

Section Contents

| | |
|---|----------------|
| BOST-BRONZ (OIL-IMPREGNATED SINTERED BRONZE) | |
| General Description..... | 136–137 |
| Catalog Number Selections/Dimensions | 138–144 |
| BEAR-N-BRONZ (660 CAST BRONZE) | |
| General Description..... | 145 |
| Catalog Number Selections/Dimensions | 146–153 |
| BRONZE BEARING EMERGENCY BANK | |
| BOST-BRONZ & BEAR-N-BRONZ..... | 154 |
| BOSTonE F-1 (GLASS FILLED TEFLON) | |
| General Description/Engineering..... | 155 |
| Catalog Number Selections/Dimensions | 156–157 |
| RULON® 641 BEARINGS | |
| General Description..... | 158 |
| Catalog Number Selections/Dimensions | 159 |
| BOSTonE MOLDED PLASTIC | |
| General Description/Engineering..... | 160 |
| Catalog Number Selections/Dimensions | 161–171 |
| BOSTonE MOLDED NYLON | |
| Catalog Number Selections/Dimensions | 172–173 |
| Engineering Information..... | 174–182 |
| ANTI-FRICTION (BALL BEARINGS) | |
| General Description..... | 183–184 |
| Catalog Number Selections/Dimensions | 185–197 |
| SELF-ALIGNING (ROD END & SPHERICAL BEARINGS) | |
| Catalog Number Selections/Dimensions | 198–206 |
| Engineering Information..... | 207–211 |
| MOUNTED BEARINGS | |
| General Description..... | 212 |
| Replacement Bearings & Locking Collars..... | 213–214 |
| Pillow Blocks | 215–222 |
| Flanged Units | 223–230 |
| Shaft Supports | 231 |
| Take-Up Frames | 232 |
| Stainless Steel Pillow Blocks with Setscrew Locking..... | 233 |
| Stainless Steel Pillow Blocks with Eccentric Locking Collar | 234 |
| Stainless Steel 2 Bolt Flange | 235 |
| Stainless Steel 4 Bolt Flange | 236 |
| Stainless Steel 3 Bolt Flange Bracket..... | 237 |
| Stainless Steel Take Up Units | 238 |
| ENGINEERING INFORMATION | 239–245 |

BOST-BRONZ Oil-Impregnated Sintered Bronze Bearings

F



BOST-BRONZ is Boston Gear’s all-purpose, oil-impregnated porous bronze bearing material. It is manufactured of highest purity metal powders by the powder metallurgy process. This process provides uniformly distributed pores between the metal particles which absorb oil by capillary action. BOST-BRONZ has a self-contained oil supply (approximately 20% by volume) which provides a uniform, protective film over the entire bearing surface. Composition and physical properties are as follows: –

BOST-BRONZ can be used for production and replacement requirements in practically every known industry. It has proven to be efficient under heavy loads at moderate speeds and also under light loads at high speeds. It is ideally suited for applications where normal lubrication is difficult or impossible to provide.

| Coefficient of Friction | |
|-------------------------|-----------|
| Static | .1 - .3 |
| Dynamic | .02 - .04 |

Accuracy

The close tolerances of BOST-BRONZ bearings are made possible through expertly controlled manufacturing methods. In addition, the lubricating features of BOST-BRONZ permit reduced shaft clearances — a precision product with precision performance.

Performance

Because of its porous construction, BOST-BRONZ bearings have an oil reservoir when idle — an oil film to start on — an oil film to run on, assuring low starting torque and smooth, quiet positive performance.

Adaptability

BOST-BRONZ bearings are designed for immediate installation and may be used in most applications without additional machining. Oil holes or grooves are not required and turning or boring bearing diameters is normally unnecessary.

| Composition % | Density in Grams per Cu. Cent. Impregnated | Tensile Strength Lbs. per Sq. In. | Yield Strength in Compression (0.2% Offset) Lbs. per Sq. In. | Elongation in One Inch % | Porosity by Volume % |
|---|--|-----------------------------------|--|--------------------------|----------------------|
| Copper (Cu) 87.5-90.5 Iron 1.0 Max. Lead (a) Carbon (Graphite Max.) 1.75 Max. Tin 9.5-10.5 Total Other Elements .05 | 6.4/6.8 | 14,000 | 11,000 | 1.0 | 19 Min. |
| Conforms to ASTM B438-73 Grade 1, Type 2, and SAE-841 Mil-B-5687C TYPE 1 comp A (Ref:Oil is a SAE 20-30 weight) | | | | | |

(a) Included in other elements

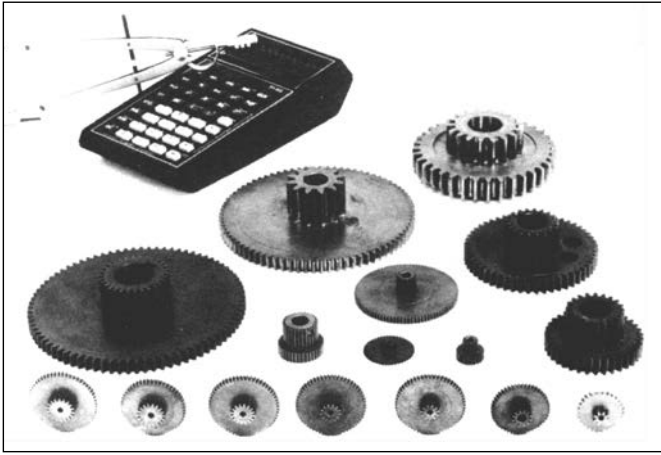
BOST-BRONZ Oil-Impregnated Sintered Bronze Bearings

Non-Listed Sizes

The stock sizes of BOST-BRONZ bearings listed in this catalog will satisfy the majority of industrial applications. Tooling is available for many metric and additional inch sizes. Where tooling is not available, special sizes can be made to order.

Special Shapes

Many special shapes can be made economically by the powdered metal process. This process is particularly economical for the production of comparatively simple shapes in large volume. More complicated shapes may also be economical to produce by this process when the savings in machining justify the cost of more expensive tooling.



Special Compositions

In addition to our standard BOST-BRONZ, many special compositions can be furnished on a made-to-order basis.

Applications

BOST-BRONZ bearings can be used on any application where the load-carrying capacity required falls within the capabilities of the material. BOST-BRONZ bearings operate efficiently under heavy loads at slow speeds. Because these bearings are supplied with oil impregnation, the original oil content provides long-lasting lubrication. For even longer life requirements, many applications incorporate impregnated felts or other reservoir techniques about the bearing.

Selection

In general, sleeve bearings should be selected with a length of one to two times the shaft diameter and an O.D. approximately 25% larger than the shaft diameter.

A general guide to determination of limiting load and velocity values for sleeve bearings has been established by the use of PV calculations. PV represents Pressure x Velocity, for example 100 psi x 20 fpm yields a PV of 2000.

Maximum PV values for BOST-BRONZ bearings:

Cylindrical & Flange Bearings - 50,000
Thrust Bearings - 10,000

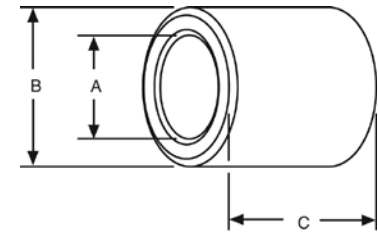
For complete selection and application information, see Engineering Section, Pages 174-182.

F

BOST-BRONZ Oil-Impregnated Sintered Bronze Bearings

Plain Cylindrical Bearings

ALL DIMENSIONS IN INCHES
ORDER BY CATALOG NUMBER OR ITEM CODE



STANDARD TOLERANCES

| DIMENSIONS | | TOLERANCE |
|------------|---------------|-----------------|
| A | 1/8 – 1 1/2 | + .000, – .001 |
| | 1 3/4 – 2 1/2 | + .000, – .0015 |
| B | 2 3/4 – 3 1/2 | + .000, – .002 |
| C | 1/8 – 1-1/2 | ± .005 |
| | 1 3/4 – 3 | ± .0075 |
| | 4 | ± .010 |

CONCENTRICITY

| DIMENSIONS | | TOLERANCE |
|------------|---------------|-----------|
| A | 1/8 – 1 1/2 | .003 |
| | 1 5/8 – 3 | .004 |
| | 3 1/4 – 3 1/2 | .005 |

Prices on unlisted sizes and other Boston Gear powder metal parts provided on request.

| A | B | C | Catalog Number | Item Code | A | B | C | Catalog Number | Item Code | | | | | | |
|-------------|--------------|--------------|----------------|--------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|-------------|-------|
| 1/8 .127 | 1/4 .252 | 1/8 | B24-1 | 34504 | 3/8 .377 | 5/8 .627 | 3/8 | B69-3 | 34648 | | | | | | |
| | | 1/4 | B24-2 | 34506 | | | 1/2 | B69-4 | 34650 | | | | | | |
| | | 3/8 | B24-3 | 34508 | | | 5/8 | B69-5 | 34652 | | | | | | |
| | | 1/2 | B24-4 | 34510 | | | 3/4 | B69-6 | 34654 | | | | | | |
| | 3/16 .189 | 5/16 .315 | 1/8 | B25-1 | | | 34512 | 7/16 .439 | 9/16 .5645 | 7/8 | B69-7 | 34656 | | | |
| | | | 1/4 | B25-2 | | | 34514 | | | 1 | B69-8 | 34658 | | | |
| | | | 3/8 | B25-3 | | | 34516 | | | 1-1/4 | B69-10 | 34660 | | | |
| | | 1/2 | B25-4 | 34518 | | | 3/8 | | | B610-3 | 34676 | | | | |
| | | 5/8 | B25-5 | 34520 | | | 1/2 | | | B610-4 | 34678 | | | | |
| | | 3/4 | B25-6 | 34530 | | | 5/8 | | | B610-5 | 34680 | | | | |
| 1/4 .252 | 1/4 .252 | 1/4 | B34-2 | 34522 | 1/2 .503 | 3/4 .753 | 3/4 | B610-6 | 34682 | | | | | | |
| | | 3/8 | B34-3 | 34524 | | | 7/8 | B610-7 | 34684 | | | | | | |
| | | 1/2 | B34-4 | 34526 | | | 1 | B610-8 | 34686 | | | | | | |
| | 3/8 .377 | 5/16 .314 | 5/8 | B34-5 | | | 34528 | 7/8 .878 | 1.004 | 1-1/4 | B610-10 | 34688 | | | |
| | | | 3/4 | B34-6 | | | 34530 | | | 3/8 | B612-3 | 34690 | | | |
| | | | 1/4 | B35-2 | | | 34532 | | | 1/2 | B612-4 | 34692 | | | |
| | | 3/8 | B35-3 | 34534 | | | 3/4 | | | B612-6 | 34694 | | | | |
| | | 1/2 | B35-4 | 34536 | | | 1 | | | B612-8 | 34696 | | | | |
| | | 5/8 | B35-5 | 34538 | | | 1-1/4 | | | B612-10 | 34698 | | | | |
| | 3/8 .377 | 3/8 .377 | 3/8 | B36-3 | | | 13561 | 9/16 .5645 | 11/16 .690 | 3/4 | B612-10 | 34698 | | | |
| | | | 1/2 | B36-4 | | | 13563 | | | 3/8 | B79-3 | 34662 | | | |
| | | | 5/8 | B36-5 | | | 13565 | | | 1/2 | B79-4 | 34664 | | | |
| 3/4 | | B36-6 | 13567 | 3/4 | B79-6 | 34668 | | | | | | | | | |
| 1/2 .502 | | 7/16 .439 | 1/4 | B45-2 | 13569 | 1/2 .503 | 13/16 .815 | | | 7/8 | B79-7 | 34670 | | | |
| | | | 3/8 | B45-3 | 13571 | | | | | 1 | B79-8 | 34672 | | | |
| | | | 1/2 | B45-4 | 13573 | | | | | 1-1/4 | B79-10 | 34674 | | | |
| | | | 3/4 | B45-6 | 13575 | | | | | 3/8 | B710-3 | 34700 | | | |
| | | 3/8 .377 | 3/8 .377 | 1/4 | B46-2 | | | | | 34542 | 7/8 .878 | 1.004 | 1/2 | B710-4 | 34702 |
| | | | | 5/16 | B46-2 1/2 | | | | | 34544 | | | 5/8 | B710-5 | 34704 |
| | 3/8 | | | B46-3 | 34546 | | | 3/4 | B710-6 | 34706 | | | | | |
| 1/2 .502 | 3/8 .377 | 1/2 | B46-4 | 34548 | 9/16 .5645 | 11/16 .690 | 7/8 | B710-7 | 34708 | | | | | | |
| | | 5/8 | B46-5 | 34550 | | | 1 | B710-8 | 34710 | | | | | | |
| | | 3/4 | B46-6 | 34552 | | | 1-1/4 | B710-10 | 34712 | | | | | | |
| | 7/16 .439 | 7/16 .439 | 7/8 | B46-7 | | | 34554 | 1/2 .503 | 1.004 | 1/2 | B711-4 | 34714 | | | |
| | | | 1 | B46-8 | | | 34556 | | | 1 | B711-8 | 34716 | | | |
| | | | 1-1/4 | B46-10 | | | 34558 | | | 1-1/2 | B711-12 | 34718 | | | |
| | | | 3/8 | B47-3 | | | 34560 | | | 7/8 .878 | 1.004 | 1-1/8 | B810-4 | 34720 | |
| | | | 1/2 | B47-4 | | | 34562 | | | | | 5/8 | B810-5 | 34722 | |
| | | | 5/8 | B47-5 | | | 34564 | | | | | 3/4 | B810-6 | 34724 | |
| | | | 3/4 | B47-6 | | | 34566 | | | | | 7/8 | B810-7 | 34726 | |
| 7/8 | B47-7 | 34568 | 1 | B810-8 | 34728 | | | | | | | | | | |
| 1 | B47-8 | 34570 | 1-1/8 | B810-9 | 34730 | | | | | | | | | | |
| 1-1/4 | B47-10 | 34572 | 1-1/4 | B810-10 | 34732 | | | | | | | | | | |
| 3/8 .377 | 3/8 .377 | 3/8 | B48-3 | 34572 | 9/16 .5645 | 11/16 .690 | 1-1/2 | B810-12 | 34734 | | | | | | |
| | | 1/2 | B48-4 | 34574 | | | 1/2 | B811-4 | 34736 | | | | | | |
| | | 5/8 | B48-5 | 34576 | | | 5/8 | B811-5 | 34738 | | | | | | |
| | 5/16 .314 | 7/16 .439 | 3/4 | B48-6 | | | 34578 | 7/8 .878 | 1.004 | 3/4 | B811-6 | 34740 | | | |
| | | | 7/8 | B48-7 | | | 34580 | | | 7/8 | B811-7 | 34742 | | | |
| | | | 1 | B48-8 | | | 34582 | | | 1 | B811-8 | 34744 | | | |
| | | | 1-1/4 | B48-10 | | | 34584 | | | 1-1/8 | B811-9 | 34746 | | | |
| | | | 3/8 | B56-3 | | | 34586 | | | 1-1/4 | B811-10 | 34748 | | | |
| | | | 1/2 | B56-4 | | | 34588 | | | 1-1/2 | B811-12 | 34750 | | | |
| | | | 5/8 | B56-5 | | | 34590 | | | 1/2 .503 | 1.004 | 1-1/2 | B812-4 | 34752 | |
| 3/4 | B56-6 | 34592 | 5/8 | B812-5 | 34754 | | | | | | | | | | |
| 7/8 | B56-7 | 34594 | 3/4 | B812-6 | 34756 | | | | | | | | | | |
| 1 | B56-8 | 34596 | 7/8 | B812-7 | 34758 | | | | | | | | | | |
| 1/2 .502 | 3/8 .377 | 1/4 | B57-2 | 34598 | 9/16 .5645 | 11/16 .690 | 1 | B812-8 | 34760 | | | | | | |
| | | 3/8 | B57-3 | 34600 | | | 1-1/8 | B812-9 | 34762 | | | | | | |
| | | 1/2 | B57-4 | 34602 | | | 1-1/4 | B812-10 | 34764 | | | | | | |
| | 5/16 .314 | 7/16 .439 | 5/8 | B57-5 | | | 34604 | 7/8 .878 | 1.004 | | | 1-1/2 | B812-12 | 34766 | |
| | | | 3/4 | B57-6 | | | 34606 | | | | | 1-3/4 | B812-14 | 34768 | |
| | | | 7/8 | B57-7 | | | 34608 | | | | | 2 | B812-16 | 34770 | |
| | | | 1 | B57-8 | | | 34610 | | | 1/2 .503 | 1.004 | 1/2 | B813-4 | 34772 | |
| | | | 1-1/4 | B57-10 | | | 34612 | | | | | 3/4 | B813-6 | 34774 | |
| | | | 1-3/8 | B57-11 | | | 34614 | | | | | 1 | B813-8 | 34776 | |
| | | | 3/8 .377 | 7/16 .439 | | | 3/8 | | | | | B58-3 | 34616 | 7/8 .878 | 1.004 |
| 1/2 | B58-4 | 34618 | | | 1/2 | B814-4 | 34780 | | | | | | | | |
| 5/8 | B58-5 | 34620 | | | 5/8 | B814-5 | 34782 | | | | | | | | |
| 3/4 | B58-6 | 34622 | | | 3/4 | B814-6 | 34784 | | | | | | | | |
| 7/8 | B58-7 | 34624 | | | 7/8 | B814-7 | 34786 | | | | | | | | |
| 1 | B58-8 | 34626 | | | 1 | B814-8 | 34788 | | | | | | | | |
| 1-1/4 | B58-10 | 34628 | | | 1-1/4 | B814-10 | 34790 | | | | | | | | |
| 3/8 .377 | 3/8 .377 | 1-1/2 | B58-12 | 34630 | 9/16 .5645 | 11/16 .690 | 1-1/2 | B814-12 | 34792 | | | | | | |
| | | 1-3/4 | B58-14 | 34632 | | | 3/4 | B816-6 | 13585 | | | | | | |
| | | 1/2 | B67-4 | 13577 | | | 1 | B816-8 | 13587 | | | | | | |
| | 5/16 .314 | 7/16 .439 | 5/8 | B67-5 | | | 13579 | 7/8 .878 | 1.004 | 1-1/2 | B816-12 | 13589 | | | |
| | | | 3/4 | B67-6 | | | 13581 | | | 2 | B816-16 | 13591 | | | |
| | | | 1 | B67-8 | | | 13583 | | | 9/16 .5645 | 11/16 .690 | 1/2 | B911-4 | 34794 | |
| | | | 3/8 | B68-3 | | | 34634 | | | | | 3/4 | B911-6 | 34796 | |
| | | | 1/2 | B68-4 | | | 34636 | | | | | 1 | B911-8 | 34798 | |
| | | | 5/8 | B68-5 | | | 34638 | | | | | 1-1/2 | B911-12 | 34800 | |
| | | | 3/4 | B68-6 | | | 34640 | | | | | 9/16 .5645 | 11/16 .690 | 1.004 | 1.004 |
| 7/8 | B68-7 | 34642 | | | | | | | | | | | | | |
| 1 | B68-8 | 34644 | | | | | | | | | | | | | |
| 1-1/4 | B68-10 | 34646 | | | | | | | | | | | | | |

On A and B dimensions, tolerances apply to actual (decimal) dimensions.

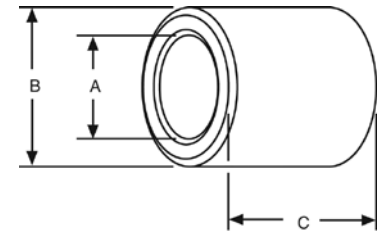
BOST-BRONZ Oil-Impregnated Sintered Bronze Bearings

ALL DIMENSIONS IN INCHES
ORDER BY CATALOG NUMBER OR ITEM CODE

Plain Cylindrical Bearings

| A | B | C | Catalog Number | Item Code | |
|---------------|----------------|-------|----------------|-----------|-------|
| 9/16 .565 | 3/4 .753 | 1/2 | B912-4 | 34802 | |
| | | 3/4 | B912-6 | 34804 | |
| | | 1 | B912-8 | 34806 | |
| | 13/16 .815 | 1 | 1-1/2 | B912-12 | 34808 |
| | | | 1/2 | B913-4 | 34810 |
| | | | 3/4 | B913-6 | 34812 |
| 1 | | | B913-8 | 34814 | |
| 5/8 .627 | 3/4 .753 | 1-1/4 | B913-10 | 34816 | |
| | | 1-1/2 | B913-12 | 34818 | |
| | | 1/2 | B1012-4 | 34820 | |
| | | 5/8 | B1012-5 | 34822 | |
| | | 3/4 | B1012-6 | 34824 | |
| | | 7/8 | B1012-7 | 34826 | |
| | 13/16 .815 | 1 | 1 | B1012-8 | 34828 |
| | | | 1-1/8 | B1012-9 | 34830 |
| | | | 1-1/4 | B1012-10 | 34834 |
| | | | 1-1/2 | B1012-12 | 34832 |
| | | | 1/2 | B1013-4 | 34836 |
| | | | 5/8 | B1013-5 | 34838 |
| 5/8 .628 | 1 1.003 | 3/4 | B1013-6 | 34840 | |
| | | 7/8 | B1013-7 | 35400 | |
| | | 1 | B1013-8 | 34842 | |
| | | 1-1/4 | B1013-10 | 34844 | |
| | | 1-1/2 | B1013-12 | 34846 | |
| | | 2 | B1013-16 | 34848 | |
| | 7/8 .878 | 1 | 5/8 | B1014-5 | 34850 |
| | | | 3/4 | B1014-6 | 34852 |
| | | | 7/8 | B1014-7 | 34854 |
| | | | 1 | B1014-8 | 34856 |
| | | | 1-1/4 | B1014-10 | 34858 |
| | | | 1-1/2 | B1014-12 | 34860 |
| 11/16 .690 | 7/8 .878 | 1-3/4 | B1014-14 | 34862 | |
| | | 2 | B1014-16 | 34864 | |
| | | 1/2 | B1016-4 | 34866 | |
| | | 5/8 | B1016-5 | 34868 | |
| | | 3/4 | B1016-6 | 34870 | |
| | | 7/8 | B1016-7 | 34872 | |
| | 15/16 .9405 | 1 | 1 | B1016-8 | 34874 |
| | | | 1-1/4 | B1016-10 | 34876 |
| | | | 1-1/2 | B1016-12 | 34878 |
| | | | 1-3/4 | B1016-14 | 34880 |
| | | | 2 | B1016-16 | 34882 |
| | | | 3/4 | B1114-6 | 34884 |
| 3/4 .753 | 7/8 .878 | 1 | B1114-8 | 34886 | |
| | | 1-1/4 | B1114-10 | 34888 | |
| | | 1-1/2 | B1114-12 | 34890 | |
| | | 1-3/4 | B1114-14 | 34892 | |
| | | 2 | B1114-16 | 34894 | |
| | | 1/2 | B1214-4 | 34896 | |
| | 15/16 .9405 | 1 | 5/8 | B1214-5 | 34898 |
| | | | 3/4 | B1214-6 | 34900 |
| | | | 7/8 | B1214-7 | 34902 |
| | | | 1 | B1214-8 | 34904 |
| | | | 1-1/4 | B1214-10 | 34906 |
| | | | 1-1/2 | B1214-12 | 34908 |
| 1 1.004 | 1 | 1-5/8 | B1214-13 | 34910 | |
| | | 1/2 | B1215-4 | 34912 | |
| | | 5/8 | B1215-5 | 34914 | |
| | | 3/4 | B1215-6 | 34916 | |
| | | 7/8 | B1215-7 | 34918 | |
| | | 1 | B1215-8 | 34920 | |
| | 1 1.003 | 1 | 1-1/4 | B1215-10 | 34922 |
| | | | 1-1/2 | B1215-12 | 34924 |
| | | | 1-3/4 | B1215-14 | 34926 |
| | | | 2 | B1215-16 | 34928 |
| | | | 1/2 | B1216-4 | 34930 |
| | | | 5/8 | B1216-5 | 34932 |
| 1 1.003 | 1 | 3/4 | B1216-6 | 34934 | |
| | | 7/8 | B1216-7 | 34936 | |
| | | 1 | B1216-8 | 34938 | |
| | | 1-1/8 | B1216-9 | 34940 | |
| | | 1-1/4 | B1216-10 | 34942 | |
| | | 1-1/2 | B1216-12 | 34944 | |
| | 1 1.003 | 1 | 1-3/4 | B1216-14 | 34946 |
| | | | 2 | B1216-16 | 34948 |
| | | | 2-1/2 | B1216-20 | 34950 |

| A | B | C | Catalog Number | Item Code | |
|-----------------|------------------|-------|----------------|-----------|-------|
| 3/4 .753 | 1-1/8 1.128 | 1/2 | B1218-4 | 34952 | |
| | | 3/4 | B1218-6 | 34954 | |
| | | 1 | B1218-8 | 34956 | |
| | | 1-1/4 | B1218-10 | 34958 | |
| | | 1-1/2 | B1218-12 | 34960 | |
| | | 1-3/4 | B1218-14 | 34962 | |
| | 1-1/4 1.253 | 2 | 1-1/2 | B1218-16 | 34964 |
| | | | 3/4 | B1220-6 | 34966 |
| | | | 1 | B1220-8 | 34968 |
| | | | 1-1/4 | B1220-10 | 34970 |
| | | | 1-1/2 | B1220-12 | 34972 |
| | | | 2 | B1220-16 | 34976 |
| 13/16 .8155 | 1 1.003 | 3/4 | B1316-6 | 34978 | |
| | | 1 | B1316-8 | 34980 | |
| | | 1-1/4 | B1316-10 | 34982 | |
| | | 1-1/2 | B1316-12 | 34984 | |
| | | 1-3/4 | B1316-14 | 34986 | |
| | | 2 | B1316-16 | 34988 | |
| | 1 1.003 | 1 | 3/4 | B1416-6 | 34990 |
| | | | 7/8 | B1416-7 | 34992 |
| | | | 1 | B1416-8 | 34994 |
| | | | 1-1/4 | B1416-10 | 34996 |
| | | | 1-1/2 | B1416-12 | 34998 |
| | | | 3/4 | B1418-6 | 35000 |
| 7/8 .878 | 1-1/8 1.128 | 7/8 | B1418-7 | 35002 | |
| | | 1 | B1418-8 | 35004 | |
| | | 1-1/8 | B1418-9 | 35006 | |
| | | 1-1/4 | B1418-10 | 35008 | |
| | | 1-3/8 | B1418-11 | 35010 | |
| | | 1-1/2 | B1418-12 | 35012 | |
| | 1-1/4 1.253 | 2 | 1-3/4 | B1418-14 | 35014 |
| | | | 2 | B1418-16 | 35016 |
| | | | 2-1/2 | B1418-20 | 35018 |
| | | | 3/4 | B1420-6 | 35020 |
| | | | 1 | B1420-8 | 35022 |
| | | | 1-1/4 | B1420-10 | 35024 |
| 15/16 .9405 | 1-3/16 1.1905 | 1-1/2 | B1420-12 | 35026 | |
| | | 2 | B1420-16 | 35028 | |
| | | 3/4 | B1519-6 | 35030 | |
| | | 1 | B1519-8 | 35032 | |
| | | 1-1/4 | B1519-10 | 35034 | |
| | | 1-1/2 | B1519-12 | 35036 | |
| | 1-1/8 1.128 | 2 | 1-3/4 | B1519-16 | 35038 |
| | | | 3/4 | B1520-6 | 35040 |
| | | | 1 | B1520-8 | 35042 |
| | | | 1-1/4 | B1520-10 | 35044 |
| | | | 1-3/4 | B1520-14 | 35048 |
| | | | 2 | B1520-16 | 35050 |
| 1 1.004 | 1-1/8 1.128 | 3/4 | B1618-6 | 35052 | |
| | | 1 | B1618-8 | 35054 | |
| | | 1-1/4 | B1618-10 | 35056 | |
| | | 1-1/2 | B1618-12 | 35058 | |
| | | 1-3/4 | B1618-14 | 35060 | |
| | | 2 | B1618-16 | 35062 | |
| | 1-3/16 1.190 | 2 | 3/4 | B1619-6 | 13593 |
| | | | 1 | B1619-8 | 13595 |
| | | | 1-1/4 | B1619-10 | 13597 |
| | | | 1-1/2 | B1619-12 | 13599 |
| | | | 1-3/4 | B1619-14 | 13601 |
| | | | 2 | B1619-16 | 13603 |
| 1 1.004 | 1-1/4 1.253 | 3/4 | B1620-6 | 35064 | |
| | | 7/8 | B1620-7 | 35066 | |
| | | 1 | B1620-8 | 35068 | |
| | | 1-1/4 | B1620-10 | 35070 | |
| | | 1-3/8 | B1620-11 | 35072 | |
| | | 1-1/2 | B1620-12 | 35074 | |
| | 1-5/16 1.3155 | 3 | 1-3/4 | B1620-14 | 35076 |
| | | | 2 | B1620-16 | 35078 |
| | | | 2-1/4 | B1620-18 | 35080 |
| | | | 2-1/2 | B1620-20 | 35082 |
| | | | 3 | B1620-24 | 35084 |
| | | | 1 | B1621-8 | 35086 |
| 1-1/2 1.3155 | 3 | 1-1/4 | B1621-10 | 35088 | |
| | | 1-1/2 | B1621-12 | 35090 | |
| | | 1-3/4 | B1621-14 | 35092 | |
| | | 2 | B1621-16 | 35094 | |
| | | 2-1/2 | B1621-20 | 35096 | |
| | | 3 | B1621-24 | 35098 | |



STANDARD TOLERANCES

| DIMENSIONS | TOLERANCE |
|------------|-------------------------------|
| A | 1/8 - 1 1/2 1 3/4 - 2 1/2 |
| B | 2 3/4 - 3 1/2 |
| C | 1/8 - 1 1/2 1 3/4 - 3 4 |

CONCENTRICITY

| DIMENSIONS | TOLERANCE |
|------------|---|
| A | 1/8 - 1 1/2 1 5/8 - 3 3 1/4 - 3 1/2 |

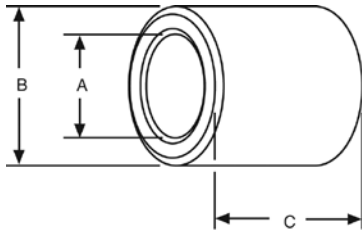
Prices on unlisted sizes and other Boston Gear powder metal parts provided on request.

On A and B dimensions, tolerances apply to actual (decimal) dimensions.

BOST-BRONZ Oil-Impregnated Sintered Bronze Bearings

Plain Cylindrical Bearings

F



STANDARD TOLERANCES

| DIMENSIONS | | TOLERANCE |
|------------|---------------|-----------------|
| A | 1/8 – 1 1/2 | + .000, – .001 |
| | 1 3/4 – 2 1/2 | + .000, – .0015 |
| B | 2 3/4 – 3 1/2 | + .000, – .002 |
| | 1/8 – 1 1/2 | ± .005 |
| C | 1 3/4 – 3 | ± .0075 |
| | 4 | ± .010 |

CONCENTRICITY

| DIMENSIONS | | TOLERANCE |
|------------|---------------|-----------|
| A | 1/8 – 1 1/2 | .003 |
| | 1 5/8 – 3 | .004 |
| | 3 1/4 – 3 1/2 | .005 |

Prices on unlisted sizes and other Boston Gear powder metal parts provided on request.

ALL DIMENSIONS IN INCHES
ORDER BY CATALOG NUMBER OR ITEM CODE

| A | B | C | Catalog Number | Item Code | A | B | C | Catalog Number | Item Code |
|------------------|------------------|-------|----------------|-----------|-------------------|-----------------|-------|----------------|-----------|
| 1 1.003 | 1-3/8 1.378 | 1 | B1622-8 | 35100 | 1-7/16 1.4405 | 1-3/4 1.753 | 1 | B2328-8 | 35252 |
| | | 1-1/4 | B1622-10 | 35102 | | | 1-1/4 | B2328-10 | 35254 |
| | | 1-1/2 | B1622-12 | 35104 | | | 1-1/2 | B2328-12 | 35256 |
| | | 1-3/4 | B1622-14 | 35106 | | | 1-3/4 | B2328-14 | 35258 |
| | | 2 | B1622-16 | 35108 | | | 2 | B2328-16 | 35260 |
| | | 2-1/2 | B1622-20 | 35110 | | | 2-1/2 | B2328-20 | 35262 |
| 1-1/2 1.503 | 1-1/2 1.503 | 3 | B1622-24 | 35112 | 1-1/2 1.503 | 1-3/4 1.753 | 3 | B2328-24 | 35264 |
| | | 1-1/2 | B1624-8 | 35114 | | | 1 | B2428-8 | 35266 |
| | | 1-1/2 | B1624-12 | 35118 | | | 1-1/4 | B2428-10 | 35268 |
| | | 2 | B1624-16 | 35120 | | | 1-1/2 | B2428-12 | 35270 |
| | | 2-1/2 | B1624-20 | 35122 | | | 2 | B2428-16 | G00602 |
| | | 3 | B1624-24 | 35124 | | | 2-1/2 | B2428-20 | 35274 |
| 1-1/16 1.0655 | 1-5/16 1.3155 | 1 | B1721-8 | 35126 | 1-13/16 1.816 | 1-7/8 1.878 | 3 | B2428-24 | 35276 |
| | | 1-1/2 | B1721-12 | 35128 | | | 1-1/2 | B2429-12 | 35278 |
| | | 2 | B1721-16 | 35130 | | | 3 | B2429-24 | 35280 |
| | | 2-1/2 | B1721-20 | 35132 | | | 1-1/2 | B2430-12 | 35282 |
| | | 1-1/4 | B1820-8 | 13605 | | | 2 | B2430-16 | 35284 |
| | | 1-1/4 | B1820-10 | 13639 | | | 3 | B2430-20 | 35286 |
| 1-1/8 1.129 | 1-1/4 1.254 | 1-1/2 | B1820-12 | 13641 | 1-1/2 1.503 | 1-7/8 1.878 | 3 | B2430-24 | 35288 |
| | | 1 | B1821-8 | 35134 | | | 1 | B2432-8 | 35290 |
| | | 1-1/4 | B1821-10 | 35136 | | | 1-1/2 | B2432-12 | 35292 |
| | | 1-1/2 | B1821-12 | 35138 | | | 2 | B2432-16 | 35294 |
| | | 2 | B1821-16 | 35140 | | | 2-1/2 | B2432-20 | 35296 |
| | | 3/4 | B1822-6 | 35142 | | | 3 | B2432-24 | 35298 |
| 1-1/2 1.503 | 1-3/8 1.378 | 1 | B1822-8 | 35144 | 1-5/8 1.628 | 1-7/8 1.878 | 1 | B2630-10 | 35300 |
| | | 1-1/4 | B1822-10 | 35146 | | | 1-1/2 | B2630-12 | 35302 |
| | | 1-1/2 | B1822-12 | 35148 | | | 2 | B2630-16 | 35304 |
| | | 1-3/4 | B1822-14 | 35150 | | | 2-1/2 | B2630-20 | 35306 |
| | | 2 | B1822-16 | 35152 | | | 3 | B2630-24 | 35308 |
| | | 2-1/2 | B1822-20 | 35154 | | | 1 | B2632-8 | 35310 |
| 1-3/16 1.1905 | 1-1/2 1.503 | 3 | B1822-24 | 35156 | 1-3/4 1.753 | 2-1/8 2.129 | 2 | B2632-16 | 35312 |
| | | 1 | B1824-8 | 35158 | | | 3 | B2632-24 | 35314 |
| | | 1-1/2 | B1824-12 | 35160 | | | 2 | B2735-14 | 35316 |
| | | 2 | B1824-16 | 35162 | | | 3 | B2735-16 | 35318 |
| | | 1-1/4 | B1923-10 | 35164 | | | 4 | B2735-24 | 35322 |
| | | 1-1/4 | B1923-12 | 35166 | | | 2 | B2832-16 | 35324 |
| 1-1/4 1.254 | 1-1/2 1.503 | 2 | B1923-16 | 35168 | 1-15/16 1.9405 | 2-5/16 2.316 | 3 | B2832-20 | 35326 |
| | | 3 | B1923-24 | 35170 | | | 2-1/2 | B2832-24 | 35328 |
| | | 1 | B1924-8 | 35172 | | | 1-1/2 | B2834-12 | 35330 |
| | | 1-1/4 | B1924-10 | 35174 | | | 2 | B2834-16 | 35332 |
| | | 1-1/2 | B1924-12 | 35176 | | | 3 | B2834-24 | 35334 |
| | | 1-3/4 | B1924-14 | 35178 | | | 2 | B3137-16 | 35336 |
| 1-5/16 1.3155 | 1-5/8 1.628 | 2 | B1924-16 | 35180 | 2 2.003 | 2-3/8 2.379 | 3 | B3137-24 | 35338 |
| | | 2-1/2 | B1924-20 | 35182 | | | 4 | B3137-32 | 35340 |
| | | 3 | B1924-24 | 35184 | | | 1-3/4 | B3238-14 | 35342 |
| | | 1 | B2024-8 | 35186 | | | 2 | B3238-16 | 35344 |
| | | 1-1/8 | B2024-9 | 35188 | | | 2-3/4 | B3238-22 | 35346 |
| | | 1-1/4 | B2024-10 | 35190 | | | 3 | B3238-24 | 35348 |
| 1-1/2 1.503 | 1-5/8 1.628 | 1-1/2 | B2024-11 | 35192 | 2-1/4 2.254 | 2-3/4 2.754 | 4 | B3238-32 | 35350 |
| | | 1-1/2 | B2024-12 | 35194 | | | 1 | B3240-8 | 35352 |
| | | 1-5/8 | B2024-13 | 35196 | | | 2 | B3240-16 | 35354 |
| | | 1-3/4 | B2024-14 | 35198 | | | 3 | B3240-24 | 35356 |
| | | 2 | B2024-16 | 35200 | | | 2 | B3644-16 | 35364 |
| | | 2-1/4 | B2024-18 | 35202 | | | 3 | B3644-24 | 35366 |
| 1-5/16 1.3155 | 1-5/8 1.628 | 2-1/2 | B2024-20 | 35204 | 2-3/8 2.379 | 2-3/4 2.754 | 4 | B3844-16 | 35370 |
| | | 3 | B2024-24 | 35206 | | | 3 | B3844-24 | 35372 |
| | | 1 | B2026-8 | 35208 | | | 4 | B3844-32 | 35374 |
| | | 1-1/4 | B2026-10 | 35210 | | | 2 | B4048-16 | 35382 |
| | | 1-1/2 | B2026-12 | 35212 | | | 3 | B4048-24 | 35384 |
| | | 1-3/4 | B2026-14 | 35214 | | | 4 | B4048-32 | 35386 |
| 1-3/8 1.378 | 1-3/4 1.753 | 2 | B2026-16 | 35216 | 3 3.004 | 3-1/4 3.255 | 2 | B4452-16 | 35388 |
| | | 2-1/2 | B2026-20 | 35218 | | | 3 | B4452-24 | 35390 |
| | | 3 | B2026-24 | 35220 | | | 4 | B4452-32 | 35392 |
| | | 1-1/4 | B2126-10 | 35222 | | | 2 | B4856-16 | 35394 |
| | | 1-1/2 | B2126-12 | 35224 | | | 3 | B4856-24 | 35396 |
| | | 2 | B2126-16 | 35226 | | | 4 | B4856-32 | 35398 |
| 1-3/8 1.378 | 1-3/4 1.753 | 2-1/2 | B2126-20 | 35228 | 1-1/2 1.503 | 1-3/4 1.753 | 3 | B2226-12 | 35234 |
| | | 3 | B2126-24 | 35230 | | | 2 | B2226-16 | 35236 |
| | | 1 | B2226-8 | 35238 | | | 3 | B2226-20 | 35240 |
| | | 1-1/4 | B2228-8 | 35242 | | | 1 | B2228-8 | 35242 |
| | | 1-1/2 | B2228-12 | 35244 | | | 1-1/2 | B2228-12 | 35244 |
| | | 2 | B2228-16 | 35246 | | | 2 | B2228-16 | 35246 |
| 1-1/16 1.0655 | 1-5/16 1.3155 | 2-1/2 | B2228-20 | 35248 | 1-1/2 1.503 | 1-3/4 1.753 | 3 | B2228-24 | 35248 |
| | | 3 | B2228-24 | 35250 | | | 2-1/2 | B2228-20 | 35248 |
| | | 1 | B2228-8 | 35242 | | | 3 | B2228-24 | 35250 |
| | | 1-1/2 | B2228-12 | 35244 | | | | | |
| | | 2 | B2228-16 | 35246 | | | | | |
| | | 2-1/2 | B2228-20 | 35248 | | | | | |

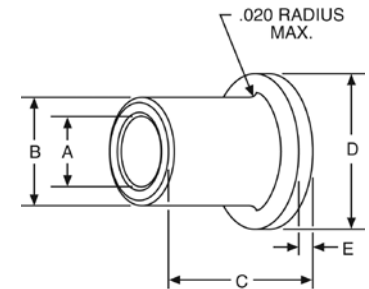
On A and B dimensions, tolerances apply to actual (decimal) dimensions.

BOST-BRONZ Oil-Impregnated Sintered Bronze Bearings

Flanged Type

ALL DIMENSIONS IN INCHES
ORDER BY CATALOG NUMBER OR ITEM CODE

| A | B | C | D | E | Catalog Number | Item Code | |
|--------------|--|---------------------------------|---------|----------|--|---|-------|
| 1/8 .127 | 5/16 .315 | 1/4 3/8 | .375 | 3/64 | FB25-2 FB25-3 | 35516 35518 | |
| 3/16 .189 | 5/16 .3145 | 1/8 1/4 3/8 | .375 | 3/64 | FB35-1 FB35-2 FB35-3 | 35520 35522 35524 | |
| 1/4 .252 | 3/8 .377 | 1/4 3/8 1/2 5/8 3/4 | .500 | 3/64 | FB46-2 FB46-3 FB46-4 FB46-5 FB46-6 | 35526 35528 35530 35532 35534 | |
| 5/16 .314 | 3/8 .377 | 3/8 | .500 | 3/64 | FB56-3 | 35536 | |
| | 7/16 .439 | 3/8 | .625 | 3/32 | FB57-3 | 35538 | |
| | | 1/2 | | | FB57-4 | 69191 | |
| | | 5/8 | | | FB57-5 | 69192 | |
| | | 3/4 | | | FB57-6 | 35540 | |
| | | 7/8 | | | FB57-7 | 69193 | |
| | 1 | FB57-8 | 69194 | | | | |
| | 1/2 .502 | 3/8 1/2 5/8 | .688 | 3/32 | FB58-3 FB58-4 FB58-5 | 35542 35544 35546 | |
| 3/8 .377 | 1/2 .502 | 3/8 | .688 | 3/32 | FB68-3 | 35548 | |
| | | 13/32 | | | FB68-3 1/4 | 35550 | |
| | | 1/2 | | | FB68-4 | 35552 | |
| | | 5/8 | | | FB68-5 | 35554 | |
| | | 3/4 | | | FB68-6 | 35556 | |
| | 7/8 | FB68-7 | 69195 | | | | |
| | 1 | FB68-8 | 35558 | | | | |
| | 1-1/4 | FB68-10 | 35560 | | | | |
| | 9/16 .5645 | 1/2 3/4 1-1/4 | .750 | 1/8 | FB69-4 | 69196 | |
| | | | | | FB69-6 | 35562 | |
| FB69-10 | | | | | 35564 | | |
| 5/8 .627 | 3/8 1/2 5/8 3/4 1 1-1/4 | .875 | 1/8 | FB610-3 | 69197 | | |
| | | | | FB610-4 | 35566 | | |
| | | | | FB610-5 | 39198 | | |
| | | | | FB610-6 | 35568 | | |
| | | | | FB610-8 | 69199 | | |
| FB610-10 | 35570 | | | | | | |
| 3/4 .753 | 1/2 | 1.000 | 1/8 | FB612-4 | 35572 | | |
| 7/16 .439 | 9/16 .565 | 1/2 5/8 3/4 | .688 | 1/16 | FB79-4 | 13611 | |
| | | | | | FB79-5 | 13613 | |
| | | | | | FB79-6 | 13615 | |
| 5/8 .628 | 5/8 3/4 1-1/4 | .875 | 1/8 | FB710-5 | 35574 | | |
| | | | | FB710-6 | 69200 | | |
| | | | | FB710-10 | 35576 | | |
| 1/2 .502 | 5/8 .628 | 1/2 | .875 | 1/8 | FB810-4 | 35578 | |
| | | 5/8 | | | FB810-5 | 35580 | |
| | | 3/4 | | | FB810-6 | 35582 | |
| | | 7/8 | | | FB810-7 | 69201 | |
| | | 1 | | | FB810-8 | 35584 | |
| | | 1-1/4 | | | FB810-10 | 35586 | |
| | | 1-1/2 | | | FB810-12 | 35588 | |
| | 1-3/4 | FB810-14 | 35590 | | | | |
| | 11/16 .690 | 1/2 5/8 3/4 | .938 | 1/8 | FB811-4 | 35592 | |
| | | | | | FB811-5 | 69202 | |
| | | | | | FB811-6 | 35594 | |
| | | 3/4 .753 | 1/2 | 1.000 | 1/8 | FB812-4 | 35596 |
| | | | 5/8 | | | FB812-5 | 69203 |
| | | | 3/4 | | | FB812-6 | 35598 |
| 7/8 | | | FB812-7 | | | 35600 | |
| 1 | FB812-8 | 35602 | | | | | |
| 1-1/4 | FB812-10 | 35604 | | | | | |
| 1-1/2 | FB812-12 | 35606 | | | | | |
| 9/16 .565 | 3/4 .753 | 1/2 3/4 1 | 1.000 | 1/8 | FB912-4 FB912-6 FB912-8 | 69204 69205 35608 | |



STANDARD TOLERANCES

| DIMENSIONS | TOLERANCE | |
|------------|------------------------------|-----------------------------------|
| A | 1/8 - 1 1/2 1 3/4 - 2 1/2 | + .000, - .001 + .000, - .0015 |
| B | 2 3/4 - 3 1/2 | + .000, - .002 |
| C | 1/8 - 1 1/2 | ± .005 |
| | 1 3/4 - 3 | ± .0075 |
| | 4 | ± .010 |
| D | 3/8 - 1 1/4 | ± .005 |
| | 1 3/8 - 2 1/2 | ± .010 |
| | 4 | ± .015 |
| E | 3/8 - 1 1/4 | ± .0025 |
| | 1 3/8 - 2 1/2 | ± .005 |
| | 4 | ± .010 |

CONCENTRICITY

| DIMENSIONS | TOLERANCE | |
|------------|---------------|------|
| A | 1/8 - 1 1/2 | .003 |
| | 1 5/8 - 3 | .004 |
| | 3 1/4 - 3 1/2 | .005 |

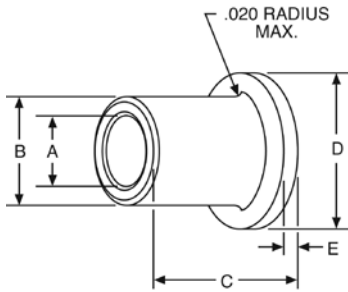
Prices on unlisted sizes and other Boston Gear powder metal parts provided on request.

On A and B dimensions, tolerances apply to actual (decimal) dimensions.

BOST-BRONZ Oil-Impregnated Sintered Bronze Bearings

Flanged Type

F



STANDARD TOLERANCES

| DIMENSIONS | TOLERANCE |
|--|-----------------------------------|
| A 1/8 - 1 1/2 1 3/4 - 2 1/2 | + .000, - .001 + .000, - .0015 |
| B 2 3/4 - 3 1/2 | + .000, - .002 |
| C 1/8 - 1 1/2 1 3/4 - 3 4 | ± .005 ± .0075 ± .010 |
| D 3/8 - 1 1/4 1 3/8 - 2 1/2 4 | ± .005 ± .010 ± .015 |
| E 3/8 - 1 1/4 1 3/8 - 2 1/2 4 | ± .0025 ± .005 ± .010 |

CONCENTRICITY

| DIMENSIONS | TOLERANCE |
|--|----------------------|
| A 1/8 - 1 1/2 1 5/8 - 3 3 1/4 - 3 1/2 | .003 .004 .005 |

Prices on unlisted sizes and other Boston Gear powder metal parts provided on request.

ALL DIMENSIONS IN INCHES ORDER BY CATALOG NUMBER OR ITEM CODE

| A | B | C | D | E | Catalog Number | Item Code | |
|----------------|----------------|------------|-------|-------|----------------|-----------|-------|
| 5/8 .626 | 3/4 .753 | 1/2 | 1.000 | 1/8 | FB1012-4 | 35610 | |
| | | 5/8 | | | FB1012-5 | 35612 | |
| | | 3/4 | | | FB1012-6 | 35614 | |
| | | 1 | | | FB1012-8 | 35616 | |
| | | 1-1/4 | | | FB1012-10 | 35618 | |
| 5/8 .627 | 13/16 .815 | 5/8 | 1.063 | 5/32 | FB1013-5 | 69206 | |
| | | 3/4 | | | FB1013-6 | 35620 | |
| | | 1 | | | FB1013-8 | 35622 | |
| | | 1-1/4 | | | FB1013-10 | 35624 | |
| | | 1-7/16 | | | FB1013-11 1/2 | 35626 | |
| | 1-1/2 | FB1013-12 | 35628 | | | | |
| | 2 | FB1013-16 | 35630 | | | | |
| | 7/8 .878 | 1 1.003 | 5/8 | 1.125 | 5/32 | FB1014-5 | 69207 |
| | | | 3/4 | | | FB1014-6 | 35632 |
| | | | 1 | | | FB1014-8 | 35634 |
| 1-3/4 | FB1014-14 | 35636 | | | | | |
| 3/4 .752 | 7/8 .878 | 3/4 | 1.125 | 5/32 | FB1214-6 | 35644 | |
| | | 1 | | | FB1214-8 | 35646 | |
| | | 1-1/4 | | | FB1214-10 | 69209 | |
| | 15/16 .940 | 1 | 1.188 | 5/32 | FB1215-8 | 35648 | |
| | | 1-1/4 | | | FB1215-10 | 69213 | |
| | | 1-1/2 | | | FB1215-12 | 35650 | |
| | 1 1.003 | 1 1.003 | 5/8 | 1.250 | 5/32 | FB1216-5 | 69214 |
| | | | 3/4 | | | FB1216-6 | 35652 |
| | | | 1 | | | FB1216-8 | 35654 |
| | | | 1-1/4 | | | FB1216-10 | 35656 |
| 1-1/2 | FB1216-12 | 35658 | | | | | |
| 2 | FB1216-16 | 35660 | | | | | |
| 7/8 .877 | 1 1.003 | 3/4 | 1.250 | 5/32 | FB1416-6 | 35662 | |
| | | 1 | | | FB1416-8 | 69210 | |
| | | 1-1/4 | | | FB1416-10 | 35664 | |
| 1-1/8 1.128 | 1 1.128 | 1 | 1.375 | 5/32 | FB1418-8 | 35666 | |
| | | 1-1/4 | | | FB1418-10 | 69211 | |
| | | 1-1/2 | | | FB1418-12 | 35668 | |
| 1 1.002 | 1-1/4 1.253 | 3/4 | 1.500 | 3/16 | FB1620-6 | 35672 | |
| | | 1 | | | FB1620-8 | 35674 | |
| | | 1-1/4 | | | FB1620-10 | 35676 | |
| | | 1-1/2 | | | FB1620-12 | 35678 | |
| 1-3/8 1.378 | 1-1/2 1.378 | 1-3/4 | 1.625 | 3/16 | FB1620-16 | 35680 | |
| 1-3/8 1.378 | 1-3/8 1.378 | 3/4 | 1.625 | 3/16 | FB1622-8 | 35682 | |
| | | 1 | | | FB1622-12 | 69215 | |
| | | 1-3/4 | | | FB1622-14 | 35684 | |
| 1-1/8 1.127 | 1-3/8 1.377 | 3/4 | 1.750 | 1/8 | FB1822-6 | 13617 | |
| | | 1 | | | FB1822-8 | 13619 | |
| | | 1-1/4 | | | FB1822-10 | 13621 | |
| 1-1/4 1.252 | 1-1/2 1.503 | 1 | 1.750 | 3/16 | FB2024-8 | 69216 | |
| | | 1-1/4 | | | FB2024-10 | 35686 | |
| | | 1-1/2 | | | FB2024-12 | 69217 | |
| 1-3/8 1.377 | 1-5/8 1.628 | 3/4 | 2.000 | 1/8 | FB2226-6 | 13623 | |
| | | 1 | | | FB2226-8 | 13625 | |
| 1-1/2 1.503 | 1-3/4 1.754 | 1-1/2 | 2.063 | 3/16 | FB2428-12 | 35688 | |
| | | 2 | | | FB3236-6 | 13627 | |
| 2 2.003 | 2-1/4 2.254 | 3/4 | 2.500 | 1/8 | FB3236-8 | 13629 | |
| | | 1 | | | FB3236-10 | 13631 | |
| 1-1/4 | 3-1/4 | 1-1/2 | 4.000 | 3/16 | FB4452-12 | 13635 | |

On A and B dimensions, tolerances apply to actual (decimal) dimensions.

BOST-BRONZ Oil-Impregnated Sintered Bronze Bearings

ALL DIMENSIONS IN INCHES
ORDER BY CATALOG NUMBER OR ITEM CODE

Thrust Type

| A | B | C | Catalog Number | Item Code |
|--------------|-----------------|------|----------------|-----------|
| 1/4 .255 | 7/16 .4375 | 1/16 | TB47 | 13515 |
| | 1/2 .500 | 1/16 | TB48 | 13517 |
| | 5/8 .625 | 1/16 | TB410 | 35766 |
| 5/16 .315 | 5/8 .625 | 1/16 | TB510 | 13519 |
| | 3/4 .750 | 1/16 | TB512 | 35768 |
| 3/8 .385 | 5/8 .625 | 1/16 | TB610 | 13521 |
| 3/8 .380 | 3/4 .750 | 1/32 | TB612 | 35770 |
| | 3/4 .750 | 1/8 | TB612-2 | 13523 |
| 7/16 .440 | 3/4 .750 | 1/16 | TB712 | 69218 |
| 1/2 .505 | 3/4 .750 | 1/16 | TB812 | 35772 |
| 1/2 .505 | 7/8 .875 | 3/16 | TB814 | 35774 |
| 1/2 .510 | 1 1.000 | 1/16 | TB816 | 35776 |
| 9/16 .565 | 1-1/4 1.250 | 1/8 | TB920 | 35778 |
| 5/8 .628 | 1 1.000 | 1/8 | TB1016 | 35780 |
| | 1-3/16 1.187 | 3/32 | TB1019 | 35782 |
| | 1-1/4 1.250 | 1/8 | TB1020 | 69219 |
| 5/8 .6265 | 1-1/2 1.500 | 1/8 | TB1024 | 69220 |
| 3/4 .753 | 1-1/4 1.250 | 1/8 | TB1220 | 69221 |
| | 1-3/8 1.375 | 1/8 | TB1222 | 69222 |

On A and B dimensions, tolerances apply to actual (decimal) dimensions.

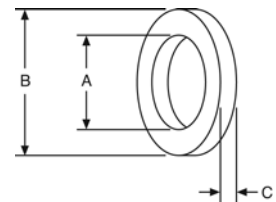
BOST-BRONZ is stocked in this convenient Plate form for ease in machining to required bearing size or shape — at your service for all emergencies.

| A | B | C | Catalog Number | Item Code |
|-----------------|------------------|------|----------------|-----------|
| 3/4 .765 | 1-9/16 1.562 | 3/32 | TB1225 | 35784 |
| | 1-3/4 1.750 | 1/8 | TB1228 | 35786 |
| 7/8 .8905 | 1-1/2 1.500 | 1/8 | TB1424 | 35788 |
| | 2 2.000 | 1/8 | TB1432 | 13525 |
| 7/8 .8905 | 2-1/8 2.125 | 1/8 | TB1434 | 35790 |
| | 1-1/2 1.500 | 1/8 | TB1624 | 35792 |
| 1 1.003 | 1.500 | 3/16 | TB1624-3 | 13527 |
| 1 1.0155 | 1-5/8 1.625 | 1/4 | TB1626-4 | 13529 |
| 1 1.0120 | 1-3/4 1.750 | 1/8 | TB1628 | 13531 |
| 1 1.016 | 2 2.000 | 1/8 | TB1632 | 35794 |
| 1 1.0155 | 2-7/8 2.875 | 1/8 | TB1646 | 13533 |
| 1-1/8 1.140 | 1-7/8 1.875 | 1/8 | TB1830 | 13535 |
| 1-1/4 1.253 | 1-3/4 1.750 | 1/8 | TB2028 | 35796 |
| 1-1/4 1.265 | 2 2.000 | 1/8 | TB2032 | 13537 |
| | 2-3/8 2.375 | 1/8 | TB2038 | 13539 |
| | 3-5/16 3.312 | 1/8 | TB2053 | 13541 |
| 1-3/8 1.379 | 1-15/16 1.940 | 1/8 | TB2231 | 13543 |
| 1-1/2 1.503 | 2 2.000 | 1/8 | TB2432 | 13545 |
| 1-1/2 1.505 | 2-1/2 2.505 | 1/8 | TB2440 | 13547 |
| 1-1/2 1.510 | 3-1/2 3.500 | 3/16 | TB2456 | 35798 |
| 1-9/16 1.578 | 2-7/16 2.4375 | 1/8 | TB2539 | 13549 |
| 1-3/4 1.765 | 2-5/8 2.625 | 1/8 | TB2842 | 13551 |
| 2 2.011 | 3 3.000 | 1/4 | TB3248 | 13553 |
| 2 2.031 | 2-5/8 2.625 | 3/16 | TB3258 | 13555 |
| 2-1/16 2.062 | 4 4.000 | 1/8 | TB3364 | 13557 |
| 2-1/2 2.502 | 3-1/4 3.250 | 1/8 | TB4052 | 13559 |

ALL DIMENSIONS IN INCHES
ORDER BY CATALOG NUMBER OR ITEM CODE

| A | B | C | Catalog Number | Item Code |
|-------------------------------|---|---|----------------|-----------|
| 1/8 3/16 1/4 5/16 | 5 | 6 | PB5602 | 35692 |
| | | | PB5603 | 35694 |
| | | | PB5604 | 35696 |
| | | | PB5605 | 35698 |
| 3/8 1/2 5/8 3/4 1 | 5 | 6 | PB5606 | 35700 |
| | | | PB5608 | 35702 |
| | | | PB5610 | 35704 |
| | | | PB5612 | 35706 |
| | | | PB5616 | 35708 |
| 3/16 1/4 | 5 | 8 | PB5803 | 35710 |
| | | | PB5804 | 35712 |

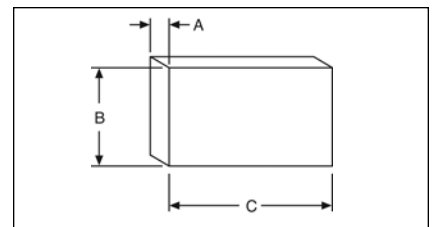
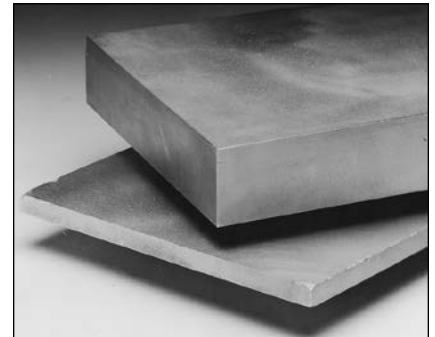
Keep **BOST-BRONZ** plate stock on hand for: Breakdowns – maintenance and repairs – Producing small lots of special sizes – Experimental and development work.



STANDARD TOLERANCES

| DIMENSIONS | TOLERANCE |
|------------|---|
| A | 1/4 – 1 1/4 1 3/8 – 2 1/2 |
| B | 7/16 – 1 1/2 1 9/16 – 3 3 1/4 – 4 |
| C | All |

Plate Stock

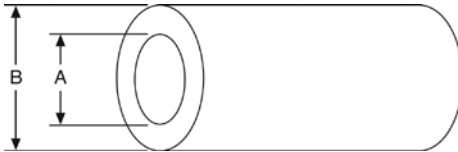
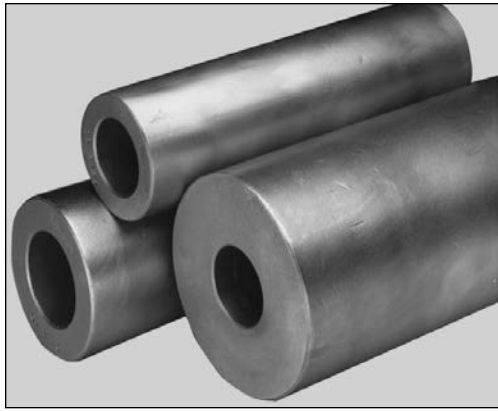


STANDARD TOLERANCES

| DIMENSIONS | TOLERANCE |
|------------|-----------|
| A | All |

BOST-BRONZ Oil-Impregnated Sintered Bronze Bearings

Cored Bars



STANDARD TOLERANCES

| DIMENSIONS | | TOLERANCE |
|------------|-----|-----------|
| A | All | -1/8" |
| B | All | +1/8" |

BOST-BRONZ is stocked in these convenient Bar forms for ease in machining to required bearing size or shape — at your service for all emergencies.

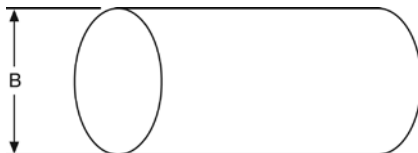
ALL DIMENSIONS IN INCHES ORDER BY CATALOG NUMBER OR ITEM CODE

| A | B | Catalog Number | Item Code |
|-------|-------|----------------|-----------|
| 1/2 | 1 | CB816 | 35402 |
| | 1-1/4 | CB820 | 35404 |
| | 1-1/2 | CB824 | 35406 |
| 5/8 | 1 | CB1016 | 35408 |
| | 1-1/4 | CB1020 | 35410 |
| | 1-3/8 | CB1022 | 35412 |
| | 1-1/2 | CB1024 | 35414 |
| | 1-3/4 | CB1028 | 35416 |
| 3/4 | 1-1/4 | CB1220 | 35418 |
| | 1-1/2 | CB1224 | 35420 |
| | 1-3/4 | CB1228 | 35422 |
| | 2 | CB1232 | 35424 |
| | 2-1/2 | CB1240 | 35426 |
| 7/8 | 1-3/8 | CB1422 | 35428 |
| 1 | 1-1/2 | CB1624 | 35430 |
| | 1-3/4 | CB1628 | 35432 |
| | 2 | CB1632 | 35434 |
| | 2-1/4 | CB1636 | 35436 |
| | 2-1/2 | CB1640 | 35438 |
| | 3 | CB1648 | 35440 |
| 1-1/4 | 1-3/4 | CB2028 | 35442 |
| | 2 | CB2032 | 35444 |
| | 2-1/4 | CB2036 | 35446 |
| | 2-1/2 | CB2040 | 35448 |
| 1-3/8 | 2 | CB2048 | 35450 |
| | 2 | CB2232 | 35452 |
| 1-1/2 | 2 | CB2432 | 35456 |
| | 2-1/4 | CB2436 | 35458 |
| | 2-1/2 | CB2440 | 35460 |
| | 3 | CB2448 | 35462 |
| | 3-1/2 | CB2456 | 35464 |

| A | B | Catalog Number | Item Code |
|-------|-------|----------------|-----------|
| 1-3/4 | 2-1/4 | CB2836 | 35466 |
| | 2-1/2 | CB2840 | 35468 |
| | 2-3/4 | CB2844 | 35470 |
| | 3 | CB2848 | 35472 |
| | 3-1/2 | CB2856 | 35474 |
| 2 | 2-3/4 | CB3244 | 35476 |
| | 3 | CB3248 | 35478 |
| | 3-1/4 | CB3252 | 35480 |
| | 4 | CB3264 | 35482 |
| | 4-1/2 | CB3272 | 35484 |
| 2-1/4 | 5 | CB3280 | 35486 |
| | 3 | CB3648 | 35488 |
| | 3-1/2 | CB3656 | 35490 |
| 2-3/8 | 3-3/4 | CB3660 | 35492 |
| | 3 | CB3848 | 35494 |
| 2-1/2 | 3-1/2 | CB4056 | 35496 |
| 3 | 3-3/4 | CB4860 | 35498 |
| | 4 | CB4864 | 35500 |
| | 5 | CB4880 | 35502 |
| | 6 | CB4896 | 35504 |
| 3-1/2 | 4-3/4 | CB5676 | 35506 |
| 4 | 6 | CB6496 | 35512 |
| 5 | 7 | CB80112 | 35514 |

All bars are 6 1/2" long.

Solid Bars



STANDARD TOLERANCES

| DIMENSIONS | | TOLERANCE |
|------------|-----|-----------|
| B | All | + 1/8" |

ALL DIMENSIONS IN INCHES ORDER BY CATALOG NUMBER OR ITEM CODE

| B | Length | Catalog Number | Item Code |
|-------|--------|----------------|-----------|
| 1/4 | 2 | SB4 | 35714 |
| 3/8 | 3 | SB6 | 35716 |
| 1/2 | 6-1/2 | SB8 | 35718 |
| 5/8 | | SB10 | 35720 |
| 3/4 | | SB12 | 35722 |
| 7/8 | | SB14 | 35724 |
| 1 | | SB16 | 35726 |
| 1-1/8 | 6-1/2 | SB18 | 35728 |
| 1-1/4 | | SB20 | 35730 |
| 1-3/8 | | SB22 | 35732 |
| 1-1/2 | 6-1/2 | SB24 | 35734 |
| 1-5/8 | | SB26 | 35736 |
| 1-3/4 | | SB28 | 35738 |
| 2 | | SB32 | 35742 |
| 2-1/4 | 6-1/2 | SB36 | 35744 |
| 2-1/2 | | SB40 | 35746 |
| 3 | | SB48 | 35748 |
| 3-1/2 | | SB56 | 35750 |
| 4 | | SB64 | 35752 |
| 4-1/2 | 6-1/2 | SB72 | 35754 |
| 5 | | SB80 | 35756 |
| 5-1/2 | | SB88 | 35758 |
| 6 | 6-1/2 | SB96 | 35760 |
| 7 | | SB112 | 35762 |

BEAR-N-BRONZE 660 Cast Bronze Bearings



⚠️ WARNING: Cancer and Reproductive Harm –
www.P65Warnings.ca.gov

The Chemical compositions and physical properties of some of the more popular are listed.

BEAR-N-BRONZ is Boston Gear’s general purpose cast, solid bronze bearing material. It is a high grade, leaded-tin bronze, having good hardness, strength, wear-resistance, and exceptional anti-friction qualities. It is particularly suited for moderate to heavy loads at normal to relatively high speeds.

Quality

BEAR-N-BRONZ is chemically and metallurgically tested to assure conformance to specifications. All parts are rigidly inspected to assure freedom from porosity and conformance to dimensional tolerances.

