32 | 5/8 | 3/16x3/32 | 1-7/8 | 1/2 | - | 2-1/16 | 5-7/8 | 4-1/4 | 2-3/4 | 3/8-16 |
| 56H | 3-1/2 | 2-7/16 | 5 | SLOT | 1-7/8 | 8-9/16 | 7-9/32 | 5/8 | 3/16x3/32 | 1-7/8 | 1/2 | - | 2-1/16 | 5-7/8 | 4-1/2 | 2-3/4 | 3/8-16 |
| 143T | 3-1/2 | 2-7/16 | 4 | 11/32 | 2-1/4 | 8-9/16 | 7-9/32 | 7/8 | 3/16x3/32 | 2-1/4 | 3/4 | - | 2-1/8 | 5-7/8 | 4-1/2 | 2-1/4 | 3/8-16 |
| 145T | 3-1/2 | 2-3/4 | 5 | 11/32 | 2-1/4 | 8-9/16 | 7-9/32 | 7/8 | 3/16x3/32 | 2-1/4 | 3/4 | - | 2-1/8 | 5-7/8 | 4-1/2 | 2-1/4 | 3/8-16 |
| 182 | 4-1/2 | 3-3/4 | 4-1/2 | 13/32 | 2-1/4 | 9-7/8 | 9-1/4 | 7/8 | 3/16x3/32 | 2-1/4 | 3/4 | 8-7/16 | 2-1/8 | 5-7/8 | 4-1/2 | 2-3/4 | 3/8-16 |
| 184 | 4-1/2 | 3-3/4 | 5-1/2 | 13/32 | 2-1/4 | 9-7/8 | 9-1/4 | 7/8 | 3/16x3/32 | 2-1/4 | 3/4 | 8-7/16 | 2-1/8 | 5-7/8 | 4-1/2 | 2-3/4 | 3/8-16 |
| 182T | 4-1/2 | 3-3/4 | 4-1/2 | 13/32 | 2-3/4 | 9-7/8 | 9-1/4 | 1-1/8 | 1/4x1/8 | 2-3/4 | 3/4 | 7-13/16 | 2-5/8 | 7-1/4 | 8-1/2 | 2-3/4 | 1/2-13 |
| 184T | 4-1/2 | 3-3/4 | 5-1/2 | 13/32 | 2-3/4 | 9-7/8 | 9-1/4 | 1-1/8 | 1/4x1/8 | 2-3/4 | 3/4 | 7-13/16 | 2-5/8 | 7-1/4 | 8-1/2 | 2-3/4 | 1/2-13 |
| 213 | 5-1/4 | 4-1/4 | 5-1/2 | 13/32 | 3 | 11-1/4 | 10-1/2 | 1-1/8 | 1/4x1/8 | 3 | 1 | 9-5/16 | 2-3/4 | 7-1/4 | 8-1/2 | 3-1/2 | 1/2-13 |
| 215 | 5-1/4 | 4-1/4 | 7 | 13/32 | 3 | 11-1/4 | 10-1/2 | 1-1/8 | 1/4x1/8 | 3 | 1 | 9-5/16 | 2-3/4 | 7-1/4 | 8-1/2 | 3-1/2 | 1/2-13 |
| 213T | 5-1/4 | 4-1/4 | 5-1/2 | 13/32 | 3-3/8 | 11-1/4 | 10-1/2 | 1-3/8 | 5/16x5/32 | 3-3/8 | 1 | 8-11/16 | 3-1/8 | 7-1/4 | 8-1/2 | 3-1/2 | 1/2-13 |
| 215T | 5-1/4 | 4-1/4 | 7 | 13/32 | 3-3/8 | 11-1/4 | 10-1/2 | 1-3/8 | 5/16x5/32 | 3-3/8 | 1 | 8-11/16 | 3-1/8 | 7-1/4 | 8-1/2 | 3-1/2 | 1/2-13 |