Adaptability

BEAR-N-BRONZ bearings are completely machined to close tolerances permitting wider housing-bore tolerances. BEAR-N-BRONZ bars are machined all over.

| Composition (%) | | Avg. Tensile Strength (Lbs. Per Sq. In.) | Avg. Yield Strength 0.2% Offset (Lbs. Per Sq. In.) | Elongation in Two Inch (%) | Brinnell Hardness (500 Kg Load) |
|-----------------|----|--|--|----------------------------|---------------------------------|
| Copper (Cu) | 83 | 35,000 | 20,000 | 15 | 60 |
| Tin (Sn) | 7 | Bear-N-Bronz conforms to SAE CA932 (660) and ASTM B584-78 (alloy C93200) specifications. | | | |
| Lead (Pb) | 7 | | | | |
| Zinc (Zn) | 3 | | | | |

| Grade | Equivalent S.A.E. Number | Composition (%) | Average Yield Strength 0.2% Offset (Lbs. Per Sq. In.) | Average Tensile Strength (Lbs. Per Sq. In.) | Elongation in Two Inch (%) | Brinnell Hardness (500 Kg Load) |
|-------------------------------|--------------------------|---|---|---|----------------------------|---------------------------------|
| 206 Leaded Gun Metal | CA927 | Copper (Cu) 88 Tin (Sn) 10 Lead (Pb) 2 | 40,000 | 20,000 | 25 | 70 |
| 210 Gun Metal | CA905 | Copper (Cu) 88 Tin (Sn) 10 Zinc (Zn) 2 | 45,000 | 22,000 | 25 | 65 |
| 305 Phosphor Bronze | CA937 | Copper (Cu) 80 Tin (Sn) 10 Lead (Pb) 10 | 35,000 | 18,000 | 20 | 63 |
| 319 Semi-Plastic Bronze | CA938 | Copper (Cu) 78 Tin (Sn) 7 Lead (Pb) 15 | 30,000 | 17,000 | 15 | 55 |

Selection

In general, sleeve bearings should be selected with a length of one to two times the shaft diameter and an O.D. approximately 25% larger than the shaft diameter.

A general guide to determination of limiting load and velocity values for sleeve bearings has been established by the use of PV calculations. PV represents Pressure x Velocity, for example 100 psi x 20 fpm yields a PV of 2000.

Maximum PV value for BEAR-N-BRONZ bearings: 75,000.

For complete selection and application information, see Engineering Section, Pages 174-182.

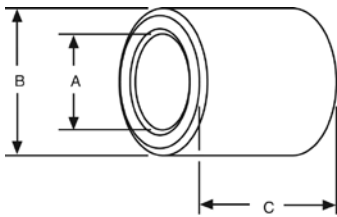
Special Compositions

In addition to our standard BEAR-N-BRONZ (SAE CA 932) material, many special compositions can be furnished on a made-to-order basis.

BEAR-N-BRONZE 660 Cast Bronze Bearings

Plain Cylindrical Bearings

F



STANDARD TOLERANCES

| DIMENSIONS | | TOLERANCE |
|------------|---------------|----------------|
| A | 3/16 - 3 | ±.001 |
| | 3-1/4 - 4-1/2 | ±.0015 |
| B | 5/16 - 3 | +.002 to +.003 |
| | 3-1/8 - 5 | +.003 to +.005 |
| C | All | ±.005 |

STANDARD CONCENTRICITY

| DIMENSIONS | | T.I.R. (A TO B) |
|------------|-----|-----------------|
| A | All | .003 |

For Oil Grooves see Page 179.

ALL DIMENSIONS IN INCHES
ORDER BY CATALOG NUMBER OR ITEM CODE

| A | B | C | Catalog Number | Item Code | A | B | C | Catalog Number | Item Code | | | | | |
|-------|---------|---------|----------------|-----------|---------|----------|----------|----------------|-----------|----------|----------|----------|----------|---------|
| 3/16 | 5/16 | 1/2 | M35-4 | 31308 | 1/2 | 1 | 1-1/2 | M816-12 | 31460 | | | | | |
| | | 3/4 | M35-6 | 31310 | | | 2 | M816-16 | 31462 | | | | | |
| | | 1 | M35-8 | 31312 | | | 2-1/4 | M816-18 | 31464 | | | | | |
| 1/4 | 3/8 | 3/4 | M46-6 | 31314 | 11/16 | 1 | 1 | M911-8 | 31466 | | | | | |
| | | 1 | M46-8 | 31316 | | | 1-1/4 | M911-10 | 31468 | | | | | |
| | | 1-1/4 | M46-10 | 31318 | | | 1-1/2 | M911-12 | 31470 | | | | | |
| | 7/16 | 3/4 | M47-6 | 31320 | | | 1-3/4 | M911-14 | 31472 | | | | | |
| | | 1 | M47-8 | 31322 | | | 2 | M911-16 | 31474 | | | | | |
| | | 1-1/4 | M47-10 | 31324 | | | 2-1/4 | M911-18 | 31476 | | | | | |
| 5/16 | 7/16 | 3/4 | M57-6 | 31326 | 9/16 | 3/4 | 1 | M912-8 | 31480 | | | | | |
| | | 1 | M57-8 | 31328 | | | 1-1/4 | M912-10 | 31482 | | | | | |
| | 1-1/4 | M57-10 | 31330 | 1-1/2 | | | M912-12 | 31484 | | | | | | |
| 3/8 | 1/2 | 3/4 | M68-6 | 31338 | 13/16 | 1 | 1 | M913-8 | 31494 | | | | | |
| | | 1 | M68-8 | 31340 | | | 1-1/4 | M913-10 | 31496 | | | | | |
| | | 1-1/4 | M68-10 | 31342 | | | 1-1/2 | M913-12 | 31498 | | | | | |
| | 9/16 | 1 | 1-1/2 | M68-12 | 31344 | 7/8 | 1-1/2 | 1-3/4 | M913-14 | 31500 | | | | |
| | | | 3/4 | M69-6 | 31346 | | | 2 | M913-16 | 31502 | | | | |
| | | | 1 | M69-8 | 31348 | | | 3/4 | 1 | M914-8 | 31506 | | | |
| | 1-1/4 | M69-10 | 31350 | 1-1/2 | M914-12 | 31508 | | | | | | | | |
| | 2 | M914-16 | 31510 | 2 | M914-16 | 31510 | | | | | | | | |
| | 7/16 | 5/8 | 3/4 | M610-6 | 31362 | 5/8 | 7/8 | 1 | M1012-8 | 31512 | | | | |
| | | | 1 | M610-8 | 31364 | | | 1-1/8 | M1012-9 | 31514 | | | | |
| | | | 1-1/4 | M610-10 | 31366 | | | 1-1/4 | M1012-10 | 31516 | | | | |
| | | 1-1/2 | M610-12 | 31368 | 1-1/2 | | | M1012-12 | 31518 | | | | | |
| 9/16 | | 1 | 1 | M79-8 | 31352 | | | 13/16 | 1-3/4 | 1-3/4 | M1012-14 | 31520 | | |
| | | | 1-1/4 | M79-10 | 31354 | | | | | 2 | M1012-16 | 31522 | | |
| | 1-1/2 | | M79-12 | 31356 | 2-1/4 | M1012-18 | 31524 | | | | | | | |
| 5/8 | 1 | 1 | M710-8 | 31370 | 15/16 | 1 | 2-1/2 | M1012-20 | 31526 | | | | | |
| | | 1-1/4 | M710-10 | 31372 | | | 1 | M1013-8 | 31528 | | | | | |
| | | 1-1/2 | M710-12 | 31374 | | | 1-1/4 | M1013-10 | 31530 | | | | | |
| | 2 | M710-16 | 31376 | 1-1/2 | | | M1013-12 | 31532 | | | | | | |
| | 11/16 | 1-1/2 | 1-1/2 | M711-12 | | | 31378 | 1 | 2 | 1-3/4 | M1013-14 | 31534 | | |
| | | | 1 | M712-8 | | | 31380 | | | 2 | M1013-16 | 31536 | | |
| 1-1/4 | | | M712-10 | 31382 | 2-1/4 | M1013-18 | 31538 | | | | | | | |
| 1/2 | 3/4 | 1-1/2 | M712-12 | 31384 | 11/16 | 1 | 2-1/2 | M1013-20 | 31540 | | | | | |
| | | 13/16 | 1-1/2 | M713-12 | | | 31386 | 7/8 | 3/4 | M1014-6 | 31542 | | | |
| | | 5/8 | 1 | 5/8 | | | M810-5 | | 31388 | 1 | M1014-8 | 31544 | | |
| | 3/4 | | | M810-6 | | | 31390 | | 1-1/4 | M1014-10 | 31548 | | | |
| | 7/8 | | | M810-7 | | | 31392 | | 1-1/2 | M1014-12 | 31550 | | | |
| | 1 | | | M810-8 | | | 31394 | | 1-3/4 | M1014-14 | 31552 | | | |
| | 1-1/4 | | | M810-10 | | | 31396 | | 2 | M1014-16 | 31554 | | | |
| | 1-3/8 | | | M810-11 | | | 31398 | 2-1/4 | M1014-18 | 31556 | | | | |
| | 11/16 | 1-1/2 | 1-1/2 | M810-12 | | | 31400 | 15/16 | 1-1/2 | 2-1/2 | M1014-20 | 31558 | | |
| | | | 1-3/4 | M810-14 | | | 31402 | | | 3 | M1014-24 | 31560 | | |
| | | | 2 | M810-16 | | | 31404 | | | 1 | 1 | 1 | M1015-8 | 31562 |
| | | | 2-1/4 | M810-18 | | | 31406 | | | | | 1-1/2 | M1015-12 | 31564 |
| 3/4 | | | 1 | 3/4 | M811-6 | 31408 | 2-1/2 | | | | | M1015-20 | 31568 | |
| | | | | 1 | M811-8 | 31410 | 13/16 | | | | | 1 | 1 | M1016-8 |
| | 1-1/4 | M811-10 | | 31412 | 1-1/2 | M1016-12 | | 31572 | | | | | | |
| | 1-1/2 | M811-12 | | 31414 | 2 | M1016-16 | | 31574 | | | | | | |
| | 1-3/4 | M811-14 | | 31416 | 2-1/4 | M1016-18 | | 31576 | | | | | | |
| | 2 | M811-16 | | 31418 | 2-1/2 | M1016-20 | | 31578 | | | | | | |
| 2-1/4 | M811-18 | 31420 | 3 | M1016-24 | 31580 | | | | | | | | | |
| 3/8 | 1 | 2-1/2 | M811-20 | 31422 | 1-1/8 | 1-1/2 | 1-1/2 | M1018-12 | 31582 | | | | | |
| | | 5/8 | 1 | 3/4 | | | M812-6 | 31424 | 2 | M1018-16 | 31584 | | | |
| | | | | 1 | | | M812-8 | 31426 | 2-1/4 | M1018-18 | 31586 | | | |
| | | | | 1-1/4 | | | M812-10 | 31428 | 13/16 | 1 | 1 | M1113-8 | 31588 | |
| | | | | 1-1/2 | | | M812-12 | 31430 | | | 1-1/2 | M1113-12 | 31592 | |
| | | | | 1-3/4 | | | M812-14 | 31432 | | | 1-3/4 | M1113-14 | 31594 | |
| | 2 | | | M812-16 | 31434 | 2 | M1113-16 | 31596 | | | | | | |
| | 2-1/4 | M812-18 | 31436 | 11/16 | 7/8 | 1 | M1114-8 | 31600 | | | | | | |
| | 2-1/2 | M812-20 | 31438 | | | 1-1/4 | M1114-10 | 31602 | | | | | | |
| | 2-3/4 | M812-22 | 31440 | | | 1-1/2 | M1114-12 | 31604 | | | | | | |
| | 7/8 | 1 | 1 | | | M813-8 | 31442 | 2 | M1114-16 | 31608 | | | | |
| | | | 1-1/2 | | | M813-12 | 31444 | 2-1/2 | M1114-20 | 31612 | | | | |
| 2-1/4 | | | M813-18 | | | 31446 | 15/16 | 1 | 1 | M1115-8 | 31614 | | | |
| 1 | | | 1 | 1 | M814-8 | 31448 | | | 1-1/4 | M1115-10 | 31616 | | | |
| | | | | 1-1/4 | M814-10 | 31450 | | | 1-1/2 | M1115-12 | 31618 | | | |
| | | | | 1-1/2 | M814-12 | 31452 | | | 2-1/2 | M1115-20 | 31626 | | | |
| | 1-3/4 | M814-14 | | 31454 | 1 | 1-1/4 | | | 1-1/4 | M1116-10 | 31628 | | | |
| | 2 | M814-16 | | 31456 | | | | | 2-1/4 | M1116-18 | 31634 | | | |
| | 1 | M816-8 | | 31458 | | | 2-1/2 | M1116-20 | 31636 | | | | | |

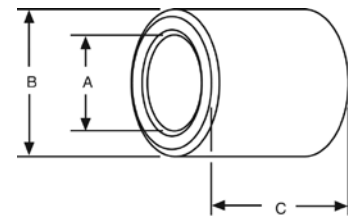
BEAR-N-BRONZE 660 Cast Bronze Bearings

Plain Cylindrical Bearings

ALL DIMENSIONS IN INCHES
ORDER BY CATALOG NUMBER OR ITEM CODE

| A | B | C | Catalog Number | Item Code |
|--------|--------|----------|----------------|-----------|
| 3/4 | 7/8 | 3/4 | M1214-6 | 31640 |
| | | 1 | M1214-8 | 31642 |
| | | 1-1/4 | M1214-10 | 31644 |
| | | 1-1/2 | M1214-12 | 31646 |
| | | 1-3/4 | M1214-14 | 31648 |
| | | 2 | M1214-16 | 31650 |
| | 15/16 | 2-1/4 | M1214-18 | 31652 |
| | | 2-1/2 | M1214-20 | 31654 |
| | | 1 | M1215-8 | 31656 |
| | | 1-1/4 | M1215-10 | 31658 |
| | | 1-1/2 | M1215-12 | 31662 |
| | | 1-3/4 | M1215-14 | 31664 |
| | 1 | 2 | M1215-16 | 31666 |
| | | 2-1/4 | M1215-18 | 31668 |
| | | 2-1/2 | M1215-20 | 31670 |
| | | 3 | M1215-24 | 31674 |
| | | 3/4 | M1216-6 | 31676 |
| | | 1 | M1216-8 | 31678 |
| | | 1-1/8 | M1216-9 | 31680 |
| | | 1-1/4 | M1216-10 | 31682 |
| | | 1-3/8 | M1216-11 | 31684 |
| | | 1-1/2 | M1216-12 | 31686 |
| | | 1-3/4 | M1216-14 | 31688 |
| | | 2 | M1216-16 | 31690 |
| | | 2-1/8 | M1216-17 | 31692 |
| | | 2-1/4 | M1216-18 | 31694 |
| | 1-1/16 | 2-1/2 | M1216-20 | 31696 |
| | | 2-3/4 | M1216-22 | 31698 |
| | | 3 | M1216-24 | 31700 |
| | | 3-1/2 | M1216-28 | 31702 |
| | | 1 | M1217-8 | 31704 |
| | | 1-1/2 | M1217-12 | 31706 |
| | 1-1/8 | 2 | M1217-16 | 31708 |
| | | 3 | M1217-24 | 31714 |
| | | 1 | M1218-8 | 31716 |
| | | 1-1/2 | M1218-12 | 31718 |
| 2 | | M1218-16 | 31720 | |
| 2-1/2 | | M1218-20 | 31724 | |
| 1-3/16 | 3 | M1218-24 | 31726 | |
| | 1-1/2 | M1219-12 | 31728 | |
| | 2 | M1219-16 | 31730 | |
| | 1-3/4 | M1220-14 | 31734 | |
| | 2 | M1220-16 | 31736 | |
| | 2-1/2 | M1220-20 | 31740 | |
| 13/16 | 15/16 | 3 | M1220-24 | 31742 |
| | | 1 | M1315-8 | 31744 |
| | | 1-1/2 | M1315-12 | 31748 |
| | 1 | 2 | M1315-16 | 31750 |
| | | 1-1/2 | M1316-12 | 31752 |
| | | 2 | M1316-16 | 31756 |
| | | 2-1/2 | M1316-20 | 31758 |
| | | 1-1/2 | M1317-12 | 31760 |
| | | 2 | M1317-16 | 31762 |
| | 1-1/8 | 2-3/4 | M1317-22 | 31766 |
| | | 1-1/2 | M1318-12 | 31770 |
| | | 2 | M1318-16 | 31772 |
| 1 | | M1416-8 | 31788 | |
| 1-1/4 | | M1416-10 | 31790 | |
| 1-3/8 | | M1416-11 | 31792 | |
| 7/8 | 1 | 1-1/2 | M1416-12 | 31794 |
| | | 1-5/8 | M1416-13 | 31796 |
| | | 2 | M1416-16 | 31798 |
| | | 1 | M1417-8 | 31800 |
| | | 1-1/4 | M1417-10 | 31802 |
| | | 1-1/2 | M1417-12 | 31804 |
| | 1-1/16 | 1-3/4 | M1417-14 | 31806 |
| | | 2 | M1417-16 | 31808 |
| | | 2-1/4 | M1417-18 | 31810 |
| | | 2-1/2 | M1417-20 | 31812 |
| | | 3 | M1417-24 | 31816 |
| | | 1-1/8 | 3/4 | M1418-6 |
| | 1 | | M1418-8 | 31820 |
| | 1-1/4 | | M1418-10 | 31822 |
| | 1-3/8 | | M1418-11 | 31824 |

| A | B | C | Catalog Number | Item Code | | |
|--------|----------|----------|----------------|-----------|----------|-------|
| 7/8 | 1-1/8 | 1-1/2 | M1418-12 | 31826 | | |
| | | 1-3/4 | M1418-14 | 31828 | | |
| | | 2 | M1418-16 | 31830 | | |
| | | 2-1/4 | M1418-18 | 31832 | | |
| | | 2-1/2 | M1418-20 | 31834 | | |
| | | 3 | M1418-24 | 31836 | | |
| | 1-3/16 | 3-1/4 | M1418-26 | 31838 | | |
| | | 3-1/2 | M1418-28 | 31840 | | |
| | | 1 | M1419-8 | 31842 | | |
| | | 3 | M1419-24 | 31852 | | |
| | | 1-1/2 | M1420-12 | 31854 | | |
| | | 1-3/4 | M1420-14 | 31856 | | |
| | 1-1/4 | 2 | M1420-16 | 31858 | | |
| | | 2-1/4 | M1420-18 | 31860 | | |
| | | 2-1/2 | M1420-20 | 31862 | | |
| | | 3 | M1420-24 | 31864 | | |
| | | 3-1/2 | M1420-28 | 31866 | | |
| | | 1-3/8 | 1-1/2 | M1422-12 | 31868 | |
| | 2 | | M1422-16 | 31872 | | |
| | 2-1/2 | | M1422-20 | 31874 | | |
| | 3 | | M1422-24 | 31876 | | |
| | 15/16 | | 1-1/8 | 1-1/2 | M1518-12 | 31878 |
| | | | | 2 | M1518-16 | 31880 |
| | | 1-3/16 | 1-1/4 | M1519-10 | 31884 | |
| | | | 1-1/2 | M1519-12 | 31886 | |
| | | | 2 | M1519-16 | 31888 | |
| | | 1-1/4 | 3 | M1519-24 | 31894 | |
| | 1 | | M1520-8 | 31896 | | |
| | 1-1/2 | | M1520-12 | 31898 | | |
| | 2 | | M1520-16 | 31900 | | |
| | 2-1/2 | | M1520-20 | 31902 | | |
| | 2-3/4 | | M1520-22 | 31904 | | |
| | 1-5/16 | 1-1/8 | 1-1/2 | M1521-12 | 31906 | |
| | | | 2 | M1521-16 | 31910 | |
| | | 1 | 1-1/8 | 1-3/8 | M1618-11 | 31916 |
| | | | | 1-1/2 | M1618-12 | 31918 |
| 1-3/4 | | | | M1618-14 | 31920 | |
| 2 | | | | M1618-16 | 31922 | |
| 2-1/2 | M1618-20 | | | 31924 | | |
| 7/8 | M1619-7 | | | 31926 | | |
| 1-3/16 | 1-1/4 | M1619-10 | 31928 | | | |
| | 1-1/2 | M1619-12 | 31930 | | | |
| | 1-3/4 | M1619-14 | 31932 | | | |
| | 2 | M1619-16 | 31934 | | | |
| | 2-1/2 | M1619-20 | 31936 | | | |
| | 1 | 1-1/4 | 3/4 | M1620-6 | 31938 | |
| 1 | | | M1620-8 | 31940 | | |
| 1-1/8 | | | M1620-9 | 31942 | | |
| 1-1/4 | | | M1620-10 | 31944 | | |
| 1-3/8 | | | M1620-11 | 31946 | | |
| 1-1/2 | | | M1620-12 | 31948 | | |
| 1-5/16 | | 1-5/8 | M1620-13 | 31950 | | |
| | | 1-3/4 | M1620-14 | 31952 | | |
| | | 2 | M1620-16 | 31954 | | |
| | | 2-1/4 | M1620-18 | 31956 | | |
| | | 2-1/2 | M1620-20 | 31958 | | |
| | | 2-3/4 | M1620-22 | 31960 | | |
| 1-1/2 | | 3 | M1620-24 | 31962 | | |
| | | 4 | M1620-32 | 31968 | | |
| | | 4-1/2 | M1620-36 | 31970 | | |
| | | 1-1/2 | M1621-12 | 31972 | | |
| | | 2 | M1621-16 | 31974 | | |
| | | 2-1/4 | M1621-18 | 31976 | | |
| 1-3/8 | 2-1/2 | M1621-20 | 31978 | | | |
| | 3 | M1621-24 | 31980 | | | |
| | 3-1/2 | M1621-28 | 31982 | | | |
| | 1-1/4 | M1622-10 | 31988 | | | |
| | 1-1/2 | M1622-12 | 31990 | | | |
| | 1-3/4 | M1622-14 | 31992 | | | |
| 2 | M1622-16 | 31994 | | | | |



STANDARD TOLERANCES

| DIMENSIONS | TOLERANCE |
|------------|---|
| A | 3/16 - 3 3-1/4 - 4-1/2 |
| B | ±.001 ±.0015 +.002 to +.003 +.003 to +.005 |
| C | All ±.005 |

STANDARD CONCENTRICITY

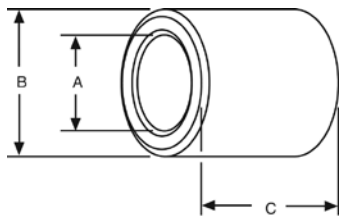
| DIMENSIONS | T.I.R. (A TO B) |
|------------|-----------------|
| A | All .003 |

For Oil Grooves see Page 179.

BEAR-N-BRONZE 660 Cast Bronze Bearings

Plain Cylindrical Bearings

F



STANDARD TOLERANCES

| DIMENSIONS | | TOLERANCE |
|------------|---------------|----------------|
| A | 3/16 – 3 | ±.001 |
| | 3-1/4 – 4-1/2 | ±.0015 |
| B | 5/16 – 3 | +.002 to +.003 |
| | 3-1/8 – 5 | +.003 to +.005 |
| C | All | ±.005 |

STANDARD CONCENTRICITY

| DIMENSIONS | T.I.R. (A TO B) |
|------------|-----------------|
| A | All |

For Oil Grooves see Page 179.

ALL DIMENSIONS IN INCHES
ORDER BY CATALOG NUMBER OR ITEM CODE

| A | B | C | Catalog Number | Item Code | A | B | C | Catalog Number | Item Code | |
|--------|----------|----------|----------------|-----------|----------|----------|----------|----------------|-----------|-------|
| 1 | 1-3/8 | 2-1/2 | M1622-20 | 31996 | 1-3/16 | 1-11/16 | 2 | M1927-16 | 32172 | |
| | | 2-3/4 | M1622-22 | 31998 | | | 2-1/2 | M1927-20 | 32174 | |
| | | 3 | M1622-24 | 32000 | | | 3 | M1927-24 | 32176 | |
| | | 3-1/2 | M1622-28 | 32004 | | | 2-1/2 | M2023-20 | 32180 | |
| | | 4 | M1622-32 | 32006 | | | | 3 | M2023-24 | 32182 |
| | 4-1/2 | M1622-36 | 32008 | 1-7/16 | | 1-1/2 | 1 | M2024-8 | 32184 | |
| | 1-1/2 | 1-1/2 | M1624-12 | | | | 32010 | 1-1/8 | M2024-9 | 32186 |
| | | 1-3/4 | M1624-14 | | | | 32012 | 1-1/4 | M2024-10 | 32188 |
| | | 2 | M1624-16 | | | | 32014 | 1-3/8 | M2024-11 | 32190 |
| | | 2-1/2 | M1624-20 | | | | 32016 | 1-1/2 | M2024-12 | 32192 |
| | 3 | M1624-24 | 32018 | | | | 1-5/8 | M2024-13 | 32194 | |
| | 4 | M1624-32 | 32020 | | | | 1-3/4 | M2024-14 | 32196 | |
| 1-5/8 | 2 | M1626-16 | 32022 | | 2 | | M2024-16 | 32198 | | |
| | 2-1/2 | M1626-20 | 32024 | | 2-1/4 | | M2024-18 | 32200 | | |
| | 3 | M1626-24 | 32026 | | 2-1/2 | | M2024-20 | 32202 | | |
| | 3-1/2 | M1626-28 | 32028 | | 2-3/4 | | M2024-22 | 32204 | | |
| 1-3/4 | 6-1/2 | M1628-52 | 32030 | | 3 | | M2024-24 | 32206 | | |
| 2 | 3 | M1632-24 | 32032 | 3-1/4 | M2024-26 | 32208 | | | | |
| 6-1/2 | M1632-52 | 32034 | 3-1/2 | M2024-28 | 32210 | | | | | |
| 1-1/16 | 1-5/16 | 1-1/2 | M1721-12 | 32036 | 4 | M2024-32 | 32212 | | | |
| | | 2 | M1721-16 | 32038 | 4-1/4 | M2024-34 | 32214 | | | |
| | | 2-1/2 | M1721-20 | 32040 | 4-1/2 | M2024-36 | 32216 | | | |
| 1-7/16 | 2-1/2 | M1723-20 | 32050 | 5 | M2024-40 | 32218 | | | | |
| 1-1/8 | 1-1/4 | 1-1/2 | M1820-12 | 32062 | 1-1/4 | 1-9/16 | 2 | M2025-16 | 32222 | |
| | | 1-3/4 | M1820-14 | 32064 | | | 2-1/2 | M2025-20 | 32224 | |
| | | 2 | M1820-16 | 32066 | | | 3 | M2025-24 | 32226 | |
| | 1-5/16 | 2-1/4 | M1821-18 | 32068 | | 3-1/2 | M2025-28 | 32228 | | |
| | | 2-1/2 | M1821-20 | 32070 | | 3-3/4 | M2025-30 | 32230 | | |
| | | 1 | M1822-8 | 32072 | | 1-5/8 | 1-3/4 | M2026-14 | 32232 | |
| | 1-1/4 | M1822-10 | 32074 | 2 | | | M2026-16 | 32234 | | |
| | 1-1/2 | M1822-12 | 32076 | 2-1/2 | | | M2026-20 | 32236 | | |
| | 1-3/4 | M1822-14 | 32078 | 3 | | | M2026-24 | 32238 | | |
| | 2 | M1822-16 | 32080 | 3-1/4 | | | M2026-26 | 32240 | | |
| | 2-1/4 | M1822-18 | 32082 | 3-1/2 | | | M2026-28 | 32242 | | |
| | 2-1/2 | M1822-20 | 32084 | 4 | | | M2026-32 | 32244 | | |
| 3 | M1822-24 | 32086 | 4-1/2 | M2026-36 | 32246 | | | | | |
| 3-1/4 | M1822-26 | 32088 | 4-3/4 | M2026-38 | 32248 | | | | | |
| 3-1/2 | M1822-28 | 32090 | 1-11/16 | 2 | M2027-16 | | 32250 | | | |
| 4 | M1822-32 | 32092 | | 3-1/4 | M2027-26 | | 32254 | | | |
| 1-1/2 | M1823-12 | 32094 | | 1-3/4 | M2028-14 | | 32258 | | | |
| 1-7/16 | 3 | M1823-24 | 32098 | 2 | M2028-16 | 32260 | | | | |
| 1-1/2 | 1-1/2 | 1-1/2 | M1824-12 | 32102 | 2-1/4 | M2028-18 | 32262 | | | |
| | | 2 | M1824-16 | 32104 | 2-1/2 | M2028-20 | 32264 | | | |
| | | 2-1/2 | M1824-20 | 32106 | 2-3/4 | M2028-22 | 32266 | | | |
| | 3 | M1824-24 | 32108 | 3 | M2028-24 | 32268 | | | | |
| | 3-1/2 | M1824-28 | 32110 | 3-1/2 | M2028-28 | 32270 | | | | |
| | 4 | M1824-32 | 32112 | 3-3/4 | M2028-30 | 32272 | | | | |
| | 1-5/8 | 1-3/4 | M1826-14 | 32114 | 4 | M2028-32 | 32274 | | | |
| | | 2 | M1826-16 | 32116 | 5 | M2028-40 | 32276 | | | |
| | | 2-1/2 | M1826-20 | 32118 | 1-7/8 | 2 | M2030-16 | 32278 | | |
| | 3 | M1826-24 | 32120 | 2-1/2 | | M2030-20 | 32280 | | | |
| | 3-1/2 | M1826-28 | 32122 | 4 | | M2030-32 | 32284 | | | |
| | 4-1/2 | M1826-36 | 32126 | 2 | 3 | M2032-24 | 32286 | | | |
| 1-7/8 | 6-1/2 | M1830-52 | 4 | | M2032-32 | 32288 | | | | |
| 2 | 3 | M1832-24 | 6-1/2 | | M2032-52 | 32290 | | | | |
| 1-3/16 | 1-3/8 | 1-3/4 | M1922-14 | 32134 | 1-5/16 | 1-1/2 | 1-3/4 | M2124-14 | 32296 | |
| | | 2 | M1922-16 | 32136 | | | 3 | M2124-24 | 32298 | |
| | | 2-1/2 | M1922-20 | 32138 | | | 2 | M2126-16 | 32306 | |
| | 1-7/16 | 1-1/4 | M1923-10 | 32140 | | 3 | M2126-24 | 32310 | | |
| | | 1-1/2 | M1923-12 | 32142 | | 4-3/4 | M2126-38 | 32314 | | |
| | | 2 | M1923-16 | 32144 | | 1-13/16 | 3 | M2129-24 | 32324 | |
| | 2-1/2 | M1923-20 | 32146 | 4 | | | M2129-32 | 32328 | | |
| | 3 | M1923-24 | 32148 | 1-7/8 | | | 3-1/2 | M2130-28 | 32330 | |
| | 3-1/2 | M1923-28 | 32150 | | | 1-1/2 | 1-3/4 | M2224-14 | 32334 | |
| | 2 | M1924-16 | 32152 | | | | 2 | M2224-16 | 32336 | |
| | 3 | M1924-24 | 32154 | 2-1/2 | | | M2224-20 | 32338 | | |
| | 4 | M1924-32 | 32158 | 1-3/8 | | | 2 | M2226-16 | 32340 | |
| 1-9/16 | 3 | M1925-24 | 3 | | M2226-24 | | 32342 | | | |
| 3-1/2 | M1925-28 | 32164 | 3-1/4 | | M2226-26 | | 32344 | | | |
| 1-5/8 | 2 | M1926-16 | 32166 | 3-1/2 | M2226-28 | 32346 | | | | |
| | 2-1/2 | M1926-20 | 32168 | 4 | M2226-32 | 32348 | | | | |
| | 3 | M1926-24 | 32170 | 1-11/16 | 3-1/2 | M2227-28 | 32352 | | | |

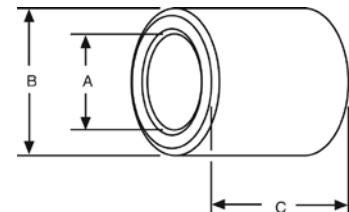
BEAR-N-BRONZE 660 Cast Bronze Bearings

Plain Cylindrical Bearings

ALL DIMENSIONS IN INCHES
ORDER BY CATALOG NUMBER OR ITEM CODE

| A | B | C | Catalog Number | Item Code | |
|---------|----------|----------|----------------|-----------|-------|
| 1-3/8 | 1-3/4 | 2 | M2228-16 | 32354 | |
| | | 2-1/4 | M2228-18 | 32356 | |
| | | 2-1/2 | M2228-20 | 32358 | |
| | | 3 | M2228-24 | 32360 | |
| | | 3-1/2 | M2228-28 | 32362 | |
| | 1-7/8 | 4 | M2228-32 | 32364 | |
| | | 3 | M2230-24 | 32366 | |
| | | 3-1/2 | M2230-28 | 32368 | |
| | 2 | 4 | M2230-32 | 32370 | |
| | | 4-1/2 | M2230-36 | 32372 | |
| 3 | | M2232-24 | 32374 | | |
| 4 | | M2232-32 | 32376 | | |
| 2-1/8 | 6-1/2 | M2234-52 | 32378 | | |
| 1-7/16 | 1-5/8 | 1-3/4 | M2326-14 | 32380 | |
| | | 2-3/4 | M2326-22 | 32382 | |
| | | 3 | M2326-24 | 32384 | |
| | 1-11/16 | 2-1/2 | M2327-20 | 32386 | |
| | | 3 | M2327-24 | 32388 | |
| | | 3-1/2 | M2327-28 | 32390 | |
| | | 4 | M2327-32 | 32392 | |
| | 1-3/4 | 2-1/4 | M2328-18 | 32396 | |
| | | 3 | M2328-24 | 32398 | |
| | | 4 | M2328-32 | 32400 | |
| | 1-13/16 | 3 | M2329-24 | 32402 | |
| | | 4-1/4 | M2329-34 | 32410 | |
| | 1-7/8 | 3 | M2330-24 | 32414 | |
| | | 4 | M2330-32 | 32416 | |
| | | 4-1/2 | M2330-36 | 32420 | |
| 5 | | M2330-40 | 32422 | | |
| 2 | | M2331-16 | 32424 | | |
| 1-15/16 | 3 | M2331-24 | 32426 | | |
| | 4 | M2332-32 | 32438 | | |
| 1-5/8 | 2 | M2426-16 | 32440 | | |
| 1-11/16 | 2-3/4 | M2427-22 | 32442 | | |
| 1-3/4 | 1-3/4 | 1-3/4 | M2428-14 | 32444 | |
| | | 2 | M2428-16 | 32446 | |
| | | 2-1/4 | M2428-18 | 32448 | |
| | | 2-1/2 | M2428-20 | 32450 | |
| | | 3 | M2428-24 | 32452 | |
| | | 3-1/2 | M2428-28 | 32454 | |
| | | 4 | M2428-32 | 32456 | |
| | | 4-1/2 | M2428-36 | 32458 | |
| | | 5 | M2428-40 | 32460 | |
| | | 5-1/2 | M2428-44 | 32462 | |
| | | 1-13/16 | 3 | M2429-24 | 32464 |
| 1-1/2 | 1-7/8 | 2 | M2430-16 | 32466 | |
| | | 2-1/2 | M2430-20 | 32468 | |
| | | 2-3/4 | M2430-22 | 32470 | |
| | | 3 | M2430-24 | 32472 | |
| | | 3-1/2 | M2430-28 | 32474 | |
| | | 4 | M2430-32 | 32476 | |
| | | 4-1/2 | M2430-36 | 32478 | |
| | | 5 | M2430-40 | 32480 | |
| | | 5-1/2 | M2430-44 | 32482 | |
| | | 2 | 2-1/2 | M2432-20 | 32484 |
| | | | 3 | M2432-24 | 32486 |
| | 3-1/2 | | M2432-28 | 32488 | |
| | 4 | | M2432-32 | 32490 | |
| | 2-1/8 | 4-1/2 | M2432-36 | 32492 | |
| | | 5 | M2432-40 | 32494 | |
| 3 | | M2434-24 | 32496 | | |
| 2-1/4 | 4 | M2434-32 | 32498 | | |
| | 3 | M2436-24 | 32500 | | |
| | 4 | M2436-32 | 32502 | | |
| | 5 | M2436-40 | 32504 | | |
| | 6-1/2 | M2436-52 | 32506 | | |
| 1-9/16 | 1-13/16 | 3 | M2529-24 | 32508 | |
| | 3-1/2 | M2529-28 | 32510 | | |
| 1-5/8 | 1-15/16 | 3-1/2 | M2531-28 | 32514 | |
| | 1-7/8 | 2-1/4 | M2630-18 | 32518 | |
| | | 3 | M2630-24 | 32520 | |
| 3-3/4 | M2630-30 | 32522 | | | |

| A | B | C | Catalog Number | Item Code | |
|---------|---------|----------|----------------|-----------|-------|
| 1-5/8 | 2 | 1-3/4 | M2632-14 | 32526 | |
| | | 2-1/2 | M2632-20 | 32528 | |
| | | 2 | M2632-24 | 32530 | |
| | | 4 | M2632-32 | 32534 | |
| | | 5 | M2632-40 | 32538 | |
| | 2-1/8 | 5-1/2 | M2632-44 | 32540 | |
| | | 3 | M2634-24 | 32542 | |
| | | 4 | M2634-32 | 32544 | |
| | | 3 | M2731-24 | 32550 | |
| | | 3-1/2 | M2731-28 | 32552 | |
| 1-11/16 | 1-15/16 | 4-1/2 | M2732-28 | 32554 | |
| | | 4 | M2732-36 | 32556 | |
| | 2 | 3 | M2733-24 | 32558 | |
| | | 4 | M2733-32 | 32562 | |
| | | 4-1/2 | M2733-36 | 32564 | |
| | | 5-1/2 | M2733-44 | 32568 | |
| | 2-3/16 | 2 | M2735-16 | 32570 | |
| | | 3 | M2735-24 | 32574 | |
| | | 4 | M2735-32 | 32578 | |
| | 1-3/4 | 2-1/4 | 3 | M2736-24 | 32586 |
| 4-1/2 | | | M2736-36 | 32588 | |
| 2-1/4 | | | M2832-18 | 32590 | |
| 2 | | 2-1/2 | M2832-20 | 32592 | |
| | | 3 | M2832-24 | 32594 | |
| | | 4 | M2832-32 | 32596 | |
| | | 4-1/2 | M2832-36 | 32598 | |
| | | 5-1/4 | M2832-42 | 32600 | |
| 1-3/8 | | 2-1/16 | 3-1/2 | M2833-28 | 32602 |
| | | | 2-3/4 | M2834-22 | 32604 |
| | | 2-1/8 | 3-1/4 | M2834-26 | 32606 |
| | | | 3-1/2 | M2834-28 | 32608 |
| | | | 4 | M2834-32 | 32610 |
| | | 2-1/4 | 4-1/4 | M2834-34 | 32612 |
| | | | 5 | M2834-40 | 32614 |
| | 1-3/4 | | M2836-14 | 32618 | |
| | 2 | | M2836-16 | 32620 | |
| | 2-1/2 | | M2836-20 | 32622 | |
| 1-13/16 | 2-1/4 | 3 | M2836-24 | 32624 | |
| | | 3-1/2 | M2836-28 | 32626 | |
| | | 4 | M2836-32 | 32628 | |
| | | 4-1/4 | M2836-34 | 32630 | |
| | | 5 | M2836-40 | 32632 | |
| | 2-3/8 | 3-1/2 | M2838-28 | 32634 | |
| | | 5 | M2838-40 | 32638 | |
| | | 2-1/2 | M2840-52 | 32640 | |
| | | 2-3/16 | 4 | M2935-32 | 32642 |
| | | 2-5/16 | 4 | M2937-32 | 32646 |
| 1-7/8 | 2-1/8 | 5 | M2937-40 | 32648 | |
| | | 2-1/2 | M3034-20 | 32650 | |
| | | 3 | M3034-24 | 32652 | |
| | 2-1/4 | 4 | M3034-32 | 32654 | |
| | | 3 | M3036-24 | 32656 | |
| | | 5 | M3036-40 | 32662 | |
| | 2-3/8 | 3 | M3038-24 | 32664 | |
| | | 4 | M3038-32 | 32666 | |
| | | 5-1/4 | M3038-42 | 32668 | |
| | 1-15/16 | 2-3/16 | 2 | M3135-16 | 32670 |
| 3 | | | M3135-24 | 32672 | |
| 2-1/4 | | 3 | M3136-24 | 32676 | |
| | | 4-1/2 | M3136-36 | 32678 | |
| 2-5/16 | | 3-1/2 | M3137-28 | 32680 | |
| | | 4 | M3137-32 | 32682 | |
| | | 5 | M3137-40 | 32684 | |
| 2-3/8 | | 6-1/4 | M3137-50 | 32688 | |
| | | 4 | M3138-32 | 32692 | |
| | | 5-1/2 | M3138-44 | 32694 | |
| 2-7/16 | 3 | M3139-24 | 32696 | | |
| | 3 | M3140-24 | 32704 | | |
| 1-1/2 | 5 | M3140-40 | 32706 | | |



STANDARD TOLERANCES

| DIMENSIONS | TOLERANCE |
|------------|-----------------------------|
| A | 3/16 – 3 ±.001 |
| | 3-1/4 – 4-1/2 ±.0015 |
| B | 5/16 – 3 +.002 to +.003 |
| | 3-1/8 – 5 +.003 to +.005 |
| C | All ±.005 |

STANDARD CONCENTRICITY

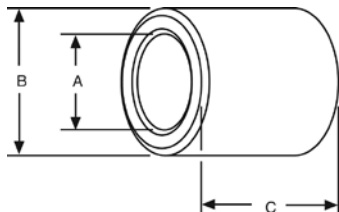
| DIMENSIONS | T.I.R. (A TO B) |
|------------|-----------------|
| A | All .003 |

For Oil Grooves see Page 179.

BEAR-N-BRONZE 660 Cast Bronze Bearings

Plain Cylindrical Bearings

F



STANDARD TOLERANCES

| DIMENSIONS | | TOLERANCE |
|------------|---------------|----------------|
| A | 3/16 – 3 | ±.001 |
| | 3-1/4 – 4-1/2 | ±.0015 |
| B | 5/16 – 3 | +.002 to +.003 |
| | 3-1/8 – 5 | +.003 to +.005 |
| C | All | ±.005 |

STANDARD CONCENTRICITY

| DIMENSIONS | | T.I.R. (A TO B) |
|------------|-----|-----------------|
| A | All | .003 |

For Oil Grooves see Page 179.

ALL DIMENSIONS IN INCHES
ORDER BY CATALOG NUMBER OR ITEM CODE

| A | B | C | Catalog Number | Item Code | A | B | C | Catalog Number | Item Code | | | | | | | | | |
|---------|----------|----------|----------------|-----------|----------|----------|----------|----------------|-----------|----------|----------|----------|----------|----------|----------|-------|----------|-------|
| 2 | 2-1/4 | 2 | M3236-16 | 32708 | 2-1/2 | 3-1/8 | 3-1/2 | M4050-28 | 32860 | | | | | | | | | |
| | | 2-1/2 | M3236-20 | 32710 | | | 4 | M4050-32 | 32862 | | | | | | | | | |
| | | 3 | M3236-24 | 32712 | | | 4-1/2 | M4050-36 | 32864 | | | | | | | | | |
| | | 3-1/2 | M3236-28 | 32714 | | 3-1/4 | 4 | M4052-32 | 32868 | | | | | | | | | |
| | | 4 | M3236-32 | 32718 | | | 5 | M4052-40 | 32870 | | | | | | | | | |
| | | 4-1/2 | M3236-36 | 32720 | | | 6 | M4052-48 | 32872 | | | | | | | | | |
| | 2-3/8 | 3 | M3238-24 | 32724 | 2-5/8 | 3-1/2 | 6-1/2 | M4056-52 | 32876 | | | | | | | | | |
| | | 3-1/2 | M3238-28 | 32726 | | | 3 | 3 | M4248-24 | 32878 | | | | | | | | |
| | | 4 | M3238-32 | 32728 | | | | 5 | M4248-40 | 32882 | | | | | | | | |
| | | 4-1/2 | M3238-36 | 32730 | | 3-1/8 | | 5 | M4250-40 | 32884 | | | | | | | | |
| | | 2-1/2 | M3240-20 | 32732 | | | 6 | M4250-48 | 32886 | | | | | | | | | |
| | | 3 | M3240-24 | 32734 | | | 7-1/4 | M4250-58 | 32888 | | | | | | | | | |
| | 2-1/2 | 3-1/2 | M3240-28 | 32736 | 2-11/16 | 3-1/4 | 7 | M4252-56 | 32890 | | | | | | | | | |
| | | 4 | M3240-32 | 32738 | | | 3-3/8 | 6-1/2 | M4254-52 | 32892 | | | | | | | | |
| | | 4-1/2 | M3240-36 | 32740 | | | | 2-3/4 | 4 | M4450-32 | 32900 | | | | | | | |
| | | 5 | M3240-40 | 32742 | | 5 | | | M4450-40 | 32902 | | | | | | | | |
| | | 6 | M3240-48 | 32746 | | 6 | M4450-48 | | 32904 | | | | | | | | | |
| | | 2-5/8 | 4 | M3242-32 | | 32748 | 2-7/8 | 3-1/4 | 4 | M4452-32 | 32906 | | | | | | | |
| 2-3/4 | 6-1/2 | M3244-52 | 32750 | 5 | M4452-40 | 32908 | | | | | | | | | | | | |
| 2-1/8 | 3 | M3440-24 | 32752 | 6 | M4452-48 | 32910 | | | | | | | | | | | | |
| 2-1/8 | 2-1/2 | 4 | M3440-32 | 32754 | 2-7/8 | 3-1/2 | 4 | M4656-36 | 32926 | | | | | | | | | |
| | | 4 | M3442-32 | 32756 | | | 6-3/4 | M4656-54 | 32928 | | | | | | | | | |
| | 5 | M3442-40 | 32758 | 2-15/16 | | | 3-7/16 | 3-1/2 | M4755-28 | 32930 | | | | | | | | |
| | 6 | M3442-48 | 32760 | | | 5 | | M4755-40 | 32932 | | | | | | | | | |
| | 4-1/2 | M3543-36 | 32770 | | | 6-1/2 | | M4755-52 | 32934 | | | | | | | | | |
| | 2-3/16 | 2-5/8 | 4 | M3542-32 | | 32762 | 3 | 3-3/8 | 4-1/2 | M4854-36 | 32936 | | | | | | | |
| 5 | | | M3542-40 | 32764 | 8 | M4854-64 | | | 32938 | | | | | | | | | |
| 2-11/16 | | 3-1/2 | M3543-28 | 32766 | 3-1/2 | 4-1/2 | | | 4-1/2 | M4856-36 | 32940 | | | | | | | |
| | | 4-1/2 | M3543-36 | 32770 | | | | 6 | M4856-48 | 32942 | | | | | | | | |
| 5 | | M3543-40 | 32772 | 9 | | | | M4856-72 | 32944 | | | | | | | | | |
| 2-3/4 | | 4-1/2 | M3544-36 | 32774 | 3-5/8 | 5 | | M4858-40 | 32946 | | | | | | | | | |
| | 5-1/4 | M3544-42 | 32776 | 3-3/4 | | | 6-1/4 | | M4860-50 | 32952 | | | | | | | | |
| 6 | M3544-48 | 32778 | 4 | | | | | | | 6-1/2 | M4864-52 | 32954 | | | | | | |
| 2-7/8 | 4-1/2 | M3546-36 | | | 32780 | 3-1/4 | | 3-1/2 | | | | 4 | M5256-32 | 32956 | | | | |
| 2-1/4 | 2-1/2 | 3-1/2 | | M3640-28 | 32782 | | 3-3/4 | | 5 | | | | | | M5260-40 | 32958 | | |
| | | 4 | M3640-32 | 32784 | 3-7/16 | | | | | 3-15/16 | 4-1/2 | | | | | | M5563-36 | 32964 |
| | 3 | M3642-24 | 32786 | 4-1/8 | | 6 | | M5666-48 | | | | 32972 | | | | | | |
| | 4 | M3642-32 | 32788 | | | | 3-1/2 | | 4-1/4 | | | | 4-1/2 | M5668-36 | 32974 | | | |
| | 5 | M3642-40 | 32790 | | 7 | | | | | M5668-56 | 32976 | | | | | | | |
| | 2-11/16 | 4-3/4 | M3643-38 | 32792 | | 9-3/4 | | M5668-78 | | | | 32978 | | | | | | |
| 2-3/8 | 2-3/4 | 3-1/2 | M3644-28 | 32794 | | | 4 | | 4-1/2 | | | | 4 | M6472-32 | 32986 | | | |
| | | 4 | M3644-32 | 32796 | 6 | | | | | M6472-48 | 32988 | | | | | | | |
| | 4-1/2 | M3644-36 | 32798 | 7 | | M6472-56 | | 32990 | | | | | | | | | | |
| | 5 | M3644-40 | 32800 | | | | | | 5 | | | 5 | M6480-40 | 32992 | | | | |
| | 6 | M3644-48 | 32802 | | 6 | | | | | M6480-48 | 32994 | | | | | | | |
| | 3 | 3-1/2 | M3648-28 | 32806 | | 4-1/4 | | 5 | | | | | | | M6876-40 | 32998 | | |
| 2-7/16 | 2-3/4 | 4 | M3648-40 | 32808 | | | 6 | | M6876-48 | | | 33000 | | | | | | |
| | | 4 | M3844-32 | 32812 | 7 | | | | | M6876-56 | 33002 | | | | | | | |
| | 6 | M3844-48 | 32816 | 5 | | 5 | | M6880-40 | | | | | 33006 | | | | | |
| | 2-7/8 | 4 | M3846-32 | | | | 32818 | | 7 | | | M6880-48 | | 33008 | | | | |
| | | 5 | M3846-40 | | 32820 | | 6 | | | M7280-48 | 33010 | | | | | | | |
| | 2-7/16 | 2-3/4 | 4 | M3944-32 | 32824 | 4-1/2 | | 5 | | | | | 7 | | M7280-56 | 33012 | | |
| 5 | | | M3944-40 | 32826 | 8 | | | | M7280-64 | | | 33014 | | | | | | |
| 3 | | M3946-24 | 32828 | 5 | | | 6 | | | M4044-32 | 32844 | | | | | | | |
| 5 | | M3946-40 | 32830 | | | 4-1/2 | | 3-1/4 | | | | | M4046-26 | 32848 | | | | |
| 6-1/4 | | M3947-50 | 32836 | | 4-1/2 | | | | 4 | | | M4048-32 | | | 32852 | | | |
| 2-15/16 | | 4 | M3947-32 | 32832 | | | 5 | | | M4048-40 | 32854 | | | | | | | |
| | 5 | M3947-40 | 32834 | 6 | | M4048-48 | | 32856 | | | | | | | | | | |
| 6-1/4 | M3947-50 | 32836 | 7 | | M4048-56 | | | | 32858 | | | | | | | | | |
| 2-1/2 | 2-3/4 | 3-3/4 | | | | | M3948-30 | | | 32838 | 2-1/2 | 3 | 4 | M4048-32 | 32852 | | | |
| | | 5 | | M3948-40 | | 32840 | 5 | M4048-40 | | 32854 | | | | | | | | |
| | 6-1/4 | M3948-50 | 32842 | 6 | M4048-48 | 32856 | | | | | | | | | | | | |
| | 2-7/8 | 4 | M4044-32 | | | | | | 32844 | | | | | | | 7 | M4048-56 | 32858 |
| | | 5 | M4044-40 | | | | | | 32846 | | | | | | | | | |
| | 2-7/8 | 3-1/4 | M4046-26 | | | | | | 32848 | | | | | | | | | |
| 4-1/2 | | M4046-36 | 32850 | | | | | | 5 | | M4048-40 | 32854 | | | | | | |
| 3 | 4 | M4048-32 | 32852 | | | | 6 | M4048-48 | | 32856 | | | | | | | | |
| | 5 | M4048-40 | 32854 | 7 | M4048-56 | 32858 | | | | | | | | | | | | |
| 6 | M4048-48 | 32856 | | | | | | | | | | | | | | | | |
| 7 | M4048-56 | 32858 | | | | | | | | | | | | | | | | |

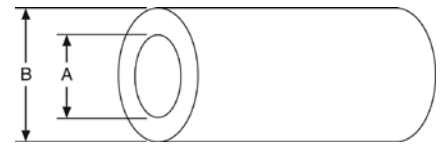
BEAR-N-BRONZE 660 Cast Bronze Bearings

Cored Bars

ALL DIMENSIONS IN INCHES
ORDER BY CATALOG NUMBER OR ITEM CODE

| A | B | Aprx. Wgt. (Lbs.) | Catalog Number | Item Code | |
|-----|-------|-------------------|----------------|-----------|-------|
| 1/2 | 1 | 2-3/4 | MCB816 | 33016 | |
| | 1-1/8 | 3-3/4 | MCB818 | 33018 | |
| | 1-1/4 | 4-3/4 | MCB820 | 33020 | |
| | 1-1/2 | 7 | MCB824 | 33024 | |
| | 1-3/4 | 9-3/4 | MCB828 | 33026 | |
| | 2 | 12-3/4 | MCB832 | 33028 | |
| 5/8 | 1 | 2 | MCB1016 | 47640 | |
| | 1-1/8 | 3 | MCB1018 | 33030 | |
| | 1-1/4 | 4 | MCB1020 | 33032 | |
| | 1-3/8 | 5 | MCB1022 | 33034 | |
| | 1-1/2 | 6-1/2 | MCB1024 | 33036 | |
| | 1-3/4 | 9 | MCB1028 | 33040 | |
| 3/4 | 1 | 1-1/2 | MCB1216 | 47641 | |
| | 1-1/8 | 2-1/2 | MCB1218 | 47642 | |
| | 1-1/4 | 3-1/2 | MCB1220 | 33046 | |
| | 1-3/8 | 4-1/2 | MCB1222 | 33048 | |
| | 1-1/2 | 5-1/2 | MCB1224 | 33050 | |
| | 1-3/4 | 8 | MCB1228 | 33054 | |
| | 2 | 11-1/2 | MCB1232 | 33058 | |
| | 2-1/4 | 15 | MCB1236 | 33062 | |
| | 2-1/2 | 19-1/2 | MCB1240 | 33064 | |
| | 2-3/4 | 24 | MCB1244 | 33066 | |
| 7/8 | 1-1/8 | 1-7/8 | MCB1418 | 47643 | |
| | 1-1/4 | 2-7/8 | MCB1420 | 47644 | |
| | 1-3/8 | 4 | MCB1422 | 33068 | |
| | 1-1/2 | 5 | MCB1424 | 33070 | |
| | 1-5/8 | 6-1/2 | MCB1426 | 33072 | |
| | 1-3/4 | 7-1/2 | MCB1428 | 33074 | |
| | 2 | 11 | MCB1432 | 33078 | |
| 1 | 1-1/4 | 2 | MCB1620 | 47645 | |
| | 1-3/8 | 3-1/8 | MCB1622 | 47646 | |
| | 1-1/2 | 4-1/2 | MCB1624 | 33084 | |
| | 1-5/8 | 5-1/2 | MCB1626 | 33086 | |
| | 1-3/4 | 7 | MCB1628 | 33088 | |
| | 1-7/8 | 8-1/2 | MCB1630 | 33090 | |
| | 2 | 10 | MCB1632 | 33092 | |
| | 2-1/4 | 13-1/2 | MCB1636 | 33096 | |
| | 2-1/2 | 17-1/2 | MCB1640 | 33100 | |
| | 2-3/4 | 22 | MCB1644 | 33102 | |
| | | 3 | 27 | MCB1648 | 33104 |
| | 2-1/4 | 32 | MCB1652 | 33106 | |
| | 3-1/2 | 37-1/2 | MCB1656 | 33108 | |
| | | 4 | 50 | MCB1664 | 33110 |

| A | B | Aprx. Wgt. (Lbs.) | Catalog Number | Item Code |
|-------|-------|-------------------|----------------|-----------|
| 1-1/8 | 1-3/8 | 2-1/4 | MCB1822 | 47647 |
| | 1-1/2 | 4-1/2 | MCB1824 | 47648 |
| | 1-5/8 | 5 | MCB1826 | 33112 |
| | 2-1/8 | 11-1/2 | MCB1834 | 33120 |
| | 2-1/2 | 16-1/2 | MCB1840 | 33126 |
| 1-1/4 | 1-1/2 | 2-1/2 | MCB2024 | 47649 |
| | 1-5/8 | 3-7/8 | MCB2026 | 47650 |
| | 1-3/4 | 5-1/2 | MCB2028 | 33132 |
| | 1-7/8 | 7 | MCB2030 | 33134 |
| | 2 | 8-1/2 | MCB2032 | 33136 |
| | 2-1/8 | 10-1/2 | MCB2034 | 33138 |
| | 2-1/4 | 12 | MCB2036 | 33140 |
| | 2-1/2 | 16 | MCB2040 | 33144 |
| | 2-3/4 | 20 | MCB2044 | 33148 |
| | 3 | 25 | MCB2048 | 33152 |
| 1-3/8 | 3-1/4 | 30 | MCB2052 | 33154 |
| | 3-1/2 | 35-1/2 | MCB2056 | 33156 |
| | 1-3/4 | 4-1/4 | MCB2228 | 47652 |
| | 1-7/8 | 6 | MCB2230 | 33160 |
| | 2 | 7-1/2 | MCB2232 | 33162 |
| 1-3/8 | 2-1/8 | 9-1/2 | MCB2234 | 33164 |
| | 2-1/4 | 11 | MCB2236 | 33166 |
| | 2-3/8 | 12-1/2 | MCB2238 | 33168 |
| | 1-3/4 | 3 | MCB2428 | 47653 |
| | 1-7/8 | 4-1/2 | MCB2430 | 47654 |
| 1-1/2 | 2 | 6 | MCB2432 | 33178 |
| | 2-1/8 | 8 | MCB2434 | 33180 |
| | 2-1/4 | 10 | MCB2436 | 33182 |
| | 2-3/8 | 11-1/2 | MCB2438 | 33184 |
| | 2-1/2 | 14 | MCB2440 | 33186 |
| | 2-3/4 | 18 | MCB2444 | 33190 |
| | 3-1/4 | 27-1/2 | MCB2452 | 33194 |
| | 3-1/2 | 33 | MCB2456 | 33196 |
| | 3-3/4 | 40 | MCB2460 | 33198 |
| | 4 | 45 | MCB2464 | 33200 |
| | 4-1/2 | 62 | MCB2472 | 33202 |



STANDARD TOLERANCES

| DIMENSIONS | TOLERANCE |
|------------|--------------------|
| A | 1/2 - 4 - 1/16 |
| | 4-1/4 - 8 - 1/8 |
| B | 1 - 4 + 1/16 |
| | 4-1/4 - 9 + 1/8 |

All bars are 13" long.
Contact factory for bars longer than 13". Available in lengths up to 105".

BEAR-N-BRONZE 660 Cast Bronze Bearings

Cored Bars

F



STANDARD TOLERANCES

| DIMENSIONS | | TOLERANCE |
|------------|-----------|-----------|
| A | 1/2 – 4 | - 1/16 |
| | 4-1/4 – 8 | - 1/8 |
| B | 1 – 4 | + 1/16 |
| | 4-1/4 – 9 | + 1/8 |

ALL DIMENSIONS IN INCHES ORDER BY CATALOG NUMBER OR ITEM CODE

| A | B | Aprx. Wgt. (Lbs.) | Catalog Number | Item Code | A | B | Aprx. Wgt. (Lbs.) | Catalog Number | Item Code | | |
|-------|--------|-------------------|----------------|-----------|---------|-------|-------------------|----------------|-----------|---------|----------|
| 1-5/8 | 2 | 4-7/8 | MCB2632 | 47655 | 2-3/8 | 3 | 12 | MCB3848 | 33314 | | |
| | 2-1/8 | 7 | MCB2634 | 33204 | | 3 | 9-7/8 | 13 | MCB4048 | 47661 | |
| | 2-1/4 | 9 | MCB2636 | 33206 | | | 3-1/8 | 15 | 13 | MCB4050 | 33324 |
| | 2-3/8 | 10-1/2 | MCB2638 | 33208 | | | | 3-1/4 | 21 | 15 | MCB4052 |
| 1-3/4 | 2 | 3-3/8 | MCB2832 | 47656 | 3-1/2 | | | | 27 | 21 | MCB4056 |
| | 2-1/8 | 5-1/8 | MCB2834 | 47657 | | 4 | | | 33-1/2 | 27 | MCB4060 |
| | 2-1/4 | 7-1/2 | MCB2836 | 33218 | | | 4-1/4 | | 40 | 33-1/2 | MCB4064 |
| | 2-3/8 | 9 | MCB2838 | 33220 | | | | 4-1/2 | 46 | 40 | MCB4068 |
| | 2-1/2 | 11 | MCB2840 | 33222 | 5 | | | | 61 | 46 | MCB4072 |
| | 2-5/8 | 13-1/2 | MCB2842 | 33224 | | 5-1/2 | | | 78 | 61 | MCB4080 |
| | 2-3/4 | 15-1/2 | MCB2844 | 33226 | | | 2-3/4 | | 19-1/2 | 78 | MCB4088 |
| | 3 | 20 | MCB2848 | 33230 | | | | 3-1/2 | 22-1/2 | 19-1/2 | MCB4456 |
| | 3-1/4 | 25 | MCB2852 | 33232 | 3-3/4 | | | | 28-1/2 | 22-1/2 | MCB4460 |
| | 3-1/2 | 31 | MCB2856 | 33234 | | 4 | | | 35 | 28-1/2 | MCB4464 |
| 4 | 42-1/2 | MCB2864 | 33238 | 4-1/4 | | | 42 | | 35 | MCB4468 | 33358 |
| 4-1/4 | 50 | MCB2868 | 33240 | | | | 4-1/2 | 26-3/4 | 42 | MCB4472 | 33360 |
| 1-7/8 | 2-1/4 | 5-1/2 | MCB3036 | | 47658 | | | 2-7/8 | 4 | 26-3/4 | MCB4664 |
| | 2-3/8 | 7-1/2 | MCB3038 | | 33242 | 3-1/2 | | | 11-1/2 | 4 | MCB4856 |
| | 2-1/2 | 9-3/4 | MCB3040 | 33244 | 3-3/4 | | | | 18-1/4 | 11-1/2 | MCB4860 |
| | 2-5/8 | 12 | MCB3042 | 33246 | | | 4 | | 24-1/2 | 18-1/4 | MCB4864 |
| 2 | 2-1/4 | 3-7/8 | MCB3236 | 47659 | | | | 4-1/4 | 31 | 24-1/2 | MCB4868 |
| | 2-1/2 | 8-1/2 | MCB3240 | 33256 | | 4-1/2 | | | 38 | 31 | MCB4872 |
| | 2-5/8 | 10 | MCB3242 | 33258 | 4-3/4 | | | | 45 | 38 | MCB4876 |
| | 2-3/4 | 12-1/4 | MCB3244 | 33260 | | | 5 | | 52 | 45 | MCB4880 |
| | 3 | 16-1/2 | MCB3248 | 33264 | | | | 5-1/2 | 70 | 52 | MCB4888 |
| | 3-1/4 | 22 | MCB3252 | 33266 | | 6 | | | 89-1/2 | 70 | MCB4896 |
| | 3-1/2 | 29 | MCB3256 | 33268 | 6-1/2 | | | | 110 | 89-1/2 | MCB48104 |
| | 3-3/4 | 34 | MCB3260 | 33270 | | | 3-1/4 | | 19-1/2 | 110 | MCB5264 |
| | 4 | 39-1/2 | MCB3264 | 33272 | | | | 4-1/4 | 25-1/2 | 19-1/2 | MCB5268 |
| | 4-1/2 | 54 | MCB3272 | 33274 | | 4-1/2 | | | 34 | 25-1/2 | MCB5272 |
| | 5 | 69 | MCB3280 | 33276 | 5 | | | | 48 | 34 | MCB5280 |
| | 6 | 105-1/2 | MCB3296 | 33278 | | | 4-1/4 | | 20-7/8 | 48 | MCB5668 |
| 2-1/8 | 2-5/8 | 8-1/2 | MCB3442 | 33280 | | | | 4-1/2 | 30 | 20-7/8 | MCB5672 |
| | 2-7/8 | 13 | MCB3446 | 33284 | | 4-3/4 | | | 35-1/2 | 30 | MCB5676 |
| 2-1/4 | 2-3/4 | 9 | MCB3644 | 33294 | 5 | | | | 44 | 35-1/2 | MCB5680 |
| | 3-1/4 | 19 | MBC3652 | 33302 | | | 5-1/2 | | 61 | 44 | MCB5688 |
| | 3-1/2 | 25 | MCB3656 | 33304 | | | | 6 | 79 | 61 | MCB5688 |
| | 3-3/4 | 30-1/2 | MCB3660 | 33306 | | 6-1/2 | | | 107-1/2 | 79 | MCB5696 |
| | 4 | 37 | MCB3664 | 33308 | 107-1/2 | | | | 22-1/4 | 107-1/2 | MCB56104 |
| | 4-1/4 | 43 | MCB3668 | 33310 | | | 3-3/4 | | 29 | 22-1/4 | MCB6072 |
| 2-1/4 | 2-3/4 | 9 | MCB3644 | 33294 | | | | 4-3/4 | 38 | 29 | MCB6076 |
| | 3-1/4 | 19 | MBC3652 | 33302 | | 5 | | | 38 | 38 | MCB6080 |
| | 3-1/2 | 25 | MCB3656 | 33304 | 6 | | | | 74 | 38 | MCB6096 |
| | 3-3/4 | 30-1/2 | MCB3660 | 33306 | | | 6 | | 74 | 74 | MCB6096 |

All bars are 13" long.
Contact factory for bars longer than 13".

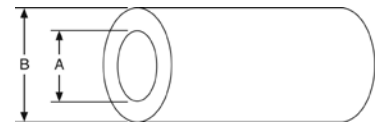
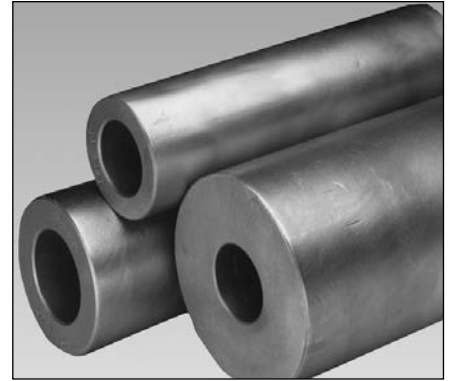
BEAR-N-BRONZE 660 Cast Bronze Bearings

Cored Bars

ALL DIMENSIONS IN INCHES
ORDER BY CATALOG NUMBER OR ITEM CODE

| A | B | Aprx. Wgt. (Lb.) | Catalog Number | Item Code | Aprx. A | B | Wgt. (Lb.) | Catalog Number | Item Code |
|-------|-------|------------------|----------------|-----------|---------|-------|------------|----------------|-----------|
| 4 | 4-3/4 | 22-3/4 | MCB6476 | 47668 | 5-1/4 | 7 | 77 | MCB84112 | 47675 |
| | 5 | 32-1/4 | MCB6480 | 47669 | 5-1/2 | 6-1/2 | 43 | MCB88104 | 47676 |
| | 5-1/2 | 49 | MCB6488 | 33412 | | 7 | 67-1/4 | MCB88112 | 47677 |
| | 6 | 67-1/2 | MCB6496 | 33414 | | 7-1/2 | 91 | MCB88120 | 33434 |
| | 6-1/2 | 87 | MCB64104 | 33416 | 8 | 113 | MCB88128 | 33436 | |
| | 7 | 109 | MCB64112 | 33510 | 5-3/4 | 7-1/2 | 79 | MCB92120 | 33438 |
| | 7-1/2 | 134 | MCB64120 | 33512 | | | | | |
| 4-1/4 | 5-1/2 | 41-1/4 | MCB6888 | 47670 | 6 | 7 | 46-1/2 | MCB96112 | 47678 |
| | 6 | 61 | MCB6896 | 33418 | | 7-1/2 | 72-1/2 | MCB96120 | 47679 |
| | 6-1/2 | 82 | MCB68104 | 33514 | | 8 | 94 | MCB96128 | 33440 |
| 4-1/2 | 5-1/2 | 36 | MCB7288 | 47671 | 6-1/2 | 9 | 151 | MCB96144 | 33522 |
| | 6 | 56-1/2 | MCB7296 | 47672 | | 7-1/2 | 50-1/4 | MCB104120 | 47681 |
| | 6-1/2 | 75 | MCB72104 | 33420 | | 8 | 84 | MCB104128 | 47682 |
| | 7 | 97 | MCB72112 | 33422 | 9 | 130 | MCB104144 | 33442 | |
| 4-3/4 | 6 | 67 | MCB7696 | 47673 | 8 | 9 | 61 | MCB128144 | 47684 |
| 5 | 6 | 39 | MCB8096 | 33428 | | | | | |
| | 7 | 81 | MCB80112 | 33430 | | | | | |
| | 7-1/2 | 104 | MCB80120 | 33516 | | | | | |
| | 8 | 130 | MCB80128 | 33518 | | | | | |

All bars are 13" long.
Contact factory for bars longer than 13".



STANDARD TOLERANCES

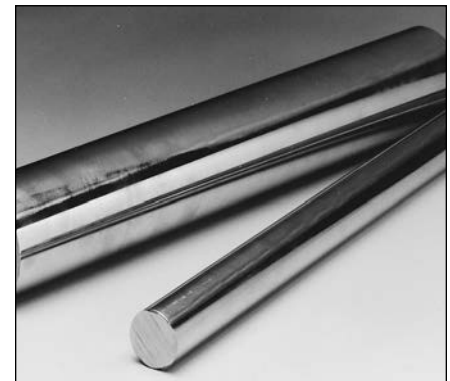
| DIMENSIONS | TOLERANCE |
|------------|----------------------|
| A | 1/2 - 4 4-1/4 - 8 |
| B | 1 - 4 4-1/4 - 9 |

Solid Bars

ALL DIMENSIONS IN INCHES
ORDER BY CATALOG NUMBER OR ITEM CODE

| B | Aprx. Wgt. (Lb.) | Catalog Number | Item Code | B | Aprx. Wgt. (Lb.) | Catalog Number | Item Code |
|-------|------------------|----------------|-----------|-------|------------------|----------------|-----------|
| 1/2 | 1 | MS8 | 33444 | 3 | 30 | MS48 | 33484 |
| 5/8 | 1-1/2 | MS10 | 33446 | 3-1/4 | 35-1/2 | MS52 | 33486 |
| 3/4 | 2 | MS12 | 33448 | 3-1/2 | 41 | MS56 | 33488 |
| 7/8 | 2-3/4 | MS14 | 33450 | 4 | 53 | MS64 | 33492 |
| 1 | 3-1/2 | MS16 | 33452 | 4-1/4 | 59 | MS68 | 33494 |
| 1-1/8 | 4-1/2 | MS18 | 33454 | 4-1/2 | 67 | MS72 | 33496 |
| 1-1/4 | 5-1/2 | MS20 | 33456 | 4-3/4 | 73 | MS76 | 33536 |
| 1-3/8 | 6-1/2 | MS22 | 33458 | 5 | 82 | MS80 | 33498 |
| 1-1/2 | 7-1/2 | MS24 | 33460 | 5-1/2 | 98 | MS88 | 33500 |
| 1-5/8 | 8-1/2 | MS26 | 33462 | 6 | 118 | MS96 | 33502 |
| 1-3/4 | 10-1/4 | MS28 | 33464 | 6-1/2 | 139 | MS104 | 33538 |
| 1-7/8 | 11-1/2 | MS30 | 33466 | 7 | 161 | MS112 | 33504 |
| 2 | 14 | MS32 | 33468 | 7-1/2 | 186 | MS120 | 33506 |
| 2-1/4 | 17 | MS36 | 33472 | 8 | 210-1/2 | MS128 | 33508 |
| 2-1/2 | 21-1/2 | MS40 | 33476 | 9 | 273 | MS144 | 33544 |
| 2-5/8 | 23-1/2 | MS42 | 33478 | | | | |
| 2-3/4 | 25-1/2 | MS44 | 33480 | | | | |

All Bars are 13" long.
Contact Factory for Bars longer than 13".



STANDARD TOLERANCES

| DIMENSIONS | TOLERANCE |
|------------|----------------------|
| B | 1/2 - 4 4-1/4 - 9 |

Bronze Bearing Emergency Banks

F



Actual Size of Bank 10-1/2 x 13-1/2"

SAVES MONEY — Reduce time lost when breakdowns occur due to bearing failures. You own stock — any time — day or night.

COMPACT — Handy metal kit keeps bearings together in conveniently labeled compartments. Bearings where you want them — when you need them.

REFILLS AVAILABLE — Both kit and replacement bearings are available from stock.

See your Boston Gear Distributors, in all major cities — from coast to coast.

BOST-BRONZ Emergency Bank

Order by Catalog Number-34500 BBB-1

| <i>There are two each of the 47 bearing sizes below in the bank.</i> | | | | | |
|--|----------------------|----------|----------------------|----------|-------------------------|
| B46-8 | 1/4 x 3/8 x 1 | B913-12 | 9/16 x 13/16 x 1-1/2 | B1618-16 | 1 x 1-1/8 x 2 |
| B47-8 | 1/4 x 7/16 x 1 | B1012-12 | 5/8 x 3/4 x 1-1/2 | B1620-20 | 1 x 1-1/4 x 3 |
| B48-8 | 1/4 x 1/2 x 1 | B1013-16 | 5/8 x 13/16 x 2 | B1622-24 | 1 x 1-3/8 x 3 |
| B56-8 | 5/16 x 3/8 x 1 | B1014-16 | 5/8 x 7/8 x 2 | B1624-16 | 1 x 1-1/2 x 2 |
| B58-8 | 5/16 x 1/2 x 1 | B1016-16 | 5/8 x 1 x 2 | B1721-20 | 1-1/16 x 1-5/16 x 2-1/2 |
| B68-10 | 3/8 x 1/2 x 1-1/4 | B1114-16 | 11/16 x 7/8 x 2 | B1822-24 | 1-1/8 x 1-3/8 x 3 |
| B69-10 | 3/8 x 9/16 x 1-1/4 | B1214-12 | 3/4 x 7/8 x 1-1/2 | B1824-16 | 1-1/8 x 1-1/2 x 2 |
| B610-10 | 3/8 x 5/8 x 1-1/4 | B1215-16 | 3/4 x 15/16 x 2 | B1923-24 | 1-3/16 x 1-7/16 x 3 |
| B79-10 | 7/16 x 9/16 x 1-1/4 | B1216-20 | 3/4 x 1 x 2-1/2 | B1924-24 | 1-3/16 x 1-1/2 x 3 |
| B710-10 | 7/16 x 5/8 x 1-1/4 | B1218-16 | 3/4 x 1-1/8 x 2 | B2024-24 | 1-1/4 x 1-1/2 x 3 |
| B711-12 | 7/16 x 11/16 x 1-1/2 | B1316-16 | 13/16 x 1 x 2 | B2026-16 | 1-1/4 x 1-5/8 x 2 |
| B810-12 | 1/2 x 5/8 x 1-1/2 | B1416-12 | 7/8 x 1 x 1-1/2 | B2126-24 | 1-5/16 x 1-5/8 x 3 |
| B812-16 | 1/2 x 3/4 x 2 | B1418-20 | 7/8 x 1-1/8 x 2-1/2 | B2228-16 | 1-3/8 x 1-3/4 x 2 |
| B813-12 | 1/2 x 13/16 x 1-1/2 | B1420-16 | 7/8 x 1-1/4 x 2 | B2328-24 | 1-7/16 x 1-3/4 x 3 |
| B814-12 | 1/2 x 7/8 x 1-1/2 | B1519-16 | 15/16 x 1-3/16 x 2 | B2430-16 | 1-1/2 x 1-7/8 x 2 |
| B912-12 | 9/16 x 3/4 x 1-1/2 | B1520-16 | 15/16 x 1-1/4 x 3 | | |

BEAR-N-BRONZ Emergency Bearing Bank

Order by Item Code

Bank #1 Item Code – 31300

Bank #2 Item Code – 31304

| Bank #1 | | Bank #2 | |
|--|-------------------------|--|-----------------------|
| <i>There are two each of the 30 bearing sizes below in the bank.</i> | | <i>There are two each of the 20 bearing sizes below in the bank.</i> | |
| M46-10 | 1/4 x 3/8 x 1-1/4 | M1824-16 | 1-1/8 x 1-1/2 x 2 |
| M58-10 | 5/16 x 1/2 x 1-1/4 | M1923-16 | 1-3/16 x 1-7/16 x 2 |
| M69-10 | 3/8 x 9/16 x 1-1/4 | M1926-16 | 1-3/16 x 1-5/8 x 2 |
| M710-10 | 7/16 x 5/8 x 1-1/4 | M2026-20 | 1-1/4 x 1-5/8 x 2-1/2 |
| M812-12 | 1/2 x 3/4 x 1-1/2 | M2228-18 | 1-3/8 x 1-3/4 x 2-1/4 |
| M816-16 | 1/2 x 1 x 2 | M2230-24 | 1-3/8 x 1-7/8 x 3 |
| M912-12 | 9/16 x 3/4 x 1-1/2 | M2328-24 | 1-7/16 x 1-3/4 x 3 |
| M1014-12 | 5/8 x 7/8 x 1-1/2 | M2330-32 | 1-7/16 x 1-7/8 x 4 |
| M1115-12 | 11/16 x 15/16 x 1-1/2 | M2428-18 | 1-1/2 x 1-3/4 x 2-1/4 |
| M1216-12 | 3/4 x 1 x 1-1/2 | M2430-20 | 1-1/2 x 1-7/8 x 2-1/2 |
| M1316-12 | 13/16 x 1 x 1-1/2 | M2432-28 | 1-1/2 x 2 x 3-1/2 |
| M1420-14 | 7/8 x 1-1/4 x 1-3/4 | M2630-30 | 1-5/8 x 1-7/8 x 3-3/4 |
| M1520-20 | 15/16 x 1-1/4 x 2-1/2 | M2632-24 | 1-5/8 x 2 x 2 |
| M1620-16 | 1 x 1-1/4 x 2 | M2832-32 | 1-3/4 x 2 x 4 |
| M1624-16 | 1 x 1-1/2 x 2 | | |
| M1723-20 | 1-1/16 x 1-7/16 x 2-1/2 | | |
| | | M1219-12 | 3/4 x 1-3/16 x 1-1/2 |
| | | M1318-12 | 13/16 x 1-1/8 x 1-1/2 |
| | | M1419-8 | 7/8 x 1-3/16 x 1 |
| | | M1420-12 | 7/8 x 1-1/4 x 1-1/2 |
| | | M1620-16 | 1 x 1-1/4 x 2 |
| | | M1624-16 | 1 x 1-1/2 x 2 |
| | | M1824-16 | 1-1/8 x 1-1/2 x 2 |
| | | M1923-16 | 1-3/16 x 1-7/16 x 2 |
| | | M2028-16 | 1-1/4 x 1-3/4 x 2 |
| | | M2126-16 | 1-5/16 x 1-5/8 x 2 |
| | | M2228-16 | 1-3/8 x 1-3/4 x 2 |
| | | M2330-24 | 1-7/16 x 1-7/8 x 3 |
| | | M2428-18 | 1-1/2 x 1-3/4 x 2-1/4 |
| | | M2430-20 | 1-1/2 x 1-7/8 x 2-1/2 |
| | | M2432-20 | 1-1/2 x 2 x 2-1/2 |
| | | M2630-18 | 1-5/8 x 1-7/8 x 2-1/4 |
| | | M2632-24 | 1-5/8 x 2 x 3 |
| | | M2832-24 | 1-3/4 x 2 x 3 |
| | | M3238-32 | 2 x 2-3/8 x 4 |
| | | M3644-32 | 2-1/4 x 2-3/4 x 4 |

BOSStonE F-1 Glass Filled Teflon Bearings

F



BOSStonE F-1 glass filled material is completely self-lubricating with outstanding wear and corrosion resistance properties, machined from extruded rods to close tolerances. BOSStonE F-1 material has a wide temperature capability and an excellent PV value. **BOSStonE F-1 bearings may be green, white or any other color.**

Lubrication of these bearings is not required. Teflon®, the major ingredient of BOSStonE F-1 material (75% to 80%), has excellent self-lubricating characteristics and a low coefficient of friction. The remaining 20% to 25% is glass.

BOSStonE F-1 bearing material has excellent strength and wearability and was developed to withstand high loads at moderate speeds. The allowable operating temperature range is -400° to +550°F.

Typical applications for BOSStonE F-1 bearings are textile machinery, farm implements, food processing equipment, pulp and paper machinery, business machinery, aircraft, home appliances, automotive and machine tools as well as many others, in both the electrical and chemical fields.

Cylindrical, Flanged and Thrust Bearings and Solid Bars are stocked in BOSStonE F-1 material.

Selection

In general, sleeve bearings should be selected with a length of one to two times the shaft diameter and an O.D. approximately 25% larger than the shaft diameter.

A general guide to determination of limiting load and velocity values for sleeve bearings has been established by the use of PV calculations. PV represents Pressure x Velocity, for example 100 psi x 20 fpm yields a PV of 2000.

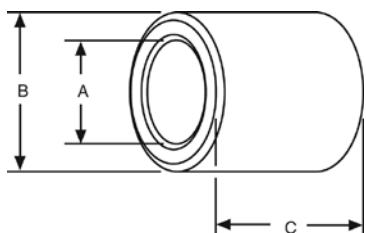
Maximum PV value for BOSStonE F-1 bearings: 20,000 (50,000 for intermittent service).

For complete selection and application information, see Engineering Section, Pages 174-182.

BOSStonE F-1 Glass Filled Teflon Bearings

Plain Cylindrical Bearings

F



ALL DIMENSIONS IN INCHES
ORDER BY CATALOG NUMBER OR ITEM CODE

| A | B | C | Catalog Number | Item Code | A | B | C | Catalog Number | Item Code |
|----------------|----------------|-----|----------------|-----------|----------------|----------------|-------|----------------|-----------|
| 3/16 .191 | 5/16 .313 | 1/4 | P35-2 | 56821 | 3/4 .755 | 1 1.001 | 1/2 | P1216-4 | 56845 |
| | | 3/8 | P35-3 | 56822 | | | 3/4 | P1216-6 | 56846 |
| | | 1/2 | P35-4 | 56823 | | | 1 | P1216-8 | 56847 |
| 1/4 .254 | 3/8 .376 | 1/4 | P46-2 | 56824 | 7/8 .880 | 1-1/8 1.126 | 3/4 | P1418-6 | 56848 |
| | | 3/8 | P46-3 | 56825 | | | 1 | P1418-8 | 56849 |
| | | 1/2 | P46-4 | 56826 | | | | | |
| 5/16 .316 | 1/2 .501 | 3/8 | P58-3 | 56827 | 1 1.005 | 1-1/4 1.251 | 3/4 | P1620-6 | 56850 |
| | | 1/2 | P58-4 | 56828 | | | 1 | P1620-8 | 56851 |
| 3/8 .379 | 9/16 .563 | 3/8 | P69-3 | 56829 | 1-1/8 1.130 | 1-3/8 1.376 | 3/4 | P1822-6 | 56853 |
| | | 1/2 | P69-4 | 56830 | | | 1 | P1822-8 | 56854 |
| | | 3/4 | P69-6 | 56831 | | | 1-1/2 | P1822-12 | 56855 |
| 7/16 .441 | 5/8 .626 | 3/8 | P710-3 | 56832 | 1-1/4 1.255 | 1-1/2 1.501 | 3/4 | P2024-6 | 56856 |
| | | 1/2 | P710-4 | 56833 | | | 1 | P2024-8 | 56857 |
| | | 3/4 | P710-6 | 56834 | | | 1-1/2 | P2024-12 | 56858 |
| 1/2 .504 | 3/4 .751 | 1/2 | P812-4 | 56835 | 1.380 | 1.626 | 1-1/2 | P2226-12 | 56860 |
| | | 3/4 | P812-6 | 56836 | | | 1 | P2428-8 | 56861 |
| | | 1 | P812-8 | 56837 | | | 1-1/2 | P2428-12 | 56862 |
| 5/8 .630 | 7/8 .876 | 5/8 | P1014-5 | 56841 | 1-5/8 1.631 | 1-7/8 1.876 | 2 | P2428-16 | 56863 |
| | | 3/4 | P1014-6 | 56842 | | | | | |
| | | 1 | P1014-8 | 56843 | | | | | |
| 11/16 .693 | 15/16 .938 | 3/4 | P1115-6 | 56844 | 1-3/4 1.756 | 2 2.001 | 1-3/4 | P2832-14 | 56865 |
| | | | | | | | | | |
| 1-7/8 1.881 | 2-1/8 2.126 | | | | 2 2.006 | 2-1/4 2.251 | 2 | P3034-16 | 56866 |
| | | | | | | | | | |
| | | | | | | | 2 | P3236-16 | 56867 |

On A and B dimensions, tolerances apply to actual (decimal) dimensions

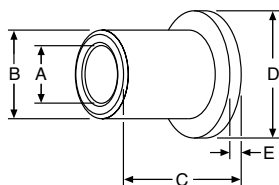
STANDARD TOLERANCES

| DIMENSIONS | TOLERANCE |
|------------|-----------|
| A | All |
| B | |
| C | All |

STANDARD CONCENTRICITY

| DIMENSIONS | T.I.R. (A TO B) |
|------------|-----------------|
| A | .129 – 1.005 |
| | 1.130 – 2.006 |

Flanged Bearings



ALL DIMENSIONS IN INCHES
ORDER BY CATALOG NUMBER OR ITEM CODE

| A | B | C | D | E | Catalog Number | Item Code |
|--------------|--------------|-----|-------|------|----------------|-----------|
| 3/16 .191 | 5/16 .313 | 1/4 | .437 | 1/16 | FP35-2 | 56868 |
| | | 1/2 | | | FP35-4 | 56869 |
| 1/4 .254 | 3/8 .376 | 3/8 | .500 | 1/16 | FP46-3 | 56870 |
| | | 1/2 | | | FP46-4 | 56871 |
| 3/8 .379 | 5/8 .626 | 1/2 | .875 | 1/8 | FP610-4 | 56872 |
| | | 3/4 | | | FP610-6 | 56873 |
| 1/2 .504 | 3/4 .751 | 1/2 | 1.000 | 1/8 | FP812-4 | 56874 |
| | | 3/4 | | | FP812-6 | 56875 |
| | | 1 | | | FP812-8 | 56876 |
| 5/8 .630 | 7/8 .876 | 3/4 | 1.000 | 1/8 | FP1014-6 | 56877 |
| | | 1 | | | FP1014-8 | 56878 |
| 3/4 .755 | 1 1.001 | 1 | 1.250 | 1/8 | FP1216-8 | 56879 |

On A and B dimensions, tolerances apply to actual (decimal) dimensions

STANDARD TOLERANCES

| DIMENSIONS | TOLERANCE |
|------------|-----------|
| A | All |
| B | |
| C | All |
| D | All |
| E | All |

STANDARD CONCENTRICITY

| DIMENSIONS | T.I.R. (A TO B) |
|------------|-----------------|
| A | All |

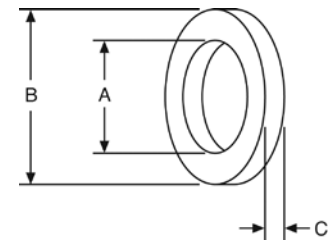
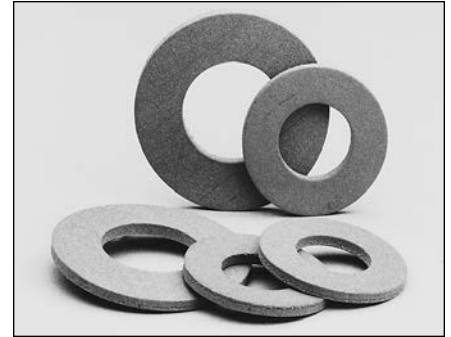
BOSStonE F-1 Glass Filled Teflon Bearings

Thrust Type

ALL DIMENSIONS IN INCHES
ORDER BY CATALOG NUMBER OR ITEM CODE

| A | B | C | Catalog Number | Item Code |
|-------------|-------------|------|----------------|-----------|
| 1/4 .254 | 5/8 .625 | .060 | TP410 | 56880 |
| 3/8 .379 | 3/4 .750 | .060 | TP612 | 56881 |
| 1/2 .504 | 1 1.000 | .060 | TP816 | 56882 |

On A and B dimensions, tolerances apply to actual (decimal) dimensions.



STANDARD TOLERANCES

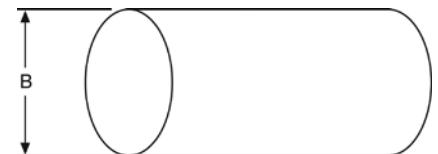
| DIMENSIONS | TOLERANCE |
|------------|---------------|
| A All | +.010 / -.000 |
| B All | +.000 / -.010 |
| C All | +.004 / -.000 |
| E All | +.004 / -.000 |

ALL DIMENSIONS IN INCHES
ORDER BY CATALOG NUMBER OR ITEM CODE

| B | Approx. Weight (In Lbs.) | Catalog Number | Item Code |
|-------|--------------------------|----------------|-----------|
| 1/4 | .065 | SP4 | 50958 |
| 3/8 | .135 | SP6 | 50959 |
| 1/2 | .233 | SP8 | 50960 |
| 1 | .878 | SP16 | 50962 |
| 1-1/4 | 1.355 | SP20 | 50963 |
| 1-1/2 | 1.937 | SP24 | 50964 |
| 2 | 3.250 | SP32 | 50965 |

All Bars are 13" long.
Other Diameters and longer Lengths are available on special order.

Solid Bars (Extruded)



STANDARD TOLERANCES

| DIMENSIONS | TOLERANCE |
|-------------|----------------|
| B 1/4 - 1/2 | -.000 to +.015 |
| 3/4 - 1 | -.000 to +.020 |
| 1-1/4 | -.000 to +.030 |
| 1-1/2 - 2 | -.000 to +.040 |

Other BOSStonE F-1 SHAPES AVAILABLE ON SPECIAL ORDER



CORED BARS



CIRCULAR DISCS



TUBING



PLATES

RULON® 641 Bearings

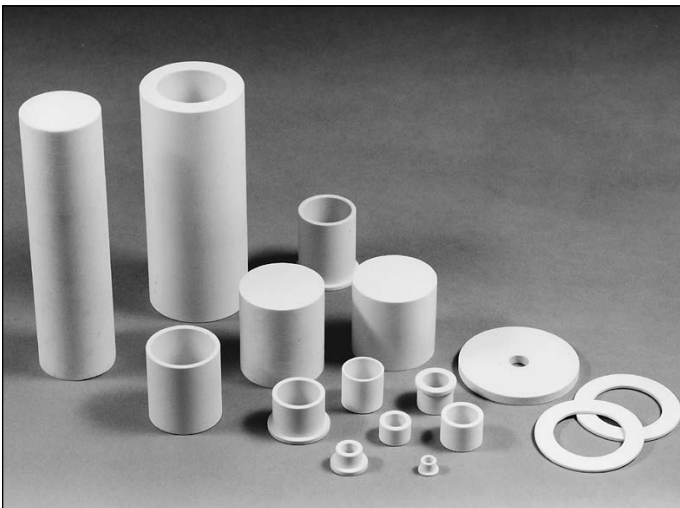
F



Boston Gear's RULON 641 Bearings are designed to overcome the chronic problems that plague bearings used in food and pharmaceutical applications.

Features

- FDA cleared, USDA accepted non-toxic materials
- RULON 641 compound of virgin PTFE and fillers designed to meet poultry and meat industry specs
- FDA drug master file numbered to allow for incidental contact with body fluids
- Excellent load and wear characteristics for continuous non-lubricated service
- Compatible with food and drug industries standard stainless steels 303 and 316 as well as 1018 mild steel
- Designed for performance at extremely high temperatures. PV value of 10,000 with 316 stainless steel
- Capable of speeds up to 400 ft/minute under dry, low-load operation
- Stick-slip is virtually nonexistent due to low friction at start-up and slow speeds. Ideal for oscillating or start/stop applications
- Corrosion resistant, unaffected by all common acids, bases, and solvents
- Shatter proof design to eliminate sudden breakdowns



Why RULON 641 for Food and Pharmaceutical Applications

- White natural color and lower friction than when using carbon bearings
- No metallic debris to drop into a process such as when using bronze bearings
- No leaky lubricants or lubricants damaged by high or low temperatures or cleaning solutions such as when using bronze bearings
- RULON 641 has a wider temperature tolerance and better load carrying capabilities than UHMWPE materials
- RULON 641 has better wear properties and better high temperature load carrying capabilities than virgin PTFE alone
- Reduced downtime
- No lubrication required

Applications

RULON 641 bearings are perfect for use in machinery and equipment in the following areas:

- Prepared meat products
- Frozen foods
- Cookies and crackers
- Candy
- Animal and marine fats and oils
- Malt beverages
- Medicinal chemicals
- Pharmaceutical preparations
- Soaps and detergents
- Perfumes and cosmetics
- Food-related packing and sealing devices
- Food and drug conveyors
- Coffee
- Food preparations
- Biological products
- Food process machinery
- Vending machines
- Household cooking equipment and appliances

| Recommended Operating Limits | RULON 641 | Engineering Information | RULON 641 |
|--------------------------------|----------------------|---|-------------------------------------|
| Temperature — Typical Range °F | - 400/+500 | Friction—Static & Dynamic | .10-.30 |
| Maximum PV (continuous) | 10,000 | Water Absorption ASTM D570 | 0% |
| Maximum P — PSI (static) | 1,000 | Flammability ASTM D635 | Non-Flammable |
| Maximum V — SFM (no load) | 400 | Chemical Resistance | Inert |
| Shaft Hardness — Minimum | RB25 | Thermal Conductivity BTU/hr/sq. ft/°F/in. | 2.60 |
| Shaft Finish Recommended RMS | 8 – 16 | Linear Coefficient of 78°F–200°F | ^B 3.9 x 10 ⁻⁵ |
| | Mild Steel, 303 | Thermal Expansion | ^C 4.9 x 10 ⁻⁵ |
| | +316 Stainless Steel | | ^B 4.2 x 10 ⁻⁵ |
| | | | ^C 5.7 x 10 ⁻⁵ |

Note: B = Bearing Diameter C = Bearing Length

| SLEEVE BEARINGS | | | | | | | FLANGED BEARINGS | | | | | | | | | |
|---|---------------------------|---------------------------------|------------------------------|----------------|-----------------------|----------------|--|------------------------|---|------------------------------|---------------------|---|------|-------------------|--------------|--|
| A -.000 +.002 ID | B -.000 +.002 OD | Recommended Housing Bore* | Recommended Shaft Size | C ±.005 | Catalog Number | Item Code | A -.000 +.002 | B -.000 +.002 | Recommended Housing Bore* | Recommended Shaft Size | C Lgth. ±.005 | Flange D ±.005 E ±.003 | | Catalog Number | Item Code | |
| 1/4 .254 | 3/8 .376 | .375/.374 | .2500/.2490 | .250 .375 | RP46-2 RP46-3 | 56790 56791 | 1/4 .254 | 3/8 .376 | .375/.374 | .2500/.2490 | .500 | .500 | .062 | RFP46-4 | 56802 | |
| 3/8 .379 | 9/16 .563 | .562/.561 | .3750/.3740 | .375 | RP69-3 | 56792 | 3/8 .379 | 5/8 .626 | .625/.624 | .3750/.3740 | .500 | .875 | .125 | RFP610-4 | 56803 | |
| 1/2 .504 | 3/4 .751 | .750/.749 | .5000/.4990 | .500 | RP812-4 | 56793 | 1/2 .504 | 3/4 .751 | .750/.749 | .5000/.4990 | 1.000 | 1.000 | .125 | RFP812-8 | 56804 | |
| 5/8 .630 | 7/8 .876 | .875/.874 | .6250/.6240 | .625 | RP1014-5 RP1014-8 | 56794 56795 | 5/8 .630 | 7/8 .876 | .875/.874 | .6250/.6240 | 1.000 | 1.000 | .125 | RFP1014-8 | 56805 | |
| 3/4 .755 | 1 1.001 | 1.000/.999 | .7500/.7490 | .750 1.500 | RP1216-6 RP1216-12 | 56796 56797 | 3/4 .755 | 1 1.001 | 1.000/.999 | .7500/.7490 | 1.000 | 1.250 | .125 | RFP1216-8 | 56817 | |
| 1 1.005 | 1-1/4 1.251 | 1.250/1.249 | 1.000/.9990 | 1.000 1.500 | RP1620-8 RP1620-12 | 56798 56799 |   | | | | | | | | | |
| 1-1/4 1.255 | 1-1/2 1.501 | 1.500/1.499 | 1.250/1.249 | 2.000 | RP2024-16 | 56800 | | | | | | | | | | |
| 1-1/2 1.506 | 1-3/4 1.751 | 1.750/1.749 | 1.500/1.499 | 2.000 | RP2428-16 | 56801 | | | | | | | | | | |
|   | | | | | | | SOLID BARS | | | | |  | | | | |
| | | | | | | | B (Dia.) | Standard Tolerances | Approx. Wt. Lbs. | Catalog Number | Item Code | | | | | |
| | | | | | | | 1/2 .504 | -.000/+.015 | .233 | RSP-8 | 56786 | | | | | |
| | | | | | | | 3/4 .755 | -.000/+.015 | .503 | RSP-12 | 56787 | | | | | |
| | | | | | | | 1 1.005 | -.000/+.020 | .878 | RSP-16 | 56788 | | | | | |
| | | | | | | | All Bars are 13" long Other Diameters and longer lengths are available on special order. | | | | |  | | | | |
| Other Shapes Available On Special Order | | | | | | |  PLATES | |  CORED BARS | | | | | | | |

*Press fit. .004/.001 Note: On A and B dimensions, tolerances apply to actual (decimal) dimensions.

BOSStonE Molded Plastic Bearings

F



Boston stocks Cylindrical, Flanged and Roll End Bearings in five materials —

1. Nylon (N) exhibits good chemical and corrosion resistance. Excellent abrasion resistance and low surface friction provide long wear without lubrication. These nylon bearings are black. Good up to 225°F maximum.
2. Delrin® and Celcon® (D) are trademarks for equivalent Acetal Resins produced by Du Pont and Celanese respectively. Acetals possess excellent moisture resistance characteristics. These materials are white. Good up to 225°F maximum.
3. Nylatron® GS (GS) is a trademark for molybdenum disulfide filled nylon produced by the Polymer Corp. Nylatron® GS exhibits excellent abrasion resistance. Nylatron® GS is dark gray in color. Good up to 225°F maximum.
4. Teflon filled Acetal (AF) — Teflon.® This material has excellent abrasion and corrosion resistance and high lubricity against steel. Good up to 225°F maximum.
5. Teflon filled Nylon (TN) used for Hanger Bearings only, is light gray in color.

Roll End Bearings

These bearings are available in almost every conceivable size directly from stock — no costly waiting, tooling or set-up charges.

Sizes are interchangeable with existing wood and ball bearings. Several objectives can be met with Roll End Bearings made of our selected plastic resins.

1. No lubricant required
2. Clean — Neat appearance
3. Non-contamination
4. Resistant to moisture & chemicals
5. Quiet operation
6. Excellent load & wear ratings

Size variation is easily accomplished by rebores or remachine operations, simply state size desired. Bores can be reduced with bushing inserts. Adaptors are available for hex shafts.

(AF) Roll End Bearings, 3" and up, are Delrin or Celcon with a Teflon filled Acetal bushing. This combination provides a low cost unit with the superior properties of a Teflon filled bearing. However, one piece Teflon filled Acetal bearings can be offered upon request.

For bearings not shown — write for prices stating quantity desired.

Blind Bore Bearings

Blind Bore Bearings are available on special order. Minimum quantities will apply. They are available for roll end bearing sizes 818 through 2216 and 8P40 through 20P40. Depth of blind bores is 1/8" less than total bearing length. When ordering, add "B" to Catalog Number.

Selection

A general guide to determination of limiting load and velocity values for sleeve bearings has been established by the use of PV calculations. PV represents Pressure x Velocity, for example: 100 psi x 20 fpm yields a PV of 2000.

Maximum PV values for BostonE Molded Plastic Bearings are:

- Nylon (N) — 3,000
- Delrin or Celcon (D) — 3,000
- Nylatron GS (GS) — 4,000
- Teflon filled Acetal (AF) — 8,000
- Teflon filled nylon (TN) — 10,000

For complete selection and application information, see Engineering Section, Pages 174-181.

Teflon® is a registered trademark of Dupont.

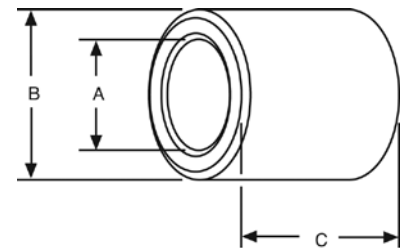
BOSStonE Molded Plastic Bearings

Plain Cylindrical Bearings

ALL DIMENSIONS IN INCHES
ORDER BY CATALOG NUMBER OR ITEM CODE

| A* | B* | C | Catalog Number | Item† Code |
|------|-------|-------|----------------|------------|
| 1/4 | 1/2 | 7/8 | GS48-7 | 57551 |
| 5/16 | 1/2 | 7/8 | GS58-7 | 57552 |
| 3/8 | 1/2 | 7/8 | GS68-7 | 57553 |
| 1/2 | 5/8 | 1 | AF810-8 | 57555 |
| 5/8 | 3/4 | 3/4 | GS1012-6 | 57557 |
| | | | AF1012-6 | 57558 |
| 5/8 | 3/4 | 1-1/2 | GS1012-12 | 57559 |
| | | | AF1012-12 | 57560 |
| 3/4 | 1 | 1-1/2 | GS1216-12 | 57561 |
| | | | AF1216-12 | 57562 |
| 1 | 1-1/4 | 2 | GS1620-16 | 57565 |

†Any item listed WITHOUT an item Code Number is available on a SPECIAL ORDER BASIS and minimum quantities may apply.



Material

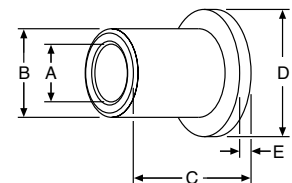
Delrin or Celcon (Acetals) — D
Nylatron GS (Molybdenum disulfide filled nylon) — GS
Teflon filled Acetal (Teflon added to Delrin or Celcon) — AF

ALL DIMENSIONS IN INCHES
ORDER BY CATALOG NUMBER OR ITEM CODE

| A* | B* | C | D | E | Catalog Number | Item Code |
|-------|-------|-------|-------|------|----------------|-----------|
| 3/8 | 5/8 | 1 | 7/8 | 1/16 | FGS610-8 | 57577 |
| | 3/4 | 1-1/2 | 1 | 1/16 | FAF610-8 | 57578 |
| | | | | | FAF612-12 | 57585 |
| 7/16 | 3/4 | 1-1/2 | 1 | 1/16 | FAF712-12 | 57586 |
| | 1/2 | 5/8 | 1 | 7/8 | 1/16 | FGS810-8 |
| 3/4 | | 1-1/2 | 1 | 1/16 | FAF810-8 | 57580 |
| | | | | | FAF812-12 | 57587 |
| | | 2 | | | FGS812-16 | 57582 |
| 9/16 | 3/4 | 1-1/2 | 1 | 1/16 | FAF912-12 | 57588 |
| | | | | | FGS912-16 | 57583 |
| 5/8 | 3/4 | 1-1/2 | 1 | 1/16 | FGS1012-12 | 57589 |
| | | 2 | | | FGS1012-16 | 57584 |
| | | 1-1/2 | | | FAF1012-12 | 57590 |
| 3/4 | 1 | 1-1/2 | 1-1/4 | 1/8 | FGS1216-12 | 57591 |
| | | | | | FAF1216-12 | 57592 |
| 1 | 1-1/4 | 2 | 1-1/2 | 1/8 | FGS1620-16 | 57593 |
| | | | | | FAF1620-16 | 57594 |
| 1-1/2 | 1-3/4 | 1-1/2 | 2 | 1/8 | FAF2428-12 | 57606 |

*Approx. dimensions. Actual size related to molding variations, however, wall thickness will be quite uniform making it practical to use these bearings for many applications.

Flanged Type



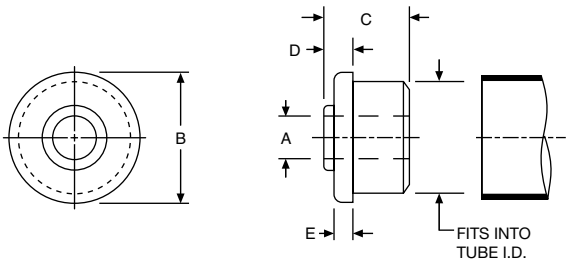
Material

Nylatron GS (Molybdenum disulfide filled nylon) — GS
Teflon filled Acetal (Teflon added to Delrin or Celcon) — AF

BOSStonE Molded Plastic Bearings

Roll End Bearings for Steel Tubing

F



Material

Delrin or Celcon (Acetals) — D
 Nylatron GS (Molybdenum disulfide filled nylon) — GS
 Teflon filled Acetal (Teflon added to Delrin or Celcon) — AF

*These dimensions are approximately 1/64" larger than listed.

†Any item listed WITHOUT an Item Code Number is available on a SPECIAL ORDER BASIS and minimum quantities may apply.

BLIND BORE Bearings are available on special order — minimum quantities will apply.

ALL DIMENSIONS IN INCHES
 ORDER BY CATALOG NUMBER OR ITEM CODE †

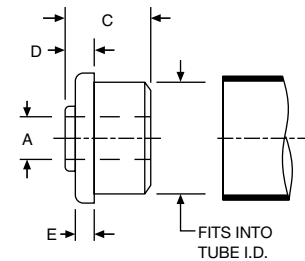
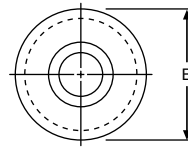
| B (Tube Size) | A* | C | D | E | Catalog Number | Item † Code |
|-----------------------------|------------|------|------|------|-------------------|----------------|
| 3/4 22 ga. | 1/8 | 9/16 | 5/32 | 3/32 | 622D-1/8 | 56920 |
| | 3/16 | | | | 622GS-1/8 | 56923 |
| | | | | | 622AF-1/8 | 56926 |
| .750 O.D. .694 I.D. | 1/4 | 9/16 | 5/32 | 3/32 | 622D-3/16 | 56921 |
| | | | | | 622GS-3/16 | 56924 |
| | 622AF-3/16 | | | | 56927 | |
| 7/8 20 ga. | 3/16 | 9/16 | 5/32 | 3/32 | 622D-1/4 | 56922 |
| | 1/4 | | | | 622GS-1/4 | 56925 |
| | | | | | 622AF-1/4 | 56928 |
| — .875 O.D. .805 I.D. | 3/16 | 9/16 | 5/32 | 3/32 | 720D-3/16 | 56929 |
| | 1/4 | | | | 720AF-3/16 | — |
| | | | | | 3/8 | 720AF-1/4 |
| 1 18 ga. | 1/4 | 9/16 | 3/16 | 1/8 | 720D-3/8 | 56931 |
| | 3/8 | | | | 720AF-3/8 | — |
| | | | | | 1/2 | 818D-1/4 |
| 1.000 O.D. .902 I.D. | 1/4 | 9/16 | 3/16 | 1/8 | 818GS-1/4 | 56941 |
| | | | | | 818AF-1/4 | 56944 |
| | 3/8 | | | | 818GS-3/8 | 56942 |
| 1.250 O.D. 1.120 I.D. | 1/2 | 9/16 | 3/16 | 1/8 | 818AF-3/8 | 56945 |
| | | | | | 818D-1/2 | 56940 |
| | 3/8 | | | | 818GS-1/2 | 56943 |
| 1-1/4 16 ga. | 1/4 | 5/8 | 3/16 | 1/8 | 818AF-1/2 | 56946 |
| | | | | | 3/8 | 1016D-1/4 |
| | 1/2 | | | | 1016GS-1/4 | 56950 |
| 1.375 O.D. 1.277 I.D. | 1/4 | 5/8 | 3/16 | 1/8 | 1016AF-1/4 | 56953 |
| | | | | | 3/8 | 1016D-3/8 |
| | 1/2 | | | | 1016GS-3/8 | 56951 |
| 1-3/8 18 ga. | 5/16 | 3/4 | 1/4 | 1/8 | 1016AF-3/8 | 56954 |
| | | | | | 3/8 | 1016D-1/2 |
| | 3/8 | | | | 1016GS-1/2 | 56952 |
| 1.500 O.D. 1.370 I.D. | 1/4 | 7/8 | 5/16 | 3/16 | 1016AF-1/2 | 56955 |
| | | | | | 3/8 | 1118D-1/4 |
| | 1/2 | | | | 1118GS-1/4 | 56960 |
| 1-1/2 16 ga. | 3/8 | 7/8 | 5/16 | 3/16 | 1118AF-1/4 | — |
| | | | | | 1/2 | 1118D-5/16 |
| | 5/8 | | | | 1118GS-5/16 | 56961 |
| 1.740 O.D. 1.610 I.D. | 1/4 | 1 | 5/16 | 3/16 | 1118AF-5/16 | — |
| | | | | | 3/8 | 1118D-3/8 |
| | 1/2 | | | | 1118GS-3/8 | 56962 |
| 3/8 1-1/2 EMT | 1/4 | 1 | 5/16 | 3/16 | 1118AF-3/8 | — |
| | | | | | 3/8 | 1216D-1/4 |
| | 1/2 | | | | 1216GS-1/4 | 56972 |
| 1.740 O.D. 1.610 I.D. | 1/4 | 1 | 5/16 | 3/16 | 1216AF-1/4 | 56976 |
| | | | | | 3/8 | 1216D-3/8 |
| | 1/2 | | | | 1216AF-3/8 | 56977 |
| 1.740 O.D. 1.610 I.D. | 1/4 | 1 | 5/16 | 3/16 | 1216GS-1/2 | 56974 |
| | | | | | 3/8 | 1216AF-1/2 |
| | 1/2 | | | | 1216D-5/8 | 56971 |
| 1.740 O.D. 1.610 I.D. | 1/4 | 1 | 5/16 | 3/16 | 1216GS-5/8 | 56975 |
| | | | | | 3/8 | 1216AF-5/8 |
| | 1/2 | | | | 12EMD-1/4 | — |
| 1.740 O.D. 1.610 I.D. | 1/4 | 1 | 5/16 | 3/16 | 12EMGS-1/4 | — |
| | | | | | 3/8 | 12EMAF-1/4 |
| | 1/2 | | | | 12EMD-3/8 | 56981 |
| 1.740 O.D. 1.610 I.D. | 1/4 | 1 | 5/16 | 3/16 | 12EMGS-3/8 | — |
| | | | | | 3/8 | 12EMAF-3/8 |
| | 1/2 | | | | 12EMD-1/2 | 56982 |
| 1.740 O.D. 1.610 I.D. | 1/4 | 1 | 5/16 | 3/16 | 12EMGS-1/2 | 56986 |
| | | | | | 3/8 | 12EMAF-1/2 |
| | 1/2 | | | | 12EMD-5/8 | 56983 |
| 1.740 O.D. 1.610 I.D. | 1/4 | 1 | 5/16 | 3/16 | 12EMGS-5/8 | 56987 |
| | | | | | 3/8 | 12EMAF-5/8 |
| | 1/2 | | | | 12EMD-5/8 | 56983 |
| 1.740 O.D. 1.610 I.D. | 1/4 | 1 | 5/16 | 3/16 | 12EMGS-5/8 | 56987 |
| | | | | | 3/8 | 12EMAF-5/8 |
| | 1/2 | | | | 12EMD-5/8 | 56983 |

BOSStonE Molded Plastic Bearings

Roll End Bearings for Steel Tubing

ALL DIMENSIONS IN INCHES
ORDER BY CATALOG NUMBER OR ITEM CODE †

| B (Tube Size) | A* | C | D | E | Catalog Number | Item † Code |
|---|------------|-------|------|------|-------------------|----------------|
| 1-5/8 16 ga. 1.625 O.D. 1.495 I.D. | 1/4 | 1 | 5/16 | 3/16 | 1316D-1/4 | — |
| | | | | | 1316GS-1/4 | 56996 |
| | | | | | 1316AF-1/4 | — |
| | 3/8 | | | | 1316D-3/8 | 56993 |
| | | | | | 1316GS-3/8 | 56997 |
| | | | | | 1316AF-3/8 | — |
| | 1/2 | | | | 1316D-1/2 | 56994 |
| | | | | | 1316GS-1/2 | 56998 |
| | | | | | 1316AF-1/2 | — |
| | 5/8 | | | | 1316D-5/8 | 56995 |
| | | | | | 1316GS-5/8 | 56999 |
| | | | | | 1316AF-5/8 | — |
| 1-3/4 16 ga. 1.750 O.D. 1.620 I.D. | 1/4 | 1 | 5/16 | 3/16 | 1416D-1/4 | 57070 |
| | | | | | 1416GS-1/4 | 57075 |
| | | | | | 1416AF-1/4 | — |
| | 3/8 | | | | 1416D-3/8 | 57071 |
| | | | | | 1416GS-3/8 | 57076 |
| | | | | | 1416AF-3/8 | — |
| | 1/2 | | | | 1416D-1/2 | 57072 |
| | | | | | 1416GS-1/2 | 57077 |
| | | | | | 1416AF-1/2 | — |
| | 5/8 | | | | 1416D-5/8 | 57073 |
| | | | | | 1416GS-5/8 | 57078 |
| | | | | | 1416AF-5/8 | 57083 |
| 3/4 | 1416D-3/4 | 57074 | | | | |
| | 1416GS-3/4 | 57079 | | | | |
| | 1416AF-3/4 | 57084 | | | | |
| 1-7/8 16 ga. 1.875 O.D. 1.745 I.D. | 1/4 | 1 | 5/16 | 3/16 | 1516D-1/4 | 57085 |
| | | | | | 1516GS-1/4 | 57090 |
| | | | | | 1516AF-1/4 | — |
| | 3/8 | | | | 1516D-3/8 | 57086 |
| | | | | | 1516GS-3/8 | 57091 |
| | | | | | 1516AF-3/8 | — |
| | 1/2 | | | | 1516D-1/2 | 57087 |
| | | | | | 1516GS-1/2 | 57092 |
| | | | | | 1516AF-1/2 | — |
| | 5/8 | | | | 1516D-5/8 | 57088 |
| | | | | | 1516GS-5/8 | 57093 |
| | | | | | 1516AF-5/8 | — |
| 3/4 | 1516D-3/4 | — | | | | |
| | 1516GS-3/4 | 57094 | | | | |
| | 1516AF-3/4 | — | | | | |
| 2 18 ga. 2.000 O.D. 1.902 I.D. | 1/4 | 1 | 5/16 | 3/16 | 1618D-1/4 | 57872 |
| | | | | | 1618GS-1/4 | 57877 |
| | | | | | 1618AF-1/4 | — |
| | 3/8 | | | | 1618D-3/8 | — |
| | | | | | 1618GS-3/8 | — |
| | | | | | 1618AF-3/8 | — |
| | 1/2 | | | | 1618D-1/2 | 57874 |
| | | | | | 1618GS-1/2 | 57879 |
| | | | | | 1618AF-1/2 | — |
| | 5/8 | | | | 1618D-5/8 | 57875 |
| | | | | | 1618GS-5/8 | 57880 |
| | | | | | 1618AF-5/8 | — |
| 3/4 | 1618D-3/4 | 57876 | | | | |
| | 1618GS-3/4 | 57881 | | | | |
| | 1618AF-3/4 | — | | | | |
| 2 16 ga. 2.000 O.D. 1.8701 I.D. | 1/4 | 1 | 5/16 | 3/16 | 1616D-1/4 | 57100 |
| | | | | | 1616GS-1/4 | 57105 |
| | | | | | 1616AF-1/4 | — |
| | 3/8 | | | | 1616D-3/8 | 57101 |
| | | | | | 1616GS-3/8 | 57106 |
| | | | | | 1616AF-3/8 | — |
| | 1/2 | | | | 1616D-1/2 | 57102 |
| | | | | | 1616GS-1/2 | 57107 |
| | | | | | 1616AF-1/2 | 57112 |
| | 5/8 | | | | 1616D-5/8 | 57103 |
| | | | | | 1616GS-5/8 | 57108 |
| | | | | | 1616AF-5/8 | — |
| 3/4 | 1616D-3/4 | 57104 | | | | |
| | 1616GS-3/4 | — | | | | |
| | 1616AF-3/4 | — | | | | |



Material

Delrin or Celcon (Acetals) — D
Nylatron GS (Molybdenum disulfide filled nylon) — GS
Teflon filled Acetal (Teflon added to Delrin or Celcon) — AF

*These dimensions are approximately 1/64" larger than listed.

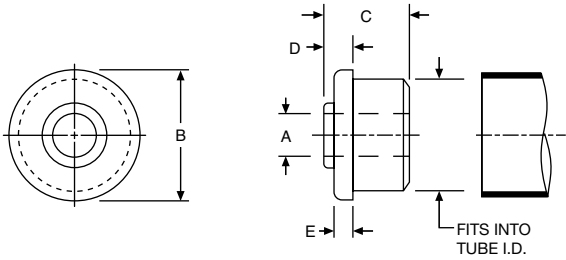
†Any item listed WITHOUT an Item Code Number is available on a SPECIAL ORDER BASIS and minimum quantities may apply.

BLIND BORE Bearings are available on special order — minimum quantities will apply.

BOSStonE Molded Plastic Bearings

Roll End Bearings for Steel Tubing

F



Material

Delrin or Celcon (Acetals) — D
 Nylatron GS (Molybdenum disulfide filled nylon) — GS
 Teflon filled Acetal (Teflon added to Delrin or Celcon) — AF

*These dimensions are approximately 1/64" larger than listed.

†Any item listed WITHOUT an Item Code Number is available on a SPECIAL ORDER BASIS and minimum quantities may apply.

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ALL DIMENSIONS IN INCHES
 ORDER BY CATALOG NUMBER OR ITEM CODE †

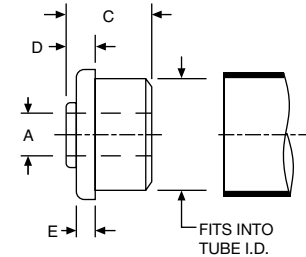
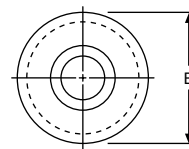
| B (Tube Size) | A* | C | D | E | Catalog Number | Item † Code |
|--------------------------|------------|-------|------|------|-------------------|----------------|
| 2 EMT | 1/4 | 1 | 5/16 | 3/16 | 16EMD-1/4 | — |
| | 3/8 | | | | 16EMGS-1/4 | — |
| | | | | | 16EMAF-1/4 | — |
| | | | | | 16EMD-3/8 | — |
| | 1/2 | | | | 16EMGS-3/8 | — |
| 16EMAF-3/8 | | — | | | | |
| 16EMD-1/2 | | 57117 | | | | |
| 5/8 | 16EMGS-1/2 | — | | | | |
| | 16EMAF-1/2 | — | | | | |
| | 16EMD-5/8 | 57118 | | | | |
| 2.190 O.D. 2.067 I.D. | 3/4 | 1 | 5/16 | 3/16 | 16EMGS-5/8 | — |
| | | | | | 16EMAF-5/8 | — |
| | | | | | 16EMD-3/4 | 57119 |
| 2-1/4 18 ga. | 1/4 | 1 | 5/16 | 3/16 | 16EMGS-3/4 | — |
| | | | | | 16EMAF-3/4 | — |
| | | | | | 1818D-1/4 | — |
| | 3/8 | | | | 1818GS-1/4 | 57862 |
| | | | | | 1818AF-1/4 | — |
| | | | | | 1818D-3/8 | — |
| | 1/2 | | | | 1818GS-3/8 | — |
| | | | | | 1818AF-3/8 | — |
| | | | | | 1818D-1/2 | — |
| | 5/8 | | | | 1818GS-1/2 | — |
| 1818AF-1/2 | | — | | | | |
| 1818D-5/8 | | — | | | | |
| 2.250 O.D. 2.152 I.D. | 3/4 | 1 | 5/16 | 3/16 | 1818GS-5/8 | — |
| | | | | | 1818AF-5/8 | — |
| | | | | | 1818D-3/4 | — |
| 2-1/4 16 ga. | 1/4 | 1 | 5/16 | 3/16 | 1818GS-3/4 | — |
| | | | | | 1818AF-3/4 | — |
| | | | | | 1816D-1/4 | 57130 |
| | 3/8 | | | | 1816GS-1/4 | — |
| | | | | | 1816AF-1/4 | — |
| | | | | | 1816D-3/8 | 57131 |
| | 1/2 | | | | 1816GS-3/8 | 57136 |
| | | | | | 1816AF-3/8 | — |
| | | | | | 1816D-1/2 | 57132 |
| | 5/8 | | | | 1816GS-1/2 | 57137 |
| 1816AF-1/2 | | — | | | | |
| 1816D-5/8 | | 57133 | | | | |
| 2.250 O.D. 2.120 I.D. | 3/4 | 1 | 5/16 | 3/16 | 1816GS-5/8 | — |
| | | | | | 1816AF-5/8 | — |
| | | | | | 1816D-3/4 | 57134 |
| 2-1/2 18 ga. | 1/4 | 1 | 5/16 | 3/16 | 1816GS-3/4 | — |
| | | | | | 1816AF-3/4 | — |
| | | | | | 2018D-1/4 | — |
| | 3/8 | | | | 2018GS-1/4 | — |
| | | | | | 2018AF-1/4 | — |
| | | | | | 2018D-3/8 | — |
| | 1/2 | | | | 2018GS-3/8 | — |
| | | | | | 2018AF-3/8 | — |
| | | | | | 2018D-1/2 | — |
| | 5/8 | | | | 2018GS-1/2 | — |
| 2018AF-1/2 | | — | | | | |
| 2018D-5/8 | | — | | | | |
| 2.500 O.D. 2.402 I.D. | 3/4 | 1 | 5/16 | 3/16 | 2018GS-5/8 | — |
| | | | | | 2018AF-5/8 | — |
| | | | | | 2018D-3/4 | — |
| 2-1/2 16 ga. | 1/4 | 1 | 5/16 | 3/16 | 2018GS-3/4 | — |
| | | | | | 2018AF-3/4 | — |
| | | | | | 2016D-1/4 | 57145 |
| | 3/8 | | | | 2016GS-1/4 | — |
| | | | | | 2016AF-1/4 | — |
| | | | | | 2016D-3/8 | — |
| | 1/2 | | | | 2016GS-3/8 | — |
| | | | | | 2016AF-3/8 | — |
| | | | | | 2016D-1/2 | 57147 |
| | 5/8 | | | | 2016GS-1/2 | 57152 |
| 2016AF-1/2 | | — | | | | |
| 2016D-5/8 | | 57148 | | | | |
| 2.500 O.D. 2.370 I.D. | 3/4 | 1 | 5/16 | 3/16 | 2016GS-5/8 | 57153 |
| | | | | | 2016AF-5/8 | — |
| | | | | | 2016D-3/4 | 57149 |
| 2.500 O.D. 2.370 I.D. | 3/4 | 1 | 5/16 | 3/16 | 2016GS-3/4 | 57154 |
| | | | | | 2016AF-3/4 | — |
| | | | | | 2016D-3/4 | — |

BOSStonE Molded Plastic Bearings

Roll End Bearings for Steel Tubing

ALL DIMENSIONS IN INCHES
ORDER BY CATALOG NUMBER OR ITEM CODE †

| B (Tube Size) | A* | C | D | E | Catalog Number | Item † Code |
|---|---|------------|--------------|------------|-------------------|----------------|
| 2-3/4 16 ga. 2.750 O.D. 2.620 I.D. | 1/4 | 1 | 5/16 | 3/16 | 2216D-1/4 | 57160 |
| | | | | | 2216GS-1/4 | — |
| | | | | | 2216AF-1/4 | — |
| | 3/8 | | | | 2216D-3/8 | 57161 |
| | | | | | 2216GS-3/8 | — |
| | | | | | 2216AF-3/8 | — |
| | 1/2 | | | | 2216D-1/2 | 57162 |
| | | | | | 2216GS-1/2 | — |
| | | | | | 2216AF-1/2 | — |
| | 5/8 | | | | 2216D-5/8 | 57163 |
| 2216GS-5/8 | | — | | | | |
| 2216AF-5/8 | | — | | | | |
| 3/4 | 2216D-3/4 | — | | | | |
| | 2216GS-3/4 | — | | | | |
| | 2216AF-3/4 | — | | | | |
| 3 16 ga. 3.000 O.D. 2.870 I.D. | 3/8 | 2416D-3/8 | 57607 | | | |
| | | 2416GS-3/8 | 57611 | | | |
| | | 2416AF-3/8 | 57615 | | | |
| | 1/2 | 2416D-1/2 | 57608 | | | |
| | | 2416GS-1/2 | 57612 | | | |
| | | 2416AF-1/2 | 57616 | | | |
| | 5/8 | 2416D-5/8 | 57609 | | | |
| | | 2416GS-5/8 | 57613 | | | |
| | | 2416D-3/4 | 57610 | | | |
| 3/4 | 2416GS-3/4 | 57614 | | | | |
| | 2416AF-3/4 | 57618 | | | | |
| | 3 11 ga. 3.000 O.D. 2.760 I.D. | 3/8 | 2411D-3/8 | 57175 | | |
| 2411GS-3/8 | | | 57179 | | | |
| 2411AF-3/8 | | | 57183 | | | |
| 1/2 | | 2411D-1/2 | 57176 | | | |
| | | 2411GS-1/2 | 57180 | | | |
| | | 2411AF-1/2 | 57184 | | | |
| 5/8 | | 2411D-5/8 | 57177 | | | |
| | | 2411GS-5/8 | 57181 | | | |
| | | 2411AF-5/8 | 57185 | | | |
| 3/4 | 2411D-3/4 | 57178 | | | | |
| | 2411GS-3/4 | 57182 | | | | |
| | 2411AF-3/4 | 57186 | | | | |
| 4 11 ga. 4.000 O.D. 3.760 I.D. | 1/2 | 2 | 3/8 | 3211D-1/2 | 57187 | |
| | | 2 | 3/8 | 3211GS-1/2 | 57192 | |
| | | 2-1/8 | 1/2 | 3211AF-1/2 | 57197 | |
| | 5/8 | 2 | 3/8 | 3211D-5/8 | 57188 | |
| | | 2 | 3/8 | 3211GS-5/8 | 57193 | |
| | | 2-1/8 | 1/2 | 3211AF-5/8 | 57198 | |
| | 3/4 | 2 | 3/8 | 3211D-3/4 | 57189 | |
| | | 2 | 3/8 | 3211GS-3/4 | 57194 | |
| | | 2-1/8 | 1/2 | 3211AF-3/4 | 57199 | |
| | 1 | 2 | 3/8 | 3211D-1 | 57190 | |
| | | 2 | 3/8 | 3211GS-1 | 57195 | |
| | | 2-1/8 | 1/2 | 3211AF-1 | 57200 | |
| 1-1/4 | 2 | 3/8 | 3211D-1-1/4 | 57191 | | |
| | 2 | 3/8 | 3211GS-1-1/4 | 57196 | | |
| | 2-1/8 | 1/2 | 3211AF-1-1/4 | — | | |
| 4-1/2 11 ga. 4.500 O.D. 4.260 I.D. | 1/2 | 1-3/4 | 3/8 | 3611D-1/2 | — | |
| | | 1-3/4 | 3/8 | 3611GS-1/2 | — | |
| | | 1-7/8 | 1/2 | 3611AF-1/2 | — | |
| | 5/8 | 1-3/4 | 3/8 | 3611D-5/8 | — | |
| | | 1-3/4 | 3/8 | 3611GS-5/8 | — | |
| | | 1-7/8 | 1/2 | 3611AF-5/8 | — | |
| | 3/4 | 1-3/4 | 3/8 | 3611D-3/4 | — | |
| | | 1-3/4 | 3/8 | 3611GS-3/4 | — | |
| | | 1-7/8 | 1/2 | 3611AF-3/4 | — | |
| 1 | 1-3/4 | 3/8 | 3611GS-1 | — | | |
| | 1-7/8 | 1/2 | 3611AF-1 | — | | |
| | 1-3/4 | 3/8 | 3611D-1-1/4 | — | | |
| 1-1/4 | 1-3/4 | 3/8 | 3611GS-1-1/4 | — | | |
| | 1-3/4 | 3/8 | 3611GS-1-1/4 | — | | |
| | 1-7/8 | 1/2 | 3611AF-1-1/4 | — | | |



Material

Delrin or Celcon (Acetals) — D
Nylatron GS (Molybdenum disulfide filled nylon) — GS
Teflon filled Acetal (Teflon added to Delrin or Celcon) — AF

*These dimensions are approximately 1/64" larger than listed.

†Any item listed WITHOUT an Item Code Number is available on a SPECIAL ORDER BASIS and minimum quantities may apply.

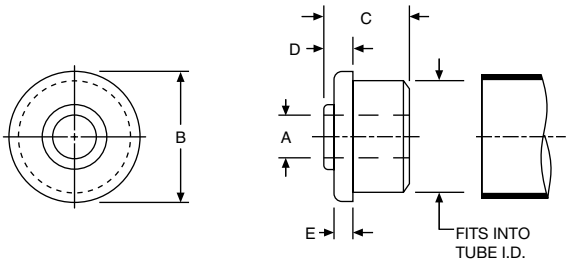
AF Bearings with 3" or larger O.D. will be supplied with an AF Flanged bushing inserted into a D or GS Roll End Bearing. For these AF Bearings it is recommended to reduce the shaft diameter or increase bushing I.D. to obtain proper clearance.

BLIND BORE Bearings are available on special order. Minimum quantities will apply.

BOSStonE Molded Plastic Bearings

Roll End Bearings for Steel Tubing and Standard Pipe

F



Material

Delrin or Celcon (Acetals) — D
 Nylatron GS (Molybdenum disulfide filled nylon) — GS
 Teflon filled Acetal (Teflon added to Delrin or Celcon) — AF

ALL DIMENSIONS IN INCHES
 ORDER BY CATALOG NUMBER OR ITEM CODE †

| B (Pipe Size) | A* | C | D | E | Catalog Number | Item † Code | | | | |
|--|--|-------------|-------|------|-------------------|----------------|------|------|-------------|-------|
| 1 Sch. 40 1.315 O.D. 1.049 I.D. | 1/4 | 5/8 | 3/16 | 1/8 | 8P40D-1/4 | 57334 | | | | |
| | 3/8 | | | | 8P40GS-1/4 | 57337 | | | | |
| | | | | | 8P40AF-1/4 | — | | | | |
| | | | | | 8P40D-3/8 | 57335 | | | | |
| | 1/2 | | | | 8P40GS-3/8 | 57338 | | | | |
| | | | | | 8P40AF-3/8 | — | | | | |
| | | | | | 8P40D-1/2 | 57336 | | | | |
| | 1-1/2 Sch. 40 1.900 O.D. 1.610 I.D. | | | | 1/4 | 1 | 5/16 | 3/16 | 12P40D-1/4 | 57343 |
| | | | | | 3/8 | | | | 12P40GS-1/4 | 57347 |
| 12P40AF-1/4 | | 57351 | | | | | | | | |
| 12P40D-3/8 | | 57344 | | | | | | | | |
| 1/2 | | 12P40GS-3/8 | 57348 | | | | | | | |
| | | 12P40AF-3/8 | 57352 | | | | | | | |
| | | 12P40D-1/2 | 57345 | | | | | | | |
| 5/8 | | 12P40GS-1/2 | 57349 | | | | | | | |
| | | 12P40AF-1/2 | — | | | | | | | |
| | 12P40D-5/8 | 57346 | | | | | | | | |
| 1-1/2 Sch. 80 1.900 O.D. 1.500 I.D. | 1/4 | 1 | 5/16 | 3/16 | 12P80D-1/4 | — | | | | |
| | 3/8 | | | | 12P80GS-1/4 | — | | | | |
| | | | | | 12P80AF-1/4 | — | | | | |
| | | | | | 12P80D-3/8 | — | | | | |
| | 1/2 | | | | 12P80GS-3/8 | — | | | | |
| | | | | | 12P80AF-3/8 | — | | | | |
| | | | | | 12P80D-1/2 | 57663 | | | | |
| | 5/8 | | | | 12P80GS-1/2 | — | | | | |
| | | | | | 12P80AF-1/2 | — | | | | |
| 12P80D-5/8 | | 57664 | | | | | | | | |
| 2 Sch.40 2.375 O.D. 2.067 I.D. | 1/4 | 1 | 5/16 | 3/16 | 16P40D-1/4 | 57355 | | | | |
| | 3/8 | | | | 16P40GS-1/4 | — | | | | |
| | | | | | 16P40AF-1/4 | — | | | | |
| | | | | | 16P40D-3/8 | 57356 | | | | |
| | 1/2 | | | | 16P40GS-3/8 | — | | | | |
| | | | | | 16P40AF-3/8 | — | | | | |
| | | | | | 16P40D-1/2 | 57357 | | | | |
| | 5/8 | | | | 16P40GS-1/2 | 57362 | | | | |
| | | | | | 16P40AF-1/2 | — | | | | |
| 16P40D-5/8 | | 57358 | | | | | | | | |
| 3/4 | 16P40GS-5/8 | 57363 | | | | | | | | |
| | 16P40AF-5/8 | — | | | | | | | | |
| | 16P40D-3/4 | 57359 | | | | | | | | |
| 3/4 | 16P40GS-3/4 | 57364 | | | | | | | | |
| | 16P40AF-3/4 | — | | | | | | | | |

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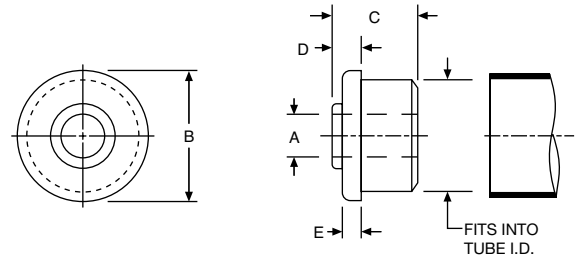
BLIND BORE Bearings are available on special order.
 Minimum quantities will apply.