| 254U | 6-1/4 | 5 | 8-1/4 | 17/32 | 3-3/4 | 13-1/4 | 13-1/4 | 1-3/8 | 5/16x5/32 | 3-3/4 | 1-1/4 | 10-13/16 | 3-1/2 | 7-1/4 | 8-1/2 | 4-1/4 | 1/2-13 |
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| 254T | 6-1/4 | 5 | 8-1/4 | 17/32 | 4 | 13-1/4 | 13-1/4 | 1-5/8 | 3/8x3/16 | 4 | 1-1/4 | 10-3/4 | 3-3/4 | 7-1/4 | 8-1/2 | 4-1/4 | 1/2-13 |
| 256T | 6-1/4 | 5 | 10 | 17/32 | 4 | 13-1/4 | 13-1/4 | 1-5/8 | 3/8x3/16 | 4 | 1-1/4 | 10-3/4 | 3-3/4 | 7-1/4 | 8-1/2 | 4-1/4 | 1/2-13 |
| 284U | 7 | 5-1/2 | 9-1/2 | 17/32 | 4-7/8 | 14-3/4 | 14-7/8 | 1-5/8 | 3/8x3/16 | 4-7/8 | 1-1/2 | 12-5/8 | 4-5/8 | 9 | 10-1/2 | 4-3/4 | 1/2-13 |
| 286U | 7 | 5-1/2 | 11 | 17/32 | 4-7/8 | 14-3/4 | 14-7/8 | 1-5/8 | 3/8x3/16 | 4-7/8 | 1-1/2 | 12-5/8 | 4-5/8 | 9 | 10-1/2 | 4-3/4 | 1/2-13 |
| 284T | 7 | 5-1/2 | 9-1/2 | 17/32 | 4-5/8 | 14-3/4 | 14-7/8 | 1-7/8 | 1/2x1/4 | 4-5/8 | 1-1/2 | 12-3/4 | 4-3/8 | 9 | 10-1/2 | 4-3/4 | 1/2-13 |
| 286T | 7 | 5-1/2 | 11 | 17/32 | 4-5/8 | 14-3/4 | 14-7/8 | 1-7/8 | 1/2x1/4 | 4-5/8 | 1-1/2 | 12-3/4 | 4-3/8 | 9 | 10-1/2 | 4-3/4 | 1/2-13 |
| 284TS | 7 | 5-1/2 | 9-1/2 | 17/32 | 3-1/4 | 14-3/4 | 14-7/8 | 1-5/8 | 3/8x3/16 | 3-1/4 | 1-1/2 | 12-3/4 | 3 | 9 | 10-1/2 | 4-3/4 | 1/2-13 |
| 286TS | 7 | 5-1/2 | 11 | 17/32 | 3-1/4 | 14-3/4 | 14-7/8 | 1-5/8 | 3/8x3/16 | 3-1/4 | 1-1/2 | 12-3/4 | 3 | 9 | 10-1/2 | 4-3/4 | 1/2-13 |
| 324U | 8 | 6-1/4 | 10-1/2 | 21/32 | 5-5/8 | 16-11/16 | 17 | 1-7/8 | 1/2x1/4 | 5-5/8 | 2 | 15-7/16 | 5-3/8 | 11 | 12-1/2 | 5-1/4 | 5/8-11 |
| 326U | 8 | 6-1/4 | 12 | 21/32 | 5-5/8 | 16-11/16 | 17 | 1-7/8 | 1/2x1/4 | 5-5/8 | 2 | 15-7/16 | 5-3/8 | 11 | 12-1/2 | 5-1/4 | 5/8-11 |
| 324T | 8 | 6-1/4 | 10-1/2 | 21/32 | 5-1/4 | 16-11/16 | 17 | 2-1/8 | 1/2x1/4 | 5-1/4 | 2 | 15-3/16 | 5 | 11 | 12-1/2 | 5-1/4 | 5/8-11 |