BOSStonE Molded Plastic Bearings

Roll End Bearings for Standard Steel Pipe

ALL DIMENSIONS IN INCHES
ORDER BY CATALOG NUMBER OR ITEM CODE †

| B (Pipe Size) | A* | C | D | E | Catalog Number | Item Code † |
|---|-------------|-------|------|-----------|-------------------|----------------|
| 2 Sch.10 2.375 O.D. 2.152 I.D. | 1/4 | 1 | 5/16 | 3/16 | 16P10D-1/4 | — |
| | | | | | 16P10GS-1/4 | — |
| | | | | | 16P10AF-1/4 | — |
| | 3/8 | | | | 16P10D-3/8 | — |
| | | | | | 16P10GS-3/8 | — |
| | | | | | 16P10AF-3/8 | — |
| | 1/2 | | | | 16P10D-1/2 | — |
| | | | | | 16P10GS-1/2 | — |
| | | | | | 16P10AF-1/2 | — |
| | 5/8 | | | | 16P10D-5/8 | — |
| | | | | | 16P10GS-5/8 | — |
| | | | | | 16P10AF-5/8 | — |
| 3/4 | 16P10D-3/4 | — | | | | |
| | 16P10GS-3/4 | — | | | | |
| | 16P10AF-3/4 | — | | | | |
| 2 Sch.80 2.375 O.D. 1.939 I.D. | 1/4 | 1 | 5/16 | 3/16 | 16P80D-1/4 | — |
| | | | | | 16P80GS-1/4 | — |
| | | | | | 16P80AF-1/4 | — |
| | 3/8 | | | | 16P80D-3/8 | — |
| | | | | | 16P80GS-3/8 | — |
| | | | | | 16P80AF-3/8 | — |
| | 1/2 | | | | 16P80D-1/2 | 57690 |
| | | | | | 16P80GS-1/2 | 57695 |
| | | | | | 16P80AF-1/2 | — |
| | 5/8 | | | | 16P80D-5/8 | 57691 |
| | | | | | 16P80GS-5/8 | — |
| | | | | | 16P80AF-5/8 | — |
| 3/4 | 16P80D-3/4 | 57692 | | | | |
| | 16P80GS-3/4 | — | | | | |
| | 16P80AF-3/4 | — | | | | |
| 2-1/2 Sch.40 2.875 O.D. 2.469 I.D. | 1/4 | 1 | 5/16 | 3/16 | 20P40D-1/4 | 57370 |
| | | | | | 20P40GS-1/4 | — |
| | | | | | 20P40AF-1/4 | — |
| | 3/8 | | | | 20P40D-3/8 | 57371 |
| | | | | | 20P40GS-3/8 | — |
| | | | | | 20P40AF-3/8 | — |
| | 1/2 | | | | 20P40D-1/2 | 57372 |
| | | | | | 20P40GS-1/2 | — |
| | | | | | 20P40AF-1/2 | — |
| | 5/8 | | | | 20P40D-5/8 | 57373 |
| | | | | | 20P40GS-5/8 | — |
| | | | | | 20P40AF-5/8 | — |
| 3/4 | 20P40D-3/4 | 57374 | | | | |
| | 20P40GS-3/4 | — | | | | |
| | 20P40AF-3/4 | — | | | | |
| 3 Sch.40 3.500 O.D. 3.068 I.D. | 3/8 | 1-1/4 | 3/8 | 3/16 | 24P40D-3/8 | 57385 |
| | | 1-1/4 | 3/8 | | 24P40GS-3/8 | 57390 |
| | | 1-3/8 | 1/2 | | 24P40AF-3/8 | 57395 |
| | 1/2 | 1-1/4 | 3/8 | 3/16 | 24P40D-1/2 | 57386 |
| | | 1-1/4 | 3/8 | | 24P40GS-1/2 | 57391 |
| | | 1-3/8 | 1/2 | | 24P40AF-1/2 | 57396 |
| | 5/8 | 1-1/4 | 3/8 | 3/16 | 24P40D-5/8 | 57387 |
| | | 1-1/4 | 3/8 | | 24P40GS-5/8 | 57392 |
| | | 1-3/8 | 1/2 | | 24P40AF-5/8 | 57397 |
| | 3/4 | 1-1/4 | 3/8 | 3/16 | 24P40D-3/4 | 57388 |
| | | 1-1/4 | 3/8 | | 24P40GS-3/4 | 57393 |
| | | 1-3/8 | 1/2 | | 24P40AF-3/4 | 57398 |
| 1 | 1-1/4 | 3/8 | 3/16 | 24P40D-1 | 57389 | |
| | 1-1/4 | 3/8 | | 24P40GS-1 | 57394 | |
| | 1-3/8 | 1/2 | | 24P40AF-1 | 57399 | |



Material

Delrin or Celcon (Acetals) — D
Nylatron GS (Molybdenum disulfide filled nylon) — GS
Teflon filled Acetal (Teflon added to Delrin or Celcon) — AF

*These dimensions are approximately 1/64" larger than listed.

†Any item listed WITHOUT an Item Code Number is available on a SPECIAL ORDER BASIS and minimum quantities may apply.

AF Bearings with 3" or larger O.D. will be supplied with an AF Flanged bushing inserted into a D or GS Roll End Bearing. For these AF Bearings it is recommended to reduce the shaft diameter or increase bushing I.D. to obtain proper clearance.

BLIND BORE bearings are available on special order. Minimum quantities will apply.

BOSonE Molded Plastic Bearings

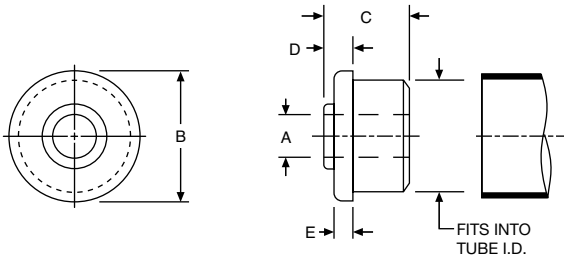
Roll End Bearings for Standard Steel Pipe

F



ALL DIMENSIONS IN INCHES
ORDER BY CATALOG NUMBER OR ITEM CODE †

| B (Pipe Size) | A* | C | D | E | Catalog Number | Item † Code |
|------------------|-------|-------|-----|------|-------------------|----------------|
| 4 Sch. 40 | 1/2 | 1-3/4 | 3/8 | | 32P40D-1/2 | 57400 |
| | | 1-3/4 | 3/8 | 3/16 | 32P40GS-1/2 | 57405 |
| | | 1-7/8 | 1/2 | | 32P40AF-1/2 | 57410 |
| | 5/8 | 1-3/4 | 3/8 | | 32P40D-5/8 | 57401 |
| | | 1-3/4 | 3/8 | 3/16 | 32P40GS-5/8 | 57406 |
| | | 1-7/8 | 1/2 | | 32P40AF-5/8 | 57411 |
| | 3/4 | 1-3/4 | 3/8 | | 32P40D-3/4 | 57402 |
| | | 1-3/4 | 3/8 | 3/16 | 32P40GS-3/4 | 57407 |
| | | 1-7/8 | 1/2 | | 32P40AF-3/4 | 57412 |
| | 1 | 1-3/4 | 3/8 | | 32P40D-1 | 57403 |
| | | 1-3/4 | 3/8 | 3/16 | 32P40GS-1 | 57408 |
| | | 1-7/8 | 1/2 | | 32P40AF-1 | 57411 |
| 4.500 O.D. | | 1-3/4 | 3/8 | | 32P40D-1-1/4 | 57404 |
| 4.026 I.D. | 1-1/4 | 1-3/4 | 3/8 | 3/16 | 32P40GS1-1/4 | 57409 |



AF bearings with 3" or larger O.D. will be supplied with an AF Flanged bushing inserted into a D or GS Roll End Bearing. For these AF Bearings it is recommended to reduce the shaft diameter or increase bushing I.D. to obtain proper clearance.

BLIND BORE bearings are available on special order — minimum quantities will apply.

Material

Delrin or Celcon (Acetals) — D
Nylatron GS (Molybdenum disulfide filled nylon) — GS
Teflon filled Acetal (Teflon added to Delrin or Celcon) — AF

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†Any item listed WITHOUT an Item Code Number is available on a SPECIAL ORDER BASIS — minimum quantities may apply.

BOSStonE Molded Plastic Bearings

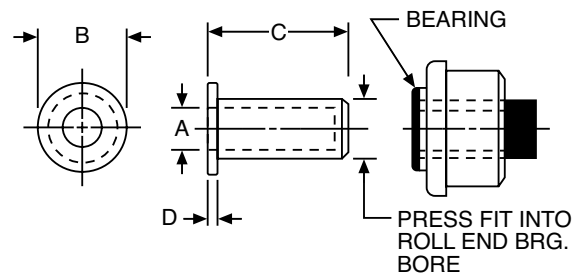
Extra Length – Blind Bore Bearing Inserts

Extra length Blind Bore inserts are available for Roll End Bearings from 1-3/4" to 6" outside diameter. All Blind Bore Bearing inserts listed below are made from Nylatron GS and are designed to press fit into 3/4" I.D. Roll End Bearings.

ALL DIMENSIONS IN INCHES
ORDER BY CATALOG NUMBER OR ITEM CODE

| Roll End Brg. Bore | A* | B | C | Max. Depth | D | Catalog Number | Item Code |
|--------------------|------|---|-------|------------|------|----------------|-----------|
| 3/4 | 7/16 | 1 | 1-1/2 | 1-3/8 | 1/16 | F7612B | 57482 |
| | 1/2 | | | | | F8612B | 57483 |
| | 9/16 | | | | | F9612B | 57484 |
| | 5/8 | | | | | F10612B | - |
| 3/4 | 7/16 | 1 | 2 | 1-7/8 | 1/16 | F7616B | 57486 |
| | 1/2 | | | | | F8616B | 57487 |
| | 9/16 | | | | | F9616B | 57488 |
| | 5/8 | | | | | F10616B | 57489 |

* These dimensions are approximately 1/64" larger than listed.



Roll End Adapter for Hex Shaft

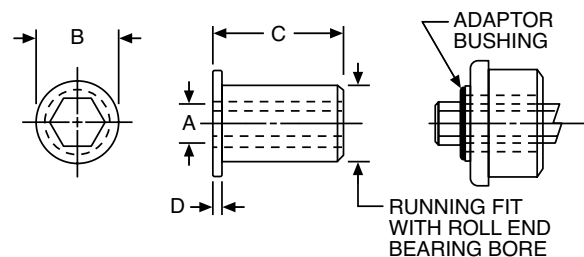
Hex shaft adapter bushings are available for Roll End Bearings from 1" to 6" outside diameter. All hex shaft adapter bushings are made from Nylatron GS and are designed to provide a running fit with the Roll End Bearing bores listed below.

ALL DIMENSIONS IN INCHES
ORDER BY CATALOG NUMBER OR ITEM CODE

| A Hex Shaft Size | Roll End Brg. Bore + | B | C | D | Catalog Number | Item Code |
|---------------------|----------------------|-------|-------|------|----------------|-----------|
| 5/16 | 1/2 | 3/4 | 7/8 | 1/16 | FH547 | 57479 |
| 7/16 | 5/8 | 7/8 | 1 | 1/16 | FH758 | 57481 |
| 5/8 | 7/8* | 1-1/8 | 1-1/4 | 3/32 | FH10710 | 57707 |
| 11/16 | 7/8* | 1-1/8 | 1-1/4 | 3/32 | FH11710 | 57708 |

*7/8" I.D. Roll End Bearings are not available from stock. They may be machined from any 3/4" bore size. Prices on application.

+I.D. of "AF" Roll End bearings may have to be enlarged approximately 1/64" to obtain proper clearance.



BOSStonE Molded Plastic Bearings

Guide Roll Bearings

F



Nylatron GS Roll End Bearing has an oversized flange. Designed for use as a belt guide on conveyor rollers, or on light duty trolley conveyors. Using 2" 16 Gage Tubing.

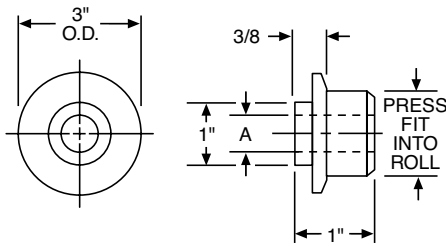
Material

Nylatron GS (Molybdenum disulfide filled nylon) — GS

ALL DIMENSIONS IN INCHES
ORDER BY CATALOG NUMBER
OR ITEM CODE

| A | Catalog Number | Item Code |
|-----|----------------|-----------|
| 1/2 | G1616GS-1/2 | 57704 |
| 5/8 | G1616GS-5/8 | 57706 |

Also suitable to take 5/16, 3/8 and 7/16" hex shaft bushing.



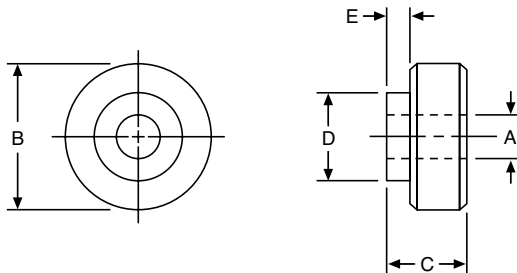
Rollers



These rollers are made from roll end bearings shown on pages 162 through 168. (Ribbed Construction)

ALL DIMENSIONS IN INCHES
ORDER BY CATALOG NUMBER OR ITEM CODE

| B | A* | C | D | E | Made From Cat. No. | Catalog Number | Item Code |
|-------|------|-------|-------|------|--------------------|----------------|-----------|
| .700 | 1/8 | 9/16 | 1/2 | 1/16 | 622D-1/8 | R700D | 57492 |
| | | | | | 622GS-1/8 | R700GS | 57493 |
| .800 | 3/16 | 9/16 | 5/8 | 1/16 | 720D-3/16 | R800D | 57494 |
| | | | | | 720GS-3/16 | R800GS | 57495 |
| .900 | 1/4 | 9/16 | 5/8 | 1/16 | 818D-1/4 | R900D | 57496 |
| | | | | | 818GS-1/4 | R900GS | 57497 |
| 1.120 | 3/8 | 5/8 | 5/8 | 1/16 | 1016D-3/8 | R1120D | 57498 |
| | | | | | 1016GS-3/8 | R1120GS | 57499 |
| 1.370 | 1/2 | 7/8 | 7/8 | 1/8 | 1216D-1/2 | R1370D | 57500 |
| | | | | | 1216GS-1/2 | R1370GS | 57501 |
| 1.500 | 1/2 | 1 | 1 | 1/8 | 1316D-1/2 | R1500D | 57502 |
| | | | | | 1316GS-1/2 | R1500GS | 57503 |
| 1.620 | 1/2 | 1 | 1 | 1/8 | 1416D-1/2 | R1620D | 57504 |
| | | | | | 1416GS-1/2 | R1620GS | 57505 |
| 1.870 | 1/2 | 1 | 1 | 1/8 | 1616D-1/2 | R1870D | 57506 |
| | | | | | 1616GS-1/2 | R1870GS | 57507 |
| 2.120 | 1/2 | 1 | 1 | 1/8 | 1816D-1/2 | R2120D | 57508 |
| | | | | | 1816GS-1/2 | R2120GS | 57509 |
| 2.370 | 1/2 | 1 | 1 | 1/8 | 2016D-1/2 | R2370D | 57510 |
| | | | | | 2016GS-1/2 | R2370GS | 57511 |
| 2.750 | 3/4 | 1-1/2 | 1-1/2 | 3/16 | 2411D-3/4 | R2750D | 57512 |
| | | | | | 2411GS-3/4 | R2750GS | 57513 |
| 3.000 | 3/4 | 1-1/4 | 2 | 3/16 | 24P40D-3/4 | R3000D | 57514 |
| | | | | | 24P40GS-3/4 | R3000GS | 57515 |
| 3.750 | 1 | 2 | 2 | 3/16 | 3211D-1 | R3750D | 57516 |
| 4.250 | 1 | 1-3/4 | 2 | 3/16 | 3611D-1 | R4250D | 57518 |



Material

Delrin or Celcon (Acetals) — D
Nylatron GS (Molybdenum disulfide filled nylon) — GS

*These dimensions are approximately 1/64" larger than listed.

BOSStonE Molded Plastic Bearings

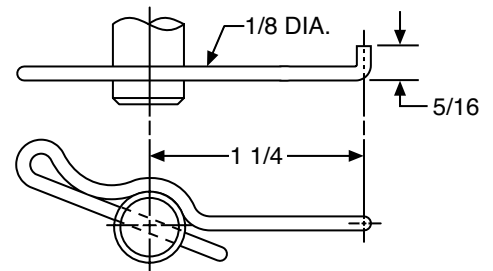
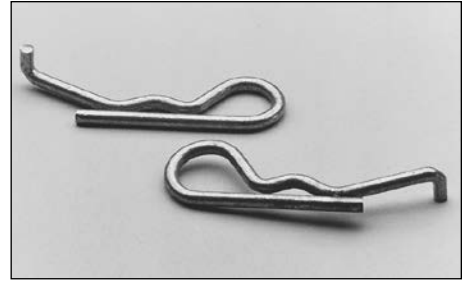
Shaft Clip

Secures round shaft to conveyor frame. Shaft can't turn or slide out. Clip required on one end only, conventional cotter pin can be used on other end.

Available from stock for 1/2" dia. shaft.

ORDER BY CATALOG NUMBER OR ITEM CODE

| Catalog Number | Item Code |
|----------------|-----------|
| SC-4 | 57490 |

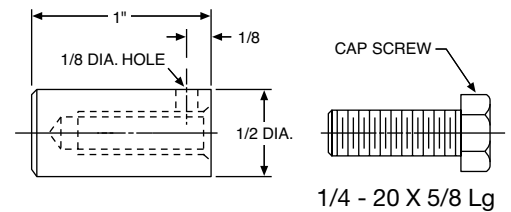


Stub Shaft for Rollers

This stainless steel screw and stub assembly fits Blind Bore Roll End Bearings.

ORDER BY CATALOG NUMBER OR ITEM CODE

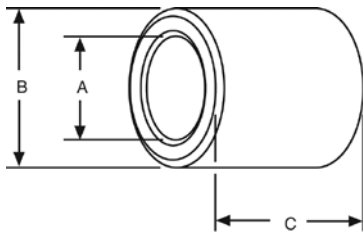
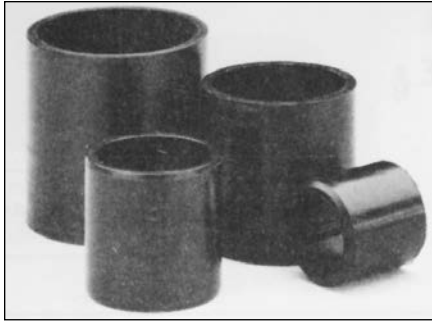
| Catalog Number | Item Code |
|----------------|-----------|
| SS-4 | 57491 |



BOSonE Molded Nylon Bearings

Plain Cylindrical Bearings

F



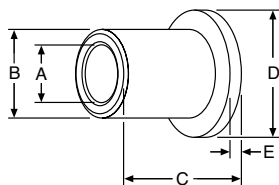
STANDARD TOLERANCES

| DIMENSIONS | | TOLERANCE |
|------------|-----|-----------|
| A | All | ± .015 |
| B | | |
| C | All | ± .015 |

ALL DIMENSIONS IN INCHES ORDER BY CATALOG NUMBER OR ITEM CODE

| A | B | C | Catalog Number | Item Code |
|-------|--------|--------|----------------|-----------|
| 3/16 | 5/16 | 5/16 | NS35-2-1/2 | 56883 |
| 1/4 | 3/8 | 3/8 | NS46-3 | 56884 |
| 5/16 | 7/16 | 7/16 | NS57-3-1/2 | 56885 |
| 3/8 | 1/2 | 1/2 | NS68-4 | 56886 |
| 7/16 | 9/16 | 9/16 | NS79-4-1/2 | 56887 |
| 1/2 | 5/8 | 5/8 | NS810-5 | 56888 |
| 9/16 | 11/16 | 11/16 | NS911-5-1/2 | 56889 |
| 5/8 | 3/4 | 3/4 | NS1012-6 | 56890 |
| 11/16 | 13/16 | 13/16 | NS1113-6-1/2 | 56891 |
| 3/4 | 7/8 | 7/8 | NS1214-7 | 56892 |
| 7/8 | 1 | 1 | NS1416-8 | 56894 |
| 15/16 | 1-1/16 | 1-1/16 | NS1517-8-1/2 | 56895 |
| 1 | 1-1/8 | 1-1/8 | NS1618-9 | 56896 |

Flanged Type



ALL DIMENSIONS IN INCHES ORDER BY CATALOG NUMBER OR ITEM CODE

| A | B | C | D | E | Catalog Number | Item Code |
|-------|--------|--------|--------|------|----------------|-----------|
| 3/16 | 5/16 | 5/16 | 7/16 | 1/16 | NF35-2-1/2 | 56897 |
| 1/4 | 3/8 | 3/8 | 1/2 | 1/16 | NF46-3 | 56898 |
| 5/16 | 7/16 | 7/16 | 9/16 | 1/16 | NF57-3-1/2 | 56899 |
| 3/8 | 1/2 | 1/2 | 5/8 | 1/16 | NF68-4 | 56900 |
| 1/2 | 5/8 | 5/8 | 3/4 | 1/16 | NF810-5 | 56902 |
| 9/16 | 11/16 | 11/16 | 15/16 | 1/16 | NF911-5-1/2 | 56903 |
| 5/8 | 3/4 | 3/4 | 7/8 | 1/16 | NF1012-6 | 56904 |
| 11/16 | 13/16 | 13/16 | 1 | 1/16 | NF1113-6-1/2 | 56905 |
| 3/4 | 7/8 | 7/8 | 1-1/16 | 1/16 | NF1214-7 | 56906 |
| 7/8 | 1 | 1 | 1-3/16 | 1/16 | NF1416-8 | 56908 |
| 15/16 | 1-1/16 | 1-1/16 | 1-1/4 | 1/16 | NF1517-8-1/2 | 56909 |
| 1 | 1-1/8 | 1-1/8 | 1-5/16 | 1/16 | NF1618-9 | 56910 |

STANDARD TOLERANCES

| DIMENSIONS | | TOLERANCE |
|------------------|-----|-----------|
| A B D E | All | ± .015 |
| C | All | ± .015 |

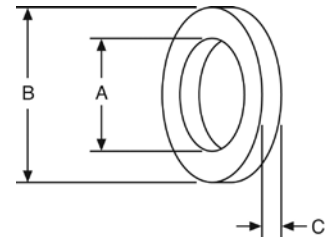
BOSStonE Molded Nylon Bearings

Thrust Type

ALL DIMENSIONS IN INCHES
ORDER BY CATALOG NUMBER OR ITEM CODE

| A | B | C | Catalog Number | Item Code |
|----------------|-----------------|--------------|----------------|-----------|
| 3/16 .189 | 3/4 .750 | 1/16 .070 | NT312 | 56911 |
| 1/4 .255 | 5/8 .620 | 3/32 .097 | NT410 | 56912 |
| 1/2 .503 | 13/16 .820 | 3/32 .095 | NT813 | 56913 |
| 9/16 .565 | 13/16 .812 | 3/32 .095 | NT913 | 56914 |
| 5/8 .630 | 1 1.000 | 3/32 .094 | NT1016 | 56915 |
| 3/4 .760 | 1-1/16 1.063 | 3/32 .094 | NT1217 | 56916 |
| 7/8 .890 | 1-1/8 1.125 | 3/32 .094 | NT1418 | 56917 |
| 1-1/4 1.290 | 2-1/8 2.140 | 3/32 .098 | NT2034 | 56918 |
| 1-1/2 1.555 | 2-1/16 2.058 | 1/8 .120 | NT2533 | 56919 |

Tolerances apply to actual (decimal) dimensions.



STANDARD TOLERANCES

| DIMENSIONS | | TOLERANCE |
|-------------|-----|-----------|
| A B C | All | ± .015 |

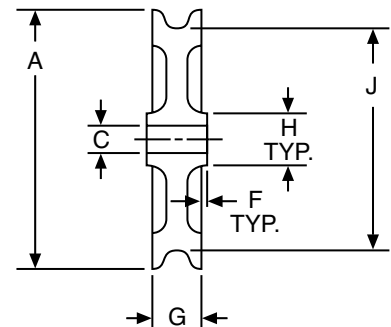
ALL DIMENSIONS IN INCHES
ORDER BY CATALOG NUMBER OR ITEM CODE

| A | C | G | F | H | J | Cable Size | Catalog Number | Item Code |
|-------|-----|------|------|-----|-------|------------|----------------|-----------|
| 1-1/4 | 1/4 | .400 | | 1/2 | 31/32 | 1/4 | P1250-2 | 57522 |
| 2-5/8 | 3/8 | .500 | .017 | 3/4 | 2-1/8 | 1/4 | P2625-3 | 57525 |
| 2-5/8 | 1/2 | .500 | — | 3/4 | 2-1/8 | 1/4 | P2625-4 | 57526 |

STANDARD TOLERANCES

| DIMENSIONS | TOLERANCE |
|------------|------------------|
| C | All |
| | + .005 to + .010 |

Cable Pulleys



Sleeve Bearing Selection

F

The performance of a bearing is influenced by the conditions of speed, mating materials, clearances, temperature, lubrication, type of loading, etc. Of primary importance, is the maintenance of an oil film between the bearing surfaces to reduce friction, dissipate heat and retard wear by minimizing metal to metal contact. The most critical periods of operation are during starting and stopping, when the load may cause the bearing surfaces to come into contact with each other. For these reasons it is not practical to predict the wear rate of bronze bearings.

The selection of the best bearing for an application can be a very complicated problem because the combined influence of the many factors affecting the operation is difficult to predict.

The following information may be used as a guide for selecting a Bronze sleeve bearing which should satisfy the requirements.

For practical reasons, the length of the bearing should normally be between one and two times the shaft diameter and the O.D. approximately 25% larger than the shaft diameter.

Starting and Stopping/

Oscillatory Motion/Cyclical Overload conditions mean a full film of oil cannot be maintained. When this happens, metal-to-metal contact occurs and causes bearing wear. Because of the continual interruption of the oil film, a larger safety factor is required when designing bearings for applications of this type. A lower permissible PV factor must be considered.

Speed/Oil Viscosity must also be considered. The proper viscosity oil must be selected for each particular speed application, to achieve optimum bearing operation.

For high speed applications, a light oil (150 SUS at 100°F) is required to keep internal oil friction at a minimum and assure proper metering of the oil to the bearing/shaft surface.

For moderate speeds, a medium-viscosity oil (400 SUS at 100°F) is required.

For very low shaft speeds under moderate or heavy loads, a heavier oil with an extreme pressure additive may be required to prevent complete oil film rupture and give sufficient lubrication for proper operation.

Shaft Consideration is extremely important in bearing applications. For optimum operation the shaft must be of proper material, hardness, surface finish, roundness and dimensions. Experience indicates that carbon steels, and preferably C1137, offer the best operating results. If stainless steel shafts are to be used, 400 Series is recommended. Austenitic 300 Series stainless steel tends to gall, which results in extreme wear and shortened life. If 300 Series stainless is required for its non-magnetic qualities, it is strongly recommended that shafts be work-hardened or chrome-plated for satisfactory operation.

For best results, a shaft surface finish of 4 to 12 RMS is recommended. Nicks, gouges, and burrs should be avoided because they rupture the oil film and cause metal-to-metal contact.

Shaft roundness and dimensions also contribute greatly to bearing life. The more round the shaft, the less the bearing and shaft wear, with longer life resulting. Dimensions also play an important role in operation and should always be in accord with the recommended bearing clearance charts.

As stated, for practical reasons the bearing length should normally be between one and two times the shaft diameter. However, the recommended practice is by using the PV factor. PV is a means of measuring the performance capabilities of bearings. P is expressed as pressure or pounds per square inch on the projected area of the bearing. V is velocity in feet per minute of the wear surface (surface feet per minute).

“PV” is expressed by the following:

$$PV = \frac{W}{Ld} \times \frac{\pi dn}{12} = \frac{\pi Wn}{12L} = \frac{.262Wn}{L}$$

$$P = \frac{W}{A \text{ (Brg. I.D. x Length)}}$$

$$V = \text{Surface velocity of the shaft, ft./min.} \\ (.262 \times \text{RPM} \times \text{Shaft Dia.})$$

$$W = \text{Bearing load in pounds}$$

$$L = \text{Bearing length in inches}$$

$$d = \text{I.D. of bearing in inches} \\ (\text{cancels out of formula})$$

$$n = \text{Shaft speed, RPM}$$

Sleeve Bearing Selection (Continued)

Each material has a specific maximum PV rating, as shown in the following Table. In addition, it also has a maximum pressure (P) and velocity (V) limitation. These values should not be exceeded. At no time can all maximum values be utilized.

| Material | Max. PV | Max. P | Max. V |
|-------------------------------------|---------|--------|--------|
| BEAR-N-BRONZ | 75,000 | 3,000 | 750 |
| BOST-BRONZ | 50,000 | 2,000 | 1,200 |
| BOST-BRONZ (Thrust Washers) | 10,000 | 2,000 | 1,200 |
| F1 | 20,000 | 1,000 | 400 |
| TN | 10,000 | 800 | 300 |
| AF | 8,000 | 750 | 300 |
| GS | 4,000 | 500 | 300 |
| D | 3,000 | 480 | 300 |
| N | 3,000 | 480 | 300 |
| UHMW-PE | 2,300 | 1,400 | 100 |
| Nyloil | 16,000 | 2,000 | 400 |
| UHMW-PE with Internal Wear Strip | 4,000 | 1,400 | 100 |
| Nyloil with Internal Wear Strip | 16,000 | 2,000 | 400 |

All values based on 72°F ambient temperature and standard lubricant, when required.

NOTE: Above figures should be considered maximum and not to be exceeded.

EXAMPLE

Select a BOST-BRONZ (oil impregnated) bearing to satisfy the following conditions.

Known—

5/8" Shaft Diameter

$$n = 500 \text{ RPM}$$

$$W_1 = \text{Load Bearing I} = L_1 = 52.5 \text{ Lbs.}$$

$$W_2 = \text{Load Bearing II} = L_{II} = 157.5 \text{ Lbs.}$$

L = Length of Bearing

For Bearing I—

$$\begin{aligned} PV &= \frac{.262 \times W_1 \times n}{L \text{ (In. of Lgth)}} \\ &= \frac{.262 \times 52.5 \times 500}{1} \\ &= 6877 \end{aligned}$$

For Bearing II—

$$\begin{aligned} PV &= \frac{.262 \times W_2 \times n}{L \text{ (In. of Lgth.)}} \\ &= \frac{.262 \times 157.5 \times 500}{1} \\ &= 20632 \end{aligned}$$

With the calculated PV of 6877, Bearing I, and 20,632, Bearing II, it can be seen from the Table, that a BOST-BRONZ bearing, one inch long, will not exceed Maximum PV.

NOTE: An increase in L will decrease the value of PV; conversely, a shortening of L increases the value of PV.

A check of PV calculations should now be performed to assure that Max. "P" and Max. "V" is not exceeded.

$$PV \text{ Max.} = P \text{ Max.} \times V \text{ Max.}$$

$$\begin{aligned} V &= .262 \times \text{Shaft Dia.} \times n \\ &= .262 \times .625 \times 500 = 81.9 \end{aligned}$$

$$\text{Bearing I} \quad P = \frac{PV}{V} = \frac{6877}{81.9} = 83.9$$

$$\text{Bearing II} \quad P = \frac{PV}{V} = \frac{20632}{81.9} = 251.9$$

As can be seen, we have not exceeded any maximum values. We can now select an actual Bost-Bronz bearing.

Knowing:

$$\text{Shaft Dia. } 5/8" = \text{Bearing I.D. } 5/8"$$

Bearing O.D. should be approximately 25% larger than I.D.

$$\text{Bearing O.D.} = .625 \times 1.25 = .781"$$

Referring to Bost-Bronz listings, Page 12, we find 5/8" I.D. bearings listed with O.D.'s from 3/4 to 1" and lengths from 1/2 to 2".

From this selection of bearings, we may choose a bearing to fit the requirements.

Since Bearing I is lightly loaded, for practical reasons, we select a bearing length of one times bearing I.D. We select a B1013-5 (5/8" I.D. x 13/16 O.D. x 5/8" long).

Sleeve Bearing Selection (Continued)

EXAMPLE (Continued):

For Bearing II we will select a length of two times bearing I.D. — B1013-10. (In actual practice, it may be more suitable to select one common size — B1013-10.)

For a double-check of PV, we should use actual bearing selected:

$$PV \text{ Actual} = \frac{PV}{L (\text{Actual Bearing})}$$

$$\text{Bearing I PVA} = \frac{6877}{.625} = 10043$$

$$\text{Bearing II PVA} = \frac{20632}{1.25} = 16505$$

Actual PV values are below Maximum PV values shown in Table.

Sleeve Bearing Wear Life

Wear life cannot be applied to BOST-BRONZ (oil-impregnated) or BEAR-N-BRONZ (SAE CA932/660) bearings. Under ideal conditions the shaft rides on a film of oil, and will give almost infinite life. If this film of oil is disrupted, intimate metal-to-metal contact results leading to eventual failure.

Non-Metallic and Non-Lubricated Bearings

Wear rate is generally defined as the volumetric loss of material over a unit of time. Several mechanisms operate simultaneously to remove material from the wear interface, however, the primary mechanism is adhesive wear which is characterized by fine particles of polymer being removed from the surface. The presence of this powder is a good indication that the rubbing surfaces are wearing properly. The presence of melted polymer or large gouges or grooves at the interface is normally an indication that the materials are abrading and wearing and/or the pressure velocity limits of the materials are being exceeded.

Once a Wear Rate factor (K) has been established it can be used by the engineer to calculate wear rates of bearings, gears, etc. However, because wear rates is affected by material types, finishes and hardness as well as environmental temperature and part design, large errors may result as end use variables begin to differ from those selected for the test procedure.

As a relative measure of the performance of one composite vs. another at the same operating conditions, the K factors have proven to be highly reliable.

$$t = K (PVT)$$

t = Wear in inches

$$P = \frac{W (\text{Total Load})}{A (\text{Brg. I.D.} \times \text{Lgth.})}$$

V = Velocity in ft. per minute
(.262 x RPM x Shaft Dia.)

$$T = \frac{t}{KPV}$$

T = Running time in hours

K = Wear rate factor

| | | K |
|---------------------------|------|----------------------|
| Delrin or Celcon | (D) | 50×10^{-10} |
| Nylatron GS . . . | (GS) | 35×10^{-10} |
| Teflon filled Acetal | (AF) | 17×10^{-10} |
| Teflon filled Nylon | (TN) | 13×10^{-10} |
| Glass Filled Teflon (F-1) | | 12×10^{-10} |
| Nylon | | 12×10^{-10} |

Values for plastic resins assume no trace of lubricant present.

A simple calculation could be made as follows:

- Assumptions:
1. 1616D-1/2 Delrin Roll End Bearing
 2. .020 inch allowable wear limit
 3. 50 lbs. load on roll (25 lbs. per bearing)
 4. 100 RPM
 5. Normal environment with no lubrication

Problem: Find estimated wear life

Solution:

$$PV = \frac{\pi W n}{12 L} = \frac{\pi \times 25 \times 100}{12 \times 1} = 655$$

$$t = K (PVT)$$

$$T = \frac{t}{KPV} \text{ or } \frac{.020}{50 \times 10^{-10}} \times 655$$

$$T = 6100 \text{ hrs.}$$

The use of low viscosity lubricant applied initially and/or periodically during operation of the bearing would extend the life several times.

BostonE F-1 material is generally limited to a bearing maximum of 1,000 p.s.i. For more detailed design calculations Fig. 2 shows actual deformation values as a function of temperature and load.

The coefficient of friction of BostonE F-1 varies with changes in load and speed when operated dry. Figure 3 shows the variation with load and Figure 4 shows the variation with speed.

Sleeve Bearing Wear Life (Continued)



For optimum performance of BostonE F-1 bearings, the mating surface should be as hard as possible. Mild steel, however, will give satisfactory results.

A surface finish range of 8-16 micro-inches is preferred; however, good results will be obtained with finishes to 32 micro-inches.

Figures 1 through 6 apply to BostonE F-1 material only.

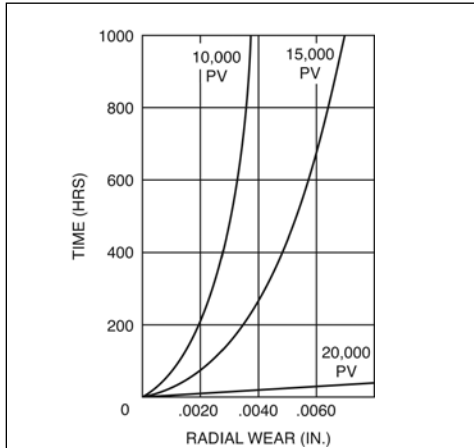


FIGURE 1 – TIME VS. RADIAL WEAR (UNLUBRICATED)

| Load (psi) | Deformation (%) | |
|------------|-----------------|-------|
| | 78°F | 300°F |
| 250 | .1 | .4 |
| 500 | .3 | 1.4 |
| 750 | .5 | 2.9 |
| 1000 | .8 | — |
| 1250 | 1.1 | — |
| 1500 | 1.6 | — |

FIGURE 2 – DEFORMATION UNDER LOAD

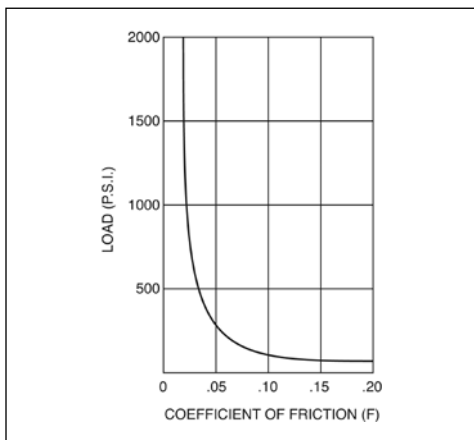


FIGURE 3 – LOAD VS. FRICTION

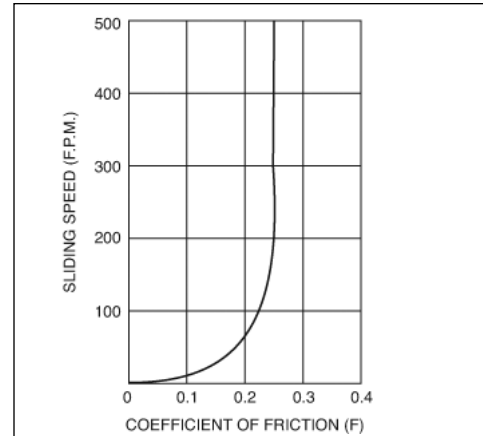


FIGURE 4 – SPEED VS. FRICTION

Coefficient of Friction

| Shaft Material | |
|------------------------|------|
| Hardened Steel | 0.15 |
| Stainless Steel | 0.15 |
| Chromium Plated Steel | 0.16 |
| Cast Iron | 0.19 |
| Hard Anodized Aluminum | 0.20 |
| Monel | 0.23 |
| Cold Rolled Steel | 0.25 |
| *Brass | 0.33 |
| *Aluminum | 0.35 |

*High rate of shaft wear

FIGURE 5 – EFFECT OF MATING SURFACES WITH BOSTONE F-1

Coefficient of Expansion

| Temperature Range | C.D. (all values are x 10 ⁻⁵) | M.D. |
|--------------------|--|------|
| +68°F. to -400° | -1.8 | -3.5 |
| +68°F. to -300° | -2.3 | -4.0 |
| +68°F. to -200° | -2.9 | -4.3 |
| +68°F. to -100° | -3.5 | -4.8 |
| +68°F. to 0° | -4.4 | -5.9 |
| +68°F. to +78° | 12 | 25 |
| (approximate data) | | |
| +78°F. to +100° | 3.5 | 6.0 |
| +78°F. to +200° | 3.5 | 6.2 |
| +78°F. to +300° | 3.6 | 7.0 |
| +78°F. to +400° | 4.2 | 7.8 |
| +78°F. to +500° | 5.0 | 8.5 |

M.D. = Molded Direction (parallel to length of molded or extruded rod or tube)

C.D. = Cross Direction (perpendicular to length of molded or extruded rod or tube)

All tubes are approximately ± 5%.

FIGURE 6 – COEFFICIENT OF LINEAR THERMAL EXPANSION

Engineering Information

Lubrication – BOST-BRONZ

All standard BOST-BRONZ bearings, bars and plates are impregnated with a high grade, oxidation-resistant mineral oil of SAE30 (ISO 100) viscosity. If properly stored, BOST-BRONZ parts retain their oil supply indefinitely. To prevent loss of lubricant, BOST-BRONZ should be stored in non-absorbent materials (metal, plastic, or suitably lined containers, etc.) The bearings should be covered to keep out dirt and dust.

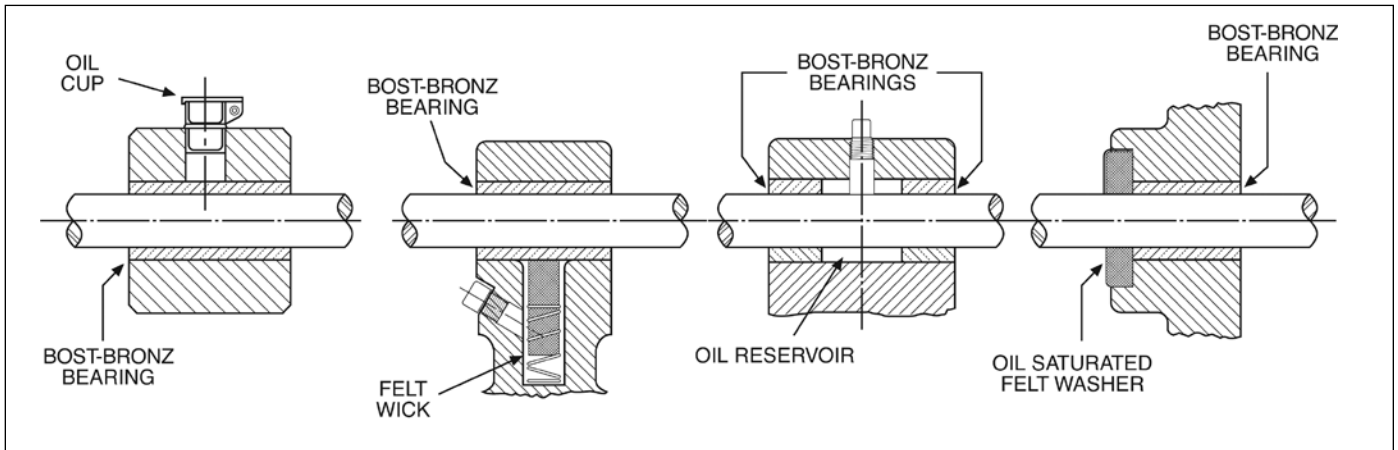
REMOVING LUBRICANT: If it becomes necessary to remove the oil from BOST-BRONZ, for example to replace with another type or viscosity of lubricant, the following procedure may be used:

Immerse parts in a good grade of oil solvent, such as lead-free gasoline, naphtha, carbon tetrachloride or alcohol. Change solvent often, until solvent appears clear. Agitation will hasten the process.

RE-OILING: BOST-BRONZ parts may be re-impregnated by submerging in oil (pre-heated to about 150°F) for approximately 30 minutes. More time should be allowed for larger parts.

Supplementary Lubrication

The following designs illustrate simple, effective arrangements for providing supplementary lubrication.

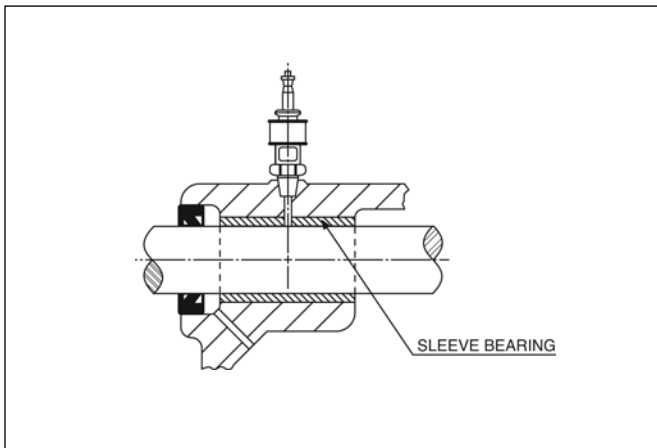


Lubrication – BEAR-N-BRONZ

The maintenance of an oil film between the shaft and bearing surfaces is extremely important, serving to reduce friction, dissipate heat, and retard wear by minimizing any metal to metal contact.

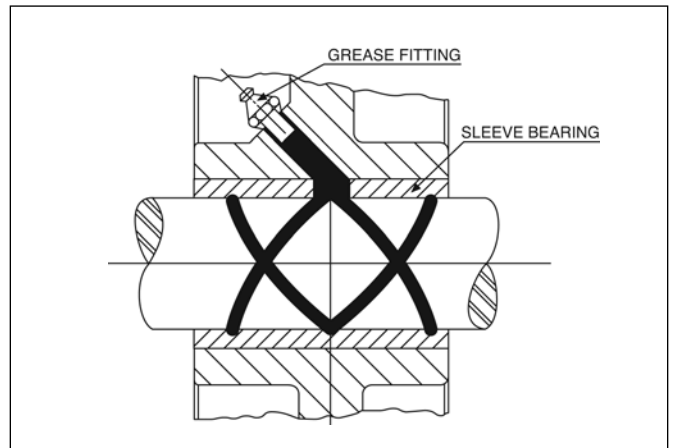
Lubricant is usually supplied into the bearing from an oil cup or fitting through an oil hole.

The drawings below illustrate two typical methods.



A. Oil Cup

Oil is fed from the oil cup to the bearing by gravity.



B. Oil or Grease Fitting

Lubricant is fed through the fitting under pressure and distributed through grooves by the rotation of the shaft.

Lubrication – BEAR-N-BRONZ (Continued)

Grooving

1. An oil feeder hole is normally sufficient for small bearings under light loads.

The oil hole should be in a position to introduce the lubricant to the non-loaded area of the bearing. The lubricant will then normally be carried to the loaded area by the rotation of the shaft.

For larger bearings under heavy loads, it may be desirable to facilitate the flow of lubricant to the pressure area by means of grooves machined into the bearing surface.

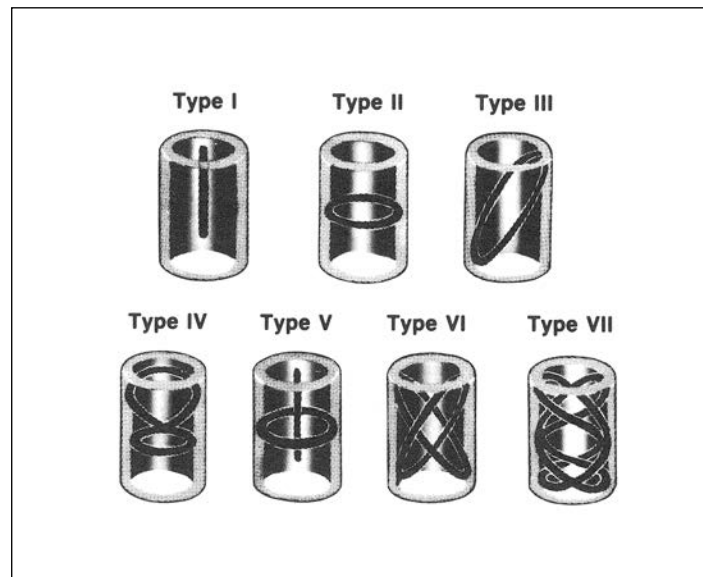
2. Type I or Type II grooves have proven adequate for most applications requiring an oil groove. In either case, the oil feed hole introducing the lubricant should always be located in the unloaded bearing area.

3. Very long bearings may require two feeder holes connected by one straight (axial) groove.

4. Oil grooves should stop short of the bearing ends to minimize oil leakage.

5. Grease lubricants are normally restricted to applications subjected to heavy loads at low speeds. Grease should be distributed under pressure along oil grooves to the loaded area. Type VI or Type VII grooves may be used for grease lubrication.

Below are illustrations of some popular styles of oil grooves:



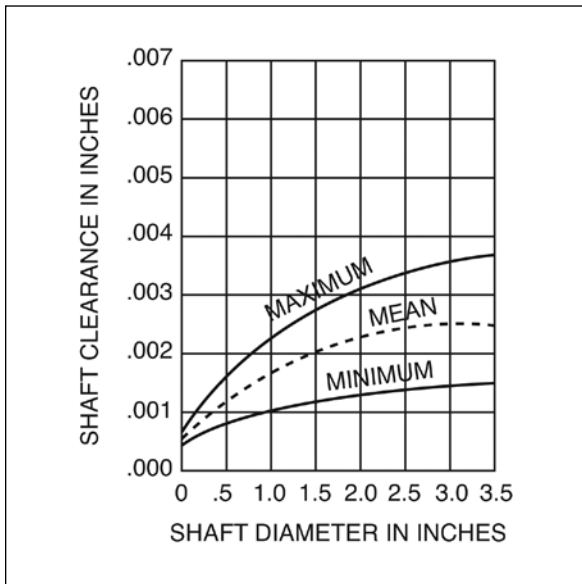
Depth of oil groove is 1/8" max. if wall permits. On thin wall bearings depth of groove is normally less than 1/2" wall thickness. When applicable groove is located 1/8" from ends.

Shaft Clearances

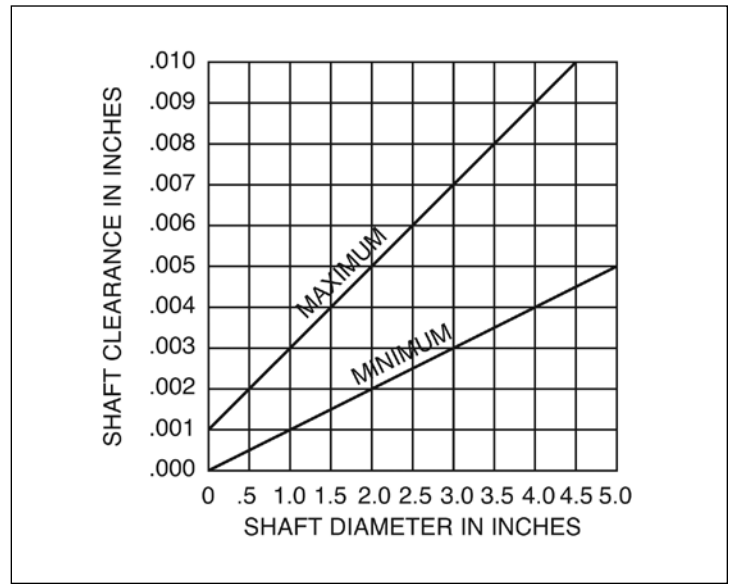
The following graphs may be used as a guide to determine shaft clearance for proper running fit.

F

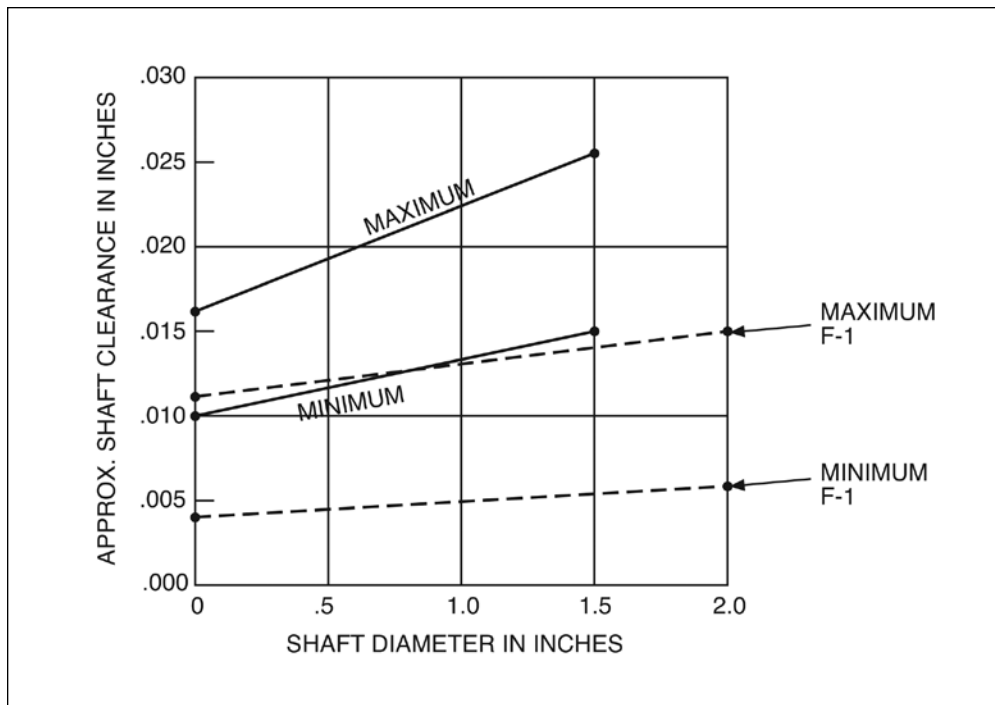
BOST-BRONZ



BEAR-N-BRONZ

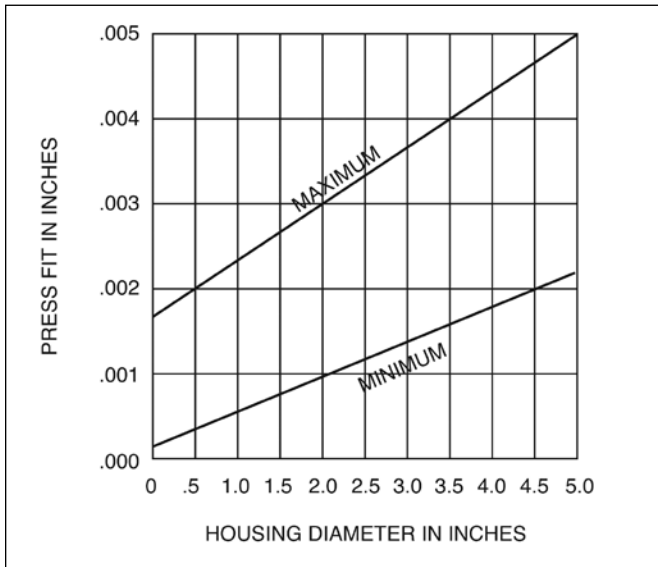


Plastics



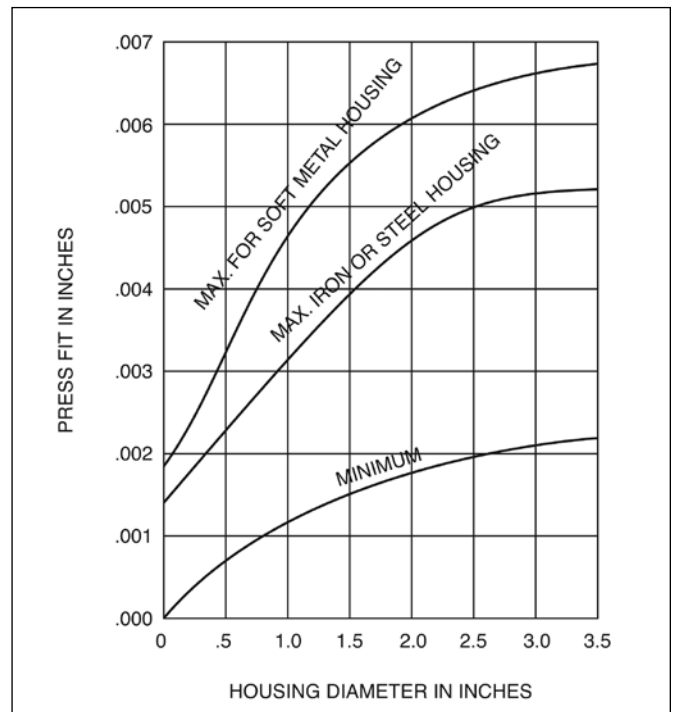
The allowance for press fit into a housing will vary depending upon bearing size, wall thickness, housing material, and housing construction. The accompanying graphs will be a useful guide in determining allowances for press fits.

BEAR-N-BRONZ



BOST-BRONZ

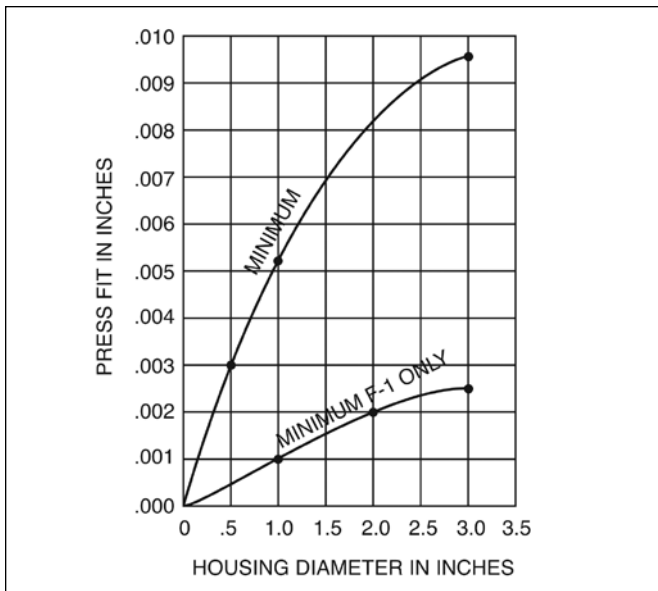
When a BOST-BRONZ bearing is pressed into a housing, the inside diameter (I.D.) will close-in (becoming smaller). The amount will depend upon the same factors influencing the Press Fit, but will average approximately 75% of the Press Fit allowance.



Plastics

Due to normal variations in molded bearings, practicality dictates the measuring of actual bearing O.D. and adjusting bore size accordingly.

For this reason, the minimum required press fit depicted in graph, for F-1 material and other plastic material is approximate and may be used as a guide.



Machining

In cases where it is desired to alter a standard stock bearing or to manufacture parts from a bronze bar or plate stock, the following machining practices are suggested.

BOST-BRONZ

BOST-BRONZ may be readily machined. For best results, use carbide tools. For finishing cuts on bearing surfaces, the cutting tool should be extremely sharp. Use feeds and speeds that are normal for machining regular bronze. Finish with a light cut (up to .005"). This method avoids the pulling or spreading of metal over the surface pores. Cutting oils or coolants should not be used. After machining, parts should be reoiled, using a good grade of oxidation-resistant mineral oil of about SAE20 (ISO 68) viscosity. For re-oiling procedure, see lubrication, Page 178.

Assembly and Sizing – BOST-BRONZ

In most instances, sizing the bore of BOST-BRONZ bearing is not necessary. The desired inside diameter will be obtained by proper press fit (and close-in) at assembly. In applications where sizing is necessary, it may be accomplished during assembly by the use of a shouldered sizing arbor, as illustrated in Figure 1. The arbor should be ground and lapped to a size slightly larger (.0002" to .0003" approx.) than the hole desired. A multiple step burnishing tool (see Figure 2) may also be used to size the hole in BOST-BRONZ bearings after assembly.

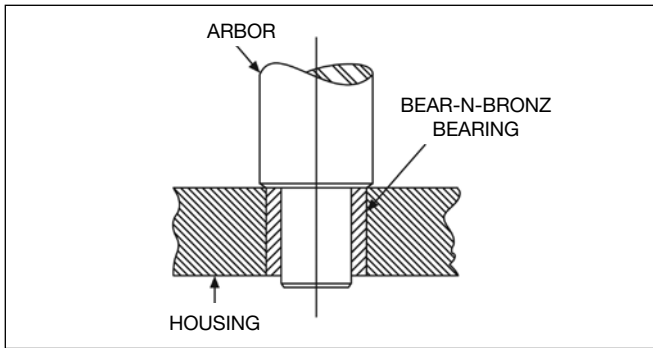


FIGURE 1.

BEAR-N-BRONZ

The use of carbide tools or high speed tools is recommended for machining Bear-N-Bronz. Carbide tools should be used at speeds of 500 to 1000 surface feet per minute. High speed steel tools should be used to 200 to 500 surface feet per minute. Either tool should be held to a minimum clearance angle for best results. Cutting solutions are not required.

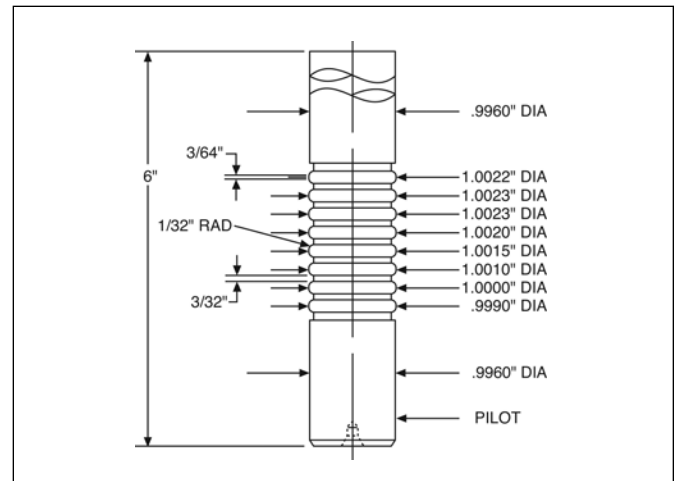
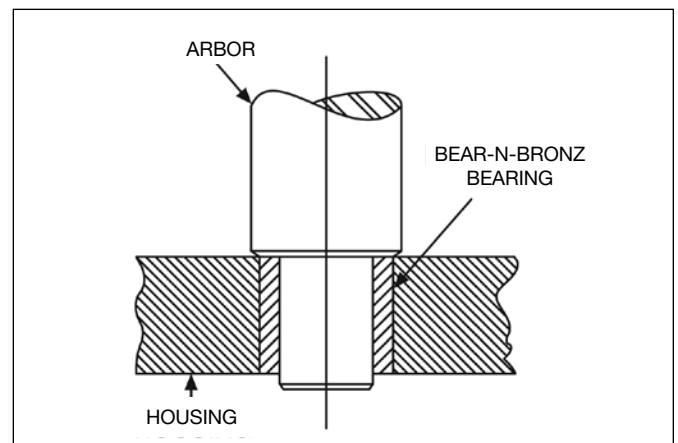


FIGURE 2.

Assembly – BEAR-N-BRONZ

BEAR-N-BRONZ can be easily assembled by using a shouldered arbor, as illustrated, to maintain proper bearing alignment. A steady, even pressure should be applied. The arbor diameter should be of a size to allow for close-in of bearing I.D. at assembly. The surface of the arbor should be lightly oiled to facilitate withdrawal after assembly.





Boston Gear's line of unmounted, inch size ball bearings, rod ends, spherical and linear bearings, give the designer freedom to choose from a wide range of quality bearing products that will resolve numerous application problems.

Boston Gear's inch size ball bearings are offered in Precision Ground, Semi- and Unground Radial and Thrust bearings. Our rod end and linear bearings are offered in Precision and Commercial Series.

Ball Bearings

Boston Ball Bearings provide improved performance over a wide range of operating conditions.

Major features include: Honed raceways on precision ball bearings for maximum life and smoother, quieter operation. Superior, low friction (low torque) seals, to more effectively exclude foreign matter and retain lubricant over a longer period.

The line of Ball Bearings include close tolerance precision units and inexpensive steel assemblies of the semi-ground type. These anti-friction items, available quickly from stock, make it easier to use a superior bearing "exactly right" for the majority of applications.



Anti-Friction Bearings

Ball Bearings (Continued)

F



The bearings listed in this catalog are made from steel of various analyses. Carburizing grades are case hardened to the desired depths and hardness values, insuring high resistance to wear and breakdown. High carbon chrome alloy steels are through hardened. If you have a special material application, Boston Gear engineers will welcome the opportunity to help you make a proper bearing selection.

Bearings in this catalog may be selected according to finish or accuracy: ground bearings are available in the radial and thrust designs primarily. With boundary dimensions and internal fit-up held to exacting tolerances and with ground and polished ball grooves, ground bearings are recommended for applications requiring greater speeds and loads and where quiet accurate operation is essential. Normal tolerance level is .005"/.0010".

Unground bearings are designed for applications where speeds and loads are moderate and the requirements of running accuracy and noise level do not warrant the more expensive ground precision bearing. The three basic design types are available. Normal tolerance level is .005"/.010".

Rod End and Spherical Bearings



Boston Gear's broad line of rod end and spherical bearings serve many markets, which include textile, agriculture and off-highway vehicles along with military.

Anti-Friction Bearings

Nice® 1600 Series® Bearings Radial Ball Bearings; Ground, Single Row



HIGH QUALITY INCH DIMENSIONAL BEARINGS for adaptation to many precision bearing applications. Suitable for speeds in the neighborhood of 5000 R.P.M.

IMPROVED BALL GROOVE FINISH for smoother, quieter operation.

GROUND BORES held to a tolerance of + .0000" to -.0005" on all sizes, 1/4" bore and over.

NYLON BALL RETAINERS (TN) furnished as standard. Steel retainers (J) available on special production order.

GREASE PACKED as standard on Types DC and DS. Types SC, SS and NS can be grease packed on special order.

NYLON SEALS more effectively retain lubricant and exclude foreign matter.

SPECIAL FEATURES including dimensions, tolerances, etc. available on special order.

ORDER BY CATALOG NUMBER OR ITEM CODE

| Bore | Double Shield | | Double Sealed | |
|--------|----------------|-----------|----------------|-----------|
| | Catalog Number | Item Code | Catalog Number | Item Code |
| .2500 | 1602DS | 50724 | 1602DC | 50701 |
| .3125 | 1603DS | 50725 | 1603DC | 50702 |
| .3750 | 1604DS | 50726 | 1604DC | 50703 |
| .3125 | 1605DS | 50727 | 1605DC | 50704 |
| .3750 | 1606DS | 50728 | 1606DC | 50705 |
| .4375 | 1607DS | 50729 | 1607DC | 50706 |
| .3750 | 1614DS | 50730 | 1614DC | 50707 |
| .4375 | 1615DS | 50731 | 1615DC | 50708 |
| .5000 | 1616DS | 50732 | 1616DC | 50709 |
| .4375 | 1620DS | 50733 | — | — |
| .5000 | 1621DS | 50734 | 1621DC | 50710 |
| .6250 | 1623DS | 50736 | 1623DC | 50712 |
| .6250 | 1628DS | 50737 | 1628DC | 50713 |
| .7500 | 1630DS | 50738 | 1630DC | 50714 |
| .6250 | 1633DS | 50739 | 1633DC | 50715 |
| .7500 | 1635DS | 50740 | 1635DC | 50716 |
| .7500 | 1638DS | 50741 | 1638DC | 50717 |
| .8750 | 1640DS | 50742 | 1640DC | 50718 |
| 1.0000 | 1641DS | 50743 | 1641DC | 50719 |
| 1.1250 | 1652DS | 50744 | 1652DC | 50720 |
| 1.2500 | 1654DS | 50745 | 1654DC | 50721 |
| 1.2500 | 1657DS | 50746 | 1657DC | 50722 |

NOTE: Dimensions and load data on next page.

Seal and Shield Arrangements

TYPES SC, SS and NS are available via special order only

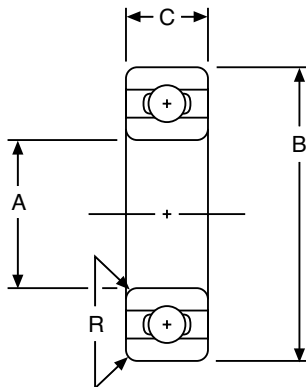
| | | | | |
|---------------|---------------|-------------|---------------|------------|
| | | | | |
| DOUBLE SEALED | DOUBLE SHIELD | SINGLE SEAL | SINGLE SHIELD | NO SHIELDS |
| DC | DS | SC | SS | NS |

*All bearings listed are registered Trademarks of RBC Bearings and Roller Bearing Company of America, Inc.

Anti-Friction Bearings

Nice® 1600 Series® Bearings Radial Ball Bearings; Ground, Single Row

F



STANDARD TOLERANCES

| DIMENSIONS | TOLERANCE |
|------------|---|
| A | 2500-1.2500 +.0000 to - .0005 |
| B | .6875-1.7500 2.0000-2.5625 +.0000 to - .0005 +.0000 to - .0006 |
| C | All +.000 to - .005 |

For recommended shaft and housing fits, see engineering section, page 238.

ALL DIMENSIONS IN INCHES

| Basic Bearing No. | A | B | C | R | Balls | |
|-------------------|--------|--------|--------|--------|-------|-------|
| | | | | Radius | No. | Dia. |
| 1602 | .2500 | .6875 | 1/4+ | .012 | 6 | 1/8 |
| 1603 | .3125 | .8750 | 9/32++ | .012 | 7 | 5/32 |
| 1604 | .3750 | .8750 | 9/32++ | .015 | 7 | 5/32 |
| 1605 | .3125 | .9063 | 5/16 | .012 | 9 | 1/8 |
| 1606 | .3750 | .9063 | 5/16 | .015 | 9 | 1/8 |
| 1607 | .4375 | .9063 | 5/16 | .015 | 9 | 1/8 |
| 1614 | .3750 | 1.1250 | 3/8 | .025 | 7 | 3/16 |
| 1615 | .4375 | 1.1250 | 3/8 | .025 | 7 | 3/16 |
| 1616 | .5000 | 1.1250 | 3/8 | .025 | 7 | 3/16 |
| 1620 | .4375 | 1.3750 | 7/16 | .025 | 8 | 15/64 |
| 1621® | .5000 | 1.3750 | 7/16 | .025 | 8 | 15/64 |
| 1623 | .6250 | 1.3750 | 7/16 | .025 | 8 | 15/64 |
| 1628 | .6250 | 1.6250 | 1/2 | .025 | 8 | 1/4 |
| 1630® | .7500 | 1.6250 | 1/2 | .025 | 8 | 1/4 |
| 1633 | .6250 | 1.7500 | 1/2 | .025 | 8 | 1/4 |
| 1635® | .7500 | 1.7500 | 1/2 | .025 | 8 | 1/4 |
| 1638 | .7500 | 2.0000 | 9/16 | .035 | 10 | 1/4 |
| 1640 | .8750 | 2.0000 | 9/16 | .035 | 10 | 1/4 |
| 1641® | 1.0000 | 2.0000 | 9/16 | .035 | 10 | 1/4 |
| 1652 | 1.1250 | 2.5000 | 5/8 | .035 | 10 | 5/16 |
| 1654 | 1.2500 | 2.5000 | 5/8 | .035 | 10 | 5/16 |
| 1657 | 1.2500 | 2.5625 | 11/16 | .035 | 9 | 3/8 |

*Maximum fillet on shaft or in housing which bearing corner will clear.
+ Width SC & DC = 5/16"
++ Width SC & DC = 11/32"

Load Data

The indicated load ratings are based on 2500 hours average life. (L_{50}) to determine the load ratings at 3500 and 5000 hours, 90 percent and 80 percent respectively, of the above ratings should be used.

| Basic Bearing Number | Radial Capacity (Lbs.) | | | | | | | | Limiting Thrust (Lbs.) |
|----------------------|------------------------|------|------|------|------|------|------|------|------------------------|
| | Revolutions Per Minute | | | | | | | | |
| | 50 | 100 | 300 | 500 | 1200 | 1800 | 2500 | 5000 | |
| 1602 | 230 | 185 | 130 | 110 | 80 | 70 | 65 | 50 | 42 |
| 1603 | 380 | 300 | 210 | 175 | 130 | 115 | 105 | 80 | 75 |
| 1604 | 380 | 300 | 210 | 175 | 130 | 115 | 105 | 80 | 75 |
| 1605 | 305 | 245 | 170 | 140 | 105 | 95 | 85 | 65 | 65 |
| 1606 | 305 | 245 | 170 | 140 | 105 | 95 | 85 | 65 | 65 |
| 1607 | 305 | 245 | 170 | 140 | 105 | 95 | 85 | 65 | 65 |
| 1614 | 530 | 420 | 290 | 245 | 185 | 160 | 145 | 115 | 110 |
| 1615 | 530 | 420 | 290 | 245 | 185 | 160 | 145 | 115 | 110 |
| 1616 | 530 | 420 | 290 | 245 | 185 | 160 | 145 | 115 | 110 |
| 1620 | 860 | 690 | 475 | 400 | 300 | 260 | 235 | 185 | 200 |
| 1621® | 860 | 690 | 475 | 400 | 300 | 260 | 235 | 185 | 200 |
| 1623 | 860 | 690 | 475 | 400 | 300 | 260 | 235 | 185 | 200 |
| 1628 | 980 | 780 | 540 | 460 | 340 | 300 | 265 | 210 | 225 |
| 1630® | 980 | 780 | 540 | 460 | 340 | 300 | 265 | 210 | 225 |
| 1633 | 980 | 780 | 540 | 460 | 340 | 300 | 265 | 210 | 225 |
| 1635® | 980 | 780 | 540 | 460 | 340 | 300 | 265 | 210 | 225 |
| 1638 | 1140 | 905 | 630 | 530 | 395 | 345 | 310 | 245 | 280 |
| 1640 | 1140 | 905 | 630 | 530 | 395 | 345 | 310 | 245 | 280 |
| 1641® | 1140 | 905 | 630 | 530 | 395 | 345 | 310 | 245 | 280 |
| 1652 | 1695 | 1345 | 935 | 790 | 590 | 515 | 460 | 365 | 440 |
| 1654 | 1695 | 1345 | 935 | 790 | 590 | 515 | 460 | 365 | 440 |
| 1657 | 2200 | 1750 | 1215 | 1025 | 765 | 665 | 600 | 475 | 570 |

*All bearings listed are registered Trademarks of RBC Bearings and Roller Bearing Company of America, Inc.

Anti-Friction Bearings

Nice® 7500 Series® Bearings Radial Ball Bearings; Ground, Single Row

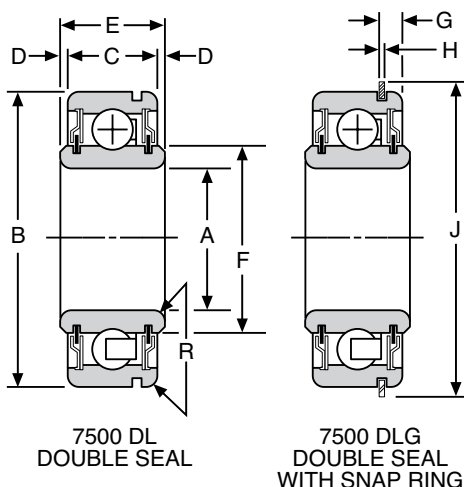
NYLON BALL RETAINERS (TN) standard on all sizes.

SINGLE LIP CONTACT SEALS effectively retain lubricant and exclude foreign material.

GREASE PACKED as standard on all "Double Sealed" Type DL and DLG.

SPECIAL FEATURES including dimensions, tolerances, single or without seals, steel retainers available on special order if quantity warrants.

SNAP RINGS included on all Type DLG sizes. Type DL sizes include snap ring groove but no snap rings furnished.



STANDARD TOLERANCES

| DIMENSIONS | TOLERANCE |
|------------|---|
| A | All +.0000 to -.0005 |
| B | 1.7500 2.0000-2.5625 +.0000 to -.0005 +.0000 to -.0006 |
| C | All +.000 to -.005 |
| E | All +.000 to -.005 |
| G | All ±.005 |

ALL DIMENSIONS IN INCHES ORDER BY CATALOG NUMBER OR ITEM CODE

| A | B | C | D | E | F | G | H | J | R Radius * | Balls | | DL Series | | DLG Series | |
|--------|--------|-----|------|-----|-------|------|------|---------|------------------|-------|------|----------------|-----------|----------------|-----------|
| | | | | | | | | | | No. | Dia. | Catalog Number | Item Code | Catalog Number | Item Code |
| .5000 | 1.7500 | 5/8 | 1/16 | 3/4 | .993 | .136 | .042 | 1-59/64 | .035 | 8 | 1/4 | 7508DL | 50587 | 7508DLG | 50581 |
| .6250 | | | | | | | | | | | | 7510DL | 50588 | 7510DLG | 50582 |
| .7500 | | | | | | | | | | | | 7512DL | 50589 | 7512DLG | 50583 |
| 1.0000 | 2.0000 | 5/8 | 1/16 | 3/4 | 1.290 | .136 | .042 | 2-5/32 | .035 | 10 | 1/4 | 7516DL | 50591 | 7516DLG | 50585 |
| 1.2500 | | | | | | | | | | | | 7520DL | 50592 | 7520DLG | 50586 |

*Maximum fillet on shaft or housing which bearing will clear.

For recommended shaft and housing fits, see engineering section, page 238.

Load Data

The indicated load ratings are based on 2500 hours average life (L_{50}). To determine the load ratings at 3500 and 5000 hours, 90 percent and 80 percent respectively, of the above ratings should be used.

| Basic Bearing Number | Radial Capacity (Lbs.) | | | | | | | | | | Max. Thrust Lbs. |
|----------------------|------------------------|------|------|------|------|------|------|------|------|------|------------------|
| | Revolutions Per Minute | | | | | | | | | | |
| | 50 | 100 | 300 | 500 | 1000 | 1200 | 1800 | 2500 | 3600 | 5000 | |
| 7508-7512 | 1180 | 940 | 650 | 550 | 435 | 410 | 360 | 320 | 285 | 255 | 340 |
| 7516 | 1365 | 1085 | 750 | 635 | 505 | 475 | 415 | 370 | 330 | 295 | 375 |
| 7520 | 2640 | 2100 | 1460 | 1230 | 975 | 915 | 805 | 715 | 635 | 570 | 740 |

*All bearings listed are registered Trademarks of RBC Bearings and Roller Bearing Company of America, Inc.

Anti-Friction Bearings

Nice® 7600 Series® Bearings

Radial Ball Bearings; Ground, Single Row; Extended Inner Race



NYLON BALL RETAINERS (TN) standard on all sizes.

SINGLE LIP CONTACT SEALS effectively retain lubricant and exclude foreign material.

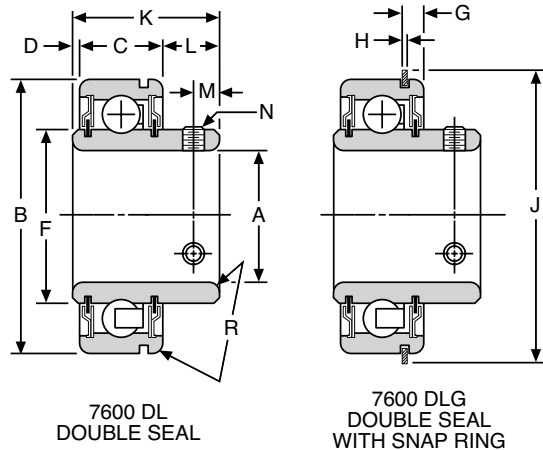
GREASE PACKED as standard on all "Double Sealed" Type DL and DLG.

SPECIAL FEATURES including dimensions, tolerances, single or without seals, steel retainers available on special order if quantity warrants.

SNAP RINGS included on all Type DLG sizes. Type DL sizes include snap ring groove but no snap rings furnished.

STANDARD TOLERANCES

| DIMENSIONS | TOLERANCE |
|------------|---|
| A | All +.0008 to -.0000 |
| B | 1.7500 2.0000-2.5625 +.0000 to -.0005 +.0000 to -.0006 |
| C | All +.000 to -.005 |
| E | All +.000 to -.005 |
| G | All ±.005 |
| K | All +.000 to -.005 |



ALL DIMENSIONS IN INCHES ORDER BY CATALOG NUMBER OR ITEM CODE

| A | B | C | D | F | G | H | J | K | L | M | N | R* Radius * | Balls | | DL Series | | DLG Series | |
|----------------|--------|-----|------|-------|------|------|---------|-------|------|------|--------|-------------------|-------|------|------------------|----------------|--------------------|----------------|
| | | | | | | | | | | | | | No. | Dia. | Catalog Number | Item Code | Catalog Number | Item Code |
| .6250 .7500 | 1.7500 | 5/8 | 1/16 | .993 | .136 | .042 | 1-59/64 | 1.092 | .405 | .233 | 10-32 | .035 | 8 | 1/4 | 7610DL 7612DL | 50600 50601 | 7610DLG 7612DLG | 50594 50595 |
| 1.0000 | 2.0000 | 5/8 | 1/16 | 1.290 | .136 | .042 | 2-5/32 | 1.179 | .492 | .261 | 10-32 | .035 | 10 | 1/4 | 7616DL | 50603 | 7616DLG | 50597 |
| 1.2500 | 2.5625 | 3/4 | 1/16 | 1.631 | .190 | .065 | 2-49/64 | 1.417 | .605 | .261 | 1/4-28 | .035 | 9 | 3/8 | 7620DL | 50604 | 7620DLG | 50598 |

*Maximum fillet on shaft or housing which bearing will clear.

For recommended shaft and housing fits, see engineering section, page 238.

Load Data

The indicated load ratings are based on 2500 hours average life (L₅₀). To determine the load ratings at 3500 and 5000 hours, 90 percent and 80 percent respectively, of the above ratings should be used.

| Basic Bearing Number | Radial Capacity (Lbs.) | | | | | | | | | | Max. (Lbs.) |
|----------------------|------------------------|------|------|------|------|------|------|------|------|------|-------------|
| | Revolutions Per Minute | | | | | | | | | | |
| | 50 | 100 | 300 | 500 | 1000 | 1200 | 1800 | 2500 | 3600 | 5000 | |
| 7610-7612 | 1180 | 940 | 650 | 550 | 435 | 410 | 360 | 320 | 285 | 255 | 340 |
| 7616 | 1365 | 1085 | 750 | 635 | 505 | 475 | 415 | 370 | 330 | 295 | 375 |
| 7620 | 2640 | 2100 | 1460 | 1230 | 975 | 915 | 805 | 715 | 635 | 570 | 740 |

*All bearings listed are registered Trademarks of RBC Bearings and Roller Bearing Company of America, Inc.

Anti-Friction Bearings

Nice® 6900 Series® Bearings

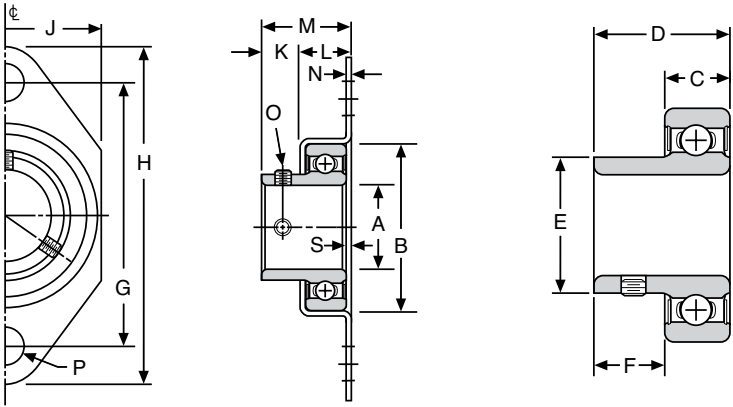
Radial Ball Bearings; Ground, Single Row; Flange Mounted

AVAILABLE AS COMPLETE ASSEMBLY, BEARING only or HOUSING only.

INNER RACE includes 2 setscrews.

GREASE PACKED, COMPOSITION SEALED.

NYLON RETAINERS (TN) furnished as standard.



ASSEMBLY

BEARING ONLY

STANDARD TOLERANCES

| DIMENSIONS | TOLERANCE |
|------------|---|
| A | All +.005 to -.000 |
| B | .9062-1.6250 2.000 +.0000 to -.0005 +.0000 to -.0006 |
| C | All +.000 to -.005 |

ALL DIMENSIONS IN INCHES
ORDER BY CATALOG NUMBER OR ITEM CODE

| A | B | C | D | E | F | G Bolt Ctrs. | H | + J | K | L | M | N | O | P | S | Assembly* | | Bearing Only | |
|-----------------|--------|------|--------|-------|-----|--------------------|-------|--------|-------|-------|-------|------|-----------------|------|------|-------------------|----------------|-------------------|----------------|
| | | | | | | | | | | | | | | | | Catalog Number | Item Code | Catalog Number | Item Code |
| .3750 | .9062 | 5/16 | 11/16 | .555 | 3/8 | 1-7/8 | 2-1/2 | 1-1/8 | 11/32 | 11/32 | 11/16 | .035 | 8-32 | 5/16 | .000 | 6906 | 50572 | 6906B | 50571 |
| .5000 .6250 | 1.6250 | 1/2 | 1 | .995 | 1/2 | 2-7/8 | 3-3/4 | 1-7/8 | 7/16 | 11/16 | 1 | .062 | 1/4-28 | 7/16 | .010 | 6908 6910 | 50574 50576 | 6908B 6910B | 50573 50575 |
| .7500 1.0000 | 2.0000 | 9/16 | 1-1/16 | 1.293 | 1/2 | 3-1/4 | 4-1/8 | 2-1/4 | 7/16 | 11/16 | 1-1/8 | .062 | 1/4-28 10-32 | 7/16 | 1/16 | 6912 6916 | 50578 50580 | 6912B 6916B | 50577 50579 |

*Housings do not have Catalog Numbers. To order specify bearing size-housing. Example: 6906-Housing.
+ J dimension is the overall width.

| Basic Bearing Number | Radial Capacity (Lbs.) Revolutions Per Minute | | | |
|----------------------------|--|-----|-----|------|
| | 50 | 100 | 500 | 1800 |
| 6906 | 305 | 245 | 140 | 95 |
| 6908-6910 | 735 | 585 | 340 | 225 |
| 6912 | 850 | 675 | 395 | 260 |
| 6916 | 1140 | 905 | 530 | 345 |

Load Data

The indicated load ratings are based on 2500 hours average life (L₅₀). To determine the load ratings at 3500 and 5000 hours, 90 percent and 80 percent respectively, of the above ratings should be used.

*All bearings listed are registered Trademarks of RBC Bearings and Roller Bearing Company of America, Inc.

Anti-Friction Bearings

Nice® 3000 Series® Bearings

Radial Ball Bearings; Semi-Ground, Single Row



LOW COST INCH DIMENSIONAL BEARINGS similar to 1600 Series in construction and dimensions and suitable for speeds up to 2500 R.P.M.

NYLON BALL RETAINERS (TN) furnished as standard. Steel retainers (J) available on special production order.

GREASE PACKED as standard on Types DC and DS. Types SC, SS and NS can be grease packed on special order.






NYLON SEALS more effectively retain lubricant and exclude foreign matter.

SPECIAL FEATURES including dimensions, tolerances, etc. available on special order.

ORDER BY CATALOG NUMBER OR ITEM CODE

| Bore | Double Shield | | Double Sealed | |
|------|----------------|-----------|----------------|-----------|
| | Catalog Number | Item Code | Catalog Number | Item Code |
| 1/4 | 3002DS | 50768 | 3002DC | 50749 |
| 3/8 | 3004DS | 50770 | — | — |
| 3/8 | 3014DS | 50774 | 3014DC | 50755 |
| 1/2 | 3016DS | 50776 | 3016DC | 50757 |
| 1/2 | 3021DS | 50778 | 3021DC | 50758 |
| 5/8 | 3023DS | 50779 | 3023DC | 50759 |
| 5/8 | 3028DS | 50780 | 3028DC | 50760 |
| 3/4 | 3030DS | 50781 | 3030DC | 50761 |
| 3/4 | 3035DS | 50783 | 3035DC | 50763 |
| 1 | 3041DS | 50786 | 3041DC | 50766 |

Seal and Shield Arrangements

| | | | | |
|---|---|---|---|---|
|  |  |  |  |  |
| DOUBLE SEALED | DOUBLE SHIELD | SINGLE SEAL | SINGLE SHIELD | NO SHIELDS |
| DC | DS | SC | SS | NS |

TYPES SC, SS and NS are available via special order only.

*All bearings listed are registered Trademarks of RBC Bearings and Roller Bearing Company of America, Inc.

Anti-Friction Bearings

Nice® 3000 Series® Bearings Radial Ball Bearings; Semi-Ground, Single Row

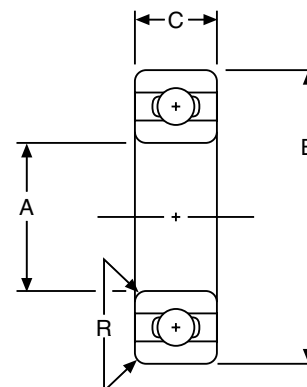
ALL DIMENSIONS IN INCHES

| Basic Bearing Number | A | B | C | R * Radius | Balls | |
|----------------------|------------|-------|--------|---------------|-------|-------|
| | | | | | No. | Dia. |
| 3002 | 1/4 | 11/16 | 1/4+ | .012 | 6 | 1/8 |
| 3004 | 3/8 | 7/8 | 9/32** | .012 | 7 | 5/32 |
| 3014 3016 | 3/8 1/2 | 1-1/8 | 3/8 | .025 | 7 | 3/16 |
| 3021 3023 | 1/2 5/8 | 1-3/8 | 7/16 | .025 | 8 | 15/64 |
| 3028 3030 | 5/8 3/4 | 1-5/8 | 1/2 | .025 | 8 | 1/4 |
| 3035 | 3/4 | 1-3/4 | 1/2 | .025 | 8 | 1/4 |
| 3040 3041 | 7/8 1 | 2 | 9/16 | .035 | 10 | 1/4 |

*Maximum fillet on shaft or in housing which bearing corner will clear.

+ Width SC & DC = 5/16"

++ Width SC = 11/32"



STANDARD TOLERANCES

| DIMENSIONS | TOLERANCE |
|------------|--|
| A | All +.005 to -.000 |
| B | 11/16-1-3/4 2 +.0000 to -.0005 +.0000 to -.0006 |
| C | All ±.005 |

For recommended shaft and housing fits, see engineering section, page 244.

| Basic Bearing Number | Radial Capacity (Lbs.) | | | | | Limiting Thrust (Lbs.) |
|----------------------|------------------------|-----|-----|------|------|------------------------|
| | Revolutions Per Minute | | | | | |
| | 50 | 100 | 500 | 1800 | 2500 | |
| 3002 | 150 | 120 | 70 | 45 | 40 | 30 |
| 3004 | 250 | 200 | 120 | 80 | 70 | 50 |
| 3014 3016 | 350 | 280 | 165 | 105 | 95 | 75 |
| 3021 3023 | 575 | 460 | 270 | 175 | 155 | 135 |
| 3028 3030 3035 | 650 | 520 | 305 | 200 | 180 | 150 |
| 3040 3041 | 760 | 605 | 355 | 230 | 205 | 185 |

Load Data

Load ratings are provided only as a guide for bearing selection and are not to be used for life calculation.

Anti-Friction Bearings

Flanged 400F Series

Radial Ball Bearings; Unground, Single Row



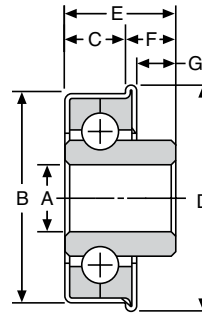
STANDARD TOLERANCES

| DIMENSIONS | | TOLERANCE |
|------------|-----|------------------|
| A | All | +0.005 to -0.000 |
| B | All | +0.005 to -0.000 |
| C | All | ±0.010 |

FULL BALL TYPE (V) without retainer.

SUITABLE for SPEEDS up to 1200 RPM.

SOFT STEEL BAND on O.D. permits bearing to be pressed in a housing without the necessity of close housing tolerances.



ALL DIMENSIONS IN INCHES
ORDER BY CATALOG NUMBER OR ITEM CODE

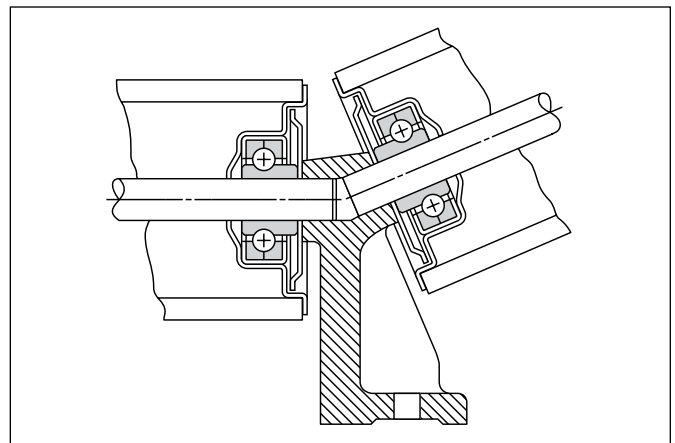
| A | B | C | D | E | F | G | Balls | | Catalog Number | Item Code |
|-----|-------|-------|---------|-------|------|------|--------|------|----------------|-----------|
| | | | | | | | Number | Dia. | | |
| 1/4 | 11/16 | 13/65 | 3/4 | 1/4 | 3/64 | 0 | 10 | 1/8 | 5561 | 50566 |
| 3/8 | 29/32 | 17/64 | 1 | .350 | .088 | .048 | 15 | 1/8 | 5543 | 50565 |
| 1/2 | 1-1/8 | .305 | 1-1/4 | 7/16 | .132 | 1/16 | 18 | 1/8 | 5491 | 50564 |
| 1/2 | 1-3/8 | 11/32 | 1-1/2 | .475 | 1/8 | 1/32 | 15 | 3/16 | 5881 | 50569 |
| 5/8 | 1-3/8 | 11/32 | 1-1/2 | .475 | 1/8 | 1/32 | 15 | 3/16 | 5273 | 50559 |
| 1/2 | 1-1/2 | 3/8 | 1-21/32 | 11/16 | .320 | 1/4 | 11 | 1/4 | 5327 | 50561 |
| 3/4 | 1-3/4 | .462 | 1-15/16 | 37/64 | 1/8 | 1/64 | 14 | 1/4 | 5891 | 50570 |
| 3/4 | 2 | 13/32 | 2-1/8 | 9/16 | 5/32 | 1/16 | 17 | 1/4 | 5875 | 50568 |
| 1 | 2 | 13/32 | 2-1/8 | 5/8 | 7/32 | 1/8 | 17 | 1/4 | 5418 | 50563 |

Load Data

Load ratings are provided only as a guide for bearing selection and are not to be used for life calculation.

| Basic Bearing Number | Radial Capacity (Lbs.) | | | |
|----------------------|------------------------|-----|-----|------|
| | Revolutions Per Minute | | | |
| | 50 | 200 | 600 | 1200 |
| 5561 | 110 | 53 | 30 | 21 |
| 5543 | 167 | 80 | 45 | 32 |
| 5368-5491 | 200 | 96 | 54 | 38 |
| 5881-5273 | 375 | 180 | 101 | 71 |
| 5327 | 492 | 236 | 132 | 92 |
| 5891 | 625 | 300 | 168 | 177 |
| 5875-5418 | 757 | 362 | 204 | 142 |

Typical Application Flanged Series



Anti-Friction Bearings

AO/SAO Series Thrust Ball Bearings; Ground, Unbanded

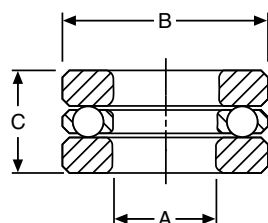
Hardened Alloy Steel — AO Series
Hardened Stainless Steel — SAO Series
FOR LIGHT LOADS

HIGH QUALITY HARDENED STEEL BALLS, retained in a nylon cage.

HARDENED THRUST WASHERS, are ground both sides to provide smooth, flat, parallel ball raceway surfaces.

QUALITY and NUMBER OF BALLS assure high load carrying capacity.

NYLON RETAINER assures minimum frictional losses.



STANDARD TOLERANCES

| DIMENSIONS | | TOLERANCE |
|------------|-----|------------------|
| A* | All | +0.002 to +0.007 |
| B | All | +0.000 to -0.005 |
| C | All | +0.000 to -0.010 |

*AO/SAO 16 +0.002 to +0.010

ALL DIMENSIONS IN INCHES ORDER BY ITEM CODE (2 WASHERS AND 1 NYLON CAGE)

| A | B | C | Balls | | Basic Bearing Number | AO Series Alloy | | SAO Series Stainless Steel | |
|------|-------|------|--------|----------|----------------------|-----------------|------------|----------------------------|------------|
| | | | Number | Diameter | | Washer | Nylon Cage | Washer | Nylon Cage |
| 3/16 | 7/16 | 3/16 | 9 | 1/16 | AO/SAO1 | 06724 | 56807 | 06760 | 56813 |
| 1/4 | 9/16 | 7/32 | 10 | 3/32 | AO/SAO5 | 06726 | 56808 | 06762 | 56814 |
| 5/16 | 5/8 | 1/4 | 10 | 3/32 | AO/SAO8 | 06728 | 56809 | 06764 | 56815 |
| 3/8 | 11/16 | 9/32 | 12 | 3/32 | AO/SAO10 | 06730 | 56810 | 06766 | 56816 |
| 1/2 | 7/8 | 3/8 | 10 | 1/8 | AO/SAO16 | 06734 | 56812 | 06770 | 56818 |

Load Data

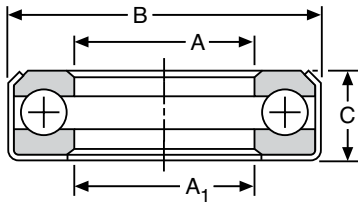
The indicated load ratings are based on 2500 hours average life (L₅₀). To determine the load ratings at 3500 and 5000 hours, 90 percent and 80 percent respectively, of the above ratings should be used.

| Basic Bearing Number | Thrust Capacity (Lbs.) | | | |
|----------------------|------------------------|-----|-----|------|
| | Revolutions Per Minute | | | |
| | 50 | 100 | 500 | 1000 |
| AO/SAO1 | 30 | 25 | 14 | 11 |
| AO/SAO5 | 64 | 56 | 31 | 25 |
| AO/SAO8 | 68 | 60 | 34 | 27 |
| AO/SAO10 | 85 | 72 | 42 | 32 |
| AO/SAO16 | 250 | 125 | 70 | 58 |

Anti-Friction Bearings

Nice® 600 Series® Bearings Thrust Ball Bearings; Unground, Banded

F



STANDARD TOLERANCES

| DIMENSIONS | | TOLERANCE |
|----------------|-----|----------------|
| A | All | -.000 to +.010 |
| A ₁ | All | ±.010 |
| B | All | ±.010 |
| C | All | ±.010 |

FULL BALL TYPE (M) without retainer.

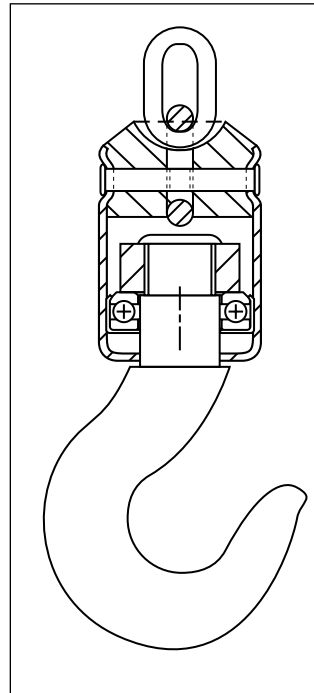
ALL DIMENSIONS IN INCHES ORDER BY CATALOG NUMBER OR ITEM CODE

| A | A ₁ | B | C | Balls | | Catalog Number | Item Code |
|-------|----------------|---------|------|-------|------|----------------|-----------|
| | | | | No. | Dia. | | |
| .250 | .275 | 27/32 | .333 | 10 | 5/32 | 601 | 50537 |
| .375 | .400 | 1-3/64 | .359 | 14 | 5/32 | 602 | 50538 |
| .453 | .478 | 55/64 | .281 | 15 | 1/8 | 602-3/4 | 50540 |
| .500 | .525 | 1-17/64 | .437 | 10 | 1/4 | 603 | 50541 |
| .500 | .525 | 1 | .344 | 12 | 3/16 | 603-1/4 | 50542 |
| .625 | .656 | 1-1/8 | .344 | 16 | 5/32 | 605 | 50543 |
| .625 | .656 | 1-27/64 | .456 | 12 | 1/4 | 606 | 50544 |
| .750 | .775 | 1-21/32 | .545 | 15 | 1/4 | 607 | 50545 |
| .875 | .900 | 1-57/64 | .594 | 17 | 1/4 | 608 | 50547 |
| 1.000 | 1.075 | 2 | .640 | 12 | 3/8 | 609 | 50548 |
| 1.000 | 1.031 | 1-31/32 | .625 | 18 | 1/4 | 610 | 50549 |
| 1.016 | 1.031 | 1-3/4 | .625 | 16 | 1/4 | 610-1/4 | 50550 |
| 1.063 | 1.094 | 1-31/32 | .625 | 18 | 1/4 | 611 | 50551 |
| 1.125 | 1.150 | 2-3/32 | .625 | 19 | 1/4 | 613 | 50552 |
| 1.457 | 1.462 | 2-15/32 | .625 | 23 | 1/4 | 619 | 50555 |
| 1.500 | 1.525 | 2-19/32 | .625 | 25 | 1/4 | 621 | 50556 |

Load Data

Load ratings are provided only as a guide for bearing selection and are not to be used for life calculation.

| Bearing Number | Thrust Capacity (Lbs.) | | | | | | Crane Hook |
|----------------|------------------------|------|------|-----|-----|------|------------|
| | Revolutions Per Minute | | | | | | |
| | 10 | 50 | 100 | 250 | 500 | 1000 | |
| 601 | 304 | 246 | 182 | 98 | 71 | 51 | 912 |
| 602 | 426 | 344 | 254 | 138 | 100 | 71 | 1277 |
| 602-3/4 | 292 | 236 | 174 | 94 | 68 | 48 | 873 |
| 603 | 780 | 630 | 465 | 252 | 182 | 129 | 2325 |
| 603-1/4 | 526 | 425 | 314 | 170 | 123 | 87 | 1570 |
| 605 | 487 | 394 | 291 | 158 | 114 | 81 | 1460 |
| 606 | 936 | 750 | 558 | 302 | 218 | 155 | 2790 |
| 607 | 1170 | 945 | 698 | 378 | 273 | 194 | 3490 |
| 608 | 1326 | 1071 | 791 | 428 | 309 | 220 | 3960 |
| 609 | 1706 | 1378 | 1017 | 551 | 398 | 284 | 5080 |
| 610 | 1404 | 1134 | 837 | 454 | 328 | 233 | 4190 |
| 610-1/4 | 1248 | 1008 | 744 | 403 | 291 | 207 | 3730 |
| 611 | 1404 | 1134 | 837 | 454 | 328 | 233 | 4190 |
| 613 | 1482 | 1197 | 883 | 479 | 346 | 246 | 4420 |
| 619 | 1794 | 1449 | 1069 | 579 | 419 | 298 | 5350 |
| 621 | 1950 | 1575 | 1162 | 630 | 455 | 324 | 5820 |



Crane Hook Swivel Application Bearing No. 605

This standard product provided the exact bearing needed by this crane hoist manufacturer. An unground bearing provided the economy, while a full ball complement provided the required high thrust-load capacity. The bearing features a bonded non-separable assembly that provides easy installation and lubrication.

Special platings and stainless steel balls are readily available as a cost-effective way to fight corrosion and increase service life.

*All bearings listed are registered Trademarks of RBC Bearings and Roller Bearing Company of America, Inc.

Anti-Friction Bearings

2000 Series

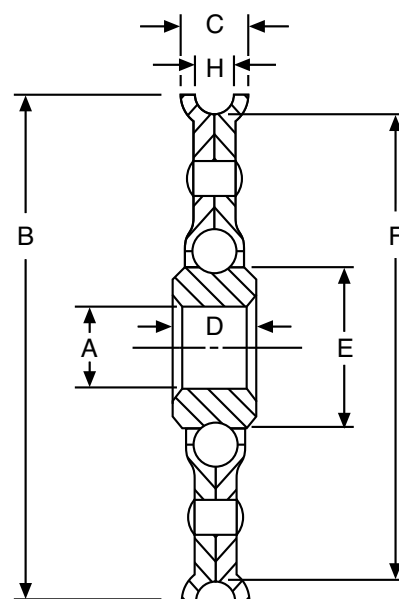
Ball Bearings Sheaves; Unground

NR 2000 Series are unground, of pressed steel construction with hardened raceways. For rope, wire rope, etc. and special uses requiring a semi-circular tread.

ALL DIMENSIONS IN INCHES
ORDER BY CATALOG NUMBER OR ITEM CODE

| | | | | | | | | |
|------|---------|-------|-------|-------|---------|-------|----------|-------|
| .166 | 1-1/4 | 9/32 | 7/16 | 3/8 | 1 | 7/32 | NR2000 | 67135 |
| | 1-21/32 | 5/16 | 7/16 | 3/8 | 1-11/32 | 7/32 | NR2006 | 67136 |
| 1/4 | 2-7/8 | 17/32 | 1/2 | 1 | 2-9/16 | 13/32 | NR2008 | 67137 |
| | 3-1/16 | 37/64 | 1/2 | 1 | 2-9/16 | 13/32 | NR2010 | 67138 |
| 5/16 | 3 | 19/32 | 3/4 | 1 | 2-5/8 | 1/2 | NR2011 | 67139 |
| 3/8 | 2-3/4 | 1/2 | 7/16 | 1 | 2-3/8 | 3/8 | NR2012 | 67140 |
| | 2-3/4 | 1/2 | 9/16 | 1 | 2-3/8 | 3/8 | NR2012-1 | 67141 |
| | 2-3/4 | 9/16 | 7/16 | 1 | 2-3/8 | 7/16 | NR2013 | 67142 |
| | 2-7/8 | 17/32 | 1/2 | 1 | 2-9/16 | 13/32 | NR2014 | 67143 |
| | 3 | 1/2 | 11/16 | 1 | 2-3/8 | 3/8 | NR2015 | 67144 |
| | 3-1/16 | 37/64 | 1/2 | 1 | 2-9/16 | 13/32 | NR2016 | 67145 |
| | 3-5/16 | 3/4 | 13/16 | 13/16 | 2-3/8 | 7/16 | NR2017 | 67146 |
| | 4-1/16 | 17/32 | 3/4 | 1 | 3-9/16 | 13/32 | NR2024 | 67149 |
| 1/2 | 2-7/8 | 11/16 | 13/16 | 13/16 | 2-1/4 | 17/32 | NR5378 | 67267 |
| | 4-1/16 | 17/32 | 3/4 | 1 | 3-9/16 | 13/32 | NR2025 | 67150 |
| 5/8 | 2-3/4 | 7/16 | 9/16 | 13/16 | 2-3/16 | 5/16 | NR2018 | 67147 |
| | 3 | 19/32 | 3/4 | 1 | 2-5/8 | 1/2 | NR2020* | 67148 |
| 1 | 7-1/8 | 13/16 | 5/8 | 1-3/8 | 6 | 17/32 | NR5623 | 67275 |

* Inner race "D" dimension not centered.



Load Data

Load ratings are provided only as a guide for bearing selection and are not to be used for life calculation.

STANDARD TOLERANCES

| DIMENSIONS | | TOLERANCE |
|------------|-----|-----------------|
| A | All | + .005 to -.000 |

| | | | | | | | | |
|--------------------------------------|-----|-----|-----|-----|-----|-----|------|------|
| NR2000 NR2006 | 88 | 62 | 42 | 34 | 24 | 19 | 10 | 1/8 |
| NR2008 NR2010 | 300 | 210 | 144 | 116 | 81 | 66 | 14 | 1/4 |
| NR2011 | 293 | 208 | 146 | 121 | 82 | 70 | 14 | 1/4 |
| NR2012 NR2012-1 | 300 | 210 | 144 | 116 | 81 | 66 | 14 | 1/4 |
| NR2013 | 230 | 164 | 115 | 95 | 65 | 55 | 14 | 1/4 |
| NR2014 NR2015 NR2016 NR2017 | 300 | 210 | 144 | 116 | 81 | 66 | 14 | 1/4 |
| 15 | | | | | | | 3/16 | |
| 14 | | | | | | | 1/4 | |
| 15 | | | | | | | 3/16 | |
| NR2024 NR5378 NR2025 | 471 | 334 | 235 | 194 | 132 | 112 | 14 | 1/4 |
| 15 | | | | | | | 3/16 | |
| 14 | | | | | | | 1/4 | |
| NR2018 | 300 | 210 | 144 | 116 | 81 | 66 | 15 | 3/16 |
| NR2020 NR5623 | 293 | 208 | 146 | 121 | 82 | 70 | 19 | 1/4 |

Anti-Friction Bearings

2100 Series

Ball Bearings Sheaves; Unground

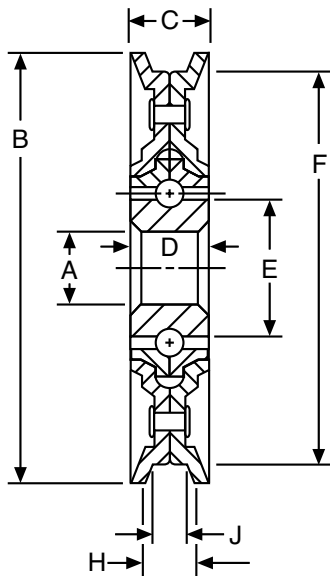
F



NR 2100 Series are unground, of pressed steel construction with hardened raceways. For chain or belt application.

ALL DIMENSIONS IN INCHES
ORDER BY CATALOG NUMBER OR ITEM CODE

| A | B | C | D | E | F | H | J | Catalog No. | Item Code |
|------|---------|-------|-------|-------|---------|-------|-------|-------------|-----------|
| .372 | 2-1/4 | 19/32 | 7/8 | 9/16 | 1-5/8 | 15/32 | 15/32 | NR2105 | 67151 |
| 3/8 | 2-5/8 | 1/2 | 5/8 | 13/16 | 2 | 3/8 | 3/8 | NR2106 | 67152 |
| | 3-1/4 | 19/32 | 11/16 | 1 | 2-11/16 | 15/32 | 7/16 | NR2111-1 | 67154 |
| | 3-3/8 | 19/32 | 11/16 | 1 | 2-11/16 | 15/32 | 7/16 | NR2111 | 67153 |
| 1/2 | 3-3/8 | 19/32 | 7/8 | 1 | 2-11/16 | 15/32 | 7/16 | NR2112 | 67155 |
| | 3 | 5/8 | 15/16 | 1 | 2-13/16 | 1/2 | 1/2 | NR2113 | 67156 |
| | 4-15/16 | 3/4 | 7/8 | 1 | 4 | 5/8 | 9/16 | NR2118 | 67157 |
| 5/8 | 4-7/16 | 5/8 | 3/4 | 1 | 3-7/8 | 27/64 | 27/64 | NR2120 | 67158 |



Load Data

Load ratings are provided only as a guide for bearing selection and are not to be used for life calculation.

| Sheave Number | Radial Load Capacity in Pounds | | | | | | Balls | |
|---------------|--------------------------------|-----|-----|-----|-----|-----|-------|-------|
| | Revolutions Per Minute | | | | | | No. | Diam. |
| | 50 | 100 | 200 | 300 | 600 | 900 | | |
| NR2105 | 220 | 153 | 119 | 85 | 59 | 48 | 11 | 3/16 |
| NR2106 | 356 | 247 | 170 | 137 | 96 | 78 | 10 | 1/4 |
| NR2111-1 | 327 | 232 | 163 | 135 | 92 | 78 | 10 | 5/16 |
| NR2111 | | | | | | | | |
| NR2112 | | | | | | | | |
| NR2113 | | | | | | | | |
| NR2118 | 500 | 344 | 240 | 192 | 134 | 109 | 14 | 1/4 |
| NR2120 | 293 | 208 | 146 | 121 | 82 | 70 | 14 | 1/4 |

STANDARD TOLERANCES

| DIMENSIONS | TOLERANCE |
|------------|-----------------------|
| A | All +.005 to -.000 |

Anti-Friction Bearings

2200 Series

Ball Bearings Wheels; Unground

The NR 2200 series pressed steel, ball bearing type wheels conform to the drawings showing their tread types. NR2201, 2204 and 2205 have ball races and outer housing carefully hardened. NR 2203 and 2206 have hardened races and unhardened outer housings.



**ALL DIMENSIONS IN INCHES
ORDER BY CATALOG NUMBER OR ITEM CODE**

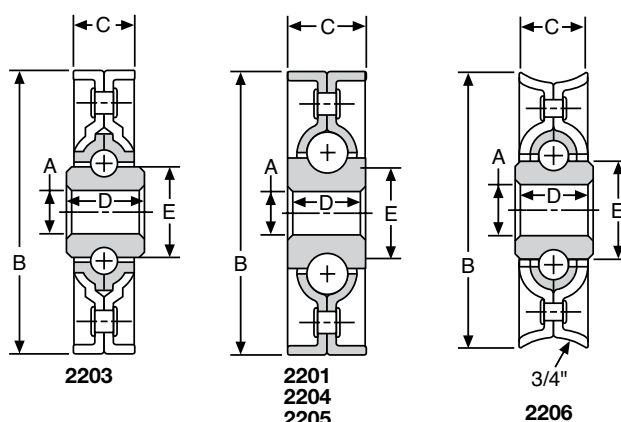
| A | B | C | D | E | R | Catalog No. | Item Code |
|-------|-------|-------|-------|-------|-----|-------------|-----------|
| 1/4 | 1.400 | 1/2 | 7/16 | 9/16 | — | NR2201 | 67159 |
| 3/8 | 2-1/8 | 1/2 | 5/8 | 13/16 | — | NR2203 | 67160 |
| 3/8 | 2-1/2 | 11/16 | 11/16 | 1 | — | NR2204 | 67161 |
| 17/32 | 2-1/2 | 11/16 | 11/16 | 1 | — | NR2205 | 67162 |
| 1/2 | 2-3/4 | 9/16 | 11/16 | 1 | 3/4 | NR2206 | 67163 |

STANDARD TOLERANCES

| DIMENSIONS | TOLERANCE |
|------------|------------------|
| A | All |
| | + .005 to - .000 |

LOAD DATA*

| Wheel Number | Radial Load Capacity in Pounds | | | | | | Balls | |
|------------------|--------------------------------|-----|-----|-----|-----|-----|-------|-------|
| | Revolutions Per Minute | | | | | | No. | Diam. |
| | 50 | 100 | 200 | 300 | 600 | 900 | | |
| NR2201 | 91 | 66 | 47 | 37 | 25 | 23 | 15 | 1/8 |
| NR2203 | 230 | 164 | 115 | 95 | 65 | 55 | 15 | 3/16 |
| NR2204 NR2205 | 136 | 100 | 71 | 56 | 38 | 34 | 14 | 1/4 |
| NR2206 | 327 | 232 | 163 | 135 | 92 | 78 | 14 | 1/4 |



Flanged 2300 Series Unground

The NR 2300 Series pressed steel, ball bearing type wheels are advantageous for application to wooden rollers or steel tubes, pipes, etc. The flange serves as an economical method of locating the roller in its nest. The ball races are carefully hardened while the outer housing is unhardened.

**ALL DIMENSIONS IN INCHES
ORDER BY CATALOG NUMBER OR ITEM CODE**

| A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z |
|-----|-------|------|-------|------|-------|-------|------|---------|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3/8 | 2 | 1/2 | 11/16 | 9/16 | 1.875 | 1.875 | 7/16 | NR2308 | 67165 | | | | | | | | | | | | | | | | |
| 3/8 | 2-1/4 | 9/16 | 3/4 | 9/16 | 1.625 | 1.625 | 1/2 | NR2312+ | 67166 | | | | | | | | | | | | | | | | |
| 1/2 | 3 | 9/16 | 15/16 | 1 | 2.781 | 2.810 | 1/2 | NR2324 | 67167 | | | | | | | | | | | | | | | | |

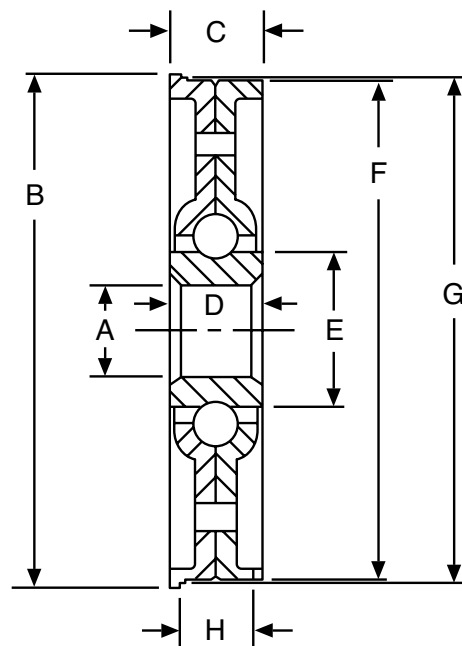
+Screw holes in Flange, for application to Wood Rollers.

STANDARD TOLERANCES

| DIMENSIONS | TOLERANCE |
|------------|------------------|
| A | All |
| | + .005 to - .000 |

LOAD DATA*

| Wheel Number | Radial Load Capacity in Pounds | | | | | | Balls | |
|--------------|--------------------------------|-----|-----|-----|-----|-----|-------|-------|
| | Revolutions Per Minute | | | | | | No. | Diam. |
| | 50 | 100 | 200 | 300 | 600 | 900 | | |
| NR2308 | 77 | 56 | 40 | 32 | 21 | 19 | 15 | 1/8 |
| NR2312 | 220 | 153 | 119 | 85 | 59 | 48 | 15 | 1/8 |
| NR2324 | 327 | 232 | 163 | 135 | 92 | 78 | 14 | 1/4 |

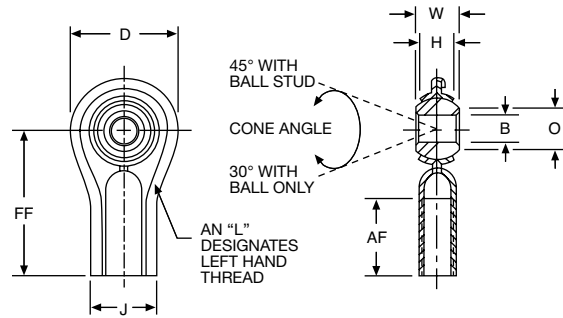
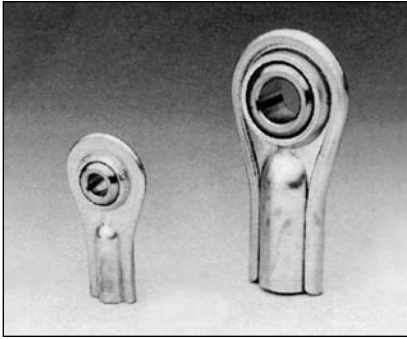


*Load ratings are provided only as a guide for bearing selection and are not to be used for life calculation.

Self-Aligning Bearings

KF Female Series Rod Ends – Economical

F



SPECIFICATIONS

| | |
|--------------|--|
| Outer Member | Low carbon steel stamping plated for corrosion resistance |
| Ball | Low carbon steel, case hardened plated for corrosion resistance and wear |

ALL DIMENSIONS IN INCHES

| Bore B | W | H | AF | FF | D | J | O | Ball Dia. | Thread |
|--------------------|-------|------|-------|-------|-------|-------|------|-----------|-------------|
| +0.0025 -0.0005 | ±.005 | REF | ±.060 | ±.030 | ±.030 | REF | REF | REF | Class UNF-2 |
| .1900 | .312 | .250 | .500 | 1.062 | .750 | .450 | .296 | .430 | 10-32 |
| .2500 | .375 | .287 | .687 | 1.312 | .850 | .515 | .346 | .510 | 1/4-28 |
| .3125 | .437 | .305 | .687 | 1.375 | 1.015 | .590 | .438 | .618 | 5/16-24 |
| .3750 | .500 | .400 | .875 | 1.625 | 1.125 | .725 | .508 | .713 | 3/8-24 |
| .5000 | .625 | .500 | 1.125 | 2.125 | 1.470 | 1.010 | .690 | .931 | 1/2-20 |

LOAD DATA

| Basic Bearing Number | Ultimate Static Load (Radial) Rating (Lbs.) | Approx. Wt. (Lbs.) |
|----------------------|---|--------------------|
| 3 | 1,000 | .02 |
| 4 | 1,900 | .04 |
| 5 | 2,300 | .07 |
| 6 | 3,000 | .11 |
| 8 | 6,100 | .23 |

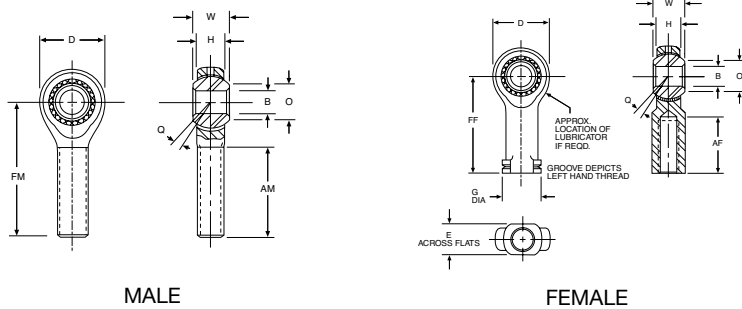
ORDER BY CATALOG NUMBER OR ITEM CODE

| Bore | Right Hand | | Left Hand | |
|-------|----------------|-----------|----------------|-----------|
| | Catalog Number | Item Code | Catalog Number | Item Code |
| .1900 | KF-3 | 65001 | KFL-3 | 65070 |
| .2500 | KF-4 | 65002 | KFL-4 | 65140 |
| .3125 | KF-5 | 65041 | KFL-5 | 65141 |
| .3750 | KF-6 | 65042 | KFL-6 | 65142 |
| .5000 | KF-8 | 65069 | KFL-8 | 65252 |

NOTES: To order with optional studs, add letters "Y" or "S" to suffix. For stud specifications, see Page 211. For Engineering Data, see Pages 207-211.

Self-Aligning Bearings

HM-C Male/HF-C Female Series Rod Ends – Commercial



ALL DIMENSIONS IN INCHES

| Bore B | W | H | AM | FM | AF | FF | D | G | E | O | Ball Dia. | Q | Thread |
|--------------------|-------|------|-------|-------|-------|-------|-------------------|-------|-------|-------|-----------|---------|-------------|
| + .0025 - .0005 | ±.005 | REF | ±.060 | ±.030 | ±.060 | ±.030 | ±.010 | REF | REF | REF | REF | REF | Class UNF-2 |
| .1900 | .312 | .250 | .750 | 1.250 | .562 | 1.062 | .750 | .406 | .312 | .296 | .430 | ±5-1/2° | 10-32 |
| .2500 | .375 | .281 | 1.000 | 1.562 | .750 | 1.312 | .750 ¹ | .468 | .375 | .346 | .510 | ±6-1/2° | 1/4-28 |
| .3125 | .437 | .344 | 1.250 | 1.875 | .750 | 1.375 | .875 | .500 | .437 | .438 | .618 | ±5-1/2° | 5/16-24 |
| .3750 | .500 | .406 | 1.250 | 1.938 | .937 | 1.625 | 1.000 | .687 | .562 | .508 | .713 | ±5° | 3/8-24 |
| .4375 | .562 | .437 | 1.375 | 2.125 | 1.062 | 1.812 | 1.125 | .750 | .625 | .578 | .806 | ±6° | 7/16-20 |
| .5000 | .625 | .500 | 1.500 | 2.438 | 1.187 | 2.125 | 1.312 | .875 | .750 | .690 | .931 | ±5° | 1/2-20 |
| .6250 | .750 | .562 | 1.625 | 2.625 | 1.500 | 2.500 | 1.500 | 1.000 | .875 | .801 | 1.098 | ±6° | 5/8-18 |
| .7500 | .875 | .687 | 1.750 | 2.875 | 1.750 | 2.875 | 1.750 | 1.125 | 1.000 | 1.010 | 1.336 | ±5° | 3/4-16 |

+Tolerance +.015/- .010

ORDER BY CATALOG NUMBER OR ITEM CODE

| Bore | Right Hand | | | | Left Hand | | | |
|--------------------|-----------------|-----------|--------------------|-----------|-----------------|-----------|--------------------|-----------|
| | With Lubricator | | Without Lubricator | | With Lubricator | | Without Lubricator | |
| | Catalog Number | Item Code | Catalog Number | Item Code | Catalog Number | Item Code | Catalog Number | Item Code |
| MALE TYPE | | | | | | | | |
| .1900 | — | — | HM-3C | 48193 | — | — | HML-3C | 48208 |
| .2500 | HM-4CG | 48201 | HM-4C | 48194 | HML-4CG | 48216 | HML-4C | 48209 |
| .3125 | HM-5CG | 48202 | HM-5C | 48195 | HML-5CG | 48217 | HML-5C | 48210 |
| .3750 | HM-6CG | 48203 | HM-6C | 48196 | HML-6CG | 48218 | HML-6C | 48211 |
| .4375 | HM-7CG | 48204 | HM-7C | 48197 | HML-7CG | 48219 | HML-7C | 48212 |
| .5000 | HM-8CG | 48205 | HM-8C | 48198 | HML-8CG | 48220 | HML-8C | 48213 |
| .6250 | HM-10CG | 48206 | HM-10C | 48199 | HML-10CG | 48221 | HML-10C | 48214 |
| .7500 | HM-12CG | 48207 | HM-12C | 48200 | HML-12CG | 48222 | HML-12C | 48215 |
| FEMALE TYPE | | | | | | | | |
| .1900 | — | — | HF-3C | 48163 | — | — | HFL-3C | 48178 |
| .2500 | HF-4CG | 48171 | HF-4C | 48164 | HFL-4CG | 48186 | HFL-4C | 48179 |
| .3125 | HF-5CG | 48172 | HF-5C | 48165 | HFL-5CG | 48187 | HFL-5C | 48180 |
| .3750 | HF-6CG | 48173 | HF-6C | 48166 | HFL-6CG | 48188 | HFL-6C | 48181 |
| .4375 | HF-7CG | 48174 | HF-7C | 48167 | HFL-7CG | 48189 | HFL-7C | 48182 |
| .5000 | HF-8CG | 48175 | HF-8C | 48168 | HFL-8CG | 48190 | HFL-8C | 48183 |
| .6250 | HF-10CG | 48176 | HF-10C | 48169 | HFL-10CG | 48191 | HFL-10C | 48184 |
| .7500 | HF-12CG | 48177 | HF-12C | 48170 | HFL-12CG | 48192 | HFL-12C | 48185 |

SPECIFICATIONS

| | |
|--------------|--|
| Outer Member | Low carbon steel plated for corrosion resistance |
| Ball | Case hardened steel plated for corrosion resistance and wear |
| Insert | Oil impregnated sintered bronze |

LOAD DATA

| Basic Bearing Number | Ultimate Static Load (Radial) Rating (Lbs.) | | Approx. Wt. (Lbs.) | |
|----------------------|---|--------|--------------------|--------|
| | Male | Female | Male | Female |
| 3 | 1,600 | 1,800 | .04 | .04 |
| 4 | 2,250 | 2,300 | .05 | .06 |
| 5 | 2,850 | 2,900 | .08 | .09 |
| 6 | 3,900 | 4,300 | .12 | .16 |
| 7 | 5,300 | 5,350 | .17 | .20 |
| 8 | 7,400 | 8,400 | .27 | .32 |
| 10 | 9,350 | 9,550 | .40 | .48 |
| 12 | 10,450 | 10,500 | .72 | .72 |

NOTES:

To order with optional studs, add letter "Y" or "S" to suffix. For stud specifications, see Page 211.

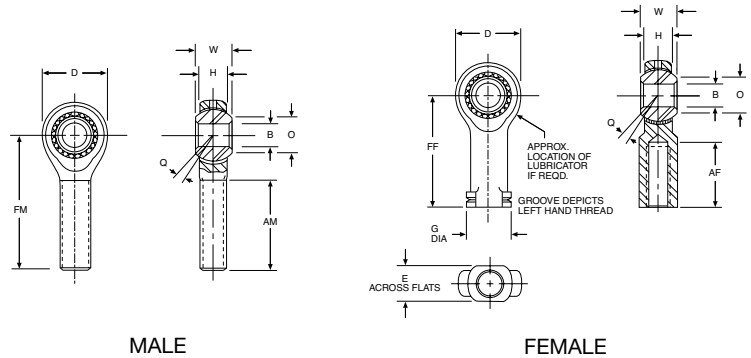
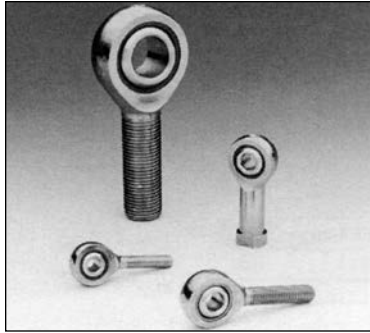
Lubricators available on sizes 4 through 12 only, studs available on all sizes.

For Engineering Data, see Pages 207-211.

Self-Aligning Bearings

CMHD Male/CFHD Female Series Rod Ends – Commercial; Self Lubricating

F



ALL DIMENSIONS IN INCHES

| Bore B | W | H | AM | FM | AF | FF | D | G | E | O | Ball Dia. | Thread | Q |
|--------------------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-----------|-------------|---------|
| +0.0025 -0.0005 | ±.005 | REF | ±.060 | ±.030 | ±.060 | ±.030 | ±.010 | REF | REF | REF | REF | Class UNF-2 | REF |
| .1900 | .312 | .250 | .750 | 1.250 | .562 | 1.062 | .625 | .406 | .312 | .296 | .430 | 10-32 | ±6° |
| .2500 | .375 | .281 | 1.000 | 1.562 | .750 | 1.312 | .750 | .468 | .375 | .346 | .510 | 1/4-28 | ±7° |
| .3125 | .437 | .344 | 1.250 | 1.875 | .750 | 1.375 | .875 | .500 | .437 | .438 | .618 | 5/16-24 | ±6° |
| .3750 | .500 | .406 | 1.250 | 1.938 | .937 | 1.625 | 1.000 | .687 | .562 | .508 | .713 | 3/8-24 | ±5-1/2° |
| .4375 | .562 | .437 | 1.375 | 2.125 | 1.062 | 1.812 | 1.125 | .750 | .625 | .578 | .806 | 7/16-20 | ±6° |
| .5000 | .625 | .500 | 1.500 | 2.438 | 1.187 | 2.125 | 1.312 | .875 | .750 | .690 | .931 | 1/2-20 | ±5° |
| .6250 | .750 | .562 | 1.625 | 2.625 | 1.500 | 2.500 | 1.500 | 1.000 | .875 | .801 | 1.098 | 5/8-18 | ±7-1/2° |
| .7500 | .875 | .687 | 1.750 | 2.875 | 1.750 | 2.875 | 1.750 | 1.125 | 1.000 | 1.010 | 1.336 | 3/4-16 | ±6° |

SPECIFICATIONS

| | |
|--------------|--|
| Outer Member | Low carbon steel plated for corrosion resistance |
| Ball | Case hardened steel electroless nickel plated |
| Insert | Reinforced nylon |

LOAD DATA

| Basic Bearing Number | Ultimate Static Load (Radial) Rating (Lbs.) | | Approx. Wt. (Lbs.) |
|----------------------|---|--------|--------------------|
| | Male | Female | |
| 3 | 1,150 | 1,200 | .02 |
| 4 | 1,600 | 1,650 | .04 |
| 5 | 2,700 | 2,800 | .07 |
| 6 | 3,200 | 3,250 | .11 |
| 7 | 3,750 | 3,800 | .15 |
| 8 | 5,800 | 6,400 | .23 |
| 10 | 7,050 | 7,100 | .38 |
| 12 | 8,800 | 9,000 | .58 |

ORDER BY CATALOG NUMBER OR ITEM CODE

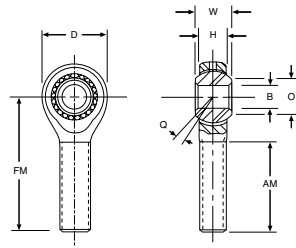
| Bore | Right Hand | | Left Hand | |
|--------------------|----------------|-----------|----------------|-----------|
| | Catalog Number | Item Code | Catalog Number | Item Code |
| MALE TYPE | | | | |
| .1900 | CMHD-3 | 48307 | CMHDL-3 | 48315 |
| .2500 | CMHD-4 | 48308 | CMHDL-4 | 48316 |
| .3125 | CMHD-5 | 48309 | CMHDL-5 | 48317 |
| .3750 | CMHD-6 | 48310 | CMHDL-6 | 48318 |
| .4375 | CMHD-7 | 48311 | CMHDL-7 | 48319 |
| .5000 | CMHD-8 | 48312 | CMHDL-8 | 48320 |
| .6250 | CMHD-10 | 48313 | CMHDL-10 | 48321 |
| .7500 | CMHD-12 | 48314 | CMHDL-12 | 48322 |
| FEMALE TYPE | | | | |
| .1900 | CFHD-3 | 48291 | CFHDL-3 | 48299 |
| .2500 | CFHD-4 | 48292 | CFHDL-4 | 48300 |
| .3125 | CFHD-5 | 48293 | CFHDL-5 | 48301 |
| .3750 | CFHD-6 | 48294 | CFHDL-6 | 48302 |
| .4375 | CFHD-7 | 48295 | CFHDL-7 | 48303 |
| .5000 | CFHD-8 | 48296 | CFHDL-8 | 48304 |
| .6250 | CFHD-10 | 48297 | CFHDL-10 | 48305 |
| .7500 | CFHD-12 | 48298 | CFHDL-12 | 48306 |

NOTES:

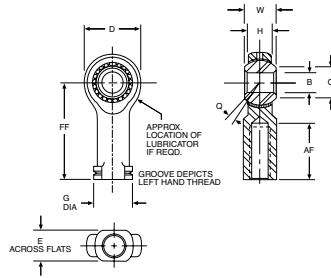
To order with optional studs, add letter "Y" or "S" to suffix. For stud specifications, see Page 211.
For Engineering Data, see Pages 207-211.

Self-Aligning Bearings

HM Males/HF Female Series Rod Ends – Precision



MALE



FEMALE



ALL DIMENSIONS IN INCHES

| Bore B | W | H | AM | FM | AF | FF | D | G | E | O | Ball Dia. | Q | Thread |
|------------------|-------|-------|-------|-------|-------|-------|----------------------|-------|-------|-------|-----------|---------|-------------------------|
| +.0015 -.0005 | ±.005 | REF | ±.060 | ±.030 | ±.060 | ±.030 | ±.010 | REF | REF | REF | REF | REF | Class UNF-2 |
| .1900 | .312 | .250 | .750 | 1.250 | .562 | 1.062 | .750 | .406 | .312 | .296 | .430 | ±5-1/2° | 10-32 |
| .2500 | .375 | .281 | 1.000 | 1.562 | .750 | 1.312 | .750 ⁽¹⁾ | .468 | .375 | .346 | .510 | ±6-1/2° | 1/4-28 |
| .3125 | .437 | .344 | 1.250 | 1.875 | .750 | 1.375 | .875 | .500 | .437 | .438 | .618 | ±5-1/2° | 5/16-24 |
| .3750 | .500 | .406 | 1.250 | 1.938 | .937 | 1.625 | 1.000 | .687 | .562 | .508 | .713 | ±5° | 3/8-24 |
| .4375 | .562 | .437 | 1.375 | 2.125 | 1.062 | 1.812 | 1.125 | .750 | .625 | .578 | .806 | ±6° | 7/16-20 |
| .5000 | .625 | .500 | 1.500 | 2.438 | 1.187 | 2.125 | 1.312 | .875 | .750 | .690 | .931 | ±5° | 1/2-20 |
| .6250 | .750 | .562 | 1.625 | 2.625 | 1.500 | 2.500 | 1.500 | 1.000 | .875 | .801 | 1.098 | ±6° | 5/8-18 |
| .7500 | .875 | .687 | 1.750 | 2.875 | 1.750 | 2.875 | 1.750 | 1.125 | 1.000 | 1.010 | 1.336 | ±5° | 3/4-16 |
| 1.0000 | 1.375 | 1.000 | 2.125 | 4.125 | 2.125 | 4.125 | 2.750 ⁽²⁾ | 1.625 | 1.500 | 1.269 | 1.875 | 7° | 1-1/4-12 ⁽⁴⁾ |

(1) Tolerance +.015/-0.10

(2) Tolerance +.030/-0.10

(3) Tolerance +.000/-0.005

(4) Class 3 Threads

ORDER BY CATALOG NUMBER OR ITEM CODE

| Bore | Right Hand | | | | Left Hand | | | |
|--------------------|-----------------|-----------|--------------------|-----------|-----------------|-----------|--------------------|-----------|
| | With Lubricator | | Without Lubricator | | With Lubricator | | Without Lubricator | |
| | Catalog Number | Item Code | Catalog Number | Item Code | Catalog Number | Item Code | Catalog Number | Item Code |
| MALE TYPE | | | | | | | | |
| .1900 | — | — | HM-3 | 48259 | — | — | HML-3 | 48276 |
| .2500 | HM-4G | 48267 | HM-4 | 48260 | HML-4G | 48284 | HML-4 | 48277 |
| .3125 | HM-5G | 48268 | HM-5 | 48261 | HML-5G | 48285 | HML-5 | 48278 |
| .3750 | HM-6G | 48269 | HM-6 | 48262 | HML-6G | 48286 | HML-6 | 48279 |
| .4375 | HM-7G | 48270 | HM-7 | 48263 | HML-7G | 48287 | HML-7 | 48280 |
| .5000 | HM-8G | 48271 | HM-8 | 48264 | HML-8G | 48288 | HML-8 | 48281 |
| .6250 | HM-10G | 48272 | HM-10 | 48265 | HML-10G | 48289 | HML-10 | 48282 |
| .7500 | HM-12G | 48273 | HM-12 | 48266 | HML-12G | 48290 | HML-12 | 48283 |
| 1.0000 | HM-16G | 48103 | HM-16 | 48102 | HML-16G | 48107 | HML-16 | 48106 |
| FEMALE TYPE | | | | | | | | |
| .1900 | — | — | HF-3 | 48225 | — | — | HFL-3 | 48242 |
| .2500 | HF-4G | 48233 | HF-4 | 48226 | HFL-4G | 48250 | HFL-4 | 48243 |
| .3125 | HF-5G | 48234 | HF-5 | 48227 | HFL-5G | 48251 | HFL-5 | 48244 |
| .3750 | HF-6G | 48235 | HF-6 | 48228 | HFL-6G | 48252 | HFL-6 | 48245 |
| .4375 | HF-7G | 48236 | HF-7 | 48229 | HFL-7G | 48253 | HFL-7 | 48246 |
| .5000 | HF-8G | 48237 | HF-8 | 48230 | HFL-8G | 48254 | HFL-8 | 48247 |
| .6250 | HF-10G | 48238 | HF-10 | 48231 | HFL-10G | 48255 | HFL-10 | 48248 |
| .7500 | HF-12G | 48239 | HF-12 | 48232 | HFL-12G | 48256 | HFL-12 | 48249 |
| 1.0000 | HF-16G | 48105 | HF-16 | 48104 | HFL-16G | 48109 | HFL-16 | 48108 |

SPECIFICATIONS

| | Sizes 3 - 12 | Size 16 |
|--------------|---|--|
| Outer Member | Low carbon steel plated for corrosion resistance | |
| Ball | Case hardened steel for corrosion resistance and wear | 52100 steel heat treated plated for corrosion resistance |
| Insert | Oil impregnated sintered bronze | Low carbon steel plated for corrosion resistance |

LOAD DATA

| Basic Bearing Number | Ultimate Static Load (Radial) Rating (Lbs.) | | Approx. Wt. (Lbs.) | |
|----------------------|---|--------|--------------------|--------|
| | Male | Female | Male | Female |
| 3 | 1,600 | 1,800 | .04 | .04 |
| 4 | 2,250 | 2,300 | .05 | .06 |
| 5 | 2,850 | 2,900 | .08 | .09 |
| 6 | 3,900 | 4,300 | .12 | .16 |
| 7 | 5,300 | 5,350 | .17 | .20 |
| 8 | 7,400 | 8,400 | .27 | .32 |
| 10 | 9,350 | 9,550 | .40 | .48 |
| 12 | 10,450 | 10,500 | .62 | .72 |
| 16 | 43,540 | 43,540 | 2.41 | 2.13 |

NOTES:

To order with optional studs, add letter "Y" or "S" to suffix. For stud specifications, see Page 211.