| 326T | 8 | 6-1/4 | 12 | 21/32 | 5-1/4 | 16-11/16 | 17 | 2-1/8 | 1/2x1/4 | 5-1/4 | 2 | 15-3/16 | 5 | 11 | 12-1/2 | 5-1/4 | 5/8-11 |
| 324TS | 8 | 6-1/4 | 10-1/2 | 21/32 | 3-3/4 | 16-11/16 | 17 | 1-7/8 | 1/2x1/4 | 3-3/4 | 2 | 15-3/16 | 3-1/2 | 11 | 12-1/2 | 5-1/4 | 5/8-11 |
| 326TS | 8 | 6-1/4 | 12 | 21/32 | 3-3/4 | 16-11/16 | 17 | 1-7/8 | 1/2x1/4 | 3-3/4 | 2 | 15-3/16 | 3-1/2 | 11 | 12-1/2 | 5-1/4 | 5/8-11 |
| 364U | 9 | 7 | 11-1/4 | 21/32 | 6-3/8 | 18-1/2 | 19-1/2 | 2-1/8 | 1/2x1/4 | 6-3/8 | 2-1/2 | 18 | 6-1/8 | 11 | 12-1/2 | 5-7/8 | 5/8-11 |
| 365U | 9 | 7 | 12-1/4 | 21/32 | 6-3/8 | 18-1/2 | 19-1/2 | 2-1/8 | 1/2x1/4 | 6-3/8 | 2-1/2 | 18 | 6-1/8 | 11 | 12-1/2 | 5-7/8 | 5/8-11 |
| 364T | 9 | 7 | 11-1/4 | 21/32 | 5-7/8 | 18-1/2 | 19-1/2 | 2-3/8 | 5/8x5/16 | 5-7/8 | 2-1/2 | 18-1/16 | 5-5/8 | 11 | 12-1/2 | 5-7/8 | 5/8-11 |
| 365T | 9 | 7 | 12-1/4 | 21/32 | 5-7/8 | 18-1/2 | 19-1/2 | 2-3/8 | 5/8x5/16 | 5-7/8 | 2-1/2 | 18-1/16 | 5-5/8 | 11 | 12-1/2 | 5-7/8 | 5/8-11 |
| 364TS | 9 | 7 | 11-1/4 | 21/32 | 3-3/4 | 18-1/2 | 19-1/2 | 1-7/8 | 1/2x1/4 | 3-3/4 | 2-1/2 | 18-1/16 | 3-1/2 | 11 | 12-1/2 | 5-7/8 | 5/8-11 |
| 365TS | 9 | 7 | 12-1/4 | 21/32 | 3-3/4 | 18-1/2 | 19-1/2 | 1-7/8 | 1/2x1/4 | 3-3/4 | 2-1/2 | 18-1/16 | 3-1/2 | 11 | 12-1/2 | 5-7/8 | 5/8-11 |
| 404U | 10 | 8 | 12-1/4 | 13/16 | 7-1/8 | 21-5/16 | 22-1/2 | 2-3/8 | 5/8x5/16 | 7-1/8 | 3 | 19-1/4 | 6-7/8 | 11 | 12-1/2 | 6-5/8 | 5/8-11 |
| 405U | 10 | 8 | 13-3/4 | 13/16 | 7-1/8 | 21-5/16 | 22-1/2 | 2-3/8 | 5/8x5/16 | 7-1/8 | 3 | 19-1/4 | 6-7/8 | 11 | 12-1/2 | 6-5/8 | 5/8-11 |
| 404T | 10 | 8 | 12-1/4 | 13/16 | 7-1/4 | 21-5/16 | 22-1/2 | 2-7/8 | 3/4x3/8 | 7-1/4 | 3 | 19-5/16 | 7 | 11 | 12-1/2 | 6-5/8 | 5/8-11 |