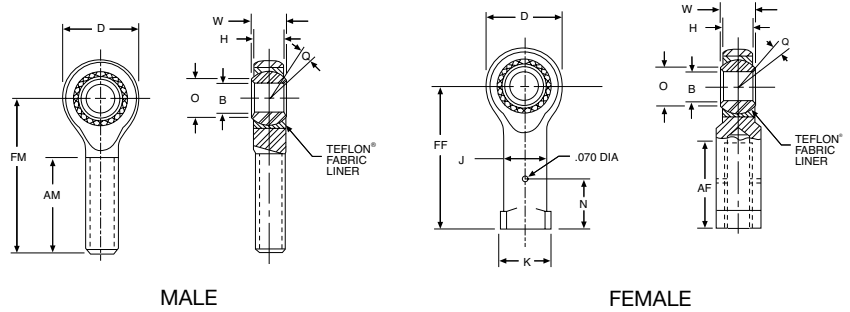
Lubricators available on sizes 4 through 16 only, studs available on sizes 3 through 12 only.

For Engineering Data, see Pages 207-211.

Self-Aligning Bearings

HME Male/HFE Female Series Rod Ends – Precision; Self Lubricating

F



ALL DIMENSIONS IN INCHES

| Bore B | W | H | AM | FM | AF | FF | D | O | J | K | N | Ball Dia. | Q | Thread |
|--------------------|------------------|----------------------|------------------|-------|------------------|-------|----------------------|-------|-------|-------|------------------|-----------|---------|-------------|
| + .0015 - .0005 | + .000 - .005 | ±.005 | + .060 - .030 | ±.010 | + .060 - .030 | ±.010 | ±.010 | REF | ±.010 | ±.010 | + .000 - .005 | REF | REF | Class UNF-3 |
| .1900 | .312 | .250 | .750 | 1.250 | .562 | 1.062 | .625 | .306 | .312 | .406 | .312 | .406 | ±6-1/2° | 10-32 |
| .2500 | .375 | .281 | 1.000 | 1.562 | .750 | 1.312 | .750 | .331 | .375 | .468 | .312 | .500 | ±8° | 1/4-28 |
| .3125 | .437 | .344 | 1.250 | 1.875 | .750 | 1.375 | .875 | .447 | .437 | .500 | .406 | .625 | ±7° | 5/16-24 |
| .3750 | .500 | .406 | 1.250 | 1.938 | .937 | 1.625 | 1.000 | .517 | .562 | .687 | .469 | .713 | ±6° | 3/8-24 |
| .4375 | .562 | .437 | 1.375 | 2.125 | 1.062 | 1.812 | 1.125 | .586 | .625 | .750 | .531 | .813 | ±7° | 7/16-20 |
| .5000 | .625 | .500 | 1.500 | 2.438 | 1.187 | 2.125 | 1.312 | .656 | .750 | .875 | .594 | .906 | ±6° | 1/2-20 |
| .6250 | .750 | .562 | 1.625 | 2.625 | 1.500 | 2.500 | 1.500 | .832 | .875 | 1.000 | .750 | 1.125 | ±8° | 5/8-18 |
| .7500 | .875 | .687 | 1.750 | 2.875 | 1.750 | 2.875 | 1.750 | .978 | 1.000 | 1.125 | .875 | 1.312 | ±7° | 3/4-16 |
| 1.0000 | 1.375 | 1.000 ⁽¹⁾ | 2.125 | 4.125 | 2.125 | 4.125 | 2.750 ⁽²⁾ | 1.269 | 1.500 | 1.625 | — | 1.875 | ±7° | 1-1/4-12 |

(1) Tolerance +.015/- .010

(2) Tolerance +.030/- .010

SPECIFICATIONS

| | |
|--------------|---|
| Outer Member | Low carbon steel plated for corrosion resistance |
| Ball | 52100 Steel - heat treated Rc 56 Min hard chrome plated |
| Insert | Carbon steel - plated for corrosion resistance or stainless steel |
| Liner | Teflon® fabric permanently bonded to insert I.D. |

Teflon® is a trade name of E.I. DuPont de Nemours & Co. Inc.

LOAD DATA

| Basic Bearing Number | Ultimate Static Load (Radial) Rating (Lbs.) | | Approx. Wt. (Lbs.) | |
|----------------------|---|--------|--------------------|--------|
| | Male | Female | Male | Female |
| 3 | 1,169 | 1,531 | .03 | .04 |
| 4 | 2,158 | 2,539 | .04 | .06 |
| 5 | 2,784 | 3,133 | .08 | .09 |
| 6 | 3,915 | 3,915 | .12 | .16 |
| 7 | 4,218 | 4,218 | .16 | .20 |
| 8 | 6,660 | 6,660 | .25 | .32 |
| 10 | 7,364 | 7,364 | .39 | .48 |
| 12 | 11,518 | 11,518 | .60 | .72 |
| 16 | 43,540 | 43,540 | 2.41 | 2.13 |

NOTE:

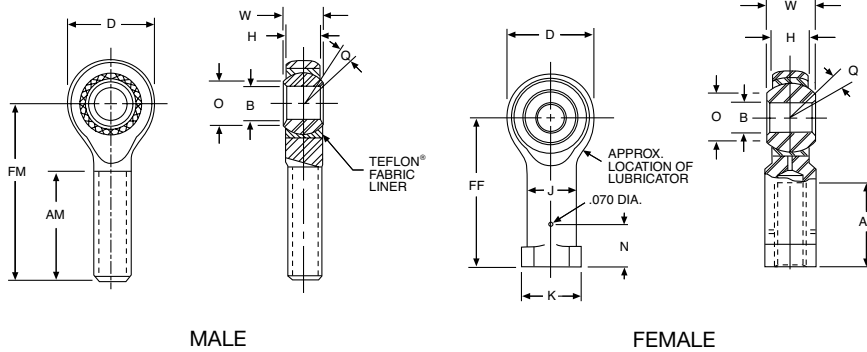
For Engineering Data, see Pages 207-211.

ORDER BY CATALOG NUMBER OR ITEM CODE

| Bore | Right Hand | | Left Hand | |
|--------------------|----------------|-----------|----------------|-----------|
| | Catalog Number | Item Code | Catalog Number | Item Code |
| MALE TYPE | | | | |
| .1900 | HME-3 | 48038 | HMLE-3 | 48059 |
| .2500 | HME-4 | 48039 | — | — |
| .3125 | HME-5 | 48040 | HMLE-5 | 48065 |
| .3750 | HME-6 | 48041 | HMLE-6 | 48067 |
| .4375 | HME-7 | 48043 | HMLE-7 | 48068 |
| .5000 | HME-8 | 48044 | HMLE-8 | 48069 |
| .6250 | HME-10 | 48045 | HMLE-10 | 48076 |
| .7500 | HME-12 | 48046 | HMLE-12 | 48077 |
| 1.0000 | HME-16 | 48047 | HMLE-16 | 48078 |
| FEMALE TYPE | | | | |
| .1900 | HFE-3 | 48079 | HFLE-3 | 48004 |
| .2500 | HFE-4 | 48080 | HFLE-4 | 48006 |
| .3125 | HFE-5 | 48086 | HFLE-5 | 48007 |
| .3750 | HFE-6 | 48088 | HFLE-6 | 48008 |
| .4375 | HFE-7 | 48091 | HFLE-7 | 48010 |
| .5000 | HFE-8 | 48093 | HFLE-8 | 48012 |
| .6250 | HFE-10 | 48094 | HFLE-10 | 48014 |
| .7500 | HFE-12 | 48095 | HFLE-12 | 46017 |
| 1.000 | HFE-16 | 48096 | HFLE-16 | 48019 |

Self-Aligning Bearings

HMX Male/HFX Female Series Rod Ends – Extra Capacity



ALL DIMENSIONS IN INCHES

| Bore B | W | H | AM | FM | AF | FF | D | O | J | K | N | Ball Dia. | Q | Female Thread | Male Thread |
|--------------------|------------------|--------|------------------|--------|------------------|--------|--------|------|--------|--------|------------------|-----------|-----|---------------|--------------|
| +0.0015 -0.0005 | +0.000 -0.005 | ±0.005 | +0.060 -0.030 | ±0.010 | +0.060 -0.030 | ±0.010 | ±0.010 | REF | ±0.010 | ±0.010 | +0.000 -0.005 | REF | REF | Class UNF-3B | Class UNF-3A |
| .2500 | .375 | .281 | 1.000 | 1.562 | .750 | 1.312 | .750 | .331 | .375 | .468 | .312 | .500 | ±8° | 1/4-28 | 5/16-24 |
| .3125 | .437 | .344 | 1.250 | 1.875 | .750 | 1.375 | .875 | .447 | .437 | .500 | .406 | .625 | ±7° | 5/16-24 | 3/8-24 |
| .3750 | .500 | .406 | 1.250 | 1.938 | .937 | 1.625 | 1.000 | .517 | .562 | .687 | .469 | .718 | ±6° | 3/8-24 | 7/16-20 |
| .4375 | .562 | .437 | 1.375 | 2.125 | 1.062 | 1.812 | 1.125 | .586 | .625 | .750 | .531 | .813 | ±7° | 7/16-20 | 1/2-20 |
| .5000 | .625 | .500 | 1.500 | 2.438 | 1.187 | 2.125 | 1.312 | .656 | .750 | .875 | .594 | .906 | ±6° | 1/2-20 | 5/8-18 |
| .6250 | .750 | .562 | 1.625 | 2.625 | 1.500 | 2.500 | 1.500 | .832 | .875 | 1.000 | .750 | 1.125 | ±8° | 5/8-18 | 3/4-16 |
| .7500 | .875 | .687 | 1.750 | 2.875 | 1.750 | 2.875 | 1.750 | .978 | 1.000 | 1.125 | .875 | 1.312 | ±7° | 3/4-16 | 7/8-14 |
| .7500 | .875 | .687 | 1.750 | 2.875 | 1.750 | 2.875 | 1.750 | .978 | 1.000 | 1.125 | .875 | 1.312 | ±7° | 3/4-16 | 7/8-14 |

ORDER BY CATALOG NUMBER OR ITEM CODE

| Bore | Right Hand with Lubricator | | Left Hand with Lubricator | |
|--------------------|----------------------------|-----------|---------------------------|-----------|
| | Catalog Number | Item Code | Catalog Number | Item Code |
| MALE TYPE | | | | |
| .2500 | HMX-4G | 48337 | HMXL-4G | 48344 |
| .3125 | HMX-5G | 48338 | HMXL-5G | 48345 |
| .3750 | HMX-6G | 48339 | HMXL-6G | 48346 |
| .4375 | HMX-7G | 48340 | HMXL-7G | 48347 |
| .5000 | HMX-8G | 48341 | HMXL-8G | 48348 |
| .6250 | HMX-10G | 48342 | | |
| .7500 | HMX-12G | 48343 | HMXL-12G | 48350 |
| FEMALE TYPE | | | | |
| .2500 | HFX-4G | 48323 | HFXL-4G | 48330 |
| .3125 | HFX-5G | 48324 | HFXL-5G | 48331 |
| .3750 | HFX-6G | 48325 | HFXL-6G | 48332 |
| .4375 | HFX-7G | 48326 | HFXL-7G | 48333 |
| .5000 | HFX-8G | 48327 | HFXL-8G | 48334 |
| .6250 | HFX-10G | 48328 | HFXL-10G | 48335 |
| .7500 | HFX-12G | 48329 | HFXL-12G | 46336 |

NOTE

For Engineering Data, see Pages 207-211.

SPECIFICATIONS

| | HMX Series | HFX Series |
|--------------|--|--|
| Outer Member | Alloy steel, heat treated magnetic particle inserted plated for corrosion resistance | Steel alloy, heat treated plated for corrosion resistance |
| Ball | 52100 steel heat treated, hard chrome plated | 52100 steel heat treated, hard chrome plated |
| Insert | Aluminum bronze | Alloy steel, heat treated plated for corrosion resistance or stainless steel, heat treated |

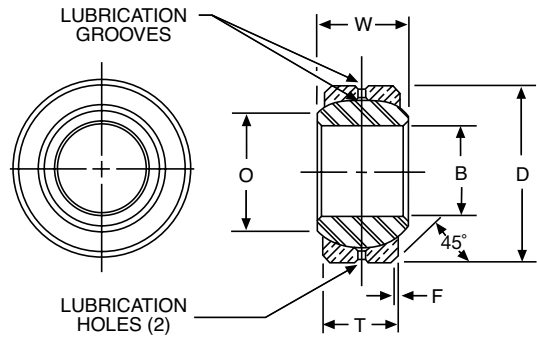
LOAD DATA

| Basic Bearing Number | Ultimate Static Load (Radial) (Lbs.) | | Approx. Wt. (Lbs.) | |
|----------------------|--------------------------------------|--------|--------------------|--------|
| | Male | Female | Male | Female |
| 4 | 5,390 | 6,190 | .06 | .06 |
| 5 | 7,500 | 7,639 | .09 | .09 |
| 6 | 9,590 | 9,544 | .13 | .15 |
| 7 | 11,000 | 10,285 | .18 | .20 |
| 8 | 13,575 | 16,238 | .30 | .32 |
| 10 | 17,300 | 17,955 | .46 | .48 |
| 12 | 23,225 | 28,081 | .72 | .72 |

Self-Aligning Bearings

LHA-LHB-LHSS Series

Sphericals – Precision



SPECIFICATIONS

| | LHA | LHB | LHSS |
|--------------|--|-----------------|------------------------------|
| Outer Member | 4130 Steel or equal heat treated plated for corrosion resistance | Aluminum Bronze | 410 or equal Stainless Steel |
| Ball | 52100 Steel heat treated, plated for corrosion resistance and wear | | |

ORDER BY CATALOG NUMBER OR ITEM CODE ALL DIMENSIONS IN INCHES

| Bore B | D | F | T | W | O | Ball Dia. | LHA Series | | LHB Series | | LHSS Series | |
|------------------|------------------|------|-------|-------|-------|-----------|----------------|-----------|----------------|-----------|----------------|-----------|
| | | | | | | | Catalog Number | Item Code | Catalog Number | Item Code | Catalog Number | Item Code |
| +.0000 -.0005 | +.0000 -.0005 | REF | ±.005 | ±.005 | REF | REF | | | | | | |
| .1650 | .4687 | .020 | .187 | .250 | .235 | .343 | LHA-2 | 48405 | LHB-2 | 48417 | LHSS-2 | 48429 |
| .1900 | .5625 | .020 | .218 | .281 | .293 | .406 | LHA-3 | 48406 | LHB-3 | 48418 | LHSS-3 | 48430 |
| .2500 | .6562 | .022 | .250 | .343 | .364 | .500 | LHA-4 | 48407 | LHB-4 | 48419 | LHSS-4 | 48431 |
| .3125 | .7500 | .032 | .281 | .375 | .419 | .562 | LHA-5 | 48408 | LHB-5 | 48420 | LHSS-5 | 48432 |
| .3750 | .8125 | .032 | .312 | .406 | .517 | .656 | LHA-6 | 48409 | LHB-6 | 48421 | LHSS-6 | 48433 |
| .4375 | .9062 | .032 | .343 | .437 | .572 | .718 | LHA-7 | 48410 | LHB-7 | 48422 | LHSS-7 | 48434 |
| .5000 | 1.0000 | .032 | .390 | .500 | .642 | .813 | LHA-8 | 48411 | LHB-8 | 48423 | LHSS-8 | 48435 |
| .5625 | 1.0937 | .032 | .437 | .562 | .670 | .906 | LHA-9 | 48412 | LHB-9 | 48424 | LHSS-9 | 48436 |
| .6250 | 1.1875 | .032 | .500 | .625 | .739 | .968 | LHA-10 | 48413 | LHB-10 | 48425 | LHSS-10 | 48437 |
| .7500 | 1.4375 | .044 | .593 | .750 | .920 | 1.187 | LHA-12 | 48414 | LHB-12 | 48426 | LHSS-12 | 48438 |
| .8750 | 1.5625 | .044 | .703 | .875 | .980 | 1.312 | LHA-14 | 48415 | LHB-14 | 48427 | LHSS-14 | 48439 |
| 1.0000 | 1.7500 | .044 | .797 | 1.000 | 1.118 | 1.500 | LHA-16 | 48416 | LHB-16 | 48428 | LHSS-16 | 48440 |

LOAD DATA

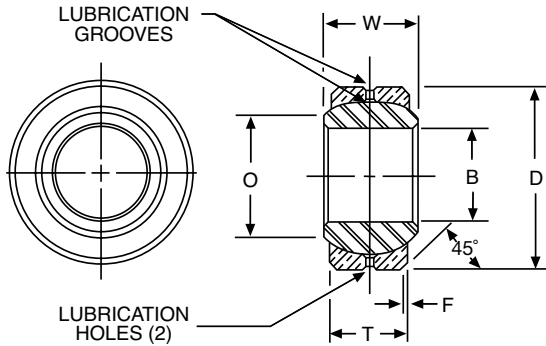
| Basic Bearing Number | Maximum Static Radial Load (Lbs.) | | Approx. Weight (Lbs.) |
|----------------------|-----------------------------------|--------|-----------------------|
| | LHA/LHSS | LHB | |
| 2 | 2,000 | 1,000 | .01 |
| 3 | 5,400 | 2,700 | .02 |
| 4 | 8,400 | 4,200 | .02 |
| 5 | 11,600 | 5,800 | .03 |
| 6 | 15,600 | 7,800 | .04 |
| 7 | 18,600 | 9,300 | .05 |
| 8 | 22,400 | 11,200 | .07 |
| 9 | 30,000 | 15,000 | .09 |
| 10 | 40,000 | 20,000 | .11 |
| 12 | 50,000 | 30,000 | .21 |
| 14 | 86,000 | 43,000 | .27 |
| 16 | 104,000 | 52,000 | .39 |

NOTES:

For Engineering Data, see Pages 207-211.
For Housing Bores, see Page 210.

Self-Aligning Bearings

LHSSE-LHSSV Series Sphericals – Precision; Self Lubricating



ORDER BY CATALOG NUMBER OR ITEM CODE ALL DIMENSIONS IN INCHES

| Bore B | O | D | F | T | W | Ball Dia. | LHSSE Series | | LHSSV Series | |
|------------------|-------|------------------|------|-------|----------------|--------------|-------------------|--------------|-------------------|--------------|
| | | | | | | | Catalog Number | Item Code | Catalog Number | Item Code |
| +.0000 -.0005 | REF | +.0000 -.0005 | REF | ±.005 | +.000 -.005 | REF | | | | |
| .1650 | .235 | .4687 | .020 | .187 | .250 | .343 | LHSSE-2 | 48021 | LHSSV-2 | 48453 |
| .1900 | .293 | .5625 | .020 | .218 | .281 | .406 | LHSSE-3 | 48023 | LHSSV-3 | 48454 |
| .2500 | .364 | .6562 | .022 | .250 | .343 | .500 | LHSSE-4 | 48025 | LHSSV-4 | 48455 |
| .3125 | .419 | .7500 | .032 | .281 | .375 | .562 | LHSSE-5 | 48027 | LHSSV-5 | 48456 |
| .3750 | .517 | .8125 | .032 | .312 | .406 | .656 | LHSSE-6 | 48029 | LHSSV-6 | 48457 |
| .4375 | .572 | .9062 | .032 | .343 | .437 | .718 | LHSSE-7 | 48030 | LHSSV-7 | 48458 |
| .5000 | .642 | 1.0000 | .032 | .390 | .500 | .813 | LHSSE-8 | 48032 | LHSSV-8 | 48459 |
| .5625 | .670 | 1.0937 | .032 | .437 | .562 | .906 | LHSSE-9 | 48033 | LHSSV-9 | 48460 |
| .6250 | .739 | 1.1875 | .032 | .500 | .625 | .968 | LHSSE-10 | 48034 | LHSSV-10 | 48461 |
| .7500 | .920 | 1.4375 | .044 | .593 | .750 | 1.187 | LHSSE-12 | 48035 | LHSSV-12 | 48462 |
| .8750 | .980 | 1.5625 | .044 | .703 | .875 | 1.312 | LHSSE-14 | 48036 | LHSSV-14 | 48463 |
| 1.0000 | 1.118 | 1.7500 | .044 | .797 | 1.000 | 1.500 | LHSSE-16 | 48037 | LHSSV-16 | 48464 |

LOAD DATA

| Basic Bearing Number | Maximum Static Radial Load (Lbs.) | | Approx. Wt. (Lbs.) |
|----------------------------|-----------------------------------|--------|--------------------------|
| | LHSSE | LHSSV | |
| 2 | 1,200 | 1,200 | .010 |
| 3 | 3,250 | 3,250 | .014 |
| 4 | 4,900 | 4,900 | .022 |
| 5 | 6,450 | 6,450 | .03 |
| 6 | 8,250 | 8,250 | .04 |
| 7 | 10,200 | 10,200 | .05 |
| 8 | 13,600 | 13,600 | .07 |
| 9 | 15,900 | 15,900 | .09 |
| 10 | 21,000 | 21,000 | .11 |
| 12 | 30,000 | 30,000 | .21 |
| 14 | 41,100 | 41,100 | .26 |
| 16 | 54,700 | 54,700 | .39 |

SPECIFICATIONS

| | LHSSE Series | LHSSV Series |
|---------------------------|--|--|
| Outer Member | 410 Stainless Steel | 410 Stainless Steel |
| Ball | 52100 Steel heat treated plated for corrosion resistance and wear | 52100 Steel heat treated plated for corrosion resistance and wear |
| Self Lubricating Liner | Teflon® | Teflon® Fabric |

Teflon® is a trade name of E. I. DuPont de Nemours & Co. Inc.

NOTES:

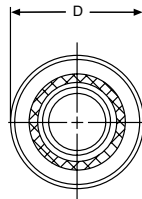
For Engineering Data, see Pages 207-211.

Self-Aligning Bearings

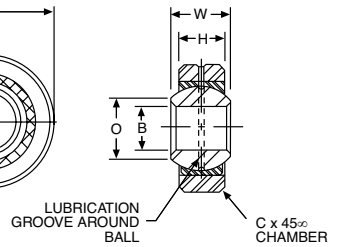
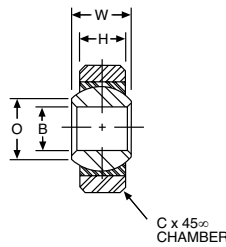
LS/LSS Series

Sphericals – Special Purpose

F



LS/LSS 3 – 10



LS 12 – 30

ORDER BY CATALOG NUMBER OR ITEM CODE ALL DIMENSIONS IN INCHES

| Bore B | D | H | w | Ball Dia. | O | C | LS Series | |
|--------------------|--------------------|-------|-------|-----------|-------|------------------|----------------|-----------|
| +0.0025 -0.0005 | +0.0000 -0.0005 | ±.005 | ±.005 | REF | REF | +0.015 -0.000 | Catalog Number | Item Code |
| .1900 | .6250 | .187 | .281 | .400 | .285 | .016 | LS-3 | 48381 |
| .2500 | .7500 | .281 | .375 | .510 | .346 | .016 | LS-4 | 48382 |
| .3125 | .8750 | .313 | .437 | .618 | .438 | .016 | LS-5 | 48383 |
| .3750 | 1.0000 | .375 | .500 | .713 | .508 | .016 | LS-6 | 48384 |
| .4375 | 1.1875 | .437 | .562 | .806 | .578 | .032 | LS-7 | 48385 |
| .5000 | 1.3125 | .531 | .687 | .931 | .627 | .044 | LS-8 | 48386 |
| .6250 | 1.5625 | .687 | .875 | 1.178 | .789 | .044 | LS-10 | 48387 |
| .7500 | 2.2500 | .937 | 1.250 | 1.625 | 1.038 | .044 | LS-12 | 48388 |
| 1.0000 | 2.3750 | .875 | 1.125 | 1.750 | 1.345 | .062 | LS-16 | 48389 |
| 1.1875 | 2.6250 | 1.000 | 1.250 | 2.000 | 1.562 | .085 | LS-19 | 48390 |
| 1.5000 | 3.2500 | 1.250 | 1.500 | 2.500 | 2.000 | .085 | LS-24 | 48391 |
| 1.8750 | 4.0000 | 1.313 | 1.625 | 3.000 | 2.521 | .125 | LS-30 | 48392 |

SPECIFICATIONS

| | LS Series | | LSS Series |
|--------------|---|--------------------------------------|---|
| | Size 3 - 10 | Size 12 - 30 | All |
| Outer Member | Low carbon steel, plated for corrosion resistance | Carbon steel, cadmium or zinc plated | 4130 Steel or equal, RC 36-42 cadmium plated |
| Ball | Low carbon steel, case hardened, plated for corrosion | Chrome steel heat treated | S.A.E. 52100 Steel heat treated and chrome plated |
| Insert | Sintered Bronze Oil impregnated | Brass | None |

LOAD DATA

| Bore B | D | H | w | Ball Dia. | O | C | LSS Series | |
|--------------------|--------------------|----------------|----------------|-----------|-------|------------------|----------------|-----------|
| +0.0000 -0.0005 | +0.0000 -0.0005 | ±.005 -.005 | ±.000 -.000 | (REF) | (REF) | +0.000 -0.005 | Catalog Number | Item Code |
| .1900 | .5625 | .218 | .281 | .406 | .293 | .020 | LSS-3 | 48394 |
| .2500 | .6562 | .250 | .343 | .500 | .364 | .022 | LSS-4 | 48395 |
| .3125 | .7500 | .281 | .375 | .562 | .419 | .032 | LSS-5 | 48396 |
| .3750 | .8125 | .312 | .406 | .656 | .517 | .032 | LSS-6 | 48397 |
| .4375 | .9062 | .343 | .437 | .718 | .572 | .032 | LSS-7 | 48398 |
| .5000 | 1.0000 | .390 | .500 | .813 | .642 | .032 | LSS-8 | 48399 |
| .5625 | 1.0937 | .437 | .562 | .906 | .670 | .032 | LSS-9 | 48400 |
| .6250 | 1.1875 | .500 | .625 | .968 | .739 | .032 | LSS-10 | 48401 |
| .7500 | 1.4375 | .593 | .750 | 1.187 | .920 | .044 | LSS-12 | 48402 |
| .8750 | 1.5625 | .703 | .875 | 1.312 | .980 | .044 | LSS-14 | 48403 |
| 1.0000 | 1.7500 | .797 | 1.000 | 1.500 | 1.118 | .044 | LSS-16 | 48404 |

| Basic Bearing Number | LS SERIES | | LSS SERIES | |
|----------------------|------------------------------------|-------------------|------------------------------------|-------------------|
| | Maximum Static Radial Load in Lbs. | Approx. Wt.(Lbs.) | Maximum Static Radial Load in Lbs. | Approx. Wt.(Lbs.) |
| 3 | 1,520 | .02 | 5,400 | .014 |
| 4 | 2,900 | .04 | 8,400 | .022 |
| 5 | 3,900 | .05 | 11,600 | .030 |
| 6 | 5,400 | .08 | 15,600 | .038 |
| 7 | 7,100 | .12 | 18,600 | .048 |
| 8 | 9,900 | .18 | 22,400 | .065 |
| 9 | | | 30,000 | .086 |
| 10 | 16,300 | .33 | 40,000 | .110 |
| 12 | 47,600 | .94 | 50,000 | .204 |
| 14 | | | 86,000 | .263 |
| 16 | 48,200 | 1.00 | 104,000 | .386 |
| 19 | 63,000 | 1.27 | | |
| 24 | 98,000 | 2.38 | | |
| 30 | 123,000 | 3.75 | | |

NOTES:

For Engineering Data, see Pages 207-211.



Environment and Mounting

Corrosive Environments

All components are protected by plating or corrosion inhibiting oil.

Lubrication and Contaminants

The rating of all series with metal-on-metal bearing members is based on the presence of an adequate lubricant film. Ratings for the Reinforced Nylon race series are based on dry operation with the inherent lubrication provided by the bronze ball.

A controlled internal clearance is present in all metal-on-metal bearings. The reinforced Nylon race series are molded with a positive interference fit-up which excludes contaminants and results in an excellent self-wiping action.

Protection from contaminants should be provided wherever possible. Grease fittings or lubricant entry provisions are available for most metal-on-metal bearings. Periodic relubrication will improve operation under severe conditions. Contaminants are also flushed out during relubrication. Where relubrication is difficult or impractical, the self-lubricating features of the sintered ball or race materials and the reinforced Nylon race provide built-in protection.

Caution:

The lubricator mounting hole in housings reduces the strength of housings by varying amounts depending on size and location.

Mounting

Sintered bronze balls may be distorted by excessive clamping pressure. Care should be used in tightening a nut against the ball to prevent distortion or binding. Caution: certain ANSI bolt series with fillets under the head will interfere with proper assembly. Use of a countersunk washer is suggested.

Temperature and Water Immersion

Self Aligning bearings may be operated between -30°F and $+300^{\circ}\text{F}$, with wider ranges obtained by the use of special lubricants. Reinforced nylon race bearings may be operated between -30°F and $+150^{\circ}\text{F}$. Prolonged immersion of Nylon races in water can cause an increase in torque.

Engineering Data

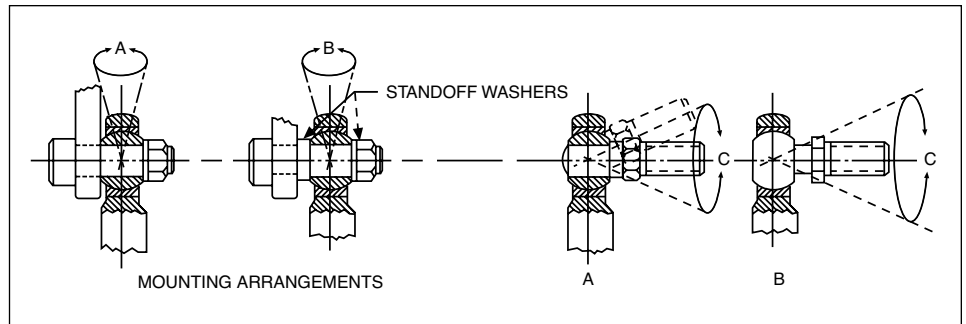
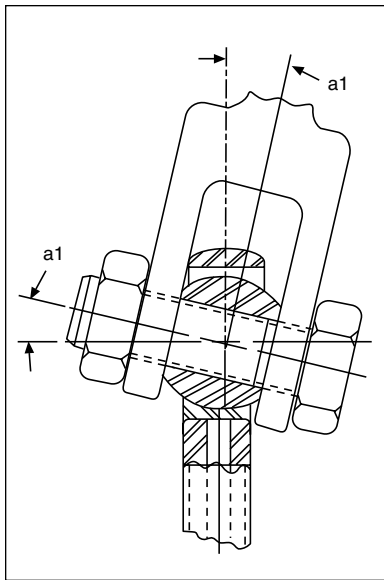
Mounting and Misalignment Factors

The single biggest reason rod end bearings are used is for their ability to absorb gross misalignment and still transmit motion in the preferred direction. To overcome misalignment, the ball or housing rotates as far as necessary or until it strikes an obstruction. The amount of misalignment a bearing can absorb is limited by the mounting arrangement. Shown below are common mounting arrangements, along with an indication of the misalignment absorbing capabilities of each. The table lists the maximum angular displacement in each mounting mode.

Rod Ends offer the least misalignment absorbing capability when fitted closely between the legs of a clevis or when the ball is bolted against the face of a lever. The limit is reached when the housing head strikes the mounting member.

Adding a standoff washer with the same diameter as the ball face increases misalignment absorbing capability. The limit is reached when the washer strikes the face.

The greatest misalignment compensation results when the ball is fitted with a stud, the shank diameter of which equals the ball bore *chamfer*, (see A). One piece ball studs (see B) of similar proportions also allow similar misalignment. Exceeding these dimensional limits may deform the race, so care should be taken to choose the proper mounting arrangement.



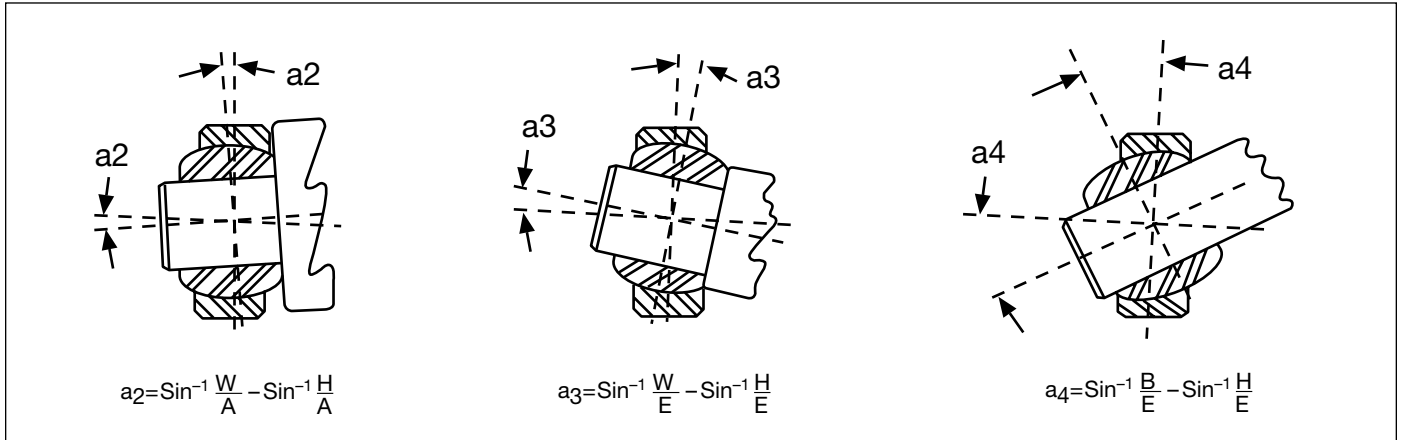
Reference Letters

- D – Head Diameter or Outer Race Diameter
- H – Housing Width
- W – Ball Width
- $A_1 = \sin^{-1} \frac{W}{D} - \sin^{-1} \frac{H}{D}$

ANGLE OF MISALIGNMENT (A1)

| Size | SERIES | | | |
|------|--------|--------------------|-----------|--------------------|
| | KF | HM-C/HF-C HM/HF | CMHD/CFHD | HME/HFE HMX/HFX |
| -3 | ±15° | ±5-1/2° | ±6° | ±6-1/2° |
| -4 | ±15° | ±6-1/2° | ±7° | ±8° |
| -5 | ±15° | ±5-1/2° | ±6° | ±7° |
| -6 | ±15° | ±5° | ±5-1/2° | ±6° |
| -7 | — | ±6° | ±6° | ±7° |
| -8 | ±15° | ±5° | ±5° | ±6° |
| -10 | — | ±6° | ±7-1/2° | ±8° |
| -12 | — | ±5° | ±6° | ±7° |
| -16 | — | ±7° | — | ±7° |

Spherical bearings offer a greater variety of mounting positions compared to the rod end bearings. The angle of misalignment is calculated based on its mounting arrangement. Shown are three common mountings and the formulae for calculating the angle of misalignment.



Reference Letters

- B – Ball Bore
- C – Outer Race Chamfer
- D – Head Diameter or Outer Race Diameter
- E – Ball Diameter
- H – Housing Width
- A – $\sqrt{(D-2C)^2 + H^2}$
- W – Ball Width

SPHERICAL BEARINGS

| Series LS | Mounting Arrangements | | | Series LHA LHB LHSS LHSSE LHSSV | Mounting Arrangements | | |
|-----------|-----------------------|----------------|----------------|---------------------------------|-----------------------|----------------|----------------|
| | a ₂ | a ₃ | a ₄ | | a ₂ | a ₃ | a ₄ |
| -3 | ±9° | ±16 1/2° | ±34 1/2° | -2 | ±8 1/2° | ±13 1/2° | ±28° |
| -4 | ±8° | ±14 1/2° | ±29° | -3 | ±7° | ±11° | ±29 1/2° |
| -5 | ±9° | ±14° | ±30° | -4 | ±9° | ±13° | ±30° |
| -6 | ±8° | ±12 1/2° | ±27° | -5 | ±8° | ±12° | ±26° |
| -7 | ±6 1/2° | ±11° | ±25° | -6 | ±7 1/2° | ±10 1/2° | ±23° |
| -8 | ±7 1/2° | ±12 1/2° | ±23° | -7 | ±6 1/2° | ±9 1/2° | ±20 1/2° |
| -10 | ±8° | ±12° | ±23° | -8 | ±7° | ±10° | ±20° |
| -12 | ±9° | ±15° | ±27° | -9 | ±7 1/2° | ±10° | ±20° |
| -16 | ±6 1/2° | ±10° | ±25° | -10 | ±7° | ±9° | ±19° |
| -19 | ±6° | ±18 1/2° | ±23 1/2° | -12 | ±7° | ±9° | ±21° |
| -24 | ±5° | ±7° | ±23° | -14 | ±7° | ±9° | ±16° |
| -30 | ±5° | ±7° | ±25° | -16 | ±7 1/2° | ±9 1/2° | ±16° |

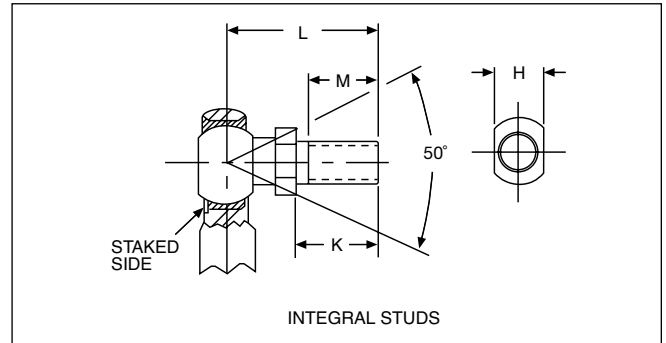
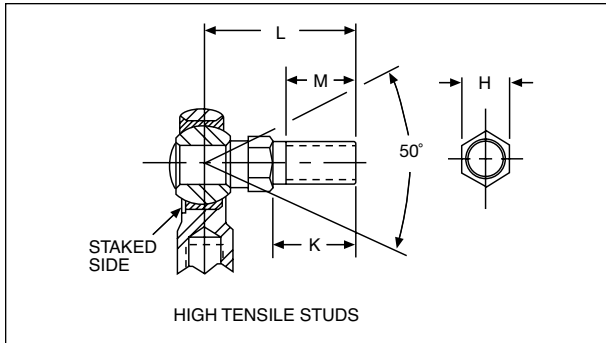
Engineering Information

Engineering Data

Housing Bore for Press Fit of Spherical Bearings

| Basic Bearing Size | D Bearing O.D. +.0000 /-.0005 | HOUSING BORE RECOMMENDED (Aluminum or Steel) |
|--------------------|----------------------------------|---|
| LS SERIES | | |
| 3 | .6250 | .6248/.6243 |
| 4 | .7500 | .7498/.7493 |
| 5 | .8750 | .8748/.8743 |
| 6 | 1.0000 | .9998/.9993 |
| 7 | 1.1875 | 1.1873/1.1868 |
| 8 | 1.3125 | 1.3123/1.3118 |
| 10 | 1.5625 | 1.5623/1.5618 |
| 12 | 2.2500 | 2.2498/2.2493 |
| 16 | 2.3750 | 2.3748/2.3743 |
| 19 | 2.6250 | 2.6248/2.6243 |
| 24 | 3.2500 | 3.2498/3.2493 |
| 30 | 4.0000 | 3.9998/3.9993 |

| Basic Bearing Size | D Bearing O.D. +.0000 /-.0005 | HOUSING BORE RECOMMENDED (Aluminum or Steel) |
|--------------------------------------|----------------------------------|---|
| LHA, LHB, LHSSE, LHSSV SERIES | | |
| 2 | .4687 | .4685/.4680 |
| 3 | .5625 | .5623/.5618 |
| 4 | .6562 | .6560/.6555 |
| 5 | .7500 | .7498/.7493 |
| 6 | .8125 | .8123/.8118 |
| 7 | .9062 | .9060/.9055 |
| 8 | 1.0000 | .9998/.9993 |
| 9 | 1.0937 | 1.0935/1.0930 |
| 10 | 1.1875 | 1.1873/1.1868 |
| 12 | 1.4375 | 1.4373/1.4368 |
| 14 | 1.5625 | 1.5623/1.5618 |
| 16 | 1.7500 | 1.7498/1.7493 |



Steel studs are available in the CMHD/CFHD, HM/HF, HM-C/HF-C and KF Series to facilitate right angle connections. Standard misalignment is 50° in all sizes. Threads are only available as right hand. There are two types of studs available:

High Tensile Steel Studs–(Y Suffix)

High tensile steel studs are available for sizes 3 through 12. These studs are machined for exact fit-up within the ball bore, providing smooth operation and high performance. The studs are assembled to maintain the internal clearances inherent in the Rod Ends. They are permanently secured in the bore of the ball, threaded for easy mounting and have a hex section to facilitate tightening. The stud is designed to accommodate 50° misalignment in any direction, and provides maximum load capacity.

Integral Ball Studs–(S Suffix)

The ball and stud are combined into a single unit of case hardened machined plated steel. Wrench flats are provided for tightening. These studs offer the same operational features as the high tensile studs, with slightly reduced load capacity. The integral studs are available in sizes 3 through 8 only.

Numbering System

High Tensile Steel Studs

Use a “Y” suffix after the complete catalog number

Example: CFHDL-3Y

Integral Ball Stud

Use a “S” suffix after the complete catalog number

Example: HF-5S

Materials

Rod End: Refer to basic Rod End specification page

Stud: High tensile steel - Plated for corrosion resistance

Integral Stud: Low carbon steel - case hardened - plated for corrosion resistance

DIMENSIONS AND LOAD DATA

DIMENSIONS IN INCHES

| To Fit Rod End Size | Stud Thread UNF-2 | H | K | L | M | Static Load Rating (Lbs.) | |
|---------------------|-------------------|-------|-------|-------|-------|---------------------------|-----------|
| | | ±.005 | ±.010 | ±.015 | MIN | High-Tensile Stud | Ball Stud |
| 3 | 10-32 | .312 | .500 | 1.016 | .437 | 350 | 250 |
| 4 | 1/4-28 | .375 | .562 | 1.047 | .500 | 850 | 550 |
| 5 | 5/16-24 | .438 | .687 | 1.234 | .594 | 1,600 | 1,050 |
| 6 | 3/8-24 | .500 | .906 | 1.570 | .812 | 2,400 | 1,500 |
| 7 | 7/16-20 | .625 | 1.125 | 1.968 | .938 | 2,700 | 1,800 |
| 8 | 1/2-20 | .625 | 1.125 | 2.000 | .938 | 3,100 | 2,200 |
| 10 | 5/8-18 | .750 | 1.500 | 2.500 | 1.250 | 4,500 | N/A |
| 12 | 3/4-16 | 1.000 | 1.812 | 3.000 | 1.625 | 6,000 | N/A |

Mounted Bearings

Replacement Bearings for Setscrew Locking Series

F



Mounted Bearings offer a simple, convenient method of providing load support. Selection for most applications may be readily accomplished from a single selection chart, based on shaft size, radial and thrust load requirements. Installation normally requires only bolting to a suitable mounting surface and securing bearing to shaft with setscrews or eccentric locking collar provided.

The Boston Gear Mounted Bearing line is one of the most comprehensive available to industry. Ranging from light duty, plain bearing blocks to precision units. They all feature Boston Gear's tradition of design excellence and precision manufacture.

Light Duty Series

PPB — Split cast iron housing with bore and mounting base machined.

SRP — PPB Series with a Bost-Bronz (oil impregnated) sleeve bearing.

PS — Stamped steel housing with pillow block, 2 bolt and 3 bolt flange configuration. Extended inner race, (2) setscrews locking to shaft. Prelubricated spherical O.D. bearing.

XL — Ductile iron housing with pillow block, 2 bolt and 3 bolt flange configuration. Extended inner race, (2) setscrews locking to shaft. Prelubricated spherical O.D. bearing.

Standard Duty Series

All Series — Solid one-piece cast iron housing of American manufacture with removable zerk-type threaded grease fitting. Precision machined base and spherical bore. Available in pillow block, 2 bolt and 4 bolt flanges.

H & L Series — Eccentric shaft lock of international manufacture.

S Series — Extended inner race with double setscrews for positive shaft locking.

Medium Duty Series

MB Series — Solid one-piece heavy duty cast iron housing with removable zerk-type threaded grease fitting. Available in pillow block 4 bolt flange and piloted flange with precision machined base, pilot diameter and spherical bore. Spherical O.D. bearing of international manufacture with extended inner race and double setscrews for positive shaft locking and smoothness of operation.

Mounted Bearings

Replacement Bearings and Locking Collars for Eccentric Locking Collar Series



F

ORDER BY CATALOG NUMBER OR ITEM CODE

| Bore | INTERNATIONAL BEARINGS | | | | | |
|---------|------------------------|-----------|-----------------|-----------|-------------------------------------|-----------|
| | Replacement Bearings | | Locking Collars | | Bearing and Carrier (A Series Only) | |
| | Catalog Number | Item Code | Catalog Number | Item Code | Catalog Number | Item Code |
| 1/2 | NX3008M | 67374 | NX3008LC | 67373 | 3A-1/2 B&C | 07030 |
| 5/8 | NX3010M | 67377 | — | — | 3A-5/8 B&C | 07032 |
| 3/4 | NX4012M | 67380 | NX4012LC | 67379 | 4A-3/4 B&C | 07014 |
| 7/8 | NX5014M | 67383 | — | — | 5A-7/8 B&C | 07034 |
| 15/16 | NX5015M | 67386 | NX5015LC | 67385 | 5A-15/16 B&C | 07036 |
| 1 | NX5016M | 67389 | NX5016LC | 67388 | 5A-1 B&C | 07022 |
| 1-1/8 | NX6018M | 67392 | — | — | 6A-1-1/8 B&C | 07038 |
| 1-3/16 | NX6019M | 67395 | NX6019LC | 67394 | 6A-1-3/16 B&C | 07040 |
| 1-1/4S | NX6020M | 67398 | NX6020LC | 67397 | 6A-1-1/4 B&C | 07042 |
| 1-1/4 | NX7104M | 67401 | — | — | — | — |
| 1-5/16 | NX7105M | 67404 | NX7105LC | 67403 | — | — |
| 1-3/8 | NX7106M | 67407 | NX7106LC | 67406 | — | — |
| 1-7/16 | NX7107M | 67410 | NX7107LC | 67409 | — | — |
| 1-1/2 | NX8108M | 67413 | NX8108LC | 67412 | — | — |
| 1-5/8 | NX9110M | 67416 | NX9110LC | 67415 | — | — |
| 1-11/16 | NX9111M | 67419 | NX9111LC | 67418 | — | — |
| 1-3/4 | NX9112M | 67422 | NX9112LC | 67421 | — | — |
| 1-15/16 | NX10115M | 67425 | NX10115LC | 67424 | — | — |
| 2 | NX11200M | 67428 | NX11200LC | 67427 | — | — |
| 2-3/16 | NX11203M | 67431 | NX11203LC | 67430 | — | — |
| 2-1/4 | NX11204M | 67434 | — | — | — | — |
| 2-7/16 | NX11207M | 67437 | NX11207LC | 67436 | — | — |

(FOR USE WITH THE L, H, F, T AND A SERIES BEARINGS)

Mounted Bearings

Replacement Bearings for Setscrew Locking Series

F



PS & XL SERIES

| Bore | Catalog Number | Item Code |
|--------|----------------|-----------|
| 1/2 | NBG15-1/2 | 68880 |
| 5/8 | NBG15-5/8 | 68881 |
| 3/4 | NBG15-3/4 | 68882 |
| 7/8 | NBG15-7/8 | 68883 |
| 15/16 | NBG15-15/16 | 68884 |
| 1 | NBG15-1 | 68885 |
| 1-1/16 | NBG15-1-1/16 | 68886 |
| 1-1/8 | NBG15-1-1/8 | 68887 |
| 1-3/16 | NBG15-1-3/16 | 68888 |
| 1-1/4S | NBG15-1-1/4S | 68889 |
| 1-3/8 | NBG15-1-3/8 | 68891 |
| 1-7/16 | NBG15-1-7/16 | 68892 |

(FOR USE WITH THE PS, PS2, PS3, XL, XL2 AND XL3 SERIES BEARINGS)

S SERIES

| Bore | Catalog Number | Item Code |
|---------|----------------|-----------|
| 1/2 | NBG25-1/2 | 68893 |
| 5/8 | NBG25-5/8 | 68894 |
| 3/4 | NBG25-3/4 | 68895 |
| 7/8 | NBG25-7/8 | 68896 |
| 15/16 | NBG25-15/16 | 68897 |
| 1 | NBG25-1 | 68898 |
| 1-1/16 | NBG25-1-1/16 | 68899 |
| 1-1/8 | NBG25-1-1/8 | 68900 |
| 1-3/16 | NBG25-1-3/16 | 68901 |
| 1-1/4S | NBG25-1-1/4S | 68902 |
| 1-5/16 | NBG25-1-5/16 | 68903 |
| 1-3/8 | NBG25-1-3/8 | 68904 |
| 1-7/16 | NBG25-1-7/16 | 68905 |
| 1-1/2 | NBG25-1-1/2 | 68906 |
| 1-5/8 | NBG25-1-5/8 | 68907 |
| 1-11/16 | NBG25-1-11/16 | 68908 |
| 1-3/4 | NBG25-1-3/4 | 68909 |
| 1-15/16 | NBG25-1-15/16 | 68910 |
| 2 | NBG25-2 | 68911 |
| 2-3/16 | NBG25-2-3/16 | 68912 |
| 2-1/4 | NBG25-2-1/4 | 68913 |
| 2-7/16 | NBG25-2-7/16 | 68914 |

(FOR USE WITH THE SF, SH, SL AND ST SERIES BEARINGS)

MB SERIES

| Bore | Catalog Number | Item Code |
|---------|----------------|-----------|
| 1-7/16 | NBG35-1-7/16 | 68915 |
| 1-1/2 | NBG35-1-1/2 | 68916 |
| 1-11/16 | NBG35-1-11/16 | 68917 |
| 1-3/4 | NBG35-1-3/4 | 68918 |
| 1-15/16 | NBG35-1-15/16 | 68919 |
| 2 | NBG35-2 | 68920 |
| 2-3/16 | NBG35-2-3/16 | 68921 |
| 2-1/4 | NBG35-2-1/4 | 68922 |
| 2-7/16 | NBG35-2-7/16 | 68923 |
| 2-1/2 | NBG35-2-1/2 | 68924 |
| 2-11/16 | NBG35-2-11/16 | 68925 |
| 2-15/16 | NBG25-2-15/16 | 68926 |
| 3 | NBG35-3 | 68927 |
| 3-3/16 | NBG35-3-3/16 | 68928 |
| 3-1/4 | NBG35-3-1/4 | 68929 |
| 3-7/16 | NBG35-3-7/16 | 68930 |
| 3-1/2 | NBG35-3-1/2 | 68931 |

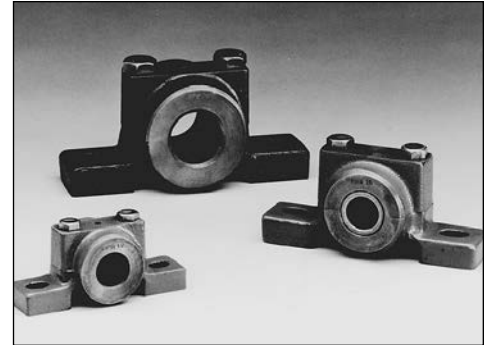
(FOR USE WITH THE MB, MBF AND MBP SERIES BEARINGS)

Mounted Bearings

PPB Series SRP Series – With Bost-Bronz Bushings

Pillow Blocks – Light Duty Split Cast Iron

The bottom surface and the split surfaces are ground. Both end surfaces of the bore are finished perpendicular to the base. Bolt holes in the base are slotted except Cat. No. PPB4 which has drilled holes. PPB Series blocks have an oil hole drilled in center of cap.†



ORDER BY CATALOG NUMBER OR ITEM CODE

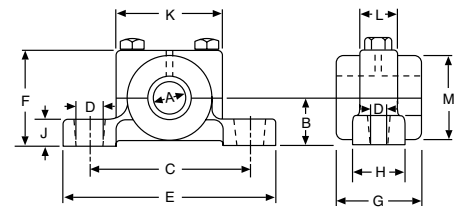
| Bore | PPB SERIES | | SRP SERIES | | | |
|--------|----------------|-----------|----------------|-----------|---------------------|-----------|
| | Catalog Number | Item Code | Pillow Blocks | | Replacement Bearing | |
| | | | Catalog Number | Item Code | Catalog Number | Item Code |
| 1/4 | PPB4 | 34304 | SRP4 | 34434 | B46-2 | 34542 |
| 3/8 | PPB6 | 34306 | SRP6 | 34436 | B68-3 | 34634 |
| 1/2 | PPB8 | 34308 | SRP8 | 34438 | B812-4 | 34752 |
| 5/8 | PPB10 | 34310 | SRP10 | 34440 | B1014-6 | 34852 |
| 3/4 | PPB12 | 34312 | SRP12 | 34442 | B1216-6 | 34934 |
| 7/8 | PPB14 | 34314 | — | — | — | — |
| 15/16 | PPB15 | 34316 | SRP15 | 34444 | B1520-8 | 35042 |
| 1 | PPB16 | 34318 | SRP16 | 34446 | B1620-8 | 35068 |
| 1-3/16 | PPB19 | 34320 | SRP19 | 34448 | B1924-8 | 35172 |
| 1-1/4 | PPB20 | 34322 | SRP20 | 34450 | B2024-8 | 35186 |
| 1-7/16 | PPB23 | 34324 | — | — | — | — |
| 1-1/2 | PPB24 | 34326 | — | — | — | — |

STANDARD TOLERANCES

| DIMENSIONS | | TOLERANCE |
|-------------------|---------------|------------------|
| PPB Series | | |
| Bore | All | +0.000 to -0.001 |
| SRP Series | | |
| Bore | .252-1.003 | +0.000 to -0.001 |
| | 1.1905-1.2530 | +0.000 to -0.002 |

*Two required.

†The 1/4" size is made of brass and has no oil holes.



ALL DIMENSIONS IN INCHES

| A (Bore) | B | C | D | E | F | G | H | J | K | L | M |
|-------------------|-------|-------|-----------|-------|-------|-------|-------|------|--------|-------|-------|
| PPB SERIES | | | | | | | | | | | |
| .2500 | 1/4 | 1-1/8 | 1/8 | 1-1/2 | 1/2 | 1/2 | 3/8 | 1/4 | 3/4 | 3/8 | 7/16 |
| .3760 | 9/16 | 2-1/8 | 5/16x3/16 | 2-3/4 | 1-1/8 | 1 | 5/8 | 5/16 | 1-7/16 | 7/16 | 1 |
| .5010 | 13/16 | 2-7/8 | 1/2x5/16 | 3-3/4 | 1-5/8 | 1-1/2 | 1 | 1/2 | 2 | 11/16 | 1-1/2 |
| .6260 | 1-1/8 | 3-3/4 | 5/8x3/8 | 5 | 2-1/4 | 2 | 1-1/4 | 5/8 | 2-1/2 | 7/8 | 2 |
| .7510 | 1-3/8 | 4-1/2 | 3/4x1/2 | 6 | 2-3/4 | 2-1/2 | 1-1/2 | 3/4 | 3 | 1 | 2-1/2 |
| .8760 | | | | | | | | | | | |
| .9385 | | | | | | | | | | | |
| 1.0010 | | | | | | | | | | | |
| 1.1885 | | | | | | | | | | | |
| 1.2510 | | | | | | | | | | | |
| 1.4385 | | | | | | | | | | | |
| 1.5010 | | | | | | | | | | | |
| SRP SERIES | | | | | | | | | | | |
| .2510 | 9/16 | 2-1/8 | 5/16x3/16 | 2-3/4 | 1-1/8 | 1 | 5/8 | 5/16 | 1-7/16 | 7/16 | 1 |
| .3770 | 13/16 | 2-7/8 | 1/2x5/16 | 3-3/4 | 1-5/8 | 1-1/2 | 1 | 1/2 | 2 | 11/16 | 1-1/2 |
| .5020 | 1-1/8 | 3-3/4 | 5/8x3/8 | 5 | 2-1/8 | 2 | 1-1/4 | 5/8 | 2-1/2 | 7/8 | 2 |
| .6270 | 1-3/8 | 4-1/2 | 3/4x1/2 | 6 | 2-3/4 | 2-1/2 | 1-1/2 | 3/4 | 3 | 1 | 2-1/2 |
| .7530 | | | | | | | | | | | |
| .9405 | | | | | | | | | | | |
| 1.0030 | | | | | | | | | | | |
| 1.1905 | | | | | | | | | | | |
| 1.2530 | | | | | | | | | | | |

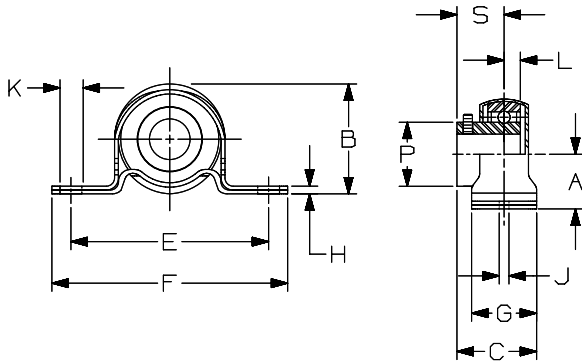
Mounted Ball Bearings

PS Series Pressed Steel Housing Pillow Blocks – Light Duty Setscrew Locking



Features —

- Quality pressed steel outer housing.
- Deep groove ball bearings for high radial and thrust loads.
- Spherical outer race for full self-alignment.
- Synthetic lip type seals.
- Positive locking by setscrews through extended inner race.
- Lubricated for life.
- Housing halves snap together for ease of assembly.



ORDER BY CATALOG NUMBER OR ITEM CODE

| Bore | Catalog Number | Item Code |
|--------|----------------|-----------|
| 1/2 | PS-1/2 | 64500 |
| 5/8 | PS-5/8 | 64501 |
| 3/4 | PS-3/4 | 64502 |
| 7/8 | PS-7/8 | 64503 |
| 15/16 | PS-15/16 | 64504 |
| 1 | PS-1 | 64505 |
| 1-1/16 | PS-1-1/16 | 64506 |
| 1-1/8 | PS-1-1/2 | 64507 |
| 1-3/16 | PS-1-3/16 | 64508 |
| 1-1/4S | PS-1-1/4S | 64509 |

STANDARD TOLERANCES

| DIMENSIONS | | TOLERANCE |
|------------|-----|------------------|
| Bore | All | +0.001 to -0.000 |

ALL DIMENSIONS IN INCHES

| Bore | A | B | C | E | F | G | H | J | K | L | P | R* Setscrew UNF | S | Bolt Size | Approx. Weight (Lbs.) |
|--------|--------|--------|-------|---------|-------|-------|------|-----|-----|-------|---------|-----------------------|-------|--------------|-----------------------------|
| 1/2 | 7/8 | 1-3/4 | 1.125 | 2-11/16 | 3-5/8 | 1 | .133 | .34 | .54 | 15/64 | 31/32 | 10-32 | 5/8 | 5/16 | .52 |
| 5/8 | | | | | | | | | | | | | | | .48 |
| 3/4 | 1 | 2-1/16 | 1.203 | 3 | 4-1/8 | 1 | .178 | .40 | .54 | 9/32 | 1-11/64 | 10-32 | 45/64 | 5/16 | .58 |
| 7/8 | | | | | | | | | | | | | | | .67 |
| 15/16 | 1-1/8 | 2-7/32 | 1.328 | 3-3/8 | 4-1/2 | 1-1/8 | .208 | .40 | .54 | 19/64 | 1-11/32 | 10-32 | 49/64 | 3/8 | .64 |
| 1 | | | | | | | | | | | | | | | .61 |
| 1-1/16 | | | | | | | | | | | | | | | 1.10 |
| 1-1/8 | 1-5/16 | 2-5/8 | 1.390 | 3-3/4 | 4-7/8 | 1-1/8 | .238 | .53 | .75 | 5/16 | 1-39/64 | 1/4-28 | 53/64 | 3/8 | 1.05 |
| 1-3/16 | | | | | | | | | | | | | | | 1.00 |
| 1-1/4S | | | | | | | | | | | | | | | .95 |

*2 at 120°

Eccentric Locking Collar bearings are available to special order.

For Load Ratings, See Engineering Section, Page 242.

Replacement Bearings are shown on Page 214.

Mounted Ball Bearings

XL Series Cast Ductile Housing Pillow Blocks – Light Duty Setscrew Locking

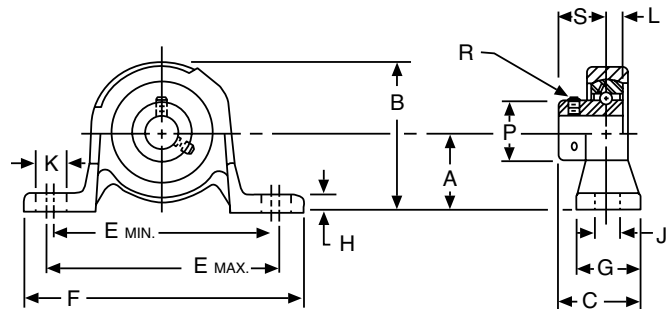
Features —

- One-piece housing (ductile casting).
- Deep groove ball bearings for high radial and thrust loads.
- Machined housing bore and spherical outer race for full self-alignment.
- Synthetic lip type seal.
- Positive locking by setscrews through extended inner race.



ORDER BY CATALOG NUMBER OR ITEM CODE

| Bore | Catalog Number | Item Code |
|--------|----------------|-----------|
| 1/2 | XL-1/2 | 64534 |
| 5/8 | XL-5/8 | 64535 |
| 3/4 | XL-3/4 | 64536 |
| 7/8 | XL-7/8 | 64537 |
| 15/16 | XL-15/16 | 64538 |
| 1 | XL-1 | 64539 |
| 1-1/16 | XL-1-1/16 | 64540 |
| 1-1/8 | XL-1-1/8 | 64541 |
| 1-3/16 | XL-1-3/16 | 64542 |
| 1-1/4S | XL-1-1/4S | 64543 |
| 1-3/8 | XL-1-3/8 | 64545 |
| 1-7/16 | XL-1-7/16 | 64546 |



STANDARD TOLERANCES

| DIMENSIONS | TOLERANCE | |
|------------|-----------|--------------|
| Bore | All | ±.001 - .000 |

ALL DIMENSIONS IN INCHES

| Bore | A | B | C | E Min. | E Max. | F | G | H | J | K | L | P | R* Setscrew UNF | S | Bolt Size | Approx. Weight (Lbs.) |
|-------------------------------------|---------|---------|---------|--------|---------|-------|--------|-------|------|-------|-------|---------|-----------------------|-------|--------------|-----------------------------|
| 1/2 5/8 | 1-3/16 | 2-5/32 | 1-1/8 | 3-3/16 | 3-11/16 | 4-1/2 | 1 | 9/32 | 7/16 | 11/16 | 15/64 | 31/32 | 10-32 | 5/8 | 3/8 | .6 |
| 3/4 | 1-5/16 | 2-7/16 | 1-15/64 | 3-5/8 | 3-7/8 | 4-3/4 | 1-1/16 | 5/16 | 7/16 | 9/16 | 9/32 | 1-11/64 | 10-32 | 45/64 | 3/8 | .8 |
| 7/8 15/16 1 | 1-7/16 | 2-21/32 | 1-11/32 | 3-7/8 | 4-1/8 | 5 | 1-1/8 | 11/32 | 7/16 | 9/16 | 19/64 | 1-11/32 | 10-32 | 49/64 | 3/8 | 1.0 |
| 1-1/16 1-1/8 1-3/16 1-1/4S | 1-11/16 | 3-5/32 | 1-31/64 | 4-1/2 | 4-3/4 | 6 | 1-5/16 | 3/8 | 9/16 | 11/16 | 5/16 | 1-39/64 | 1/4-28 | 53/64 | 1/2 | 1.4 |
| 1-3/8 1-7/16 | 1-7/8 | 3-9/16 | 1-11/16 | 4-3/4 | 5 | 6-3/8 | 1-3/8 | 13/32 | 9/16 | 11/16 | 11/32 | 1-27/32 | 1/4-28 | 1 | 1/2 | 1.9 |

*2 at 120°

These units also available with Eccentric Locking Collars on Special Order.

For Load Ratings, see Engineering Section, Page 237.

Replacement Bearings are shown on Page 214.

Mounted Ball Bearings

L/H Series

Pillow Blocks – Standard Duty; Eccentric Locking Collar



L Series Low Backing
H Series High Backing

Features —

- Rigid one piece housing.
- Chrome alloy steel balls.
- Spherical outer race.
- Synthetic lip type seals.
- Eccentric locking collar.
- 1/4-28 threaded grease fitting.