| 405T | 10 | 8 | 13-3/4 | 13/16 | 7-1/4 | 21-5/16 | 22-1/2 | 2-7/8 | 3/4x3/8 | 7-1/4 | 3 | 19-5/16 | 7 | 11 | 12-1/2 | 6-5/8 | 5/8-11 |
| 404TS | 10 | 8 | 12-1/4 | 13/16 | 4-1/4 | 21-5/16 | 22-1/2 | 2-1/8 | 1/2x1/4 | 4-1/4 | 3 | 19-5/16 | 4 | 11 | 12-1/2 | 6-5/8 | 5/8-11 |
| 405TS | 10 | 8 | 13-3/4 | 13/16 | 4-1/4 | 21-5/16 | 22-1/2 | 2-1/8 | 1/2x1/4 | 4-1/4 | 3 | 19-5/16 | 4 | 11 | 12-1/2 | 6-5/8 | 5/8-11 |
| 444U | 11 | 9 | 14-1/2 | 13/16 | 8-5/8 | 23-3/8 | 25-1/4 | 2-7/8 | 3/4x3/8 | 8-5/8 | 3 | 22-3/16 | 8-3/8 | 14 | 16 | 7-1/2 | 5/8-11 |
| 445U | 11 | 9 | 16-1/2 | 13/16 | 8-5/8 | 23-3/8 | 25-1/4 | 2-7/8 | 3/4x3/8 | 8-5/8 | 3 | 22-3/16 | 8-3/8 | 14 | 16 | 7-1/2 | 5/8-11 |
| 444T | 11 | 9 | 14-1/2 | 13/16 | 8-1/2 | 23-3/8 | 25-1/4 | 3-3/8 | 7/8x7/16 | 8-1/2 | 3 | 23-3/8 | 8-1/4 | 14 | 16 | 7-1/2 | 5/8-11 |
| 445T | 11 | 9 | 16-1/2 | 13/16 | 8-1/2 | 23-3/8 | 25-1/4 | 3-3/8 | 7/8x7/16 | 8-1/2 | 3 | 23-3/8 | 8-1/4 | 14 | 16 | 7-1/2 | 5/8-11 |
| 447T | 11 | 9 | 20 | 13/16 | 8-1/2 | 23-5/8 | 26 | 3-3/8 | 7/8x7/16 | 8-1/2 | 3 | 23-7/8 | 8-1/4 | 14 | 16 | 7-1/2 | 5/8-11 |
| 449T | 11 | 9 | 25 | 13/16 | 8-1/2 | 23-5/8 | 26 | 3-3/8 | 7/8x7/16 | 8-1/2 | 3 | 23-7/8 | 8-1/4 | 14 | 16 | 7-1/2 | 5/8-11 |
| 444TS | 11 | 9 | 14-1/2 | 13/16 | 4-3/4 | 23-3/8 | 25-1/4 | 2-3/8 | 5/8x5/16 | 4-3/4 | 3 | 23-3/8 | 4-1/2 | 14 | 16 | 7-1/2 | 5/8-11 |
| 445TS | 11 | 9 | 16-1/2 | 13/16 | 4-3/4 | 23-3/8 | 25-1/4 | 2-3/8 | 5/8x5/16 | 4-3/4 | 3 | 23-3/8 | 4-1/2 | 14 | 16 | 7-1/2 | 5/8-11 |
| 447TS | 11 | 9 | 20 | 13/16 | 4-3/4 | 23-5/8 | 26 | 2-3/8 | 5/8x5/16 | 4-3/4 | 4 NPT | 23-7/8 | 4-1/2 | 14 | 16 | 7-1/2 | 5/8-11 |
| 449TS | 11 | 9 | 25 | 13/16 | 4-3/4 | 23-5/8 | 26 | 2-3/8 | 5/8x5/16 | 4-3/4 | 4 NPT | 23-7/8 | 4-1/2 | 14 | 16 | 7-1/2 | 5/8-11 |