ORDER BY CATALOG NUMBER OR ITEM CODE

| Bore | Low Backing | | High Backing | |
|---------|----------------|-----------|----------------|-----------|
| | L Series | | H Series | |
| | Catalog Number | Item Code | Catalog Number | Item Code |
| 1/2 | 3L-1/2 | 06906 | 3H-1/2 | 06902 |
| 5/8 | 3L-5/8 | 06908 | 3H-5/8 | 06904 |
| 3/4 | 4L-3/4 | 06912 | 4H-3/4 | 06910 |
| 7/8 | 5L-7/8 | 06920 | 5H-7/8 | 06914 |
| 15/16 | 5L-15/16 | 06922 | 5H-15/16 | 06916 |
| 1 | 5L-1 | 06924 | 5H-1 | 06918 |
| 1-1/8 | 6L-1-1/8 | 06928 | 6H-1-1/8 | 06932 |
| 1-3/16 | 6L-1-3/16 | 06930 | 6H-1-3/16 | 06936 |
| 1-1/4S | 6L-1-1/4S | 06934 | 6H-1-1/4S | 06926 |
| 1-1/4 | 7L-1-1/4* | 06858 | 7H-1-1/4* | 06850 |
| 1-5/16 | 7L-1-5/16* | 06860 | 7H-1-5/16* | 06852 |
| 1-3/8 | 7L-1-3/8* | 06862 | 7H-1-3/8* | 06854 |
| 1-1/2 | 8L-1-1/2* | 06868 | 8H-1-1/2* | 06866 |
| 1-5/8 | 9L-1-5/8* | 06876 | 9H-1-5/8* | 06870 |
| 1-11/16 | 9L-1-11/16* | 06878 | 9H-1-11/16* | 06872 |
| 1-15/16 | 10L-1-15/16* | 06884 | 10H-1-15/16* | 06882 |
| 2-1/4 | 12L-2-1/4* | 06898 | 12H-2-1/4* | 06894 |
| 2-7/16 | 12L-2-7/16* | 06900 | 12H-2-7/16* | 06896 |

*Bearings equipped with steel flinger.
 Replacement Bearings are shown on Page 213.

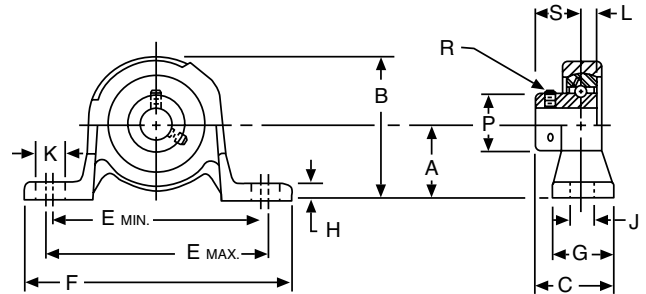
Mounted Ball Bearings

L/H Series

Pillow Blocks – Standard Duty; Eccentric Locking Collar

SHAFT HEIGHT DIMENSIONS IN INCHES

| Bore | Low Backing | | | High Backing | | |
|------------------------------------|-------------|---------|-------|--------------|---------|---------|
| | A | B | H | A | B | H |
| 1/2 5/8 | 1-1/16 | 2-5/32 | 1/2 | 1-3/16 | 2-9/32 | 5/8 |
| 3/4 | 1-1/4 | 2-15/32 | 9/16 | 1-5/16 | 2-17/32 | 5/8 |
| 7/8 15/16 1 | 1-5/16 | 2-21/32 | 5/8 | 1-7/16 | 2-25/32 | 3/4 |
| 1-1/8 1-3/16 1-1/4S | 1-9/16 | 3-1/8 | 3/4 | 1-11/16 | 3-1/4 | 7/8 |
| 1-1/4 1-5/16 1-3/8 1-7/16 | 1-13/16 | 3-11/16 | 1 | 1-7/8 | 3-3/4 | 1-1/16 |
| 1-1/2 | 1-15/16 | 4 | 1-1/8 | 2 | 4-1/16 | 1-3/16 |
| 1-5/8 1-11/16 1-3/4 | 2-1/16 | 4-1/4 | 1-1/4 | 2-1/8 | 4-5/16 | 1-5/16 |
| 1-15/16 | 2-3/16 | 4-1/2 | 1-3/8 | 2-1/4 | 4-9/16 | 1-7/16 |
| 2 2-3/16 | 2-7/16 | 4-15/16 | 1-1/2 | 2-1/2 | 5 | 1-9/16 |
| 2-1/4 2-7/16 | 2-11/16 | 5-7/16 | 1-5/8 | 2-3/4 | 5-1/2 | 1-11/16 |



STANDARD TOLERANCES

| DIMENSIONS | | TOLERANCE |
|------------|-----|--------------------|
| Bore | All | +0.0012 to -0.0000 |

ALL DIMENSIONS IN INCHES

| Bore | C | E | | F | G | J | K | L | P | R Setscrew UNF | S | Bolt Size | Approx. Wt. (Lbs.) | |
|------------------------------------|---------|---------|---------|---------|--------|-------|--------|--------|---------|----------------------|---------|--------------|-----------------------|------|
| | | Min. | Max. | | | | | | | | | | L | H |
| 1/2 5/8 | 1-5/8 | 3-5/16 | 4 | 5-1/16 | 1-1/2 | 7/16 | 25/32 | 1/4 | 1-9/64 | 1/4-28 | 7/8 | 3/8 | 1.1 | 1.2 |
| 3/4 | 1-45/64 | 3-7/16 | 4-1/8 | 5-1/4 | 1-9/16 | 7/16 | 25/32 | 19/64 | 1-19/64 | 1/4-28 | 59/64 | 3/8 | 1.6 | 1.6 |
| 7/8 15/16 1 | 1-47/64 | 3-7/16 | 4-1/4 | 5-1/2 | 1-5/8 | 7/16 | 11/16 | 19/64 | 1-1/2 | 1/4-28 | 59/64 | 3/8 | 1.9 | 1.9 |
| 1-1/8 1-3/16 1-1/4S | 1-59/64 | 4-5/16 | 4-15/16 | 6-1/4 | 1-3/4 | 9/16 | 7/8 | 23/64 | 1-3/4 | 5/16-24 | 1-3/64 | 1/2 | 2.6 | 2.7 |
| 1-1/4 1-5/16 1-3/8 1-7/16 | 2-13/64 | 4-3/4 | 5-3/8 | 6-11/16 | 1-7/8 | 9/16 | 7/8 | 47/64 | 2-3/16 | 3/8-24 | 1-17/64 | 1/2 | 4.1 | 4.3 |
| 1-1/2 | 2-3/8 | 5-1/4 | 5-13/16 | 7-1/4 | 2 | 9/16 | 27/32 | 27/32 | 2-23/64 | 3/8-24 | 1-3/8 | 1/2 | 5.5 | 5.6 |
| 1-5/8 1-11/16 1-3/4 | 2-7/16 | 5-9/16 | 6-1/8 | 7-3/4 | 2-1/8 | 9/16 | 27/32 | 27/32 | 2-1/2 | 3/8-24 | 1-3/8 | 1/2 | 6.5 | 6.6 |
| 1-15/16 | 2-5/8 | 6-1/16 | 6-5/8 | 8-1/4 | 2-1/4 | 11/16 | 31/32 | 31/32 | 2-3/4 | 3/8-24 | 1-1/2 | 5/8 | 8.0 | 8.1 |
| 2 2-3/16 | 2-29/32 | 6-7/16 | 7-3/8 | 8-7/8 | 2-3/8 | 11/16 | 1-5/32 | 1-3/32 | 3 | 7/16-20 | 1-23/32 | 5/8 | 9.5 | 10.0 |
| 2-1/4 2-7/16 | 3-3/32 | 6-15/16 | 7-7/8 | 9-5/8 | 2-1/2 | 11/16 | 1-5/32 | 1-7/32 | 3-5/16 | 7/16-20 | 1-27/32 | 5/8 | 11.8 | 11.9 |

For Load Ratings, see Engineering Section, Page 243.

Mounted Ball Bearings

SL/SH Series

Pillow Blocks – Standard Duty; Extended Inner Race – Setscrew Locking



SL Series Low Backing
SH Series High Backing

Features —

- One-piece, high grade cast iron housing.
- Deep groove ball bearings for high radial and thrust loads.
- Precision machined housing bore and spherical outer race for self-alignment.
- Synthetic lip type seals with steel flinger.
- Positive locking by setscrews through extended inner race.
- 1/4-28 threaded grease fitting and channel through outer race allow relubrication.

ORDER BY CATALOG NUMBER OR ITEM CODE

| Bore | Low Backing | | High Backing | |
|---------|----------------|-----------|----------------|-----------|
| | Catalog Number | Item Code | Catalog Number | Item Code |
| 1/2 | SL-1/2* | 64680 | SH-1/2* | 64679 |
| 5/8 | SL-5/8* | 64682 | SH-5/8* | 64681 |
| 3/4 | SL-3/4 | 64684 | SH-3/4 | 64683 |
| 7/8 | SL-7/8 | 64686 | SH-7/8 | 64685 |
| 15/16 | SL-15/16 | 64688 | SH-15/16 | 65687 |
| 1 | SL-1 | 64690 | SH-1 | 64689 |
| 1-1/8 | SL-1-1/8 | 64692 | SH-1-1/8 | 64691 |
| 1-3/16 | SL-1-3/16 | 64694 | SH-1-3/16 | 64693 |
| 1-1/4S | SL-1-1/4S | 64696 | SH-1-1/4S | 64695 |
| 1-1/4 | SL-1-1/4 | 64698 | SH-1-1/4 | 64697 |
| 1-5/16 | SL-1-5/16 | 64700 | SH-1-5/16 | 64699 |
| 1-3/8 | SL-1-3/8 | 64702 | SH-1-3/8 | 64701 |
| 1-7/16 | SL-1-7/16 | 64704 | SH-1-7/16 | 64703 |
| 1-1/2 | SL-1-1/2 | 64706 | SH-1-1/2 | 64705 |
| 1-5/8 | SL-1-5/8 | 64708 | SH-1-5/8 | 64707 |
| 1-11/16 | SL-1-11/16 | 64710 | SH-1-11/16 | 64709 |
| 1-3/4 | SL-1-3/4 | 64712 | SH-1-3/4 | 64711 |
| 1-15/16 | SL-1-15/16 | 64714 | SH-1-15/16 | 64713 |
| 2 | SL-2 | 64716 | SH-2 | 64715 |
| 2-3/16 | SL-2-3/16 | 64718 | SH-2-3/16 | 64717 |
| 2-1/4 | SL-2-1/4 | 64720 | SH-2-1/4 | 64719 |
| 2-7/16 | SL-2-7/16 | 64722 | SH-2-7/16 | 64721 |

*Bearings not equipped with steel flinger.
Replacement Bearings are shown on Page 214.

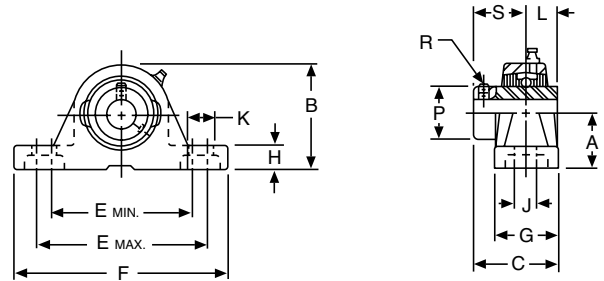
Mounted Ball Bearings

SL/SH Series

Pillow Blocks – Standard Duty; Extended Inner Race – Setscrew Locking

SHAFT HEIGHT DIMENSIONS IN INCHES

| Bore | Low Backing | | | High Backing | | |
|------------------------------------|-------------|---------|-------|--------------|---------|---------|
| | A | B | H | A | B | H |
| 1/2 5/8 | 1-1/16 | 2-5/32 | 1/2 | 1-3/16 | 2-9/32 | 5/8 |
| 3/4 | 1-1/4 | 2-15/32 | 9/16 | 1-5/16 | 2-17/32 | 5/8 |
| 7/8 15/16 1 | 1-5/16 | 2-21/32 | 5/8 | 1-7/16 | 2-25/32 | 3/4 |
| 1-1/8 1-3/16 1-1/4S | 1-9/16 | 3-1/8 | 3/4 | 1-11/16 | 3-1/4 | 7/8 |
| 1-1/4 1-5/16 1-3/8 1-7/16 | 1-13/16 | 3-11/16 | 1 | 1-7/8 | 3-3/4 | 1-1/16 |
| 1-1/2 | 1-15/16 | 4 | 1-1/8 | 2 | 4-1/16 | 1-3/16 |
| 1-5/8 1-11/16 1-3/4 | 2-1/16 | 4-1/4 | 1-1/4 | 2-1/8 | 4-5/16 | 1-5/16 |
| 1-15/16 | 2-3/16 | 4-1/2 | 1-3/8 | 2-1/4 | 4-9/16 | 1-7/16 |
| 2 2-3/16 | 2-7/16 | 4-15/16 | 1-1/2 | 2-1/2 | 5 | 1-9/16 |
| 2-1/4 2-7/16 | 2-11/16 | 5-7/16 | 1-5/8 | 2-3/4 | 5-1/2 | 1-11/16 |



STANDARD TOLERANCES

| DIMENSIONS | | TOLERANCE |
|------------|-----|--------------------|
| Bore | All | +0.0012 to -0.0000 |

ALL DIMENSIONS IN INCHES

| Bore | C | E | | F | G | J | K | L | P | R* Setscrew (UNF) | S | Bolt Size | Approx. Wt. (Lbs.) | |
|------------------------------------|---------|---------|---------|---------|--------|-------|--------|-------|---------|-------------------------|--------|--------------|-----------------------|-------|
| | | Min. | Max. | | | | | | | | | | L | H |
| 1/2 5/8 | 1-3/8 | 3-5/16 | 4 | 5-1/16 | 1-1/2 | 7/16 | 25/32 | 9/32 | 31/32 | 10-32 | 5/8 | 3/8 | 1.25 | 1.38 |
| 3/4 | 1-1/2 | 3-7/16 | 4-1/8 | 5-1/4 | 1-9/16 | 7/16 | 25/32 | 1/2 | 1-11/64 | 10-32 | 23/32 | 3/8 | 1.75 | 1.75 |
| 7/8 15/16 1 | 1-37/64 | 3-3/4 | 4-1/4 | 5-1/2 | 1-5/8 | 7/16 | 11/16 | 9/16 | 1-21/64 | 10-32 | 25/32 | 3/8 | 2.00 | 2.00 |
| 1-1/8 1-3/16 1-1/4S | 1-3/4 | 4-5/16 | 4-15/16 | 6-1/4 | 1-3/4 | 9/16 | 7/8 | 5/8 | 1-39/64 | 1/4-28 | 7/8 | 3/8 | 2.75 | 2.88 |
| 1-1/4 1-5/16 1-3/8 1-7/16 | 1-15/16 | 4-3/4 | 5-3/8 | 6-11/16 | 1-7/8 | 9/16 | 7/8 | 11/16 | 1-27/32 | 1/4-28 | 1 | 1/2 | 4.25 | 4.50 |
| 1-1/2 | 2-3/16 | 5-1/4 | 5-13/16 | 7-1/4 | 2 | 9/16 | 27/32 | 3/4 | 2-3/32 | 5/16-24 | 1-3/16 | 1/2 | 5.63 | 5.75 |
| 1-5/8 1-11/16 1-3/4 | 2-33/64 | 5-9/16 | 6-1/8 | 7-3/4 | 2-1/8 | 9/16 | 27/32 | 3/4 | 2-17/64 | 5/16-24 | 1-3/16 | 1/2 | 6.63 | 6.75 |
| 1-15/16 | 2-13/32 | 6-1/16 | 6-5/8 | 8-1/4 | 2-1/4 | 11/16 | 31/32 | 3/4 | 2-29/64 | 5/16-24 | 1-5/16 | 5/8 | 8.25 | 8.25 |
| 2 2-3/16 | 2-1/2 | 6-7/16 | 7-3/8 | 8-7/8 | 2-3/8 | 11/16 | 1-5/32 | 7/8 | 2-23/32 | 5/16-24 | 1-5/16 | 5/8 | 10.00 | 10.25 |
| 2-1/4 2-7/16 | 2-13/16 | 6-15/16 | 7-7/8 | 9-5/8 | 2-1/2 | 11/16 | 1-5/32 | 1 | 3-1/32 | 3/8-24 | 1-9/16 | 5/8 | 12.25 | 12.38 |

*2 at 120°

For Load Ratings, see Engineering Section, Page 243.

Mounted Ball Bearings

MB Series

Pillow Blocks – Medium Duty; Extended Inner Race – Setscrew Locking

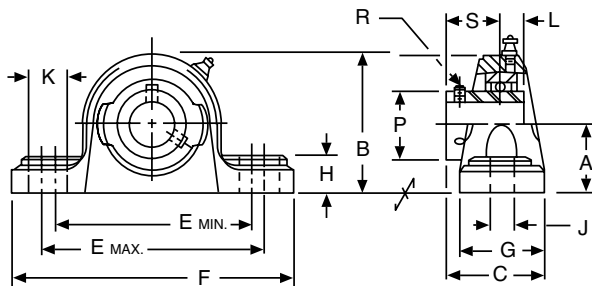


Features —

- One-piece high grade cast iron housing.
- Deep groove ball bearings for high radial and thrust loads.
- Precision machined housing bore and spherical race for full self-alignment.
- Synthetic lip type seal with steel flinger.
- Positive locking by setscrews through extended inner race.
- 1/4-28 threaded grease fitting and channel through outer race allow relubrication.

ORDER BY CATALOG NUMBER OR ITEM CODE

| Bore | Catalog Number | Item Code |
|---------|----------------|-----------|
| 1-7/16 | MB-1-7/16 | 64573 |
| 1-1/2 | MB-1-1/2 | 64574 |
| 1-11/16 | MB-1-11/16 | 64575 |
| 1-3/4 | MB-1-3/4 | 64576 |
| 1-15/16 | MB-1-15/16 | 64577 |
| 2 | MB-2 | 64578 |
| 2-3/16 | MB-2-3/16 | 64579 |
| 2-1/4 | MB-2-1/4 | 64580 |
| 2-7/16 | MB-2-7/16 | 64581 |
| 2-1/2 | MB-2-1/2 | 64582 |
| 2-11/16 | MB-2-11/16 | 64583 |
| 2-15/16 | MB-2-15/16 | 64584 |
| 3 | MB-3 | 64585 |
| 3-3/16 | MB-3-3/16 | 64586 |
| 3-1/4 | MB-3-1/4 | 64587 |
| 3-7/16 | MB-3-7/16 | 64588 |
| 3-1/2 | MB-3-1/2 | 64589 |



STANDARD TOLERANCES

| DIMENSIONS | | TOLERANCE |
|------------|-----|------------------|
| Bore | All | +0.001 to -0.000 |

ALL DIMENSIONS IN INCHES

| Bore | A | B | C | E Min. | E Max. | F | G | H | J | K | L | P | R* Setscrew (UNF) | S | Bolt Size | Approx. Weight (Lbs.) |
|------------------|--------|---------|---------|---------|---------|--------|-------|--------|-------|--------|---------|---------|-------------------------|---------|--------------|-----------------------------|
| 1-7/16 | 2-1/8 | 4-3/16 | 2-17/64 | 5-1/16 | 6-5/16 | 6-1/2 | 2-1/4 | 3/4 | 9/16 | 1-3/16 | 3/4 | 1-27/32 | 5/16-24 | 1-9/64 | 1/2 | 6.8 |
| 1-1/2 | 2-5/16 | 4-9/16 | 2-1/2 | 5-9/16 | 6-11/16 | 8-1/4 | 2-5/8 | 13/16 | 11/16 | 1-1/4 | 3/4 | 2-3/32 | 5/16-24 | 1-3/16 | 5/8 | 9.0 |
| 1-11/16 1-3/4 | 2-5/16 | 4-5/8 | 2-19/32 | 5-1/2 | 6-3/4 | 8-1/4 | 2-5/8 | 13/16 | 11/16 | 1-5/16 | 3/4 | 2-17/64 | 5/16-24 | 1-9/32 | 5/8 | 9.5 |
| 1-15/16 2 | 2-1/2 | 5-1/16 | 2-3/4 | 6 | 7-1/2 | 8-7/8 | 2-7/8 | 7/8 | 11/16 | 1-7/16 | 7/8 | 2-23/32 | 5/16-24 | 1-5/16 | 5/8 | 11.7 |
| 2-3/16 2-1/4 | 2-3/4 | 5-5/8 | 3-1/8 | 6-5/8 | 7-7/8 | 9-5/8 | 3-1/8 | 1-1/16 | 13/16 | 1-7/16 | 1 | 3-1/32 | 3/8-24 | 1-9/16 | 3/4 | 16.2 |
| 2-7/16 2-1/2 | 3 | 6-3/16 | 3-3/8 | 7-3/16 | 8-13/16 | 10-3/8 | 3-1/4 | 1-1/16 | 13/16 | 1-5/8 | 1-3/16 | 3-27/64 | 3/8-24 | 1-3/4 | 3/4 | 21.5 |
| 2-11/16 | 3-1/2 | 6-15/16 | 3-3/8 | 7-15/16 | 10-1/16 | 11-7/8 | 3-1/2 | 1-1/8 | 15/16 | 2 | 1-5/16 | 3-43/64 | 3/8-24 | 1-3/4 | 7/8 | 29.2 |
| 2-15/16 3 | 3-1/2 | 7-1/8 | 3-11/16 | 7-15/16 | 10-1/16 | 11-7/8 | 3-1/2 | 1-1/4 | 15/16 | 2 | 1-5/16 | 3-7/8 | 1/2-20 | 1-15/16 | 7/8 | 31.5 |
| 3-3/16 3-1/4 | 4 | 8 | 4-1/32 | 9-3/4 | 12-1/2 | 15 | 4 | 1-1/4 | 15/16 | 2-5/16 | 1-11/32 | 4-3/16 | 1/2-20 | 2-1/32 | 7/8 | 41.1 |
| 3-7/16 3-1/2 | 4 | 8-1/4 | 4-13/32 | 9-11/16 | 12-9/16 | 15 | 4-3/8 | 1-5/16 | 15/16 | 2-3/8 | 1-9/16 | 4-25/64 | 1/2-20 | 2-7/32 | 7/8 | 47.8 |

*2 at 120°

For Load Ratings, See Engineering Section, Page 243.

Replacement Bearings are shown on Page 214.

Mounted Ball Bearings

PS2/PS3 Series Pressed Steel Housing Flanged Units – Light Duty; Setscrew Locking

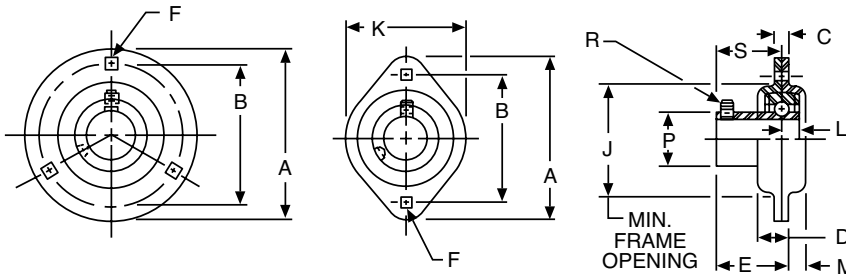
ORDER BY CATALOG NUMBER OR ITEM CODE

| Bore | 3-BOLT | | 2-BOLT | |
|--------|----------------|-----------|----------------|-----------|
| | Catalog Number | Item Code | Catalog Number | Item Code |
| 1/2 | PS3-1/2 | 64520 | PS2-1/2 | 64510 |
| 5/8 | PS3-5/8 | 64521 | PS2-5/8 | 64511 |
| 3/4 | PS3-3/4 | 64522 | PS2-3/4 | 64512 |
| 7/8 | PS3-7/8 | 64523 | PS2-7/8 | 64513 |
| 15/16 | PS3-15/16 | 64524 | PS2-15/16 | 64514 |
| 1 | PS3-1 | 64525 | PS2-1 | 64515 |
| 1-1/16 | PS3-1-1/16 | 64526 | PS2-1-1/16 | 64516 |
| 1-1/8 | PS3-1-1/8 | 64527 | PS2-1-1/8 | 64517 |
| 1-3/16 | PS3-1-3/16 | 64528 | PS2-1-3/16 | 64518 |
| 1-1/4S | PS3-1-1/4S | 64529 | PS2-1-1/4S | 64519 |
| 1-1/4 | PS3-1-1/4 | 64530 | ----- | ----- |
| 1-3/8 | PS3-1-3/8 | 64532 | ----- | ----- |
| 1-7/16 | PS3-1-7/16 | 64533 | ----- | ----- |



STANDARD TOLERANCES

| DIMENSIONS | | TOLERANCE |
|------------|-----|------------------|
| Bore | All | +0.001 to -0.000 |



ALL DIMENSIONS IN INCHES

| Bore | A | B | C | D | E | F Sq. | J | K | L | M | P | R* Setscrew UNF | S | Bolt Size | Approx. Weight (Lbs.) | |
|--------|---------|---------|------|-------|--------|----------|---------|---------|-------|-------|---------|-----------------------|-------|--------------|--------------------------|------|
| | | | | | | | | | | | | | | | PS3 | PS2 |
| 1/2 | 3-3/16 | 2-1/2 | .150 | 23/64 | 45/64 | 9/32 | 1-15/16 | 2-5/16 | 15/64 | 13/64 | 31/32 | 10-32 | 5/8 | 1/4 | .63 | .51 |
| 5/8 | 3-3/16 | 2-1/2 | .150 | 23/64 | 45/64 | 9/32 | 1-15/16 | 2-5/16 | 15/64 | 13/64 | 31/32 | 10-32 | 5/8 | 1/4 | .59 | .47 |
| 3/4 | 3-9/16 | 2-13/16 | .166 | 25/64 | 25/32 | 11/32 | 2-3/16 | 2-5/8 | 9/32 | 7/32 | 1-11/64 | 10-32 | 45/64 | 5/16 | .74 | .60 |
| 7/8 | 3-3/4 | 3 | .166 | 27/64 | 27/32 | 11/32 | 2-3/8 | 2-51/64 | 19/64 | 1/4 | 1-11/32 | 10-32 | 49/64 | 5/16 | .87 | .70 |
| 15/16 | 3-3/4 | 3 | .166 | 27/64 | 27/32 | 11/32 | 2-3/8 | 2-51/64 | 19/64 | 1/4 | 1-11/32 | 10-32 | 49/64 | 5/16 | .84 | .67 |
| 1 | 3-3/4 | 3 | .166 | 27/64 | 27/32 | 11/32 | 2-3/8 | 2-51/64 | 19/64 | 1/4 | 1-11/32 | 10-32 | 49/64 | 5/16 | .81 | .64 |
| 1-1/16 | 4-7/16 | 3-9/16 | .208 | 29/64 | 15/16 | 13/32 | 2-13/16 | 3-5/16 | 5/16 | 1/4 | 1-39/64 | 1/4-28 | 53/64 | 3/8 | 1.42 | 1.08 |
| 1-1/8 | 4-7/16 | 3-9/16 | .208 | 29/64 | 15/16 | 13/32 | 2-13/16 | 3-5/16 | 5/16 | 1/4 | 1-39/64 | 1/4-28 | 53/64 | 3/8 | 1.37 | 1.03 |
| 1-3/16 | 4-7/16 | 3-9/16 | .208 | 29/64 | 15/16 | 13/32 | 2-13/16 | 3-5/16 | 5/16 | 1/4 | 1-39/64 | 1/4-28 | 53/64 | 3/8 | 1.32 | .98 |
| 1-1/4S | 4-7/16 | 3-9/16 | .208 | 29/64 | 15/16 | 13/32 | 2-13/16 | 3-5/16 | 5/16 | 1/4 | 1-39/64 | 1/4-28 | 53/64 | 3/8 | 1.27 | .93 |
| 1-1/4 | 4-13/16 | 3-15/16 | .208 | 31/64 | 1-7/64 | 13/32 | 3-3/16 | — | 11/32 | 9/32 | 1-27/32 | 1/4-28 | 1 | 3/8 | 1.93 | — |
| 1-3/8 | 4-13/16 | 3-15/16 | .208 | 31/64 | 1-7/64 | 13/32 | 3-3/16 | — | 11/32 | 9/32 | 1-27/32 | 1/4-28 | 1 | 3/8 | 1.84 | — |
| 1-7/16 | 4-13/16 | 3-15/16 | .208 | 31/64 | 1-7/64 | 13/32 | 3-3/16 | — | 11/32 | 9/32 | 1-27/32 | 1/4-28 | 1 | 3/8 | 1.74 | — |

*2 at 120°

Eccentric Locking Collar bearings are available to special order.

On 1-1/4" through 1-7/16" Hole Diameters, Eccentric Collar bearings will have extended inner races on both sides and will project beyond "M" dimension.

For Load Ratings, see Engineering Section, Page 242.

Replacement Bearings are shown on Page 214.

Mounted Ball Bearings

XL2/XL3 Series Cast Ductile Housing Flanged Units – Light Duty; Setscrew Locking

F

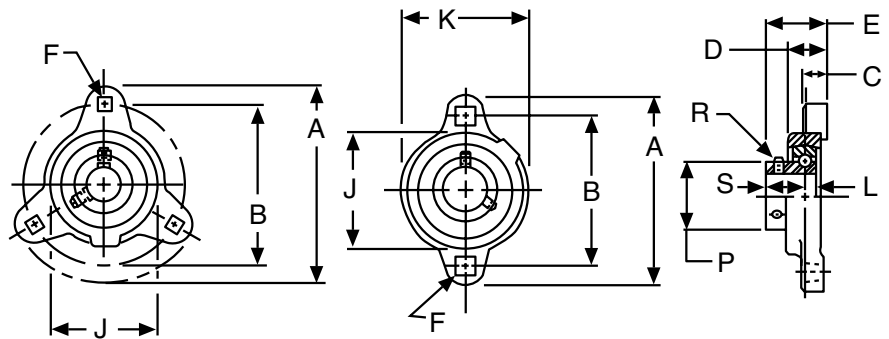


ORDER BY CATALOG NUMBER OR ITEM CODE

| Bore | 3-BOLT | | 2-BOLT | |
|--------|----------------|-----------|----------------|-----------|
| | Catalog Number | Item Code | Catalog Number | Item Code |
| 1/2 | XL3-1/2 | 64560 | XL2-1/2 | 64547 |
| 5/8 | XL3-5/8 | 64561 | XL2-5/8 | 64548 |
| 3/4 | XL3-3/4 | 64562 | XL2-3/4 | 64549 |
| 7/8 | XL3-7/8 | 64563 | XL2-7/8 | 64550 |
| 15/16 | XL3-15/16 | 64564 | XL2-15/16 | 64551 |
| 1 | XL3-1 | 64565 | XL2-1 | 64552 |
| 1-1/16 | XL3-1-1/16 | 64566 | XL2-1-1/16 | 64553 |
| 1-1/8 | XL3-1-1/8 | 64567 | XL2-1-1/8 | 64554 |
| 1-3/16 | XL3-1-3/16 | 64568 | XL2-1-3/16 | 64555 |
| 1-1/4S | XL3-1-1/4S | 64569 | XL2-1-1/4S | 64556 |
| 1-3/8 | XL3-1-3/8 | 64571 | XL2-1-3/8 | 64558 |
| 1-7/16 | XL3-1-7/16 | 64572 | XL2-1-7/16 | 64559 |

STANDARD TOLERANCES

| DIMENSIONS | | TOLERANCE |
|------------|-----|------------------|
| Bore | All | + .001 to - .000 |



ALL DIMENSIONS IN INCHES

| Bore | A | B | C | D | E | F Sq. | J | K | L | P | R* Setscrew UNF | S | Bolt Size | Approx. Weight (Lbs.) | |
|-------------------------------------|---------|---------|-------|-------|---------|----------|---------|---------|-------|---------|-----------------------|-------|--------------|--------------------------|-----|
| | | | | | | | | | | | | | | XL3 | XL2 |
| 1/2 5/8 | 3-3/16 | 2-1/2 | 27/64 | 11/16 | 1 | 9/32 | 1-13/16 | 1-15/16 | 15/64 | 31/32 | 10-32 | 5/8 | 1/4 | .6 | .5 |
| 3/4 | 3-9/16 | 2-13/16 | 7/16 | 3/4 | 1-1/8 | 11/32 | 2-1/16 | 2-1/4 | 9/32 | 1-11/64 | 10-32 | 45/64 | 3/16 | .7 | .7 |
| 7/8 15/16 1 | 3-3/4 | 3 | 7/16 | 3/4 | 1-1/8 | 11/32 | 2-5/16 | 2-1/2 | 19/64 | 1-11/32 | 10-32 | 49/64 | 5/16 | .8 | .8 |
| 1-1/16 1-1/8 1-3/16 1-1/4S | 4-7/16 | 3-9/16 | 15/32 | 27/32 | 1-19/64 | 13/32 | 2-13/16 | 2-15/16 | 5/16 | 1-39/64 | 1/4-28 | 53/64 | 3/8 | 1.2 | 1.2 |
| 1-3/8 1-7/16 | 4-13/16 | 3-15/16 | 1/2 | 29/32 | 1-1/2 | 13/32 | 3-3/16 | 3-3/8 | 11/32 | 1-27/32 | 1/4-28 | 1 | 3/8 | 1.6 | 1.5 |

*2 at 120°

These units also available with Eccentric Locking Collars on Special Order.

For Load Ratings, See Engineering Section, Page 243.

Replacement Bearings are shown on Page 214.

Mounted Ball Bearings

F/T Series

Flanged Units – Standard Duty; Eccentric Locking Collar

F Series 4-Bolt T Series 2-Bolt

Features —

- Rigid one-piece high housing.
- Chrome alloy steel balls. Spherical outer race.
- Synthetic lip type seals.
- Eccentric locking collar.
- 1/4-28 threaded grease fitting.



F

ORDER BY CATALOG NUMBER OR ITEM CODE

| Bore | 4-BOLT FLANGES F SERIES | | 2-BOLT FLANGES T SERIES | |
|---------|----------------------------|-----------|----------------------------|-----------|
| | Catalog Number | Item Code | Catalog Number | Item Code |
| 1/2 | 3F-1/2 | 06938 | 3T-1/2 | 06982 |
| 5/8 | 3F-5/8 | 06940 | 3T-5/8 | 06984 |
| 3/4 | 4F-3/4 | 06942 | 4T-3/4 | 06986 |
| 7/8 | 5F-7/8 | 06944 | 5T-7/8 | 06988 |
| 15/16 | 5F-15/16 | 06946 | 5T-15/16 | 06990 |
| 1 | 5F-1 | 06948 | 5T-1 | 06992 |
| 1-1/8 | 6F-1-1/8 | 06950 | 6T-1-1/8 | 06994 |
| 1-3/16 | 6F-1-3/16 | 06952 | 6T-1-3/16 | 06996 |
| 1-1/4S | 6F-1-1/4S | 06954 | 6T-1-1/4S | 06998 |
| 1-1/4 | 7F-1-1/4* | 06956 | 7T-1-1/4* | 07000 |
| 1-5/16 | 7F-1-5/16* | 06958 | 7T-1-5/16* | 07002 |
| 1-3/8 | 7F-1-3/8* | 06960 | 7T-1-3/8* | 07004 |
| 1-7/16 | 7F-1-7/16* | 06962 | 7T-1-7/16* | 07006 |
| 1-1/2 | 8F-1-1/2* | 06964 | — | — |
| 1-5/8 | 9F-1-5/8* | 06966 | — | — |
| 1-11/16 | 9F-1-11/16* | 06968 | — | — |
| 1-3/4 | 9F-1-3/4* | 06970 | — | — |
| 1-15/16 | 10F-1-15/16* | 06972 | 10T-1-15/16* | 50695 |
| 2 | 11F-2* | 06974 | — | — |
| 2-3/16 | 11F-2-3/16* | 06976 | — | — |
| 2-1/4 | 12F-2-1/4* | 06978 | — | — |
| 2-7/16 | 12F-2-7/16* | 06980 | — | — |

*Bearings equipped with steel flinger.

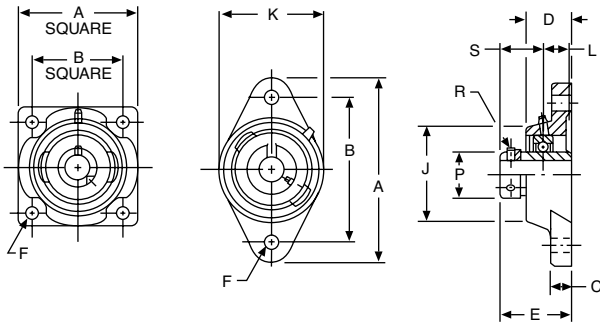
Replacement Bearings are shown on Page 213.

Mounted Ball Bearings

F/T Series

Flanged Units – Standard Duty; Eccentric Locking Collar

F



STANDARD TOLERANCES

| DIMENSIONS | | TOLERANCE |
|------------|-----|--------------------|
| Bore | All | +0.0012 to -0.0000 |

ENVELOPE AND BOLT SPACING DIMENSIONS IN INCHES

| Bore | 4-BOLT | | 2-BOLT | | |
|------------------------------------|--------|-------|---------|---------|---------|
| | A | B | A | B | K |
| 1/2 5/8 | 2-7/8 | 2-1/8 | 3-3/4 | 3 | 2-9/32 |
| 3/4 | 3-3/8 | 2-1/2 | 4-13/32 | 3-17/32 | 2-37/64 |
| 7/8 15/16 1 | 3-3/4 | 2-3/4 | 4-57/64 | 3-57/64 | 2-53/64 |
| 1-1/8 1-3/16 1-1/4S | 4-1/4 | 3-1/4 | 5-19/32 | 4-19/32 | 3-19/64 |
| 1-1/4 1-5/16 1-3/8 1-7/16 | 4-5/8 | 3-5/8 | 6-1/8 | 5-1/8 | 3-11/64 |
| 1-1/2 | 5-1/8 | 4 | — | — | — |
| 1-5/8 1-11/16 1-3/4 | 5-3/8 | 4-1/8 | — | — | — |
| 1-15/16 | 5-5/8 | 4-3/8 | 7-7/16 | 6-3/16 | 4-9/16 |
| 2 2-3/16 | 6-3/8 | 5-1/8 | — | — | — |
| 2-1/4 2-7/16 | 6-7/8 | 5-5/8 | — | — | — |

ALL DIMENSIONS IN INCHES

| Bore | C | D | E | F Bolt | J | L | P | R* Setscrew UNF | S | Approx. Weight (Lbs.) | |
|------------------------------------|-------|---------|---------|--------|---------|--------|---------|-----------------|---------|-----------------------|-----|
| | | | | | | | F T | | | F | T |
| 1/2 5/8 | 7/16 | 1-1/16 | 1-37/64 | 3/8 | 2 | 1/4 | 1-9/64 | 1/4-28 | 7/8 | .9 | .9 |
| 3/4 | 1/2 | 1-7/32 | 1-13/16 | 3/8 | 2-1/4 | 19/64 | 1-19/64 | 1/4-28 | 59/64 | 1.7 | 1.2 |
| 7/8 15/16 1 | 9/16 | 1-1/4 | 1-27/32 | 7/16 | 2-1/2 | 19/64 | 1-1/2 | 1/4-28 | 59/64 | 2.0 | 1.6 |
| 1-1/8 1-3/16 1-1/4S | 9/16 | 1-11/32 | 2 | 7/16 | 2-15/16 | 23/64 | 1-3/4 | 5/16-24 | 1-3/64 | 2.7 | 2.1 |
| 1-1/4 1-5/16 1-3/8 1-7/16 | 5/8 | 1-3/8 | 2-1/8 | 1/2 | 3-1/4 | 47/64 | 2-3/16 | 3/8-24 | 1-17/64 | 3.7 | 2.8 |
| 1-1/2 | 11/16 | 1-37/64 | 2-11/32 | 1/2 | 3-3/4 | 27/32 | 2-23/64 | 3/8-24 | 1-3/8 | 5.0 | — |
| 1-5/8 1-11/16 1-3/4 | 11/16 | 1-39/64 | 2-11/32 | 9/16 | 3-7/8 | 27/32 | 2-1/2 | 3/8-24 | 1-3/8 | 5.4 | — |
| 1-15/16 | 11/16 | 1-51/64 | 2-19/32 | 9/16 | 4-1/8 | 31/32 | 2-3/4 | 3/8-24 | 1-1/2 | 6.0 | 4.8 |
| 2 2-3/16 | 3/4 | 1-31/32 | 2-15/16 | 5/8 | 4-1/2 | 1-3/32 | 3 | 7/16-20 | 1-23/32 | 8.4 | — |
| 2-1/4 2-7/16 | 3/4 | 2-1/8 | 3-3/16 | 5/8 | 4-7/8 | 1-7/32 | 3-5/16 | 7/16-20 | 1-27/32 | 10.0 | — |

*2 at 120°.

For Load Ratings, See Engineering Section, Page 243.

Mounted Ball Bearings

SF/ST Series

Flanged Units – Standard Duty; Extended Inner Race – Setscrew Locking

SF Series 4-Bolt ST Series 2-Bolt

Features —

- One-piece high grade cast iron housing.
- Deep groove ball bearings for high radial and thrust loads.
- Precision machined housing bore and spherical outer race for self-alignment.
- Synthetic lip type seal with steel flinger.
- Positive locking by setscrews through extended inner race.
- 1/4-28 threaded grease fitting and channel through outer race allow relubrication.



ORDER BY CATALOG NUMBER OR ITEM CODE

| Bore | 4-BOLT | | 2-BOLT | |
|---------|----------------|-----------|----------------|-----------|
| | Catalog Number | Item Code | Catalog Number | Item Code |
| 1/2 | SF-1/2 | 64736 | ST-1/2 | 64723 |
| 5/8 | SF-5/8 | 64737 | ST-5/8 | 64724 |
| 3/4 | SF-3/4 | 64738 | ST-3/4 | 64725 |
| 7/8 | SF-7/8 | 64739 | ST-7/8 | 64726 |
| 15/16 | SF-15/16 | 64740 | ST-15/16 | 64727 |
| 1 | SF-1 | 64741 | ST-1 | 64728 |
| 1-1/8 | SF-1-1/8 | 64742 | ST-1-1/8 | 64729 |
| 1-3/16 | SF-1-3/16 | 64743 | ST-1-3/16 | 64730 |
| 1-1/4S | SF-1-1/4S | 64744 | ST-1-1/4S | 64731 |
| 1-1/4 | SF-1-1/4 | 64745 | ST-1-1/4 | 64732 |
| 1-3/8 | SF-1-3/8 | 64747 | ST-1-3/8 | 64734 |
| 1-7/16 | SF-1-7/16 | 64748 | ST-1-7/16 | 64735 |
| 1-1/2 | SF-1-1/2 | 64749 | — | — |
| 1-5/8 | SF-1-5/8 | 64750 | — | — |
| 1-11/16 | SF-1-11/16 | 64751 | — | — |
| 1-3/4 | SF-1-3/4 | 64752 | — | — |
| 1-15/16 | SF-1-15/16 | 64753 | ST-1-15/16 | 50696 |
| 2 | SF-2 | 64754 | — | — |
| 2-3/16 | SF-2-3/16 | 64755 | — | — |
| 2-1/4 | SF-2-1/4 | 64756 | — | — |
| 2-7/16 | SF-2-7/16 | 64757 | — | — |

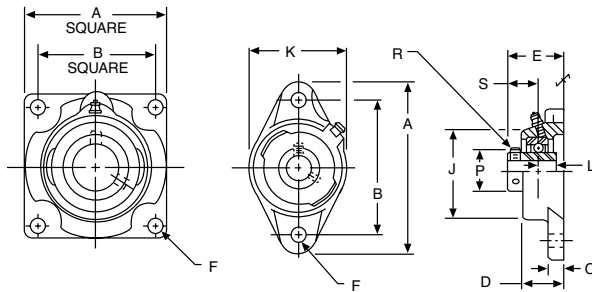
Replacement Bearings are shown on Page 214.

Mounted Ball Bearings

SF/ST Series

Flanged Units – Standard Duty; Extended Inner Race – Setscrew Locking

F



STANDARD TOLERANCES

| DIMENSIONS | | TOLERANCE |
|------------|-----|--------------------|
| Bore | All | +0.0012 to -0.0000 |

ENVELOPE AND BOLT SPACING DIMENSIONS IN INCHES

| Bore | 4-BOLT | | 2-BOLT | | |
|------------------------------------|--------|-------|---------|---------|---------|
| | A | B | A | B | K |
| 1/2 5/8 | 2-7/8 | 2-1/8 | 3-3/4 | 3 | 2-9/32 |
| 3/4 | 3-3/8 | 2-1/2 | 4-13/32 | 3-17/32 | 2-37/64 |
| 7/8 15/16 1 | 3-3/4 | 2-3/4 | 4-57/64 | 3-57/64 | 2-53/64 |
| 1-1/8 1-3/16 1-1/4S | 4-1/4 | 3-1/4 | 5-19/32 | 4-19/32 | 3-19/64 |
| 1-1/4 1-5/16 1-3/8 1-7/16 | 4-5/8 | 3-5/8 | 6-1/8 | 5-1/8 | 3-11/64 |
| 1-1/2 | 5-1/8 | 4 | — | — | — |
| 1-5/8 1-11/16 1-3/4 | 5-3/8 | 4-1/8 | — | — | — |
| 1-15/16 | 5-5/8 | 4-3/8 | 7-7/16 | 6-3/16 | 4-9/16 |
| 2 2-3/16 | 6-3/8 | 5-1/8 | — | — | — |
| 2-1/4 2-7/16 | 6-7/8 | 5-5/8 | — | — | — |

ALL DIMENSIONS IN INCHES

| Bore | C | D | E | F Bolt | J | L | P | R* Setscrew UNF | S | Approx. Weight (Lbs.) | |
|------------------------------------|-------|---------|---------|--------|---------|-------|---------|-----------------|--------|-----------------------|-----|
| | | | | | | | | | | SF | ST |
| 1/2 5/8 | 7/16 | 1-1/16 | 1-17/64 | 3/8 | 2 | 9/32 | 31/32 | 10-32 | 5/8 | .9 | .9 |
| 3/4 | 1/2 | 1-7/32 | 1-31/64 | 3/8 | 2-1/4 | 1/2 | 1-11/64 | 10-32 | 23/32 | 1.7 | 1.2 |
| 7/8 15/16 1 | 9/16 | 1-1/4 | 1-9/16 | 7/16 | 2-1/2 | 9/16 | 1-11/32 | 10-32 | 25/32 | 2.0 | 1.6 |
| 1-1/8 1-3/16 1-1/4S | 9/16 | 1-11/32 | 1-11/16 | 7/16 | 2-15/16 | 5/8 | 1-39/64 | 1/4-28 | 7/8 | 2.7 | 2.1 |
| 1-1/4 1-5/16 1-3/8 1-7/16 | 5/8 | 1-3/8 | 1-27/32 | 1/2 | 3-5/16 | 11/16 | 1-27/32 | 1/4-28 | 1 | 3.7 | 2.8 |
| 1-1/2 | 11/16 | 1-37/64 | 2-1/64 | 1/2 | 3-3/4 | 3/4 | 2-3/32 | 5/16-24 | 1-3/16 | 5.0 | — |
| 1-5/8 1-11/16 1-3/4 | 11/16 | 1-39/64 | 2-1/64 | 9/16 | 3-7/8 | 3/4 | 2-17/64 | 5/16-24 | 1-3/16 | 5.4 | — |
| 1-15/16 | 11/16 | 1-51/64 | 2-3/8 | 9/16 | 4-1/8 | 3/4 | 2-29/64 | 5/16-24 | 1-9/32 | 6.0 | 4.8 |
| 2 2-3/16 | 3/4 | 1-31/32 | 2-17/32 | 5/8 | 4-1/2 | 7/8 | 2-23/32 | 5/16-24 | 1-5/16 | 8.4 | — |
| 2-1/4 2-7/16 | 3/4 | 2-1/8 | 2-29/32 | 5/8 | 4-7/8 | 1 | 3-1/32 | 3/8-24 | 1-9/16 | 10.0 | — |

*2 AT 120°

For Load Ratings, See Engineering Section, Page 243.

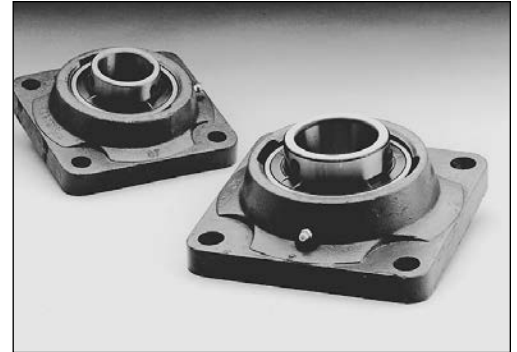
Mounted Ball Bearings

MBF Series

Flanged Units – Medium Duty; Extended Inner Race – Setscrew Locking

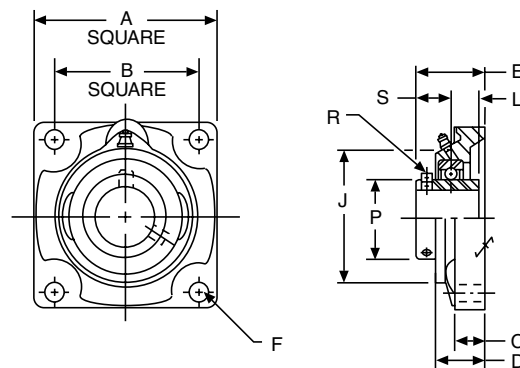
Features —

- One-piece high grade cast iron housing.
- Deep groove ball bearings for high radial and thrust loads.
- Precision machined housing bore and spherical outer race for full self-alignment.
- Synthetic lip type seal with steel flinger.
- Positive locking by setscrews through extended inner race.
- 1/4-28 threaded grease fitting and channel through outer race allow relubrication.



ORDER BY CATALOG NUMBER OR ITEM CODE

| Bore | Catalog Number | Item Code |
|---------|----------------|-----------|
| 1-7/16 | MBF-1-7/16 | 64590 |
| 1-1/2 | MBF-1-1/2 | 64591 |
| 1-11/16 | MBF-1-11/16 | 64592 |
| 1-3/4 | MBF-1-3/4 | 64593 |
| 1-15/16 | MBF-1-15/16 | 64594 |
| 2 | MBF-2 | 64595 |
| 2-3/16 | MBF-2-3/16 | 64596 |
| 2-1/4 | MBF-2-1/4 | 64597 |
| 2-7/16 | MBF-2-7/16 | 64598 |
| 2-1/2 | MBF-2-1/2 | 64599 |
| 2-11/16 | MBF-2-11/16 | 64600 |
| 2-15/16 | MBF-2-15/16 | 64601 |
| 3 | MBF-3 | 64602 |
| 3-3/16 | MBF-3-3/16 | 64603 |
| 3-1/4 | MBF-3-1/4 | 64604 |
| 3-7/16 | MBF-3-7/16 | 64605 |
| 3-1/2 | MBF-3-1/2 | 64606 |



STANDARD TOLERANCES

| DIMENSIONS | | TOLERANCE |
|------------|---------------|------------------|
| Bore | 1-7/16-1-3/4 | +0.010 to -0.000 |
| | 1-15/16-3-1/2 | +0.012 to -0.000 |

ALL DIMENSIONS IN INCHES

| Bore | A | B | C | D | E | F Bolt | J | L | P | R* Setscrew UNF | S | Approx. Weight (Lbs.) |
|------------------|-------|-------|-------|---------|---------|--------|-------|---------|---------|-----------------|---------|-----------------------|
| 1-7/16 | 5-1/8 | 4 | 11/16 | 1-37/64 | 2-5/32 | 1/2 | 3-3/4 | 3/4 | 1-27/32 | 5/16-24 | 1-9/64 | 5.5 |
| 1-1/2 | 5-3/8 | 4-1/8 | 11/16 | 1-39/64 | 2-5/32 | 9/16 | 3-7/8 | 3/4 | 2-3/32 | 5/16-24 | 1-3/16 | 6.0 |
| 1-11/16 1-3/4 | 5-5/8 | 4-3/8 | 11/16 | 1-51/64 | 2-3/8 | 9/16 | 4-1/8 | 3/4 | 2-17/64 | 5/16-24 | 1-9/32 | 6.8 |
| 1-15/16 2 | 6-3/8 | 5-1/8 | 3/4 | 1-31/32 | 2-17/32 | 5/8 | 4-1/2 | 7/8 | 2-23/32 | 5/16-24 | 1-5/16 | 10.5 |
| 2-3/16 2-1/4 | 6-7/8 | 5-5/8 | 3/4 | 2-1/8 | 2-29/32 | 5/8 | 4-7/8 | 1 | 3-1/32 | 3/8-24 | 1-9/16 | 12.1 |
| 2-7/16 2-1/2 | 7-1/8 | 5-7/8 | 3/4 | 2-5/32 | 3-1/16 | 5/8 | 5-3/4 | 1-3/16 | 3-27/64 | 3/8-24 | 1-3/4 | 16.4 |
| 2-11/16 | 7-5/8 | 6 | 3/4 | 2-5/16 | 3-3/16 | 3/4 | 5-3/4 | 1-5/16 | 3-43/64 | 3/8-24 | 1-3/4 | 20.6 |
| 2-15/16 3 | 7-5/8 | 6 | 13/16 | 2-7/16 | 3-1/2 | 3/4 | 6-1/4 | 1-5/16 | 3-7/8 | 1/2-20 | 1-15/16 | 21.4 |
| 3-3/16 3-1/4 | 8-3/8 | 6-3/4 | 15/16 | 2-13/32 | 3-17/32 | 3/4 | 6-7/8 | 1-11/32 | 4-3/16 | 1/2-20 | 2-1/32 | 26.7 |
| 3-7/16 3-1/2 | 8-3/8 | 6-3/4 | 15/16 | 2-11/16 | 3-31/32 | 3/4 | 7 | 1-9/16 | 4-25/64 | 1/2-20 | 2-7/32 | 20.0 |

*2 AT 120°

For Load Ratings, See Engineering Section, Page 243.
Replacement Bearings are shown on Page 214.

Mounted Ball Bearings

MBP Series

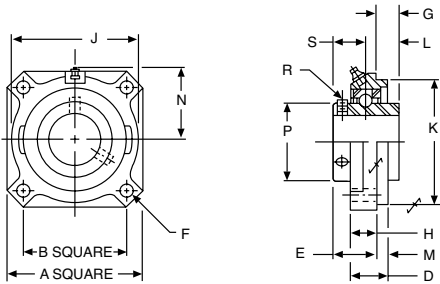
Piloted Flanged Units – Medium Duty; Extended Inner Race – Setscrew Locking

F



Features —

- One-piece high grade cast iron housing.
- Deep groove ball bearings for high radial and thrust loads.
- Precision machined housing bore and spherical outer race for full self-alignment.
- Synthetic lip type seal with steel flinger.
- Positive locking by setscrews through extended inner race.
- 1/4-28 threaded grease fitting and channel through outer race allow relubrication.



ORDER BY CATALOG NUMBER OR ITEM CODE

| Bore | Catalog Number | Item Code |
|---------|----------------|-----------|
| 1-7/16 | MBP-1-7/16 | 64607 |
| 1-1/2 | MBP-1-1/2 | 64608 |
| 1-11/16 | MBP-1-11/16 | 64609 |
| 1-3/4 | MBP-1-3/4 | 64610 |
| 1-15/16 | MBP-1-15/16 | 64611 |
| 2 | MBP-2 | 64612 |
| 2-3/16 | MBP-2-3/16 | 64613 |
| 2-1/4 | MBP-2-1/4 | 64614 |
| 2-7/16 | MBP-2-7/16 | 64615 |
| 2-1/2 | MBP-2-1/2 | 64616 |
| 2-11/16 | MBP-2-11/16 | 64617 |
| 2-15/16 | MBP-2-15/16 | 64618 |
| 3 | MBP-3 | 64619 |
| 3-7/16 | MBP-3-7/16 | 64620 |
| 3-1/2 | MBP-3-1/2 | 64621 |

STANDARD TOLERANCES

| DIMENSIONS | TOLERANCE |
|------------|-------------------------------|
| Bore | 1-7/16-1-3/4 1-15/16-3-1/2 |
| K | All |

ALL DIMENSIONS IN INCHES

| Bore | A | B | D | E | F Bolt | G | H | J | K | L | M | N | P | R* Setscrew UNF | S | Approx. Weight (Lbs.) |
|------------------|---------|---------|---------|---------|--------|-------|---------|--------|-------|--------|------|---------|---------|-----------------|---------|-----------------------|
| 1-7/16 | 4-1/4 | 3-3/32 | 1-5/16 | 1-17/32 | 7/16 | 13/32 | 7/8 | 4 | 3-5/8 | 3/4 | 7/16 | 2-1/4 | 1-27/32 | 5/16-24 | 1-9/64 | 5.5 |
| 1-1/2 | 4-1/4 | 3-3/32 | 1-11/32 | 1-9/16 | 7/16 | 3/8 | 29/32 | 4 | 3-5/8 | 3/4 | 7/16 | 2-9/32 | 2-3/32 | 5/16-24 | 1-3/16 | 6.0 |
| 1-11/16 1-3/4 | 4-15/16 | 3-5/8 | 1-3/8 | 1-11/16 | 1/2 | 11/32 | 15/16 | 4-1/2 | 4-1/4 | 3/4 | 7/16 | 2-9/16 | 2-17/64 | 5/16-24 | 1-9/32 | 6.8 |
| 1-15/16 2 | 5-3/16 | 3-13/16 | 1-3/8 | 1-21/32 | 1/2 | 17/32 | 15/16 | 4-3/4 | 4-1/2 | 7/8 | 7/16 | 2-3/4 | 2-23/32 | 5/16-24 | 1-5/16 | 10.5 |
| 2-3/16 2-1/4 | 5-13/16 | 4-1/4 | 1-15/32 | 1-7/8 | 1/2 | 11/16 | 31/32 | 5-3/8 | 5 | 1 | 1/2 | 3-1/16 | 3-1/32 | 3/8-24 | 1-9/16 | 12.1 |
| 2-7/16 2-1/2 | 6-1/4 | 4-19/32 | 1-5/8 | 2-1/8 | 1/2 | 13/16 | 1-1/8 | 5-3/4 | 5-1/2 | 1-3/16 | 1/2 | 3-9/32 | 3-27/64 | 3/8-24 | 1-3/4 | 16.4 |
| 2-11/16 | 7-1/8 | 5-5/16 | 1-21/32 | 2-5/32 | 5/8 | 29/32 | 1-5/32 | 6-9/16 | 6-3/8 | 1-5/16 | 1/2 | 3-11/32 | 3-43/64 | 3/8-24 | 1-3/4 | 20.6 |
| 2-15/16 3 | 7-1/8 | 5-5/16 | 1-7/8 | 2-3/8 | 5/8 | 7/8 | 1-1/4 | 6-9/16 | 6-3/8 | 1-5/6 | 5/8 | 3-23/32 | 3-7/8 | 1/2-20 | 1-15/16 | 21.4 |
| 3-7/16 3-1/2 | 8-3/8 | 6-3/32 | 1-31/32 | 2-21/32 | 3/4 | 1-1/8 | 1-11/32 | 7-3/4 | 7-3/8 | 1-9/16 | 5/8 | 4-5/16 | 4-25/64 | 1/2-20 | 2-7/32 | 30.0 |

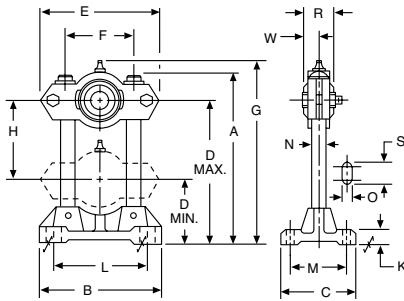
*2 AT 120°

For Load Ratings, See Engineering Section, Page 243.
Replacement Bearings are shown on Page 214.

Mounted Ball Bearings

A Series

Adjustable Shaft Supports – Standard Duty; Eccentric Locking Collar



Features —

- Rigid one piece housing.
- Chrome alloy steel balls.
- Spherical outer race.
- Synthetic lip type seals.
- Eccentric locking collar.
- 1/4-28 threaded grease fitting.



ORDER BY CATALOG NUMBER OR ITEM CODE

| Bore | Catalog Number | Item Code |
|--------|----------------|-----------|
| 1/2 | 3A-1/2 | 07008 |
| 5/8 | 3A-5/8 | 07010 |
| 3/4 | 4A-3/4 | 07012 |
| 7/8 | 5A-7/8 | 07016 |
| 15/16 | 5A-15/16 | 07018 |
| 1 | 5A-1 | 07020 |
| 1-1/8 | 6A-1-1/8 | 07024 |
| 1-3/16 | 6A-1-3/16 | 07026 |
| 1-1/4S | 6A-1-1/4S | 07028 |

STANDARD TOLERANCES

| DIMENSIONS | | TOLERANCE |
|------------|-----|------------------|
| Bore | All | +0.001 to -0.000 |

ALL DIMENSIONS IN INCHES

| Bore | A | B | C | D | | E | F | G Max. | H | |
|---------------------------|--------|-------|-------|---------|---------|---------|-------|----------|---------|----------|
| | | | | Min. | Max. | | | | Min. | Max. |
| 1/2 5/8 | 7-1/8 | 5-1/8 | 3-1/8 | 2-13/32 | 6-1/16 | 4-7/8 | 2-3/4 | 7-7/16 | 2-1/2 | 3-21/32 |
| 3/4 | 7-1/8 | 5-1/8 | 3-1/8 | 2-17/32 | 6-1/16 | 4-7/8 | 2-3/4 | 7-9/16 | 2-13/16 | 3-17.32' |
| 7/8 15/16 1 | 8-1/4 | 6-1/4 | 3-3/4 | 2-25/32 | 7-1/16 | 5-11/16 | 3-1/8 | 8-11/16 | 3 | 4-9/32 |
| 1-1/8 1-3/16 1-1/4S | 11-1/4 | 8-1/8 | 4-1/2 | 3-1/2 | 9-15/16 | 7-11/16 | 4-3/8 | 11-25/32 | 3-7/16 | 6-7/16 |

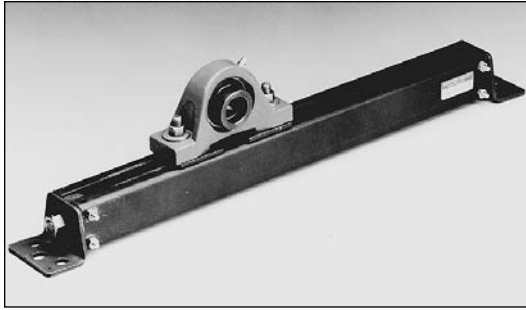
| Bore | K | L | M | N | O | R | S | W | Bolt Size |
|---------------------------|-----|---------|-------|-------|-----|---------|-------|--------|-----------|
| 1/2 5/8 | 5/8 | 3-15/16 | 2-1/4 | 5/8 | 3/8 | 1-9/16 | 11/16 | 15/16 | 5/16 |
| 3/4 | 5/8 | 3-15/16 | 2-1/4 | 5/8 | 3/8 | 1-23/32 | 11/16 | 1-3/64 | 5/16 |
| 7/8 15/16 1 | 3/4 | 4-13/16 | 2-3/4 | 3/4 | 1/2 | 1-3/4 | 15/16 | 1-1/16 | 7/16 |
| 1-1/8 1-3/16 1-1/4S | 1 | 6-3/8 | 3-1/4 | 1-1/4 | 5/8 | 2-5/16 | 1-1/8 | 1-3/16 | 9/16 |

NOTE: For applications where direction of radial bearing load is away from base, it is recommended that a hole be drilled near the end of each post and a suitable size pin inserted, as a safety precaution.

Replacement Bearings are shown on Page 213.

Mounted Bearings

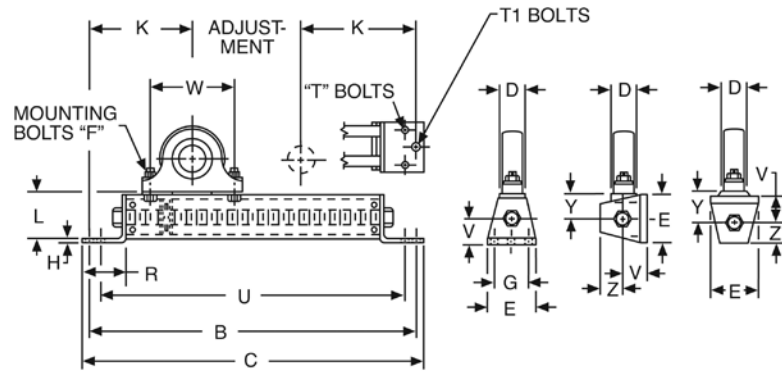
TU Series Take-Up Frames



Boston Gear Take-up Frames are designed for use with Boston's Standard Duty Pillow Blocks. Pillow Block units are not included.

Features —

- Bolted steel frame
- 3 or 4 bolt frame mounting
- Bolt hole centers adjustable



ALL DIMENSIONS IN INCHES

| Pillow Block Bore | Adjustment | B | C | D | E | F Bolts | G | H | K | L | R |
|-------------------|------------|---------|---------|-------|-------|---------|-------|------|--------|---------|--------|
| 1/2-1 | 6 | 16 | 17 | 1-3/4 | 2-5/8 | 3/8 | 1-5/8 | 3/16 | 5 | 2-1/8 | 1-3/4 |
| | 9 | 19 | 20 | | | | | | | | |
| | 12 | 22 | 23 | | | | | | | | |
| 1-1/8-1-3/4 | 6 | 19-1/8 | 20-1/4 | 2-3/8 | 3-1/8 | 1/2 | 2-1/8 | 1/4 | 6-9/16 | 2-11/16 | 2-3/16 |
| | 9 | 22-1/8 | 23-1/4 | | | | | | | | |
| | 12 | 25-1/8 | 26-1/4 | | | | | | | | |
| | 18 | 31-1/8 | 32-1/4 | | | | | | | | |
| 1-15/16-2-7/16 | 9 | 25-5/16 | 26-9/16 | 3 | 4 | 5/8 | 2-3/4 | 5/16 | 8-5/32 | 3-5/16 | 2-3/4 |
| | 12 | 28-5/16 | 29-9/16 | | | | | | | | |
| | 18 | 34-5/16 | 35-9/16 | | | | | | | | |
| | 24 | 40-5/16 | 41-9/16 | | | | | | | | |

ORDER BY CATALOG NUMBER OR ITEM CODE

| Pillow Block Bore | Adjustment | Bolts | | U | V | W | | Y | Z | Catalog Number | Item Code |
|-------------------|------------|-------|-----|---------|---------|-------|-------|---------|---------|----------------|-----------|
| | | T | T1 | | | Min. | Max. | | | | |
| 1/2-1 | 6 | 5/16 | 3/8 | 15-1/4 | 1-1/16 | 3 | 5 | 1-1/16 | 15/16 | TU816-6 | 29827 |
| | 9 | | | 18-1/4 | | | | | | TU816-9 | 29828 |
| | 12 | | | 21-1/4 | | | | | | TU816-12 | 29829 |
| 1-1/8-1-3/4 | 6 | 3/8 | 1/2 | 18-1/8 | 1-11/32 | 3-3/4 | 7-1/4 | 1-11/32 | 1-3/32 | TU1828-6 | 29830 |
| | 9 | | | 21-1/8 | | | | | | TU1828-9 | 29831 |
| | 12 | | | 24-1/8 | | | | | | TU1828-12 | 19832 |
| | 18 | | | 30-1/8 | | | | | | TU1828-18 | 29833 |
| 1-15/16-2-7/16 | 9 | 1/2 | 5/8 | 24-1/16 | 1-5/8 | 4-1/4 | 9 | 1-11/16 | 1-13/16 | TU3139-9 | 29834 |
| | 12 | | | 27-1/16 | | | | | | TU3139-12 | 29835 |
| | 18 | | | 33-1/16 | | | | | | TU3139-18 | 29836 |
| | 24 | | | 39-1/16 | | | | | | TU3139-24 | 29837 |

Stainless Mounted Bearings

Pillow Blocks – Setscrew Locking 2 Bolt Pillow Block – Setscrew Locking; Extended Inner Race

Features —

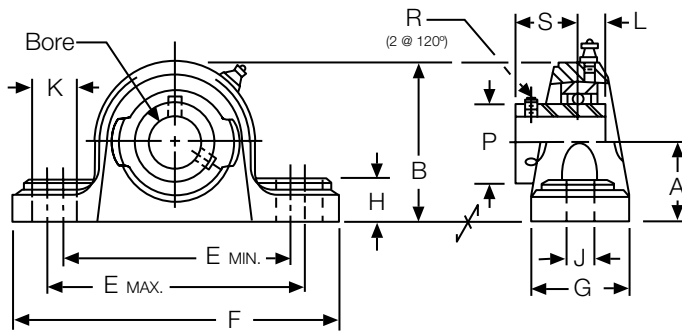
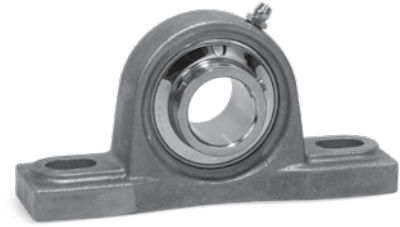
Synthetic lip seal with stainless steel flinger provides superior protection for high pressure washdown conditions.

Pre-filled with NSF H1 food grade grease.

Cast stainless steel housing.

Laser marked.

M6 grease fitting.



| Stainless Steel Material | |
|---------------------------------------|-------------------------|
| AISI 304 | AISI 440 |
| Housing, cage, shield, setscrew, seal | Balls, inner/outer ring |

ALL DIMENSIONS IN INCHES

| Catalog Number | Bore Size | Dimensions (in) | | | | | | | | | | | | | | Load Rating* (lbf) | |
|----------------|-----------|-----------------|---------|------------------|------------------|--------|-------|-------|-------|-------|-------|-------|---------|-------|-----------|--------------------|-------|
| | | A | B | E _{max} | E _{min} | F | G | H | J | K | L | P | R (UNF) | S | Bolt Size | CR | Co |
| SSUP4-3/4 | 3/4 | 1-5/16 | 2-9/16 | 4-1/8 | 3-3/8 | 5 | 1-1/2 | 9/16 | 1/2 | 3/4 | 0.500 | 1.142 | 1/4-28 | 0.721 | 3/8 | 2,901 | 1,507 |
| SSUP5-1 | 1 | 1-7/16 | 2-25/32 | 4-1/2 | 3-3/4 | 5-1/2 | 1-1/2 | 19/32 | 1/2 | 3/4 | 0.563 | 1.339 | 1/4-28 | 0.780 | 3/8 | 3,175 | 1,782 |
| SSUP6-1-3/16 | 1-3/16 | 1-11/16 | 3-1/4 | 5-1/32 | 4-15/32 | 6-1/2 | 1-7/8 | 21/32 | 43/64 | 25/32 | 0.626 | 1.591 | 1/4-28 | 0.874 | 1/2 | 4,431 | 2,558 |
| SSUP7-1-1/4 | 1-1/4 | 1-7/8 | 3-21/32 | 5-9/32 | 4-23/32 | 6-9/16 | 1-7/8 | 45/64 | 43/64 | 25/32 | 0.689 | 1.866 | 5/16-24 | 1.000 | 1/2 | 5,847 | 3,472 |
| SSUP7-1-7/16 | 1-7/16 | 1-7/8 | 3-21/32 | 5-9/32 | 4-23/32 | 6-9/16 | 1-7/8 | 45/64 | 43/64 | 25/32 | 0.689 | 1.866 | 5/16-24 | 1.000 | 1/2 | 5,847 | 3,472 |
| SSUP8-1-1/2 | 1-1/2 | 1-15/16 | 3-15/16 | 5-11/16 | 5-1/8 | 7-1/4 | 2-1/8 | 45/64 | 43/64 | 25/32 | 0.748 | 2.075 | 5/16-24 | 1.189 | 1/2 | 6,632 | 4,069 |
| SSUP10-1-15/16 | 1-15/16 | 2-1/4 | 4-29/64 | 6-17/32 | 5-31/32 | 8-1/8 | 2-3/8 | 53/64 | 25/32 | 29/32 | 0.748 | 2.465 | 3/8-24 | 1.284 | 5/8 | 7,868 | 5,216 |

ORDER BY CATALOG NUMBER OR ITEM CODE

| Bore Size | Mounted Bearing | | Bearing Insert | |
|-----------|-----------------|-----------|----------------|-----------|
| | Catalog Number | Item Code | Catalog Number | Item Code |
| 3/4 | SSUP4-3/4 | G01140 | SSUC204-12 | G01171 |
| 1 | SSUP5-1 | G01141 | SSUC205-16 | G01172 |
| 1-3/16 | SSUP6-1-3/16 | G01142 | SSUC206-19 | G01173 |
| 1-1/4 | SSUP7-1-1/4 | G01143 | SSUC207-20 | G01174 |
| 1-7/16 | SSUP7-1-7/16 | G01144 | SSUC207-23 | G01175 |
| 1-1/2 | SSUP8-1-1/2 | G05900 | SSUC208-24 | G05922 |
| 1-15/16 | SSUP10-1-15/16 | G05901 | SSUC210-31 | G05923 |

NOTES: Bore tolerance: +.001"/-.000".

Recommended shaft tolerance: Nominal +.000"/-.001".

Max recommended speed is 5000 RPM.

*CR=dynamic load rating, Co=static load rating.

Stainless Mounted Bearings

Pillow Blocks – Eccentric Locking Collar

2 Bolt Pillow Block – Eccentric Locking Collar; For Superior Shaft Holding Power

F



Features —

Synthetic lip seal with stainless steel flinger provides superior protection for high pressure washdown conditions.

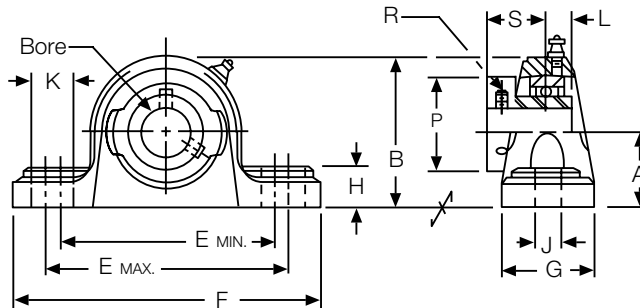
Pre-filled with NSF H1 food grade grease.

Cast stainless steel housing.

Laser marked.

M6 grease fitting.

| Stainless Steel Material | |
|---|-------------------------|
| AISI 304 | AISI 440 |
| Housing, cage, shield, setscrew, seal, collar | Balls, inner/outer ring |



ALL DIMENSIONS IN INCHES

| Catalog Number | Bore Size | Dimensions (in) | | | | | | | | | | | | | | Load Rating* (lbf) | |
|----------------|-----------|-----------------|---------|------------------|------------------|--------|-------|-------|-------|-------|-------|-------|---------|-------|-----------|--------------------|-------|
| | | A | B | E _{max} | E _{min} | F | G | H | J | K | L | P | R (UNF) | S | Bolt Size | CR | CO |
| SSHP4-3/4 | 3/4 | 1-5/16 | 2-9/16 | 4-1/8 | 3-3/8 | 5 | 1-1/2 | 9/16 | 1/2 | 3/4 | 0.673 | 1.311 | 1/4-28 | 1.047 | 3/8 | 2,901 | 1,507 |
| SSHP5-1 | 1 | 1-7/16 | 2-25/32 | 4-1/2 | 3-3/4 | 5-1/2 | 1-1/2 | 19/32 | 1/2 | 3/4 | 0.689 | 1.500 | 1/4-28 | 1.059 | 3/8 | 3,175 | 1,782 |
| SSHP6-1-3/16 | 1-3/16 | 1-11/16 | 3-1/4 | 5-1/32 | 4-15/32 | 6-1/2 | 1-7/8 | 21/32 | 43/64 | 25/32 | 0.720 | 1.713 | 1/4-28 | 1.186 | 1/2 | 4,431 | 2,558 |
| SSHP7-1-1/4 | 1-1/4 | 1-7/8 | 3-21/32 | 5-9/32 | 4-23/32 | 6-9/16 | 1-7/8 | 45/64 | 43/64 | 25/32 | 0.740 | 2.087 | 5/16-24 | 1.272 | 1/2 | 5,847 | 3,472 |
| SSHP7-1-7/16 | 1-7/16 | 1-7/8 | 3-21/32 | 5-9/32 | 4-23/32 | 6-9/16 | 1-7/8 | 45/64 | 43/64 | 25/32 | 0.740 | 2.087 | 5/16-24 | 1.272 | 1/2 | 5,847 | 3,472 |
| SSHP8-1-1/2 | 1-1/2 | 1-15/16 | 3-15/16 | 5-11/16 | 5-1/8 | 7-1/4 | 2-1/8 | 45/64 | 43/64 | 25/32 | 0.748 | 2.283 | 5/16-24 | 1.378 | 1/2 | 6,632 | 4,069 |
| SSHP10-1-15/16 | 1-15/16 | 2-1/4 | 4-29/64 | 6-17/32 | 5-31/32 | 8-1/8 | 2-3/8 | 53/64 | 25/32 | 29/32 | 0.969 | 2.697 | 3/8-24 | 1.500 | 5/8 | 7,868 | 5,216 |

ORDER BY CATALOG NUMBER OR ITEM CODE

| Bore Size | Mounted Bearing | | Bearing Insert | |
|-----------|-----------------|-----------|----------------|-----------|
| | Catalog Number | Item Code | Catalog Number | Item Code |
| 3/4 | SSHP4-3/4 | G01145 | SSHC204-12 | G01176 |
| 1 | SSHP5-1 | G01146 | SSHC205-16 | G01177 |
| 1-3/16 | SSHP6-1-3/16 | G01147 | SSHC206-19 | G01178 |
| 1-1/4 | SSHP7-1-1/4 | G01148 | SSHC207-20 | G01179 |
| 1-7/16 | SSHP7-1-7/16 | G01149 | SSHC207-23 | G01180 |
| 1-1/2 | SSHP8-1-1/2 | G05902 | SSHC208-24 | G05924 |
| 1-15/16 | SSHP10-1-15/16 | G05903 | SSHC210-31 | G05925 |

NOTES: Bore tolerance: +.001"/-.000".

Recommended shaft tolerance: Nominal +.000"/-.001".

Max recommended speed is 5000 RPM.

*CR=dynamic load rating, CO=static load rating.

Stainless Mounted Bearings

Flanged Units – Setscrew Locking 2 Bolt Flange – Setscrew Locking; Extended Inner Race

Features —

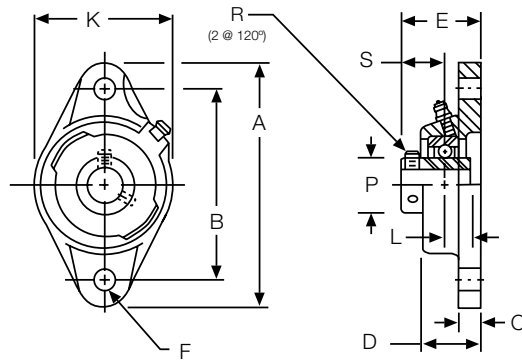
Synthetic lip seal with stainless steel finger provides superior protection for high pressure washdown conditions.

Pre-filled with NSF H1 food grade grease.

Cast stainless steel housing.

Laser marked.

M6 grease fitting.



| Stainless Steel Material | |
|--------------------------------------|-------------------------|
| AISI 304 | AISI 440 |
| Flange, cage, shield, setscrew, seal | Balls, inner/outer ring |

ALL DIMENSIONS IN INCHES

| Catalog Number | Bore Size | Dimensions (in) | | | | | | | | | | | Load Rating* (lbf) | |
|-----------------|-----------|-----------------|---------|-------|-------|---------|---------------|---------|-------|-------|---------|-------|--------------------|-------|
| | | A | B | C | D | E | Bolt Size F** | K | L | P | R (UNF) | S | CR | CO |
| SSUFL4-3/4 | 3/4 | 4-7/16 | 3-35/64 | 7/16 | 1.000 | 1-5/16 | 3/8 | 2-3/8 | 0.500 | 1.142 | 1/4-28 | 0.721 | 2,901 | 1,507 |
| SSUFL5-1 | 1 | 5-1/8 | 3-57/64 | 1/2 | 1.063 | 1-13/32 | 1/2 | 2-11/16 | 0.563 | 1.339 | 1/4-28 | 0.780 | 3,175 | 1,782 |
| SSUFL6-1-3/16 | 1-3/16 | 5-13/16 | 4-39/64 | 1/2 | 1.219 | 1-19/32 | 1/2 | 3-5/32 | 0.626 | 1.591 | 1/4-28 | 0.874 | 4,431 | 2,558 |
| SSUFL7-1-1/4 | 1-1/4 | 6-11/32 | 5-1/8 | 35/64 | 1.344 | 1-3/4 | 1/2 | 3-35/64 | 0.689 | 1.866 | 5/16-24 | 1.000 | 5,847 | 3,472 |
| SSUFL7-1-7/16 | 1-7/16 | 6-11/32 | 5-1/8 | 35/64 | 1.344 | 1-3/4 | 1/2 | 3-35/64 | 0.689 | 1.866 | 5/16-24 | 1.000 | 5,847 | 3,472 |
| SSUFL8-1-1/2 | 1-1/2 | 6-7/8 | 5-43/64 | 35/64 | 1.422 | 2-1/64 | 1/2 | 3-15/16 | 0.748 | 2.075 | 5/16-24 | 1.189 | 6,632 | 4,069 |
| SSUFL10-1-15/16 | 1-15/16 | 7-3/4 | 6-3/16 | 19/32 | 1.578 | 2-5/32 | 5/8 | 4-17/32 | 0.748 | 2.465 | 3/8-24 | 1.284 | 7,868 | 5,216 |

ORDER BY CATALOG NUMBER OR ITEM CODE

| Bore Size | Mounted Bearing | | Bearing Insert | |
|-----------|-----------------|-----------|----------------|-----------|
| | Catalog Number | Item Code | Catalog Number | Item Code |
| 3/4 | SSUFL4-3/4 | G01150 | SSUC204-12 | G01171 |
| 1 | SSUFL5-1 | G01151 | SSUC205-16 | G01172 |
| 1-3/16 | SSUFL6-1-3/16 | G01152 | SSUC206-19 | G01173 |
| 1-1/4 | SSUFL7-1-1/4 | G01153 | SSUC207-20 | G01174 |
| 1-7/16 | SSUFL7-1-7/16 | G01154 | SSUC207-23 | G01175 |
| 1-1/2 | SSUFL8-1-1/2 | G05904 | SSUC208-24 | G05922 |
| 1-15/16 | SSUFL10-1-15/16 | G05905 | SSUC210-31 | G05923 |

NOTES: Bore tolerance: +.001"/-.000".

Recommended shaft tolerance: Nominal +.000"/-.001".

Max recommended speed is 5000 RPM.

*CR=dynamic load rating, CO=static load rating.

** Smaller bolt sizes are acceptable with the use of flat washers

Stainless Mounted Bearings

Flanged Units – Setscrew Locking

4 Bolt Flange – Setscrew Locking; Extended Inner Race

F



Features —

Synthetic lip seal with stainless steel flinger provides superior protection for high pressure washdown conditions.

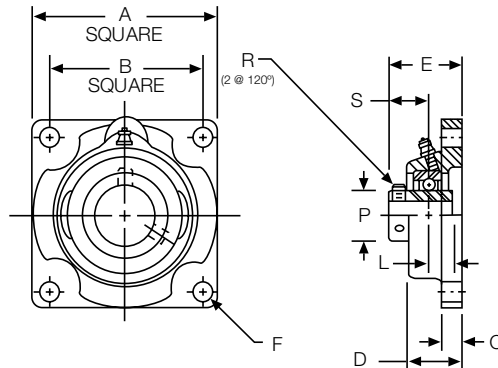
Pre-filled with NSF H1 food grade grease.

Cast stainless steel housing.

Laser marked.

M6 grease fitting.

| Stainless Steel Material | |
|--------------------------------------|-------------------------|
| AISI 304 | AISI 440 |
| Flange, cage, shield, setscrew, seal | Balls, inner/outer ring |



ALL DIMENSIONS IN INCHES

| Catalog Number | Bore Size | Dimensions (in) | | | | | | | | | | Load Rating* (lbf) | |
|----------------|-----------|-----------------|---------|-------|-------|---------|---------------|-------|-------|---------|-------|--------------------|-------|
| | | A | B | C | D | E | Bolt Size F** | L | P | R (UNF) | S | CR | Co |
| SSUF4-3/4 | 3/4 | 3-3/8 | 2-33/64 | 15/32 | 1.000 | 1-5/16 | 3/8 | 0.500 | 1.142 | 1/4-28 | 0.721 | 2,901 | 1,507 |
| SSUF5-1 | 1 | 3-3/4 | 2-3/4 | 35/64 | 1.063 | 1-13/32 | 3/8 | 0.563 | 1.339 | 1/4-28 | 0.780 | 3,175 | 1,782 |
| SSUF6-1-3/16 | 1-3/16 | 4-1/4 | 3-17/64 | 35/64 | 1.219 | 1-19/32 | 3/8 | 0.626 | 1.591 | 1/4-28 | 0.874 | 4,431 | 2,558 |
| SSUF7-1-1/4 | 1-1/4 | 4-39/64 | 3-5/8 | 5/8 | 1.344 | 1-3/4 | 7/16 | 0.689 | 1.866 | 5/16-24 | 1.000 | 5,847 | 3,472 |
| SSUF7-1-7/16 | 1-7/16 | 4-39/64 | 3-5/8 | 5/8 | 1.344 | 1-3/4 | 7/16 | 0.689 | 1.866 | 5/16-24 | 1.000 | 5,847 | 3,472 |
| SSUF8-1-1/2 | 1-1/2 | 5-1/8 | 4-1/64 | 5/8 | 1.422 | 2-1/64 | 1/2 | 0.748 | 2.075 | 5/16-24 | 1.189 | 6,632 | 4,069 |
| SSUF10-1-15/16 | 1-15/16 | 5-13/32 | 4-3/8 | 23/32 | 1.578 | 2-5/32 | 1/2 | 0.748 | 2.465 | 3/8-24 | 1.284 | 7,868 | 5,216 |

ORDER BY CATALOG NUMBER OR ITEM CODE

| Bore Size | Mounted Bearing | | Bearing Insert | |
|-----------|-----------------|-----------|----------------|-----------|
| | Catalog Number | Item Code | Catalog Number | Item Code |
| 3/4 | SSUF4-3/4 | G01155 | SSUC204-12 | G01171 |
| 1 | SSUF5-1 | G01156 | SSUC205-16 | G01172 |
| 1-3/16 | SSUF6-1-3/16 | G01157 | SSUC206-19 | G01173 |
| 1-1/4 | SSUF7-1-1/4 | G01158 | SSUC207-20 | G01174 |
| 1-7/16 | SSUF7-1-7/16 | G01159 | SSUC207-23 | G01175 |
| 1-1/2 | SSUF8-1-1/2 | G05906 | SSUC208-24 | G05922 |
| 1-15/16 | SSUF10-1-15/16 | G05907 | SSUC210-31 | G05923 |

NOTES: Bore tolerance: +.001"/-.000".

Recommended shaft tolerance: Nominal +.000"/-.001".

Max recommended speed is 5000 RPM.

*CR=dynamic load rating, Co=static load rating.

** Smaller bolt sizes are acceptable with the use of flat washers

Stainless Mounted Bearings

Flanged Units – Setscrew Locking 3 Bolt Flange – Setscrew Locking; Extended Inner Race

Features —

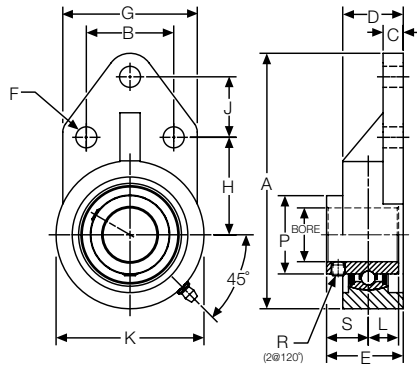
Synthetic lip seal with stainless steel flinger provides superior protection for high pressure washdown conditions.

Pre-filled with NSF H1 food grade grease.

Cast stainless steel housing.

Laser marked.

M6 grease fitting.



| Stainless Steel Material | |
|--------------------------------------|-------------------------|
| AISI 304 | AISI 440 |
| Flange, cage, shield, setscrew, seal | Balls, inner/outer ring |

ALL DIMENSIONS IN INCHES

| Catalog Number | Bore Size | Dimensions (in) | | | | | | | | | | | | | | Load Rating* (lbf) | |
|-----------------|-----------|-----------------|---------|------|---------|---------|---------------|--------|---------|-------|---------|-------|-------|---------|-------|--------------------|-------|
| | | A | B | C | D | E | Bolt Size F** | G | H | J | K | L | P | R (UNF) | S | CR | Co |
| SSUFB4-3/4 | 3/4 | 4-1/4 | 1-1/2 | 5/16 | 1 | 1.35 | 5/16 | 2-3/8 | 1-11/16 | 7/8 | 2-1/2 | 0.500 | 1.142 | 1/4-28 | 0.850 | 2,901 | 1,507 |
| SSUFB5-1 | 1 | 4-3/4 | 1-5/8 | 3/8 | 1-5/64 | 1.43 | 5/16 | 2-1/2 | 1-13/16 | 1-1/8 | 2-3/4 | 0.563 | 1.339 | 1/4-28 | 0.867 | 3,175 | 1,782 |
| SSUFB6-1-3/16 | 1-3/16 | 5-3/8 | 1-7/8 | 3/8 | 1-7/64 | 1-19/32 | 5/16 | 2-3/4 | 2-1/16 | 1-1/4 | 3-1/4 | 0.626 | 1.591 | 1/4-28 | 0.968 | 4,431 | 2,558 |
| SSUFB7-1-1/4 | 1-1/4 | 6-1/8 | 2 | 1/2 | 1-1/4 | 1-3/4 | 7/16 | 3-1/4 | 2-3/8 | 1-1/4 | 3-3/4 | 0.689 | 1.866 | 5/16-24 | 1.061 | 5,847 | 3,472 |
| SSUFB7-1-7/16 | 1-7/16 | 6-1/8 | 2 | 1/2 | 1-1/4 | 1-3/4 | 7/16 | 3-1/4 | 2-3/8 | 1-1/4 | 3-3/4 | 0.689 | 1.866 | 5/16-24 | 1.061 | 5,847 | 3,472 |
| SSUFB8-1-1/2 | 1-1/2 | 6-15/32 | 1-31/32 | 5/8 | 1-13/32 | 2-1/64 | 3/8 | 3-1/16 | 2-3/8 | 1-5/8 | 3-15/16 | 0.748 | 2.075 | 5/16-24 | 1.267 | 6,632 | 4,069 |
| SSUFB10-1-15/16 | 1-15/16 | 7-1/2 | 2-3/4 | 1/2 | 1-1/2 | 2-5/32 | 7/16 | 4 | 2-15/16 | 1-5/8 | 4-5/8 | 0.748 | 2.465 | 3/8-24 | 1.408 | 7,868 | 5,216 |

ORDER BY CATALOG NUMBER OR ITEM CODE

| Bore Size | Mounted Bearing | | Bearing Insert | |
|-----------|-----------------|-----------|----------------|-----------|
| | Catalog Number | Item Code | Catalog Number | Item Code |
| 3/4 | SSUFB4-3/4 | G05908 | SSUC204-12 | G01171 |
| 1 | SSUFB5-1 | G05909 | SSUC205-16 | G01172 |
| 1-3/16 | SSUFB6-1-3/16 | G05910 | SSUC206-19 | G01173 |
| 1-1/4 | SSUFB7-1-1/4 | G05911 | SSUC207-20 | G01174 |
| 1-7/16 | SSUFB7-1-7/16 | G05912 | SSUC207-23 | G01175 |
| 1-1/2 | SSUFB8-1-1/2 | G05913 | SSUC208-24 | G05922 |
| 1-15/16 | SSUFB10-1-15/16 | G05914 | SSUC210-31 | G05923 |

NOTES: Bore tolerance: +.001"/-.000".

Recommended shaft tolerance: Nominal +.000"/-.001".

Max recommended speed is 5000 RPM.

*CR=dynamic load rating, Co=static load rating.

** Smaller bolt sizes are acceptable with the use of flat washers

Stainless Mounted Bearings

Take Up Units – Setscrew Locking

Wide Slot Take Up Unit – Setscrew Locking; Extended Inner Race

F



Features —

Synthetic lip seal with stainless steel finger provides superior protection for high pressure washdown conditions.

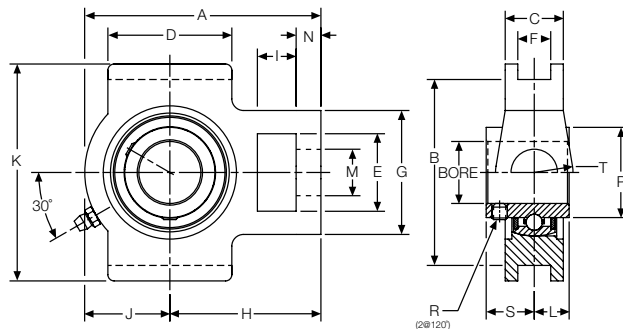
Pre-filled with NSF H1 food grade grease.

Cast stainless steel housing.

Laser marked.

M6 grease fitting.

| Stainless Steel Material | |
|--------------------------------------|-------------------------|
| AISI 304 | AISI 440 |
| Flange, cage, shield, setscrew, seal | Balls, inner/outer ring |



ALL DIMENSIONS IN INCHES

| Catalog Number | Bore Size | Dimensions (in) | | | | | | | | | | | | | | | | Load Rating* (lb) | | |
|----------------|-----------|-----------------|---------|---------|---------|-------|-------|---------|---------|-------|---------|---------|-------|-------|-------|-------|---------|-------------------|-------|-------|
| | | A | B | C | D | E | F | G | H | I | J | K | L | M | N | P | R (UNF) | S | CR | CO |
| SSUT4-3/4 | 3/4 | 3-11/16 | 2-63/64 | 13/16 | 2-1/64 | 1.250 | 0.469 | 2-1/64 | 2-13/32 | 0.625 | 1-9/32 | 3-1/2 | 0.500 | 0.750 | 0.391 | 1.142 | 1/4-28 | 0.721 | 2,901 | 1,507 |
| SSUT5-1 | 1 | 3-13/16 | 2-63/64 | 15/16 | 2-1/64 | 1.250 | 0.469 | 2-1/64 | 2-7/16 | 0.625 | 1-3/8 | 3-1/2 | 0.563 | 0.750 | 0.391 | 1.339 | 1/4-28 | 0.780 | 3,175 | 1,782 |
| SSUT6-1-3/16 | 1-3/16 | 4-29/64 | 3-1/2 | 1-3/32 | 2-1/4 | 1.453 | 0.469 | 2-7/32 | 2-3/4 | 0.625 | 1-45/64 | 4-1/64 | 0.626 | 0.859 | 0.391 | 1.591 | 1/4-28 | 0.874 | 4,431 | 2,558 |
| SSUT7-1-1/4 | 1-1/4 | 5-5/64 | 3-1/2 | 1-3/16 | 2-33/64 | 1.453 | 0.469 | 2-33/64 | 3-5/64 | 0.625 | 2 | 4-1/64 | 0.689 | 0.859 | 0.516 | 1.866 | 5/16-24 | 1.000 | 5,847 | 3,472 |
| SSUT7-1-7/16 | 1-7/16 | 5-5/64 | 3-1/2 | 1-3/16 | 2-33/64 | 1.453 | 0.469 | 2-33/64 | 3-5/64 | 0.625 | 2 | 4-1/64 | 0.689 | 0.859 | 0.516 | 1.866 | 5/16-24 | 1.000 | 5,847 | 3,472 |
| SSUT8-1-1/2 | 1-1/2 | 5-43/64 | 4-1/64 | 1-5/16 | 3-17/64 | 1.938 | 0.625 | 3-17/64 | 3-1/2 | 0.750 | 2-11/64 | 4-31/64 | 0.748 | 1.141 | 0.625 | 2.075 | 5/16-24 | 1.189 | 6,632 | 4,069 |
| SSUT10-1-15/16 | 1-15/16 | 5-55/64 | 4-1/64 | 1-15/32 | 3-17/64 | 1.938 | 0.625 | 3-17/64 | 3-35/64 | 0.750 | 2-5/16 | 4-39/64 | 0.748 | 1.141 | 0.625 | 2.465 | 3/8-24 | 1.284 | 7,868 | 5,216 |

ORDER BY CATALOG NUMBER OR ITEM CODE

| Bore Size | Mounted Bearing | | Bearing Insert | |
|-----------|-----------------|-----------|----------------|-----------|
| | Catalog Number | Item Code | Catalog Number | Item Code |
| 3/4 | SSUT4-3/4 | G05915 | SSUC204-12 | G01171 |
| 1 | SSUT5-1 | G05916 | SSUC205-16 | G01172 |
| 1-3/16 | SSUT6-1-3/16 | G05917 | SSUC206-19 | G01173 |
| 1-1/4 | SSUT7-1-1/4 | G05918 | SSUC207-20 | G01174 |
| 1-7/16 | SSUT7-1-7/16 | G05919 | SSUC207-23 | G01175 |
| 1-1/2 | SSUT8-1-1/2 | G05920 | SSUC208-24 | G05922 |
| 1-15/16 | SSUT10-1-15/16 | G05921 | SSUC210-31 | G05923 |

NOTES: Bore tolerance: +.001"/-.000".

Recommended shaft tolerance: Nominal +.000"/-.001".

Max recommended speed is 5000 RPM.

*CR=dynamic load rating, CO=static load rating.

Analysis of Radial Bearing Loads for Unmounted and Mounted Rolling Elements

Radial Load

Radial bearing loads are determined by analysis of all the forces applied to a shaft. In many instances this becomes a complex analysis and should be performed with expertise. However, many applications involve simple loading and may be calculated with basic information.

Many shafts are supported by two bearings, with a load “L” applied either between two bearings, as in Figure 1; or with load overhung, as in Figure 2. In either case, the reaction on the bearing is dependent upon:

- The point of load application
- The magnitude of the load.
- The distance between the bearing centers.

With the above information known, the reactions, due to the loads, on the bearings, may be calculated.

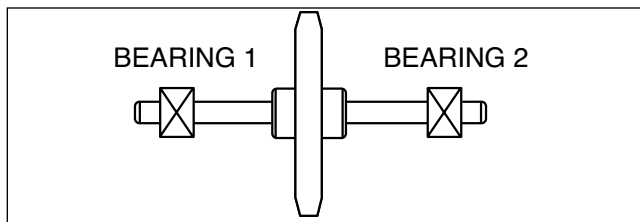


FIGURE 1.

When the applied load is located between the two bearings, it is commonly referred to as “Straddle” loading.

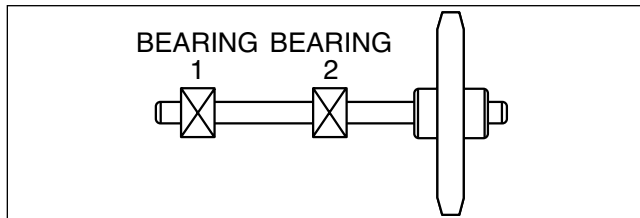


FIGURE 2.

When the applied load is located outside the two bearings, it is commonly referred to as “Overhung” loading.

The loading of a shaft usually is the result of forces generated by gearing, sprockets or pulleys, the weight of these parts and friction.

Normally the weight of the parts and friction are ignored. However, if the weight of these parts is large, they should be considered.

In this text we are mainly considering radial loading of the shaft. Each load should be calculated individually as the sum of these will be used to calculate the load imposed on the bearings.

Load Connection Factor

Loads applied by various types of drives may be calculated with use of the following load connection factors and formula:

$$L = \frac{2TK}{D}$$

L = Load (Lbs.)

$$T = \text{Torque (Lb-Ins.)} \quad T = \frac{(63025)(\text{H.P.})}{\text{RPM}}$$

K = Load Connection Factor

D = P.D. of Sprocket, Pinion, or Pulley (In.)

Load Connection Factors (K)

| | |
|---------------------------------|------|
| Sprocket or Timing Belt | 1.00 |
| Pinion and Gear Drive | 1.25 |
| Pulley and V-Belt Drive | 1.50 |
| Pulley and Flat-Belt Drive..... | 2.50 |

Example “A”

Load smooth and steady 8 hours per day.

- #40 Chain Drive
- 30 Tooth Sprocket
- 4.783 Sprocket P.D.
- 2 HP
- 500 RPM
- 5/8 Shaft Dia.

With the above information the load can be calculated as follows:

$$L = \frac{2TK}{D}$$

$$T = \frac{63025 \times 2}{\text{RPM}} = 252 \text{ In. Lbs.}$$

K = 1.0 From Load Connection Factor Table

D = 4.783

$$L = \frac{2 \times 252 \times 1.0}{4.783}$$

L = 105 lbs. Radial Load

Engineering Information

Analysis of Radial Bearing Loads for Unmounted and Mounted Rolling Elements (Cont'd)

F

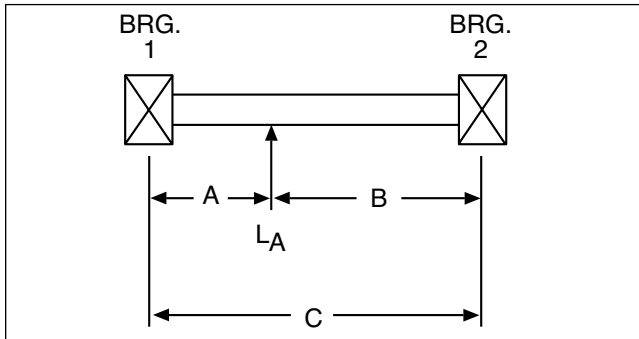
Magnitude of Load Acting on Bearings

Once the applied load or loads that act on the shaft is determined, we may now apply it to the bearings.

There are many types of loadings that can be imposed on a bearing:

Straddle Loaded Bearings

Radial Applied Load Acting On Shaft



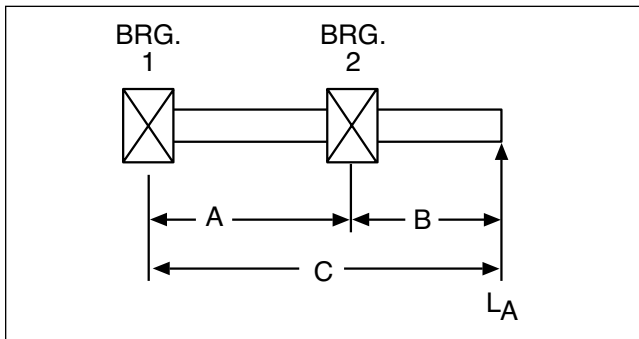
$$\text{Load Bearing I} = L_I = \frac{L_A \times B}{C}$$

$$\text{Load Bearing II} = L_{II} = \frac{L_A \times A}{C}$$

Check $L_I + L_{II} = L_A$

Overhung Loaded Bearings

Radial Applied Load Acting On Shaft



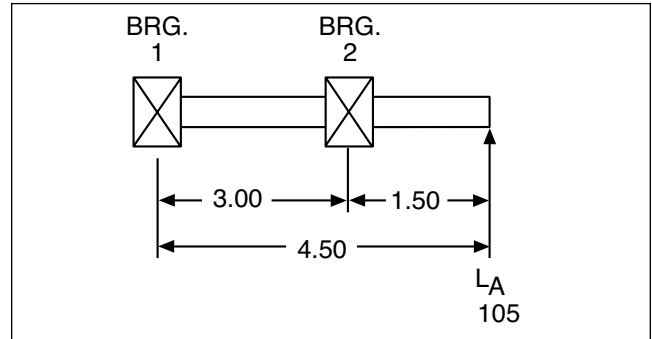
$$\text{Load Bearing I} = L_I = \frac{L_A \times B}{A}$$

$$\text{Load Bearing II} = L_{II} = \frac{L_A \times C}{A}$$

Check $L_{II} - L_I = L_A$

Example "B"

Load given in Example "A" = 105 lbs. is in overhung condition, as shown.



LOAD BEARING I

$$L_I = \frac{L_A \times B}{A}$$

$$L_I = \frac{105 \times 1.50}{3.00}$$

$$L_I = 52.5 \text{ lbs.}$$

LOAD BEARING II

$$L_{II} = \frac{L_A \times C}{A}$$

$$L_{II} = \frac{105 \times 4.5}{3.0}$$

$$L_{II} = 157.5 \text{ lbs.}$$

CHECK

$$L_{II} - L_I = L_A$$

$$157.5 - 52.5 = 105$$

$$105 = 105$$

Ball and Mounted Ball Bearing Selection

Bearing selection for the majority of applications can be made directly from the Load Rating Tables. Mounted bearings are listed individually on each page. The mounted bearings tables are located on Pages 108-109.

The following procedure may be followed:

1. Determine the actual radial load to be supported by the bearing. For applications involving heavy shock loads or severe vibration, actual load should be multiplied by a service factor from 1.1 to 1.5 depending on the severity of these conditions.

2. Select a bearing from the table that has a radial load rating equal to or greater than the actual radial load determined in Step 1, for the life desired at the required operating speed.

Ball bearing rating tables are based on an “Average” bearing life of 2500 hours. Average or medium life (L_{50}) is the life that may be expected from 50% or more of a given group of bearings operating under an identical steady load condition. The minimum life (L_{10}) is the life expectancy of at least 90% of a group of bearings and is approximately 1/5 average.

| Service Factor | Operating Conditions |
|----------------|--|
| .8 | Uniform — not more than 15 minutes in 2 hours. |
| 1.0 | Moderate Shock — not more than 15 minutes in 2 hours. Uniform — not more than 10 hours per day |
| 1.25 | Moderate Shock — not more than 10 hours per day. Uniform — more than 10 hours per day. |
| 1.50 | Heavy Shock — not more than 15 minutes in 2 hours. Moderate Shock — more than 10 hours per day. |
| 1.75 | Heavy Shock — not more than 10 hours per day. |
| 2.0 | Heavy Shock — more than 10 hours per day. |

Example “C”

Using loading from Example “B,” select a mounted bearing suitable to give an average life (L_{50}) of 15,000 hours.

Known—

Load Bearing I = 52.5

Load Bearing II = 157.5

Shaft Diameter 5/8 (From Example “A”)

Service Factor 1 (From Example “A”)

500 RPM (From Example “A”)

From the Rating Table, Page 243, as shown, a standard duty bearing (either eccentric collar or extended set screw inner race) may be selected.

Engineering Information

Mounted Ball Bearing Radial Load Capacities Light Duty

PS Series Pillow Blocks

F

| Shaft Sizes | Average Life (L ₅₀) Hours | Speed (R.P.M.) | | | | | | | |
|------------------------------------|---------------------------------------|----------------------|-----|-----|------|------|------|------|------|
| | | Radial Load (Pounds) | | | | | | | |
| | | 50 | 100 | 500 | 1000 | 1500 | 1800 | 2000 | 2500 |
| 1/2 5/8 | 2,500 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 |
| | 5,000 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 |
| | 7,500 | 300 | 300 | 300 | 245 | 215 | 200 | 195 | 180 |
| | 15,000 | 300 | 300 | 280 | 220 | 195 | 180 | 175 | 165 |
| | 75,000 | 300 | 300 | 245 | 195 | 170 | 160 | 155 | 140 |
| 3/4 | 2,500 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 |
| | 5,000 | 350 | 350 | 350 | 350 | 350 | 350 | 350 | 350 |
| | 7,500 | 350 | 350 | 350 | 330 | 285 | 270 | 260 | 240 |
| | 15,000 | 350 | 350 | 350 | 300 | 260 | 245 | 235 | 220 |
| | 75,000 | 350 | 350 | 350 | 260 | 225 | 215 | 205 | 190 |
| 7/8 15/16 1 | 2,500 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 |
| | 5,000 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 |
| | 7,500 | 400 | 400 | 400 | 360 | 315 | 295 | 285 | 265 |
| | 15,000 | 400 | 400 | 400 | 325 | 285 | 270 | 260 | 240 |
| | 75,000 | 400 | 400 | 360 | 285 | 250 | 235 | 225 | 210 |
| 1-1/16 1-1/8 1-3/16 1-1/4 | 2,500 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 |
| | 5,000 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 |
| | 7,500 | 600 | 600 | 600 | 500 | 435 | 410 | 395 | 370 |
| | 15,000 | 600 | 600 | 570 | 455 | 395 | 375 | 360 | 335 |
| | 75,000 | 600 | 600 | 500 | 395 | 345 | 325 | 315 | 295 |

PS2 and PS3 Series Flanged Units

| Shaft Sizes | Average Life (L ₅₀) Hours | Speed (R.P.M.) | | | | | | | |
|-------------------------------------|---------------------------------------|----------------------|------|------|------|------|------|------|------|
| | | Radial Load (Pounds) | | | | | | | |
| | | 50 | 100 | 500 | 1000 | 1500 | 1800 | 2000 | 2500 |
| 1/2 5/8 | 2,500 | 600 | 600 | 600 | 530 | 460 | 435 | 420 | 390 |
| | 5,000 | 600 | 600 | 530 | 420 | 365 | 385 | 330 | 310 |
| | 7,500 | 600 | 530 | 310 | 245 | 215 | 200 | 195 | 180 |
| | 15,000 | 600 | 480 | 280 | 220 | 195 | 180 | 175 | 165 |
| | 75,000 | 530 | 420 | 245 | 195 | 170 | 160 | 155 | 140 |
| 3/4 | 2,500 | 700 | 700 | 700 | 700 | 620 | 585 | 560 | 520 |
| | 5,000 | 700 | 700 | 700 | 560 | 490 | 460 | 445 | 415 |
| | 7,500 | 700 | 700 | 415 | 330 | 285 | 270 | 260 | 240 |
| | 15,000 | 700 | 645 | 375 | 300 | 260 | 245 | 235 | 220 |
| | 75,000 | 700 | 560 | 330 | 260 | 225 | 215 | 205 | 190 |
| 7/8 15/16 1 | 2,500 | 800 | 800 | 800 | 775 | 680 | 640 | 615 | 570 |
| | 5,000 | 800 | 800 | 775 | 615 | 540 | 505 | 490 | 455 |
| | 7,500 | 800 | 775 | 455 | 360 | 315 | 295 | 285 | 265 |
| | 15,000 | 800 | 705 | 410 | 325 | 285 | 270 | 260 | 240 |
| | 75,000 | 775 | 615 | 360 | 285 | 250 | 235 | 225 | 210 |
| 1-1/16 1-1/8 1-3/16 1-1/4S | 2,500 | 1100 | 1100 | 1100 | 1080 | 940 | 885 | 855 | 795 |
| | 5,000 | 1100 | 1100 | 1080 | 855 | 750 | 700 | 680 | 630 |
| | 7,500 | 1100 | 1080 | 630 | 500 | 435 | 410 | 395 | 370 |
| | 15,000 | 1100 | 980 | 570 | 455 | 395 | 375 | 360 | 335 |
| | 75,000 | 1080 | 855 | 500 | 395 | 345 | 325 | 315 | 295 |
| 1-1/4 1-5/16 1-3/8 1-7/16 | 2,500 | 1400 | 1400 | 1400 | 1400 | 1245 | 1175 | 1130 | 1050 |
| | 5,000 | 1400 | 1400 | 1400 | 1130 | 990 | 930 | 895 | 835 |
| | 7,500 | 1400 | 1400 | 835 | 660 | 580 | 545 | 525 | 485 |
| | 15,000 | 1400 | 1295 | 755 | 600 | 525 | 495 | 475 | 440 |
| | 75,000 | 1400 | 1130 | 660 | 525 | 460 | 430 | 415 | 385 |

Mounted Ball Bearing Radial Load Capacities

XL, S, H, L, F, T and MB Series

| Series | | Average Life (L ⁵⁰) Hours | Speed (R.P.M.) | | | | | | | | | | | | | | | | | | |
|------------------------------------|---------------------|---------------------------------------|----------------------|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| XL All S (All) H-L-F-T Shaft Size | MB (All) Shaft Size | | Radial Load (Pounds) | | | | | | | | | | | | | | | | | | |
| | | | 50 | 100 | 500 | 1000 | 1500 | 1800 | 2000 | 2500 | 3000 | 3600 | 4000 | 4500 | 5000 | | | | | | |
| 1/2 5/8 | — | 2,500 | 1580 | 1255 | 730 | 580 | 505 | 475 | 460 | 425 | 400 | 375 | 365 | 340 | 320 | 300 | 290 | 275 | 270 | | |
| | | 5,000 | 1255 | 995 | 580 | 460 | 400 | 375 | 365 | 340 | 320 | 300 | 290 | 275 | 270 | 255 | 240 | 230 | 220 | 210 | |
| | | 7,500 | 730 | 580 | 340 | 270 | 235 | 220 | 210 | 195 | 185 | 175 | 170 | 160 | 155 | 145 | 140 | 135 | 130 | 125 | |
| | | 15,000 | 665 | 525 | 305 | 245 | 210 | 200 | 195 | 180 | 170 | 160 | 155 | 145 | 140 | 135 | 130 | 125 | 120 | 115 | |
| | | 75,000 | 580 | 460 | 270 | 210 | 185 | 175 | 170 | 155 | 150 | 140 | 135 | 130 | 125 | 120 | 115 | 110 | 105 | 100 | |
| 3/4 | — | 2,500 | 1930 | 1530 | 895 | 710 | 620 | 585 | 560 | 520 | 490 | 460 | 445 | 415 | 390 | 365 | 355 | 335 | 330 | | |
| | | 5,000 | 1530 | 1215 | 710 | 560 | 490 | 460 | 445 | 415 | 390 | 365 | 355 | 335 | 330 | 315 | 305 | 295 | 290 | 285 | |
| | | 7,500 | 895 | 710 | 415 | 330 | 285 | 270 | 260 | 240 | 225 | 215 | 205 | 200 | 195 | 185 | 180 | 175 | 170 | 165 | |
| | | 15,000 | 810 | 645 | 375 | 300 | 260 | 245 | 235 | 220 | 205 | 195 | 185 | 180 | 175 | 165 | 160 | 155 | 150 | 145 | |
| | | 75,000 | 710 | 560 | 330 | 260 | 225 | 215 | 205 | 190 | 180 | 170 | 165 | 160 | 155 | 150 | 145 | 140 | 135 | 130 | |
| 7/8 15/16 1 | — | 2,500 | 2115 | 1675 | 980 | 775 | 680 | 640 | 615 | 570 | 540 | 505 | 490 | 455 | 400 | 385 | 370 | 360 | 360 | | |
| | | 5,000 | 1675 | 1330 | 775 | 615 | 540 | 505 | 490 | 455 | 400 | 385 | 370 | 360 | 345 | 335 | 325 | 315 | 310 | 305 | |
| | | 7,500 | 980 | 775 | 455 | 360 | 315 | 295 | 285 | 265 | 250 | 235 | 225 | 215 | 205 | 200 | 195 | 190 | 185 | 180 | |
| | | 15,000 | 890 | 705 | 410 | 325 | 285 | 270 | 260 | 240 | 225 | 210 | 205 | 195 | 190 | 185 | 180 | 175 | 170 | 165 | |
| | | 75,000 | 775 | 615 | 360 | 285 | 250 | 235 | 225 | 190 | 200 | 185 | 180 | 170 | 165 | 160 | 155 | 150 | 145 | 140 | |
| 1-1/8 1-5/16 1-1/4S | — | 2,500 | 2955 | 2340 | 1370 | 1085 | 945 | 890 | 860 | 800 | 750 | 705 | 685 | 655 | 600 | 585 | 570 | 560 | 555 | | |
| | | 5,000 | 2340 | 1855 | 1085 | 860 | 750 | 705 | 685 | 635 | 595 | 560 | 540 | 515 | 485 | 470 | 460 | 450 | 445 | 440 | |
| | | 7,500 | 1370 | 1085 | 635 | 505 | 440 | 415 | 400 | 370 | 350 | 325 | 315 | 305 | 295 | 285 | 280 | 275 | 270 | 265 | |
| | | 15,000 | 1245 | 985 | 575 | 455 | 400 | 375 | 360 | 335 | 315 | 295 | 285 | 280 | 275 | 270 | 265 | 260 | 255 | 250 | |
| | | 75,000 | 1085 | 860 | 505 | 400 | 350 | 325 | 315 | 295 | 275 | 260 | 250 | 240 | 235 | 230 | 225 | 220 | 215 | 210 | |
| 1-1/4 1-5/16 1-3/8 1-7/16 | — | 2,500 | 3890 | 3085 | 1805 | 1430 | 1250 | 1175 | 1135 | 1055 | 990 | 930 | 835 | 785 | 740 | 715 | 715 | 715 | 715 | | |
| | | 5,000 | 3085 | 2445 | 1430 | 1135 | 990 | 930 | 900 | 835 | 785 | 740 | 715 | 715 | 715 | 715 | 715 | 715 | 715 | 715 | |
| | | 7,500 | 1805 | 1430 | 835 | 665 | 580 | 545 | 525 | 490 | 460 | 430 | 415 | 415 | 415 | 415 | 415 | 415 | 415 | 415 | |
| | | 15,000 | 1635 | 1300 | 760 | 600 | 525 | 495 | 475 | 445 | 415 | 390 | 380 | 380 | 380 | 380 | 380 | 380 | 380 | 380 | |
| | | 75,000 | 1430 | 1135 | 665 | 525 | 460 | 430 | 415 | 385 | 365 | 340 | 330 | 330 | 330 | 330 | 330 | 330 | 330 | 330 | 330 |
| 1-1/2 | 1-7/16 | 2,500 | 4935 | 3915 | 2290 | 1815 | 1585 | 1495 | 1440 | 1335 | 1260 | 1180 | 1100 | 1000 | 940 | 940 | 940 | 940 | 940 | 940 | |
| | | 5,000 | 3915 | 3105 | 1815 | 1440 | 1260 | 1180 | 1140 | 1060 | 1000 | 940 | 940 | 940 | 940 | 940 | 940 | 940 | 940 | 940 | 940 |
| | | 7,500 | 2290 | 1815 | 1060 | 845 | 735 | 690 | 665 | 620 | 585 | 550 | 550 | 550 | 550 | 550 | 550 | 550 | 550 | 550 | 550 |
| | | 15,000 | 2080 | 1605 | 965 | 765 | 665 | 630 | 605 | 565 | 530 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 |
| | | 75,000 | 1815 | 1440 | 845 | 665 | 585 | 550 | 530 | 490 | 465 | 435 | 435 | 435 | 435 | 435 | 435 | 435 | 435 | 435 | 435 |
| 1-5/8 1-11/16 1-3/4 | 1-1/2 | 2,500 | 5295 | 4200 | 2455 | 1950 | 1700 | 1600 | 1545 | 1435 | 1350 | 1270 | 1225 | 1140 | 1070 | 1070 | 1070 | 1070 | 1070 | 1070 | |
| | | 5,000 | 4200 | 3330 | 1950 | 1545 | 1350 | 1270 | 1225 | 1140 | 1070 | 1070 | 1070 | 1070 | 1070 | 1070 | 1070 | 1070 | 1070 | 1070 | 1070 |
| | | 7,500 | 2455 | 1950 | 1140 | 905 | 790 | 740 | 715 | 665 | 625 | 625 | 625 | 625 | 625 | 625 | 625 | 625 | 625 | 625 | 625 |
| | | 15,000 | 2230 | 1770 | 1035 | 820 | 715 | 675 | 650 | 605 | 570 | 550 | 550 | 550 | 550 | 550 | 550 | 550 | 550 | 550 | 550 |
| | | 75,000 | 1950 | 1545 | 905 | 715 | 625 | 590 | 570 | 530 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 |
| 1-15/16 | 1-11/16 1-3/4 | 2,500 | 5295 | 4200 | 2455 | 1950 | 1700 | 1600 | 1545 | 1435 | 1350 | 1270 | 1225 | 1140 | 1070 | 1070 | 1070 | 1070 | 1070 | 1070 | |
| | | 5,000 | 4200 | 3330 | 1950 | 1545 | 1350 | 1270 | 1225 | 1140 | 1070 | 1070 | 1070 | 1070 | 1070 | 1070 | 1070 | 1070 | 1070 | 1070 | 1070 |
| | | 7,500 | 2455 | 1950 | 1140 | 905 | 790 | 740 | 715 | 665 | 625 | 625 | 625 | 625 | 625 | 625 | 625 | 625 | 625 | 625 | 625 |
| | | 15,000 | 2230 | 1770 | 1035 | 820 | 715 | 675 | 650 | 605 | 570 | 550 | 550 | 550 | 550 | 550 | 550 | 550 | 550 | 550 | 550 |
| | | 75,000 | 1950 | 1545 | 905 | 715 | 625 | 590 | 570 | 530 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 |
| 2 2-3/16 | 1-15/16 2 | 2,500 | 6545 | 5190 | 3035 | 2410 | 2100 | 1980 | 1910 | 1775 | 1700 | 1610 | 1515 | 1410 | 1310 | 1310 | 1310 | 1310 | 1310 | 1310 | |
| | | 5,000 | 5190 | 4120 | 2410 | 1910 | 1670 | 1570 | 1515 | 1410 | 1310 | 1310 | 1310 | 1310 | 1310 | 1310 | 1310 | 1310 | 1310 | 1310 | 1310 |
| | | 7,500 | 3035 | 2410 | 1410 | 1120 | 975 | 915 | 885 | 825 | 785 | 785 | 785 | 785 | 785 | 785 | 785 | 785 | 785 | 785 | 785 |
| | | 15,000 | 2755 | 2190 | 1280 | 1015 | 885 | 835 | 805 | 745 | 745 | 745 | 745 | 745 | 745 | 745 | 745 | 745 | 745 | 745 | 745 |
| | | 75,000 | 2410 | 1910 | 1120 | 885 | 775 | 725 | 705 | 655 | 655 | 655 | 655 | 655 | 655 | 655 | 655 | 655 | 655 | 655 | 655 |
| 2-1/4 2-7/16 | 2-3/16 2-1/4 | 2,500 | 7910 | 6275 | 3670 | 2910 | 2540 | 2390 | 2310 | 2145 | 2070 | 1985 | 1900 | 1810 | 1720 | 1720 | 1720 | 1720 | 1720 | 1720 | |
| | | 5,000 | 6275 | 4975 | 2910 | 2310 | 2020 | 1905 | 1830 | 1700 | 1630 | 1545 | 1460 | 1375 | 1290 | 1290 | 1290 | 1290 | 1290 | 1290 | 1290 |
| | | 7,500 | 3670 | 2910 | 1700 | 1350 | 1180 | 1110 | 1070 | 995 | 995 | 995 | 995 | 995 | 995 | 995 | 995 | 995 | 995 | 995 | 995 |
| | | 15,000 | 3330 | 2645 | 1545 | 1225 | 1070 | 1010 | 970 | 905 | 905 | 905 | 905 | 905 | 905 | 905 | 905 | 905 | 905 | 905 | 905 |
| | | 75,000 | 2910 | 2310 | 1350 | 1070 | 935 | 880 | 850 | 790 | 790 | 790 | 790 | 790 | 790 | 790 | 790 | 790 | 790 | 790 | 790 |
| — | 2-7/16 2-1/2 | 2,500 | 9395 | 7455 | 4360 | 3455 | 3020 | 2840 | 2740 | 2545 | 2470 | 2385 | 2300 | 2215 | 2125 | 2125 | 2125 | 2125 | 2125 | 2125 | |
| | | 5,000 | 7455 | 5910 | 3455 | 2740 | 2400 | 2250 | 2175 | 2020 | 1950 | 1865 | 1780 | 1695 | 1610 | 1610 | 1610 | 1610 | 1610 | 1610 | 1610 |
| | | 7,500 | 4630 | 3455 | 2020 | 1605 | 1400 | 1315 | 1270 | 1180 | 1180 | 1180 | 1180 | 1180 | 1180 | 1180 | 1180 | 1180 | 1180 | 1180 | 1180 |
| | | 15,000 | 3955 | 3140 | 1835 | 1455 | 1270 | 1200 | 1155 | 1075 | 1075 | 1075 | 1075 | 1075 | 1075 | 1075 | 1075 | 1075 | 1075 | 1075 | 1075 |
| | | 75,000 | 3455 | 2740 | 1605 | 1270 | 1110 | 1045 | 1010 | 940 | 940 | 940 | 940 | 940 | 940 | 940 | 940 | 940 | 940 | 940 | 940 |
| — | 2-11/16 | 2,500 | 9990 | 7925 | 4635 | 3675 | 3210 | 3020 | 2915 | 2705 | 2630 | 2545 | 2460 | 2375 | 2285 | 2285 | 2285 | 2285 | 2285 | 2285 | |
| | | 5,000 | 7925 | 6285 | 3675 | 2915 | 2550 | 2395 | 2310 | 2150 | 2080 | 1995 | 1910 | 1825 | 1740 | 1740 | 1740 | 1740 | 1740 | 1740 | 1740 |
| | | 7,500 | 4635 | 3675 | 2150 | 1705 | 1490 | 1400 | 1350 | 1265 | 1265 | 1265 | 1265 | 1265 | 1265 | 1265 | 1265 | 1265 | 1265 | 1265 | 1265 |
| | | 15,000 | 4210 | 3340 | 1950 | 1550 | 1350 | 1275 | 1230 | 1140 | 1140 | 1140 | 1140 | 1140 | 1140 | 1140 | 1140 | 1140 | 1140 | 1140 | 1140 |
| | | 75,000 | 3675 | 2915 | 1705 | 1350 | 1180 | 1110 | 1075 | 1015 | 1015 | 1015 | 1015 | 1015 | 1015 | 1015 | 1015 | 1015 | 1015 | 1015 | 1015 |
| — | 2-15/16 3 | 2,500 | 11720 | 9300 | 5440 | 4315 | 3765 | 3545 | 3420 | 3175 | 3100 | 3015 | 2930 | 2845 | 2760 | 2760 | 2760 | 2760 | 2760 | 2760 | |
| | | 5,000 | 9300 | 7375 | 4315 | 3420 | 2990 | 2810 | 2715 | 2525 | 2455 | 2370 | 2285 | 2200 | 2115 | 2115 | 2115 | 2115 | 2115 | 2115 | 2115 |
| | | 7,500 | 5400 | 4315 | 2525 | 2000 | 1750 | 1645 | 1585 | 1475 | 1475 | 1475 | 1475 | 1475 | 1475 | 1475 | 1475 | 1475 | 1475 | 1475 | 1475 |
| | | 15,000 | 4935 | 3920 | 2290 | 1820 | 1585 | 1495 | 1440 | 1340 | 1340 | 1340 | 1340 | 1340 | 1340 | 1340 | 1340 | 1340 | 1340 | 1340 | 1340 |
| | | 75,000 | 4315 | 3420 | 2000 | 1585 | 1385 | 1305 | 1260 | 1170 | 1170 | 1170 | 1170 | 1170 | 1170 | 1170 | 1170 | 1170 | 1170 | 1170 | 1170 |
| — | 3-3/16 3-1/4 | 2,500 | 12630 | 10020 | 5860 | 4645 | 4055 | 3820 | 3685 | 3420 | 3345 | 3260 | 3175 | 3090 | 3005 | 3005 | 3005 | 3005 | | | |

Application Data – Unmounted Bearings

Lubrication

Either oil or grease can be used for lubricating bearings. Boston bearings are supplied slushed (open bearings) with a rust inhibiting oil, or prepacked with grease (sealed or shielded bearings) at the factory. However, special purpose lubricants can be used when required. It is recommended that bearing selection include consideration of the lubricant specifications and whether the lubricant will be applied in service or prepacked at the factory. Good lubrication adds measurably to the life of a bearing.

Precautions

1. Keep bearings clean and protected with covering until ready to install.
2. Make preliminary examination of shaft and housing for correct window size. Also check for chips, filings and burrs.
3. Press inner race on shaft or outer race in housing preferably by use of arbor press. Never transmit mounting press forces through balls from one race to the other.
4. Avoid hammer blows.

Recommended Shaft Fits — 1600-3000-7500-7600 Series

| Bearing Bore | | Shaft Rotating | | | | Shaft Stationary | | | |
|--------------|--------|----------------|--------|-----------------|-------|------------------|--------|-----------------|-------|
| | | Shaft Diameter | | Theoretical Fit | | Shaft Diameter | | Theoretical Fit | |
| Max. | Min. | Max. | Min. | Tight | Loose | Max. | Min. | Tight | Loose |
| .2500 | .2495 | .2500 | .2495 | .0005 | .0005 | .2495 | .2490 | .0000 | .0010 |
| .3125 | .3120 | .3125 | .3120 | .0005 | .0005 | .3120 | .3115 | .0000 | .0010 |
| .3750 | .3745 | .3750 | .3745 | .0005 | .0005 | .3745 | .3740 | .0000 | .0010 |
| .4375 | .4370 | .4375 | .4370 | .0005 | .0005 | .4370 | .4365 | .0000 | .0010 |
| .5000 | .4995 | .5000 | .4995 | .0005 | .0005 | .4995 | .4990 | .0000 | .0010 |
| .6250 | .6245 | .6250 | .6245 | .0005 | .0005 | .6245 | .6240 | .0000 | .0010 |
| .7500 | .7495 | .7500 | .7495 | .0005 | .0005 | .7495 | .7490 | .0000 | .0010 |
| .8750 | .8745 | .8752 | .8747 | .0007 | .0003 | .8745 | .8740 | .0000 | .0010 |
| 1.0000 | .9995 | 1.0002 | .9997 | .0007 | .0003 | .9995 | .9990 | .0000 | .0010 |
| 1.1250 | 1.1245 | 1.1252 | 1.1247 | .0007 | .0003 | 1.1245 | 1.1240 | .0000 | .0010 |
| 1.2500 | 1.2405 | 1.2502 | 1.2497 | .0007 | .0003 | 1.2495 | 1.2490 | .0000 | .0010 |

Recommended Housing Fits — 1600-3000-7500-7600 Series

| Bearing Outside Diameter | | Housing Rotating | | | | Housing Stationary | | | |
|--------------------------|--------|-------------------------|--------|-----------------|-------|-------------------------|--------|-----------------|-------|
| | | Housing Inside Diameter | | Theoretical Fit | | Housing Inside Diameter | | Theoretical Fit | |
| Max. | Min. | Max. | Min. | Tight | Loose | Max. | Min. | Tight | Loose |
| .6875 | .6870 | .6877 | .6870 | .0005 | .0007 | .6880 | .6875 | .0000 | .0010 |
| .8750 | .8745 | .8752 | .8745 | .0005 | .0007 | .8755 | .8750 | .0000 | .0010 |
| .9063 | .9058 | .9065 | .9058 | .0005 | .0007 | .9068 | .9063 | .0000 | .0010 |
| 1.1250 | 1.1245 | 1.1252 | 1.1242 | .0008 | .0007 | 1.1255 | 1.1250 | .0000 | .0010 |
| 1.3750 | 1.3745 | 1.3752 | 1.3742 | .0008 | .0007 | 1.3755 | 1.3750 | .0000 | .0010 |
| 1.6250 | 1.6245 | 1.6252 | 1.6242 | .0008 | .0007 | 1.6258 | 1.6250 | .0000 | .0013 |
| 1.7500 | 1.7495 | 1.7502 | 1.7492 | .0008 | .0007 | 1.7508 | 1.7500 | .0000 | .0013 |
| 2.0000 | 1.9994 | 2.0002 | 1.9990 | .0010 | .0008 | 2.0010 | 2.0000 | .0000 | .0016 |
| 2.5000 | 2.4994 | 2.5002 | 2.4990 | .0010 | .0008 | 2.5010 | 2.5000 | .0000 | .0016 |
| 2.5625 | 2.5619 | 2.5627 | 2.5615 | .0010 | .0008 | 2.5635 | 2.5625 | .0000 | .0016 |

Note: 3000 Series Dim Are Nom. +.0005
7600 Series Dim Are Nom. +.0008

Application Data – Mounted Bearings

Lubrication

Boston Gear ball and tapered roller bearing Pillow Blocks and Flanged Cartridges are factory lubricated prior to shipping. Those designed with the relubrication feature periodically require grease during operation. The interval between relubrication and the amount necessary to insure a long operational life are determined by the specific application.

Loading, speed, and environmental conditions must be considered when determining the proper interval between relubrication.

| Hours Operated Per Day | Weeks | | | | | | | |
|------------------------|-----------|-------------|-------------|--------------|---------------|---------------|---------------|---------------|
| | 1-250 RPM | 251-500 RPM | 501-750 RPM | 751-1000 RPM | 1001-1500 RPM | 1501-2000 RPM | 2001-2500 RPM | 2501-3000 RPM |
| 8 | 12 | 12 | 10 | 7 | 5 | 4 | 3 | 2 |
| 16 | 12 | 7 | 5 | 4 | 2 | 2 | 1 | 1 |
| 24 | 10 | 5 | 3 | 2 | 1 | 1 | 1 | 1 |

The table above may be used as a guide for establishing lubrication intervals for applications where contamination is not present.

For unusual operating conditions not covered by the table, consult the factory for our recommendations. Normal bearing operation temperatures range from “cool-to-the-touch” to “too-hot-to-touch” for more than a few seconds, depending on the load, speed, and ambient temperature.

The type of grease used in Boston bearing units allows satisfactory operation at temperatures to 225°F and speeds to 6500 RPM.

Bearings are prelubricated with a No. 2 consistency lithium base grease, and it is recommended that the Lith EP-2 or an equivalent grease be used when relubrication is required. When relubricating bearings, it is preferable that the shaft be rotating. This rotation of the shaft will aid in preventing excessive filling and insure proper distribution of the grease.

Grease should be added slowly to the bearing. When a slight bead appears from under the seal, the bearing will usually contain the proper amount of lubricant.

Precautions

The shaft must be clean, straight and free from nicks and burns and should fit the bearing as snugly as possible. Recommended shaft tolerance – Low Speed (or Light Load) +.0 to -.002; Normal Speed (or Load) +.0 to -.001; High Speed (or Heavy Load) a light press fit is desirable.

The use of flats at setscrew locations will permit ease of shaft removal.

Mounting

Setscrew Locking Type

Housing should be fastened to the mounting structure. Back out setscrews to clear shaft. After lubricating the shaft, slide it through the bearings and tighten setscrews to recommended torque, see Table below.

Eccentric Locking Collar Type

When sliding the shaft through the bore bearing inner ring, be sure that the counterbore of eccentric collar “A” is toward eccentric boss “B” on inner ring.

Turn eccentric collar “A” in the direction in which the shaft will rotate. Hand tight is often sufficient but a spanner wrench or drift pin may be inserted in spanner wrench hole “C” and used to set the collar (Note: DO NOT USE A DIRECT HAMMER BLOW to set the collar as such a blow may fracture the inner ring.) Not recommended for severe reversing applications.

Tighten set screw in eccentric collar firmly against shaft to recommended torque, see Table below.

| Set Screw Diameter | Hex Width Across Flats | Tightening Torque (In.-Lbs.) |
|--------------------|------------------------|------------------------------|
| 1/4 | 1/8 | 70 |
| 5/16 | 5/32 | 140 |
| 3/8 | 5/16 | 220 |
| 7/16 | 7/32 | 350 |
| 1/2 | 1/4 | 515 |
| 5/8 | 5/16 | 1200 |



NOTE: PS, PS2 and PS3 series: It is particularly important on these units that shaft be in place before the housing is secured to the mounting structure. The self-aligning steel stampings clamp the outer race when bolts are tightened making further shaft alignment impossible.