IEC QUICK REFERENCE CHART

- Dimensions are for reference only
- Drawings represent standard TEFC general purpose motors

Contact your local DODGE/Reliance Sales Office at 1-864-284-5700 for "C" dimensions.



| KEY AND KEYSEAT DIMENSIONS | | | | | | | | | |
|----------------------------|----|------|----|----|-------|----|------|----|----|
| FRAME | D | G | F | GD | FRAME | D | G | F | GD |
| 71 | 14 | 11 | 5 | 5 | 160 | 37 | 42 | 12 | 8 |
| 80 | 19 | 15.5 | 6 | 6 | 180 | 48 | 42.5 | 14 | 9 |
| 90 | 24 | 20 | 8 | 7 | 200 | 55 | 49 | 16 | 10 |
| 100 | 28 | 24 | 8 | 7 | 225 | 60 | 53 | 18 | 11 |
| 112 | 28 | 24 | 8 | 7 | 250 | 70 | 67.5 | 20 | 12 |
| 132 | 38 | 33 | 10 | 8 | 280 | 80 | 71 | 22 | 14 |

| Frame | B3 RIGID BASE | | | | | SHAFT | | | B5 FLANGE | | | | | B14 FACE | | | | | GENERAL | | |
|-------|---------------|-----|-----|-------|------|-------|----|-----|-----------|-----|-------|--------|-----|----------|-----|-----|-----|-----|---------|----|--|
| | A | L10 | L12 | HD | C | E | D | N | M | P | S | V | N | M | P | S | V | AC | AD | XX | |
| 71 | - | - | - | - | - | - | - | 110 | 130 | 160 | "3,5" | "9,5" | 70 | 85 | 105 | 2.5 | M6 | 143 | - | 13 | |
| 80 | 125 | 100 | - | 188 | 50 | 40 | 19 | 130 | 165 | 200 | "3,5" | "11,5" | 80 | 100 | 120 | 3 | M6 | 143 | - | 13 | |
| 90 | 140 | 100 | 125 | 208 | 56 | 50 | 24 | 130 | 165 | 200 | "3,5" | "11,5" | 95 | 115 | 140 | 3 | M8 | 163 | - | 13 | |
| 100 | 160 | 112 | 140 | 229 | 63 | 60 | 28 | 180 | 215 | 250 | 4 | 14 | 110 | 130 | 160 | 3.5 | M8 | 175 | - | 19 | |
| 112S | 190 | 114 | - | 301.8 | 71.4 | 60 | 28 | 180 | 215 | 250 | 4 | 14 | 110 | 130 | 160 | 3.5 | M8 | 243 | 210 | 32 | |
| 112M | 190 | - | 140 | 301.8 | 71.4 | 60 | 28 | 180 | 215 | 250 | 4 | 14 | 110 | 130 | 160 | 3.5 | M8 | 243 | 210 | 32 | |
| 132S | 216 | 140 | - | 336.6 | 88.9 | 80 | 38 | 230 | 265 | 300 | 4 | 14 | 130 | 165 | 200 | 3.5 | M8 | 286 | 243 | 32 | |
| 132M | 216 | - | 178 | 336.6 | 88.9 | 80 | 38 | 230 | 265 | 300 | 4 | 14 | 130 | 165 | 200 | 3.5 | M8 | 286 | 243 | 32 | |
| 160M | 254 | 210 | - | 399 | 108 | 110 | 42 | 250 | 300 | 350 | 5 | 18 | 180 | 215 | 250 | 4 | M12 | 324 | 320 | 40 | |
| 160L | 254 | - | 254 | 399 | 108 | 110 | 42 | 250 | 300 | 350 | 5 | 18 | 180 | 215 | 250 | 4 | M12 | 324 | 320 | 40 | |
| 180M | 279 | 241 | - | 436 | 121 | 110 | 48 | 250 | 300 | 350 | 5 | 18 | 398 | 355 | 40 | | | 398 | 355 | 40 | |
| 180L | 279 | - | 279 | 436 | 121 | 110 | 48 | 250 | 300 | 350 | 5 | 18 | 398 | 355 | 40 | | | 398 | 355 | 40 | |
| 200M | 318 | 267 | - | 486 | 133 | 110 | 55 | 300 | 350 | 400 | 5 | 18 | 442 | 445 | 50 | | | 442 | 445 | 50 | |
| 200L | 318 | - | 305 | 486 | 133 | 110 | 55 | 300 | 350 | 400 | 5 | 18 | 442 | 445 | 50 | | | 442 | 445 | 50 | |
| 225S | 356 | 286 | - | 545 | 149 | 140 | 60 | 350 | 400 | 450 | 5 | 18 | 490 | 470 | 50 | | | 490 | 470 | 50 | |
| 225M | 356 | - | 311 | 545 | 149 | 140 | 60 | 350 | 400 | 450 | 5 | 18 | 490 | 470 | 50 | | | 490 | 470 | 50 | |
| 250S | 406 | 311 | - | 616 | 168 | 140 | 65 | | | | | | | | | | | 600 | 510 | 63 | |
| 250M | 406 | - | 349 | 616 | 168 | 140 | 65 | | | | | | | | | | | 600 | 535 | 63 | |
| 280S | 457 | 368 | - | 677 | 190 | 140 | 75 | | | | | | | | | | | 650 | 535 | 63 | |
| 280M | 457 | - | 419 | 677 | 190 | 140 | 75 | | | | | | | | | | | 650 | 535 | 63 | |
| 280K | 457 | 500 | - | 677 | 190 | 140 | 75 | | | | | | | | | | | 650 | 535 | 63 | |
| 280H | 457 | 630 | - | 677 | 190 | 140 | 75 | | | | | | | | | | | 650 | 535 | 63 | |
| L280H | 457 | 635 | - | 677 | 202 | 205 | 75 | | | | | | | | | | | 650 | 535 | 63 | |

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Plummer Blocks

Sleeve Bearings

SLEEVOIL

Take-Up Frames

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